Honeywell

Experion PKS
Software Installation and Upgrade Guide

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About This Document

References

The following list identifies all documents that may be sources of reference for material discussed in this publication.

Document Title	Doc ID
Experion PKS Common Components 210.0.25 Software Change Notice	CC01210025A
Experion PKS Experion Station Specifications and Technical Data	EP03-210
Experion PKS R210.0 Software Change Notice	EP01210A
Experion PKS Server Specifications and Technical Data	EP03-210
Getting Started with Experion R210 System Components	EP-DSX183
Fault Tolerant Ethernet (FTE) Installation and Service Guide	EP-DSX253
Fault Tolerant Ethernet (FTE) Overview and Implementation Guide	EP-DSX243
Server and Client Configuration Guide	EP-DSXX23
Server and Client Planning Guide	EP-DSX133

Contacts

World Wide Web

The following Honeywell web sites may be of interest to Industry Solution customers.

Honeywell Organization	WWW Address (URL)
Corporate	http://www.honeywell.com

Honeywell Organization	WWW Address (URL)
Industry Solutions	http://www.acs.honeywell.com
International	http://content.honeywell.com/global/

Telephone

Contact us by telephone at the numbers listed below.

	Organization	Phone Number
United States and Canada	Honeywell Process Solutions	1-800-343-0228 Sales 1-800-525-7439 Service 1-800-822-7673 Technical Support
Asia Pacific	Honeywell Asia Pacific Inc. Hong Kong	(852) 23 31 9133
Europe	Honeywell PACE Brussels, Belgium	[32-2] 728-2711
Latin America	Honeywell International Inc. Sunrise, Florida U.S.A.	(954) 845-2600

Symbol Definitions

The following table lists those symbols used in this document to denote certain conditions.

Symbol	Definition
	ATTENTION: Identifies information that requires special consideration.
	TIP: Identifies advice or hints for the user, often in terms of performing a task.

Symbol	Definition
	REFERENCE -EXTERNAL: Identifies an additional source of information outside of the bookset.
	REFERENCE - INTERNAL: Identifies an additional source of information within the bookset.
CAUTION	Indicates a situation which, if not avoided, may result in equipment or work (data) on the system being damaged or lost, or may result in the inability to properly operate the process.
	CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. **CAUTION** symbol on the equipment refers the user to the product manual for additional information. The symbol appears next to required information in the manual.
	WARNING: Indicates a potentially hazardous situation, which, if not avoided, could result in serious injury or death. **WARNING** symbol on the equipment refers the user to the product manual for additional information. The symbol appears next to required information in the manual.
	WARNING, Risk of electrical shock: Potential shock hazard where HAZARDOUS LIVE voltages greater than 30 Vrms, 42.4 Vpeak, or 60 VDC may be accessible.
	ESD HAZARD: Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices.
	Protective Earth (PE) terminal: Provided for connection of the protective earth (green or green/yellow) supply system conductor.

Symbol	Definition
	Functional earth terminal: Used for non-safety purposes such as noise immunity improvement. NOTE: This connection shall be bonded to Protective Earth at the source of supply in accordance with national local electrical code requirements.
	Earth Ground: **Functional earth connection.** NOTE: This connection shall be bonded to Protective Earth at the source of supply in accordance with national and local electrical code requirements.
	Chassis Ground: Identifies a connection to the chassis or frame of the equipment shall be bonded to Protective Earth at the source of supply in accordance with national and local electrical code requirements.

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1. Starting a successful Experion PKS installation!

This guide describes how to install and upgrade Experion PKS, including how to prepare the server and client computers on which Experion PKS is installed.

This section describes how to complete the specification forms that help you to install and setup Experion PKS.

To help you prepare for the installation, you should read the following topics.

Topic	Go to	Done?
Starting an installation or upgrade	22	
Using the checklists	59	
Related documentation	60	

Then you should choose the appropriate installation or upgrade checklist.

Topic	Go to	Done?
Unattended workstation deployment (UWD). You can use these checklists only if you chose Honeywell installation services.	61	
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1.1 Starting an installation or an upgrade

This guide uses checklists and the specification forms to help you install Experion PKS and to upgrade to Experion PKS R210.

Important information before starting

ATTENTION

You must *not* install new Microsoft hot fixes or service packs on your Experion PKS system without consulting your local Honeywell Technical Assistance Center for compatibility. Installation of unqualified patches may cause the system to become unstable.

Only upgrade paths that have checklists defined in this *Software Installation and Upgrade Guide* are supported. These upgrade paths support only the currently implemented level 2 network topology. That is, these upgrade paths do not support changing the level 2 network topology as part of the upgrade. If you want to complete an upgrade path that is not defined in this *Software Installation and Upgrade Guide*, you must complete a clean installation.

Many virus attacks gain access through default or common passwords. Once you have installed or upgraded to Experion PKS, you should change the default Experion PKS Windows account passwords (see 467).

Experion PKS software is supplied on DVD media. Honeywell has certified the Sony DW-U18A IDE DVD drive. You should only use this DVD drive for Experion PKS installations or upgrades.

Experion PKS R210 does not support the use of a mapped DVD drive.

In our efforts to provide the most up-to-date information, updates to this *Software Installation and Upgrade Guide* are available on the Solution Support Online site at `http://www.acs.honeywell.com`.

Before installing Experion PKS, please check the Solution Support Online site for updates. If you are a new user, you can register for access to the Solution Support Online site at this URL.

To check the Solution Support Online site:

Step	Action
1	In your web browser application, type the following URL: `http://www.acs.honeywell.com`

Step	Action
2	Click **Login**.
3	Type your user name and password, and then click **Login**.
4	Choose **Support** > **Online Support** > **Solution Support Online**.
5	Select **SSOL**.
6	In the **Your Entitled Products** section, choose **Experion PKS**. *Software Installation and Upgrade Guide* updates are listed in the Experion PKS home page.

STOP	You have completed this task.

1.2 Information about the specification forms and checklists

This guide uses checklists and the specifications forms to help you install Experion PKS and to upgrade to Experion PKS.

ATTENTION

You must use the specifications forms and the checklists to avoid installation problems.

Also, each installation task typically includes a list of prerequisites—do not start a task unless you have satisfied its prerequisites.

There are three specification forms:

- Site specification form.

  This form is for collecting common information used across all installations, such as network properties and passwords.

- Server specification form.

  This form is for collecting specific information for each server computer that must be installed.

- Client specification form.

  This form is for collection specific information for each client computer that must be installed.

These forms help you to identify and document values that you will need to enter when installing Experion PKS. The server specification forms are also a useful reference when you later upgrade your Experion PKS system.

ATTENTION

These specification forms are required when performing many installation tasks. You must therefore fill in the relevant sections *before* starting the installation.

Once you have completed the specification forms for your installation requirements, you can start the installations by following the required installation checklists (see 59).

Filling in the site specification form

If the computers are part of a standalone network, you may not need to complete the common network properties section of the site specification form.

You must complete the common passwords section of the site specification form.

Filling in the server specification form

The server specification form contains several sections that *must* be completed. See the following table to identify which sections you need to complete.

Installation type	Server specification form sections to complete
Experion PKS Server on NT5Plus.	• NT5Plus Server properties. • Experion PKS server properties.
Experion PKS Server on Windows 2000.	• Windows 2000 Server properties. • Server TCP/IP properties.
Experion PKS eServer on NT5Plus.	• NT5Plus Server properties. • Experion PKS server properties. • eServer properties.
Experion PKS eServer on Windows 2000.	• Windows 2000 Server properties. • Server TCP/IP properties. • Experion PKS server properties. • eServer properties.
Experion PKS Mobile Station Server.	• Windows 2000 Server properties. • Server TCP/IP properties.
Experion PKS ACE on NT5Plus.	• NT5Plus Server properties.
Experion PKS ACE on Windows 2000.	• Windows 2000 Server properties. • Server TCP/IP properties.

Installation type	Server specification form sections to complete
Experion PKS SIM-C200 on NT5Plus.	• NT5Plus Server properties • Experion PKS server properties
Experion PKS SIM-C200 on Windows 2000.	• Windows 2000 Server properties. • Server TCP/IP properties.

Considerations

- You must complete a separate server specification form for each server (including redundant Experion PKS servers, ACE servers, SIM-C200 servers, and Mobile Station Servers).
- The server specification forms will be required if you ever upgrade or reconfigure your system—so remember to keep them (and the Experion PKS license) in a safe place for future reference.

Filling the client specification form

The client specification form contains several sections that *must* be completed. See the following table to identify which sections you need to complete.

Installation type	Client specification form sections to complete
Experion PKS client applications on XPPlus.	• XPPlus properties.
Experion PKS client applications on NT5Plus Professional.	• NT5Plus Professional properties.
Experion PKS client applications on Windows 2000 Professional.	• Windows 2000 Professional properties. • Client TCP/IP properties.

1.3 Site specification form

ATTENTION

Make a copy of this site specification form. The specification form identifies common values that are used across server and client installations. Most of the information in this specification form can be supplied by your system or network administrator.

Common network properties

This section is to collect and document common network properties, such as DNS servers. Descriptions of these properties are available (see 40).

Property	Value
DNS	
Preferred DNS server	
Alternate DNS server	
DNS suffixes	• • •
DNS suffix for this connection	
Register this connection's addresses in DNS	• Yes • No
Use this connection's DNS suffix in DNS registration	• Yes • No

Property	Value
	WINS
WINS addresses	•
	•
	•
Enable LMHOSTS lookup	• Yes
	• No
NetBIOS over TCP/IP	• Enable
	• Disable
	Domains / Workgroups
Domain or Workgroup	• Domain or workgroup name.
	• If using a domain:
	– Domain administrator user name:
	– Domain administrator password:

Common passwords

This section is to collect and document common account passwords. Descriptions of these properties are available (see 42).

Property	Value
Server passwords	
Administrator password	
mngr password	
OPC password	
Windows account name	
Password	
Modem connections	
User name	
Password	

1.4 Server specification form

ATTENTION

Make a copy of this server specification form for each server, including Experion PKS servers, ACE servers, SIM-C200 servers, and Mobile Station Servers. Fill in the details on the copy of this form before starting the installation.

NT5Plus Server properties

This section must be completed for NT5Plus Server installations. Descriptions of these properties are available (see 43)

Property	Value
Dell server type	• Dell PowerEdge 1400SC • Dell PowerEdge 1600SC • Dell PowerEdge 2500 • Dell PowerEdge 2550 • Dell PowerEdge 2600 • Dell PowerEdge 2650 • Other Dell PowerEdge
Dell Power Edge RAID Controller (PERC) type	• None • PERC, PERC 2/Sc, or 2/Dc • PERC 2, or 2/Si, or PERC 3/Si, or 3/Di • PERC 3/Qc, 3/Dc, 3/Dcl, 3/Sc, or PERC 4/Di, 4/im
Computer name	

Property	Value
Number of network interface cards (NICs)	• 1 • 2 • 3 • 4
Dell System Service tag	
NIC 1 MAC address	
NIC 1 IP address	
NIC 1 subnet mask	
NIC 2 MAC address, if installed	
NIC 2 IP address, if installed	
NIC 2 subnet mask, if installed	
NIC 3 MAC address, if installed	
NIC 3 IP address, if installed	
NIC 3 subnet mask, if installed	
NIC 4 MAC address, if installed	
NIC 4 IP address, if installed	
NIC 4 subnet mask, if installed	
FTE Community Name, if using FTE	
Customer name	
Company name	

Property	Value
Workgroup name	
Server client access license mode	• Per server • Per client
Number of client licenses	
System type	• Non-redundant server • Redundant primary server • Redundant backup server
ControlNet (PCIC) Card installed?	• Yes • No
ControlNet MAC Address	

Windows 2000 Server properties

This section must be completed for Windows 2000 server-based installations. Descriptions of these properties are available (see 45).

Property	Value
Name	
Organization	
Number of concurrent connections	
Server name	

Server TCP/IP properties

This section must be completed for Windows 2000 server-based installations. Descriptions of these properties are available (see 46)

Property	Adapter 1 value	Adapter 2 value
IP address		
Subnet mask		
Default gateway		

Experion PKS server properties

This section must be completed for Experion PKS server and eServer installations. Descriptions of these properties are available (see 47).

Property	Value
Name	
Organization	
Fast History collection interval	

eServer properties

This section must be completed for eServer installations. Descriptions of these properties are available (see 48).

Property	Value
StandardAccessAdmin password	
StandardAccessUser password	

1.5 Client specification form

ATTENTION

Make a copy of this client specification form for each client computer, and then fill in the details on the copy of this form before starting the installation.

XPPlus properties

This section must be completed for XPPlus installations. Descriptions of these properties are available (see 49).

Property	Value
Windows XP client platform	• Dell Precision Workstation 360 • Dell Precision Workstation 340
Dell System Service tag	
NIC 1 IP address	
NIC 2 IP address, if installed	
NIC 3 IP address, if installed	
NIC 4 IP address, if installed	
NIC 1 and NIC 2 participating in FTE community?	• No • Yes. FTE community name:

Property	Value
Icon Console present?	• No • Yes: Number of video displays: – 1 (single) – 2 (dual) – 4 (quad)
CD drive type	• Standard CD-ROM drive. • Read Write (CD-RW) drive. • DVD and read write combo (DVD/CD-RW) drive
Keyboard type	• Standard • Integrated keyboard (IKB) • Operator entry panel (OEP) and standard
TouchScreen Present?	• No • Yes: Type of TouchScreen – USB – Serial: COM port used COM1 COM2
Computer name	
Company name	
Workgroup name	
Customer name	

Property	Value
Disk partitions?	• No • Yes. Size of primary partition, in gigabytes (GB):

NT5Plus Professional properties

This section must be completed for NT5Plus Professional installations. Descriptions of these properties are available (see 50).

Property	Value
Dell computer type	• Dell Precision Workstation 360 • Dell Precision Workstation 340
Computer name	
Dell System Service tag	
Number of network interface cards (NICs)	• 1 • 2 • 3 • 4
NIC 1 MAC address	
NIC 1 IP address	
NIC 1 subnet mask	
NIC 2 MAC address, if installed	
NIC 2 IP address, if installed	
NIC 2 subnet mask, if installed	
NIC 3MAC address, if installed	
NIC 3 IP address, if installed	
NIC 3 subnet mask, if installed	
NIC 4 MAC address, if installed	

Property	Value
NIC 4 IP address, if installed	
NIC 4 subnet mask, if installed	
FTE Community Name, if using FTE	
Customer name	
Company name	
Workgroup name	

Windows 2000 Professional properties

This section must be completed for Windows 2000 Professional installations. Descriptions of these properties are available (see 51).

Property	Value
Name	
Organization	
Computer name	

Client TCP/IP properties

This section must be completed for Windows 2000 Professional installations. Descriptions of these properties are available (see 52).

Property	Adapter 1 value	Adapter 2 value
IP address		
Subnet mask		
Default gateway		

1.6 Site property descriptions

This section describes the property values that are collected in the site specification form.

Description of common network properties

Property	Description
Preferred DNS server	Ask your network administrator for the IP address of the preferred domain name server (DNS). Your company may have one or more DNS. The preferred DNS is the first DNS that your computer communicates with to resolve names to IP addresses. If the preferred DNS server is not available, your computer communicates with the alternate DNS, if one is supplied. If you are configuring a stand-alone network this parameter can be omitted.
Alternate DNS server	Ask your network administrator for the IP address of the alternate DNS. If you are configuring a stand-alone network this parameter can be omitted.
DNS suffixes	Ask your network administrator for the list and search order of DNS suffixes. If you are configuring a stand-alone network this parameter can be omitted.
DNS suffix for this connection	Ask your network administrator for this information. If you are configuring a stand-alone network this parameter can be omitted.
Register this connection's addresses in DNS?	Ask your network administrator for this information. If you are configuring a stand-alone network this parameter can be omitted.
Use this connection's DNS suffix in DNS registration?	Ask your network administrator for this information. If you are configuring a stand-alone network this parameter can be omitted.

Property	Description
WINS addresses	Ask your network administrator for the IP address of the windows internet name service (WINS). Your company may have one or more WINS. If you are configuring a stand-alone network this parameter can be omitted.
Enable LMHOSTS lookup?	Ask your network administrator if you need to maintain an LMHOSTS file. This file maps NetBIOS names (commonly used for computer names) to IP addresses.
NetBIOS over TCP/IP	Ask your network administrator if you need to enable or disable NetBIOS over TCP/IP.
Domain or Workgroup	If you are connecting to an existing network, ask your network administrator to identify the workgroup or domain name. If you use domains, you may also need a user account and password that has the appropriate privileges to add computers to a domain. If you have a stand-alone network, specify a workgroup with a name such as `Experion PKS_NW`. The name must be the same for all computers on the network.

Description of common password properties

Property	Description
Administrator password	The password for a Windows account with local administrator rights. **Note:** This password is case-sensitive. You need this password whenever you perform administrative tasks on the server. If you have redundant Experion PKS servers, this password must the same on server A and server B. If you have a DSA system, it is recommended that the Administrator password be the same on all Experion PKS servers used in that system.
mngr password	The passwords for the Windows accounts that are created by the Experion PKS installation wizard. The passwords are case sensitive, consist of at least eight characters, and include at least one non-alphabetic character. If you have redundant Experion PKS servers, this password must the same on server A and server B. If you have a DSA system, the Windows mngr account password must be the same on all Experion PKS servers used in that system.
OPC Windows account	Only applicable if you have an OPC server option. This is the Windows account and password that OPC clients run under.
Modem connections	The user account name and password for remote access. These values are only required if one or more client computers connect to the Experion PKS server through a modem.

1.7 Server property descriptions

This section describes the property values that are collected in the server specification form.

Description of NT5Plus Server properties

Property	Description
Dell server type	The Dell computer model that NT5Plus is being installed on.
Dell Power Edge RAID Controller (PERC) type	The RAID controller type installed on the Dell computer.
Computer name	The name of the server (see 53).
Number of network interface cards (NICs)	The number of network interface cards (NICs) installed on the computer. **Note:** You must identify the correct number of NICs installed on the computer, even if you do not intend to use all of them.
Dell system service tag	Dell computers have a Dell Server Tag label printed on the side of the Dell computer.
NIC MAC address	The NIC MAC address for each NIC in the computer.
NIC IP address	The NIC IP address for each NIC in the computer. Each NIC IP Address must be unique. **Note:** Some organizations maintain central control of IP address assignment, check with IT organization.
FTE Community Name, if using FTE	The FTE community name associated with the collection of FTE and non-FTE nodes that communicates with this computer. For more information, see the *Fault Tolerant Ethernet Installation and Service Guide*.
Customer name	Your name.

Property	Description
Company name	Your company name.
Workgroup name	The name of the Windows operating system workgroup associated with this computer. All computers that are associated with this server must have the same workgroup name.
Server client access license mode	Licenses can be per server or per seat. If the license mode is per server, the license is added to the server for any client to use, and the server must have one license for each client that accesses the server. If the license mode is per seat, the client that accesses the server provides the license. Each client must have a BackOffice client access license.
Number of client licenses	See the description for Concurrent Connections (see 45).
System type	The role of this server when used in a redundant server pair. If this server is to be used as a standalone server, click non-redundant server.
ControlNet (PCIC) card installed?	Identify if a ControlNet (PCIC) card is installed on this computer to communicate with ControlNet devices.

Description of Windows 2000 Server properties

Property	Description
Name Organization	A name and organization to associate with the copy of Windows 2000 that you are installing. The name can be a person's name or a group within your company, and the organization should be the company name. The name is *not* the name of the computer. **Note:** If you have a Distributed System Architecture (DSA), the Organization must be the same for all Experion PKS servers used in that system.
Number of concurrent connections	The number of Windows client access licenses (CALs) required. You need to enter the correct number of CALs for your Experion PKS system configuration. **Note:** If you require more than 5 CALs, you need to purchase and maintain the required number of additional CALs.

<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td></td><td>
For non-redundant Experion PKS systems
<table>
<tr><th>Number of extra operator stations</th><th>Number of CALs required</th></tr>
<tr><td>5</td><td>5</td></tr>
<tr><td>6 to 10</td><td>10</td></tr>
<tr><td>11 to 15</td><td>15</td></tr>
<tr><td>16 to 20</td><td>20</td></tr>
</table>
For redundant Experion PKS systems
<table>
<tr><th>Number of extra operator stations</th><th>Number of CALs required</th></tr>
<tr><td>8</td><td>5</td></tr>
<tr><td>9 to 13</td><td>10</td></tr>
<tr><td>14 to 18</td><td>15</td></tr>
<tr><td>19 to 20</td><td>20</td></tr>
</table>
</td></tr>
<tr><td>Server name</td><td>The name of the server computer (the computer name) (see 53).</td></tr>
</table>

Description of server TCP/IP properties

ATTENTION

If you have a dual network system, you must specify values for both adapters.

Property	Description
IP address	If you have an existing network, this will be provided by your network administrator. Otherwise, specify something like `192.186.0.`*`X`*, where *X* is a unique number for each network adapter (and usually each host) on the network. This number can be between `1` and `254`.
Subnet mask	If you have an existing network, this will be provided by your network administrator. Otherwise, specify `255.255.255.0`.
Default gateway	If you have an existing network, this will be provided by your network administrator. If the computer is connected to a stand-alone network, leave this blank.

Description of Experion PKS server properties

Property	Description
Name Organization	A name and organization to associate with the copy of Windows 2000 that you are installing. The name can be a person's name or a group within your company, and the organization should be the company name. The name is *not* the name of the computer. **Note:** If you have a Distributed System Architecture (DSA), the Organization must be the same for all Experion PKS servers used in that system.
Fast History collection interval	The interval at which the server collects fast history snapshots for point parameters for which fast history collection is enabled. The interval can be between 1 and 30 seconds (the default is 5 seconds). **Note:** If you make extensive use of fast history, an excessively short interval may place a heavy load on the server.

Description of eServer properties

Property	Description
System password	The password used by people performing administrative tasks on the eServer.
User password	The password used by the eServer's standard access components to access Experion PKS.

1.8 Client property descriptions

Description of XPPlus properties

Property	Description
Windows XP client platform	The Dell computer model that XPPlus is being installed on.
Dell system service tag	Dell computers have a Dell Server Tag label printed on the side of the Dell computer.
NIC IP address	The NIC IP address for each NIC in the computer. Each NIC IP address must be unique. **Note:** Some organizations maintain central control of IP address assignment, check with IT organization.
NIC 1 and NIC 2 participating in FTE community?	The FTE community name associated with the collection of FTE and non-FTE nodes that communicates with this computer. For more information, see the *Fault Tolerant Ethernet Installation and Service Guide*.
Icon Console present?	If this computer is installed in an Icon Console, select this check box and then click the number of video displays in the Icon Console that are connected to this computer.
TouchScreen Present?	If the computer is connected with a TouchScreen device, select this checkbox and then click the type of TouchScreen device connected to the computer. If a serial TouchScreen is connected to the computer, select the COM port to which the TouchScreen device is connected.
CD drive type	The CD drive installed or connected to this computer.
Keyboard type	The keyboard type that connected to this computer.
Computer name	The name of the server (see 53).

Property	Description
Company name	Your company name.
Workgroup name	The name of the Windows operating system workgroup associated with this computer. All computers that are associated with this server must have the same workgroup name.
Customer name	Your name.
Disk partitions	If you want two partitions created on the hard disk of this computer, click Yes and then type the size of the primary partition. The size of the secondary partition is automatically calculated as the remaining space on the hard disk.

Description of NT5Plus Professional properties

Property	Description
Dell computer type	The Dell computer model that NT5Plus is being installed on.
Computer name	The name of the server (see 53).
Dell system service tag	Dell computers have a Dell Server Tag label printed on the side of the Dell computer.
Number of network interface cards (NICs)	The number of network interface cards (NICs) installed on the computer. **Note:** You must identify the correct number of NICs installed on the computer, even if you do not intend to use all of them.
NIC MAC address	The NIC MAC address for each NIC in the computer.

Property	Description
NIC IP address	The NIC IP address for each NIC in the computer. Each NIC IP Address must be unique. **Note:** Some organizations maintain central control of IP address assignment, check with IT organization.
FTE Community Name, if using FTE	The FTE community name associated with the collection of FTE and non-FTE nodes that communicates with this computer. For more information, see the *Fault Tolerant Ethernet Installation and Service Guide*.
Customer name	Your name.
Company name	Your company name.
Workgroup name	The name of the Windows operating system workgroup associated with this computer. All computers that are associated with this server must have the same workgroup name.

Description of Windows 2000 Professional properties

Property	Description
Name Organization	A name and organization to associate with the copy of Windows 2000 that you are installing. The name can be a person's name or a group within your company, and the organization should be the company name. The name is *not* the name of the computer. **Note:** If you have a Distributed System Architecture (DSA), the Organization must be the same for all Experion PKS servers used in that system.
Computer name	The name of this computer (see 53).

Description of client TCP/IP properties

ATTENTION

If you have a dual network system, you must specify values for both adapters.

Property	Description
IP address	If you have an existing network, this will be provided by your network administrator. Otherwise, specify something like `192.186.0.`*x*, where *x* is a unique number for each network adapter (and usually each host) on the network. This number can be between `1` and `254`.
Subnet mask	If you have an existing network, this will be provided by your network administrator. Otherwise, specify `255.255.255.0`.
Default gateway	If you have an existing network, this will be provided by your network administrator. If the computer is connected to a stand-alone network, leave this blank.

1.9 Additional information

This section provides additional information about values entered in the specification forms.

About computer names

All Experion PKS server and client computers must have a unique name and IP address.

Basic naming restrictions

There are basic restrictions when naming server and client computers, which are:

- The computer name must be 13 characters, or less, in length.
- The computer name must begin with an alphabetic character, such as a to z, or A to Z.
- The computer name cannot contain spaces or other non-standard characters.
- The last letter of the computer name is restricted and varies based on the Experion PKS system topology. These restrictions are described in the following sections.

Supported topologies

There are twosupported Experion PKS system topologies.

Non-redundant, standalone server

In this topology, both server and client computer names cannot end with any of the following letters:

- A
- B

Redundant servers (two servers)

In this topology, the server computer names have a common base name, which must follow the basic naming restrictions. The primary server computer name is the base name with the letter A appended, and the backup server computer name is the base name with the letter B appended.

For example, if the base name is HSSERV:

- The primary Experion PKS server computer name would be HSSERVA.
- The backup Experion PKS server computer name would be HSSERVB.

Client computer names cannot end with any of the following letters:

- A
- B

About Windows accounts, Station operator IDs and Experion PKS security levels

When you install Experion PKS, the installation wizard creates some Windows accounts and Station operator IDs.

ATTENTION

The Windows accounts, Station operator IDs and Experion PKS security levels can have the same names. Consequently, it is important that you do not confuse them.

Windows accounts

The installation wizard creates several Windows accounts and groups. The following table shows the account details after you install Experion PKS.

Windows account	Group						
	Honeywell Administrators	Administrators[1]	Engineers	Engineering Repository Administrator	Engineering Repository User	Users	Backup Operators
mngr[2]	Yes					Yes	Yes
Administrator[3]	Yes	Yes					

[1] These are default Windows operating system groups.

[2] Experion PKS services and some other Experion PKS processes run under the mngr account.

[3] This is a default Windows account.

Station operator IDs

The installation wizard also creates the following Station operator ID.

Operator ID	Description
mngr	This is the default operator ID, for which the: • Security level is `MNGR` (see 56). • Default password is `mngr1` (note the use of lower case—passwords are case-sensitive). If you intend to use operator-based security, you use this ID to log on to Station so that you can add other IDs to your system. If you intend to use Station-based security, you do not need to use this ID, or create any other IDs.

Experion PKS security levels

Experion PKS provides the following security levels that apply when you use Station. (If you use Station-based security, you can "jump" to a particular security level by typing the password for that level on that Station. If you use operator-based security, each person is given a unique operator ID and assigned a specific security level.)

Security level	Description
View Only	Only allows viewing. This level is only available with operator-based security.
Ack Only	Allows viewing and alarm acknowledgement. This level is only available with operator-based security.
OPER	The standard operator level that allows alarm acknowledgement and routine control.
SUPV	Provides access supervisor-level functions.
ENGR	Provides access to engineer-level functions.

Security level	Description
MNGR	Provides unrestricted access to all functions.

2. Using the checklists

This section describes the checklists that identify the high-level tasks for installing Experion PKS and upgrading to Experion PKS R210.

This guide makes extensive use of checklists to guide you through each installation or upgrade scenario. For example, if you are installing Experion PKS server on a new computer, there is a single checklist that identifies each separate task that you must do to complete this installation.

When using a checklist:

- Make a copy of the checklist so that it is easier to keep track of where you are in the installation or upgrade.
- Make sure you satisfy the **Prerequisites** before starting each task.
- Complete the tasks in order shown, unless specified otherwise.
- Complete only the specific task, and then return to the table that led to the task.
- Some of the tasks and steps have conditional statements. For example, the statement *if you have installed Windows 2000, continue to page 6*, is a conditional statement with a directive. When the condition is true, follow the directive and then continue with the remaining tasks or steps, unless the directive is to skip tasks or steps. When the condition is *not* true, continue to the next task or step.
- Mark off each task in the **Done** column after completing it.

STOP	You have completed this task.

2.1 Related documentation

The following Experion PKS documents describe information that may affect the software installation and upgrade tasks. Please read these documents before starting an Experion PKS software installation or upgrade.

Document	Description
Common Components Software Change Notice	Includes last-minute information pertaining to Common Components installations.
EMB User's Guide	How to start using Enterprise Model Builder.
Experion PKS Software Change Notice	The *Experion PKS Software Change Notice* is supplied as a book and contains last-minute information that was not able to be included in the standard documents. You must read it to find out whether it contains any installation-related information that is applicable to you.
Experion PKS Process Controller Installation Guide	If you are configuring process points, this guide describes how to install the Experion PKS process controller.
Interface References and *Interface Implementation Guides*	There is a separate reference for each type of process and SCADA interface supported by Experion PKS. Each reference includes configuration information specific to a particular controller or interface.
Server and Client Configuration Guide	Your main reference after installation, it describes how to configure Experion PKS.
Server and Client Planning Guide	Describes design options and planning tasks which you must perform before starting installation.

STOP You have completed this task.

3. Unattended workstation deployment (UWD) checklists

ATTENTION

Experion PKS R210 does not support the use of a mapped DVD drive.

With unattended workstation deployment, you can install new Experion PKS systems with minimal interaction. Unattended workstation deployment is an automated process that installs the Windows operating system and then installs the selected Experion PKS system components.

This is the preferred installation method, however, it is only available if the computer was ordered from Honeywell with the Installation Services option.

With unattended workstation deployment you can install:

- Experion PKS server.
- Experion PKS eServer.
- Experion PKS ACE.
- Experion PKS SIM-C200.
- Experion PKS Console Station and client applications.
- Experion PKS Flex Station and client applications.

Prerequisites

- You have read the *Software Change Notice (see* 60) and *Planning Guide*.
- Your hardware and software meet the minimum requirements (see 595).

Tasks

Installation type	Go to
Experion PKS server on NT5Plus Server.	63
Experion PKS eServer on NT5Plus Server.	70

Installation type	Go to
Experion PKS ACE on NT5Plus Server.	71
Experion PKS SIM-C200 on NT5Plus Server	73
Experion PKS Console Station on NT5Plus Professional.	74
Experion PKS Console Extension Station on XPPlus.	75
Experion PKS Console Extension Station on NT5Plus Professional.	77
Experion PKS Flex Station on XPPlus.	75
Experion PKS Flex Station on NT5Plus Professional.	77

3.1 Installing Experion PKS server on NT5Plus Server

Prerequisites

- You have completed the site specification form and a server specification form (see 24).
- Experion PKS R210 media.
- NT5Plus Server CDs.
- Microsoft OEM product key for Windows 2000 Server.

Tasks

Installation type	Go to
Non-redundant server.	64
Redundant servers.	66

Non-redundant server tasks checklist

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install NT5Plus Server.	164	
Update the server's `hosts` file.	207	
If the server has a PCIC card installed and is to use ControlNet, do the following:		
• Register the Electronic Data Sheets (EDS).	357	
• Move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks, configure the RSLinx drivers.	360	
Configure any peripherals, such as modems and printers, which are connected to the server.	520	
If you installed the Experion PKS server for use with process points, upgrade the firmware in hardware components.	368	
If your site implements Windows security policies, install your local policies in the normal manner.		

Task	Go to	Done?
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP	You have completed all tasks.

Redundant server tasks checklist

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Server A (primary server)

Complete the tasks in the following order on the *server A* only.

Task	Go to	Done?
Install NT5Plus Server.	164	
Update the server's `hosts` file.	207	
If the server has a PCIC card installed and is to use ControlNet, do the following:		
• Register the Electronic Data Sheets (EDS).	357	
• Move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks, configure the RSLinx drivers.	360	
Configure any peripherals, such as modems and printers, which are connected to the server.	520	
If you installed the Experion PKS server for use with process points, upgrade the firmware in hardware components.	368	
If your site implements Windows security policies, install your local policies in the normal manner.		

Task	Go to	Done?
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

Server B (backup server)

Complete the tasks in the following order on server B only.

Task	Go to	Done?
Install NT5Plus Server.	164	
Update the server's `hosts` file.	207	
If the server has a PCIC card installed and is to use ControlNet, do the following:		
• Register the Electronic Data Sheets (EDS).	357	
• Move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks, configure the RSLinx drivers.	360	
Configure any peripherals, such as modems and printers, which are connected to the server.	520	
If you installed the Experion PKS server for use with Process points, upgrade the firmware in hardware components.	368	
If your site implements Windows security policies, install your local policies in the normal manner.		

Task	Go to	Done?
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

Final tasks

Complete the remaining tasks.

Task	Go to	Done?
Configure Experion PKS server redundancy. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring and monitoring a redundant server system.	*Knowledge Builder*	
STOP You have completed all tasks.		

3.2 Installing Experion PKS eServer on NT5Plus Server

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have completed the site specification form and a server specification form (see 24).
- Experion PKS R210 media.
- NT5Plus Server CD.
- Microsoft product key for Windows 2000 Server.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install NT5Plus Server.	164	
Update the server's `hosts` file.	207	
If your site implements Windows security policies, install your local policies in the normal manner.		
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

3.3 Installing Experion PKS ACE on NT5Plus Server

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have completed the site specification form and a server specification form (see 24).
- Experion PKS R210 media.
- NT5Plus Server CD.
- Microsoft product key for Windows 2000 Server.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install NT5Plus Server.	164	
Update the computer's `hosts` file.	207	
Configure the CDA-SP service to use the same account and password of the OPC server.	256	
Configure the CDA-SP account to lock pages in memory.	259	
If the CDA-SP service and OPC server are on different network domains, the two domains must be configured as mutually trusted domains.	260	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		

Task	Go to	Done?
Install FTE and System Management components.	388	
STOP You have completed all tasks.		

3.4 Installing Experion PKS SIM-C200 on NT5Plus Server

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have completed the site specification form and a server specification form (see 24).
- Experion PKS R210 media.
- NT5Plus Server CD.
- Microsoft product key for Windows 2000 Server.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install NT5Plus Server.	164	
Update the computer's `hosts` file.	207	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

3.5 Installing Experion PKS Console Station on NT5Plus Professional

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- NT5Plus Professional CD.
- Microsoft product key for Windows 2000 Professional.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install NT5Plus Professional.	171	
Update the computer's `hosts` file.	207	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

3.6 Installing Experion PKS Console Extension Station or Flex Station on XPPlus

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- XPPlus media.
- Microsoft product key for Windows XP Professional.
- Microsoft Windows XP Professional CD, Microsoft Windows XP Professional SP1 CD, or Microsoft Windows XP Professional SP1a CD.
- If multiple video displays are required, a Matrox 450 MMS X2 or Matrox 450 MMS X4 video card.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
If this computer is to be connected to multiple video displays, for example, if this computer is to be installed in an Icon Console, install the Matrox 450 MMS video card.	*Matrox installation instructions*	
For USB IKBs, connect the IKB to a USB port.	506	
For non-USB IKBs, connect the IKB to the computer using the Honeywell OEP/IKB adapter.	504	
Connect the OEP to the computer using the Honeywell OEP/IKB adapter.	539	
Install XPPlus.	177	

Task	Go to	Done?
Update the computer's `hosts` file.	207	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

3.7 Installing Experion PKS Console Station Extension or Flex Station on NT5Plus Professional

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- NT5Plus Professional CD.
- Microsoft product key for Windows 2000 Professional.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install NT5Plus Professional.	171	
Update the computer's `hosts` file.	207	
If required, install and configure a FlashPoint video capture card.	508	
For USB IKBs:		
• Install the IKB service.	537	
• Connect the IKB to a USB port.	506	
For non-USB IKBs:		
• Install the IKB service.	537	
• Connect the IKB to the computer using the Honeywell OEP/IKB adapter.	504	
• Configure COM1 port as COM3.	541	

Task	Go to	Done?
Install the IKB service.	537	
Connect the OEP to the computer using the Honeywell OEP/IKB adapter.	539	
Configure COM1 port as COM3.	541	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

4. New installation checklists

This section identifies the high-level tasks for clean installations of Experion PKS software.

ATTENTION

Honeywell delivers Experion PKS computers with all the required software preinstalled. You must only follow these tasks if you are reinstalling one or more of the Experion PKS components or if you are installing Experion PKS on computers that were not purchased from Honeywell.

ATTENTION

Experion PKS R210 does not support the use of a mapped DVD drive.

To install an	Go to
Experion PKS server.	80
Experion PKS eServer.	91
Experion PKS ACE.	93
Experion PKS SIM-C200.	97
Mobile Station Server.	100
Experion PKS Console Station.	107
Experion PKS Console Extension Station.	111
Experion PKS Flex Station.	111

4.1 Installing Experion PKS server

This is the checklist for a clean installation of Experion PKS server.

Prerequisites

- You have read the *Software Change Notice* (see 60) and *Planning Guide*.
- You have completed the site specification form and a server specification form (see 24).
- Your hardware and software meet the minimum requirements (see 595).

Considerations

- Controllers can be installed independently of Experion PKS (see 545).
- If the Experion PKS server is to be used in a Distributed System Architecture (DSA), the Windows mngr account password must be the same for all Experion PKS servers within the system.

Tasks

Installation type	Go to
Non-redundant server.	81
Redundant servers.	84

Non-redundant server tasks checklist

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Complete the tasks in the following order.

Task	Go to	Done?
If required, install a ControlNet PCI Communication Interface Card, also known as a PCIC card. See Experion PKS R210 > Installation and Upgrades > ControlNet Installation Guide > ControlNet PCIC Card Installation > Installing the PCIC Card.	*Knowledge Builder*	
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file.	207	
If required, install Microsoft Excel.	213	
Protect against viruses.	216	
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
If a software protection key, also known as a dongle, is supplied in the Experion PKS media box, install this key on the printer port (LPT1:) of the computer.		
If required, install a network interface card.	500	
If required, install serial adapters.	502	

Task	Go to	Done?
If required, install terminal server(s).	547	
If you are installing Experion PKS for use with Process points:		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx.	354	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Engineering Tools.	225	
• Install Experion PKS server.	226	
If you are installing Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install Knowledge Builder.	479	
• Install Experion PKS server.	226	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
For ControlNet supervisory networks:		
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks:		
• If required, move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Configure the RSLinx drivers.	360	

Task	Go to	Done?
If required, set up Microsoft Excel data reports.	393	
Configure any peripherals, such as modems and printers, which are connected to the server.	520	
If you installed the Experion PKS server for use with process points, upgrade the firmware in hardware components.	368	
If this computer is a member of a Windows workgroup or Windows NT domain, set up this server as a time source.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, implement your local Windows security policies.	217	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
If you require Event Archiving displays or email notification for Alarm Pager, do the following:		
• Install Microsoft Internet Information Server (IIS).	398	
• **For Event Archiving displays only:** configure IIS for Event Archiving displays.	400	
• Secure IIS using the IIS Lockdown Tool.	401	
Defragment the hard drive.	621	

STOP You have completed all tasks.

Redundant server tasks checklist

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Server A

Complete the tasks in the following order on the *server A* only.

Task	Go to	Done?
If required, install a ControlNet PCI Communication Interface Card, also known as a PCIC card. See Experion PKS R210 > Installation and Upgrades > ControlNet Installation Guide > ControlNet PCIC Card Installation > Installing the PCIC Card.	*Knowledge Builder*	
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file.	207	
If required, install Microsoft Excel.	213	
Protect against viruses.	216	
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
If a software protection key, also known as a dongle, is supplied in the Experion PKS media box, install this key on the printer port (LPT1:) of the computer.		
If required, install a network interface card.	500	

Task	Go to	Done?
If required, install serial adapters.	502	
If required, install terminal server(s).	547	
If you are installing Experion PKS for use with Process points:		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx.	354	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Engineering Tools.	225	
• Install Experion PKS server.	226	
If you are installing Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install Knowledge Builder.	479	
• Install Experion PKS server.	226	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
For ControlNet supervisory networks:		
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	

Task	Go to	Done?
For Ethernet supervisory networks:		
• If required, move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Configure the RSLinx drivers.	360	
If required, set up Microsoft Excel data reports.	393	
Configure any peripherals, such as modems and printers, which are connected to the server.	520	
If your site implements Windows security policies, install your local policies in the normal manner.		
If this computer is a member of a Windows workgroup or Windows NT domain, set up this server as a time source.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	

Server B

Complete the tasks in the following order on server B only.

Task	Go to	Done?
If required, install a ControlNet PCI Communication Interface Card, also known as a PCIC card. See Experion PKS R210 > Installation and Upgrades > ControlNet Installation Guide > ControlNet PCIC Card Installation > Installing the PCIC Card.	*Knowledge Builder*	
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file.	207	
If required, install Microsoft Excel.	213	
Protect against viruses.	216	
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
If a software protection key, also known as a dongle, is supplied in the Experion PKS media box, install this key on the printer port (LPT1:) of the computer.		
If required, install a network interface card.	500	
If required, install serial adapters.	502	
If required, install terminal server(s).	547	

Task	Go to	Done?
If you are installing Experion PKS for use with Process points:		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx.	354	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Engineering Tools.	225	
• Install Experion PKS server.	226	
If you are installing Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install Knowledge Builder.	479	
• Install Experion PKS server.	226	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
For ControlNet supervisory networks:		
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks:		
• If required, move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Configure the RSLinx drivers.	360	
If required, set up Microsoft Excel data reports.	393	

Task	Go to	Done?
Configure any peripherals, such as modems and printers, which are connected to the server.	520	
If your site implements Windows security policies, install your local policies in the normal manner.		
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computer's time and date with the server using time synchronization.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	

Final tasks

Complete the remaining tasks.

Task	Go to	Done?
If you installed the Experion PKS server for use with process points, upgrade the firmware in hardware components.	368	
If required, implement your local Windows security policies.	217	

Task	Go to	Done?
If you require Event Archiving displays or email notification for Alarm Pager, do the following on each server:		
• Install Microsoft Internet Information Server (IIS).	398	
• **For Event Archiving displays only:** configure IIS for Event Archiving displays.	400	
• Secure IIS using the IIS Lockdown Tool.	401	
Configure Experion PKS server redundancy. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring and monitoring a redundant server system.	*Knowledge Builder*	

STOP You have completed all tasks.

4.2 Installing Experion PKS eServer

This is the checklist for a clean installation of eServer.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60) and *Planning Guide*.
- You have completed the site specification form and a server specification form (see 24).
- Your hardware and software meet the minimum requirements (see 595).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Install Microsoft Internet Information Server (IIS).	398	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file.	207	
If required, install Microsoft Excel.	213	
Protect against viruses.	216	

Task	Go to	Done?
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
If required, install a network interface card.	500	
Start the Experion PKS eServer installation.	268	
Install Microsoft SQL Server.	223	
Install the .NET framework.	224	
Install Knowledge Builder.	479	
Install Experion PKS eServer.	270	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computer's time and date with the server using time synchronization.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, implement your local Windows security policies.	217	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	

STOP You have completed all tasks.

4.3 Installing Experion PKS ACE

This is the checklist for a clean installation of Application Control Environment (ACE).

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60) and *Planning Guide*.
- You have completed the site specification form and a server specification form (see 24).
- Your hardware and software meet the minimum requirements (see 595).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
If required, install a ControlNet PCI Communication Interface Card, also known as a PCIC card. See Experion PKS R210 > Installation and Upgrades > ControlNet Installation Guide > ControlNet PCIC Card Installation > Installing the PCIC Card.	*Knowledge Builder*	
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file.	207	
Protect against viruses.	216	

Task	Go to	Done?
Install the Dell OpenManage software update.	469	
SKIP THIS STEP if you installed NT5Plus Server.		
If required, install a network interface card.	500	
If required, install serial adapters.	502	
Start the Experion PKS ACE installation.	252	
If this ACE node is installed to do peer to peer communication using ControlNet devices, you must install RSLinx. RSLinx is not required for ACE to ACE peer communications or ACE to TPN server communications.		
• If RSLinx is required, install RSLinx.	354	
• If RSLinx is not required, cancel the RSLinx installation.	356	
Install the .NET framework.	224	
Install Knowledge Builder.	479	
Install the Engineering Tools client.	241	
If you have a CAB license and will be loading a SIM-ACE, install the Microsoft Visual Studio remote debugger.	255	
Complete the post ACE installation	256	
Redirection Manager must be installed on every ACE node that runs an OPC client requiring redirection.		
If required, install Redirection Manager.	416	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	

Task	Go to	Done?
If RSLinx was installed, configure it:		
• To configure RSLinx drivers for ControlNet supervisory networks.	358	
• To configure RSLinx drivers for Ethernet supervisory networks.	360	
If ACE will be hosting OPC Gateway, create the Windows mngr user account on the OPC server.	409	
If ACE will be hosting OPC Gateway, configure the CDA-SP service to use the same account and password of the OPC server.	256	
If ACE will be hosting OPC Gateway, configure the CDA-SP account to lock pages in memory.	259	
If ACE will be hosting OPC Gateway, and the CDA-SP service and OPC server are on different network domains, the two domains must be configured as mutually trusted domains.	260	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computer's time and date with the server using time synchronization.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	

STOP	You have completed all tasks.

4.4 Installing Experion PKS SIM-C200

This is the checklist for a clean installation of a simulation control environment (SIM-C200).

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60) and *Planning Guide*.
- You have completed the site specification form and a server specification form (see 24).
- Your hardware and software meet the minimum requirements (see 595).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
If required, install a ControlNet PCI Communication Interface Card, also known as a PCIC card. See Experion PKS R210 > Installation and Upgrades > ControlNet Installation Guide > ControlNet PCIC Card Installation > Installing the PCIC Card.	*Knowledge Builder*	
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file.	207	
Protect against viruses.	216	

Task	Go to	Done?
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
If required, install a network interface card.	500	
If required, install serial adapters.	502	
Start the Experion PKS SIM-C200 installation.	264	
If this SIM-C200 node to is to do peer to peer communication using ControlNet devices, you must install RSLinx. RSLinx is not required for SIM-C200 to ACE peer communications or SIM-C200 to TPN server communications.		
• If RSLinx is required, install RSLinx.	354	
• If RSLinx is not required, cancel the RSLinx installation.	356	
Install the .NET framework.	224	
Install Knowledge Builder.	479	
Install the Engineering Tools client.	241	
Restart the computer.		
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
If RSLinx was installed, configure it:		
• To configure RSLinx drivers for ControlNet supervisory networks.	358	
• To configure RSLinx drivers for Ethernet supervisory networks.	360	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computer's time and date with the server using time synchronization.	456	

Task	Go to	Done?
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	

STOP You have completed all tasks.

4.5 Installing Remote Engineering and Station Server

This section describes the installation of Remote Engineering and Station Server for Mobile Access for Station and Mobile Access for eServer Premium.

Mobile Access for Station

This is the checklist for a clean installation of a Remote Engineering and Station Server for use with Mobile Access for Station.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60) and *Planning Guide*.
- You have completed the site specification form and a server specification form (see 24).
- Your hardware and software meet the minimum requirements (see 595).
- Rotary stations must be licensed and created on the Experion PKS server. For more information on creating rotary stations, see the *Quick Builder Reference* in Knowledge Builder.
- Ensure that your Experion PKS server has enough licensed Stations to allow for concurrent Station and Remote Engineering and Station Server connections.
- You have the required Client Access Licenses (CALs) for Terminal Services, which is an authorization key. You received this authorization key when you purchased CALs from Honeywell, or another vendor.

Considerations

- Remote Engineering and Station Server requires a Microsoft Terminal Services Licensing Server. If your organization already has a Microsoft Terminal Services Licensing Server, you can use this server to assign Client Access Licenses (CALs) to remote devices. In this situation, do *not* install the Terminal Services Licensing option.

- Remote Engineering and Station Server can serve up to five connections at the same time.
- Chart visualization is *not* supported.
- Rotary stations are the only connection type supported.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	
Update the server's `hosts` file. If you are providing Mobile Access for eServer Premium users, include an entry in the `hosts` file for the eServer.	207	
Protect against viruses.	216	
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
Install Terminal Services on the Remote Engineering and Station Server. If required, install the Terminal Services Licensing Server.	274	
If you installed the Terminal Services Licensing Server, activate it.	276	
Install the Client Access Licenses (CALs).	278	
Set Terminal Services to Install mode.	281	

Task	Go to	Done?
If you are installing Mobile Access for Station for use with Process points:		
• Start the Experion PKS Flex Station installation.	237	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Engineering Tools client.	241	
• If you want to create or edit CAB blocks on this computer, install the CAB Developer, which includes Microsoft Visual Studio. If you don't install CAB Developer, you can still import CAB types using Control Builder on this computer.	242	
• Install Experion PKS Flex Station and other client applications.	246	
If you are installing Mobile Access for Station for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS Flex Station installation.	237	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Experion PKS Console Extension Station or Flex Station and other client applications.	246	
If required, install Signon Manager.	249	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize the computer with the server.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, implement your local Windows security policies.	217	

Task	Go to	Done?
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	
Configure the Flex Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Stations and Consoles.	*Knowledge Builder*	
Set Terminal Services to Application mode.	282	
If you are using an existing Terminal Services Licensing Server, configure the Remote Engineering and Station Server to access it.	283	
Limit the number of connections to the Remote Engineering and Station Server.	284	
Create the Remote Engineering and Station Server users.	285	
If providing Mobile Access for Station, configure the Mobile Access for Station users.	286	

STOP You have completed all tasks.

Mobile Access for eServer Premium

This is the checklist for a clean installation of a Remote Engineering and Station Server for use with Mobile Access for eServer Premium.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60) and *Planning Guide*.
- You have completed the site specification form and a server specification form (see 24).
- Your hardware and software meet the minimum requirements (see 595).
- You must have an eServer installed and configured.
- You have the required Client Access Licenses (CALs) for Terminal Services, which is an authorization key. You received this authorization key when you purchased CALs from Honeywell, or another vendor.

Considerations

- Remote Engineering and Station Server requires a Microsoft Terminal Services Licensing Server. If your organization already has a Microsoft Terminal Services Licensing Server, you can use this server to assign Client Access Licenses (CALs) to remote devices. In this situation, do *not* install the Terminal Services Licensing option.
- Remote Engineering and Station Server can serve up to five connections at the same time.
- Chart visualization is *not* supported.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install Windows 2000 Server. SKIP THIS STEP if you installed NT5Plus Server.	189	
Configure the display. SKIP THIS STEP if you installed NT5Plus Server.	204	

Task	Go to	Done?
Update the server's `hosts` file. If you are providing Mobile Access for eServer Premium users, include an entry in the `hosts` file for the eServer.	207	
Protect against viruses.	216	
Install the Dell OpenManage software update. SKIP THIS STEP if you installed NT5Plus Server.	469	
Install Terminal Services on the Remote Engineering and Station Server. If required, install the Terminal Services Licensing Server.	274	
If you installed the Terminal Services Licensing Server, activate it.	276	
Install the Client Access Licenses (CALs).	278	
Set Terminal Services to Install mode.	281	
If required, install Signon Manager.	249	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize the computer with the server.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, implement your local Windows security policies.	217	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	

Task	Go to	Done?
Defragment the hard drive.	621	
Set Terminal Services to Application mode.	282	
If you are using an existing Terminal Services Licensing Server, configure the Remote Engineering and Station Server to access it.	283	
Limit the number of connections to the Remote Engineering and Station Server.	284	
Create the Remote Engineering and Station Server users.	285	
Configure the Mobile Access for eServer Premium users.	287	

STOP You have completed all tasks.

4.6 Installing Experion PKS Console Station

This is the checklist for a clean installation of Experion PKS Console Station. During this installation, you can also install other Experion PKS client applications, such as HMIWeb Display Builder, Display Builder, or Quick Builder.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60).
- Your hardware and software meet the minimum requirements (see 595).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install Windows 2000 Professional. SKIP THIS STEP if you installed NT5Plus Professional.	194	
If required, add the computer to a domain.	200	
Configure the display. SKIP THIS STEP if you installed NT5Plus Professional.	204	
Update the computer's `hosts` file.	207	
If required, install Microsoft Excel.	213	
Protect against viruses.	216	
If required, install a network interface card.	500	

Task	Go to	Done?
If required, install serial adapters.	502	
If required, install and configure a video capture card.	508	
For USB IKBs:		
• Install the IKB service.	537	
• Connect the IKB to a USB port.	506	
For non-USB IKBs:		
• Install the IKB service.	537	
• Connect the IKB to the computer using the Honeywell OEP/IKB adapter.	504	
• Configure COM1 port as COM3.	541	
If you are installing Experion PKS Console Station for use with Process points:		
• Start the Experion PKS Console Station installation.	234	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Engineering Tools.	225	
• If you want to create or edit CAB blocks on this computer, install the CAB Developer, which includes Microsoft Visual Studio. If you don't install CAB Developer, you can still import CAB types using Control Builder on this computer.	242	
• Install Experion PKS Console Station and other client applications.	243	

Task	Go to	Done?
If you are installing Console Station for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS Console Station installation.	234	
• Install Knowledge Builder.	479	
• Install Experion PKS Console Station and other client applications.	243	
If required, install Signon Manager.	249	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computer's time and date with the server using time synchronization.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
If required, implement your local Windows security policies.	217	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	
Configure Console Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Stations > Configuring a Console Station.	*Knowledge Builder*	
If this computer is for a Honeywell Icon Console, prepare and install this computer in the Icon Console.	531	

STOP	You have completed all tasks.

4.7 Installing Experion PKS Console Extension Station or Flex Station

This is the checklist for a clean installation of Experion PKS Console Extension Station or Experion PKS Flex Station. During this installation, you can also install other Experion PKS client applications, such as Configuration Studio, Enterprise Model Builder, HMIWeb Display Builder, or Quick Builder.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- You have read the *Software Change Notice* (see 60).
- Your hardware and software meet the minimum requirements (see 595).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install Windows operating system:		
• Windows 2000 Professional.	194	
– or –		
• Windows XP Professional.	184	
SKIP THIS STEP if you installed NT5Plus or XPPlus Professional.		
Configure the display.	204	
SKIP THIS STEP if you installed NT5Plus or XPPlus Professional.		
Update the client's `hosts` file.	207	

Task	Go to	Done?
If required, install Microsoft Excel.	213	
Protect against viruses.	216	
If required, install a network interface card.	500	
If required, install serial adapters.	502	
If required, install and configure a video capture card.	508	
For USB IKBs:		
• Install the IKB service.	537	
• Connect the IKB to a USB port.	506	
For non-USB IKBs:		
• Install the IKB service.	537	
• Connect the IKB to the computer using the Honeywell OEP/IKB adapter.	504	
• Configure COM1 port as COM3.	541	
For OEPs:		
• Install the IKB service.	537	
• Connect the OEP to the computer using the Honeywell OEP/IKB adapter.	539	
• Configure COM1 port as COM3.	541	

Task	Go to	Done?
If you are installing Experion PKS Console Extension Station or Flex Station for use with Process points:		
• Start the Experion PKS Console Extension Station or Flex Station installation.	237	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Engineering Tools client.	241	
• If you want to create or edit CAB blocks on this computer, install the CAB Developer, which includes Microsoft Visual Studio. If you don't install CAB Developer, you can still import CAB types using Control Builder on this computer.	242	
• Install Experion PKS Console Extension Station or Flex Station and other client applications.	246	
If you are installing Experion PKS Console Extension Station or Flex Station for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS Console Extension Station or Flex Station installation.	237	
• Install the .NET framework.	224	
• Install Knowledge Builder.	479	
• Install Experion PKS Console Extension Station or Flex Station and other client applications.	246	
If required, install Signon Manager.	249	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize the computer with the server.	456	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		

Task	Go to	Done?
Install FTE and System Management components.	388	
If required, implement your local Windows security policies.	217	
If required, add the server computer to a domain.	200	
If required, add domain accounts to local groups on this computer.	202	
Defragment the hard drive.	621	
For Console Extension Stations: Configure the Console Extension Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Stations and Consoles.	*Knowledge Builder*	
For Flex Stations: Configure the Flex Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Stations and printers.	*Knowledge Builder*	
If this computer is for a Honeywell Icon Console, prepare and install this computer in the Icon Console.	531	

STOP You have completed all tasks.

5. On-process migration checklists

This section identifies the high-level tasks to perform on-process migration of Experion PKS software and hardware.

ATTENTION

On-process migration is only supported for the following network topologies and releases:

- From R201 to R210 release with FTE System (Level 3) and FTE (Level 2)
- From R201 to R210 release with FTE System (Level 3) and ControlNet (Level 2)
- From R201 to R210 release with Ethernet System (Level 3) and ControlNet (Level 2)

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Experion PKS R210 does not support the use of a mapped DVD drive.

Prerequisites

- You have read the *Software Change Notice* (see 60).
- You have read the *On-Process Migration Release Guide*.
- Experion PKS R210 media.
- Experion PKS R210 license.
- The server meets the hardware requirements (see 595).
- 4 GB of free hard disk space.
- Server A must be the primary server and synchronized with server B.
- The Windows ps_user, mngr, erserver, and Administrator account passwords must be identical for each Windows accounts on both server A and server B.
- Both server A and server B must have static IP addresses.

Considerations

- You can cancel the on-process migration up to the stage *before* upgrading server A. After you commit to upgrading server A, you should not cancel the on-process migration. If you do cancel on-process migration once you start to upgrade server A, you will loose all data events for the period that server A is down.
- If you cancel the on-process migration *before* upgrading server A, you must restore or reinstall the previous version of Experion PKS on server B to return the system to a redundant server state. See the results section for each task to identify the potential consequences of canceling the on-process migration.
- On-process migration is a separately licensed option and can only be performed on redundant servers.
- It is recommended that you make a disk image of server B when you stop it. Should you want to rollback the on-process migration, a disk image can make the process easier. If you restore server B from a disk image and server B is part of a domain, you will need to remove the computer from the Windows domain and then re-add it to re-establish the trust relationship.
- If you use the previous release version of Experion PKS Station to connect to an Experion PKS R210 server, the connection is made, however it may operate unpredictably because many of the targets and actions on system displays have changed in Experion PKS R210.
- The ps_user and erserver Windows accounts are no longer used in Experion PKS R210. After a successful upgrade to R210, these two Windows accounts can be deleted.

Tasks

This is an overview of the tasks to complete an on-process migration:

Task	Go to	Done?
Prepare for the on-process migration.	118	
Upgrade server B.	121	
Migrate the server B database.	125	

Task	Go to	Done?
Upgrade one or more client computers and connect to server B.	160	
If part of the system, migrate one or more Console Stations and connect to server B.	126	
Perform upgrade and compatibility tests.	129	
Upgrade server A.	132	
Complete the on-process migration.	136	
Upgrade the remaining client computers.	160	
If part of the system, migrate the remaining Console Stations.	126	
Migrate controllers	309	

5.1 Preparing for on-process migration

Complete the tasks in the following order.

Task	Go to	Done?
Ensure that you have installed the Experion PKS R201 Cumulative Update 1. For installation instructions and the installation package, see the Solution Support Online web site.		
Verify the current Windows *mngr* and *Administrator* account passwords for both server A and server B. If you are unable to verify these passwords, use the Password Change Utility (see 467) to change them, and note their new passwords on the site specification form for later reference. **Ensure the passwords on both servers for each Windows account are identical.**		
Backup each server, including the Experion PKS database and the Windows registry. For more information, see Experion PKS (*release number migrating from*) > Administration and Startup Guide > Backups and recovery.	*Knowledge Builder*	
To backup the events database, generate an event archive of all current events. For more information, see Experion PKS (*release number migrating from*) > Operators Guide > Responding to Events > Using Event Archiving > Archiving Events.	*Knowledge Builder*	
Install the Migration Readiness Tool on both server A and server B.	290	
Verify the server readiness for OPM.	291	
Acknowledge all alarms and resolve any that are critical.		
Check synchronization status.	293	
Disable any file replications.		

Task	Go to	Done?
Disable any file backups set within the `flbkup.def` file.		
Disable ERDB replication and ensure that the ERDBs are optimized and synchronized:		
• Disable ERDB replication.	296	
• Update ERDB statistics.	301	
• Recover secondary ERDB from primary ERDB.	302	
• Backup ERDB using DBAdmin.	299	
If active, stop the HART multiplexer on both server A and server B.	440	
For systems with FTE only: Set the Internet Protocol (IP) interface metric on each network adaptor connected to the green cable to 5 on both server A and server B. For more information, see Experion PKS R210 > Installation and Upgrades > Fault Tolerant Ethernet Installation and Service Guide > 3. Installing and Configuring FTE Software > Configuring Network Adapter Ports for FTE.	*Knowledge Builder*	
Activate on-process migration.	303	
Disconnect any mapped network drives on both server A and server B.		

Results

- At this stage of the on-process migration, you cannot make changes to the Engineering Repository. ERDB replication remains disabled until server A migration is complete.
- The server A is now running as a single, primary server. You can only view the control process status from Stations connected to server A.
- You cannot initiate a manual failover or database synchronization while the on-process migration is active.

- You can cancel on-process migration now without the need to restore/reinstall the previous version of Experion PKS on server B.

STOP	You have completed this task. Return to the checklist that led to this task.

5.2 Upgrading server B

Considerations

- If Console Stations are part of your system, please note the following. After you have upgraded server B, operators should *not* call-up the Comments pane in the Alarm Summary display on Console Stations that are running at the previous software release. To call-up the Comments pane in these circumstances may cause an error.

Tasks

Complete the tasks in the following order on *server B* only.

Task	Go to	Done?
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Prepare for the upgrade.	338	
Disconnect all supervisory Ethernet / FTE network cables on server B. Do *not* disconnect the C-Net control network cables.		
Remove previous versions of selected software components.	341	
Remove the Migration Readiness Tool.	612	
Disable any virus protection software.		
Set the Experion PKS services to manual startup.	441	
Install the Dell OpenManage software update.	469	

Task	Go to	Done?
If you are upgrading Experion PKS for use with Process points:		
• Start the Experion PKS server install/upgrade.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx, only if present.	354	
• Install/upgrade the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install/upgrade Engineering Tools.	225	
• If you are installing client applications, such as Control Builder, on this computer, install Microsoft Visual Studio.	242	
• Upgrade Experion PKS server.	228	
If you are upgrading Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server install/upgrade.	220	
• Install Microsoft SQL Server.	223	
• Upgrade Knowledge Builder.	481	
• Upgrade Experion PKS server.	228	
Re-enable any virus protection software.		
Add shortcuts.	455	
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

Task	Go to	Done?
Reconnect all supervisory Ethernet / FTE network cables on server B.		
Restart the computer.		
Change the Experion PKS server status to database and daemons.	432	
If RSLinx is installed, do one of the following:		
• To configure RSLinx drivers for ControlNet supervisory networks.	358	
• To configure RSLinx drivers for Ethernet supervisory networks.	360	
Defragment the hard disk.	621	
Reapply any changes to the system acronym set.		
Reapply any specialized scan periods.		
Migrate any custom HMIWeb displays.	351	
Reapply any customizations to system displays.		
Reapply any customizations to the menus.		

Results

- If the installation of any software on server B cannot be completed successfully, do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).
- If you cancel the on-process migration now you must restore or reinstall the previous version of Experion PKS on server B to return the system to a redundant server state. If you restore server B from a disk image and server B is part of a domain, you will need to remove the computer from the Windows domain and then re-add it to re-establish the trust relationship.

STOP	You have completed this task. Return to the checklist that led to this task.

5.3 Migrating server B database

Complete the tasks in the following order.

Task	Go to	Done?
On server B, change the Experion PKS server status to system running.	432	
Migrate server B database.	305	

Results

- If the migrate server B database step cannot be completed successfully, do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).
- Server B is synchronized with server A.
- At this stage of the on-process migration, the Experion PKS system operates with dual primary servers.
- There may be a small loss of data during the period when the synchronization is complete and server B starts to collect data as a primary server. There may be a ten second loss of history.
- While there are two dual primary servers, continuous synchronization between the two servers is disabled.
- If you cancel the on-process migration now you must restore or reinstall the previous version of Experion PKS on server B to return the system to a redundant server state. If you restore server B from a disk image and server B is part of a domain, you will need to remove the computer from the Windows domain and then re-add it to re-establish the trust relationship.
- You *must* now upgrade at least one client computer to the current software release. Do *not* restart or shutdown server A until you have completed at least one client computer upgrade.

STOP	You have completed this task. Return to the checklist that led to this task.

5.4 Migrating Console Stations

This section describes how to migrate Console Stations connected to the previous release of Experion PKS on server A, to connect to the current release of Experion PKS on server B.

After you upgrade server B, and before you upgrade server A, you must upgrade at least one Console Station, if Console Stations are part of your system. When upgrading server A, any Console Stations connected to it operate in degraded mode.

Complete the tasks in the following order on each Console Station.

Task	Go to	Done?
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Remove previous versions of selected software components.	338	
Prepare for the upgrade.	338	
Set the Experion PKS services to manual startup.	441	
Disable any virus protection software.		
If you are upgrading Experion PKS Console Station for use with Process points:		
• Start the Experion PKS Console Station install/upgrade.	234	
• Install/upgrade the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install/upgrade Engineering Tools.	225	
• If you want to create or edit CAB blocks on this computer, install the CAB Developer, which includes Microsoft Visual Studio. If you don't install CAB Developer, you can still import CAB types using Control Builder on this computer.	242	
• Install/upgrade Experion PKS Console Station and other client applications.	243	

Task	Go to	Done?
If you are upgrading Experion PKS Console Station for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS Console Station install/upgrade.	234	
• Upgrade Knowledge Builder.	481	
• Install/upgrade the .NET framework.	224	
• Install/upgrade Experion PKS Console Station and other client applications.	243	
Re-enable any virus protection software.		
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
Restart the computer.		

For Console Stations that are upgraded from R201 to R210:

- With the servers in Dual Primary mode, you must delete the connection on server A (running at R201) for the Console Station that has been upgraded. Once this connection is removed, the upgraded Console Station can connect to server B (running at R210).

  To delete the connection:

Step	Action
1	Stop the Experion PKS Console Station services on the upgraded Console Station,
2	On a Flex Station connected to server A, navigate to the Console Station Summary display.

Step	Action
3	Select the upgraded Console Station name and then on the Detail display delete the connection.
4	Start the Experion PKS Console Station services on the upgraded Console Station.

Results

- If the migrate Console Station step cannot be completed successfully, do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).

STOP	You have completed this task. Return to the checklist that led to this task.

5.5 Performing upgrade and compatibility tests

Considerations

- SCADA controllers may only support one connection, which remains with server A. Therefore, these controllers will not report values, changes, or alarms to server B, unless you disable the connection from server A and enable the connection from server B.
- Operations performed on server B, such as changing operators, acknowledging alarms, and so on, will not be seen nor recorded on server A.
- Operations performed on server A, such as changing operators, acknowledging alarms, and so on, will not be seen nor recorded on server B.
- Script engines are disabled on server B. Running the same scripts concurrently on server A and server B may result in unpredictable behavior. You can enable the script engine on server B.
- If the redundant server pair is part of a Distributed System Architecture (DSA), server B can only subscribe to data within the DSA. Other servers within the DSA remain connected to server A.
- At this stage, you can upgrade additional Stations for performing upgrade and compatibility tests.
- CDA hardware items will continue to appear on the Alarm Summary display within the asset that has the same name as the area that the hardware item was assigned to in the previous Experion PKS release. CDA hardware items will not appear in the System Status display until you download the hardware items to the Experion PKS server. The completing on-process migration task will instruct you when to complete this step.

Summary of upgrade and compatibility tests:

Step	Action
1	On server A and server B: • Start Station. • Ensure that the Station running on server B connects to server B. The server name appears on the Station's Status Line. You can change the server connection by choosing **Station** > **Connect**, and then clicking server B in the **Server** list. • Call up displays, trends, and so on. • Compare the displays on the Station connected to server A with the Station connected to server B.
2	Control selected addresses on each controller and confirm correct operation.
3	If the redundant server pair is part of a Distributed System Architecture (DSA), confirm that data is being correctly received by server A and server B.
4	Enable any SCADA channels that support multiple connections, such as OPC channels, and test for correct operation.
5	SCADA devices that support only one connection can be tested on server B by disabling the connection on server A and enabling the connection on server B.
6	Test the operation of Console Stations connected to server B.
7	If the redundant OPM server pair is part of a Distributed System Architecture (DSA), force any DSA servers connected to server A to connect to server B and confirm that DSA data is being received. To do this, on each primary DSA server connected to the redundant OPM server pair, call-up the DSA status page for the redundant OPM server pair and select the **Test On Process Migration (Connect to Server B)** check ox.

Results

- If any of the upgrade and compatibility tests cannot be completed successfully, do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).
- If you are satisfied with the testing of server B, you need to decide if you are committed to completing the on-process migration.

- If you cancel the on-process migration now you must restore or reinstall the previous version of Experion PKS on server B to return the system to a redundant server state. If you restore server B from a disk image and server B is part of a domain, you will need to remove the computer from the Windows domain and then re-add it to re-establish the trust relationship.

STOP	You have completed this task. Return to the checklist that led to this task.

5.6 Upgrading server A

Considerations

- If you cancel on-process migration once server A is down, you must restore or reinstall the previous version of Experion PKS on server A and you will lose all data during the period that server A is down. Once server A is running, you must restore or reinstall the previous version of Experion PKS on server B to return the system to a redundant server state.
- While server A is being upgraded, server B must remain at system running status and as the primary server. If you change the status of server B, you will invalidate the on-progress migration and Experion PKS must be reinstalled on both server A and server B.
- If the redundant OPM server pair is part of a Distributed System architecture (DSA), other servers connected to server A must be manually made to connect to server B *before* server A is stopped and upgraded. If this step is not performed, data from the redundant OPM server pair will not be accessible to the remaining DSA servers until the on-process migration has been completed.

Tasks

Complete the tasks in the following order on *server A* only.

Task	Go to	Done?
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Prepare for the upgrade.	338	
Disconnect all supervisory Ethernet/FTE network cables on server A. Do *not* disconnect the C-Net network cables.		
Remove previous versions of software components.	341	
Remove the Migration Readiness Tool.	612	
Disable any virus protection software.		

Task	Go to	Done?
Set the Experion PKS services to manual startup.	441	
Install the Dell OpenManage software update.	469	
If you are upgrading Experion PKS for use with Process points:		
• Start the Experion PKS server install/upgrade.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx, only if present.	354	
• Install/upgrade the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install/upgrade Engineering Tools.	225	
• Upgrade Experion PKS server.	228	
If you are upgrading Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server install/upgrade	220	
• Install Microsoft SQL Server	223	
• Upgrade Knowledge Builder.	481	
• Upgrade Experion PKS server.	228	
Re-enable any virus protection software.		
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

Task	Go to	Done?
Reconnect all supervisory Ethernet/FTE network cables on server A.		
Restart the computer.		
Change the Experion PKS server status to database and daemons.	432	
If RSLinx is installed, do one of the following:		
• To configure RSLinx drivers for ControlNet supervisory networks.	358	
• To configure RSLinx drivers for Ethernet supervisory networks.	360	
Defragment the hard disk.	621	
Reapply any changes to the system acronym set.		
Reapply any specialized scan periods.		
Migrate any custom HMIWeb displays.	351	
Reapply any customizations to system displays.		
Reapply any customizations to the menus.		

STOP	You have completed this task. Return to the checklist that led to this task.

Results

- If the installation of any software on server A cannot be completed successfully, do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).
- If you cancel on-process migration once server A is down, you must restore or reinstall the previous version of Experion PKS on server A. You will lose all data

during the period that server A is down. Once server A is running, you must restore or reinstall the previous version of Experion PKS on server B to return the system to a redundant server state.

- If you restore server A or server B from a disk image and server A and server B are part of a domain, you will need to remove the computer from the Windows domain and then re-add each to re-establish the trust relationship.

5.7 Completing the on-process migration

Complete the tasks in the following order.

Task	Go to	Done?
Map to the network drives that were disconnected on both server A and server B.		
On server A, change the Experion PKS server status to system running.	432	
Complete the on-process migration.	307	
Enable ERDB replication.	297	
In Station, complete a manual failover of the servers to make server A the primary.		
If you use Process points, download CDA hardware items to the server.	349	

Results

- If the on process migration can not be completed successfully at this point do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).

STOP	You have completed this task. Return to the checklist that led to this task.

6. Upgrade checklists

ATTENTION

Experion PKS R210 does not support the use of a mapped DVD drive.

This section identifies the high-level tasks to upgrade Experion PKS software.

Upgrade from	Go to
Experion PKS R101/R201 server on the existing computer.	138
Experion PKS R101/R201 eServer on the existing computer.	149
Experion PKS R101/R201 ACE on the existing computer.	151
Experion PKS R101/R201 SIM-C200 on the existing computer.	154
Experion PKS R201 Console Station.	157
Experion PKS R101/R201 client applications and displays.	160

6.1 Upgrading from Experion PKS R101/R201 server on the existing computer

Prerequisites

- Experion PKS R210 media.
- Experion PKS license.
- The server meets the hardware requirements (see 595).
- 4 GB of free hard disk space.
- If you are using Fault Tolerant Ethernet, the switches must be installed and configured. For more information, see Experion PKS R210 > Planning and Design > Fault Tolerant Ethernet Implementation Guide > 4. Switch Installation and Configuration in Knowledge Builder.

Considerations

- All tasks must be performed with the system off-process.

Tasks

Upgrade type	Go to
Upgrade a non-redundant server.	139
Upgrade redundant servers.	142

Non-redundant server tasks checklist

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr account password. If you are unable to verify this password, use the Password Change Utility (see 467) to change it, and note this new password on the site specification form for later reference.		
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Prepare for the upgrade.	338	
Backup the events database by generating an event archive of all current events. For more information, see Experion PKS R100/R201 > Operators Guide > Responding to Events > Using Event Archiving > Archiving Events.	*Knowledge Builder*	
Backup the server, including the Experion PKS database, history data, and the Windows registry. For more information, see Experion PKS R100/R201 > Administration and Startup Guide > Backups and recovery.	*Knowledge Builder*	
If you are upgrading Experion PKS for use with Process points, do the following:		
• Export the Engineering Repository database.	347	
• Backup the Engineering Repository database.	299	
Disconnect all supervisory Ethernet/FTE network cables on the server. Do *not* disconnect the C-Net control network cables.		
Remove previous versions of selected software components.	341	

Task	Go to	Done?
Disable any virus protection software.		
Set Experion PKS services to manual startup.	441	
Install the Dell OpenManage software update.	469	
If you are installing Experion PKS for use with Process points:		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx.	354	
• Install the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install Engineering Tools.	225	
• Upgrade Experion PKS server.	228	
If you are installing Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Upgrade Knowledge Builder.	481	
• Upgrade Experion PKS server.	228	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
For ControlNet supervisory networks, do the following:		
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	

Task	Go to	Done?
For Ethernet supervisory networks, do the following:		
• If required, move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Configure the RSLinx drivers.	360	
Re-enable any virus protection software.		
Synchronize the QVCS database.	346	
Defragment the hard drive.	621	
If you installed Experion PKS for use with process points, migrate the controller firmware.	309	
Restore data and reapply customizations.	350	
Check that all printers and OPC connections are working. If OPC connections are not working, re-establish the connection (see 403).		
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
Reconnect all supervisory Ethernet/FTE network cables.		
If you use Process points, download CDA hardware items to the server.	349	

STOP You have completed all tasks.

Redundant server tasks checklist

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Preparation tasks

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr account password on each server. If you are unable to verify this password, use the Password Change Utility (see 467) to change it, and note this new password on the site specification form for later reference.		
If you have implemented dynamic help in Knowledge Builder, export this dynamic help on each server.	492	
Prepare for the upgrade.	338	
On server A, start Station and call up the Redundancy Status display (sys113) and synchronize server A and server B.		
Backup the events database by generating an event archive of all current events. For more information, see Experion PKS R100/R201 > Operators Guide > Responding to Events > Using Event Archiving > Archiving Events.	*Knowledge Builder*	
Backup the servers, including the Experion PKS database, history data, and the Windows registry. For more information, see Experion PKS R100/R201 > Administration and Startup Guide > Backups and recovery.	*Knowledge Builder*	

Task	Go to	Done?
If you are upgrading Experion PKS for use with process points, do the following:		
• Export the Engineering Repository database.	347	
• Backup the Engineering Repository.	299	
• Disable Engineering Repository database replication.	296	

Upgrade server B

Complete the tasks in the following order on server B only.

Task	Go to	Done?
Log on to the computer using a Windows account with local administrator rights.		
Close any Station applications on server B.		
Disconnect all supervisory Ethernet/FTE network cables on server B. Do *not* disconnect the control network cables.		
Remove previous versions of software components.	341	
Disable any virus protection software.		
Change the Experion PKS server status to database unloaded.	432	
Set Experion PKS services to manual startup.	441	
Install the Dell OpenManage software update.	469	

Task	Go to	Done?
If you are installing Experion PKS for use with Process points:		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx.	354	
• Install the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install Engineering Tools.	225	
• Upgrade Experion PKS server.	228	
If you are installing Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Upgrade Knowledge Builder.	481	
• Upgrade Experion PKS server.	228	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
For ControlNet supervisory networks, do the following:		
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks:		
• If required, move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Configure the RSLinx drivers.	360	
Re-enable any virus protection software.		

Task	Go to	Done?
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
Defragment the hard drive.	621	
Shutdown the computer.		
Reconnect all supervisory Ethernet/FTE network cables.		

Upgrade server A

Complete the tasks in the following order on *server A* only.

Task	Go to	Done?
Log on to the computer using a Windows account with local administrator rights.		
Close any Station applications on server A.		
Disconnect all supervisory Ethernet / FTE network cables on server B. Do *not* disconnect the C-Net control network cables.		
Remove previous versions of software components.	341	
Disable any virus protection software.		
Change the Experion PKS server status to database unloaded.	432	
Set Experion PKS services to manual startup.	441	

Task	Go to	Done?
Install the Dell OpenManage software update.	469	
If you are installing Experion PKS for use with Process points:		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Install RSLinx.	354	
• Install the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install Engineering Tools.	225	
• Upgrade Experion PKS server.	228	
If you are installing Experion PKS for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS server installation.	220	
• Install Microsoft SQL Server.	223	
• Upgrade Knowledge Builder.	481	
• Upgrade Experion PKS server.	228	
If RSLinx was installed during the Experion PKS server installation, register the Electronic Data Sheets (EDS).	357	
For ControlNet supervisory networks, do the following:		
• Update the PCIC drivers.	364	
• Configure the RSLinx drivers.	358	
For Ethernet supervisory networks:		
• If required, move the RSLinx activation code from the master 3.5-inch disk to the Experion PKS server.	362	
• Configure the RSLinx drivers.	360	

Task	Go to	Done?
Re-enable any virus protection software.		
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
Defragment the hard drive.	621	
Shutdown the computer.		
Reconnect all supervisory Ethernet/FTE network cables.		

Final tasks

Complete the remaining tasks in the following order.

Task	Go to	Done?
Restart the server A computer. Wait for all services to start.		
Restart the server B computer. Wait for all services to start.		
If you installed Experion PKS for use with process points, do the following:		
• Migrate the controller firmware.	309	
• Enable Engineering Repository database replication.	297	
• Enable Enterprise Model database replication.	295	
Restore data and reapply customizations.	350	

Task	Go to	Done?
On server A, start Station and call up the Redundancy Status display (sys113) and synchronize server A and server B.		
If you use process points, download CDA hardware items to the server.	349	

STOP	You have completed all tasks.

6.2 Upgrading Experion PKS R101/R201 eSever

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- Experion PKS license.
- The server meets the hardware requirements (see 595).
- 4 GB of free hard disk space.
- If you are using Fault Tolerant Ethernet, the switches must be installed and configured. For more information, see Experion PKS R210 > Planning and Design > Fault Tolerant Ethernet Implementation Guide > 4. Switch Installation and Configuration in Knowledge Builder.

Considerations

- All tasks must be performed with the system off-process.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr and StandardAccessAdmin account passwords. If you are unable to verify these passwords, use the Password Change Utility (see 467) to change them, and note these new passwords on the site specification form and server specification form for later reference.		
Prepare for the upgrade.	338	
Remove previous versions of selected software components.	341	

Task	Go to	Done?
Disable any virus protection software.		
Set Experion PKS services to manual startup.	441	
Install the Dell OpenManage software update.	469	
Start the Experion PKS eServer upgrade.	268	
Upgrade Microsoft SQL Server.	223	
Install the .NET framework.	224	
Upgrade Knowledge Builder.	481	
Upgrade Experion PKS eServer.	270	
Re-enable any virus protection software.		
Defragment the hard drive.	621	
Restore data and reapply customizations.	350	
Check that all printers and OPC connections are working. If OPC connections are not working, re-establish the connection (see 403).		
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

6.3 Upgrading Experion PKS R101/R201 ACE

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- If you are using Fault Tolerant Ethernet, the switches must be installed and configured. For more information, see Experion PKS R210 > Planning and Design > Fault Tolerant Ethernet Implementation Guide > 4. Switch Installation and Configuration in Knowledge Builder.

Considerations

- Close all applications.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr account password. If you are unable to verify this password, use the Password Change Utility (see 467) to change it such that it is same as the Windows mngr account password on the Experion PKS Server to which the ACE is connected. Note this new password on the site specification form for later reference.		
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Disable any virus protection software.		
Remove previous versions of software components.	341	

Task	Go to	Done?
If present, disable the ControlNet (PCIC) card device.	385	
Set Experion PKS services to manual startup.	441	
Install Dell Open Manage Software Update	469	
Start the Experion PKS ACE node upgrade.	252	
If this ACE node to is to do peer to peer communication using ControlNet devices, you must install RSLinx. RSLinx is not required for ACE to ACE peer communications or ACE to TPN server communications.		
• If RSLinx is required, install RSLinx.	354	
• If RSLinx is not required, cancel the RSLinx installation.	356	
Install the .NET framework.	224	
Upgrade Knowledge Builder.	481	
Install the Engineering Tools client.	241	
If you selected the Remote Debug install option, install the Microsoft Visual Studio remote debugger.	255	
Complete the post ACE installation	256	
Re-enable any virus protection software.		
Redirection Manager must be installed on every ACE node that runs an OPC client requiring redirection.		
If required, install Redirection Manager.	416	
If a ControlNet (PCIC) card is installed, do the following:		
• Re-enable the card.	385	
• Update the drivers.	360	

Task	Go to	Done?
If RSLinx was installed, do one of the following:		
• To configure RSLinx drivers for ControlNet supervisory networks.	358	
• To configure RSLinx drivers for Ethernet supervisory networks.	360	
If ACE will be hosting OPC Gateway, create the Windows mngr account on the OPC server.	409	
If ACE will be hosting OPC Gateway, configure the CDA-SP service to use the same account and password of the OPC server.	257	
If ACE will be hosting OPC Gateway, configure the CDA-SP account to lock pages in memory.	259	
If ACE will be hosting OPC Gateway, and the CDA-SP service and OPC server are on different network domains, the two domains must be configured as mutually trusted domains.	260	
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP You have completed all tasks.

6.4 Upgrading Experion PKS R101/R201 SCE/SIM-C200

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- If you are using Fault Tolerant Ethernet, the switches must be installed and configured. For more information, see Experion PKS R210 > Planning and Design > Fault Tolerant Ethernet Implementation Guide > 4. Switch Installation and Configuration in Knowledge Builder.

Considerations

- Close all applications.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr account password. If you are unable to verify this password, use the Password Change Utility (see 467) to change it such that it is same as the Windows mngr account password on the Experion PKS Server to which the SIM-C200 is connected. Note this new password on the site specification form for later reference.		
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Disable any virus protection software.		
Remove previous versions of software components.	341	

Task	Go to	Done?
If present, disable the ControlNet (PCIC) card device.	385	
Set Experion PKS services to manual startup.	441	
Install Dell Open Manage Software Update	469	
Start the Experion PKS SIM-C200 installation.	264	
If this SIM-C200 node to is to do peer to peer communication using ControlNet devices, you must install RSLinx. RSLinx is not required for SIM-C200 to ACE peer communications or SIM-C200 to TPN server communications.		
• If RSLinx is required, install RSLinx.	354	
• If RSLinx is not required, cancel the RSLinx installation.	356	
Install the .NET framework.	224	
Upgrade Knowledge Builder.	481	
Install the Engineering Tools client.	241	
Re-enable any virus protection software.		
If a ControlNet (PCIC) card is installed, do the following:		
• Re-enable the card.	385	
• Update the drivers.	360	
If RSLinx was installed, do one of the following:		
• To configure RSLinx drivers for ControlNet supervisory networks.	358	
• To configure RSLinx drivers for Ethernet supervisory networks.	360	
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	

Task	Go to	Done?
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

STOP	You have completed all tasks.

6.5 Upgrading Experion PKS R201 Console Station and client applications

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.

Considerations

- Close all applications.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr account password. If you are unable to verify this password, use the Password Change Utility (see 467) to change it such that it is same as the Windows mngr account password on Experion PKS Server to which the Console Station is connected.		
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Prepare for the upgrade.	338	
Remove previous versions of software components.	341	
Disable any virus protection software.		
Set the Experion PKS services to manual startup.	441	

Task	Go to	Done?
If you are upgrading Experion PKS Console Station for use with Process points:		
• Start the Experion PKS Console Station install/upgrade.	234	
• Install/upgrade the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install/upgrade Engineering Tools.	225	
• If you want to create or edit CAB blocks on this computer, install the CAB Developer, which includes Microsoft Visual Studio. If you don't install CAB Developer, you can still import CAB types using Control Builder on this computer.	242	
• Install/upgrade Experion PKS Console Station and other client applications.	243	
If you are upgrading Experion PKS Console Station for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS Console Station install/upgrade.	234	
• Install/upgrade the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install/upgrade Experion PKS Console Station and other client applications.	243	
Re-enable any virus protection software.		
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	
Restore data and reapply customizations.	350	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	

Task	Go to	Done?
Defragment the hard drive.	621	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computers date/time with the server.	456	
Configure Console Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Stations > Configuring a Console Station.	*Knowledge Builder*	

STOP	You have completed all tasks.

6.6 Upgrading Experion PKS R101/R201 Flex Station and client applications

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Prerequisites

- Experion PKS R210 media.
- If you are using Fault Tolerant Ethernet, the switches must be installed and configured. For more information, see Experion PKS R210 > Planning and Design > Fault Tolerant Ethernet Implementation Guide > 4. Switch Installation and Configuration in Knowledge Builder.

Considerations

- Close all applications.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Verify the current Windows mngr account password. If you are unable to verify this password, use the Password Change Utility (see 467) to change it such that it is same as the Windows mngr account password on Experion PKS Server to which the Flex Station is connected. Note this new password on the site specification form for later reference.		
If you have implemented dynamic help in Knowledge Builder, export this dynamic help.	492	
Remove previous versions of software components.	341	

Task	Go to	Done?
Disable any virus protection software.		
If you are installing Experion PKS Flex Station for use with Process points:		
• Start the Experion PKS Flex Station installation.	237	
• Install the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install Engineering Tools client.	241	
• If you want to create or edit CAB blocks on this computer, install the CAB Developer, which includes Microsoft Visual Studio. If you don't install CAB Developer, you can still import CAB types using Control Builder on this computer.	242	
• Install Experion PKS Flex Station and other client applications.	246	
If you are installing Experion PKS Flex Station for use with SCADA only points (do not repeat these steps if you previously completed the Process points installation):		
• Start the Experion PKS Flex Station installation.	237	
• Install the .NET framework.	224	
• Upgrade Knowledge Builder.	481	
• Install Experion PKS Flex Station and other client applications.	246	
Re-enable any virus protection software.		
If required, install Signon Manager.	249	
If this computer is a member of a Windows workgroup or Windows NT domain, synchronize this computer's time and date with the server using time synchronization.	456	
If you exported the dynamic help in Knowledge Builder during the preparation for this upgrade, import this dynamic help.	494	

Task	Go to	Done?
Migrate any custom HMIWeb displays.	351	
If required, install any patches from the Support CD. Instructions for installing these patches are located on the Support CD.		
Install FTE and System Management components.	388	
Configure the Flex Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Stations and Consoles.	*Knowledge Builder*	

STOP You have completed all tasks.

7. Preparing a computer

This section contains the tasks to prepare a computer, which you must do before you can install Experion PKS.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

7.1 Installing NT5Plus Server

This is the preferred operating system installation method, however, it is only available if the computer was ordered from Honeywell with the Installation Services option.

CAUTION	The NT5Plus installation procedure destroys all data on your computer. Ensure that you backup all important data before starting the NT5Plus installation.

Prerequisites

- You have completed the site specification form and a server specification form (see 24).
- NT5Plus Windows 2000 Server Platform CD (part number 51153606).
- NT5Plus Windows 2000 Server Operating System CD (part number 51153608).
- Blank 3.5-inch disk.
- If this computer will be participating in an FTE community, there can only be two network interface cards (NICs) active on the computer. If there is a NIC installed on the computer's motherboard, you should disable this NIC using the computer's BIOS setup. Once FTE is installed and operating, you can then re-enable the onboard NIC and configure it.
- All computers participating in Experion PKS server-related FTE communities must have the same community name

Considerations

- Before proceeding to install NT5Plus, you must call your Honeywell Technical Assistance Center (TAC) for assistance. Do *not* proceed with installing NT5Plus until you call TAC.

Starting the System Configuration application

Part of the NT5Plus installation is the System Configuration application, where you enter details about your computer hardware and configuration.

To start the System Configuration application:

Step	Action
1	Insert the NT5Plus Windows 2000 Server Platform CD into the CD-ROM drive. The Microsoft Internet Explorer browser starts, displaying a Warning screen.
2	Click **Click here to continue**.
3	Click **Read Me First**.
4	Review the Readme file, and then click **Return to Home Page**.
5	If required, click Other Important Notes **Readme** and review it.
6	Insert the blank 3.5-inch disk into drive A.
7	Click **Tools**.
8	Click **System Configuration Application**.
9	Click **Open** in the Downloading File dialog box. In older releases of Internet Explorer, click **Run**.
10	Click **OK** on the **Option Disk Check** screen to start the System Configuration application.

Completing the System Configuration application

Once the System Configuration application starts, you can enter the computer hardware and configuration details.

Prerequisites

- You have started the System Configuration application.

To complete the System Configuration application:

Step	Action
1	In the Platform and OS Option screen, within the **Windows 2000 Server Options** group, click the type of the computer that you are installing NT5Plus Server on, as specified on the server specification form, and then click **Continue**.

Step	Action
2	On the Monitor Option screen: a) Select **Normal CRT** or **LCD Panel**, and then click **Continue**. b) If you selected a LCD Panel, select whether or not to install the NEC Naviset Monitor Utilities software, and then click **Continue**.
3	If the platform you selected has a RAID controller included in the standard Honeywell configuration, the NT5Plus RAID controller configuration notes appear. Go to step 5. If the platform you selected has an optional RAID controller available, click the RAID controller installed on the computer, as specified on the server specification form. If no RAID controller is installed, select **No RAID**.
4	Click **Continue**.
5	If you selected a RAID controller, review the RAID configuration notes displayed on screen, and then click **Continue**.
6	On the Large Memory Option screen, read the instructions and click the appropriate checkbox, and then click **Continue**.
7	On the Disk Partitioning Option screen, choose one of the following: • If you want a single partition, select **Default,** and then click **Continue**. • If you want a limited size partition, select **Limit partition size**, click **Continue**, then enter the size of partition, and then click **Continue.**.
8	Type the computer name, as specified on the server specification form, and then click **Continue**.
9	On the Hardware Options screen: a) Click the number of network interface ports installed on this computer. This number must match the number of ports installed on this computer, less the number of ports on the onboard NIC that were disabled before starting these steps. For a dual port NIC, select **2**. b) Select if the NICs are participating in an FTE community. c) Type the Dell Service Tag, as specified on the server specification form. d) Click **Continue**.
10	Click FTE Network Type and then click **Continue**.

Step	Action
11	Type the MAC address, IP address, subnet mask, and gateway for the NIC, as specified on the server specification form. If a NIC is not connected to a network, accept the default IP address.
12	Click **Continue**.
13	If two NICs are participating in an FTE community, select the type of FTE network, that is level 1+2 or level 2), and then click **Continue**. Then type the community name and click **Continue**.
14	Type the **Customer Name**, **Company Name**, and **Workgroup Name**, and then click **Continue**.
15	On the **Server Options** screen: a) Click the server client access license mode (see 43). b) Under Server Tuning Options: – For Experion PKS server installations, click **Maximize Throughput for Network Applications**. – For ACE and SIM-C200 installations, click **Balance**. c) Click **Continue**.
16	Review the notes on the Server Service Options screen. Select the options based on the system you are configuring, and then click **Continue**.
17	Select the required Server Service Options, and then click **Continue**.
18	If required, in the **Language Choices** list, click an additional language for Windows 2000 to support.
19	Type the three-digit telephone area code, and then click **Continue**.
20	Click **Experion PKS R210**.
21	On the **Experion PKS System Info** screen: a) Click the role that your system is to perform in the **Redundancy** group. b) Verify that the computer name matches the rules specified for the selected redundancy role. c) Click the type of Experion PKS system that you want to install on this computer.

Step	Action
22	If prompted on the EMDB Server Installation screen, select **Yes** if this server or server pair will host the master Enterprise Model database and then click **Next**. If the EMDB host is a redundant server, you must load EMDB on both server A and server B. For more information about the enterprise model, see the following topic in Knowledge Builder, Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring your enterprise model > About the system model.
23	If you selected **No** in the previous step, type the EMDB Server Name and select the Redundancy mode, and then click **Next**
24	If you selected Application Control Environment (ACE) or SIM–C200 (SCE), do the following: a) In the **Base Server Name** box, type the name of the base server. Click **Yes** if it is a redundant server. b) If a ControlNet card is installed on the computer, click **Yes**, otherwise click **No**. For FTE supervisory control networks, Honeywell recommends that PCIC cards be removed from computers to avoid RSLinx being installed. c) Click **Next** to continue.
25	On the CAB Developer installation screen: **For server and client computers:** If you want to create or edit CAB blocks on this computer, select **Yes**. This will also install Microsoft Visual Studio. If you select **No**, you can still import CAB types using Control Builder on this computer. **For ACE:** If you have a CAB license and will be loading a SIM-ACE, select **Yes**.
26	Click **Next** to continue.
27	If you selected an Experion PKS Server (Process Points) or Experion PKS Server (SCADA Points) system: a) If a ControlNet card is installed on the computer, click **Yes**, otherwise click **No**. b) Click **Next** to continue. c) Type the **Server System No** and **Authorization Key**, and then click **Next**.

Step	Action
28	If you selected eServer, type the **Server System No** and **Authorization Key**, and then click **Next**.
29	Review the settings you selected, and then click **Finish**.
30	Review the **Network Configuration**, **PC Options**, **Licensing Information**, **Performance Tuning Options**, and **Verification Information** groups, and then click **Generate Files**.
31	Click **OK** to exit the System Configuration application.
32	If the options you entered are for reinstalling NT5Plus on this computer, restart the computer. Otherwise, remove the 3.5-inch disk and CD from this computer and then insert them in the computer where you are installing NT5Plus. Restart that computer and then complete the remaining steps on it.
33	Set the computer BIOS to startup from the CD/DVD drive.
34	Review the warning message and then press any key to reformat the hard disk.
35	When prompted, remove the NT5Plus Windows 2000 Server Platform CD from the CD/DVD drive and insert the NT5Plus Windows 2000 Server Operating System CD, leaving the options disk in drive A.
36	Press CTRL+ALT+DELETE to continue the installation.
37	When prompted, remove the NT5Plus Windows 2000 Server Operating System CD from the CD/DVD drive and eject the options disk in drive A.
38	Insert the Experion PKS R210 Application DVD.
39	Press CTRL+ALT+DELETE to continue the installation.
40	When prompted, click **I accept the Microsoft License Agreement**.
41	When prompted, type the Microsoft product key, and then click **Next** to continue. During the installation, the computer will restart several times, however, no user interaction is required.
42	When the installation is finished, an unattended workstation deployment completed message appears. Click **Continue** to restart the computer.

Step	Action
43	After the computer restarts, and when prompted, type the new Windows Administrator password and then click **OK**. The unattended workstation deployment installation is complete.

STOP	You have completed this task. Return to the checklist that led to this task.

7.2 Installing NT5Plus Professional

This is the preferred operating system installation method, however, it is only available if the computer was ordered from Honeywell with the Installation Services option.

CAUTION	The NT5Plus installation procedure destroys all data on your computer. Ensure that you backup all important data before starting the NT5Plus installation.

Prerequisites

- You have completed the site specification form and a server specification form (see 24)
- The NT5Plus Windows 2000 Professional CD.
- A blank 3.5-inch disk.
- If this computer will be participating in an FTE community, there can only be two network interface cards (NICs) active on the computer. If there is a NIC installed on the computer's motherboard, you should disable this NIC using the computer's BIOS setup. Once FTE is installed and operating, you can then re-enable the onboard NIC and configure it.
- All computers participating in Experion PKS server-related FTE communities must have the same community name.
- Windows 2000 Professional OEM Software License/Product ID key.

Considerations

- Before proceeding to install NT5Plus, you must call your local Honeywell Technical Assistance Center (TAC) for assistance. Do *not* proceed with installing NT5Plus until you call TAC.
- There are multiple releases of NT5Plus CDs. Only NT5Plus Professional part number 51153555 prepares a computer for Experion PKS support.

Starting the System Configuration application

Part of the NT5Plus installation is the System Configuration application, where you enter details about your computer hardware and configuration.

To start the System Configuration application:

Step	Action
1	Insert the NT5Plus Windows 2000 Professional Platform CD into the CD-ROM drive. The Microsoft Internet Explorer browser starts, displaying a Warning screen.
2	Click **Click here to continue**.
3	Click **Read Me First**.
4	Review the Readme file, and then click **Return to Home Screen**.
5	If required, click Other Important Notes **Readme**, and review it.
5	Insert the blank 3.5-inch disk into drive A.
6	Click **Tools**.
7	Click **System Configuration Application**.
8	Click **Open** in the Downloading File dialog box.
9	Click **OK** on the Options Disk Cheek screen to start the System Configuration application.

Completing the System Configuration application

Once the System Configuration application starts, you can enter the computer hardware and configuration details.

Prerequisites

- You have started the System Configuration application.

To complete the System Configuration application:

Step	Action
1	In the **Windows 2000 Professional Options** group, click the type of the computer that you are installing NT5Plus Professional on, and then click **Continue**.
2	On the Video Options screen, select the number of monitors, from **Single** to **Quad**, and then click **Continue**. If you selected **Quad**, you must install SafeView later from the Common Components CD.
3	On the Monitor Option screen: a) Select **Normal CRT** or **LCD Panel**, and then click **Continue**. b) If you selected **LCD Panel**, select whether or not to install the NEC Naviset Monitor configuration software, and then click **Continue**.
4	Click the display resolution of your video card and monitor (the default resolution for Experion PKS R210 is 1280 by 1024), and then click **Continue**.
5	On the Touch Screen Options screen, select the appropriate option, and then click **Continue**.
6	If prompted, select a Large Memory Option, and then click **Continue**.
7	On the Disk Partitioning Option screen, choose one of the following: • If you want a single partition, select **Default,** and then click **Continue**. • If you want a limited size partition, select **Limit partition size**, click **Continue**, then enter the size of partition, and then click **Continue.**.
8	On the Station Keyboard Options screen, select the appropriate keyboard type, and then click **Continue**.
9	Type the computer name, and then click **Continue**.
10	Click the number of network interface cards (NICs) installed on this computer. This number must match the number of NICs installed on this computer, whether you plan to use them or not.
11	If you have two NICs installed, select if these cards are participating in a fault tolerant Ethernet (FTE) community.
12	If you purchased a Dell computer, type the Dell Service Tag that appears on the label of the packaging box.

Step	Action
13	Click **Continue**.
14	Select the FTE Network Type and then click **Continue**.
15	Type the MAC address, IP address, subnet mask, and gateway for the NIC. If a NIC is not connected to a network, accept the default IP address.
16	Click **Continue**.
17	If two NICs are participating in an FTE community, select the type of FTE network, that is level 1+2 or level 2, and then click **Continue**. Then type the community name and click **Continue**.
18	Type the **Customer Name**, **Company Name**, and **Workgroup Name**, and then click **Continue**.
19	Select one of the following: a) For Flex Stations, select **Tune for Applications.** b) For Console Stations, select **Tune for Background Services**. c) Click **Continue**.
20	If required, in the **Language Choices** list, click an additional language for Windows 2000 to support.
21	Type the three-digit telephone area code, and then click **Continue**.
22	Select **Experion PKS R210**.
23	On the **Experion PKS System Info** screen: a) Verify that the computer name matches the rules specified. b) Click the type of Experion PKS system that you want to install on this computer.
24	In the **Base Server Name** box, type the name of the base server. Select **Yes** if it is a redundant server.
25	Click **Next**.
26	In the **EMDB Server Name** box, type the name of the base server. Select **Yes** if it is a redundant server.
27	Click **Next**.

Step	Action
28	On the CAB Developer installation screen: a) If you want to create or edit CAB blocks on this computer, select **Yes**. This will install Microsoft Visual Studio. If you select **No**, you can still import CAB types using Control Builder on this computer. b) Click **Next**.
29	If you selected an Server (SCADA Points) system: a) Click **Yes** if a ControlNet card is installed on the computer, otherwise click **No**. b) Click **Next** to continue. c) Type the **Server System No** and **Authorization Key**, and then click **Next**.
30	Review the settings you selected, and then click **Finish**.
31	Review the **Network Configuration**, **PC Options**, **Licensing Information**, **Performance Tuning Options**, and **Verification Information** groups, and then click **Generate Files**.
32	Click **OK** to exit the System Configuration application.
33	Restart the computer.
34	Set the computer BIOS to startup from the CD/DVD drive.
35	Review the warning message and then press any key to reformat the hard disk. If your computer is below a certain BIOS revision, the installation will automatically run a BIOS upgrade routine. If the BIOS upgrade starts, follow the on-screen instructions.
36	When prompted, remove the NT5Plus Windows 2000 Professional Platform CD from the CD/DVD drive and insert the NT5Plus Windows 2000 Professional Operating System CD, leaving the options floppy in drive A.
37	Press CTRL+ALT+DELETE to continue the installation.
38	When prompted, remove the NT5Plus Windows 2000 Professional Operating System CD and eject the options disk in drive A.
39	Insert the Experion PKS R210 Application DVD.

Step	Action
40	When prompted and as instructed on-screen, either press CTRL+ALT+DELETE or turn off and then turn on the computer to continue the installation.
41	When prompted, click **I accept the Microsoft License Agreement**.
42	When prompted, type the Microsoft product key, and click **Next** to continue. During the installation, the computer will restart several times, however, no user interaction is required. On certain configurations, you may need to turn off and then turn on the computer. If the CD/DVD tray opens, you should check the computer for on-screen instructions. For dual-display configurations on a Dell Precision Workstation 370 using an ATI Fire GL card, the install will stop and prompt you to connect the second display.
43	When the installation is finished, an unattended workstation deployment completed message appears. Click **Continue** to restart the computer.
44	After the computer restarts, and when prompted, type the new Windows Administrator password and then click **OK**. The unattended workstation deployment installation is complete.

STOP	You have completed this task. Return to the checklist that led to this task.

7.3 Installing XPPlus

This is the preferred operating system installation method, however, it is only available if the computer was ordered from Honeywell with the Installation Services option.

The XPPlus-WinPE media can be used for the following installation scenarios:

- The recovery of an Experion PKS client computer that was ordered from Honeywell.
- A clean installation of the Windows XP, which can include Experion PKS client software, on Honeywell certified client computers. The following computers are certified by Honeywell:
  - Dell Precision Workstation 340
  - Dell Precision Workstation 360

CAUTION	The XPPlus installation procedure destroys all data on your computer. Ensure that you backup all important data before starting the XPPlus installation.

Prerequisites

- XPPlus-WinPE media.
- Microsoft Windows XP Professional CD or Dell Windows XP Reinstallation CD. If you are upgrading a client computer from a previous version of the Windows operating system, you must purchase the Windows XP Professional CD from another third-party vendor. You can use an OEM or retail license of Windows XP. Windows XP with Service Pack 1a is the preferred media.
- The Windows XP Professional Certificate of Authenticity, which contains your Product Identification number.
- A blank 3.5-inch disk.
- If you are installing Experion PKS software as part of the XPPlus installation, you also need the Experion PKS media.

Considerations

- Before proceeding to install XPPlus, you must call your local Honeywell Technical Assistance Center (TAC) for assistance. Do *not* proceed with installing XPPlus until you call TAC.

Starting the Experion PKS Configuration Tool

Part of the XPPlus installation is the Experion PKS Configuration Tool (EPCTool), where you enter details about your computer hardware and software configuration to generate an options 3.5-inch disk that is used for installing Windows XP.

Considerations

- The contents of the options disk used for the factory installation is located in the following folder:

```
C:\Install\RecoveryDisk
```

You can copy the contents of this folder to the 3.5-inch disk and then use it as the options disk. If you do this, you can skip to Starting an XPPlus installation (see 181).

To start the Experion PKS Configuration Tool on a computer with the Windows operating system installed:

Step	Action
1	Insert the XPPlus-WinPE media into the appropriate drive. The default Web browser application starts, displaying the XPPlus-WinPE page.
2	Click the **Create Options disk using EPCTool (Launch EPCTool)** link. You may have to scroll down the page to see this link. The EPCTool is started.
3	Insert the blank 3.5-inch disk into drive A.

To start the Experion PKS Configuration Tool in WinPE:

Step	Action
1	Insert the XPPlus-WinPE media into the appropriate drive.
2	Insert the blank 3.5-inch disk into drive A.
3	Restart the computer.

Step	Action
4	When the **Press any key to boot from CD-ROM** message appears, press any key. The computer starts, using the Windows Pre-Installation Environment (WinPE) contained on the XPPlus-WinPE media.
5	When the **Error in option disk contents** message appears, click **Generate Options disk**. The EPCTool is started.

Generating an options disk using the Experion PKS Configuration Tool

Once the Experion PKS Configuration Tool (EPCTool) starts, you can enter the computer hardware and software configuration details.

Prerequisites

- You have started the Experion PKS Configuration Tool.

To generate an options disk using the Experion PKS Configuration Tool:

Step	Action
1	Click the **Platform** tab.
2	To generate an options disk for this computer, select the **Options Disk Generated for this machine** check box.
3	If you are installing XPPlus only and you do not want to install Experion PKS applications, click **Operating System Only** in the **Installation** group.
4	Click the appropriate Windows XP media that you have in the **Operating System media** group.
5	Click the **Network Configuration** tab.
6	Type the IP address/subnet Mask/Gateway address for each network interface card (NIC) in the appropriate boxes.
7	Select the **NIC1 and NIC2 participating in FTE community** check box if NIC1 and NIC2 are participating in FTE. Select the FTE type (Supervisory or Co-joined) if NIC1 and NIC2 are participating in FTE.
8	If NIC1 and NIC2 are participating in FTE, type the FTE community name in the **Community Name** box.

Step	Action
9	Click the **Input/Output Devices** tab.
10	If this computer is to be installed in an Icon Console, select the **Icon Console Present** check box and click the number of display monitors installed in the Icon Console.
11	If an operator entry panel (OEP) is installed, click **System Keyboard and OEP** in the Keyboard group.
12	If this computer is to be installed with a TouchScreen device, select the **TouchScreen Present** checkbox and select the type of TouchScreen device (USB or Serial) to be used with this computer. If you have a Serial TouchScreen, select the COM port that connects the TouchScreen.
13	Click the **System Details** tab.
14	In the **Language** list, click the required language.
15	In the **Telephone Area Code** box, type the telephone area code of your location. This area code can be up to three digits.
16	In the **Product ID** boxes, type the Windows XP Product Identification number.
17	In the **Computer Name** box, type the computer name.
18	In the **Company Name** box, type the company name.
19	In the **Workgroup Name** box, type the workgroup name.
20	In the **Customer Name** box, type your name.
21	If you want to create two partitions on the hard disk, click **Yes** in the **Partition Disk** group and then type the size of the primary partition in gigabytes (GB). The remaining space on the hard disk is created as the secondary partition.
22	Click the **Activation** tab.
23	If this computer does not have access to the Internet, click **Activation through Telephone**.

Step	Action
24	If this computer will have access to the Internet when correctly installed and configured, click **Activation through Internet**, and then do the following: • If you do not have a DHCP server, click **Use the following addresses** and then type the IP, subnet mask, default gateway, DNS server, and WINS server addresses in the appropriate boxes. • If you access the Internet through a proxy server, click **Use a proxy server** and then type the name or IP address of the proxy server and the port number assigned to HTTP.
25	Click the **Summary** tab.
26	Review the configuration details.
27	If all details are correct, click **Generate Options Disk**. The EPCTool writes the data to the 3.5-inch disk, which is known as the options disk.
28	Click **Exit**.

Starting an XPPlus installation

Prerequisites

- XPPlus-WinPE media in the appropriate drive.
- Options disk in drive A. This 3.5-inch disk must remain in drive A during the XPPlus installation, unless instructed to remove it.
- Ensure the required hardware, such as the video card and OEP/IKB, are connected or installed.

To start the XPPlus installation:

Step	Action
1	Restart the computer.
2	At the Dell startup screen, press F2 to enter the setup.
3	Select Boot sequence.

Step	Action
4	Set the boot sequence to the following order: a) IDE CD-ROM device. b) Hard disk drive. c) 3.5-inch disk drive.
5	Save the settings and exit setup.
6	When the **Press any key to boot from CD-ROM** message appears, press any key. The computer starts, using the Windows Pre-Installation Environment (WinPE) contained on the XPPlus-WinPE media. This environment validates the options disk.
7	When prompted, click **Continue** to start the Windows XP installation. The hard disk is erased and formatted. This may take 10 to 15 minutes to complete. The computer restarts. While the computer is restarting, do *not* press any key when the message “Press any key to boot from CD-ROM” is displayed.
8	When prompted, remove the XPPlus-WinPE media and insert the Microsoft Windows XP Professional CD or Dell Reinstallation CD into the appropriate drive, and then click **Continue**. The preparation of the Microsoft Windows XP Professional installation starts. This may take 5 to 10 minutes.
9	When prompted, click **I accept this agreement** in the **Windows XP Professional setup** dialog box, and then click **Next**.
10	When prompted, enter the Administrator user account password for the computer. The Microsoft Windows XP Professional installation is finalized. This may take 10 to 15 minutes.
11	If an XPPlus-WinPE installation complete message appears, click **OK**. Windows XP Professional is installed.

Step	Action
12	For non-unattended workstation deployment (UWD) installations, disable simple file sharing (see 187). If you are installing XPPlus as part of a UWD installation, simple file sharing is automatically disabled; there is no need to complete this step. The XPPlus installation process is complete.
13	If prompted, remove the Microsoft Windows XP Professional CD or Dell Reinstallation CD and insert the Experion PKS R210 Application Software DVD into the appropriate drive, and then click **Continue**. Experion PKS client software is installed. This may take 15 to 20 minutes.

Results

- XPPlus installation is complete. The Microsoft Windows XP operating system is installed, and, if selected on the options disk, Experion PKS software is also installed.
- If there are any errors during the installation, check the `C:\Install` folder for an `error.log` file. If this folder or file does not exist, there were no errors.

STOP	You have completed this task. Return to the checklist that led to this task.

7.4 Installing Windows XP Professional

You install Windows XP Professional using the Installation wizard, which is largely self-explanatory.

Prerequisites

- You have completed the site specification form and a client specification form (see 24).
- The Windows XP Professional CD, unless you are installing from a network. If you are installing from a network, ask your network administrator for help.
- The Windows XP Professional Certificate of Authenticity, which contains your Product Identification number.

Considerations

- If Windows XP Professional is already installed, you need to make a set of driver 3.5-inch disks and you need to reinstall it.
- Check if the computer is set to boot from the CD-ROM drive. If you do not have a bootable CD-ROM drive you need to create a set of boot disks (see 198).
- The hard disk must use NTFS formatting.
- In general, it is recommended that you create only one partition on the hard drive. However, if you intend to connect a printer to the server, you can create a separate partition for spooling print jobs.

  If print jobs are not processed—because, for example, the printer has run out of paper or has been disconnected—they are not deleted from the spool folder. If this folder is located in the server's primary partition, system performance will deteriorate as the partition fills up.

To install Windows XP Professional:

Step	Action
1	Insert the Windows XP Professional CD into the CD-ROM drive and switch off the computer.

Step	Action
2	Switch on the computer. If you are booting from the CD-ROM, a message will appear after the initial Dell screen disappears. When you see the text **Press any key to boot from the CD**, you have approximately four seconds to press any key to initiate the installation.
3	When the Welcome to Setup screen appears, press ENTER to start installation.
4	To accept the Licensing Agreement, press F8. Windows attempts to detect the hardware in your computer and will display a list of Mass Storage Devices.
5	If Windows is: a) Already installed on the computer, select **Install a fresh copy of Windows XP** and press ESC. b) Not installed on the computer, go to the next step.
6	A list of partitions on which Windows can be installed appears. Select the drive you want Windows installed on and press ENTER.
7	If you selected a drive that contains another operating system, you will be asked if you want to continue. Press C to continue.
8	Select **Format the partition using the NTFS file system** and press ENTER. Formatting the drive will delete all files on that drive. The partition is configured and the computer restarts.
9	When the computer restarts, the Setup wizard starts (see 185).

Setting Up Windows XP Professional

The Setup wizard starts when the computer restarts after installing Windows XP Professional.

Considerations

- You must configure TCP/IP networking, even if there is no network adapter in the computer.

To set up Windows XP Professional:

Step	Action
1	To change the System and User locales or the Keyboard layout, click the appropriate **Customize** button. Make your changes, click **Apply**, and then **OK**.
2	Click **Next**.
3	Type the name and organization, as specified on the client specification form.
4	Type your Windows XP Product Identification number.
5	Type the server name, as specified in the client specification form.
6	Type the password for a Windows account with local administrator rights, as specified in the site specification form, and then click **Next**.
7	Check the **Date & Time** are set correctly.
8	Click the **Time Zone** that the server is running in.
9	Clear the **Automatically adjust for Daylight Savings Time** check box. Instead, manually adjust the time for daylight-savings time shifts.
10	Click **Next**.
11	Click **Typical settings** and click **Next**.
12	Click **No, this computer is not on a network, or is on a network without a domain**.
13	Type the name of the workgroup and click **Next**.
	Setup now installs the components. This will take several minutes.
14	When the Welcome to Windows dialog box appears click **Next**.
15	Click **Local Area Network** and click **Next**.
16	Enter the TCP/IP settings as specified on the site specification form.
17	Click **Next**.
18	If you have internet access, click **Yes** to register Windows XP with Microsoft, otherwise, click **No**.

Step	Action
19	When prompted to enter who will use this computer, type **`Honeywell`**. This is a temporary user that is deleted in the next step.

Logging on to Windows XP

To log on to Windows XP:

Step	Action
1	Click the **Honeywell** user.
2	Choose **Start** > **Control Panel** and then click **User Accounts**.
3	Click **Change the way user log on or off**.
4	Clear the **User the Welcome Screen** option and then click **Apply Options**.
5	Choose **Start** > **Log Off** and click **Log Off**.
6	Log on to the computer as the Administrator user.
7	Choose **Start**, right-click **My Computer** and then choose **Manage**.
8	Expand **System Tools**, then **Local Users and Group**, and then **Users**.
9	Right-click the **Honeywell** user, and choose **Delete** to delete this temporary user account.
10	Close the Computer Management dialog box.

Disabling Simple File Sharing

To disable simple file sharing:

Step	Action
1	In Windows Explorer, choose **Tools** > **Folder Options**.
2	Click the **View** tab on the Folder Options dialog box.
3	Clear the **Use simple file sharing** check box in the **Advanced settings** list.
4	Click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

7.5 Installing Windows 2000 Server

You install Windows 2000 Server using the Installation wizard, which is largely self-explanatory.

Prerequisites

- You have completed the site specification form and a server specification form (see 24).
- Windows 2000 Server CD, unless you are installing from a network. (If you are installing from a network, ask your network administrator for help.)
- Windows 2000 Certificate of Authenticity, which contains your Product Identification number.

Considerations

- If Windows 2000 Server is already installed, you need to make a set of driver disk and you have to reinstall it.
- Check if the computer is set to boot from the CD-ROM drive. If you do not have a bootable CD-ROM drive you need to create a set of boot disks (see 198).
- Check that Logical Processors (hyper-threading) is disabled. This setting can be found in the system BIOS under CPU Information.
- The hard disk must use NTFS formatting.
- In general, it is recommended that you create only one partition on the hard drive. However, if you intend to connect a printer to the server, you may create a separate partition for spooling print jobs.

  If print jobs are not processed—because, for example, the printer has run out of paper or has been disconnected—they are not deleted from the spool folder. If this folder is located in the server's primary partition, system performance will deteriorate as the partition fills up.

To install Windows 2000 Server:

Step	Action
1	Insert the Windows 2000 Server CD into the CD-ROM drive and switch off the computer.

Step	Action
2	Switch on the computer. If you are booting from the CD, a message will appear after the initial Dell screen disappears. When you see the message **Press any key to boot from the CD**, you have approximately four seconds to press any key to initiate the installation.
3	When the Welcome to Setup screen appears, press ENTER to start the installation.
4	To accept the Licensing Agreement, press F8. Windows attempts to detect the hardware in your computer and will display a list of Mass Storage Devices.
5	If Windows is already installed on the computer, select **Install a fresh copy of Windows 2000** and press ESC.
6	A list of partitions on which Windows can be installed appears. Select the drive you want Windows installed on and press ENTER.
7	If you selected a drive that contains another operating system, you will be asked if you want to continue. Press C to continue.
8	Select **Format the partition using the NTFS file system** and press ENTER.
9	Formatting the hard disk will delete all files on that drive. To format the drive, press F. The partition is configured and formatted. This may take several minutes. The setup files are copied to the hard disk. This may take several minutes. The computer restarts.
10	When the computer restarts, the Setup wizard starts.

Setting Up Windows 2000 Server

The Setup wizard starts when the computer restarts after installing Windows 2000 Server.

Considerations

- You must configure the TCP/IP networking software, even if there is no network adapter in the computer.
- When the computer restarts and you are prompted to start the computer from the CD, do *not* press any keys.

- The date and time formats within the system locale are used by Experion PKS reports. When prompted to customize the system locale, set the date and time to the required format.

To set up Windows 2000 Server:

Step	Action
1	Click **Next**. The Setup wizard detects and installs devices. This may take several minutes.
2	To change the system or user locales, or the keyboard layout, click the appropriate **Customize** button. Make your changes, click **Apply**, and then click **OK**.
3	Click **Next**.
4	Type the name and organization, as specified on the server specification form, and then click **Next**.
5	Type your Windows 2000 Product Identification number and then click **Next**.
6	Click **Per Server** and then type the number of concurrent connections, as specified on the server specification form. Concurrent connections are *not* identical to the number of station connections.
7	Click **Next**.
8	Type the server name, as specified in the server specification form.
9	Type the password for a Windows account with local administrator rights, as specified in the site specification form.
10	Click **Next**.
11	Ensure that the **Script Debugger** check box is selected.
12	Click **Next**.
13	Check the **Date & Time** are set correctly.
14	Click the **Time Zone** that the server is running in.
15	Click **Next**. Setup installs the network components. This installation can take several minutes to complete.

Step	Action
16	Click **Typical settings** and then click **Next**.
17	Click **No, this computer is not on a network, or is on a network without a domain** and then click **Next**. Setup installs the components. This installation can take 10-20 minutes to complete.
18	When prompted, remove the CD, and then click **Finish**. The computer restarts.
19	Log on to the computer using a Windows account with local administrator rights.
20	Click **I will configure this computer later** and then click **Next**.
21	Clear the **Show this screen at startup** check box and then close the **Windows 2000 Configure Your Server** dialog box.

Configuring TCP/IP Networking

The next phase of the setup procedure involves configuring TCP/IP networking, which must be configured.

ATTENTION

Experion PKS requires TCP/IP networking in order to run.

To configure TCP/IP networking:

Step	Action
1	Choose **Start** > **Settings** > **Network and Dial-up Connections**.
2	Right-click **Local Area Connection** and choose **Properties**.
3	Click **Internet Protocol (TCP/IP)**. Click the **Properties** button.
4	Type the TCP/IP settings on the **General** tab, as specified on the site specification form.
5	Click **Advanced** and type the WINS and DNS information, as specified on the site specification form.
6	Click **OK** to close the Advanced TCP/IP Settings dialog box.

Step	Action
7	Click **OK** to close the Internet Protocol (TCP/IP) Properties dialog box.
8	Click **OK** to close the Local Area Connection Properties dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

7.6 Installing Windows 2000 Professional

You install Windows 2000 using the Installation wizard, which is largely self-explanatory.

Prerequisites

- You have completed the site specification form and a client specification form (see 24).
- The Windows 2000 Professional CD, unless you are installing from a network. (If you are installing from a network, ask your network administrator for help.)
- The Windows 2000 Certificate of Authenticity, which contains your Product Identification number.

Considerations

- If Windows 2000 Professional is already installed, you need to make a set of driver 3.5-inch disks and you have to reinstall it.
- Check if the computer is set to boot from the CD-ROM. If you do not have a bootable CD-ROM drive you need to create a set of boot disks (see 198).
- The hard disk must use NTFS formatting.
- In general, it is recommended that you create only one partition on the hard drive. However, if you intend to connect a printer to the server, you must create a separate partition for spooling print jobs. (If print jobs are not processed—because, for example, the printer has run out of paper or has been disconnected—they are not deleted from the spool folder. If this folder is located in the server's primary partition, system performance will deteriorate as the partition fills up.)

To install Windows 2000 Professional:

Step	Action
1	Insert the Windows 2000 Professional CD into the CD-ROM drive and shutdown the computer.
2	Switch on the computer. If you are booting from the CD-ROM drive, a message will appear after the initial Dell screen disappears. When you see the text **Press any key to boot from the CD**, you have approximately four seconds to press any key to initiate the installation.

Step	Action
3	When the Welcome to Setup screen appears, press ENTER to start the installation.
4	To accept the Licensing Agreement, press F8. Windows attempts to detect the hardware in your computer and will display a list of Mass Storage Devices.
5	If Windows is already installed on the computer, select **Install a fresh copy of Windows 2000** and press ESC.
6	A list of partitions on which Windows can be installed appears. Select the drive you want Windows installed on and press ENTER.
7	If you selected a drive that contains another operating system, you will be asked if you want to continue. Press C to continue.
8	Select **Format the partition using the NTFS file system** and press ENTER.
9	Formatting the drive will delete all files on that drive. To format the drive, press F. The partition is configured and the computer restarts.
10	When the computer restarts, the Setup wizard starts.

Setting Up Windows 2000 Professional

The Setup wizard starts when the computer restarts after installing Windows 2000 Professional.

Considerations

- You must configure the TCP/IP networking software, even if there is no network adapter in the computer.

To set up Windows 2000 Professional:

Step	Action
1	Click **Next**.
2	To change the system and user locales or the keyboard layout, click the appropriate **Customize** button. Make your changes, click **Apply**, and then **OK**.

Step	Action
3	Click **Next**.
4	Type the name and organization, as specified on the client specification form, and then click **Next**.
5	Type your Windows 2000 Product Identification number and then click **Next**.
6	Type the computer name, as specified in the client specification form.
7	Type the password for a Windows account with local administrator rights, as specified in the site specification form.
8	Click **Next**.
9	Check the **Date & Time** are set correctly.
10	Click the **Time Zone** that the server is running in.
11	Clear the **Automatically adjust for Daylight Savings Time** check box. Instead, manually adjust the time for daylight-savings time shifts.
12	Click **Next**. Setup installs the network components. This installation can take several minutes to complete.
13	Click **Typical settings** and click **Next**.
14	Click **No, this computer is not on a network, or is on a network without a domain** and then click **Next**. Setup installs the components. This installation can take 10-20 minutes to complete.
15	When prompted, remove the CD, and then click **Finish**. The computer restarts.
16	When the Network Identification wizard starts. Click **Next**.
17	Click **Users must enter a user name and password to use this computer**.
18	Click **Next**.
19	Click **Finish**.
20	Log on to the computer using a Windows account with local administrator rights.

Configuring TCP/IP Networking Software

The next phase of the setup procedure involves configuring TCP/IP networking, which must be configured.

ATTENTION

Experion PKS requires TCP/IP networking in order to run.

To configure TCP/IP networking:

Step	Action
1	Choose **Start** > **Settings** > **Network and Dial-up Connections**.
2	Right-click **Local Area Connection** and choose **Properties**.
3	Click **Internet Protocol (TCP/IP)**. Click the **Properties** button.
4	Type the TCP/IP settings on the **General** tab, as specified on the site specification form.
5	Click **Advanced** and type the WINS and DNS information, as specified on the site specification form.
6	Click **OK** to close the Advanced TCP/IP Setting dialog box.
7	Click **OK** to close the Internet Protocol (TCP/IP) Properties dialog box.
8	Click **OK** to close the Local Area Connection Properties dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

7.7 Creating Windows operating system boot disks

This section describes how to create boot 3.5-inch disks for a Windows 2000 or Windows XP installation.

Requirements

- Windows operating system installation CD.
- Four blank 3.5-inch disks.
- A computer with DOS or Windows operating system installed and a 3.5-inch disk drive and CD-ROM drive.

Considerations

- Each variation of the Windows operating system requires a set of separate boot 3.5-inch disks. For example, you need a separate set of boot disks for Windows 2000 Server and another set for Windows 2000 Professional.

To create Windows operating system boot disks:

Step	Action
1	Insert the Windows operating system installation CD into the CD-ROM drive.
2	Display a Command window.
3	Change to the CD-ROM drive. For example, type **`D:`**.
4	Change to the `bootdisk` directory. For example, type **`cd bootdisk`**.
5	Type **`makeboot`** and press ENTER.
6	When prompted, type the letter of your 3.5-inch disk drive. For example, **`A`**.
7	Follow the on-screen prompts for inserting, labeling, and creating the disks.

To start an installation from the boot disks:

Step	Action
1	Turn off the computer.
2	Insert the first boot disk into drive A.

Step	Action
3	Turn on the computer.
4	The system boots from the disk in drive A.
5	Follow the on-screen prompts to eject and insert the remaining boot disks.
6	When the Welcome to Setup screen appears, follow the installation instructions.

STOP	You have completed this task. Return to the checklist that led to this task.

7.8 Adding the computer to a domain

If you require your computer to be assigned to a Windows domain complete the instructions in this section.

Prerequisites

- You have a Windows domain controller installed and operating correctly.
- You have completed the site specification form (see 24).

To add a Windows 2000 computer to a domain:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click the **System** icon to display the **System Properties** dialog box.
3	Click the **Network Identification** tab.
4	Click **Properties** to display the **Identification Changes** dialog box.
5	Click **Domain** and then type the domain name, as specified in the site specification form.
6	Click **OK**.
7	If prompted, type the user name and password of the domain administrator, and then click **OK**. The computer registers with the domain. This may take several seconds.
8	Click **OK** to acknowledge the welcome message.
9	Restart the computer.
10	Log on to the computer using a Windows account with local administrator rights.

STOP	You have completed this task. Return to the checklist that led to this task.

To add a Windows XP computer to a domain:

Step	Action
1	Choose **Start** > **Control Panel**. Click the **Performance and Monitoring** icon and then click the **System** icon to display the **System Properties** dialog box. If you view the Control Panel in classic view, choose **Start** > **Control Panel** and then click the **System** icon.
2	Click the **Computer Name** tab.
3	Click **Change** to display the **Computer Name Changes** dialog box.
4	Click **Domain** and then type the domain name, as specified in the site specification form.
5	If prompted, type the user name and password of the domain administrator, and then click **OK**. The computer registers with the domain. This may take several seconds.
6	Click **OK** to acknowledge the welcome message.
7	Restart the computer.
8	Log on to the computer using a Windows account with local administrator rights.

STOP	You have completed this task. Return to the checklist that led to this task.

7.9 Adding a domain account to local groups on this computer

If you require a domain account to have local administrator rights, or to have permissions to import and export Control Builder repositories on this computer, complete the instructions in this section.

Prerequisites

- You have a Windows domain controller installed and operating correctly.
- You have completed the site specification form (see 24).

Considerations

- For the remaining installation instructions, if you are instructed to log on to the computer using a Windows account with local administrator rights, you can log on to the computer using a domain account that has been added the local Administrators group on this computer.
- If a domain account user is required to import or export Control Builder repositories, that domain account must be added to the local Engineering Repository Administrator group.

To add a domain user to a local group on Windows 2000:

Step	Action
1	On the Windows desktop, right-click on the **My Computer** icon, and choose **Manage**.
2	Expand the **System Tools** item.
3	Expand the **Local Users and Groups** item
4	Click **Groups**.
5	Double-click on the name of the local group to add the domain account. For example, double-click Administrators.
6	Click **Add** to display the **Select Users or Groups** dialog box.
7	In the **Look in** list, click the domain name containing the domain account.
8	Click the name of domain account.

Step	Action
9	Click **Add**.
10	Click **OK** to close the group properties dialog box.
11	Click **OK** to close the **Administrators Properties** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

To add a domain user to a local group on Windows XP:

Step	Action
1	Choose **Start**, right-click on the **My Computer** icon, and choose **Manage**.
2	Expand the **Local Users and Groups** item
3	Click **Groups**.
4	Double-click on the name of the local group to add the domain account. For example, double-click Administrators.
5	Click **Add** to display the **Select Users or Groups** dialog box.
6	Click **Locations** to display the **Locations** dialog box.
7	Click the domain name containing the domain account and then click **OK**.
8	In the **Enter the object names to select** box, type the name of domain account.
9	Click **OK**.
10	Click **OK** to close the group properties dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

7.10 Configuring the video display

You must configure the video display so that it suitable for use by Station.

Considerations

- Experion PKS does not support the use of large fonts. When setting the font size, ensure you select Small Fonts (for Windows 2000) or Normal size (for Windows XP).
- In general, setup automatically detects your display adapter and installs the correct drivers. However, if setup does not detect the display adapter (that is, only a VGA adapter is detected), you must manually install the display adaptor drivers in accordance with the manufacturer's instructions.
- Do *not* use a CPU-intensive, or graphics-intensive, screen saver as its CPU requirements may degrade Experion PKS performance.

To configure the video display in Windows 2000:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel** and double-click the **Display** icon to open the **Display Properties** dialog box.
2	Click the **Settings** tab and set the values as follows:

Property	Value
Colors	High Color (16-bit)
Screen area	1280 x 1024

Step	Action
3	Click **Advanced**.
4	In the **Font Size** list, click **Small Fonts**, and then click **OK**.
5	Click the **Monitor** tab.
6	Set the **Refresh Frequency** to the highest rate that the display can handle.
7	Click **Apply** and then click **OK** to preview the changes.

Step	Action
8	If the screen displays correctly, click **Yes** to accept the settings. If not, adjust the **Refresh Frequency**, **Colors** or **Screen Area** to correct the problem.
9	Click **OK**.
10	Click **OK** to close the **Display Properties** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

To configure the video display in Windows XP (client computers only):

Step	Action
1	Choose **Start** > **Control Panel**.
2	Click the **Display** icon to open the **Display Properties** dialog box. If the **Display** icon is not displayed, switch to Classic view.
3	Click the **Settings** tab and set the values as follows:

Property	Value
Screen resolution	1280 by 1024 pixels
Color quality	Medium (16-bit)

4	Click **Advanced**.
5	In the **DPI Setting** list, click **Normal size**.
6	Click the **Monitor** tab and set the **Screen refresh rate** to the highest rate that the display can handle.
7	Click **Apply** and then click **OK** to preview the changes.
8	If the screen displays correctly, click **Yes** to accept the settings. If not, adjust the **Refresh frequency**, **Color quality** or **Screen resolution** to correct the problem.
9	Click **OK**.

Step	Action
10	Click **OK** to close the **Display Properties** dialog box.
STOP	You have completed this task. Return to the checklist that led to this task.

7.11 Updating the computer's hosts file

You must identify the computer name and associated IP address of each Experion PKS server and Console Station in the `hosts` file. Both server and client computers require a modified `hosts` file with identical entries, so you can edit the `hosts` file on one computer and then copy it to each computer in the Experion PKS system.

The `hosts` file is located in `%SystemRoot%\system32\drivers\etc\`, where `%SystemRoot%` is normally `C:\WINNT` or `C:\WINDOWS`.

Use any text editing tool, such as Notepad, to edit the file.

The following examples show typical system configurations and the entries that should be included in the `hosts` file.

Single Experion PKS server, single-network or FTE

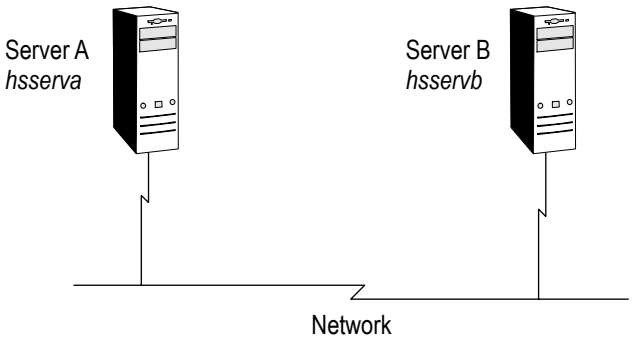
Assume the IP address of the Experion PKS server computer, hsserv, is `192.168.0.1`. For FTE, this IP address is for the yellow cable connection.

If your system has Console Stations, the IP address and computer names of these Console Stations must also be included in the `hosts` file. Assume that there are two Console Stations, hscstn01 and hscstn02, with the IP addresses of `192.168.0.10` and `192.168.0.11`, respectively. For FTE, these IP addresses are for the yellow cable connection.

The `hosts` file on each computer within this Experion PKS system would include the following entries:

```
127.0.0.1     localhost
192.168.0.1   hsserv
192.168.0.10  hscstn01
192.168.0.11  hscstn02
```

Redundant Experion PKS servers, single-network or FTE



Assume the IP addresses are:

- `192.168.0.1` for server A, hsserva.
- `192.168.0.2` for server B, hsservb.

For FTE, these IP addresses are for the yellow cable connection.

If your system has Console Stations, the IP address and computer names of these Console Stations must also be included in the `hosts` file. Assume that there are two Console Stations, hscstn01 and hscstn02, with the IP addresses of `192.168.0.10` and `192.168.0.11`, respectively. For FTE, these IP addresses are for the yellow cable connection.

The `hosts` file on each server and client computer within this Experion PKS system would include the following entries:

```
127.0.0.1     localhost
192.168.0.1   hsserva hsserva0
192.168.0.2   hsservb hsservb0
192.168.0.10  hscstn01
192.168.0.11  hscstn02
```

Single Experion PKS server, dual network (non FTE)

Assume the IP addresses are:

- `192.168.0.1` for the server, hsserv, on the first network.
- `192.168.1.1` for the server, hsserv, on the second network.

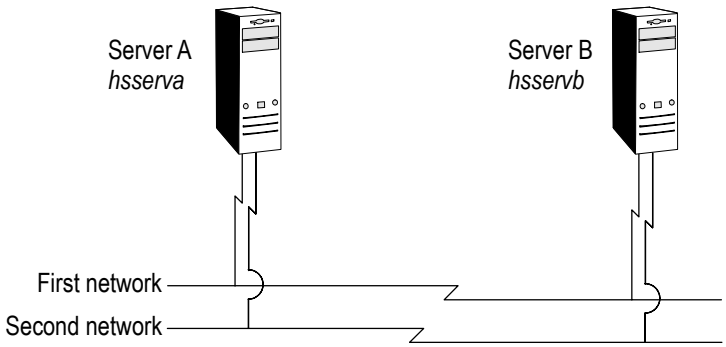
If your system has Console Stations, the IP address and computer names of these Console Stations must also be included in the `hosts` file. Assume the IP addresses are:

- `192.168.0.10` for the Console Station, hscstn01, on the first network.
- `192.168.1.10` for the Console Station, hscstn01, on the second network.
- `192.168.0.11` for the Console Station, hscstn02, on the first network.
- `192.168.1.11` for the Console Station, hscstn02, on the second network.

The `hosts` file on each server and client computer within the Experion PKS system would include the following entries:

```
127.0.0.1     localhost
192.168.0.1   hsserv hsserv0
192.168.1.1   hsserv1
192.168.0.10  hscstn01 hscstn010
192.168.1.10  hscstn011
192.168.0.11  hscstn02 hscstn020
192.168.1.11  hscstn021
```

Redundant Experion PKS servers, dual network (non FTE)



Assume the IP addresses are:

- `192.168.0.1` for server A, hsserva, on the first network.
- `192.168.1.1` for server A, hsserva, on the second network.
- `192.168.0.2` for server B, hsservb, on the first network.
- `192.168.1.2` for server B, hsservb, on the second network.

If your system has Console Stations, the IP address and computer names of these Console Stations must also be included in the `hosts` file. Assume the IP addresses are:

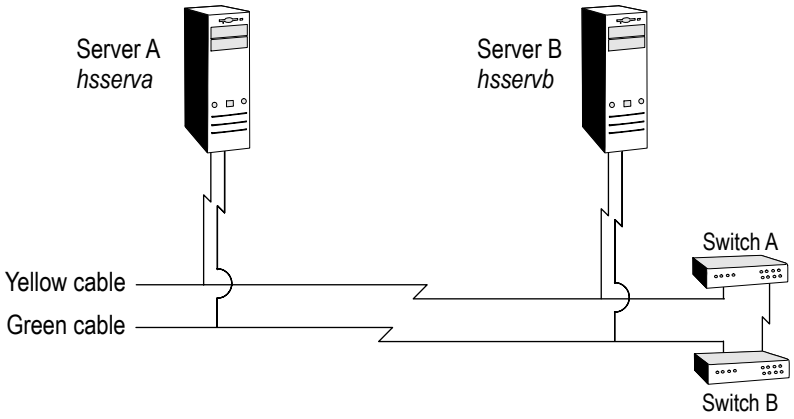
- `192.168.0.10` for the Console Station, hscstn01, on the first network.
- `192.168.1.10` for the Console Station, hscstn01, on the second network.
- `192.168.0.11` for the Console Station, hscstn02, on the first network.
- `192.168.1.11` for the Console Station, hscstn02, on the second network.

The `hosts` file on each server and client computer within the Experion PKS system would include the following entries:

```
127.0.0.1     localhost
192.168.0.1   hsserva hsserva0
192.168.1.1   hsserva1
```

```
192.168.0.2   hsservb hsservb0
192.168.1.2   hsservb1
192.168.0.10  hscstn01 hscstn010
192.168.1.10  hscstn011
192.168.0.11  hscstn02 hscstn020
192.168.1.11  hscstn021
```

Redundant Experion PKS servers, Fault Tolerant Ethernet (FTE) system



Assume the IP addresses are:

- `192.168.0.1` for server A, hsserva, connected to the yellow cable.
- `192.168.0.2` for server B, hsservb, connected to the yellow cable.

The `hosts` file on each server and client computer within the Experion PKS system would include the following entries:

```
127.0.0.1     localhost
192.168.0.1   hsserva hsserva0
192.168.0.2   hsservb hsservb0
```

- for `hsserva` on the first network

- `192.168.1.1` for `hsserva` on the second network
- `192.168.0.2` for `hsservb` on the first network
- `192.168.1.2` for `hsservb` on the second network

The `hosts` file would therefore include the following:

```
127.0.0.1       localhost
192.168.0.1     hsserva hsserva0
192.168.0.2     hsservb hsservb0
192.168.1.1     hsserva1
192.168.1.2     hsservb1
```

STOP	You have completed this task. Return to the checklist that led to this task.

7.12 Installing Microsoft Excel

This section describes how to install Microsoft Excel 2000 or XP, how to apply the Microsoft Office service pack, and how to configure Microsoft Excel macro settings.

Installing Microsoft Excel 2000 or XP

Prerequisites

- Microsoft Office or Microsoft Excel CD.
- You must be logged on to the computer using a Windows account with local administrator rights.

Considerations

- If you install Microsoft Excel on a remote computer (computer other than the server), it uses the full name of the primary server when requesting information from the server (see 421).

To install/upgrade Microsoft Excel:

Step	Action
1	Insert the Microsoft Office or Microsoft Excel CD into the CD-ROM drive.
2	In Windows Explorer, browse to the drive and double-click the `setup.exe` file.
3	Follow the instructions on-screen to complete the installation.
4	Restart the computer.

Installing the Microsoft Office service pack

Prerequisites

- Latest Microsoft Office service pack for your version of Microsoft Office or Microsoft Excel.

  For Microsoft Office 2000, you must install Service Release 1a first (`o2sr1a.exe`), then you can install Service Pack 2 (`sp2upd.exe`).

  For Microsoft Office XP, this is Service Pack 2 (*`oxpsp2.exe`*).

You can download the appropriate service pack(s) from the following location: `http://office.microsoft.com/Downloads/default.aspx`, or you can order a CD from Microsoft containing these updates.

- You cannot install the Microsoft Office 2000 Service Release 1a on a computer that does *not* have access to the Internet. Instead, you must download the full version of the Microsoft Office 2000 Service Release 1a (`o2ksr1adl.exe`) on a computer that has Internet access and transfer it to this computer. You can download the full version from the following location:
  `http://www.microsoft.com/office/ork/2000/appndx/toolbox.htm#o2sr1au`

  For more information on how to install this service release, see the Knowledge Base article number 258323 on the Microsoft web site.
- Microsoft Office or Microsoft Excel CD.

To install the Microsoft Office service pack:

Step	Action
1	Close any applications that are running.
2	In Windows Explorer, browse to the folder containing the Microsoft Office service pack, and double-click on the setup application file, such as `sp2upd.exe`.
3	Follow the instructions on-screen to complete the installation.
4	Restart the computer.

Configuring Microsoft Excel

After installing Microsoft Excel, you need to change the default macro security setting. By default, the macro security level is High and needs to be changed to Medium for successful installation of Microsoft Excel Data Exchange components.

To change the macro security settings:

Step	Action
1	Choose **Start** > **Programs** > **Microsoft Excel** to start the Microsoft Excel application.
2	Choose **Tools** > **Macro** > **Security** to display the **Security** dialog box.

Step	Action
3	Click **Medium** and click **OK**.
4	Close the Microsoft Excel application.

Configuring the Microsoft Excel Data Exchange add-in

When you complete a standard Experion PKS server installation, Microsoft Excel Data Exchange (MEDE) components are installed even if Microsoft Excel is not installed at that time. If you install Microsoft Excel *after* installing Experion PKS server, and wish to use MEDE, you will need to configure MEDE (see 393)

STOP	You have completed this task. Return to the checklist that led to this task.

7.13 Protecting against viruses

Anti-virus measures are an important element of a comprehensive process control security strategy. It is therefore important to not only install anti-virus software, and to run regular virus checks, but also to keep the anti-virus software and virus signatures up-to-date.

Anti-virus software should be installed on server, Station, and ACE nodes within your Experion PKS system.

For further guidance on anti-virus measures, see the *Experion PKS Network and Security Planning Guide*.

Honeywell support for anti-virus software

McAfee VirusScan and Norton AntiVirus have been tested and are supported by Honeywell for use with Experion PKS.

Configuring anti-virus software guidelines

After installing Experion PKS server and Console Station software on a computer, you need to configure the anti-virus software to exclude the following folders from the virus scan:

- `C:\Program Files\Honeywell\Experion PKS\server\data`
- `C:\Program Files\Honeywell\Experion PKS\Engineering Tools\system\er`

STOP	You have completed this task. Return to the checklist that led to this task.

7.14 Implementing Windows security policies

This section describes the considerations you should note before implementing your local Windows security policies or procedures.

Administrator account

If your local policy is to rename the Windows Administrator account, you need to note the following:

- You should *not* rename the Windows Administrator account during the installation of Experion PKS software. You should rename the Windows Administrator account either prior to or after completing the installation of Experion PKS software.
- If you do rename the Windows Administrator account, you must log off from the Windows operating system and then log on again, using the new Windows Administrator account name.

STOP	You have completed this task. Return to the checklist that led to this task.

8. Installing/upgrading Experion PKS server

This section contains the task on how to install the Experion PKS server and associated components on a server.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

8.1 Starting the Experion PKS server install/upgrade

This section describes how to start the Experion PKS server installation.

Prerequisites

- Experion PKS R210 media.

Considerations

- You cannot install Experion PKS software on a computer that is configured as a Windows 2000 domain controller. If domains are required, separate computers that are *not* part of the Experion PKS installation can be configured as the domain controllers.
- The computer restarts during the installation process, so it is recommended that you have no other applications running during this installation.
- If the installation fails or aborts, you can restart the Experion PKS installation by double-clicking on the `ppd.exe` file on the Application DVD.
- You can also install Experion PKS client applications, such as Station and Quick Builder, as part of the installation.

To start the Experion PKS server installation:

Step	Action
1	Restart the computer and log on using a Windows account with local administrator rights. If this is an upgrade, log on to the computer using the same Windows account with local administrator rights that was used for the previous Experion PKS installation. You can confirm the correct Windows account by logging on to the computer and viewing the Add/Remove Programs screen. If the **Psc System Installer** program exists, the current Windows account is correct.
2	**For upgrades only:** If you *cannot* see the Psc System Installer program in the Add/Remove Programs screen in the step above, do *not* proceed any further with this installation. Call your Honeywell Technical Assistance Center (TAC).
3	In Windows Explorer, browse to the Experion PKS R210 Application DVD drive, and then double-click the `setup.exe` file.

Step	Action
4	If the **Experion PKS Migration Utility** screen appears, click **Continue**. The migration utility installs the required operating system and application updates for Experion PKS.
5	**For clean installations only:** Go to step 11.
6	If you are **upgrading** server A in a redundant pair of an Experion PKS system, go to step 9.
7	If you are **upgrading** a non-redundant server, or server B in a redundant pair of an Experion PKS system, do the following: a) On the Database Migration Wizard screen, click **Next** to start the database backup. b) On the database migration has completed successfully message, click **Finished**. The Experion PKS Migration Utility closes.
8	If prompted, click **OK** to restart the computer. You may be prompted more than once. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
9	On the Migrate screen, click **OK** to restart the computer.
10	When the computer restarts, log on to the computer using a Windows account with local administrator rights.
11	**For clean installations only**: On the Experion PKS - Product Selection screen, do one of the following: • If you are installing Experion PKS for use with process points, click **Experion PKS Server (Process Points)**. • If you are installing Experion PKS for use with SCADA points, click **Experion PKS Server (SCADA Points)**.
12	**For clean installations only**: If you selected Experion PKS Server (Process Points), click the **Level 2 (Supervisory) Control Network** used in the Experion PKS system.
13	On the Experion PKS Product Selection screen, verify the product selection and control network, and then click **Next**.
14	On the License Agreement screen, read the license agreement and then click **I accept the terms in the license agreement**, and then click **Next**.

Step	Action
15	On the EMDB screen, if this server is intended to be the single repository (per server cluster) for the Enterprise Model database, select **Install**, otherwise select **Do Not Install**.
16	Click **Next**.
17	**For clean installations only:** If you selected Fault Tolerant Ethernet (FTE) as the level 2 control network, on the Basic FTE Address Configuration screen, do the following: a) In the **FTE Network Number (NN)** list, click the network number. b) In the **FTE Community Number (CN)** list, click the community number. c) If required, click **Expert Mode** to enter customized FTE IP addresses. d) Click **Next**.
18	On the Enter MNGR password screen, type the existing Windows mngr account password and then click **Next**.
19	On the Confirm Installation Settings screen, verify that the product installation selections are correct, and then click **Install**.
20	On the Product Selection screen, click **Continue**.

STOP	You have completed this task. Return to the checklist that led to this task.

8.2 Install/upgrade Microsoft SQL Server

This section describes how to continue installing Microsoft SQL Server.

Considerations

- This installation step requires no user interaction, except to click **OK** to restart the computer.
- When the computer restarts and if a service failure message appears, click **OK** to continue.

To install Microsoft SQL Server:

Step	Action
1	For clean installations only: Status messages in the SQL Setup Installation Application dialog box display the progress of the installation. This installation may take several minutes to complete. If prompted, click **OK** to restart the computer. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
2	The SQL Server Service Pack 3 installation begins. Status messages in the **SQL Setup Installation Application** dialog box display the progress of the installation. This installation may take several minutes to complete. SQL Server Service Pack 3 hot fix is installed. When the **SQL Setup Installation Application** dialog box closes, the installation is complete.
STOP	You have completed this task. Return to the checklist that led to this task.

8.3 Install/upgrade the .NET framework

This section describes how to continue installing the Microsoft .NET framework. For upgrades where the version of .NET is unchanged, the progress bar does not appear.

To install the .NET framework:

Step	Action
1	In the attention message, click **OK** to restart the computer.

ATTENTION

An error in the `VirtualBackplane.sys` file for the PCIC drivers causes a blue screen error event during a computer restart. This error is expected and can be ignored.

STOP	You have completed this task. Return to the checklist that led to this task.

8.4 Install/upgrade Engineering Tools

This section describes how to continue installing the Engineering Tools.

Considerations

- If a failed to register an application message appears during the installation, click **Ignore** to continue the installation.

To install Engineering Tools:

Step	Action
1	If you are prompted to stop SQL Server and the Engineering Tools services, click **Yes**, or, type **Y** and press ENTER, if this message appears in a Command window. This installation may take several minutes to complete.
2	If an Engineering Repository Database setup failed message appears, click **OK**. Active X components are installed; however, no user interaction is required. This installation may take one or two minutes to complete.

STOP	You have completed this task. Return to the checklist that led to this task.

8.5 Install Experion PKS server

This section describes how to continue installing the Experion PKS server.

To install Experion PKS server:

Step	Action
1	If required, insert the **Experion PKS R210 Application DVD and click Yes.**
2	If the Experion PKS Server Setup screen appears, click **Next**.
3	On the Enter License screen, type the **System number** and the **Authorization number**, as specified in your Experion PKS license, and then click **Next**.
4	On the Experion PKS Server Setup screen, click **Complete Install** and then click **Next**.
5	On the Ready to Install the Program screen, review the program features that are to be installed, and then click **Install**.
6	If a setup requires Internet Information Services, a message appears, click **Ignore**.
7	If a start the server message appears in a Command window, type **Y** and then press ENTER. The **Experion PKS R210 Server Setup** wizard installs the software. This installation may take up to 30 minutes.
8	Click **Finish** to continue the Experion PKS installation. Detail Displays are installed. A progress window and a command window display the installation progress.
9	If an msi.dll error message appears, click **OK** to continue the installation. Profit Loop Assistant software is installed. A progress window displays the installation progress. No user intervention is required.
10	On the Experion PKS Setup Complete screen, click **Finish**.

Step	Action
11	If a msi.dll error message was displayed during the installation, do the following: a) In Windows Explorer, browse to the `detail displays` folder on the drive. b) Double-click on the `Process Detail Displays.msi` file. c) Wait until the Command window closes.
STOP	You have completed this task. Return to the checklist that led to this task.

8.6 Upgrading an Experion PKS server

This section describes how to continue upgrading an earlier release of Experion PKS server to Experion PKS R210.

Considerations

- If during the upgrade you receive error messages about shortcuts that were unable to be removed or added, you will need to add these shortcuts manually once the upgrade to Experion PKS R210 is complete (see 455).

To upgrade an Experion PKS server:

Step	Action
1	If required, insert **Experion PKS R210 Application DVD and click Yes.**
2	Do the following: a) On the Upgrade Notification message, click **Next**. b) On the Enter License screen, type the **System number** and **Authorization number**, as specified in your Experion PKS license, and then click **Next**. c) If prompted, on the Retain Database screen, select **Yes**, and then click **Next**. d) On the Choose the type of installation screen, click **Complete Install** and then click **Next**. e) If Microsoft Excel is not found, click **OK** on the Excel Not Installed message. f) On the Ready to Upgrade the Program screen, review the settings and then click **Upgrade** (an R101 or R201 upgrade may say **Install**). The server upgrade may take 15 to 20 minutes to complete.
3	On the Experion PKS Server Setup Complete screen, click **Finish**. Detail Displays are installed. Profit Loop Assistant is installed.
4	On the Experion PKS Setup Complete screen, click **Finish**.

Step	Action
5	**For server A only:** Go to step 14.
	Steps 6 to 13 are for server B or non-redundant servers only.
6	On the Migrate screen, click **OK** to restart the computer.
7	Using Services control panel, verify that Experion PKS-related services have started.
8	On the Experion PKS welcome screen, close the screen.
9	On the Database Migration Wizard screen, click **Next** to migrate the ERDB.
10	If prompted: a) Click **Import Fieldbus** to populate the existing Fieldbus devices into the Engineering Repository database. b) For each Fieldbus device displayed, select the path to the folder containing the DD files for that Fieldbus device. c) Click **Import** to start the migration of Fieldbus devices. d) If a “No Field Bus Devices found that need to be imported” message appears, click **OK**. e) When the import is complete, click **Exit** to close the Fieldbus Migration Utility application.
11	When prompted, click **Finished** on the Database Migration Wizard.
12	Click **OK** to acknowledge the migration completed successfully message dialog box.

Step	Action
13	For Chassis HART IO users only. If you have previously populated any additional HART device templates into the ERDB using the HART Template Builder tool, you must manually update these templates using the Device Descriptor Manager tool. a) Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Device Description Manager** to start the Device Descriptor Manager. b) Click **Browse** and then browse to the folder containing the DD file. c) Click **Add/Update Device**. d) Select whether the device type is an **Input Device** or an **Output Device**, then click **OK**. e) For the defined HART Command 48 status bits, configure the desired notification option, and then click **OK**. The progress of the template generation appears. f) Repeat steps b to e for each required DD file. g) Click **Cancel** to exit the Device Descriptor Manager.
14	Remove the Experion PKS R210 Application DVD from the drive.
15	Restart the computer and log on using a Windows account with local administrator rights.

STOP	You have completed this task. Return to the checklist that led to this task.

8.7 Upgrading the EMSEvents database

This section describes how to manually upgrade the EMSEvents database should the database upgrade fail during the upgrade.

To upgrade the EMSEvents database:

Step	Action
1	Stop the server and unload the database (see 432).
2	Choose **Start** > **Run**.
3	In the **Open** box, type **cmd**, and then click **OK**.
4	In the Command window, type the following: `hisint –Events`

STOP	You have completed this task. Return to the checklist that led to this task.

9. Installing/upgrading Experion PKS Station and other client applications

This section contains the tasks to install or upgrade Experion PKS Stations and other client applications.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

9.1 Starting the Experion PKS Console Station install/upgrade

This section describes how to start the installation or upgrade of Experion PKS Console Station and other client applications.

Prerequisites

- Experion PKS R210 media.
- If Excel Data Exchange is required, Microsoft Excel should be installed (see 213) before installing Experion PKS. This version of Experion PKS supports Microsoft Excel 2000 or XP.

Considerations

- During the installation process, you will be prompted to change CDs/DVDs in the CD/DVD drive. Be sure that you have all the Experion PKS R210 media available.
- The computer restarts during the installation process, so it is recommended that you have no other applications running during this installation.
- If the installation fails or aborts, you can restart the Experion PKS installation by double-clicking on the `ppd.exe` file on the Application DVD.

To start the Experion PKS Console Station install/upgrade:

Step	Action
1	Restart the computer and log on using a Windows account with local administrator rights. If this is an upgrade, log on to the computer using the same Windows account with local administrator rights that was used for the previous Experion PKS installation. You can confirm the correct Windows account by logging on to the computer and viewing the Add/Remove Programs screen. If the **Psc System Installer** program exists, the current Windows account is correct.
2	**For upgrades only:** If you *cannot* see the Psc System Installer program in the Add/Remove Programs screen in the step above, do *not* proceed any further with this installation. Call your Honeywell Technical Assistance Center (TAC).
3	Insert the Experion PKS R210 Application DVD into the appropriate drive.

Step	Action
4	In Windows Explorer, browse to the drive, and then double-click the `setup.exe` file.
5	If the **Experion PKS Migration Utility** dialog box appears, click **Continue**. The migration utility installs the required operating system and application updates for Experion PKS.
6	If prompted, click **OK** to restart the computer. You may be prompted more than once. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
7	If a Migration Utility will now exit message appears, click **OK**. After the computer restarts, log on to the computer using a Windows account with local administrator rights.
8	**For upgrades only:** Go to step 10.
9	On the Product Selection screen, use the following table to select the correct client installation.

If you are installing Experion PKS Console Station…	Click…
to access Experion PKS process controller points	**Experion PKS Station - Console (Process Points)**
to access TPN points	**Experion PKS Station - Console (SCADA Points)**

10	On the Product Selection screen, click **Next**.
11	On the License Agreement screen, read the license agreement, click **I accept the terms in the license agreement**, and then click **Next**.
12	On the CAB Developer screen, if you want to create or edit CAB blocks on this computer, select **Install** to install the CAB development tools. If Microsoft Visual Studio .Net 2003 is not already installed, selecting **Install** will install this too. Otherwise select **Do Not Install**.
13	Click **Next.**

Step	Action
14	On the Server Name screen, do the following: a) Enter the base server name. b) If you have redundant Experion PKS servers, select the **Server is Redundant** check box. c) Click **Next**.
15	On the Enter password for the MNGR account screen, type the Windows mngr account password and then click **Next**.
16	On the Confirm Installation Settings screen, verify that the product installation selections are correct, and then click **Install**.
17	On the Product Selection screen, click **Continue**.

STOP	You have completed this task. Return to the checklist that led to this task.

9.2 Starting the Experion PKS Console Extension Station or Flex Station install/upgrade

This section describes how to start the installation or upgrade of Experion PKS Console Extension Station or Flex Station and other client applications.

Prerequisites

- Experion PKS R210 media.
- If Excel Data Exchange is required, Microsoft Excel must be installed (see 213) before installing Experion PKS. This version of Experion PKS supports Microsoft Excel 2000 or XP.

Considerations

- During the installation process, you will be prompted to change CDs in the CD-ROM drive. Be sure that you have all the CDs listed in the previous "Prerequisites" section available.
- The computer restarts during the installation process, so it is recommended that you have no other applications running during this installation.
- If the installation fails or aborts, you can restart the Experion PKS installation by double-clicking on the `ppd.exe` file on the Application DVD.

To start the Experion PKS Flex Station install/upgrade:

Step	Action
1	Restart the computer and log on using a Windows account with local administrator rights. If this is an upgrade, log on to the computer using the same Windows account with local administrator rights that was used for the previous Experion PKS installation. You can confirm the correct Windows account by logging on to the computer and viewing the Add/Remove Programs screen. If the **Psc System Installer** program exists, the current Windows account is correct.
2	**For upgrades only:** If you *cannot* see the Psc System Installer program in the Add/Remove Programs screen in the step above, do *not* proceed any further with this installation. Call your Honeywell Technical Assistance Center (TAC).

Step	Action
3	Insert the Experion PKS R210 Application DVD into the appropriate drive.
4	In Windows Explorer, browse to the Experion PKS R210 Application DVD drive, and then double-click the `setup.exe` file.
5	If the **Experion PKS Migration Utility** dialog box appears, click **Continue**. The migration utility installs the required operating system and application updates for Experion PKS.
6	If prompted, click **OK** to restart the computer. You may be prompted more than once. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
7	If a Migration Utility will now exit message appears, click **OK**. After the computer restarts, log on to the computer using a Windows account with local administrator rights.
8	**For upgrades only:** Go to step 10.

Step	Action
9	On the Product Selection screen, use the following table to select the correct client installation:

If you are installing Experion PKS Console Extension Station or Flex Station …	Click…
to access an Experion PKS Console Station or Experion PKS server for use with process points	**Experion PKS Station - Flex (Process Points)**
to access an Experion PKS Console Station or Experion PKS server for use with SCADA points	**Experion PKS Station - Flex (SCADA Points)**
on a Mobile Station Server providing mobile access for eServer Premium users	**Experion PKS Station - Flex (SCADA Points)**
on a Mobile Station Server providing mobile access for Station users	**Experion PKS Station - Flex (Process Point)**
on a Mobile Station Server providing *both* mobile access for eServer Premium users and mobile access for Station users	**Experion PKS Station - Flex (Process Points)**

10	On the Product Selection screen, click **Next**.
11	On the License Agreement screen, read the license agreement, click **I accept the terms in the license agreement**, and then click **Next**
12	On the CAB Developer screen, if you want to create or edit CAB blocks on this computer, select **Install** to install the CAB development tools. If Microsoft Visual Studio .Net 2003 is not already installed, selecting **Install** will install this too. Otherwise select **Do Not Install**.
13	Click **Next**.

Step	Action
14	On the Enter password for the MNGR account screen, type the Windows mngr account password, as specified in the site specification form, and then click **Next**.
15	On the Confirm Installation Settings screen, verify that the product installation selections are correct, and then click **Install**.
16	On the Product Selection Completed screen, click **Continue**.

STOP	You have completed this task. Return to the checklist that led to this task.

9.3 Install/upgrade Engineering Tools client

This section describes how to continue the installation or upgrade of Experion PKS client components, installing the Engineering Tools client.

Considerations

- You only complete this stage if you are installing Experion PKS client for process points.
- If a message dialog box about failing to register an application appears during the installation, click **Ignore** to continue the installation.

To install/upgrade Engineering Tools client:

Step	Action
1	If a stop the server message dialog box appears, click **Yes**, or, if prompted in a Command window to stop the server, type **Y** and then press ENTER.
STOP	You have completed this task. Return to the checklist that led to this task.

9.4 Install Microsoft Visual Studio

This section describes how to continue the installation or upgrade of Experion PKS, installing Microsoft Visual Studio.

ATTENTION

If you are not installing CAB Developer on this computer, skip this task and return to the checklist that led to this task.

To install Microsoft Visual Studio:

Step	Action
1	When prompted, insert the Microsoft Visual Studio .Net 2003 Professional for CAB Developers media, and then click Yes. This step can take up to 30 minutes or more to complete.
2	When prompted. insert the Microsoft Visual Studio .Net 2003 Professional for MSDN Library media, and then click OK. This step will take 15 minutes or more to complete.

STOP	You have completed this task. Return to the checklist that led to this task.

9.5 Install/upgrade Experion PKS Console Station and other client applications

This section describes how to continue the installation or upgrade of Experion PKS Console Station and other client applications.

Prerequisites

- **The Experion PKS Console Station Installation** wizard is displayed.

Considerations

- If a directory already exists message appears, click **Yes** to continue the installation.
- If a setup error message appears, click **OK** to continue the installation.

To install Experion PKS Console Station and other client applications:

Step	Action
1	If required, insert the Experion PKS R210 Application DVD into the appropriate drive and then click **Yes**.
2	On the Upgrade Notification screen, click **Next**, and then go to step 9.
3	On the Setup Type screen, select one of the following options: • If prompted on the Retain Database screen, select **Yes** and then **Next**. • Click **Complete Install**, then click **Next**, and then go to step 9. • Click **Custom** and then click **Next**.

Step	Action
4	Select the application check boxes that you want to install. See the following table for more information about each client application.

Client Application	Description
Microsoft Excel Data Exchange If you want to grant Microsoft Excel permission to write to Experion PKS server database, click **Yes**, otherwise click **No**.	A network option for reporting that can be used to capture the most recent point and history information on the server and display it in Microsoft Excel spreadsheets.
Network API	An API that allows you to create applications in Visual C/C++ or Visual Basic that exchange data with the Experion PKS database.

5	Click **Next**.
6	On the Experion PKS Console Station Display Paths screen, click **Next** to accept the default search paths for user displays.
7	On the Experion PKS Console Station screen, click **Next** to accept the default program folder name.
8	On the Experion PKS Console Station Diagnostic Tools Folder screen, click **Next** to accept the default program folder name.
9	On the Ready to Install screen, review the settings you have selected, and then click **Install** to start installing the Experion PKS client applications. The installation can take up to 10 minutes to complete.
10	If you are installing Microsoft Excel Data Exchange, the installation application starts Microsoft Excel: a) When prompted, click **Enable Macros**. b) If prompted, click **Do not show this dialog again** and then click **OK** to acknowledge the Microsoft Excel dialog box.

Step	Action
11	When prompted, click **Finish**. Do *not* remove the Experion PKS R210 Application DVD from the drive. If you are installing Experion PKS Console Station for use with Process points, Detail Displays are installed and then Profit Loop Assistant is installed. These installations may take several minutes to complete.
11	Click **Finish**.
12	Remove the Experion PKS R210 Application DVD from the drive.
13	Restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

9.6 Install/upgrade Experion PKS Console Extension Station or Experion PKS Flex Station

This section describes how to continue the installation of Experion PKS client applications, installing the Experion PKS Console Extension Station or Experion PKS Flex Station and other applications.

Prerequisites

- **The Experion PKS Client Installation** wizard is displayed.

Considerations

- If a directory already exists message appears, click **Yes** to continue the installation.
- If a setup error message appears, click **OK** to continue the installation.
- There are two HMIWeb interfaces that you can install. HMIWeb Station is the standard interface to the Experion PKS system. HMIWeb Browser Runtime uses Microsoft Internet Explorer as the interface, and is designed for eServer Premium users.

To install Experion PKS Flex Station and other client applications:

Step	Action
1	If required, insert the Experion PKS R210 Application DVD into the appropriate drive and then click **Yes**.
2	**For R210 On-Process Beta upgrades only:** On the Upgrade Notification screen, click **Next**, and then go to step 9.
3	If prompted, click **Upgrade** and then click **Next**.
4	**For R101 upgrades only:** On the Upgrade Notification screen, click **Next**, and then go to step 8.
5	On the Setup Type screen, select one of the following options: • Click **Complete Install**, then click **Next**, and then go to step 9. • Click **Custom** and then click **Next**.

Step	Action
6	On the Experion PKS Client Software screen, select the client application check boxes that you want to install. See the following table for more information about each client application.

Client Application	Description
HMIWeb Display Builder	Station is the main Experion PKS operator interface. HMIWeb Display Builder is the Experion PKS tool for creating custom HMIWeb displays.
System Displays	These are the standard displays supplied with Experion PKS.
Display Builder	The Experion PKS tool for creating custom displays in the proprietary DSP format (web-based displays are created using HMIWeb Display Builder).
Quick Builder	The Experion PKS tool used to configure system components, such as standard points, Flex Stations, controllers (other than Process Controllers), and printers.
Microsoft Excel Data Exchange	A network option for reporting that can be used to capture the most recent point and history information on the server and display it in Microsoft Excel spreadsheets.
Network API	An API that allows you to create applications in Visual C/C++ or Visual Basic that exchange data with the Experion PKS database.
ODBC	An Open Database Connectivity (ODBC) driver that processes ODBC calls, queries the database, and returns the results.
OPC Server Connect	An option for connecting to OPC servers.
Shape Library	A set of pre-built shapes that you can include in your displays.
HCI Runtime	A Honeywell Communications Interface (HCI) that implements OPC Data Access functionality. HCI also provides several extensions to OPC Data Access.

Step	Action
7	If you are installing Microsoft Excel Data Exchange, and if you want to grant Microsoft Excel permission to write to Experion PKS server database, click **Yes**, otherwise click **No**.
8	Click **Next**.
9	On the EPKS Client Software folder screen, select **Install Quick Use Shortcuts** and accept the default program folder, and then click **Next**.
10	On the Ready to Install screen, review the settings you have selected, and then click **Upgrade or Install** to start installing the Experion PKS client applications. The installation can take up to 10 minutes to complete.
11	If you are installing Microsoft Excel Data Exchange, the installation application starts Microsoft Excel: a) If prompted, click **Enable Macros**. b) If prompted, click **Do not show this dialog again** and then click **OK** to acknowledge the Microsoft Excel dialog box.
12	When prompted, click **Finish**. Do *not* remove the Experion PKS R210 Application DVD from the drive. If you are installing Experion PKS Flex Station for use with Process points, Detail Displays are installed and then Profit Loop Assistant is installed. These installations may take several minutes to complete.
13	Click **Finish**.
14	Remove the Experion PKS R210 Application DVD from the drive.
15	Restart the computer and log on using a Windows account with local administrator rights.

STOP	You have completed this task. Return to the checklist that led to this task.

9.7 Install/upgrade Signon Manager

Prerequisites

- The Common Components CD.

To install Signon Manager:

Step	Action
1	Insert the Common Components CD into the CD-ROM drive.
2	In the Common Component CD Browser window, click **Experion PKS Signon Manager**. If you have disabled the autorun feature, browse to the **signon** folder on the drive and double-click the **honeywell_signon_manager.msi** file.
3	Follow the on-screen instructions.
4	If prompted on the Completed screen, click **Finish**. After you have successfully installed Signon Manager, the Current User window and taskbar icon appear.

STOP	You have completed this task. Return to the checklist that led to this task.

10. Installing/upgrading Experion PKS ACE

This section contains the tasks to install ACE components.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

10.1 Starting the Experion PKS ACE install/upgrade

This section describes how to start the Experion PKS ACE installation.

Prerequisites

- Experion PKS R210 media.
- Dynamic Host Configuration (DHCP) is disabled on the computer that the ACE components are being installed. Assign the computer a static private IP address.

Considerations

- During the installation process, you will be prompted to change CDs in the CD-ROM drive. Be sure that you have all the CDs listed in the "Prerequisites" section available.
- The computer restarts during the installation process, it is recommended that you have no other applications running during this installation.
- If the installation fails or aborts, you can restart the Experion PKS installation by double-clicking on the `ppd.exe` file on the Application DVD.

To start the ACE install/upgrade

Step	Action
1	Restart the computer and log on using a Windows account with local administrator rights. If this is an upgrade, log on to the computer using the same Windows account with local administrator rights that was used for the previous Experion PKS installation. You can confirm the correct Windows account by logging on to the computer and viewing the Add/Remove Programs screen. If the **Psc System Installer** program exists, the current Windows account is correct.
2	**For upgrades only:** If you *cannot* see the Psc System Installer program in the Add/Remove Programs screen in the step above, do *not* proceed any further with this installation. Call your Honeywell Technical Assistance Center (TAC).
3	Insert the Experion PKS R210 Application DVD into the appropriate drive.
4	In Windows Explorer, browse to the drive, and then double-click the `setup.exe` file.
5	If the **Experion PKS Migration Utility** dialog box appears, click **Continue**. The migration utility installs the required operating system and application updates for Experion PKS.
6	If prompted, click **OK** to restart the computer. You may be prompted more than once. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
7	If a Migration Utility will now exit message appears, click **OK**. After the computer restarts, log on to the computer using a Windows account with local administrator rights.
8	**For clean installations only:** On the Product Selection screen, click **ACE**, then click the **Level 2 (Supervisory) Control Network** used in the Experion PKS system, and then click **Next**.
9	On the Experion PKS Product Selection screen, verify the product selection and the control network, and then click **Next**.
10	On the License Agreement screen, read the license agreement, click **I accept the terms in the license agreement**, and then click **Next**.

Step	Action
11	On the CAB Developer screen, select **Install** to install the Microsoft Visual Studio remote debugger, otherwise select **Do Not Install**, and then click **Next**. **Note:** You only need to install the Microsoft Visual Studio remote debugger if this computer is to be used as SIM-ACE for remote debugging of CAB blocks. *Do not* install it on ACE nodes.
12	On the Server Name screen, do the following: a) Enter the base server name. b) If you have redundant Experion PKS servers, select the **Server is Redundant** check box. c) Click **Next**.
13	On the Enter MNGR password screen, type the Windows mngr account password, and then click **Next**.
14	On the Confirm Installation Settings screen, verify that the product installation selections are correct, and then click **Install**.
15	On the Product Selection screen, click **Continue**.

STOP	You have completed this task. Return to the checklist that led to this task.

10.2 Install Microsoft Visual Studio remote debugger

This section describes how to installing the Microsoft Visual Studio remote debugger, if selected as part of the Experion PKS ACE installation or upgrade.

To install Microsoft Visual Studio remote debugger:

Step	Action
1	When prompted, insert the Microsoft Visual Studio .Net 2003 Professional for CAB Developers media, and then click Yes. This step will take 5 minutes or more to complete.
STOP	You have completed this task. Return to the checklist that led to this task.

10.3 Post ACE installation

This section describes how to continue the post ACE installation.

Step	Action
1	When prompted, insert the Experion PKS R210 Application DVD, and click **Yes**.
2	If prompted, on the OPC server connection screen, click **Finish**.
3	Click **Finish** on the setup complete information.

STOP	You have completed this task. Return to the checklist that led to this task.

10.4 Configuring the CDA-SP service to use the OPC server account and password

This section describes how to configure the CDA-SP service to use the same account and password as the OPC server.

To configure the CDA-SP service on the ACE server:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**, and double-click the **Administrative Tools** icon, and then double-click the **Services** icon.
2	Right-click the **Experion PKS CDA-SP** server item and choose **Properties**.
3	Click the **Log On** tab.
4	Click **This account** and type **`mngr`** as the account. `.\` may be prefixed to mngr.
5	In the **Password** and **Confirm password** boxes, type the mngr password, and then click **OK**.
6	Click **OK**.
7	Close the **Services** dialog box.

To configure the OPC server:

Complete the following steps on the OPC server, *not* on the ACE server.

Step	Action
1	Choose **Start** > **Run**.
2	Type **`dcomcnfg`** in the **Open** box and then click **OK**.
3	In the **Applications** list, click the OPC server that matches the ACE client use and click **Properties**. For most Experion PKS systems, the OPC server is **HCI_TPNServer – exe Server**.
4	Click the **Identity** tab.

Step	Action
5	Click **This user**.
6	In the **User** box, type **<*Computer Name*>\mngr**, where <*Computer Name*> is the name of this computer. If required, click **Browse** to locate the name of this computer.
7	In the **Password** and **Confirm Password** boxes, type the Windows mngr account password.
8	Click the **Security** tab.
9	Click **Use custom access**, then click **Use custom launch permission**, and then click **User custom configuration permissions**.
10	Click each **Edit** button and complete the following instructions: a) Click **Add**. b) In the **List Names From** list, click the computer name. c) Click **Show Users**. d) Click **mngr (Experion PKS Server Manager)**. e) In the **Type of Access** list, click **Allow Access**. f) Click **Add**. g) Click **OK** to close the **Add Users and Groups** dialog box.
11	Click **OK** to close the **Registry Value Permissions** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

10.5 Enabling page locking

To enable page locking on ACE:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Local Security Policy**.
2	Expand the **Local Policies** item and click **User Rights Assignment**.
3	Double-click **Lock pages in memory** to display the **Local Security Policy Setting** dialog box.
4	Click **Add**.
5	Click **mngr** and then click **Add**.
6	Click **OK**.
7	Click **OK** to close the **Local Security Policy Setting** dialog box. The changes will take effect when the computer is restarted.
8	Close the **Local Security Settings** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

10.6 Creating mutually trusting domains

Configuring mutually trusting domains is required only if the CDA-SP service (ACE) is on a different domain to the OPC server.

Mutually trusting domains are created by configuring the primary domain controllers on two connected domains to trust the partner domain. Windows NT and Windows 2000 use different primary domain controllers.

To set up mutually trusting domains, each domain must trust the other domain and each domain must know what other domains trust it. The process for defining these relationships is to create a trusted domain and to create a trusting domain. A trusted domain is a domain that is trusted by the domain that is being configured. A trusting domain is a domain that trusts the domain that is being configured.

Configure both domain controllers using the appropriate procedure.

To create trusts on Windows NT primary domain controllers:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **User Manager for Domains**.
2	Click the **Policies** tab and then click **Trust Relationships**.
3	In the **Trusting Domain** and the **Trusted Domain** boxes, enter the domain names.
4	Enter the same password in each password box.
5	Close the User Manager for Domains dialog box.

To create trusts on Windows 2000 primary domain controllers:

Step	Action
1	Choose **Start** > **Run**.
2	Type **mcc** in the **Open** box and then click **OK**.
3	Choose **Console** > **Add/Remove Snap-In**.
4	Click **Add**.
5	Click **Active Directory Domains and Trust** and then click **Add**.

Step	Action
6	Click **Close**.
7	Click **OK** to close the Add/Remove Snap-In dialog box.
8	Expand the **Active Directory Domains and Trust** item.
9	Right-click the local domain name and click **Properties**.
10	In the **Trusting Domain** and the **Trusted Domain** boxes, enter the domain names.
11	Enter the same password in each password box.
12	Close the Console dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

11. Installing/upgrading Experion PKS SIM-C200

This section contains the tasks to install Experion PKS SIM-C200, previously known as the SCE.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

11.1 Starting the Experion PKS SIM-C200 install/upgrade

This section describes how to start the Experion PKS SIM-C200 installation.

Prerequisites

- Experion PKS R210 media.

Considerations

- During the installation process, you will be prompted to change CDs in the CD-ROM drive. Be sure that you have all the CDs listed in the "Prerequisites" section available.
- The computer restarts during the installation process, so it is recommended that you have no other applications running during this installation.
- If the installation fails or aborts, you can restart the Experion PKS installation by double-clicking on the `ppd.exe` file on the Application DVD.

To start the Experion PKS SIM-C200 install/upgrade:

Step	Action
1	Restart the computer and log on using a Windows account with local administrator rights. If this is an upgrade, log on to the computer using the same Windows account with local administrator rights that was used for the previous Experion PKS installation. You can confirm the correct Windows account by logging on to the computer and viewing the Add/Remove Programs screen. If the **Psc System Installer** program exists, the current Windows account is correct.
2	**For upgrades only:** If you *cannot* see the Psc System Installer program in the Add/Remove Programs screen in the step above, do *not* proceed any further with this installation. Call your Honeywell Technical Assistance Center (TAC).
3	In Windows Explorer, browse to the Experion PKS R210 Application DVD drive, and then double-click the `setup.exe` file.
4	If an **Experion PKS Migration Utility** dialog box appears, click **Continue**. The migration utility installs the required operating system and application updates for Experion PKS.
5	If prompted, click **OK** to restart the computer. You may be prompted more than once. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
6	If a Migration Utility will now exit message appears, click **OK**. After the computer restarts, log on to the computer using a Windows account with local administrator rights.
7	**For clean installations only:** On the Product selection screen, click **SIM-C200**, and then click the **Level 2 (Supervisory) Control Network** used in the Experion PKS system.
8	On the Product Selection screen, verify the product selection and control network, and then click **Next**.
9	On the License Agreement screen, read the license agreement, click **I accept the terms in the license agreement**, and then click **Next**.

Step	Action
10	On the Server Name screen, do the following: a) Enter the base server name. b) If you have redundant Experion PKS servers, select the **Server is Redundant** check box. c) Click **Next**.
11	On the Enter password for the MNGR account screen, type the Windows mngr account password, and then click **Next**.
12	On the Confirm Installation Settings screen, verify that the product installation selections are correct, and then click **Install**.
13	On the Product Selection Completed screen, click **Continue**.

STOP	You have completed this task. Return to the checklist that led to this task.

12. Installing/upgrading Experion PKS eServer

This section contains the tasks to install eServer components on a server.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

12.1 Starting the Experion PKS eServer install/upgrade

This section describes how to start the Experion PKS server installation.

Prerequisites

- Experion PKS R210 media.
- If you are upgrading eServer, set the Experion PKS services to manual startup (see 441).

Considerations

- You cannot install Experion PKS software on a computer that is configured as a Windows 2000 domain controller. If domains are required, separate computers that are *not* part of the Experion PKS installation can be configured as the domain controllers.
- The computer restarts during the installation process, so it is recommended that you have no other applications running during this installation.
- If the installation fails or aborts, you can restart the Experion PKS installation by double-clicking on the `ppd.exe` file on the Application DVD.
- If a services failed to start error message dialog box appears during the installation, click **OK** to continue.

To start the Experion PKS eServer install/upgrade:

Step	Action
1	Restart the computer and log on using a Windows account with local administrator rights. If this is an upgrade, log on to the computer using the same Windows account with local administrator rights that was used for the previous Experion PKS installation. You can confirm the correct Windows account by logging on to the computer and viewing the Add/Remove Programs screen. If the **Psc System Installer** program exists, the current Windows account is correct.
2	If you *cannot* see the Psc System Installer program in the Add/Remove Programs screen in the step above, do *not* proceed any further with this installation. Call your Honeywell Technical Assistance Center (TAC).

Step	Action
3	In Windows Explorer, browse to the Experion PKS R210 Application DVD drive, and then double-click the `setup.exe` file.
4	If the **Experion PKS Migration Utility** dialog box appears, click **Continue**. The migration utility installs the required operating system and application updates for Experion PKS.
5	If prompted, click **OK** to restart the computer. You may be prompted more than once. When the computer restarts, log on to the computer using a Windows account with local administrator rights.
6	If a Migration Utility will now exit message appears, click **OK**.
7	**For clean installations only:** On the Product Selection screen, click **eServer**, and then click **Next**.
8	**For upgrades only:** On the Experion PKS Product Selection screen, verify the product selected and then click **Next**.
9	On the License Agreement screen, read the license agreement, click **I accept the terms in the license agreement, and then click Next**.
10	On the EMDB screen, if this server is intended to be the repository for the Enterprise Model database, select **Install**, otherwise select **Do Not Install**.
11	Click **Next**.
12	On the Enter password for the MNGR account screen, type the Windows mngr account password and then click **Next**.
13	On the Confirm Installation Settings screen, verify that the product installation selections are correct, and then click **Install**.
14	On the Product Selection Completed screen, click **Continue**.

STOP	You have completed this task. Return to the checklist that led to this task.

12.2 Install/upgrade eServer

This section describes how to continue the installation, installing the Experion PKS eServer.

Prerequisites

- Experion PKS R210 media.

To install/upgrade Experion PKS server:

Step	Action
1	If prompted, on the Upgrade Notification message, click **Next**.
2	On the Enter License screen, type the **System number** and the **Authorization number**, as specified in your Experion PKS license, and then click **Next**.
3	**For clean installations only:** On the Enter Experion PKS Server eServer Account Password screen, type the eServer StandardAccessAdmin and StandardAccessUser passwords, and then click **Next**.
4	**For upgrades only:** On the Enter Experion PKS Server eServer Account Password screen, type the eServer StandardAccessAdmin password, and then click **Next**.
4	On the Experion PKS Server screen, click **Complete Install** and then click **Next**.
5	On the Ready to Install the Program screen, review the program features that are to be installed, and then click **Install**.
6	If a setup requires Internet Information Server message appears, click **Ignore**.
7	If a start the server message appears in a Command window, type **Y** and then press ENTER. The **Experion PKS R210 Server Setup** wizard installs the software. This installation may take up to 30 minutes.
8	On the Experion PKS Server Setup Complete screen, click **Finish**.
9	On the Experion PKS Setup Complete screen, click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

13. Installing/upgrading Remote Engineering and Station Server

This section contains the tasks to install a Remote Engineering and Station Server.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

13.1 Install/upgrade Terminal Services

Prerequisites

- Windows 2000 Server CD.
- Windows 2000 Server is installed on the server.
- Experion PKS Station is installed on the server.

Considerations

- Remote Engineering and Station Server requires a Microsoft Terminal Services Licensing Server. If your organization already has a Microsoft Terminal Services Licensing Server, you can use this server to assign Client Access Licenses (CALs) to remote devices. In this situation, do *not* install the Terminal Services Licensing option.

To install Microsoft Terminal Services:

Step	Action
1	Choose **Start** > **Control Panel** and then double-click the **Add/Remove Programs** icon.
2	Click **Add/Remove Windows Components**.
3	Click **Terminal Services**.
4	If you require a Terminal Services Licensing Server, click **Terminal Services Licensing**. For more information, see the “Considerations” section above.
5	Click **Next**.
6	When prompted for the Terminal Services installation mode, click **Application Server Mode** and then click **Next**.
7	Click **Permissions Compatible with Windows 2000 Users** and then click **Next**.
8	Click **Next** to acknowledge the warning message.
9	If prompted, click **Next** to accept the default Licensing server database installation path.

Step	Action
10	When prompted, insert the Windows 2000 Server CD into the CD-ROM drive. Terminal Server is installed.
11	Click **Finish** to complete the installation.
12	Click **Yes** to restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

13.2 Activating Terminal Services Licensing server

If you installed the Terminal Services Licensing server, you need to activate it.

Prerequisites

- Installed a Terminal Services Licensing Server.
- To activate the Terminal Services Licensing server using the Internet, you must already be connected to the Internet before starting.

Considerations

- If you do not have an Internet connection, you must activate the Terminal Services Licensing server by telephone.
- You do *not* need to purchase an activation key for the Terminal Services Licensing server.

To activate the Terminal Services Licensing server using the Internet:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Licensing**.
2	Expand the **All Servers** item.
3	Right-click on the computer's name item, and click **Activate Server**.
4	Confirm that the displayed product ID is correct and then click **Next**.
5	Click **Internet** in the method of activation list. The wizard contacts the Microsoft Activation Server (you must be connected to the internet to use this method)
6	When prompted, enter all the appropriate details. Ensure your email address is correct as you will need to receive an email to this address containing the PIN.

To activate the Terminal Services Licensing server by telephone:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Licensing**.
2	Expand the **All Servers** item.
3	Right-click on the computer's name item, and click **Activate Server**.
4	Confirm that the displayed product ID is correct and then click **Next**.
5	Click **Telephone** in the method of activation list.
6	Click your country in the country list and then click **Next**. The telephone number to call appears on the screen.
7	Call the telephone number displayed. A Microsoft representative will provide you with a license server identification number and will guide you through the rest of the installation procedure.

STOP	You have completed this task. Return to the checklist that led to this task.

13.3 Installing the Client Access Licenses

This section describes how to install the Client Access Licenses on the Terminal Services Licensing server.

Prerequisites

- Installed and activated a Terminal Services Licensing Server.
- You have the required Client Access Licenses (CALs) for Terminal Services, which is an authorization key. You received this authorization key when you purchased CALs from Honeywell, or another vendor.
- To install the Client Access Licenses using the Internet, you must already be connected to the Internet before starting.

To install Microsoft Select Agreement Client Access Licenses using the Internet:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Licensing**.
2	Expand the **All Servers** item.
3	Right-click on the Terminal Services Licensing server's name item, and choose **Install Licenses**.
4	When prompted, type the 25 character authorization key and then click **Add**.
5	Click **Next**.
6	The Terminal Services Licensing server contacts the Licensing server. If successful, the CALs are installed. If you are not successful, please use the telephone procedure to get help from a Microsoft representative.

To install Microsoft Open License Agreement Client Access Licenses using the Internet:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Licensing**.
2	Expand the **All Servers** item.

Step	Action
3	Right-click on the Terminal Services Licensing server's name item, and choose **Install Licenses**.
4	When prompted, type the authorization no and license agreement number.
5	Click **Windows 2000 Terminal Services Client Access License** as the product type.
6	Type the required number of licenses.
7	Click **Next**.
8	The Terminal Services Licensing server contacts the Licensing server. If successful, the CALs are installed. If you are not successful, please use the telephone procedure to get help from a Microsoft representative.

To install other Licensing Client Access Licenses using the Internet:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Licensing**.
2	Expand the **All Servers** item.
3	Right-click on the Terminal Services Licensing server's name item, and choose **Install Licenses**.
4	When prompted, type the license number, the number of CALs, and the 25 character authorization key, and then click **Add**.
5	Click **Next**.
6	The Terminal Services Licensing server contacts the Licensing server. If successful, the CALs are installed. If you are not successful, please use the telephone procedure to get help from a Microsoft representative.

To install the Client Access Licenses by telephone:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Licensing**.
2	Expand the **All Servers** item.

Step	Action
3	Right-click on the Terminal Services Licensing server's name item, and choose **Properties**.
4	Click the **Connection Method** tab.
5	Click **Telephone** in the Connection method list and then click **OK**.
6	Right-click on the Terminal Services Licensing server's name item, and choose **Install Licenses**.
7	When prompted for the connection method, click **Next**.
8	Click your country in the country list and then click **Next**. The telephone number to call appears on the screen.
9	Call the telephone number displayed. A Microsoft representative will provide you with an additional authorization key.
10	Type the authorization key and then click **Next**.

STOP	You have completed this task. Return to the checklist that led to this task.

13.4 Set Terminal Services to Install mode

This section describes how to set Terminal Services to Install mode before installing applications.

Step	Action
1	Open a Command window.
2	Type the following: `change user /INSTALL` and press ENTER.
3	Close the Command window.

STOP	You have completed this task. Return to the checklist that led to this task.

13.5 Set Terminal Services to Application mode

This section describes how to return Terminal Services to Application mode.

Step	Action
1	Open a Command window.
2	Type the following: **`change user /EXECUTE`** and press ENTER.
3	Close the Command window.

STOP	You have completed this task. Return to the checklist that led to this task.

13.6 Configuring a Remote Engineering and Station Server to access an existing Terminal Services Licensing server

This section describes how to configure a Remote Engineering and Station Server to access an existing Terminal Services Licensing server where the CALs are installed. To access an existing Terminal Services Licensing Server, you need to edit the registry.

CAUTION	Incorrectly editing the registry may severely damage your system. Before making changes to the registry, you must back up any valued data on your computer.

Prerequisites

- The name or IP address of an activated Terminal Services Licensing Server.

To access an existing Terminal Services Licensing server:

Step	Action
1	On the Remote Engineering and Station Server, choose **Start** > **Run**.
2	Type **`regedit`** and then click **OK**.
3	Browse to the following key: `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\TermService\Parameters`
4	Choose **Edit** > **New** > **String Value**.
5	Type **`DefaultLicenseServer`**.
6	Double-click the **DefaultLicenseServer** key you created.
7	Type the name or IP address of the Terminal Services Licensing server in the **Value Data** text box.
8	Click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

13.7 Limiting the number of connections to the Remote Engineering and Station Server

This section describes how to limits the number of users that can access the Remote Engineering and Station Server.

To limit the number of connections to the Remote Engineering and Station Server:

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Terminal Services Configuration**.
2	Right-click on the RDP-TCP connection item and choose **Properties**.
3	Click the **Network Adapter** tab.
4	Click **Maximum connections** and set the number of connections to 5.
5	Click **OK**.
6	Exit the Terminal Services Configuration application.

STOP	You have completed this task. Return to the checklist that led to this task.

13.8 Creating Remote Engineering and Station Server users

You must create a windows account on the Remote Engineering and Station Server for each operator/user that connects to the Remote Engineering and Station Server.

To create a Remote Engineering and Station Server user:

Step	Action
1	Log on to the Remote Engineering and Station Server as a user with local administrator rights.
2	Choose **Start** > **Programs** > **Administrative Tools** > **Computer Management**.
3	Expand the **Local Users and Groups** item.
4	Right-click on the **Users** item and then choose **New User**.
5	Type the **User Name**, **Full Name**, **Description**, and **Password** of the user.
6	Click **Password never expires**.
7	Click **Create**.
8	Repeat steps 4 to 7 for each user.

STOP	You have completed this task. Return to the checklist that led to this task.

13.9 Configuring Mobile Access for Station users

This section describes how to configure Mobile Access for Station users to start the Station application when they log on to the Remote Engineering and Station Server.

Prerequisites

- A `.stn` file has been configured for each Experion PKS server to access. For more information on creating a `.stn` file, see the "Configuring Stations and printers" section in the *Server and Client Configuration Guide*.

To configure the Mobile Access for Station users:

Step	Action
1	Log on to the Remote Engineering and Station Server as a user with local administrator rights.
2	Choose **Start** > **Programs** > **Administrative Tools** > **Computer Management**.
3	Expand the **Local Users and Groups** item and then expand the **Users** item.
4	Right-click on a Mobile Station user and choose **Properties**.
5	Click the **Sessions** tab.
6	Click **1 minute** in the **End Disconnected sessions** list.
7	Click **Apply** and then click **Close**.
8	Repeat steps 4 to 11 for each Mobile Station Server user.

STOP	You have completed this task. Return to the checklist that led to this task.

13.10 Configuring Mobile Access for eServer Premium users

This section describes how to configure Mobile Access for eServer Premium users to start the Internet Explorer application when they log in to the Remote Engineering and Station Server.

To configure mobile access for eServer Premium users:

Step	Action
1	Log on to the Remote Engineering and Station Server as a user with local administrator rights.
2	Choose **Start** > **Programs** > **Administrative Tools** > **Computer Management**.
3	Expand the **Local Users and Groups** item and then expand the **Users** item.
4	Right-click on an eServer Premium user and choose **Properties**.
5	Click the **Environment** tab.
6	Click **Start the following program at logon**.
7	Type the full path to the `iexplore.exe` file and the URL address o the eServer home page, enclosed in quotation marks. For example: `"C:\Program Files\Internet Explorer\iexplore.exe http:\\`*`ServerName`*`\eServer"` where *`ServerName`* is the name of the eServer computer.
8	Click **Apply**.
9	Click the **Sessions** tab.
10	Click **1 minute** in the **End Disconnected sessions** list.
11	Click **Apply** and then click **Close**.
12	Repeat steps 4 to 11 for each eServer Premium user.

STOP	You have completed this task. Return to the checklist that led to this task.

14. On-process migration

This section contains the tasks for on-process migration.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

14.1 Installing the Migration Readiness Tool

This section describes how to install the Migration Readiness Tool on Experion PKS R201 systems.

If the Migration Readiness Tool is to be used on a system and is not already installed, follow these steps.

To install the Migration Readiness Tool:

Step	Action
1	Close all applications.
2	Insert the Experion PKS R210 Application DVD into the appropriate drive.
3	In Windows Explorer, browse to the MRT folder on the drive and double-click the setup.exe file.
4	On the Welcome to the InstallShield Wizard for Migration Readiness Tool screen, click **Next**.
5	When prompted, click **I accept this agreement** in the License Agreement dialog box, and then click **Next.**
6	On the Ready to Install the Program screen, click **Next**.
7	Click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

14.2 Verifying server readiness for OPM

This section describes how to verify that a server is ready for OPM.

ATTENTION

You should *not* run the Migration Readiness Tool simultaneously on server A and server B as it may result in an incomplete report.

To verify server readiness for OPM:

Step	Action
1	On server A, choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Migration Readiness Tool**.
2	Log on to the primary server with Engineer (Engr) security permissions.
3	Choose **Readiness Check** > **Server Migration**. The Server Migration screen appears.
4	Select the appropriate Target Release and then click **Generate Report**.
5	On the Password Information screen, type the Experion PKS mngr password, and then click **OK**.
5	Make sure that all checks are passed. If the report displays failure, contact your local Honeywell Technical Assistance Center (TAC); do *not* start OPM.
6	Close the application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.3 Verifying controller readiness for OPM

This section describes how to verify that a controller is ready for OPM.

ATTENTION

You should not run the Migration Readiness Tool simultaneously on server A and server B as this may result in an incomplete report.

To verify controller readiness for OPM:

Step	Action
1	On server B, choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Migration Readiness Tool**.
2	Log on to the primary server with Engineer (Engr) security permissions.
3	Choose **Readiness Check** > **Controller Migration**. The Controller Migration screen appears.
4	Select the appropriate controller and the target release, and then click **Generate Report**.
5	Make sure that all checks are passed. If the report displays failure, contact your local Honeywell Technical Assistance Center (TAC); do *not* start OPM.
6	Close the application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.4 Checking synchronization status

ATTENTION

After you upgrade or migrate your system to Experion PKS R210, DbAdmin-related tasks must be performed from Configuration Studio. See the *Enterprise Model Builder User's Guide* for further instructions.

This section describes how to check the synchronization status before starting the on-process migration.

To check the synchronization status:

Step	Action
1	Log on to Station running on server A.
2	Change to the mngr security level.
3	Choose **View** > **System Status** > **Server Redundancy** to call up the Server Redundancy display.
4	Check that the backup server (server B) is running and that the servers are synchronized.
5	If server B is *not* running, start server B to system running status (see 432).
6	If server B is running, however, the servers are *not* synchronized, click **Synchronize**.
7	Choose **View** > **Alarms** to see the list of alarms.
8	If there is an **Events Database Replication Failed** alarm, choose **View** > **System Status** > **Server Redundancy** to call up the Server Redundancy display, and then click **Synchronize**.
9	If synchronization did not remove the **Events Database Replication Failed** alarm, contact TAC for assistance in removing the alarm before proceeding with On-process migration.

STOP	You have completed this task. Return to the checklist that led to this task.

14.5 Disabling Enterprise Model database replication

Considerations

You only need to complete these steps on *server B*.

To disable Enterprise Model database replication:

Step	Action
1	Start the Configuration Studio.
2	Connect to the system that contains server B.
3	In the Configuration Explorer, click the system name, and then click the **Administer the system database** task. The DbAdmin application appears.
4	Expand the **DbAdmin** item.
5	Expand the **Experion PKS Node** item.
6	Click the **EMDB Admin Tasks** item.
7	Click **Disable Replication**.
8	Click **Yes** to continue.
9	Click **OK** to acknowledge the successful completion message dialog box.
10	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.6 Enabling Enterprise Model database replication

Considerations

You only need to complete these steps on *server B*.

To enable Enterprise Model database replication:

Step	Action
1	Start the Configuration Studio.
2	Connect to the system that contains server B.
3	In the Configuration Explorer, click the system name, and then click the **Administer the system database** task. The DbAdmin application appears.
4	Expand the **DbAdmin** item.
5	Expand the **Experion PKS Node** item.
6	Click the **EMDB Admin Tasks** item.
7	Click **Recover Secondary DB**.
8	Click **Yes** to continue.
9	Click **OK** to acknowledge the successful completion message dialog box.
10	Click **Enable Replication**.
11	Click **OK** to acknowledge the successful completion message dialog box.
12	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.7 Disabling Engineering Repository database replication

ATTENTION

For Experion PKS R210, DbAdmin-related tasks must be performed from Configuration Studio. See the *Enterprise Model Builder User's Guide* for further instructions.

Considerations

You only need to complete these steps on *server B*.

To disable Engineering Repository database replication:

Step	Action
1	On server B, choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Db Admin**. For R101 systems, choose **Start** > **Programs** > **Experion PKS Engineering Tools** > **Db Admin**.
2	Expand the **DbAdmin** item.
3	Log on with a user having manager access level.
4	Expand the **Experion PKS Node** item.
5	Click the **ERDB Admin Tasks** item.
6	Click **Disable Replication**.
7	Click **Yes** to disable replication.
8	Click **OK** to acknowledge the disable replication succeeded message dialog box.
9	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.8 Enabling Engineering Repository database replication

ATTENTION

For Experion PKS R210, DbAdmin-related tasks must be performed from Configuration Studio. See the *Enterprise Model Builder User's Guide* for further instructions.

Considerations

You only need to complete these steps on *server B*.

To enable Engineering Repository database replication:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Db Admin**.
2	Expand the **DbAdmin** item.
3	Log on as a user with manager level access.
4	Expand the **Experion PKS Node** item.
5	Click the **ERDB Admin Tasks** item.
6	Click **Recover Secondary DB**.
7	Click **Yes** to continue.
8	Click **OK** to acknowledge the successful completion message dialog box.
9	Click **Enable Replication**.
10	Click **Yes** to continue.
11	Click **OK** to acknowledge the successful completion message dialog box.
12	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.9 Backing up the Enterprise Model database

This section describes how to backup the Enterprise Model database (EMDB).

Considerations

- You only need to complete these steps on *server B*.

To back up the Enterprise Model database:

Step	Action
1	Start the Configuration Studio.
2	Connect to the system that contains server B.
3	In the Configuration Explorer, click the system name, and then click the **Administer the system database** task. The DbAdmin application appears.
4	Expand the **DbAdmin** item.
5	Expand the **Experion PKS Node** item.
6	Click the **EMDB Admin Tasks** item.
7	Click **Backup Database**, then browse to `C:\Program Files\Honeywell\Experion PKS\Engineering Tools\system\ER`, and then click **Select**.
8	Click **OK** to continue.
9	Click **OK** to acknowledge the successful completion message dialog box.
10	Copy the *.bak files from `C:\Program Files\Honeywell\Experion PKS\Engineering Tools\system\ER` to any different folder that can be accessed later.
11	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.10 Backing up the Engineering Repository database

ATTENTION

After you upgrade or migrate your system to Experion PKS R210, DbAdmin-related tasks must be performed from Configuration Studio. See the *Enterprise Model Builder User's Guide* for further instructions.

This section describes how to backup the Engineering Repository database (ERDB).

Considerations

- You only need to complete these steps on *server B*.

To back up the Engineering Repository database:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Db Admin**. For R101 systems, choose **Start** > **Programs** > **Experion PKS Engineering Tools** > **Db Admin**.
2	Expand the **DbAdmin** item.
3	Log on as a user with manager level access.
4	Expand the **Experion PKS Node** item.
5	Click the **ERDB Admin Tasks** item.
6	Click **Backup Database**, then browse to `C:\Program Files\Honeywell\Experion PKS\Engineering Tools\system\ER`, and then click **Select**.
7	On the AdminFuncs dialog box, click **OK** to continue.
8	Click **OK** to acknowledge the successful completion message dialog box.
9	Copy the *.bak files from `C:\Program Files\Honeywell\Experion PKS\Engineering Tools\system\ER` to any different folder that can be accessed later.
10	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.11 Updating Engineering Repository database statistics

ATTENTION

After you upgrade or migrate your system to Experion PKS R210, DbAdmin-related tasks must be performed from Configuration Studio. See the *Enterprise Model Builder User's Guide* for further instructions.

This section describes how to update the Engineering Repository database (ERDB) statistics.

Considerations

- You only need to complete these steps on *server B*.

To update the ERDB statistics:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Db Admin**.
2	Expand the **DbAdmin** item.
3	Log on as a user with manager level access.
4	Expand the **Experion PKS Node** item.
5	Click the **ERDB Admin Tasks** item.
6	Click **Update Statistics**.
7	Click **Yes** to continue.
8	Click **OK** to acknowledge the successful completion message dialog box.
9	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.12 Recovering the secondary Engineering Repository database

ATTENTION

After you upgrade or migrate your system to Experion PKS R210, DbAdmin-related tasks must be performed from Configuration Studio. See the *Enterprise Model Builder User's Guide* for further instructions.

This section describes how to recover the secondary Engineering Repository Database (ERDB) from the primary ERDB.

Considerations

- You only need to complete these steps on *server B*.

To recover the secondary ERDB:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Db Admin**.
2	Expand the **DbAdmin** item.
3	Log on as a user with manager level access.
4	Expand the **Experion PKS Node** item.
5	Click the **ERDB Admin Tasks** item.
6	Click **Recover Secondary Database**.
7	Click **Yes** to continue.
8	Click **OK** to acknowledge the successful completion message dialog box.
9	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

14.13 Activating on-process migration

This section describes how to set the servers to on-process migration mode, so that the Experion PKS servers can communicate during the on-process migration.

Prerequisites

- There must be no active locks in the Engineering Repository database (ERDB).

Consideration

- Server B must be running and synchronized with server A.
- There must be no **Events Database Replication Failed** alarms.

To activate on-process migration:

Step	Action
1	Log on to Station running on server A.
2	Change to the mngr security level.
3	Choose **Configure** > **System Hardware** > **On Process Migration** to call up the On-Process Migration display.
4	Check the following: • On Process Migration is not active. • Server B is running and synchronized.
5	Click **Start Migration** to activate the on-process migration.
6	In the Message Zone, click **Yes** to start the on-process migration.
7	Check that On Process Migration is activated.

Results

- If the activation of on-process migration cannot be completed successfully, do *not* proceed any further with the on-process migration, then call your Honeywell Technical Assistance Center (TAC).

STOP	You have completed this task. Return to the checklist that led to this task.

14.14 Migrating the server B database

This section describes how to migrate the existing data on server A to server B. When the server B database migration is complete, server B is promoted to a primary server, with both server A and server B running as primary servers (dual-primary mode).

To migrate the server B database:

Step	Action
1	Log on to Station running on server A.
2	Change to the mngr security level.
3	Choose **Configure** > **System Hardware** > **On Process Migration** to call up the On-Process Migration Display.
4	Click **Migrate Database**.
5	In the Message Zone, click **Yes** to start the database migration to server B.

Results

- When Server B is synchronized and running as dual primary, the database migration is complete.
- If the following are true:
  - There is an alarm or operator message that synchronization failed. A synchronization lost error is expected and does not require action.
  - Server B remains as backup server or is stopped.

  You must do the following:
  - Unload the database on server B (see 432).
  - Return server B to system running (see 432).
  - Check that the **Migrate Database** button on the On Process Migration display on server A is enabled.
  - Repeat the steps in this task to migrate the server B database.

STOP	You have completed this task. Return to the checklist that led to this task.

14.15 Completing the on-process migration

This section describes how to complete the on-process migration.

To complete the on-process migration:

Step	Action
1	Log on to Station running on server B.
2	Change to the mngr security level.
3	Choose **Configure** > **System Hardware** > **On Process Migration** to call up the On-Process Migration display.
4	Click **Synchronize**.
5	In the Message Zone, click **Yes** to synchronize server A with the database on server B.

Results

- If server A does not synchronize or remains stopped.

  You must do the following:

  - Unload the database on server A (see 432).
  - Return server A to system running (see 432).
  - Check that the **Synchronize** button on the On Process Migration display on server B is enabled.
  - Repeat the steps in this task to complete the on-process migration.

- If the synchronization of server A cannot be completed successfully, do *not* proceed any further with the on-process migration. Call your Honeywell Technical Assistance Center (TAC).
- On-process migration is complete when server A is running and synchronized.

STOP	You have completed this task. Return to the checklist that led to this task.

15. Migrating controllers

The Controller Migration wizard lets you on-process and off-process migrate your controller component's firmware to the latest supported release version/revision for your current Experion PKS installation.

For consistency, the term *controller* refers to the following module types:

- Control Processor Module (CPM).
- Fieldbus Interface Module (FIM).
- I/O Link Interface Module (IOLIM).
- Application Control Environment (ACE).
- Simulation Control Environment (SIM-C200).

There are four migration types supported by the Controller Migration wizard.

Migration type	Go to
On-process migration of redundant controllers.	310
Off-process migration of redundant controllers.	316
Off-process migration of non-redundant controllers.	321
Off-process migration of associated I/Os.	325

You may need to run the Controller Migration wizard multiple times for the same controller. For example, for a redundant controller with remote I/O, you may on-process migrate the redundant controller chassis, and then run the Controller Migration wizard to off-process migrate the controller's associated remote I/O.

ATTENTION

Only redundant controllers can be on-process migrated. During the on-process migration of controllers there may be a control freeze for up to five seconds (depending on the size of the control strategy).

15.1 Starting on-process migration of redundant controllers

Choose this option to perform an on-process migration of all components in the selected redundant chassis pair. This will update the firmware of all components in the selected redundant chassis pair without a loss of control. However, there may be a freeze in control for up to five seconds (depending on the size of your control strategy), and SCMs in peer controllers may experience delay during the control freeze period, resulting in step timeout or failure notifications.

ATTENTION

The on-process migration path for controller firmware is from R201 to R210 Release with C-Net and FTE as the level2 control network.

Controller migration must be started from Control Builder running on a server. On redundant Experion PKS servers, controller migration must be started from Control Builder running on server B.

Before starting controller OPM, you must run the Migration Readiness Tool (see 292).

If your system has Fault Tolerant Ethernet Bridge Modules (FTEBs), verify the switch port settings (see 333).

Prerequisites

- Purchase the license required to enable on-process migration.
- You have read the *Experion PKS On-Process Migration Guide* before starting the on-process migration for planning and impact assessment guidelines.
- The associated Experion PKS servers must be migrated (does not apply for service pack or patch releases).
- Redundant chassis pair must be synchronized prior to commencing on-process migration.
- Honeywell recommends that all controller and I/O chassis contain CNI module numbers CCN013 or CCR013.
- A RCP must only contain CNI module numbers CCN013 or CCR013 for on-process migration.

- ControlNet communication paths with FIMs or HART I/O modules must only contain CNI module numbers CCN013 or CCR013. However, legacy CCN012 or CCR012 CNI modules can reside in non-redundant controller or I/O chassis that do *not* contain FIMs or HART I/O modules.
- You must stop the HART software multiplexer service (see 440).
- You must ensure that the CPM control strategy has no dangling control connections (see 332).
- The Controller Migration wizard only supports Honeywell qualified module types and firmware versions (see 335).
- You must ensure that all peer references in the CPM are working as expected *before* starting the on-process migration. Peer references that do not work usually indicate a configuration mismatch between the ERDB and the controller. Such a mismatch can result when the peer definition block is reconfigured and reloaded, but the block with the peer reference is not subsequently reloaded. This condition must be fixed before starting on-process migration, otherwise, the controller migration will fail to complete.
- Make sure that all required Experion PKS patches are installed before starting controller on-process migration. See the patch SCN for installation instructions.
- Open every CEEFB and make sure that BASEPERIOD is not set to DEFAULT. If the value is set to DEFAULT, then call TAC and do not start on-process migration.
- There must be no active locks in the Engineering Repository database (ERDB).
- If RM modules are at firmware 3.38v, manually upgrade the RM modules to 3.40v using NTools *before* starting controller on-process migration.
- Ensure that Auto Synchronization State of Redundancy Module is set to Conditional before starting controller on-process migration.

Considerations

- Valid module types to select to commence Redundant Controller Migration include Control Processor Module (CPM), Fieldbus Interface Module (FIM), and I/O Link Interface Module (IOLIM).
- In Redundant Chassis Pairs (RCPs), select the Primary module to commence controller migration.

- The Controller Migration wizard identifies associated components such as Redundancy Modules (RMs), ControlNet Interface Modules (CNIs), Fault Tolerant Ethernet Bridge Modules (FTEBs) and any remote I/O Modules (IOMs).
- Migrated components maintain control during the migration process. However, there may be a freeze in control for up to five seconds (depending on the size of your control strategy). In addition, SCMs in peer controllers may experience delay during the control freeze period resulting in step timeout or failure notifications.
- On-process migration leverages controller chassis redundancy. The redundant chassis pair must be synchronized to commence on-process migration. Moreover, the redundant chassis pair must be able to switch-over and resynchronize to be able to complete on-process migration.
- The Controller Migration wizard automatically updates firmware. For modules participating in on-process migration, do *not* extract modules, remove power, issue shutdown commands or disconnect communication cables, otherwise, you may have to return the module to the factory for reprogramming.
- The Control Builder application should be the only application running on the computer when migrating controllers. Close all other applications *before* starting controller migration and do *not* start any additional applications until controller migration is complete.

To start on-process migration of redundant controllers:

Step	Action
1	Start Control Builder.
2	Log on to Control Builder with Engineer (Engr) security permissions.
3	In the **Control Builder Monitor/Assignment** tab, select the module to be migrated.
4	Choose **Controller** > **Migrate** to start the Experion PKS Controller Migration wizard.
5	Click **Next** on the Welcome dialog box.

Step	Action
6	Select the release for migration: • To migrate your components to the latest major release available for this system, click **Migrate Components to the Latest Release**. For example, if the Experion PKS Servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to R210.0.0. • To migrate your components to the latest service pack or patch available for their current release, click **Migrate Components to the Latest Service Pack**. For example, if the Experion PKS Servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to the R101.0.1 patch release. When a service pack is selected, only components that were updated in that service pack require migration. Service Packs are only supported if all other components in the chassis are at the same base release. For example, you cannot use a service pack in a chassis where the CPM is using R210 firmware, but a FIM is using R101 firmware.
7	Click **Next** to continue. The Controller Migration wizard collects information about each component to determine if the component is mismatched and requires migration.
8	Select the On-process Migration of All Components in the Redundant Chassis Pair check box, and then click Next.
9	Review the list of components to be on-process migrated.
10	Click **Next** to continue.

Step	Action
11	Click **Yes** to start on-process migration. The Controller Migration wizard does the following: • Creates a snapshot. The Experion PKS Controller Migration wizard updates the snapshot for your controller. Depending on the size of your database, this operation may take several minutes. This only applies if there is a mismatched CPM in the redundant chassis pair. • Migrates selected components. The Controller Migration wizard updates all of the selected components. This operation may take several minutes. More specifically, the Controller Migration wizard indicates the following progress steps:

Current migration progress
Updating Components in Secondary Chassis
Performing Synchronization and Switch-over of Redundant Chassis Pair
Updating Components in New Secondary Chassis
Performing Synchronization of Redundant Chassis Pair
On Process Migration Complete

• If a timeout while waiting for indirect sync error message appears during the “Performing Synchronization and Switch-over of Redundant Chassis Pair” stage of the migration and the Station Event Summary display shows an “OPM: Open I/O Conns Failure” notification, migration may have failed due to mismatched peer references between the ERDB and the controller being migrated. This mismatch can occur when the peer definition block is reconfigured and reloaded, but the block with the peer reference is not subsequently reloaded. You must ensure that all peer references in the CPM being migrated are working as expected and then reattempt the on-process migration.

• Once migration is complete, a summary of all the completed component updates appears.

12	Click **Finish**.

Step	Action
13	Rerun the Controller Migration wizard, or use the Network Tools application, to determine if there are any associated I/O modules that need to be migrated.
STOP	You have completed this task. Return to the checklist that led to this task.

15.2 Starting off-process migration of redundant controllers

Choose this option to perform an off-process migration of all components in the selected redundant chassis pair. This will update the firmware of all components in the selected redundant chassis pair. However, control will not be maintained during the migration process.

ATTENTION

Controller migration must be started from Control Builder running on a server. On redundant Experion PKS servers, controller migration must be started from Control Builder running on server B.

Valid off-process migration paths for Experion PKS R210 release are:

- R101 release to R210 release (CNET only)
- R201 release to R210 release (CNET and FTE)
- R210 on-process beta to R210 release (CNET and FTE)

Prerequisites

- The associated Experion PKS servers must be migrated (does not apply for service pack or patch releases).
- For systems with the Qualification and Version Control System (QVCS) licensed, the Module Function Blocks for components that are to be migrated must be checked out *before* running the Controller Migration wizard. These objects can be detected by running the Controller Migration wizard. Items that are highlighted for migration (or manually selected for off-process migration) should be checked out. For redundant components, both the primary and secondary object should be checked out.
- You must stop the HART software multiplexer service (see 440).
- The Controller Migration wizard only supports Honeywell qualified module types and firmware versions (see 335).
- If RM modules are at firmware 3.38v, manually upgrade the RM modules to 3.40v using NTools *before* starting controller on-process migration.

Considerations

- Valid module types to select to commence Redundant Controller Migration include Control Processor Module (CPM), Fieldbus Interface Module (FIM), and I/O Link Interface Module (IOLIM).
- In Redundant Chassis Pairs (RCPs), select the Primary module to commence controller migration.
- The Controller Migration wizard identifies associated components such as Redundancy Modules (RMs), ControlNet Interface Modules (CNIs), Fault Tolerant Ethernet Bridge Modules (FTEBs), and any remote I/O Modules (IOMs).
- Migrated components do *not* maintain control during the migration process.
- The Controller Migration wizard automatically updates firmware. Do *not* extract modules, remove power, or disconnect communication cables, otherwise, you may have to return the module to the factory for reprogramming.
- The Control Builder application should be the only application running on the computer when migrating controllers. Close all other applications *before* starting controller migration and do *not* start any additional applications until controller migration is complete.

To start off-process migration of redundant controllers:

Step	Action
1	Start Control Builder.
2	Log on to Control Builder with Engineer (Engr) security permissions.
3	In the **Control Builder Monitor/Assignment** tab, click the module to be migrated.
4	Choose **Controller** > **Migrate** to start the Experion PKS Controller Migration wizard.
5	Click **Next** on the Welcome dialog box.

Step	Action
6	Select the release for migration: To migrate your components to the latest major release available for this system, click **Migrate Components to the Latest Release**. For example, if the Experion PKS servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to R210.0.0. To migrate your components to the latest service pack or patch available for their current release, click **Migrate Components to the Latest Service Pack**. For example, if the Experion PKS servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to the R101.0.1 patch release. When a service pack is selected, only components that were updated in that service pack or patch require migration. Service Packs are only supported if all other components in the chassis are at the same base release. For example, you cannot use a service pack in a chassis where the CPM is using R210 firmware, but a FIM is using R101 firmware.
7	Click **Next** to continue. The Controller Migration wizard collects information about each component to determine if the component is mismatched and requires migration.
8	Select the Off-process Migration of All Components in the Redundant Chassis Pair check box.
9	Click **Next** to continue.
10	Review the list of components to off-process migrate.
11	Click **Next** to continue.

Step	Action
12	Click **Yes** to start off-process migration. The Controller Migration wizard performs the following activities: • Creates a snapshot. The Experion PKS Controller Migration wizard updates the snapshot for your controller. Depending on the size of your database, this operation may take several minutes. This only applies if there is a mismatched CPM in the redundant chassis pair. • Migrates selected components. The Controller Migration wizard updates all of the selected components. This operation may take several minutes. More specifically, the Controller Migration wizard indicates the following progress steps: **Current migration progress** Updating Components in Secondary Chassis Updating Components in Primary Chassis Off Process Migration Complete • Once migration is complete, a summary of all the completed component updates appears.
13	Click **Finish**.
14	At this point, any CPM, FIM, IOLIM (in the migrated redundant chassis pair) that was firmware updated must have its control strategy reloaded.
15	In the **Control Builder Monitor/Assignment** tab, do the following: a) Click each updated IOLIM and/or FIM and then click **Load With Contents**. b) Click the updated CPM and then choose **Snapshot** > **Restore Controller from Snapshot**.
16	Rerun the Controller Migration wizard, or use the Network Tools application, to determine if there are any associated I/O modules that need to be migrated.
STOP	You have completed this task. Return to the checklist that led to this task.

15.3 Starting off-process migration of non-redundant controllers

Choose this option to perform an off-process migration of individually selected components associated with a non-redundant controller. Selected components will *not* maintain control during the migration process.

ATTENTION

Controller migration must be started from Control Builder running on a server. On redundant Experion PKS servers, controller migration must be started from Control Builder running on server B.

Prerequisites

- The associated Experion PKS servers are migrated (does not apply for service pack or patch releases).
- For systems with the Qualification and Version Control System (QVCS) licensed, the Module Function Blocks for components that are to be migrated must be checked out *before* running the Controller Migration wizard. These objects can be detected by running the Controller Migration wizard. Items that are highlighted for migration (or manually selected for off-process migration) should be checked out. For redundant components, both the primary and secondary object should be checked out.
- You must stop the HART software multiplexer service (see 440).
- The Controller Migration wizard only supports Honeywell qualified module types and firmware versions (see 335).

Considerations

- Valid module types to select to commence controller migration include Control Processor Module (CPM), Fieldbus Interface Module (FIM), I/O Link Interface Module (IOLIM), Application Control Environment (ACE), and Simulation Control Environment (SIM-C200).
- The Controller Migration wizard identifies associated components such as ControlNet Interface Modules (CNIs), Fault Tolerant Ethernet Bridge Modules (FTEBs) and I/O Modules (IOMs).
- Migrated components do not maintain control during the migration process.

- The Controller Migration wizard automatically updates firmware. Do *not* extract modules, remove power, or disconnect communication cables, otherwise, you may have to return the module to the factory for reprogramming.
- The Control Builder application should be the only application running on the computer when migrating controllers. Close all other applications *before* starting controller migration and do *not* start any additional applications until controller migration is complete.

To start off-process migration of non-redundant controllers:

Step	Action
1	Start Control Builder.
2	Log on to Control Builder with Engineer (Engr) security permissions.
3	In the **Control Builder Monitor/Assignment** tab, click the module to be migrated.
4	Choose **Controller** > **Migrate** to start the Experion PKS Controller Migration wizard.
5	Click **Next** on the Welcome dialog box.
6	Select the release for migration: • To migrate your components to the latest major release available for this system, click **Migrate Components to the Latest Release**. For example, if the Experion PKS servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to R210.0.0. • To migrate your components to the latest service pack or patch available for their current release, click **Migrate Components to the Latest Service Pack**. For example, if the Experion PKS servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to the R101.0.1 patch release. When a service pack is selected, only components that were updated in that service pack or patch require migration. Service Packs are only supported if all other components in the chassis are at the same base release. For example, you cannot use a service pack in a chassis where the CPM is using R210 firmware, but a FIM is using R101 firmware.
7	Click **Next** to continue. The Controller Migration wizard collects information about each component to determine if the component is mismatched and requires migration.

Step	Action
8	Select the Off-process Migration of Individually Selected Components in the Non-Redundant Chassis check box.
9	Click **Next** to continue.
10	Click components to migrate and then click **Next**.
11	Review the list of components to off-process migrate.
12	Click **Next** to continue.
13	Click **Yes** to commence off-process migration. The Controller Migration wizard does the following: • Creates a snapshot. The Experion PKS Controller Migration wizard updates the snapshot for your controller. Depending on the size of your database, this operation may take several minutes. This only applies if there is a mismatched CPM in the redundant chassis pair. • Migrates selected components. The Controller Migration wizard updates all selected components. This operation may take several minutes. More specifically, the Controller Migration wizard indicates the following progress steps: **Current migration progress** Updating Selected Components in Chassis Off Process Migration Complete Once migration is complete, a summary of all the completed component updates appears.
14	Click **Next** in the Snapshot created message.
15	Click **OK** in the status message.
16	Click **Finish**.
17	At this point, any CPM, FIM, IOLIM (in the migrated non-redundant controller chassis) that was firmware updated must have its control strategy reloaded.

Step	Action
18	In the **Control Builder Monitor/Assignment** tab, do the following: • Click each updated IOLIM and/or FIM and then click **Load With Contents**. • Click the updated CPM and then choose Snapshot > Restore Controller from Snapshot.
19	Rerun the Controller Migration wizard, or use the Network Tools application, to determine if there are any associated I/O modules that need to be migrated.

STOP	You have completed this task. Return to the checklist that led to this task.

15.4 Starting off-process migration of associated I/Os

Choose this option to off-process migrate local or remote I/O components associated with the selected controller chassis. Selected components do *not* maintain control during the migration process.

ATTENTION

Controller migration must be started from Control Builder running on a server. On redundant Experion PKS servers, controller migration must be started from Control Builder running on server B.

Prerequisites

- The associated Experion PKS servers must be migrated (does not apply for service pack or patch releases).
- For systems with the Qualification and Version Control System (QVCS) licensed, the Module Function Blocks for components that are to be migrated must be checked out *before* running the Controller Migration wizard. These objects can be detected by running the Controller Migration wizard. Items that are highlighted for migration (or manually selected for off-process migration) should be checked out. For redundant components, both the primary and secondary object should be checked out.
- You must stop the HART software multiplexer service (see 440).
- The Controller Migration wizard only supports Honeywell qualified module types and firmware versions (see 335).

Considerations

- Valid module types to select to commence Controller Migration include Control Processor Module (CPM), Fieldbus Interface Module (FIM), I/O Link Interface Module (IOLIM), Application Control Environment (ACE), and Simulation Control Environment (SIM-C200).
- In Redundant Chassis Pairs (RCPs), select the Primary module to commence migration.
- The Controller Migration wizard identifies associated components such as Redundancy Modules (RMs), ControlNet Interface Modules (CNIs), and I/O Modules (IOMs).

- Migrated components do *not* maintain control during the migration process.
- The Controller Migration wizard lists all local and/or remote IOMs (associated with a controller) irrespective of the number of remote I/O chassis and/or irrespective of whether IOMs reside in a chassis or directly connected to ControlNet (for example, Rail I/O).
- The Controller Migration wizard automatically updates firmware. Do *not* extract modules, remove power, or disconnect communication cables, otherwise, you may have to return the module to the factory for reprogramming.
- The Control Builder application should be the only application running on the computer when migrating controllers. Close all other applications *before* starting controller migration and do *not* start any additional applications until controller migration is complete.

To start off-process migration of associated remote I/Os:

Step	Action
1	Start Control Builder.
2	Log on to Control Builder with Engineer (Engr) security permissions.
3	In the **Control Builder Monitor/Assignment** tab, click the module to be migrated.
4	Choose **Controller** > **Migrate** to start the Experion PKS Controller Migration wizard.
5	Click **Next** on the Welcome dialog box.

Step	Action
6	Select the release for migration: To migrate your components to the latest major release available for this system, click **Migrate Components to the Latest Release**. For example, if the Experion PKS servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to R210.0.0. To migrate your components to the latest service pack or patch available for their current release, click **Migrate Components to the Latest Service Pack**. For example, if the Experion PKS servers have been migrated to R210.0, use this option to migrate an R101.0.0 controller to the R101.0.1 patch release. When a service pack is selected, only components that were updated in that service pack or patch require migration. Service Packs are only supported if all other components in the chassis are at the same base release. For example, you cannot use a service pack in a chassis where the CPM is using R210 firmware, but a FIM is using R101 firmware.
7	Click **Next** to continue. The Controller Migration wizard collects information about each component to determine if the component is mismatched and requires migration.
8	Select the Off-process Migration of Associated I/O Components check box.
9	Click **Next** to continue.
10	Click components to migrate and then click **Next**.
11	Review the list of components to off-process migrate.
12	Click **Next** to continue.

Step	Action
13	Click **Yes** to commence off-process migration. The Controller Migration wizard does the following: • Migrates selected components. The Controller Migration wizard updates all selected components. This operation may take several minutes. More specifically, the Controller Migration wizard indicates the following progress steps: **Current migration progress** Updating Selected Components in Chassis Off Process Migration Complete Once migration is complete, a summary of all the completed component updates appears.
14	Click **Finish**.
15	At this point, any FIM (in the migrated remote chassis) that was firmware updated must have its control strategy reloaded. You may need to recover from loss of communication to IOMs if any IOMs or CNIs were updated. a) In the **Control Builder Monitor/Assignment** tab, click each updated FIM and then click Load With Contents. b) Recovering from loss of communication to IOMs is control strategy dependent. The controller automatically detects the presence of the IOMs once communication is restored.
STOP	You have completed this task. Return to the checklist that led to this task.

15.5 Replacing ControlNet interfaces

The TC-CCN013/TC-CCR013 or TK-CCN013/TK-CCR013 ControlNet Interface module types are valid replacements for the legacy TC-CCN012/TC-CCR012 ControlNet Interface module type. Reasons for replacing legacy ControlNet Interface modules include:

- Replacement of faulted legacy CCN012/CCR012 module with spare module CCN013/CCR013.
- Legacy module is not supported within controller chassis during on-process migration.

There are two separate procedures to replace legacy ControlNet Interface modules.

Replacement is within a	Go to
Redundant chassis.	329
Non-redundant (or remote) chassis.	331

Replacing within redundant chassis

Within a redundant chassis pair, the CCN012/CCR012 is compatible with the CCN013/CCR013 (that has the same ControlNet parameter configuration) with one limitation: the CCN012/CCR012 must be in the primary redundancy role.

The intent of this design enhancement is to allow a customer to migrate to the CCN013/CCR013 while on process. For example, if the customer only has CCN013/CCR013 spares and a CCN012/CCR012 fails in a redundant chassis pair, the customer:

- Replaces the faulted CCN012/CCR012 in the secondary chassis with a CCN013/CCR013 (the redundant chassis pair synchronizes)
- Commands a switch-over.
- Replaces the good CCN012/CCR012 in the secondary chassis with a CCN013/CCR013.

Upon switch-over to the primary role, the CCN013/CCR013 is not compatible with the CCN012/CCR012 because the CCN013/CCR013 has more resources (for example, memory) than the CCN012/CCR012.

Prerequisites

- The original CCN012/CCR012 ControlNet Interface modules must be at 4.24 version firmware.
- The replacement CCN013/CCR013 ControlNet Interface modules must be at 5.36 (or later) version firmware.

Considerations

- Redundant chassis pair synchronization will be dropped while performing module replacement.
- The CCN012/CCR012 replacement with CCN013/CCR013 can be done on-process (as long as the CCN012/CCR012 modules are at 4.24 version firmware). However, replacing CCN013/CCR013 with CCN012/CCR012 (that is, the reverse operation) can only be done off-process.

To replace CCN012/CCR012 ControlNet interfaces in redundant chassis:

Step	Action
1	Remove power from the secondary chassis.
2	Disconnect the ControlNet cables (at the module) and extract the CCN012/CCR012 modules from the secondary chassis.
3	Insert the CCN013/CCR013 replacement modules and reconnect the ControlNet cables.
4	Apply power to the secondary chassis.
5	If necessary, set the CNI Module NUT Timing (see 375).
6	In the RM detail display's **Summary** tab, click **Synchronize Secondary** and then click **Yes** to commence initial synchronization, if not automatically triggered.
7	Wait until the redundant chassis pair is synchronized.
8	In the RM detail display's **Summary** tab, click **Initiate Switchover** and a then click **Yes** to change redundancy role. At this point in time, the new CCN013/CCR013 modules are operating in the primary redundancy role.
9	Remove power from the secondary chassis.
10	Disconnect the ControlNet cables (at the module) and extract the CCN012/CCR012 modules from the secondary chassis.

Step	Action
11	Insert CCN013/CCR013 replacement modules and reconnect the ControlNet cables.
12	Apply power to the secondary chassis.
13	If necessary, set the CNI Module NUT Timing (see 375).
14	In the RM detail display's **Summary** tab, click **Synchronize Secondary** and then click **Yes** to commence initial synchronization, if not automatically triggered.

Replacing within non-redundant (or remote) chassis

Within a non-redundant chassis, replacement of CCN012/CCR012 with CCN013/CCR013 ControlNet Interface is an off-process operation resulting in loss-of-view and/or loss-of-control.

Considerations

- The affected chassis is power-cycled making this an off-process operation.

To replace CCN012/CCR012 ControlNet interfaces in non-redundant chassis:

Step	Action
1	Remove power from the chassis.
2	Disconnect the ControlNet cables (at the module) and extract the CCN012/CCR012 modules from the chassis.
3	Insert CCN013/CCR013 replacement modules and reconnect the ControlNet cables.
4	Apply power to the chassis.
5	If necessary, set the CNI Module NUT Timing (see 375).

STOP	You have completed this task. Return to the checklist that led to this task.

15.6 Verifying dangling control connections

This section describes how to verify dangling control connections.

To verify dangling control connections:

Step	Action
1	Start Control Builder.
2	Log on to Control Builder with Engineer (Engr) security permissions.
3	In the **Control Builder Monitor/Assignment** tab, click the CPM.
4	Choose Tools >Snapshot >**Refresh selected object(s) and contents Snapshot from Monitoring Tab**.
5	Resolve any “Block at other end of connection missing” errors before starting the on-process migration.

STOP	You have completed this task. Return to the checklist that led to this task.

15.7 Verifying switch port settings

This describes how to verify the switch port settings before starting controller OPM.

Prerequisites

- The name of Yellow and Green switches. Yellow and Green are the standard naming conventions for FTE switches. Your switches may have different names.
- The IP addresses of the Yellow and Green switches.
- The login name and password.

To verify port settings:

Step	Action
1	Choose to **Start** > **Run**.
2	Type **`cmd`** and then click **OK**.
3	In the Command window, type **`telnet`** ***`ip_address`*** where *`ip_address`* is the IP address of the switch. Press ENTER.
4	At the password prompt, type the password and then press ENTER.
5	Type **`enable`** and then press ENTER.
6	Type **`password`** and then press ENTER.
7	Type **`sho run`** and then press ENTER.
8	Verify that the switch port connected to the FTEB has the following settings: • No IP address • Duplex full • Spanning-tree portfast trunk If the port speed is set to Auto, it is not displayed. If it is set to 100Mbps, it will be displayed as Speed 100. For FTEB, the port speed should be set to Auto.

Step	Action
9	If the settings in your switch are not the same, contact your local Honeywell Technical Assistance Center (TAC).
STOP	You have completed this task. Return to the checklist that led to this task.

15.8 Searching for unsupported modules

This section describes how to search for unsupported modules.

To search for unsupported modules:

Step	Action
1	Choose **Start** > **Run**.

2	For ControlNet Supervisory Networks, in the **Open** box, type:
	`ntools -c -u –pg`
	For Ethernet Supervisory Networks, in the **Open** box, type:
	`ntools -e -u -pg`

4	Click **OK** to launch the Network Tools application.
5	Click the Resume button on the toolbar to initiate a network scan.
6	In the Desktop tree, click the required supervisory communication interface.
7	Wait for the chassis details to display in the Detail pane.

Results

- The Controller Migration wizard does not support modules that have a firmware version displayed in red or yellow.
- A red firmware version indicates a recognized module type with an unknown firmware version. You must perform an off-process correction to the firmware version using the Network Tools application (see 368).
- A yellow firmware version indicates the module type is not recognized. You must perform an off-process replacement with an equivalent supported module type.

STOP	You have completed this task. Return to the checklist that led to this task.

16. Upgrading from Experion PKS

This section contains the tasks to upgrade to Experion PKS R210.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

16.1 Preparing for the upgrade

Each of the following items must be considered or documented before proceeding with the upgrade.

Item	Options
Experion PKS Welcome screen	To prevent the Experion PKS Welcome screen from popping up during the migration/upgrade, it is recommended that you display the Experion PKS Welcome screen and clear the **Show this screen next time you start Windows** check box. To display this screen For R200 and above: • Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Server** > **Experion PKS Welcome**. For R101: • Choose **Start** > **Programs** > **Experion PKS Server** > **Experion PKS Welcome**. For Console Stations: • Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Console Station** > **Experion PKS Welcome**.
System displays	You must reapply the changes to the new display after the upgrade. (This applies in particular to the System Startup display, which is often customized.)
Project-specific custom displays	If you have any project-specific custom displays, now would be a good time to save them in the appropriate location. Custom displays may require modification for use in an Experion PKS system.
Station menus	If any changes were made to existing menus, now is good time to document them. You must reapply the changes to the new menus after the upgrade.

Item	Options
System acronyms	If any changes were made to existing set, now is good time to document them. You must reapply the changes to the new set after the upgrade.
File replication	You must reconfigure any file replications after the upgrade.
Station configuration file	`Winnt\station.ini` If you have made changes in the `station.ini` file, you will need to reapply them to the new file after the upgrade. The IconPopToTopOnAlarm option has been removed, and is no longer recognized by Station. Its replacement is FlashWindowOnAlarm, which enables Station to flash its title bar and taskbar icon when an alarm is generated. This behavior is disabled by default. DisConnectTimeout and KeepAliveTimeout settings have been added, and are used to configure fast Station failover. For more information, see the *Server and Client Configuration Guide*.
Station setup file	The new default setup file is configured to as “static Station 1”. If this is not correct, you must make the appropriate changes via Station’s Setup menu. For more information, see the *Server and Client Configuration Guide*.
Custom reports	You will need to restore any custom reports after the upgrade. Back up the following folder containing the custom reports: `C:\Program Files\Honeywell\Experion PKS\server\user`
Close applications	Close all Windows applications *before* starting an upgrade on a server.

STOP	You have completed this task. Return to the checklist that led to this task.

16.2 Removing previous versions of software components

This section describes how to remove previous versions of Experion PKS software components before upgrading.

To remove previous versions of software components:

Step	Action
1	Remove all Experion PKS patches. Follow the removal instructions supplied with each patch and remove these patches in the reverse order that they were installed. You can verify installed patches by viewing the following file: C:\Program Files\Honeywell\Experion PKS\Engineering Tools\ProductVersion.txt.
2	If you have installed FTE, system management, or other common components, see the *Common Component CD SCN* for the latest information about removing it. If this document is not available, see the *Fault Tolerant Ethernet (FTE) Installation and Service Guide* for the installed release that you are removing, that is, FE05-210, FE05-201, or FE05-101.
3	Remove Adobe Acrobat 4.0 (see 497).

STOP	You have completed this task. Return to the checklist that led to this task.

16.3 Removing Experion PKS server or Console Station for an upgrade

This section describes how to remove Experion PKS server or Console Station before installing an upgrade.

Prerequisites

- Experion PKS media. The version of the media must match the installed version of Experion PKS server. For example, if you are upgrading from R101, you must have the Experion PKS R101 media.

To remove Experion PKS server or Console Station:

Step	Action
1	If the `C:\Install\RemoveHwlSoftware.bat` file exists, double-click on this file. Otherwise, insert the applicable Experion PKS media into the appropriate drive, browse to the `Tools` folder, and then double-click the `RemoveHwlSoftware.bat` file.
2	Press the SPACE BAR to acknowledge the remove warning message.
3	Click **Yes** to confirm the uninstallation of Experion PKS.
4	If you are upgrading Experion PKS for use with Process points, click **Yes** to confirm the uninstallation of the process detail displays.
5	Click **Cancel** to quit the Experion PKS Server Setup application.
6	Click **Yes** to confirm quitting the Experion PKS Server Setup application.
7	Click **Finish**.
8	If you are upgrading Experion PKS for use with SCADA points, go to step 13.
9	Click **Yes** to confirm the uninstallation of the PSC Engineering Tools.
10	If one or more registry error messages are displayed, click **OK** on these messages.
11	If an InstallShield complete dialog box appears, click **Finish**.

Step	Action
12	If a RSLinx is already installed message appears, do the following: a) Click **OK** to acknowledge the message. b) On the Welcome to the InstallShield Wizard for RSLinx screen, click **Next**. c) On the Program Maintenance screen, click **Remove** and then click **Next**. d) If a backup RSLinx configuration message appears, click **No**. e) On the Remove the Program screen, click **Remove**. f) When prompted, on the InstallShield Wizard Complete screen, click **Finish**.
13	On the Knowledge Builder Maintenance screen, click **Cancel**.
14	Click **OK** or **Yes** confirm the cancellation.
15	Click **Finish**.
16	Click **No** to cancel removing Microsoft SQL Server.
17	Click **OK** to acknowledge the message.
18	Press the SPACE BAR to close the RemoveHwlSoftware.bat Command window.
19	Choose **Start** > **Settings** > **Control Panel** and double-click the **Add/Remove Programs** icon.
20	Remove the **Experion PKS - Remove this last** program. The Experion PKS - Remove this last program applies to the Experion PKS Engineering Tools software only. There will be other Experion PKS server and client applications installed, however, these applications are automatically upgraded later.
21	Restart the computer. An error in the `VirtualBackplane.sys` file for the PCIC drivers causes a blue screen error event during a computer restart. This error is expected and can be ignored.

STOP	You have completed this task. Return to the checklist that led to this task.

16.4 Removing Experion PKS client applications for an upgrade

This section describes how to remove Experion PKS client applications before installing an upgrade.

Prerequisites

- Experion PKS media. The version of the media must match the installed version of Experion PKS client application. For example, if you are upgrading from R101, you must have the Experion PKS R101 media.

To remove Experion PKS client applications for an upgrade:

Step	Action
1	If the `C:\Install\RemoveHwlSoftware.bat` file exists, double-click on this file. Otherwise, insert the applicable Experion PKS media into the appropriate drive, browse to the `Tools` folder, and then double-click the `RemoveHwlSoftware.bat` file.
2	Insert the Experion PKS R210 media into the appropriate drive.
3	In Windows Explorer, browse to the `Tools` folder on the drive, and double-click the `RemoveHwlSoftware` file.
4	Press the SPACE BAR to acknowledge the remove warning message.
5	If prompted, click **Yes** to confirm that you want to remove all Experion PKS software.
6	Click **Yes** to confirm the uninstallation. This removes the process detail displays.
7	If an information message dialog box appears, click **OK**.
8	On the Experion PKS Client Software Setup screen, click **Cancel**.
9	On the Knowledge Builder Maintenance screen, click **Cancel**.
9	Click **OK** or **Yes** to confirm the cancellation.
10	Click **OK** to acknowledge the message dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

16.5 Synchronizing the QVCS database

This section describes how to synchronize the QVCS database.

Considerations

- You only need to complete these steps on the primary ERDB. The primary ERDB on a redundant system is on server B.

To synchronize the QVCS database:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Db Admin**.
2	Expand the **DbAdmin** item.
3	Log on.
4	Expand the **Experion PKS Node** item.
5	Click the **VCS Admin Tasks** item.
6	To start the synchronization: a) Click **Synchronize VCS**. b) Click **Yes**. c) Click **OK** to acknowledge the successful completion message. d) Click **Yes**.
7	Close the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

16.6 Exporting the Engineering Repository database

This section describes how to export the Engineering Repository database on an Experion PKS server.

Considerations

- If you have a redundant server pair, you only need to complete these steps on *server B*.
- All data contained in the Engineering Repository database must be exported. The exported data can be saved in the file system on the computer, however, it *cannot* be stored in the `C:\Program Files\Honeywell` path.
- Identify a network location to store the exported data, or create a new sub-directory at the root level of the C: drive. For example, create the `C:\Data\ExportDB` directory.
- Depending on the size of the Engineering Repository, this task can take several minutes for small databases, to several hours for very large databases.

To export the Engineering Repository:

Step	Action
1	Start Control Builder.
2	Choose **File** > **Export**.
3	Click **Browse**, browse to the location where you want to export the Engineering Repository data, for example `C:\Data\ExportDB`, and then click **OK**.
4	Click **Select All**.
5	Click **Export**. Depending on the size of the database, this step may take several minutes to several hours. If the export is successful, the Export dialog box closes.

Step	Action
6	If the Export dialog box remains open, do the following: a) Close the dialog box. b) Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Error Logs** > **IXP log**. c) Investigate and correct each error listed in this log file. For further information about each error, refer to the Experion PKS documentation or contact TAC for assistance. d) Once you have corrected the errors, repeat this complete task.
7	Close the Control Builder application.

STOP	You have completed this task. Return to the checklist that led to this task.

16.7 Downloading CDA hardware items to server

This section describes how to download CDA hardware items from Control Builder to the Experion PKS server.

Considerations

- You should only download non-CM and non-SCM hardware items to the Experion PKS server. You can download CM and SCM hardware items, however, downloading them is unnecessary and will add significant duration to this task.

To download CDA hardware items to the server:

Step	Action
1	Start the Control Builder application.
2	Select all non-CM and non-SCM hardware items in the Control Builder Tree Window.
3	Right-click on the selected hardware items and choose **Load Server Points** in the pop-up menu. The **Load To Server** dialog box appears.
4	Review the list of hardware items to load to the server and then click **Continue**. A progress dialog box appears. Control Builder loads the hardware items to the Experion PKS server.
5	Exit the Control Builder application.

STOP	You have completed this task. Return to the checklist that led to this task.

16.8 Restoring data and reapplying customizations

You may need to restore data or reapply customizations after an upgrade. Review the following list, and complete where required.

Item	Options
System displays	Reapply changes to the new system displays. (This applies in particular to the System Startup display, which is often customized.)
Custom displays	Migrate all custom HMIWeb displays (see 351).
Station menus	Reapply changes to the new menus.
System acronyms	Reapply changes to the new acronym set.
Scan periods	Reapply any specialized scan periods.
File replication	Reconfigure file replications, including any changes to the following file: `C:\Program Files\Honeywell\Experion PKS\server\data\flbkup.def` For more information, see the following topic in Knowledge Builder: Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring File Replication.
Station configuration file	Reapply changes to the `station.ini` file.
Station setup file	The new default setup file (`default.stn`) is configured as static Station 1. If this does not meet your requirements, you must make the appropriate changes. For more information, see the following topic in Knowledge Builder: Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Stations and printers > Configuring Station connection properties.

Item	Options
Custom reports	Restore the custom reports from backups to: `C:\Program Files\Honeywell\ Experion PKS\server\user` Reconfigure the custom reports. For more information, see the following topic in Knowledge Builder: Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring reports > Creating custom reports with Microsoft Excel.
History data	Restore the history data from backups to: `C:\Program Files\Honeywell\Experion PKS\ server\archive` or the file location defined in the Experion PKS Control Panel. For more information, see the following topic in Knowledge Builder: Experion PKS R210 > System Administration > System Administration and Startup Guide > Backups and recovery > Performing backups and recover.

STOP	You have completed this task. Return to the checklist that led to this task.

16.9 Migrating HMIWeb displays and shapes

If you have any HMIWeb displays and shapes, you must migrate them to the current format. You migrate the displays and shapes using the BulkDisplayMigrator utility (`BulkDisplayMigrator.exe`), which is located in the `C:\Program Files\ Honeywell\Experion PKS\client\HMIWeb Display Builder` folder.

Considerations

- You can also migrate individual displays or shapes by opening, saving, and closing them in HMIWeb Display Builder.

To migrate HMIWeb displays and shapes:

Step	Action
1	Double-click the BulkDisplayMigrator.exe file to display the HMIWeb Bulk Display Migrator dialog box.
2	Click the lookup button (...), browse to the folder containing the displays and shapes to migrate, and then click **OK**.
3	Click **GO** to migrate the displays and shapes.
4	Close the HMIWeb Bulk Display Migrator window.

STOP	You have completed this task. Return to the checklist that led to this task.

17. Upgrading drivers and firmware

This section describes how to maintain the firmware and software drivers of the following components.

Component	Go to
Drivers for PCIC cards.	354
Firmware for hardware components.	368

17.1 Installing RSLinx

This section describes how to continue installing RSLinx software.

ATTENTION

If you are installing Experion PKS server for use with Process points and you selected Fault Tolerant Ethernet (FTE) as the level 2 control network, you are not prompted to install RSLinx. Do *not* follow these instructions. Return to the checklist that led to this task.

Considerations

- If a message appears during the installation requesting you to restore a backup of the RSLinx configuration, click **OK** to continue the installation.
- When the Electronic Data Sheets are displayed, do *not* change the default Electronic Data Sheets to install.
- When reviewing the Release Notes displayed when the RSLinx installation is complete, an Experion PKS Installation message appears requesting you to restart the computer. Review the Release Notes first, then locate this message and click **OK** to restart the computer.

To install RSLinx:

Step	Action
1	On the RSLinx Welcome screen, click **Next** to continue installing RSLinx.
2	On the License Agreement screen, click **I accept the terms in the license agreement**, and then click **Next**.
3	On the Customer Information screen, type the **User Name** and **Organization**, and then click **Next**.
4	On the Standard Setup screen, click **Next** to accept the default features to install.
5	On the Ready to Install the Program screen, click **Install** to start installing the RSLinx applications. This installation may take several minutes to complete.
6	On the Installation Wizard Completed screen, click **Finish**.

Step	Action
7	Review the Release Notes and then close the window that displays the Release Notes.

ATTENTION

An error in the `VirtualBackplane.sys` file for the PCIC drivers causes a blue screen error event during a computer restart. This error is expected and can be ignored.

STOP	You have completed this task. Return to the checklist that led to this task.

17.2 Canceling the RSLinx installation

This section describes how to cancel the RSLinx install application when installing Experion PKS ACE pr SIM-C200.

ATTENTION

If you selected Fault Tolerant Ethernet (FTE) as the level 2 control network, you are not prompted to install RSLinx. Do *not* follow these instructions. Return to the checklist that led to this task.

Considerations

- RSLinx is *not* required for ACE to ACE, or ACE to SIM-C200, or SIM-C200 to SIM-C200 peer communications or ACE to TPN server communications.

To cancel the RSLinx install:

Step	Action
1	If prompted, insert the Experion PKS R210 Applications CD into the CD-ROM drive and then click **Yes** to continue
2	Click **Cancel** to cancel installing RSLinx.
3	Click **Yes** to confirm that you want to cancel installing RSLinx.
4	Click **Finish** to close the RSLinx installation application.

STOP You have completed this task. Return to the checklist that led to this task.

17.3 Registering Electronic Data Sheets (EDS)

This section describes how to register electronic data sheets.

Prerequisites

- You only complete this task if you installed Experion PKS server for use with process points.

To register electronic data sheets (EDS):

Step	Action
1	Choose **Start** > **Programs** > **Rockwell Software** > **RSLinx Tools** > **EDS Hardware Installation Tool**.
2	Click **Add**.
3	Click **Register a directory of EDS files**.
4	Click **Browse** and browse to `C:\Program Files\Rockwell Software\RSCommon\Honeywell EDS`.
5	Click **Next**.
6	Review the Installation Test Results and click **Next**.
7	Click **Next** to accept the default icons.
8	Click **Next** to register the devices.
9	Click **Finish** to complete the wizard.
10	Click **Exit**.

STOP	You have completed this task. Return to the checklist that led to this task.

17.4 Configuring RSLinx drivers for a ControlNet supervisory network

This section describes how to configure the RSLinx drivers for a ControlNet supervisory network.

To configure RSLinx drivers for a ControlNet supervisory network:

Step	Action
1	Click the RSLinx icon in the system tray to open the RSLinx application.
2	Click the Configure Drivers button on the toolbar.
3	In the **Available Driver Types** list, click **1784-PCIC(S) for ControlNet devices**, and click **Add New**.
4	Verify that the name is `AB_PCIC-1` and then click **OK**.
5	Type the **Network Address (dec)**, based on the following table:

Server Type	Network Address
Redundant server A	24
Redundant server B	23
Non-redundant server	24

For ACE and SIM-C200, type the MAC address as per the site specification form.

6	Click **OK**.
7	Check the status of the driver. It must be **Running**.
8	Click **Close**.
9	Close the RSLinx window.
10	Restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

17.5 Configuring RSLinx drivers for an Ethernet supervisory network

This section describes how to configure the RSLinx drivers for an Ethernet supervisory Network.

Prerequisites

- RSLinx must be activated and be in OEM mode to use the Ethernet drivers. For information about activating OEM mode (see 362).
- The `bootpdata.txt` file must be located in the `C:\Program Files\Honeywell\Experion PKS\Engineering Tools\system\bin` folder.

  If you are upgrading, this file was backed up from your previous installation *before* the migration and must be copied to this folder *before* continuing this task.

  If you are installing a new Experion PKS system, you need to create this file.

To configure RSLinx drivers for an Ethernet supervisory network:

Step	Action
1	Verify the settings of the Ethernet network interface card (NIC) that communicates with the controller. For more information, see the “Configuring and Setting IP Address for Ethernet Module” topic in Knowledge Builder. To access this topic, navigate to **Experion PKS R210** > **Installation and Upgrades** > **Ethernet Implementation Guide** > **Configuration** > **Setting up Drivers and IP Addresses**.
2	Configure the IP address for each controller. For more information, see the “Setting up Drivers and IP Addresses” topic in Knowledge Builder. To access this topic, navigate to **Experion PKS R210** > **Installation and Upgrades** > **Ethernet Implementation Guide** > **Configuration** > **Setting up Drivers and IP Addresses**.

Step	Action
3	Configure the RSLinx drivers. A driver must be configured for each controller. For more information, see the “Configuring RSLinx Drivers for Ethernet Supervisory Network” topic in Knowledge Builder. To access this topic, navigate to **Experion PKS R210** > **Installation and Upgrades** > **Ethernet Implementation Guide** > **Configuration** > **Setting up Drivers and IP Addresses**.
4	Restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

17.6 Moving the RSLinx activation file

This section describes how to move the activation file (`evrsi.sys`) either from the RSLinx Master 3.5-inch disk to the computer's hard drive or from the computer's hard drive back to the RSLinx Master 3.5-inch disk.

RSLinx requires this activation file for the software to operate as the OEM version, rather than the Lite version. In the Lite version, RSLinx supports Experion PKS systems that communicate to controllers using ControlNet. To support Experion PKS systems that communicate using Ethernet, the RSLinx version must be OEM.

Therefore, you must follow this procedure if you need to upgrade RSLinx from the Lite version to the OEM version.

ATTENTION

If the activation file is already present on the computer's hard drive when you install RSLinx, the application will operate as the OEM version.

Prerequisites

- RSLinx Master 3.5-inch disk.

Considerations

- If you ever have to reformat your computer's hard drive, you must move the activation file to the RSLinx Master 3.5-inch disk *before* you reformat the computer's hard drive.
- Ensure that you shut down all Experion PKS server and RSLinx services before you remove the activation file.
- Do *not* manually copy or move the `evrsi.sys` file. Moving or coping the `evrsi.sys` file will disable the OEM version of RSLinx. Always use the `EVMOVE.EXE` application to move the `evrsi.sys` file.
- If the `evrsi.sys` file is corrupted, or if you manually move it, and the RSLinx application runs as the Lite version, rather than the OEM version, you can visit the Rockwell Automation Web site (`http://support.rockwellautomation.com/resetcodes/`) to recover the RSLinx activation.

To move the RSLinx activation files:

Step	Action
1	Choose **Start** > **Programs** > **Rockwell Software** > **RSLinx** > **RSLinx** to open the RSLinx application.
2	Check the title in the RSLinx dialog box.
3	If the title displays “RSLinx Lite”: a) Choose **File** > **Exit**. b) Return to the checklist that led to this task.
4	If the title displays “RSLinx OEM”, choose **File** > **Exit**.
5	Stop the RSLinx service (see 439).
6	Stop the Experion PKS server (see 432).
7	Insert the RSLinx Master 3.5-inch disk into drive A.
8	In Windows Explorer, browse to drive A, and then double-click `evmove.exe`.
9	Select the **From Drive** and the **To Drive**. If you are preparing for an upgrade, click **C:** in the **From Drive** and click `A:` in the **To Drive**. If you are activating a new installation of RSLinx, click **A:** in the **From Drive** and click **C:** in the **To Drive**.
10	Click **OK** to initiate the move.
11	Click **Move** to move the activation file.
12	When a successful message dialog box appears, click **OK**.
13	Remove the Master 3.5-inch disk from drive A and store it in a safe place.

STOP	You have completed this task. Return to the checklist that led to this task.

17.7 Upgrading PCIC drivers

If you have upgraded to Experion PKS for use with process points you must upgrade the PCIC drivers to the latest version.

You must check if the PCIC drivers are installed, and if they are installed, identify if they are the correct version for Experion PKS R210.

Verifying the PCIC driver

To verify if the PCIC driver is installed:

Step	Action
1	On the Windows Desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Click the **Device Manager** item.
3	If the **A-B Virtual Backplane** item does *not* exist, Install the PCIC drivers on page 365.
4	In the Computer Management dialog box, expand the **A-B Virtual Backplane** item.
5	Double-click the **A-B 1784-PCIC(S)** item to display the Properties dialog box.
6	Click the **Driver** tab and then click **Driver Details**.
7	Click the **ABPCICSW.sys** file in the **Driver files** list.
8	Review the file version displayed below the **Driver files** list.
9	The file version must be **3.6.18 WDM**. If it is *not*, you need to update the PCIC driver: continue to 366.
10	Click the **VirtualBackplane.sys** file in the **Driver files** list.
11	Review the file version displayed below the **Driver files** list.
12	The file version must be **1.9**. If it is *not*, you need to update the PCIC driver: continue to 366.
13	If both of driver files are the correct versions, click **OK** to close the Driver File Details dialog box, the click **OK** to close the Properties dialog box, and then close the Computer Management dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

Installing the PCIC drivers

Prerequisites

- Experion PKS R210 media.

To install the PCIC drivers:

Step	Action
1	Insert the Experion PKS R210 Application DVD into the appropriate drive.
2	In the Computer Management dialog box, right-click in the pane displaying the devices, and then click **Scan for Hardware Changes**.
3	Click **Other Device** and then click **Reinstall Driver**.
4	Click **Next** to start installing the driver.
5	Click **Display a list of the known drivers for this device so that I can choose a specific driver** and then click **Next**.
6	Click **Other Device**.
7	Click **Have Disk** to display the Install from Disk dialog box.
8	Click **Browse** and then browse to the following folder on the drive: `\RSLinx\RSLinx\pnp_Drivers\Win2k\1784-PCIC(S)`
9	Click **OK**.
10	Click **A-B 1784-PCIC(S)**.
11	Click **Next**.
12	Click **Yes** in the update driver warning message dialog box.
13	Click **Next**.
14	If a confirm file replace message dialog box appears, click **Yes** to continue the installation.
15	Click **Finish** to complete the installation.
16	Click **Close** to close the Properties dialog box.

Step	Action
17	Configure the RSLinx PCIC driver: continue to “Configuring RSLinx drivers for a ControlNet supervisory network” (see 358).
STOP	You have completed this task. Return to the checklist that led to this task.

Upgrading the PCIC drivers

Prerequisites

- Experion PKS R210 media.

To update the PCIC Drivers:

Step	Action
1	If the Driver File Details dialog box appears, click **OK** to close it.
2	Click the **General** tab on the Properties dialog box.
3	Click **Do not use this device (disable)** in the **Device usage** list.
4	Click **OK**.
5	Insert the Experion PKS R210 Application DVD into the appropriate drive.

6	Using Windows Explorer, copy the `ABPCICSW.sys` and `VirtualBackplane.sys` files from the following folder on the drive:
	`\RSLinx\RSLinx\PnP_Drivers\Win2k\1784-PCIC(S)`
	to the following folder on the hard disk:
	`C:\WINNT\system32\drivers`
	If you are prompted to replace the existing files, click **Yes**.

7	In the Computer Management dialog box, double-click the A-B 1784-PCIC(S) item.
8	Click the General tab.
9	Click **Use this device (enable)** in the **Device usage** list.
10	Click **OK**.

Step	Action
11	Configure the RSLinx PCIC driver. Follow the instructions in “Configuring RSLinx drivers for a ControlNet supervisory network” (see 358).
12	Verify that the new drivers are being used (see 354).

STOP	You have completed this task. Return to the checklist that led to this task.

17.8 Upgrading firmware in hardware components

Each Experion PKS release includes firmware revisions to update hardware components to levels that are compatible with the current release, or previous releases with which the current release may interoperate. There are two Experion PKS Engineering Tools utilities for updating firmware:

- Network Tools (NTOOLS).
- Controller Migration wizard.

Although both utilities check that firmware revisions in the hardware are compatible with the release and are used to update firmware (where required), they serve different purposes. The Controller Migration wizard is used to automatically update firmware when migrating between releases, while the Network Tools utility is used to manually update firmware in the following scenarios:

- To ensure that a replacement module is of the proper firmware version.
- When commissioning one or more modules for the first time before initiating control operations.

The hardware components that are affected by these utilities are:

- PC to ControlNet (PCIC) cards.
- Control Processor (CPM) modules.
- Fieldbus Interface (FIM) modules.
- IO Link Interface (IOLIM) modules.
- Serial Interface (SIM) modules.
- ControlNet Interface (CNI) modules.
- Redundancy (RM) modules.
- Ethernet Interface (ENet) modules.
- Input Output (IOM) modules.

Prerequisites

- The supported firmware revisions for Experion PKS R210, and their location, are documented in the *Software Change Notice* (SCN).

Considerations

- All component firmware upgrades must be performed with the system off-process.
- Firmware versions are *not* backwards compatible. For example, if you try to use a CPM with a firmware revision that is compatible with Experion PKS R210 that is connected to a server running PlantScape R500.1, the control and operation of the system is *not* guaranteed.
- If you are updating a PCIC ControlNet card, your computer will be blind to all modules.
- If you get a use extreme care warning message dialog box during an update, confirm that the correct `.nvs` file, as listed in the SCN, is selected.
- Carefully read all message dialog boxes displayed during the firmware update.
- Do *not* extract modules, remove power, or disconnect communication cables, otherwise, you may have to return the module to the factory for reprogramming.
- If you are performing a clean installation and your level 2 controller network is FTE, you must configure your FTE Bridges (FTEB) using Control Builder before upgrading the FTEB firmware (see 383).

Tasks

Complete the tasks in the following order.

Task	Go to
Upgrade PCIC firmware.	369
Upgrade CPM, SIM, IOLIM, or FIM boot and personality images.	371
Upgrade CNI, IOM, RM, ENet, or Gateway firmware	374

Upgrading PCIC firmware

Prerequisites

- The name of the local PCIC card. To find the name of the local PCIC card, open RSLinx and click the Configure Drivers button on the toolbar. Note the CNetNode number of the PCIC driver (usually 23 or 24).

- Identify the PCIC firmware update file name and location. These are documented in the *Software Change Notice* (SCN).

To start the NTOOLS application:

Step	Action
1	If this is the first time you have used NetworkTools on this computer, complete the instructions in 379 and then continue to step 6.
2	Choose **Start** > **Run**.
3	For ControlNet supervisory networks: a) In the **Open** box, type **`ntools -c -u -pg`**. b) The RSLinx and PCIC driver services for system communications are started in ControlNet mode, if they are not already running. For Ethernet Supervisory Networks: a) In the **Open** box, type **`ntools -e -u -pg`**.
4	Click **OK** to launch the Network Tools application.
5	Click **OK** to acknowledge the warning dialog box about monitoring through Engineering Tools.
6	Click the Resume button on the toolbar to initiate a network scan.
7	In the Desktop tree, click the *local* PCIC item. The CNetNode number identified in the RSLinx application appears in the local PCIC item name. Wait for the card details to display in the Detail pane.
8	Choose **Device** > **Update Firmware from File**.
9	Click **Yes** to acknowledge the use extreme care warning message dialog box.
10	The location and name of the firmware update for the PCIC card are listed in the SCN. Browse to the folder and click the firmware update file.
11	Click **Open** to start the firmware load.
12	Click **Yes** to confirm the firmware load. Wait for the load to complete. The Status field in the lower portion of the Network Tools dialog box displays the load progress.
13	Click **OK** to acknowledge the firmware load completed with no errors.

Step	Action
14	Close the NTOOLS application.
15	If you have not already done so, verify that your PCIC device driver is up to date (see 364).
16	Shutdown and then turn off the power to the computer.
17	Restart the computer and log on to the computer using a Windows account with local administrator rights.

Upgrading CPM, SIM, IOLIM or FIM boot and personality images

Use the following instructions to upgrade the boot code and personality images in existing Experion PKS process controller CPM, SIM, IOLIM or FIM devices.

Prerequisites

- Identify the required firmware update file names and locations. These are documented in the *Software Change Notice* (SCN).

Considerations

- You must repeat these instructions for all CPM, SIM, IOLIM, and FIM devices in your system.
- For CPM, IOLIM, and FIM devices. When you update CPM, IOLIM, or FIM devices in a Redundant Chassis Pair (RCP), it is recommended that you switch the power *off* to one of the controller chassis in the RCP. This allows the firmware in the selected device to be updated in the powered controller chassis while it is in a primary state with no partner. Once the device is updated in the powered chassis, switch the power *off* to this chassis and turn switch the power *on* to the other controller chassis and repeat the firmware update for the other device in the RCP. This avoids possible confusion caused by logical change in Network Addresses in response to a controller switchover.

To load CPM, SIM, IOLIM, or FIM boot and personality images:

Step	Action
1	If this is the first time you have used NetworkTools on this computer, complete the NetworkTools setup instructions (see 379) and then continue to step 6.
2	Choose **Start** > **Run**.

Step	Action
3	In the **Open** box, type **`ntools -c -u -pg`**.
4	Click **OK** to launch the Network Tools application. The RSLinx and PCIC driver services for system communications are started in ControlNet mode, if they are not already running.
5	Click **OK** to acknowledge the warning dialog box about monitoring through Engineering Tools.
6	Click the Resume button on the toolbar to initiate a network scan.
7	In the Desktop tree, click the required CNI item. Wait for the chassis details to display in the Detail pane. The following table describes the module colors.

Color	Description
Red	The module type is recognized, however, the device firmware version/revision is *not* known.
Green	The module type is recognized and the device firmware version/revision is associated with the current release of Experion PKS.
Cyan	The module type is recognized and the device firmware version/revision is interoperable with the current release of Experion PKS, however, it is *not* the most recent version/revision of the firmware.
Yellow	The module type is *not* recognized.

To load the boot image:

Step	Action
1	Click the device's graphic representation in the details pane.
2	Choose **Device** > **Update Firmware from File**.
3	Click **Yes** to acknowledge the warning message dialog box.

Step	Action
4	Look at the device's LED display. If the device is *not* in the Ready (**RDY**) state, click **Yes** to issue a stop (shutdown) command to the device and wait for the device to reboot to the RDY state.
5	The file name and location of the boot firmware update image are listed in the SCN. Browse to the folder and click the required boot image file.
6	Click **Open** to start the firmware load.
7	Click **Yes** to confirm the firmware load. Wait for the load to complete and the device to reboot to the Alive (**ALIV**) state. The Status field in the lower portion of the Network Tools dialog box displays the load progress.
8	Click **OK** to acknowledge the firmware load completed with no errors.

To load the personality image:

Step	Action
1	When the device in the Alive state, click the device's graphic representation in the detail pane.
2	Choose **Device** > **Update Firmware from File**.
3	Click **Yes** to acknowledge the warning message dialog box.
4	The file name and location of the personality firmware update image are listed in the SCN. Browse to the folder and click the required personality image file.
5	Click **Open** to start the firmware load.
6	Click **Yes** to confirm the firmware load. Wait for the load to complete and the device to reboot to the **NODB** state. The Status field in the lower portion of the Network Tools dialog box displays the load progress.
7	Click **OK** to acknowledge the firmware load completed with no errors.

Upgrading Firmware in CNI, IOM, RM, ENet, or Gateway Devices

Prerequisites

- Identify the required firmware update file names and locations. These are documented in the *Software Change Notice* (SCN).

Considerations

- When you update devices in a Redundant Chassis Pair (RCP), it is recommended that you switch the power *off* to one of the controller chassis in the RCP. This allows the firmware in the selected device to be updated in the powered controller chassis while it is in a primary state with no partner. Once the device is updated in the powered chassis, switch the power *off* to this chassis and turn switch the power *on* to the other controller chassis and repeat the firmware update for the other device in the RCP. This avoids possible confusion caused by logical change in Network Addresses in response to a controller switchover.
- When updating RMs, switch the power *off* to the secondary chassis. If you fail to remove power from the secondary chassis, there may be an unrecoverable loss of the RM.
- Update each module one by one.

To upgrade firmware in CNI, IOM, RM, ENet, or Gateway components:

Step	Action
1	If this is the first time you have used NetworkTools on this computer, complete the NetworkTools setup instructions (see 379) and then continue to step 6.
2	Choose **Start** > **Run**.
3	In the **Open** box, type **`ntools -c -u -pg`**.
4	Click **OK** to launch the Network Tools application. The RSLinx and PCIC driver services for system communications are started ControlNet mode, if they are not already running.
5	Click **OK** to acknowledge the warning message dialog box about monitoring through Engineering Tools.
6	Click the Resume button on the toolbar to initiate a network scan.
7	In the Desktop tree, click the required CNI item.

Step	Action
8	Wait for the chassis details to display in the Detail pane.
9	Click the CNI, IOM, or RM to be updated.
10	Choose **Device** > **Update Firmware from File**.
11	Click **Yes** to acknowledge the warning message dialog box.
12	Clear the **Update all other identical types in this controller (only) now** option.
13	Click **Yes** button acknowledge the use extreme care warning dialog box.
14	The file name and location of the firmware update images are listed in the SCN. Browse to the file and folder identified the prerequisites section.
15	Click **Open** to start the firmware load.
16	Click **Yes** to confirm the firmware load. The Status field in the lower portion of the Network Tools dialog box displays the load progress.
17	Click **OK** to acknowledge the firmware load completed with no errors.
18	If you have added any new CNI modules to your network, follow the instructions in 374.

Setting CNI Module NUT Timing

Considerations

- You only need to adjust the NUT timing on new CNI modules received from the factory. You can skip this procedure if you have previously set the NUT timing for all the CNI modules in your system.
- If you are including a Foundation Fieldbus Linking Device in your application, review the CNI restrictions described in the *Linking Device Implementation Guide* for NUT timing data specific to Fieldbus applications
- The CNI modules must be on a Control Net that is plugged into a rack, cabled to the ControlNet, and have unique MAC addresses in order to change their ControlNet parameters, such as. NUT Time, UMAX, SMAX, and so on. The ControlNet parameters are updated for all CNIs on the ControlNet at the same time.

- After reprogramming the Secondary CNI's ControlNet parameters to match that of the Primary CNI, the Secondary CNI must be power-cycled so that redundant partner compatibility checks are re-attempted.

To set CNI module NUT timing:

Step	Action
1	If this is the first time you have used NetworkTools on this computer, complete the NetworkTools setup instructions (see 379) and then continue to step 6.
2	Choose **Start** > **Run**.
3	In the **Open** box, type **`ntools -c -u -pg`**.
4	Click **OK** to launch the Network Tools application. The RSLinx and PCIC driver services for system communications are started in ControlNet mode, if they are not already running.
5	Click **OK** to acknowledge the warning message dialog box about monitoring through Engineering Tools.
6	Click the Resume button on the toolbar to initiate a network scan.
7	In the Desktop tree, click the required CNI item. Wait for the chassis details to display in the Detail pane.
8	Click the CNI module's graphic representation in the Details pane. The CNI module is the item with the Network Address displayed.
9	Click the Change ControlNet button on the toolbar to display the Keeper Values dialog box.
10	Click the **Change** tab.

Step	Action
11	Confirm, and change if required, the parameter values match the values in the following table.

Parameter	Value
NUT Time	10000 uS (10 msec.)
SMAX	1
UMAX	32 (set UMAX to `20` for I/O network CNI modules)
Number of Repeaters	0
Cable Length	1000 (meters)
Cable Usage	A+B (for dual media cable configuration) – or – A (for single media cable configuration)

12	Clear the **My System uses Fiber Optics** option.
13	If you did not change any of the parameter values, click **Cancel** and continue to step 18.
14	Click **OK**.
15	Click **Yes** to acknowledge the confirmation messages. Wait for the data transfer to complete.
16	Click **OK** to acknowledge the completion of the update without errors.
17	If a communications message dialog box appears, click **OK** to acknowledge the message dialog box and then click the Pause button on the toolbar to halt the network scan.
18	If there are CNIs on I/O networks that need to be updated, click a CNI from each I/O network in step 374 and repeat steps 8 to 17.
19	Close the NetworkTools application.

STOP	You have completed this task. Return to the checklist that led to this task.

17.9 Setting Up Network Tools (NTOOLS)

The Network Tools utility lets you access operating data about Experion PKS process controllers and related hardware used within your Experion PKS system. It scans all the nodes on the Supervisory Network connected to your Experion PKS server.

In the Network Tools utility, the Tree pane displays the nodes connected to your computer in hierarchical order. The List pane displays information about the communication status of the Supervisory Network. The Detail pane displays a graphical representation of the modules included in the chassis.

Each module graphic displays the following details about the module:

- The module base model number of the module, without the `TC-` prefix.
- The module state.
- The CEE type of the CPMs (standard is 50ms and fast is 5ms)
- The module firmware version, including application version (AV) and boot version (BV), if applicable.

Online Help

You can get additional help about the NetworkTools application by selecting **Help** > **Help Topics**.

Network Tools Usage Guidelines

To avoid possible negative impact on network performance, please observe the following guidelines:

- Do *not* use Network Tools while connecting nodes to the network.
- Do *not* use Network Tools when monitoring an analog I/O module using Engineering Tools.
- Do *not* use Network Tools to monitor an analog I/O ControlNet network while the system is “on-control”.

Starting Network Tools for the First Time

Use the following procedure to make the initial settings the first time you start the NetworkTools application on your computer.

Prerequisites

- You need to know the number of slots in the local chassis.
- If your system includes a remote chassis, you need to know the following details:
  - The number of slots in the remote chassis.
  - The assigned network address (MAC ID) of the remote chassis.

    The assigned network address appears in the module's LED display in the format A#*nn*, where *nn* is the network address.
  - The slot number where the downlink CNI is installed in your local chassis.

Considerations

- When using Network Tools for the first time, the Network Tools application may display a message dialog box about Engineering Tools. You must follow the instructions or recommendations displayed in the message dialog box, and then close it.
- The Network Tools version/revision checking feature enables Network Tools to display information about the firmware version/revisions contained within the modules. The display of this information is by color, which are:

Color	Description
Red	The module type is recognized, however, the device firmware version/revision is *not* known.
Green	The module type is recognized and the device firmware version/revision is associated with the current release of Experion PKS.
Cyan	The module type is recognized and the device firmware version/revision is interoperable with the current release of Experion PKS, however, it is *not* the most recent version/revision of the firmware.
Yellow	The module type is *not* recognized.

To start Network Tools:

Step	Action
1	Choose **Start** > **Run**.
2	For ControlNet Supervisory Networks: a) In the **Open** box, type **`ntools -c -u -pg`**. b) The RSLinx and PCIC driver services for system communications are started in ControlNet mode, if they are not already running. For Ethernet Supervisory Networks: a) In the **Open** box, type **`ntools -e -u -pg`**.
3	Click **OK** to launch the Network Tools application.
4	Click **OK** to acknowledge the warning dialog box about monitoring through Engineering Tools.
5	Select the Desktop item in the Tree pane, and then click the **Settings** button on the toolbar.
6	In the **Delay between scans (seconds)** text box, type **2**, and click **Periodic (automatic).**
7	Check **Enable Module Version/Revision Checking**.
8	Check **Enable ControlNet Parameter Checking**.
9	Click **OK**.
10	Click the **Resume** button in the toolbar.
11	When network nodes are displayed under the Desktop item in the Tree pane, click the first CNI or Ethernet item.
12	Click the **Local Chassis** tab.
13	In the **Number of Slots in Local Chassis** box, click or type the number of slots.

Step	Action
14	If your system includes a remote chassis: a) Click a **Remote Chassis** tab. b) Click **Check here if Remote Chassis installed**. c) In the **Number of Slots in Remote Chassis** box, click or type the number of slots. d) In the **Remote Chassis CNI MAC ID** box, click or type the network address of the remote chassis. e) In the DownLink CHI Slot number box, click or type the slot number where the downlink CNI is installed on the local chassis. f) Repeat all these sub-steps for each remote chassis, selecting the next available numbered remote chassis tab, for example, **Remote Chassis 2**.
15	Click **OK**.
16	In the Detail pane, the chassis graphic appears, including the remote chassis, if applicable.
17	In the Tree pane, click the next CNI or Ethernet item.
18	Repeat steps 12 to 17 until all CNI or Ethernet items are configured.
19	Close the NetworkTools application.

STOP	You have completed this task. Return to the checklist that led to this task.

17.10 Installing Fault Tolerant Ethernet Bridge

This section describes how to install a Fault Tolerant Ethernet Bridge (FTEB).

Prerequisites

- Experion PKS R210 Knowledge Builder.
- If your system has any CNI cards installed on the supervisory control network, remove these cards from the controllers.
- If your server computers have PCIC cards installed, remove these cards from the computers.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install the FTEB cards in the controllers. For more information, see Experion PKS R210 > Installation and Upgrades > Fault Tolerant Ethernet Bridge Implementation Guide > Installation > FTE Bridge Module.	*Knowledge Builder*	
Read the considerations before configuring FTEB. For more information, see Experion PKS R210 > Installation and Upgrades > Fault Tolerant Ethernet Bridge Implementation Guide > Configuration > Things to Consider Before Configuring FTE Bridge.	*Knowledge Builder*	
Configure the FTEB. For more information, see Experion PKS R210 > Installation and Upgrades > Fault Tolerant Ethernet Bridge Implementation Guide > Configuration > Configuring FTE Bridge.	*Knowledge Builder*	
Check that the modules are running the latest firmware.	371	
Once the FTEB is created and loaded, CM and SCM building can begin. For more information, see the **Control Builder** sections.	*Knowledge Builder*	

Checking that the modules are running the latest firmware

To check that the modules are running the latest firmware:

Step	Action
1	Choose **Start** > **Run**.
2	In the **Open** box, type **`ntools -e -u`**.
3	Click **OK** to launch the Network Tools application.
4	Click **OK** to acknowledge the warning dialog box about monitoring through Engineering Tools.
5	Check that all cards indicate green, which indicates that all modules are running the latest firmware (see 368).

STOP	You have completed this task. Return to the checklist that led to this task.

17.11 Disabling or enabling the ControlNet (PCIC) card

If you are upgrading Experion PKS ACE/SIM-C200, you must disable the ControlNet (PCIC) card to avoid an RSLinx failure during the installation. After completing the upgrade, you need to re-enable the card.

To disable the ControlNet (PCIC) card:

Step	Action
1	On the Windows Desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Click the **Device Manager** item.
3	On the right side of the window, expand the **A-B Virtual Backplane** item.
4	Right-click on **A-B 1784-PCIC(s)** and choose **Disable**.
5	Close the Computer Management screen.

STOP	You have completed this task. Return to the checklist that led to this task.

To enable the ControlNet (PCIC) card:

Step	Action
1	On the Windows Desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Click the **Device Manager** item.
3	On the right side of the window, expand the **A-B Virtual Backplane** item.
4	Right-click on **A-B 1784-PCIC(s)** and choose **Enable**.
5	Close the Computer Management screen.

STOP	You have completed this task. Return to the checklist that led to this task.

18. Installing and setting up associated applications

This section describes how to install and set up associated applications.

To	Go to
Install latest versions of software components.	388
Set up Microsoft Excel Reports.	393
Set up the Experion PKS server as a file server.	396

18.1 Installing FTE, System Management, and other software components

This section describes how to install FTE, System Management, and other software components during an Experion PKS installation or upgrade.

Information in Knowledge Builder can also be found in the *Fault Tolerant Ethernet Installation and Service Guide* and the *System Management Configuration Guide*.

All nodes

You must install the following System Management components on all nodes, including servers, clients, ACE nodes, and SIM-C200 nodes.

Task	Go to	Done?
Install Workstation Security package.	392	
Install System Management Display or Runtime. • See the "Common Component 2XX/RXX Installation" section of the *Common Component CD SCN* for the latest considerations.		
• For installation instructions, see Experion PKS R210 > Configuration > System Management Configuration Guide > 3. Installing System Management Tools.	*Knowledge Builder*	
• After installing the software components, see the *Common Component CD SCN* to identify **if** patches must be installed for these software components.		

FTE

FTE is an optional, licensed component. Only install FTE if you have licensed this feature and you have the FTE hardware.

Task	Go to	Done?
Install Fault tolerant Ethernet (FTE). • See the Common Component CD SCN for latest installation considerations. • **For clean installations only:** See Experion PKS R210 > Installation and Upgrades > Fault Tolerant Ethernet Installation and Service Guide > 4. FTE Software Installation and Configuration. • **For upgrades only:** See Experion PKS R210 > Installation and Upgrades > Fault Tolerant Ethernet Installation and Service Guide > 5. Removing and Upgrading FTE Software. • After installing the software components, see the Common Component SCN to identify **if** patches must be installed for these software components.	*Knowledge Builder*	

Server nodes

In addition to the System Management components listed in the "All nodes" section, you should also install the following System Management components on some servers. See the Installation Considerations for System Events Server, System Performance Server, and SNMP Monitor in the *Common Component CD SCN* for installation guidelines.

Task	Go to	Done?
Install System Event Server. For more information, see: • *Common Component CD SCN* Installation Considerations for System Event Server. • For installation instructions, see Experion PKS R210 > Configuration > System Management Configuration Guide > 7.3 Installing and Configuring System Event Server. • After installing the software components, see the *Common Component SCN* to identify **if** patches must be installed for these software components.	*Knowledge Builder*	
Install System Performance Server. For more information, see: • *Common Component CD SCN* Installation Considerations for System Performance Server. • For installation instructions, see Experion PKS R210 > Configuration > System Management Configuration Guide > 9.2 Installing SPS *and* 9.3 Configuring SPS on Experion PKS Server or ESVT. • After installing the software components, see the *Common Component CD SCN* to identify **if** patches must be installed for these software components.	*Knowledge Builder*	

Task	Go to	Done?
Install SNMP Monitor. For more information, see: • *Common Component CD SCN* Installation Considerations for SNMP Monitor. • For installation instructions, see Experion PKS R210 > Configuration > System Management Configuration Guide > 10.2 Installing the SNMP Monitor *and* 10.3 Configuring the SNMP Monitor. • After installing the software components, see the *Common Component CD SCN* to identify **if** patches must be installed for these software components.	*Knowledge Builder*	

STOP	You have completed this task. Return to the checklist that led to this task.

18.2 Installing the Workstation Security package

The Workstation Security package must be installed on all nodes in an FTE-based Experion PKS system.

Information in Knowledge Builder can also be found in the *Fault Tolerant Ethernet Installation and Service Guide*, FE05 and the *System Management Configuration Guide*, EX01.

Prerequisites

- Experion PKS R210 Common Component CD.

To install the Workstation Security package:

Step	Action
1	Insert the Experion PKS R210 Common Component CD into the CD-ROM drive.
2	On the **Common Component CD Browser** dialog box, click **Workstation Package**. The workstation package is installed.
3	If prompted on the Completed screen, click **Finish**.
4	On the Common Component CD Browser dialog box, click **Exit**, and then click **Yes** to exit.
5	If you are using Experion PKS High Security Policy and you have installed the High Security Policy Domain Controller Package, you must run a script to link the local Security Groups to the Domain Security Groups. Double-click the batch file **LinkDomainGroups.vbs** located in the **C:\Program Files\Honeywell\WksSecurity** folder.

STOP	You have completed this task. Return to the checklist that led to this task.

18.3 Setting Up Microsoft Excel reports

You can set up Microsoft Excel Reports so that it accesses Experion PKS data using either Microsoft Excel Data Exchange (MEDE) or the Experion PKS ODBC driver.

Prerequisites

- You have installed Microsoft Excel (see 213).
- You have installed Experion PKS server components (see 80).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Select one of the following, depending how you want to access data:		
• Microsoft Excel Data Exchange	393	
• Experion PKS ODBC driver	394	
If you have a network printer, configure it.	395	

Setting up Microsoft Excel Data Exchange

Setting up Microsoft Excel Data Exchange (MEDE) involves activating the `mngr` account for use with MEDE.

To set up Microsoft Excel Data Exchange:

Step	Action
1	Log on using the `mngr` account.
2	In Windows Explorer, browse to the `C:\Program Files\Honeywell\Experion PKS\client\xldataex` folder and double-click the `activatemede.vbs` file. The Microsoft Office/Excel Installer may start.

Installing the Experion PKS ODBC client

In order for a client application, such as Microsoft Access, to use the Experion PKS ODBC driver, the ODBC client must be installed on the same computer as the client application.

If the client application is on the Experion PKS server, you do not have to separately install the ODBC client because it is installed as part of the Experion PKS installation. However, if the client application is on another computer, you must install the ODBC client on that computer.

Prerequisites

- Experion PKS R210 media.

Considerations

- After installing the ODBC client, you have to configure the Experion PKS ODBC driver. See the *Server and Client Configuration Guide*.

To install the ODBC client:

Step	Action
1	Insert the Experion PKS R210 media into the appropriate drive.
2	In Windows Explorer, browse to the `server-client` folder on the Experion PKS R210 media drive, and then double-click the `setup.exe` file.
3	On the Experion PKS Server 210 Setup screen, click **Next**.
4	On the Setup Type screen, select **Experion PKS Server Client setup**, and then click **Next**.
5	On the Experion PKS Client Software screen, select **Custom**, and then click **Next**.
6	On the Experion PKS Client Software Client Options screen, select **ODBC Client**, and then click **Next**.
7	On the Experion PKS Client Software Folder screen, click **Next**.
8	On the Ready to Install the Program screen, click **Install**.
	The ODBC Client is installed.
9	On the InstallShield Wizard Complete screen, click **Finish**.
10	On the Experion PKS Client Software Installer Information message, click **Yes** to restart the computer.
	The computer restarts.

Configuring a printer

If you want to print Integrated Microsoft Excel reports to a network printer, you must be logged on using the `mngr` account when configuring that printer. (Printers configured using other accounts cannot be used because the connection to the network print queue will not always be visible to other accounts on the same computer.)

STOP	You have completed this task. Return to the checklist that led to this task.

18.4 Setting up a file server

A file server allows other computers to share its files over a network. Experion PKS uses the file-sharing capabilities of the Microsoft Windows Network.

Experion PKS uses a file server to store displays and Quick Builder projects.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Set up the folder as a shared folder.	396	
On each computer that needs access to the shared folder, assign a drive letter. In the case of Station, specify the location of the shared folder. For details, see the *Server and Client Configuration* Guide.	397	

Setting up a shared folder

To set up a shared folder:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	In Windows Explorer, right-click the folder you want to share and choose **Sharing**.
3	Click **Share this folder**.
4	Change the **Share Name** if you need a different one.
5	Set the maximum number of users that can simultaneously access the folder. (See your System Administrator for an estimate of the anticipated number of users logging on at the server at any one time.)

Step	Action
6	Set the permissions to determine which users are able to access the shared folder. To set the permissions: a) Click **Permissions**. b) Click **Add** or **Remove** to set which users are able to access the folder. c) In the Permissions area, in the Allow column make sure that **Read** is the only option selected. d) Click **Apply** and then click **OK** to close the dialog box.
7	Click **Apply** again, click **OK** to share the folder, and then close the dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

Assigning a drive letter on a client computer to a shared folder

In order for a client computer to access to files in a shared folder, you must assign a drive letter to the shared folder.

To assign a drive letter on a Windows 2000 client computer:

Step	Action
1	In Windows Explorer, choose **Tools** > **Map Network Drive**. The Map Network Drive dialog box appears.
2	In the **Drive** list, click an unassigned letter.
3	Click **Browse** and browse to the shared folder and click **OK**.
4	Click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

18.5 Installing Microsoft Internet Information Server

This section describes how to install the Microsoft Internet Information Server (IIS) components.

Prerequisites

- Windows 2000 Server or NT5Plus Server CD.

To install Microsoft Internet Information Server:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel** and then double-click the **Add/Remove Programs** icon.
2	Click the **Add/Remove Windows Components** icon on the left side of the screen. There may be a delay of up to one minute.
3	On the Windows Components screen, select the **Internet Information Services (IIS)** option and then click **Details**.
4	Clear all options except those listed below: • Common Files • Internet Information Services Snap-In
5	For Event Archiving, select the **World Wide Web Server** option. For Alarm Paging, select the **SMTP Service** option.
6	Click **OK**.
7	Insert the Windows 2000 Server or NT5Plus Server CD in the CD-ROM drive.
8	Click **Next**.
9	If you are asked to select a configuration mode for Windows Terminal Services, select your current mode, and then click **Next**.
10	Restart the computer.
11	After the computer has restarted, reapply Windows 2000 Service Pack 4.

STOP	You have completed this task. Return to the checklist that led to this task.

18.6 Configuring IIS for Event Archiving displays

This section describes how to enable the Event Archiving display by configuring IIS.

To configure IIS for Event Archiving displays:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel** and then double-click the **Administrative Tools** icon.
2	In the Administrative Tools window, double-click the **Internet Services Manager** icon.
3	On the Internet Information Services window, expand the tree displaying the computer name.
4	Select **Default Web Site** and then choose **Action** > **New** > **Virtual Directory** from the Window's menu.
5	On the Welcome screen, click **Next**.
6	On the Virtual Directory Alias screen, type **`eventmanagement`** in the **Alias** box and then click **Next**.
7	On the Web Site Content Directory screen, set the directory to `C:\Program Files\Honeywell\Experion PKS\server\evtarch\eventmanagement` and then click **Next**.
8	On the Access Permissions screen, ensure the **Read** option is selected and clear the remaining options, and then click **Next**.
9	Click Finish.
10	Close the Internet Information Services window.

STOP	You have completed this task. Return to the checklist that led to this task.

18.7 Securing IIS using the IIS Lockdown Tool

This section describes how to secure IIS by using the IIS Lockdown Tool. This tool is available from the Microsoft website, at the following URL:

```
http://www.microsoft.com/downloads/details.aspx?FamilyID=dde9efc0-bb30-47eb-9a61-fd755d23cdec&DisplayLang=en
```

To secure IIS using the IIS Lockdown Tool:

Step	Action
1	Download the IIS Lockdown Tool from the Microsoft website, and save the executable file in a temporary file location, such as C:\Temp.
2	In Windows Explorer, locate the iislockd.exe file in the temporary file location, and then double-click on it.
3	On the Welcome screen, click Next.
4	On the License agreement screen, click **I Agree** and then click **Next**.
5	On the Select Server Template screen, click **Other (Server that does not match any of the listed roles)** and then click **Next**.
6	On the Internet Services screen, do the following: • For Event Archiving, select **Web service (HTTP)**. • For Alarm Paging, select **E-mail service (SMTP)**.
7	Clear the remaining options, including the **Remove unselected services** option, and then click **Next**.
8	On the Script Maps screen, select all options, and then click **Next**.
9	On the Additional Security screen, select all options, and then click **Next**.
10	On the URLScan screen, select the Install **URLScan filter on the server** option, and then click **Next**.
11	On the Ready to Apply Settings screen, click **Next**. The Lockdown Tool applies the settings.
12	When the wizard finishes applying the security settings, click **Next**.
13	On the completion screen, click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

19. Setting up a third-party OPC client or server

This section describes how to set up a third-party OPC client or third-party OPC server on a remote computer to communicate with an Experion PKS server.

ATTENTION

If you are installing the third-party OPC software on an Experion PKS server, follow the instructions supplied by the manufacturer; there are no additional configuration steps required. Additional configuration is only required when you are installing third-party OPC software on a remote computer.

If you are installing third-party OPC software on a remote computer, follow the appropriate instructions for your installation.

To install a third-party	Go to
OPC client	404
OPC server	406

19.1 Installing a remote third-party OPC client

This section describes the steps to install a third-party OPC client on a remote computer.

Prerequisites

- You have completed the site specification form (see 24).
- The relevant installation media, license, and documentation for the third-party OPC software.
- Experion PKS R210 media.
- You must be logged on to the computer using a Windows account with local administrator rights.

Considerations

- For more information about OPC, see the "Configuring OPC" section in the *Server and Client Configuration Guide* in Knowledge Builder.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install the third-party OPC client software on the remote computer using the instructions supplied by the manufacturer.		
Install the Experion PKS OPC Server Connect package on the remote computer.	408	
Create the Windows mngr account on the computer where you installed the third-party OPC client.	409	

Task	Go to	Done?
If the Windows account that the third-party OPC client runs under is unknown to the Experion PKS server, create that Windows account on the server. The Windows account will be unknown to the Experion PKS server in any of the following situations: • The Windows account is a workgroup account. • If the computers are on the same domain, however, the Windows account that the third-party OPC client runs under is local to the remote computer, rather than a domain account. • If the computers are on different domains.	410	
Configure the Experion PKS OPC server's DCOM settings to grant access to the Windows account that the third-party OPC client runs under.	412	
Specify the third-party OPC client's read/write access.	414	
If the third-party OPC client connects with redundant Experion PKS servers, install Redirection Manager.	416	

19.2 Installing a remote third-party OPC server

This section describes the steps to install a third-party OPC server on a remote computer.

Prerequisites

- You have completed the site specification form (see 24).
- The relevant installation media, license, and documentation for the third-party OPC software.
- You must be logged on to the computer using a Windows account with local administrator rights.

Considerations

- For more information about OPC, see the "Configuring OPC" section in the *Server and Client Configuration Guide* in Knowledge Builder.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install the third-party OPC server software on the remote computer using the instructions supplied by the manufacturer.		
Create a Windows mngr account on the computer where you installed the third-party OPC server.	409	

Task	Go to	Done?
If the Windows account that the third-party OPC server runs under is unknown to the Experion PKS server, create that Windows account on the server. The Windows account will be unknown to the Experion PKS server in any of the following situations: • The account is a workgroup account. • If the computers are on the same domain, however, the Windows account that the third-party OPC server runs under is local to the remote computer, rather than a domain account. • If the computers are on different domains.	410	
Configure the third-party OPC server's DCOM settings to grant access to the Windows mngr account.	413	

19.3 Installing the OPC Server Connect package

This section describes how to install the OPC Server Connect package on a remote computer.

To install the OPC Server Connect package:

Step	Action
1	Insert the Experion PKS R210 media into the appropriate drive.
2	In Windows Explorer, browse to the `server-client` folder on the Experion PKS R210 media drive, and then double-click the `setup.exe` file.
3	On the Experion PKS Server 210 Setup screen, click **Next**.
4	On the Setup Type screen, select **Experion PKS Server Client setup**, and then click **Next**.
5	On the Experion PKS Client Software screen, select **Custom**, and then click **Next**.
6	On the Experion PKS Client Software Client Options screen, select **OPC Server Connect**, and then click **Next**.
7	On the Experion PKS Client Software Folder screen, click **Next**.
8	On the Ready to Install the Program screen, click **Install**. The OPC Server Package is installed.
9	On the InstallShield Wizard Complete screen, click **Finish**.
10	On the Experion PKS Client Software Installer Information message, click **Yes** to restart the computer. The computer restarts.

STOP	You have completed this task. Return to the checklist that led to this task.

19.4 Creating the Windows mngr account

This section describes how to create the Windows mngr account.

To create the Windows mngr account:

Step	Action
1	On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Expand the **System Tools** item and then expand the **Local Users and Groups** item.
3	Click **Users**.
4	Choose **Action** > **New User** to open the **New User** dialog box.
5	In the **User Name** box, type **`mngr`**.
6	In the **Full Name** box, type **`Experion PKS Server Manager`**.
7	In the Password and Confirm Password boxes, type the password for this user, as specified in the site specification form. The Windows mngr account password must be the same on all computers.
8	Clear the **User must change password at next logon** check box and then select the **Password never expires** check box.
9	Click **Create** to add the account.
10	Close the **Computer Management** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

19.5 Creating the third-party OPC Windows account

This section describes how to create the Windows account that the third-party OPC software runs under on another computer.

Prerequisites

- The name and password of the Windows account that the third-party OPC software runs under, as specified on the site specification form.

To create the third-party OPC Windows account:

Step	Action
1	On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Expand the **System Tools** item and then expand the **Local Users and Groups** item.
3	Click **Users**.
4	Choose **Action** > **New User** to open the **New User** dialog box.
5	In the **User Name** box, type the Windows account that the third-party OPC software runs under.
6	In the **Full Name** box, type a meaningful name for this account.
7	In the Password and Confirm Password boxes, type the password for this account. The Windows account password must be the same on all computers.
8	Clear the **User must change password at next logon** check box and then select the **Password never expires** check box.
9	Click **Create** to add the account.
10	In the **Local Users and Groups** item, click **Groups**.
11	Double-click the **Honeywell Administrators** group to the display the **Honeywell Administrators Properties** dialog box.
12	Click **Add** to display the **Select Users or Groups** dialog box.
13	Click the name of the Windows account you have created and then click **Add**.

Step	Action
14	Click **OK**.
15	Click **OK** to close the **Honeywell Administrators Properties** dialog box.
16	Close the **Computer Management** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

19.6 Configuring DCOM on the Experion PKS OPC server

This section describes how to configure the DCOM settings on the Experion PKS OPC server to grant access to the Windows account that the third-party OPC client runs under.

To configure DCOM on an Experion PKS server:

Step	Action
1	Choose **Start** > **Run** to display the **Run** dialog box.
2	Type **`dcomcnfg`** and click **OK** to display the **Distributed COM Configuration Properties** dialog box.
3	In the **Applications** list, click **Experion PKS OPC Server** and then click **Properties**.
4	Click the **Security** tab.
5	Click **Use custom access permissions** and then click **Edit**.
6	Click **Add** to display the **Add Users and Groups** dialog box.
7	Click **Show Users**.
8	If the Experion PKS server and the third-party OPC client computer are on different Windows domains, in the **List Names From** list, select the name of the Experion PKS server.
9	In the **Names** list, click the name of the Windows account that the third-party OPC client is running under.
10	Click **Add**.
11	Click **OK**.
12	Click **OK** to close the **Registry Value Permissions** dialog box.
13	Click **User custom launch permissions** and then click **Edit**.
14	Repeat steps 6 to 12 to add the Windows account that the third-party OPC client is running under.
15	Close the **Distributed COM Configuration Properties** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

19.7 Configuring DCOM on a third-party OPC server

This section describes how to configure the DCOM settings on a third-party OPC server to grant access to the Windows mngr account.

To configure DCOM on a third-party OPC server:

Step	Action
1	Choose **Start** > **Run** to display the **Run** dialog box.
2	Type **`dcomcnfg`** and click **OK** to display the **Distributed COM Configuration Properties** dialog box.
3	In the **Applications** list, click the name of the third-party OPC server and then click **Properties**.
4	Click the **Security** tab.
5	Click **Use custom access permissions** and then click **Edit**.
6	Click **Add** to display the **Add Users and Groups** dialog box.
7	Click **Show Users**.
8	In the **Names** list, click **mngr**.
9	Click **Add**.
10	Click **OK**.
11	Click **OK** to close the **Registry Value Permissions** dialog box.
12	Click **User custom launch permissions** and then click **Edit**.
13	Repeat steps 6 to 11 to add the Windows mngr account.
14	Close the **Distributed COM Configuration Properties** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

19.8 Controlling read/write access

By default, any OPC client connected to the Experion PKS OPC data access server has full read and write access to the Experion PKS point database. It is possible to deny OPC clients read/write access to the Experion PKS point database based on the Windows account that the third-party OPC client runs under.

To deny read/write access for a Windows account:

Step	Action
1	On the Experion PKS server, use Windows Explorer to locate the `XPKSOPCRead` and `XPKSOPCWrite` files in the `\Hwiac\Security` folder.
2	For each file: a) Right-click it and choose **Properties** to display the **Properties** dialog box. b) Click the **Security** tab. c) Click **Add** to display the **Select Users of Groups** dialog box. d) Click the Windows account name that you want to deny access and then click **Add**. e) Click **OK**. f) In the **Permissions** list, select all check boxes displayed in the **Deny** column. g) Click **OK**. It is not possible to deny read access to a Windows account while giving write access to the same Windows account. If a Windows account is denied read access, any third-party OPC clients that run under that Windows account are denied access to the Experion PKS point database. It is possible, however, to only deny write access to a Windows account.

ATTENTION

For upgraded Experion PKS servers, there may be existing files in the `\Hwiac\Security` folder controlling read/write access. On these servers, the file names are specified by the `OPCRead` and `OPCWrite` registry values located in the `HKEY_LOCAL_MACHINES\Software\Honeywell\MyTPSDomain\HciComponents\Experion PKS OPC Server hostname\MethodSecurity` key, where hostname is the name of the Experion PKS server.

STOP	You have completed this task. Return to the checklist that led to this task.

19.9 Installing Redirection Manager for third-party OPC clients

You need to install Redirection Manager for third-party OPC clients to communicate with redundant Experion PKS servers. You also need to install and configure components on the Experion PKS OPC server computers.

This section describes the high-level tasks you must complete to install and configure the Redirection Manager and System Management software. Most of the tasks listed below are described in the following guides:

- *Redirection Manager User's Guide*
- *System Management Configuration Guide*

Tasks

Select the appropriate installation.

Installation type	Go to
Domain environment.	416
Workgroup environment.	418

Installing Redirection Manager in a domain environment

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install the TPS Domain/Console Configuration Tool on the domain controller. See the "System Management Installation - Domain Controller" topic in the "Installing System Management Tools" section of the *System Management Configuration Guide*.		

Task	Go to	Done?
Add an organizational unit (OU) on the domain controller and set the type to TPS Domain, using the TPS Domain/Console Configuration Tool. See the “Creating a TPS Domain or Console” section of the *System Management Configuration Guide*.		
Install the System Management Runtime on each Experion PKS server (OPC server). See the *System Management Configuration Guide*.		
Install the Redirection Manager components on each OPC client computer. See the “Installing Redirection Manager Components” topic in the “Installing Redirection Manager Components” section of the *Redirection Manager User’s Guide*.		
Create the Windows mngr account on each OPC client computer and set the password to be the same as the Windows mngr account password on the Experion PKS server.	409	
Install the System Management Status Display on the nodes from which you want to view the status of the managed components. See the “System Management Installation - Workstation” topic in the “Installing System Management Tools” section of the *System Management Configuration Guide*.		
Add each Experion PKS server and OPC client computer to the Windows domain managed by the domain controller.	200	
Move each server and OPC client computer to the new organizational unit (OU) on the domain controller.		
Change the Primary DNS on each server and OPC client computer to the domain controller.		

Task	Go to	Done?
Add the Node Administration snap-in to the Microsoft Management Console (MMC) on each computer that you have installed the System Management Status Display. See the “Adding the Node Administration Span-In to the MMC” topic in the “Configuring a System Management Display” section of the *System Management Configuration Guide*.		
Verify that the server and OPC client computers appear in the System Management display. Using the System Management Status Display, you can view the RDM status and identify which Experion PKS server is the primary server. See the “Managing Organizational Units and Computers” topic in the “Configuring a System Management Display” section of the *System Management Configuration Guide*.		
Configure the Redirection Manager on each OPC client computer. See the “Configuring Redirection Manager” section of the *Redirection Manager User’s Guide*.		

STOP	You have completed this task. Return to the checklist that led to this task.

Installing Redirection Manager in a workgroup environment

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Add each computer that is to be a managed node to the same Windows workgroup.		

Task	Go to	Done?
Install the System Management Runtime on each of these computers. See the *System Management Configuration Guide*.		
Install the System Management Status Display on the nodes from which you want to view the status of the managed components. See the “System Management Installation - Workstation” topic in the “Installing System Management Tools” section of the *System Management Configuration Guide*.		
Install the Redirection Manager components on each OPC client computer. See the “Installing Redirection Manager Components” topic in the “Installing Redirection Manager Components” section of the *Redirection Manager User’s Guide*.		
Create the Windows mngr account on each OPC client computer and set the password to be the same as the Windows mngr account password on the Experion PKS server.	409	
Add the Node Administration snap-in to the Microsoft Management Console (MMC) on each computer that you have installed the System Management Status Display. See the “Adding the Node Administration Span-In to the MMC” topic in the “Configuring a System Management Display” section of the *System Management Configuration Guide*.		

Task	Go to	Done?
Verify that the server and OPC client computers appear in the System Management display. Using the System Management Status Display, you can view the RDM status and identify which Experion PKS server is the primary server. See the “Managing Organizational Units and Computers” topic in the “Configuring a System Management Display” section of the *System Management Configuration Guide*.		
Configure the Redirection Manager on each OPC client computer. See the “Configuring Redirection Manager” section of the *Redirection Manager User’s Guide*.		

STOP	You have completed this task. Return to the checklist that led to this task.

19.10 Specifying the server name in client applications

When an application running on a client computer requests data from the server, it must specify the appropriate server name.

In a redundant system, client computers see the two server names, for example: `hsserva0` and `hsservb0`. Similarly, in a dual network, redundant system, client computers see four server names, for example: `hsserva0`, `hsserva1`, `hsservb0`, and `hsservb1`.

When to use the base name

Use the *base name* (for example, `hsserv`) when specifying the server name in the following applications:

- An application (for Network API).
- A workbook (for Microsoft Excel Data Exchange).
- ODBC client application (for ODBC clients).
- Console Station.

ATTENTION

For non-redundant Experion PKS servers, the server name is the base name.

When to use the full name of the primary server

Use the full name of the primary server (for example, `hsserva0`) when specifying the server name in the following applications:

- Quick Builder.
- Third-party OPC client communicating with an OPC server on the Experion PKS server.

STOP	You have completed this task. Return to the checklist that led to this task.

20. Changing computer names

This section describes how to change computer names. All Experion PKS servers, Console Stations, and client computers require unique computer names and IP addresses. If your Experion PKS system includes multiple servers and/or clients, you may need to change computer names and IP addresses to ensure unique identities. You may also need to change the name of computers when adding Experion PKS server redundancy.

There are separate procedures depending on the computer type.

Computer type	Go to
Client computer, including Console Extension Station and Flex Station.	424
Console Station.	425

20.1 Changing the computer name for client computers

ATTENTION

These instructions are for client computers.

Tasks

To change the name of a client computer, complete the tasks in the following order.

Task	Go to	Done?
Change the computer name.	427	
Update computer's `hosts` file.	429	

20.2 Changing the computer name for Console Stations

CAUTION	Ensure your process is “Off Control” before you change the computer name.

Tasks

To change the name of Console Stations, complete the tasks in the following order.

Task	Go to	Done?
Backup each server, including the Experion PKS database and the Windows registry. For more information, see Experion PKS R210 > Administration and Startup Guide > Backups and recovery.	*Knowledge Builder*	
Stop the Console Station and unload the database.	432	
Change the computer name.	427	
Stop the Experion PKS server services.	436	
Stop the Console Station and unload the database.	432	
Update the Console Station computer name configuration.	428	
Update the `hosts` file on all computers in the Experion PKS system.	429	
Change the computer name in the `.stn` files.		
In a Station that is connected to the Experion PKS server that the Console Station is registered with, call up the Console Station Configuration Summary display and change the network name for the Console Station. For more information, see the “Configuring Console Station” section in the *Server and Client Configuration Guide*.	*Knowledge Builder*	

20.3 Changing Experion PKS servers on Console Stations

This section describes how to change the Experion PKS servers that Console Stations connect to.

Tasks

Task	Go to	Done?
In a Station that is connected to the Experion PKS server that the Console Station is registered with, call up the Console Station Configuration Summary display and remove the entry for that Console Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Station > Configuring a Console Station > Deleting a Console Station.	*Knowledge Builder*	
In a Station that is connected to the Experion PKS server that the Console Station is to be registered with, call up the Console Station Configuration Summary display and add an entry for the Console Station. For more information, see Experion PKS R210 > Configuration > Server and Client Configuration Guide > Configuring Console Station > Configuring a Console Station > Configuring the connection to the Console Station from the server.	*Knowledge Builder*	
Log on to the Console Station using a Windows account with Honeywell Administrator rights.		
Change the Experion PKS Console Station status to database unloaded.	434	
Run the name change application.	430	
Restart the Console Station computer.		

20.4 Changing the computer name

Considerations

- You understand computer name restrictions (see 53).
- If you are changing the name of one computer used in a redundant server pair, you must change the name of each computer used in the redundant pair, that is, you must change the computer name of the primary server and the backup server.
- After changing the name of a computer, you will need to update the hosts file on every computer used in the Experion PKS system. In addition, all station configuration files need to be updated to reflect the Experion PKS server name change.
- If you have a redundant server pair, you need to complete these steps on *both* servers.

To change the computer name:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Settings** > **Control Panel** and then double-click **System**.
3	Click the **Network Identification** tab.
4	Click **Properties**.
5	In the **Computer Name box**, type the new computer name and then click **OK**.
6	Click **OK** in the message dialog box displayed.
7	Click **OK** in the **System Properties** dialog box.
8	Click **Yes** to restart the computer. After the computer restarts, an unable to locate dll event message may be displayed. This message can be ignored. Click **OK** to continue.

STOP	You have completed this task. Return to the checklist that led to this task.

20.5 Updating the Console Station computer name configuration

To update the Console Station computer name configuration:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Programs** > **Accessories** > **Command Prompt**.
3	Change directory to the Experion PKS run directory. For example, type: `cd C:\Program Files\Honeywell\Experion PKS\ server\run`
4	Type the following command: `cscript postrename.js <this_computers_old_name>` where: `<this_computers_old_name>` is the *former* name of the Console Station computer.
5	Restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

20.6 Updating the hosts File

Considerations

- A copy of the updated hosts file must reside on all computers on the Experion PKS R210 system.

To update the hosts file:

Step	Action
1	In a text editor application, such as Notepad, open the `hosts` file. The `hosts` file is located in `%SystemRoot%\system32\drivers\etc\`.
2	Locate each old computer name and change it to the new computer name. If the computer name is appended with the number 0 or 1, retain these numbers and the replace the remainder of the computer name.
3	Save the changes to the `hosts` file.
4	Copy the updated hosts file to the following location in each server in your Experion PKS system `%SystemRoot%\system32\drivers\etc\`.

STOP	You have completed this task. Return to the checklist that led to this task.

20.7 Running the name change application

This section describes how to run the name change application on a Console Station that changes the name of the Experion PKS servers.

To run the name change application:

Step	Action
1	Open a Command window.
2	At the prompt, type the following, including the " characters: "C:\Program Files\Honeywell\Experion PKS\utilities\namechg\namechg.exe" The Name Change application appears.
3	If you have a non-redundant Experion PKS server, select **Non-Redundant**.
4	For redundant servers, type the base name of the Experion PKS server (see 421). For non-redundant servers, type the full server name of the Experion PKS server.
5	Click **Perform Change**.

STOP	You have completed this task. Return to the checklist that led to this task.

21. Supplementary tasks

This section contains supplementary tasks that are either part of an installation or upgrade checklist, or can be completed, if required, after an installation.

To	Go to
Start or stop an Experion PKS server.	432
Start or stop an Experion PKS Console Station.	434
Stop Experion PKS services.	436
Change something after installation, such as the license or history archive folder.	446
Configure the database setup.	450
Synchronize the date and time.	456
Change the Experion PKS server on Console Stations.	426
Repair/Replace Experion PKS components.	458
Changing the Experion PKS Windows account passwords.	467
Updating Dell Open Manage software.	469

21.1 Starting and stopping an Experion PKS server

This section describes how to stop and start an Experion PKS server.

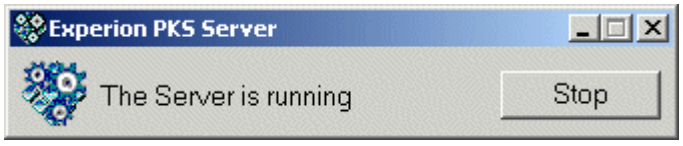
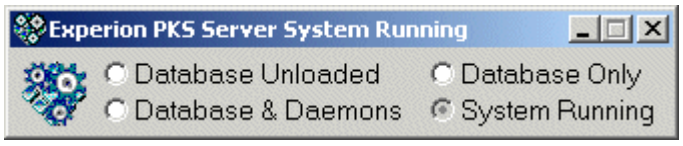
Tasks

Select the appropriate task.

To	Go to
Stop an Experion PKS server.	432
Start an Experion PKS server.	433

To stop the Experion PKS server:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Server** > **Start-Stop Experion PKS Server**. The **Experion PKS Server** dialog box appears.

Mode	
Simple	
Full	

2	If the **Experion PKS Server** dialog box appears in simple mode, click the icon to the left of the title bar, and choose **Advanced** > **Full**.

Step	Action
3	There are three stop modes available in Full mode; **Database Unloaded**, **Database & Daemons**, and **Database Only**. Click the stop mode specified in the task or step that led you to this task.
4	If prompted, click **Yes** to confirm the action. Wait for the server to change its state. It may take several minutes for the Experion PKS server to stop.

STOP	You have completed this task. Return to the checklist that led to this task.

To start the Experion PKS server:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Server** > **Start-Stop Experion PKS Server**. The **Experion PKS Server** dialog box appears.
2	If the **Experion PKS Server** dialog box appears in simple mode, click the icon to the left of the title bar, and choose **Advanced** > **Full**.
3	To start the Experion PKS server, click **System Running**.
4	If prompted, click **Yes** to confirm the action. Wait for the server to change its state. It may take several minutes for the Experion PKS server to start.

STOP	You have completed this task. Return to the checklist that led to this task.

21.2 Starting and stopping an Experion PKS Console Station

This section describes how to stop and start an Experion PKS Console Station.

Tasks

Select the appropriate task.

To	Go to
Stop an Experion PKS Console Station.	434
Start an Experion PKS Console Station.	435

To stop the Experion PKS Console Station:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Console Station** > **Start-Stop Experion PKS Console Station**. The **Experion PKS Console Station** dialog box appears.

Mode	
Simple	
Full	

Step	Action
2	If the **Experion PKS Console Station** dialog box appears in simple mode, click the icon to the left of the title bar, and choose **Advanced** > **Full**.
3	There are three stop modes available in Full mode; **Database Unloaded**, **Database & Daemons**, and **Database Only**. Click the stop mode specified in the task or step that led you to this task.
4	If prompted, click **Yes** to confirm the action. Wait for the Console Station to change its state, which may take several minutes.

STOP	You have completed this task. Return to the checklist that led to this task.

To start the Experion PKS Console Station:

Step	Action
1	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Console Station** > **Start-Stop Experion PKS Console Station**. The **Experion PKS Console Station** dialog box appears.
2	If the **Experion PKS Console Station** dialog box appears in simple mode, click the icon to the left of the title bar, and choose **Advanced** > **Full**.
3	To start the Experion PKS Console Station, click **System Running**.
4	If prompted, click **Yes** to confirm the action. Wait for the Console Station to change its state, which may take several minutes.

STOP	You have completed this task. Return to the checklist that led to this task.

21.3 Stopping Experion PKS services

This section describes how to stop the Experion PKS services on a computer.

ATTENTION

Depending on your system configuration, some of the Experion PKS services identified in this section may not be running or available. If these services are not available, you can skip the specific task and continue to stop the remaining services.

Using the start/stop services utility

Only use this utility on an Experion PKS server.

Considerations

- The start/stop utility can be accessed by the following methods:
  - In the `tools` folder on the Experion PKS R210 Application DVD, double-click the `ssservices.exe` file.
  - If you have installed Experion PKS R210, in the `C:\Program Files\Honeywell\Experion PKS\Migrate` folder, double-click the `ssservices.exe` file.
  - Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Engineering Tools** > **Eng Tools Services Control Panel**.

To use the start/stop services utility:

Step	Action
1	Open the start/stop utility application. See the previous “Considerations” section for more information on how to start this utility.
2	Click **Stop all including SQL**.
3	Click **OK**. A message displays the success of stopping the services.

Displaying the Computer Management services console

To display the Computer Management Services Console:

Step	Action
1	On the Desktop, right-click the **My Computer** icon and choose **Manage**.
2	Expand the **Services and Applications** item.
3	Click the **Services** item. The services are displayed on the right pane of the console. Most Experion PKS-related process names are prefixed with “Experion PKS ”.

Stopping Experion PKS server services

This section only applies to Experion PKS servers.

To stop the Experion PKS server services:

Step	Action
1	Display the Services Console (see 437).
2	To stop a service, right-click the service name and then choose **Stop**. If the **Stop** command is not available, the service has already stopped.
3	Stop each of the following services, if present on your computer, in this order: a) Experion PKS Server Daemon. Stopping this service also stops the Experion PKS Server Operator Management, Experion PKS Server System, and Experion PKS OPC Integrator, if present. b) Experion PKS Server Database. Stopping this service also stops the Experion PKS Server Replication and Experion PKS Server Desktop services. c) Experion PKS Server Logger.

Stopping Experion PKS Console Station services

This section only applies to Experion PKS Console Stations.

To stop the Experion PKS Console Station services:

Step	Action
1	Display the Services Console (see 437).
2	To stop a service, right-click the service name and then choose **Stop**. If the **Stop** command is not available, the service has already stopped.
3	Stop each of the following services, if present on your computer, in this order: a) Experion PKS Console Station Daemon. Stopping this service also stops the Experion PKS Console Station Operator Management, Experion PKS Console Station System, and Experion PKS OPC Integrator, if present. b) Experion PKS Console Station Database. Stopping this service also stops the Experion PKS Console Station Replication and Experion PKS Console Station Desktop services. c) Experion PKS Console Station Logger.

Stopping System Management services

To stop the System Management services:

Step	Action
1	Choose **Start** > **Run** and then type **stopsmservices** and then click **OK**. A Command window appears while the System Management services are set to disabled and then stopped. System Management services are stopped when the Command window closes.

Stopping the Sign-On Manager

To stop the Sign-On Manager:

Step	Action
1	Display the Services Console (see 437).
2	Right-click the **Signon Manager** service and then choose **Stop**. If the **Stop** command is not available, the service has already stopped.

Stopping other Experion PKS services

To stop other Experion PKS services:

Step	Action
1	Display the Services Console (see 437).
2	Right-click **Experion PKS GCL Name Server** service and then choose **Stop**. If the **Stop** command is not available, the service has already stopped. Stopping this service also stops the Experion PKS Control Data Access Server service, if this service is present and currently running.
3	Click **Yes** to stop all dependant services.

Stopping RSLinx

Considerations

- The system tray is the area on the Windows operating system task bar displaying the time. To left side of the time, there are one or more icons displayed.

To stop RSLinx:

Step	Action
1	Click the RSLinx icon in the system tray to display the RSLinx application.
2	Choose **File** > **Exit and Shutdown**.
3	When the “Shutdown RSLinx anyway?” message dialog box appears, click **Yes**.

Stopping the XLNet daemon

To stop the XLNet Daemon:

Step	Action
1	Display the Services Console (see 437).
2	Right-click the **XLNET Daemon** service and then choose **Stop**. If the **Stop** command is not available, the service has already stopped.

Stopping the HART multiplexer

Considerations

- The system tray is the area on the Windows operating system task bar displaying the time. To left side of the time, there are one or more icons displayed.

To stop the HART Multiplexer:

Step	Action
1	Right-click on the Experion Software Mux icon in the system tray.
2	Choose **Software Multiplexer Service - Stop**.
3	Right-click on the Experion Software Mux icon in the system tray.
4	Choose **Software Multiplexer Service - Exit**.

STOP	You have completed this task. Return to the checklist that led to this task.

21.4 Setting Experion PKS services to manual startup

This section describes how to set the Experion PKS services to manual startup.

To set the Experion PKS services to manual startup:

Step	Action
1	Display the Services Console (see 437).
2	Right-click the service name and choose **Properties**.
3	Click **Manual** in the **Startup type** list.
4	Click **OK**.

Step	Action
5	Set all services starting with Experion PKS, to manual startup. Below is a comprehensive list of these services: • Experion PKS Configuration Studio Information Service. • Experion PKS BOOTP Server. • Experion PKS CDA-SP Service. • Experion PKS Control Data Access Server. • Experion PKS DTLR Server. • Experion PKS ER Server. • Experion PKS GCL Name Server. • Experion PKS Server Daemon. • Experion PKS Console Station Daemon. • Experion PKS Server Database. • Experion PKS Console Station Database. • Experion PKS Server Desktop. • Experion PKS Console Station Desktop. • Experion PKS Server Logger. • Experion PKS Console Station Logger. • Experion PKS Server Operator Management. • Experion PKS Console Station Operator Management. • Experion PKS Server Replication. • Experion PKS Console Station Replication. • Experion PKS Server System. • Experion PKS Console Station System. • Experion PKS System Repository.

Step	Action
6	Set the following services, if present, to Manual startup. • RSLinx. • Signon Manager. • XLNET Daemon.
STOP	You have completed this task. Return to the checklist that led to this task.

21.5 Setting Experion PKS services to automatic startup

This section describes how to set the Experion PKS services to automatic startup.

To set the Experion PKS services to automatic startup:

Step	Action
1	Display the Services Console (see 437).
2	Right-click the service name and choose **Properties**.
3	Click **Automatic** in the **Startup type** list.
4	Click **OK**.

Step	Action
5	Set each of the following services, if present/applicable, to automatic startup: • Experion PKS BOOTP Server. • Experion PKS CDA-SP Service. • Experion PKS Control Data Access Server. • Experion PKS DTLR Server. • Experion PKS EMDB Server. • Experion PKS ER Server. • Experion PKS GCL Name Server. • Experion PKS Server Daemon. • Experion PKS Console Station Daemon. • Experion PKS Server Database. • Experion PKS Server Desktop. • Experion PKS Console Station Desktop. • Experion PKS Server Logger. • Experion PKS Console Station Logger. • Experion PKS Server Operator Management. • Experion PKS Console Station Operator Management. • Experion PKS Server Replication. • Experion PKS Console Station Replication. • Experion PKS Server System. • Experion PKS Console Station System. • Experion PKS System Repository. • Signon Manager. • XLNET Daemon.
STOP	You have completed this task. Return to the checklist that led to this task.

21.6 Making changes after installation

To change the	Go to
License.	446
Displays search path.	447
Event archiving folder.	447
History archive folder.	447
History restore folder.	447
Fast history rate.	448
Report paper type.	447
Report font.	447

Changing the Experion PKS license

This section describes how to change the Experion PKS license.

Prerequisites

- The new Experion PKS license.
- You have backed up the database, especially if the database size is being changed.

Considerations

- Some major license changes require you to run the setup program from Experion PKS Base CD. The setup program will notify you if this is the case.
- If you have a redundant server system, you have to perform this procedure on each server.

To change the Experion PKS license:

Step	Action
1	Log on to the server using a Windows account with local administrator rights.
2	Stop the Experion PKS server in the Database Unloaded mode (see 432).
3	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Server** > **Experion PKS Configuration Panel**.
4	Click **View License**.
5	Click **Change License**.
6	Type the new system and authorization numbers.
7	Click **OK**.
8	Click **Close**.
9	Click **OK** to close the **Experion PKS Configuration Panel** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

Changing the displays search path, Event Archiving, History archive, and History restore folders

Considerations

- Changing the folders requires you to stop and restart the Experion PKS server.

To change the folder:

Step	Action
1	Log on to the server using a Windows account with local administrator rights.
2	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Server** > **Experion PKS Configuration Panel**.
3	Click **Edit**.
4	In the appropriate box, type the path to the folder, or click **Browse** and then browse to the location of the folder.

Step	Action
5	Click **OK**.
6	Click **OK** to close the **Experion PKS Configuration Panel** dialog box.
7	Stop the Experion PKS server and unload the database (see 432).
8	Return the Experion PKS server to system running status (see 432).

STOP	You have completed this task. Return to the checklist that led to this task.

Changing the fast history rate, report paper type, or report font

Considerations

- Changing the fast history rate, report paper type, or report font requires you to stop and restart the Experion PKS server.

To change the fast history rate, report paper type, or report font:

Step	Action
1	Log on to the server using a Windows account with local administrator rights.
2	Choose **Start** > **Programs** > **Honeywell Experion PKS** > **Server** > **Experion PKS Configuration Panel**.
3	Click **Edit**.
4	In the appropriate list, click the new value.
5	Click **OK**.
6	Click **OK** to close the **Experion PKS Configuration Panel** dialog box.
7	Stop the Experion PKS server and unload the database (see 432).
8	Return the Experion PKS server to system running status (see 432).

STOP	You have completed this task. Return to the checklist that led to this task.

21.7 Changing from a non-CAB license to a license that includes CAB

This section describes the steps to upgrade from an Experion PKS license without CAB to a license that includes CAB.

To change from a non-CAB license to a license that includes CAB:

Step	Action
1	On the Experion PKS server, enter the details of the new Experion PKS license that includes CAB (see 446).
2	On each client computer to be used for CAB development tasks: a) Uninstall the Experion PKS software (see 603). b) Install the same Experion PKS software. When prompted during the installation on the CAB Developer screen, select **Install** (see 107 or 111).
3	If you want to do CAB remote debugging on an SIM-ACE node, you will need to do the following on each SIM-ACE node: a) Uninstall the ACE software (see 606). b) Install the ACE software. When prompted during the installation on the CAB Developer screen, select **Install** (see 93).

STOP	You have completed this task. Return to the checklist that led to this task.

21.8 Configuring the database setup

After installing Experion PKS, you can adjust the database sizing for history samples and other non-licensed items to meet your system's requirements.

To	Go to
Adjust history retention	450
Adjust sizing for non-licensed items	452

Adjusting History retention

You can adjust history retention periods, including the duration and number of samples, with the **sysbld** utility. For details about this utility, see the *Server and Client Configuration Guide*.

History types

When you configure a point you can choose to store up to three types of history (*standard*, *extended* and *fast*) for each point parameter. The following table describes the type of samples taken for each history type. The default retention period refers to the length of time before old history samples are discarded from the online history files.

You can configure the number of history samples retained after installation. The maximum number of samples that can be collected is 100,000, providing you have enough disk space.

History type	Sample(s) taken	Default retention period	
		Duration	Number of samples
Standard	1-minute snapshot	24 hours	1442
	6-minute average	7 days	1682
	1-hour average	7 days	170
	8-hour average	3 months	281

History type	Sample(s) taken	Default retention period	
		Duration	Number of samples
Extended	24-hour average	1 year	368
	1-hour snapshot	7 days	170
	8-hour snapshot	3 months	281
	24-hour snapshot	1 year	368
Fast History	Snapshots taken at intervals between 1 and 30 seconds (interval specified during installation)	2 hours to 72 hours	8652

The following table lists the default and maximum number of parameters for which history can be recorded.

History type	Default number of point parameters	Maximum number of point parameters
Standard	Equal to the number of points or 2000 (whichever is smaller)	10000
Extended	200	5000
Fast History	100	1000

Calculating disk space requirements for History

The following formula allows you to calculate the disk space requirements for the Experion PKS history files.

$(N1+N2+N3+N4+N5+2)*PS*4+(N6+2)*PF*4+(N7+N8+N9+2)*PE*4$

Part	Description
PS	The number of point parameters that can be assigned to standard history.
PF	The number of point parameters that can be assigned to fast history.
PE	The number of point parameters that can be assigned to extended history.
N1 to *N5*	The number of samples of history retained for each of the standard history intervals.
N6	The number of samples of history retained for the fast history interval.
N7 to *N9*	The number of samples of history retained for the extended history.

Adjusting sizing of non-licensed items

You can adjust the sizing of non-licensed items, so that the sizing meets your needs, with the **sysbld** utility. The following table lists the non-licensed items whose sizing you can adjust. For details about this utility, see the *Server and Client Configuration Guide*.

ATTENTION

Because some of non-licensed items affect disk space and memory requirements, you need to take care when setting their sizes.

Item	Default number	Max number	Additional disk space required/item (kilobytes)
Printer connections	50	50	0
Controller channels	90	99	0
Controllers	100	255	0

Item	Default number	Max number	Additional disk space required/item (kilobytes)
Algorithm blocks	6000	6000	0
Areas	1000	1000	0
Dynamic objects on named displays	300	300	0
Trends	3000	3000	0
Groups	16000	16000	0
Reports	1000	1000	0
Point control schedules	1000	1000	0
Operators	400	1000	0
Concurrent alarms	1000	1000	0
Recipes	500	32767	1
Concurrent messages	1000	1000	0
Concurrent delays	1000	1000	0
Stored delays	2000	32767	0.1
Event Summary	32000	32767[4]	0.25
Number of user files	3	150	User defined
Number of application tasks	80	80	0

[4]The maximum configurable size of the online Event Summary.

Item	Default number	Max number	Additional disk space required/item (kilobytes)
Point lists	2000	2000	0
Sequence of event (SOE) entries	1000	32767	0.25

STOP	You have completed this task. Return to the checklist that led to this task.

21.9 Adding shortcuts manually

This section describes how to manually add shortcuts that may have not been able to be installed during the Experion PKS server installation.

To add the shortcuts manually:

Step	Action
1	Using Windows Explorer, browse to `C:\Program Files\Honeywell\Experion PKS\client\qckbld`.
2	Right-click the `qckbld.exe` file and choose **Copy**.
3	Browse to `C:\Documents and Settings\All Users\Start Menu\Programs\Honeywell Experion PKS\Server`.
4	Choose **Edit** > **Paste Shortcut**.
5	Right-click on the new shortcut and choose **Rename**.
6	Type **`Quick Builder`** and then press ENTER.
7	Browse to `C:\Program Files\Honeywell\Experion PKS\client\qckbld\AddIns`.
8	Right-click the `QBUMBStandalone.exe` file and choose **Copy**.
9	Browse to `C:\Documents and Settings\All Users\Start Menu\Programs\Honeywell Experion PKS\Server`.
10	Choose **Edit** > **Paste Shortcut**.
11	Right-click on the new shortcut and choose **Rename**.
12	Type **`Control Products Wizard`** and then press ENTER.

STOP	You have completed this task. Return to the checklist that led to this task.

21.10 Setting up date and time synchronization

With redundant servers, distributed servers, and Console Stations, you must synchronize the date and time on these computers to ensure that all dates/times associated with events in the database are consistent. In an Experion PKS system, server A is the time source for synchronization.

ATTENTION

If you plan to install System Event Server, all computers in the Experion PKS system, including ACE, SIM-C200, and Flex Stations, must be synchronized with one time source.

Considerations

- If the computers are members of a Windows 2000 domain, the computer can synchronize time automatically with the domain controller.

To set up server A as a time source:

Step	Action
1	On server A, choose **Start** > **Run** and type **cmd** and then click **OK**. This program sets up the server as a time source, and is silent if successful.
2	At the command prompt, type the following: **`cd Program Files\Honeywell\Experion PKS\server\run`** and then press ENTER.
3	Type the following: **`settimesource.vbs`** and then press ENTER.
4	Choose **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Services**.
5	Double-click **Windows Time**.
6	In the **Startup Type** list, click **Automatic**.
7	If the Windows Time service is running, click **Stop**.

Step	Action
8	Click **Start** to start the Windows Time service.
9	Click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

To set up a computer to synchronize with server A:

Step	Action
1	On the computer, choose **Start** > **Run** and type **cmd** and then click **OK**.
2	In the Command window type the following: `net time /setsntp:`*`servera_name`* where *servera_name* is the computer name of server A.
3	Choose **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Services**.
4	Double-click **Windows Time**.
5	In the **Startup Type** list, click **Automatic**.
6	If the Windows Time service is running, click **Stop**.
7	Click **Start** to start the Windows Time service.
8	Click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

21.11 Repairing or replacing Experion PKS components

Replacing the Engineering Tools or SQL Server

Prerequisites

- Experion PKS R210 media.

Considerations

- Repairing or replacing the SQL Server includes replacing the Engineering Tools.

To replace or repair the Engineering Tools or SQL Server:

Step	Action
1	Stop all Experion PKS-related services (see 436).
2	Backup your Engineering Repository database using the DB Admin application.
3	Choose **Start** > **Settings** > **Control Panel**, and then double-click **Add/Remove Programs**.
4	Remove these software components in the following order: a) Control Component Library. b) ActiveX Components Install. c) PSC Engineering Tools. d) PSC System Installer. e) Experion PKS. f) Microsoft SQL Server 2000.
5	When prompted to restart the computer, click **No**.
6	Shutdown and restart the computer.
7	If a cannot find a dll event message appears, click **OK** to continue.
8	Log on to the computer using a Windows account with local administrator rights.
9	Verify that there are no **MSSQLServer** or **SQLServerAgent** services running on the computer (see 437).

Step	Action
10	Insert the Experion PKS R210 Application DVD into the appropriate drive.
11	In Windows Explorer, browse to the drive and double-click the `setup.exe` file.
12	If you are installing Experion PKS for use with process points, click **Experion PKS Server (Process Points)**. If you are installing Experion PKS for use with SCADA points, click **Experion PKS Server (SCADA Points)**.
13	Click **Next**.
14	Click **Yes** to acknowledge the message dialog box.
15	Click **Continue**. Status messages in the SQL Setup Installation Application dialog box indicate the progress of the installation. This application installation can take several minutes to complete.
16	Click **OK** when prompted to restart the computer. Do *not* press any keys or buttons during the shutdown and restart.
17	Log on to the computer using a Windows account with local administrator rights. The SQL Server Service Pack 3 installation begins. Status messages in the SQL Setup Installation Application dialog box display the progress of the installation. The application installation can take several minutes to complete. When the SQL Setup Installation Application dialog box closes, the installation is complete.
18	When prompted, insert the Experion PKS R210 Knowledge Builder CD into the CD-ROM drive.
19	Click **Yes** to continue.
20	Click **Cancel**. Knowledge Builder is already installed and does *not* need to be reinstalled.
21	Click **Yes** to confirm.

Step	Action
22	Click **Finish** to complete the installation.
23	When prompted, insert the Experion PKS R210 Application DVD into the appropriate drive.
24	Click **Yes** to continue.
25	**If you are installing Experion PKS server for use with SCADA points**, go to step 35.
26	Click **OK** to confirm that RSLinx is already installed.
27	Click **Cancel**.
28	Click **OK** to acknowledge the message dialog box.
29	Click **Finish** to finish the installation.
30	Click **OK** to restart the computer.
31	After the computer restarts, log on to the computer using a Windows account with local administrator rights. There may be a delay of several minutes before the installation process resumes.
32	Click **Install** to start installing the Engineering Tools applications.
33	During the installation, if you are prompted in a Command window to stop the server, type **y** and then press ENTER. This application installation can take several minutes to complete.
34	Click **Finish** to complete the Engineering Tools installation. Wait for all automated installation tasks to complete.
35	Click **Cancel** to cancel the Experion PKS server setup. The Experion PKS server software is already installed on the computer.
36	Click **Yes** to confirm.
37	Click **OK** to acknowledge the message dialog box.
38	Click **No, I will restart my computer later**, and then click **Finish**.
39	Shutdown and restart the computer.

Step	Action
40	Log on to the computer using a Windows account with local administrator rights.
41	Restore the Engineering Tools Repository database using the DB Admin application.

STOP	You have completed this task. Return to the checklist that led to this task.

Replacing RSLinx components

Prerequisites

- Experion PKS R210 media.

Considerations

- When the Electronic Data Sheets are displayed, do *not* change the default Electronic Data Sheets to install.
- When reviewing the Release Notes displayed when the RSLinx installation is complete, an Experion PKS **Installation** message dialog box appears requesting you to restart the computer. Review the Release Notes first, then locate this message dialog box and click **OK** to restart the computer.

To replace RSLinx components:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**, and then double-click **Add/Remove Programs.**
2	Remove the following components: • **RSI Utilities** *or* **Rockwell Software Hardware Maintenance Tool** • **RSLinx** *or* **RSLinx 2.3**
3	Restart the computer.
4	If a service or driver failed to start message dialog box appears, click **OK** to continue.

Step	Action
5	Log on to the computer using a Windows account with local administrator rights.
6	Insert the Experion PKS R210 Application DVD into the appropriate drive.
7	In Windows Explorer, browse to the `RSLinx\RSLinx\ENU` folder on the drive, and double-click the `setup.exe` file.
8	Click **Next** to continue installing RSLinx.
9	Click **I accept the terms in the license agreement**, and then click **Next**.
10	Type the **User Name** and **Organization**, and then click **Next**.
11	Click **Next**.
12	Click **Install** to start installing the RSLinx applications. This application installation can take several minutes to complete.
13	Click **Yes** to acknowledge that you are using a PCIC or Ethernet card to communicate with RSLinx.
14	Click **Finish** to finish the installation.
15	Review the Release Notes and then close the Internet Explorer window that displays the Release Notes.
16	Locate the Experion PKS Installation message dialog box and then click **OK** to restart the computer.
17	Shutdown and restart the computer.
18	Log on to the computer using a Windows account with local administrator rights.

STOP	You have completed this task. Return to the checklist that led to this task.

Replacing Experion PKS server components

Prerequisites

- Experion PKS R210 media.

To replace Experion PKS server components:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**, and then double-click the **Add/Remove Programs** icon.
2	In the **Currently installed programs** list, click **Experion PKS Server**.
3	Click **Change** to display the Experion PKS Server Setup wizard.
4	Click **Next**.
5	Click **Repair** and then click **Next**.
6	On the **Enter Experion PKS Server Mngr Account Password** screen, type the mngr password.
7	Click **Next**.
8	Click **Yes** to retain the existing Experion PKS server database and then click **Next**.
9	Click **Upgrade** to start the repair process.
10	When prompted, click **Finish**.
11	Restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

Replacing Experion PKS client component

Prerequisites

- Experion PKS R210 media.

To replace Experion PKS client components:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Settings** > **Control Panel**, and then double-click **Add/Remove Programs**.
3	Remove the following components: • Genevieve • Server System Displays • Quick Builder • Experion PKS Server ODBC Client • OPC Server Connect 400.0 • Shape Library 400.0 • Display Builder 320.2 • Network API 400.0 • HMIWeb Display Builder • Networked XLET node 400.0 • TPS HCI Runtime
4	Restart the computer.
5	Log on to the computer using a Windows account with local administrator rights.
6	Insert the Experion PKS R210 Application DVD into the appropriate drive.
7	In Windows Explorer, browse to the `Server-Client` folder on the drive, and double-click the `setup.exe` file.
8	Click **Next**.
9	Click **Experion PKS Client Setup**, and then click **Next**.
10	If a “Folder Not Empty” message dialog box appears, click **OK** to continue.

Step	Action
11	Select the **Station** check box. You can also select **Quick Builder**, **HMIWeb Display Builder**, and **Display Builder**, if required. Do *not* select **Microsoft Excel Data Exchange** unless Microsoft Excel is installed on this computer.
12	Click **Next**.
13	If a Directory Already Exists message appears, click **Yes** to continue.
14	If a Failed to uninstall Quick Builder message appears, click **OK** to continue.
15	If a Directory not empty message appears, click **Yes** to continue.
16	Click **Yes** to accept the default Experion PKS client software folder.
17	Click **Next** to continue the installation.
18	When prompted, click **Yes, restart my computer now** and click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

21.12 Mapping to a Knowledge Builder server

When you install the Knowledge Builder server component on a computer, the Knowledge Builder installation automatically shares the `PST_Server` folder containing the installed Knowledge Builder products.

When you install Knowledge Builder clients on other networked computers, you can map a network drive to this shared folder and access these installed Knowledge Builder products.

Considerations

- These instructions must be completed *before* installing the Knowledge Builder client.

To create a shared folder to access Knowledge Builder products:

Step	Action
1	In Windows Explorer, browse the Entire Network and location the computer where the Knowledge Builder server is installed.
2	Double-click the computer name.
3	Right-click on **PSTSERVER** and choose **Map Network Drive**.
4	Select the drive to assign to this mapping.
5	Click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

21.13 Changing the Experion PKS Windows account passwords

This section describes how to change Experion PKS Windows account passwords across the Experion PKS system using the Password utility.

Prerequisites

- If you have redundant Experion PKS servers, the passwords must the same on server A and server B.

Considerations

- Passwords must be eight to 14 characters in length and must contain at least one numeric character and at least one alpha character.
- The Password utility, `pwdutil.exe`, can be found in the following locations:
  - In the `Utilities\Password Utility` folder on the Experion PKS R210 Knowledge Builder CD.
  - In the `C:\Program Files\Honeywell\Experion PKS\Utilities\PwdUtil` folder on an Experion PKS server.

To change the Experion PKS Windows account passwords:

Step	Action
1	Double-click the `pwdutil.exe` file. See the previous “Considerations” section for more information on the location of this file.
2	Click the name of the Windows account that you want to change passwords.
3	Type the new password and then click **OK**.
4	If an error message appears one or more times, click **OK** on each message.
5	When finished changing Windows account passwords, click **Done**.

Step	Action
6	Click **OK**. If the Password utility warns you that Windows accounts exist that no longer are required, for example, the Windows ps_user account, you should delete these accounts unless another application, other than Experion PKS, uses these accounts.
7	Restart the computer.

STOP	You have completed this task. Return to the checklist that led to this task.

21.14 Installing/updating Dell OpenManage software

The Dell OpenManage software must be updated on Dell PowerEdge servers for Experion PKS R210. This section describes how to uninstall the previous version and how to install and configure new version.

ATTENTION

If you have completed a clean installation using NT5Plus Server NT210.0-5.1, do *not* complete this task.

Prerequisites

- Experion PKS R210 media.

Considerations

- When you remove some services, the computer requires a restart. Instead of restarting the computer multiple times, you only need to restart the computer once at the end of the procedure. Some of the services may not disappear until after the computer has restarted.

To remove the previous version of Dell OpenManage:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click the **Add/Remove Programs** icon.
3	If the **NobleNet Port Mapper** program appears in the list, do the following: a) Click **Change/Remove** next to the program name. b) If an error message appears, click **Yes** to remove this software from the list.

Step	Action
4	If the **CI/O Management Software** program appears in the list, do the following: a) Click **Change/Remove** next to the program name. b) Click **Yes** to confirm the file deletion. c) Click **Yes to All** to remove shared files. d) Click **Yes** to confirm the removal of shared files. e) Click **OK** to remove programs from your computer. f) Click **OK** in the CI/O Management Software 4.01 message.
5	If the **Dell OpenManage Server Agent** program appears in the list, do the following: a) Click **Change/Remove** next to the program name. b) Click **Yes** in the Add/Remove Programs message. c) Click **No** to restart the computer in the Dell Open Manage Server Agent message.
6	If the **Dell OpenManage** program appears in the list, do the following: a) Click **Change/Remove** next to the program name. b) Click **Next** in the Uninstall Section screen. c) Click **Next** in the Uninstall Summary screen. d) Click **Yes** to confirm the uninstallation. e) Click **No** and then click **Finish** in the Restart computer message. If prompted that a network resource is unavailable, click **OK** or **Cancel** to continue the uninstall process. f) Click **OK** in the confirmation message.
7	If the **Dell OpenManage Array Manager** program appears in the list, click **Change/Remove** next to the program name.
8	Close the **Add/Remove Programs** dialog box.
9	Close the Control Panel.
10	Restart the computer.

Step	Action
11	Proceed to the next task to check the version of Dell OpenManage Array Manager ASPI, if it exists, and to install ASPI 4.6.0, if necessary.

To install Dell OpenManage Array Manager ASPI 4.6.0:

When performing an unattended installation of Dell Open Manage software on a system with the ASPI 4.7.x driver, the installation will fail without displaying an error message.

After using the Array Manager ASPI 4.6.0 Package to update the ASPI driver to 4.6.0, you can complete the unattended installation.

Use the following steps to verify which version of ASPI is on your system:

Step	Action
1	From the ASPI folder on the Experion PKS R210 media, extract (unzip) file `aspip460.exe` to a temporary directory. The default directory is `c:\temp_aspi`.
2	From the unzipped folder location, double-click on the **aspiver.bat** executable. This script displays a pop-up message indicating the version of the ASPI components on the system.
3	If the ASPI driver is 4.7.x, or higher, continue with the remaining steps of this task to replace this version of the drivers, otherwise, continue to the next task of “To install the new version of Dell OpenManage”. Click **OK** on the VBScript message.
4	At a command prompt, type **inst-460.exe** and then press ENTER.
5	After the installation is complete, a message that your drivers have been updated successfully and to restart your system appears. Restart the computer.
6	Proceed to the next task to install the new version of Dell OpenManage.

To install the new version of Dell OpenManage:

Step	Action
1	Insert the Experion PKS R210 Application DVD into the appropriate drive to install the new version of Dell OpenManage.

Step	Action
2	In Windows Explorer, browse to the `OMSA` folder on the Application DVD drive, and then double-click on the `Install_OMSA.bat` file.
3	In the on-process message, press any key to continue to install the Dell OpenManage software. No user interaction is required.
4	Press a key to continue.
5	Restart the computer.
6	Log on to computer using a Windows account with local administrator rights.
7	Click **OK** in the Dell OpenManage Array Manager message. The installation of the Dell OpenManage will take several minutes.
8	If the Dell Open Manage Icon appears on the Desktop, return to the checklist that led to this task. If the Icon does not appear, proceed to the next task to repair and re-install Dell OpenManage:

To repair and re-install Dell OpenManage:

Step	Action
1	Insert the Experion PKS R210 Application DVD into the appropriate drive.
2	In Windows Explorer, browse to the **`OMSA`** folder on the Application DVD drive.
3	Copy the files **OMSAINST.exe** and **OMSA.zip** to **C:\PLATFORM\OMSA**.
4	In Windows Explorer, browse to **C:\ PLATFORM\OMSA**, and then double-click on the **OMSAINST.exe** file.
5	The contents of the OMSA.zip file will be unzipped and the Dell OpenMange Install application will Exit. No user interaction is needed
6	In Windows Explorer, browse to **C:\PLATFORM\OMSA\app\class\OMClean**, and then double-click on the **OMClean.exe** file.
7	Click **Accept** on the DELL SOFTWARE LICENSE AGREEMENT.
8	Click **Yes** to Confirm on OMClean Message Box
9	Click **OK** on the OMClean Message Box.

Step	Action
10	Restart the System
11	Once the Computer Restarts Log on to the computer using a Windows account with local administrator rights.
12	Insert the Experion PKS R210 media into the appropriate drive.
13	In Windows Explorer, browse to the `OMSA` folder on the drive, and then double-click on the `Install_OMSA.bat` file.
14	In the on-process message, press any key to install the Dell OpenManage software. No user interaction is required.
15	Restart the computer.
16	Log on to computer using a Windows account with local administrator rights.
17	Click **OK** in the Dell OpenManage Array Manager message.

STOP	You have completed this task. Return to the checklist that led to this task.

21.15 Installing/updating Dell OpenManage Client Instrumentation

The Dell OpenManage software must be updated on Dell Precision 360 Workstation for Experion PKS R210. This section describes how to uninstall the previous version and how to install and configure new version.

Prerequisites

- Experion PKS R210 media.

Considerations

- If your system has NT5Plus Professional NT200.0-6.6 6 or XPPlus Professional R201.2 installed, do *not* complete this task. This version number is printed on the NT5Plus Server CD of the CD set that was used.
- When you remove some services, the computer requires a restart. Instead of restarting the computer multiple times, you only need to restart the computer once at the end of the procedure. Some of the services may not disappear until after the computer has restarted. After restarting, log on to the computer using a Windows account with administrative privileges.

To remove the previous version of Dell OpenManage Client Instrumentation:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click the **Add/Remove Programs** icon.
3	If the **Dell OpenManage Client Instrumentation** program appears in the list, do the following: a) Click **Change/Remove** next to the program name. b) On the Welcome dialog select **Remove** and click **Next**. c) Click OK to confirm the un-installation
4	Close the **Add/Remove Programs** dialog box.
5	Close the Control Panel.
6	Restart the computer. After restarting, log on to the computer using a Windows account with administrative privileges.

Step	Action
7	Proceed to the next section to install the new version of Dell OpenManage Client Instrumentation.

To install the new version of Dell OpenManage Client Instrumentation:

Step	Action
1	Insert the Experion PKS R210 Application DVD into the appropriate drive.
2	In Windows Explorer, browse to the `OMCI` folder on the drive, and then double-click on the `setup.exe` file.
3	Click **OK** in the **Setup Language** dialog box.
4	Click **Next** in the **OMCI- InstallShield Wizard** dialog box.
5	Select **Complete** and then click **Next**.
6	Click **Install** to start the installation.
7	Click **Finish** to complete the install.
8	Install the OMCI patch by double-clicking on the OMCI701.exe file.
9	Click **Next** on the **Welcome** dialog box.
10	Click **Install** to start the installation.
11	Click **Finish** to complete the install.
12	Restart the computer. After restarting, log on to the computer using a Windows account with administrative privileges.

STOP	You have completed this task. Return to the checklist that led to this task.

22. Installing and managing Knowledge Builder

This section describes how to install Knowledge Builder and how to manage Knowledge Builder booksets and dynamic help.

Considerations

Identify the type of Knowledge Builder installation you require.

- You can complete a *Full Install*, where the Knowledge Builder client and server are installed on this computer.
- You can complete a *CD-ROM Install*, where only the Knowledge Builder client is installed on this computer and you access the Knowledge Builder content from the Knowledge Builder CD.
- You can complete a *Server Only Install*, where only the Knowledge Builder server is installed. You can install Knowledge Builder clients on other computers that can access this server.
- If you have already installed a Knowledge Builder server, you can access this server by completing a *Client Only Install*. To access this Knowledge Builder server, you must map a drive to the path where the Knowledge Builder server is installed on the other computer (see 466).

Tasks

Task	Go to
Install Knowledge Builder.	479
Upgrade Knowledge Builder.	481
Install Knowledge Builder stand-alone.	482
Planning Knowledge Builder bookset backups	484
Back up Knowledge Builder booksets.	487
Restore Knowledge Builder booksets.	489
Learn about Dynamic Help.	491

Task	Go to
Export Knowledge Builder Dynamic Help.	492
Import Knowledge Builder Dynamic Help.	494
Remove Knowledge Builder Tools 4	496

22.1 Installing Knowledge Builder

This section describes how to continue installing Knowledge Builder.

Prerequisites

- Experion PKS R210 Knowledge Builder CD.

To install Knowledge Builder:

Step	Action
1	When prompted, insert the Experion PKS R210 Knowledge Builder CD into the CD-ROM drive, and then click **Yes**.
2	On the Installation Type screen, click the setup type, **Full Install**, **Client Only Install**, **CD-ROM Install**, or **Server Only Install**, and then click **Next**.
3	If you selected a CD-ROM Install setup type, continue to step 7.
4	If you selected a Client Only Install setup type, continue to step 6.
5	If you selected Full Install or Server Only Install, on the Bookset Selection screen, select the **Experion PKS R210** check box, and any others as required in the Knowledge Builder product list, and then click **Next**.
6	On the Server Selection screen: a) If you selected Client Only Install, click **Browse**, and then browse to the mapped network drive for the Knowledge Builder server. b) If you have selected Full Install or Server Only Install, accept the default path. c) Click **Next**.
7	On the Start Copy screen, click **Next** to start installing the Knowledge Builder application. This application installation may take several minutes to complete.
8	Click **Finish** to complete the installation.
9	When prompted, insert the Experion PKS R210 Application DVD into the appropriate drive.
10	Click **Yes** to continue.

STOP	You have completed this task. Return to the checklist that led to this task.

22.2 Upgrading Knowledge Builder

This section describes how to upgrade an existing Knowledge Builder installation.

To Upgrade Knowledge Builder:

Step	Action
1	When prompted, insert the Experion PKS R210 Knowledge Builder CD into the CD-ROM drive, and then click **Yes**.
2	On the Maintenance Welcome screen, click **Repair** and then click **Next**.
3	If you selected CD-ROM Installed when you installed Knowledge Builder, go to step 9.
4	If the **Experion PKS R210 On Process Beta/R201/R101** bookset is listed, select its **Remove** check box.
5	Select the **Experion PKS R210** bookset check box. If you have previously exported the Dynamic Help, select the **Repair/Install Dynamic Help** bookset check box. If the Dynamic Help bookset is not installed on this computer, you must select the **Dynamic Help** check box to install it. If required for any other booksets, select the required Repair/Install check box.
6	Click **Next** to continue.
7	If prompted, click **Yes** to continue to install Dynamic Help booksets.
8	Review the settings and then click **Next**. The application upgrade may take several minutes to complete.
9	Click **Finish** to complete the upgrade.
10	When prompted, insert the Experion PKS R210 Application DVD into the appropriate drive and then click **Yes**.

STOP	You have completed this task. Return to the checklist that led to this task.

22.3 Installing Knowledge Builder standalone

This section describes how to complete a stand-alone installation of Knowledge Builder on a computer. Knowledge Builder is installed by default on Experion PKS server and client computers.

Prerequisites

- Experion PKS R210 Knowledge Builder CD.

Considerations

- If the Microsoft .NET Framework 1.1 is not installed, during the Knowledge Builder installation the computer will restart.

To install Knowledge Builder:

Step	Action
1	Insert the Experion PKS R210 Knowledge Builder CD into the CD-ROM drive.
2	In Windows Explorer, browse to the drive and double-click the `setup.exe` file. If Adobe Acrobat Reader 5.1, or higher, is not installed on this computer, the installation process installs Acrobat Reader.
3	On the Welcome screen, click **Next**.
4	On the Copyright screen, click **Yes** to accept the license agreement.
5	On the Installation Type screen, click the setup type, **Full Install**, **Client Only Install**, **CD-ROM Install**, or **Server Only Install**, and then click **Next**.
6	If you selected a CD-ROM Install setup type, continue to step 10.
7	If you selected a Client Only Install setup type, continue to step 9.
8	If you selected Full Install or Server Only Install, on the Bookset Selection screen, select the **Experion PKS R210** check box, and any others as required in the Knowledge Builder product list, and then click **Next**.

Step	Action
9	On the Server Selection screen: a) If you selected Client Only Install, click **Browse**, and then browse to the mapped network drive for the Knowledge Builder server. b) Click **Next**.
10	On the Start Copy screen, click **Next** to start installing the Knowledge Builder application. This application installation may take several minutes to complete.
11	Click **Finish** to complete the installation.

STOP	You have completed this task. Return to the checklist that led to this task.

22.4 Planning Knowledge Builder bookset backups

This section provides guidelines for Knowledge Builder bookset backup strategies. You can backup the following Knowledge Builder components:

- Booksets:
  - Backup installed Knowledge Builder booksets (content repositories).
  - Restore backed-up bookset(s) to an installed Knowledge Builder.
- Dynamic Help migration:
  - Export Dynamic Help from a book within a bookset.
  - Import and migrate Dynamic Help to a Dynamic Help bookset.

These backup and restore functions are available using the Knowledge Builder Backup, Restore, and Migrate (Dynamic Help) utility. In the remainder of this section, this utility is referred to as the KBBackupRestore utility.

Deciding on a backup strategy

The KBBackupRestore utility can be used by a user with local administrator rights. With this utility, you can capture existing installed Knowledge Builders and copy them to an alternate location with the intent of creating an archive of installed booksets. These booksets can then be restored to an active Knowledge Builder in the future. This will eliminate the requirement for original Knowledge Builder CDs for future re-deployment of the installed booksets (which have been backed up using this utility.)

It is important to decide on a backup and restore strategy for the Knowledge Builder booksets. The strategy should include:

- Is there a requirement to perform a backup?
- Who will perform the backup?
- What will be backed up?
- How often it will be backed up?
- Procedures for backing and restoring booksets.
- Procedures for exporting and importing Dynamic Help for migration purposes.

Ideally, the Knowledge Builder backup strategy should be documented and maintained by those responsible for such activities.

Deciding if there is a need to backup booksets

Backing up of booksets is a preventive maintenance activity. Installation of booksets is reliant on Knowledge Builder CDs. Backing up booksets eliminates the need of relying on the Knowledge Builder CDs for restoring booksets in the future. Backing up booksets should be considered in the following situations:

- Creating an archive—multiple booksets from multiple Knowledge Builder CDs have been installed (from either single or multiple systems).
- Copying to a remote Knowledge Builder server location.

Deciding who should do the backup and restore

The person who backs up and restores booksets must meet the following requirements:

- Administrator rights on the local computer.
- Knowledge of the department's installed booksets.
- Access to network resources where the archived booksets may be stored.
- Follow a department strategy regarding archiving.

Deciding on what to backup

The only part of Knowledge Builder that is backed up using the KBBackupRestore utility is the booksets (content repositories). Booksets consist of the following:

- Content – HTML, GIF, PDF, and so on, files.
- Structure – XML and XSL files.

Installed booksets of the same release should be similar, except for booksets containing post-shipment Dynamic Help.

Therefore, is most cases, booksets of the same release and name should be backed up to a central location only once and not from every system. This can be decided as part of the department's defined strategy.

Deciding how often to backup

The KBBackupRestore utility is typically used in the following scenarios:

- Archiving Knowledge Build booksets for possible future use.
- Performing maintenance to the system, such as uninstalling Experion PKS or Knowledge Builder alone. In this scenario, you back up the booksets, perform the

required maintenance, ensure there is a functional Knowledge Builder installed, and then restore the booksets back into Knowledge Builder.

22.5 Backing up Knowledge Builder booksets

This section describes how to back up Knowledge Builder booksets. You can back up booksets in the Knowledge Builder server on this computer or you can back up booksets in the Knowledge Builder server located on another computer. If you want to back up booksets in the Knowledge Builder server on another computer, you must map a network drive on this computer to the computer where the Knowledge Builder server is located.

Considerations

- The backup and restore utility, `KBBackupRestore.exe`, can be found in the following locations:
  - In the `Utilities\KB BackupRestore Utility` folder on the Experion PKS R210 Knowledge Builder PKS CD.
  - In the `C:\Program Files\Honeywell\PST_Client\Bin` folder if you have installed the version of Knowledge Builder PKS supplied with Experion PKS R210.

To backup Knowledge Builder booksets:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Double-click the `KBBackupRestore.exe` file. See the previous “Considerations” section for more information on the location of this file.
3	In the warning message, click **OK**. The **KB BackupRestore Utility** dialog box appears.
4	In the **Select item for migration** list, click **Bookset Backup and Restore**.
5	Click **Backup**.
6	If you are backing up booksets on this computer, click **Currently active server** and then click **OK**.

Step	Action
7	If you are backing up booksets on another computer: a) Click **Other location**. b) Click **Browse**. c) Browse to the folder containing the booksets. This folder is usually `C:\Program Files\Honeywell\PST_Server\Knowledge_Builder\Docs`. Ensure the **Server location** is valid. d) Click **OK**.
8	In the **Available booksets** list, select the bookset check boxes that you want to back up.
9	Click **Continue**.
10	To back up the selected booksets to the default location, click **Default backup location** and then click **OK**.
11	To back up the selected booksets to a different location: a) Click **Select a user preferred backup destination**. b) Click **Browse**. c) Browse to folder where you want to back up the selected booksets. d) Click **OK**.
12	If you want to want a different folder name, type that folder name.
13	Click **Continue**.
14	In the backup from Knowledge Builder message, click **Yes**. The progress of the backup appears in the **Backing Up** dialog box.
15	When the backup is complete, click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

22.6 Restoring Knowledge Builder booksets

This section describes how to restore a previously backed up Knowledge Builder bookset into the Knowledge Builder server on this computer.

Considerations

- The backup and restore utility, `KBBackupRestore.exe`, can be found in the following locations:
  - In the `Utilities\KB BackupRestore Utility` folder on the Experion PKS R210 Knowledge Builder PKS CD.
  - In the `C:\Program Files\Honeywell\PST_Client\Bin` folder if you have installed the version of Knowledge Builder PKS supplied with Experion PKS R210.

To backup Knowledge Builder booksets:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Double-click the `KBBackupRestore.exe` file. See the previous “Considerations” section for more information on the location of this file.
3	In the warning message, click **OK**. The **KB BackupRestore Utility** dialog box appears.
4	In the **Select item for migration** list, click **Bookset Backup and Restore**.
5	Click **Restore**.
6	To restore booksets from the default location, click **Default source** and then click **OK**.

Step	Action
7	To restore booksets from a different location: a) Click **User preferred source**. b) Click **Browse**. c) Browse to folder that contains the backed up booksets. Ensure the **Server location** is valid. d) Click **OK**.
8	Click the folder containing the booksets that you want to restore.
9	Click **Continue**.
10	In the **Available booksets** list, select the bookset check boxes that you want to restore.
11	Click **Continue**. The progress of the restore appears in the **Restoring** dialog box.
12	If you are restoring a bookset that already exists in the Knowledge Builder server, a duplicate bookset message appears. Click **Yes** to continue the restore.
13	When the restore is complete, click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

22.7 About Dynamic Help

Dynamic Help migration is an optional activity. Although Dynamic Help exists in all previous Knowledge Builder releases as pre-shipped content, not all Experion PKS users load post-shipment content in Dynamic Help. This is done when you add devices and def files into applications like Control Builder.

In earlier versions of Knowledge Builder, Dynamic Help existed as book in the release bookset. Whenever the bookset was discarded, upgraded, or uninstalled the added post-shipment Dynamic Help was also discarded. You can export Dynamic Help using the KBBackupRestore utility prior to discarding, upgrading, or uninstalling a bookset that contains the Dynamic Help book.

In the current version of Knowledge Builder, Dynamic Help exists as its own bookset. You can import and migrate previously exported Dynamic Help content into the Dynamic Help bookset. If the current release bookset is discarded or updated, it will have no impact on the Dynamic Help. In addition, the Dynamic Help bookset can now be backed up and restored using the bookset backup and restore functions.

Procedure for migrating Dynamic Help

CAUTION	The sequence for migrating Dynamic Help to Experion PKS Knowledge Builder R210 is important. Failure to follow this sequence may result in the loss of Dynamic Help content.

The Dynamic Help migration requires a critical sequence of activities to properly export and import the Dynamic Help content. The required sequence is:

- Export the Dynamic Help that resides in the previous Knowledge Builder release, which contains Honeywell or third-party post-shipment added content.
- Upgrade the previous Knowledge Builder release to the current Knowledge Builder release supplied with Experion PKS R210.
- Import the previously exported Dynamic Help into the upgraded Knowledge Builder.

22.8 Exporting Knowledge Builder Dynamic Help

This section describes how to export Knowledge Builder Dynamic Help.

Considerations

- The backup and restore utility, `KBBackupRestore.exe`, can be found in the following locations:
  - If you are upgrading from R101 to R210 release, you can find this file in the `Utilities\KB BackupRestore Utility` folder on the Experion PKS R210 Knowledge Builder CD.
  - If you are upgrading from R201 to R210 release and you have installed Knowledge Builder supplied with Experion PKS R210, you can find this file in `C:\Program Files\Honeywell\PST_Client\Bin` folder.

To export Knowledge Builder Dynamic Help:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Double-click the `KBBackupRestore.exe` file. See the previous “Considerations” section for more information on the location of this file.
3	In the warning message, click **OK**. The **KB BackupRestore Utility** dialog box appears.
4	In the **Select item for migration** list, click **Dynamic Help**.
5	Click **Export**.
6	If you are exporting Dynamic Help on this computer, click **Currently active server** and then click **OK**.

Step	Action
7	If you are exporting Dynamic Help on another computer: a) Click **Other location**. b) Click **Browse**. c) Browse to the folder containing the booksets. This folder is usually `C:\Program Files\Honeywell\PST_Server\Knowledge_Builder\Docs`. Ensure the **Server location** is valid. d) Click **OK**.
8	In the **Available Dynamic Help** list, select the Dynamic Help check boxes that you want to export.
9	Click **Continue**.
10	To back up the selected booksets to the default location, click **Default export destination** and then click **OK**.
11	To export the selected Dynamic Help to a different location: a) Click **Select a user preferred export destination**. b) Click **Browse**. c) Browse to folder where you want to export the selected Dynamic Help. d) Click **OK**.
12	In the export from Knowledge Builder message, click **Yes**. The progress of the export appears in the **Exporting** dialog box.
13	When the export is complete, click **OK**.
14	Click **Close**, and then **Yes** to exit.

STOP	You have completed this task. Return to the checklist that led to this task.

22.9 Importing Knowledge Builder Dynamic Help

This section describes how to import a previously exported Dynamic Help into the Knowledge Builder server on this computer.

Considerations

- The backup and restore utility, `KBBackupRestore.exe`, can be found in the `C:\Program Files\Honeywell\PST_Client\Bin` folder if you installed Knowledge Builder supplied with Experion PKS R210.

To import Knowledge Builder Dynamic Help:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Double-click the `KBBackupRestore.exe` file. See the previous “Considerations” section for more information on the location of this file.
3	In the warning message, click **OK**. The **KB BackupRestore Utility** dialog box appears.
4	In the **Select item for migration** list, click **Dynamic Help**.
5	Click **Import**.
6	To restore Dynamic Help from the default location, click **Default source** and then click **OK**.
7	To restore Dynamic Help from a different location: a) Click **User preferred source**. b) Click **Browse**. c) Browse to folder that contains the exported Dynamic Help. Ensure the **Server location** is valid. d) Click **OK**.
8	Click the folder containing the Dynamic Help that you want to restore.

Step	Action
9	Click **Continue**. The progress of the import appears in the **Importing** dialog box.
10	When the import is complete, click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

22.10 Removing Knowledge Builder Tools 4

Considerations

- This action is required for all Experion PKS R101 Knowledge Builder upgrades:

To remove Honeywell Knowledge Builder Tools 4:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click **Add/Remove Programs**, click **KB Server – Knowledge Builder Tools 4**, and then click **Remove**.
3	Click **Yes** to confirm the action and then follow the on-screen instructions to complete the removal.

STOP	You have completed this task. Return to the checklist that led to this task.

22.11 Removing Adobe Acrobat 4.0

To remove Adobe Acrobat 4.0:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click **Add/Remove Programs**.
3	Click **Adobe Acrobat 4.0** and then click **Remove**.
4	Click **Yes** to confirm the action.
5	On the Remove Shared File screen, click **No to All.**
6	Click **OK** to close the screen.

STOP	You have completed this task. Return to the checklist that led to this task.

23. Installing specialized hardware on a computer

This section contains the tasks on how to install and configure specialized hardware on a computer.

ATTENTION

You should only complete the tasks in this section when instructed to by a checklist (see 24). To complete these tasks out of sequence may result in the failure of your Experion PKS installation.

To install	Go to
Network interface cards (NIC).	500
Serial adapter.	502
Terminal servers.	547

23.1 Installing a network interface card (NIC)

This section describes how to install a network interface card (NIC) and driver.

If you do not install a NIC, you must install the Microsoft loopback adapter driver (see 501), regardless of the connection status.

Install the NIC in accordance with the manufacturer's instructions, and then install the appropriate driver as described here.

ESD HAZARD

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

Prerequisites

- NIC is qualified for use with Experion PKS R210 (see 596).
- Disk or CD supplied with the NIC.

Considerations

- If you have a Windows 2000 recommended NIC, it will be detected and automatically configured during the Windows 2000 installation.

Configuring the network adapter settings

To change the configuration:

Step	Action
1	Choose **Start** > **Settings** > **Network and Dial-up Connections**.
2	Right-click on the connection and choose **Properties**.
3	Make the required changes.

STOP	You have completed this task. Return to the checklist that led to this task.

Installing the Microsoft loopback adapter

ATTENTION

If you have a Network Interface Card (NIC) installed, you do *not* need to install the Microsoft Loopback adapter driver. You have completed the task and can return to the checklist that led to this task.

If you have no NIC installed, you must install the Microsoft Loopback adapter driver.

To install the Microsoft Loopback Adapter:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click **Add/Remove Hardware**.
3	The Add/Remove Hardware wizard starts, click **Next** to continue.
4	Click **Add/Troubleshoot a device** and click **Next**. The wizard will locate and list all the plug and play hardware devices.
5	From the list of devices, click **Add a new device** and click **Next**.
6	Click **No, I want to select the hardware from a list** and click **Next**.
7	In the **Hardware Types** list, click **Network Adapters** and click **Next**.
8	In the **Manufacturers** list, click **Microsoft,** and in the **Network Adapter** list, click **Microsoft Loopback Adapter** and click **Next**.
9	Click **Next** to start the hardware installation.
10	Click **Finish**.

STOP	You have completed this task. Return to the checklist that led to this task.

23.2 Installing a serial adapter

This section describes how to install a serial adapter.

Prerequisites

- Serial adapter is qualified for use with Experion PKS R210 (see 597).

Considerations

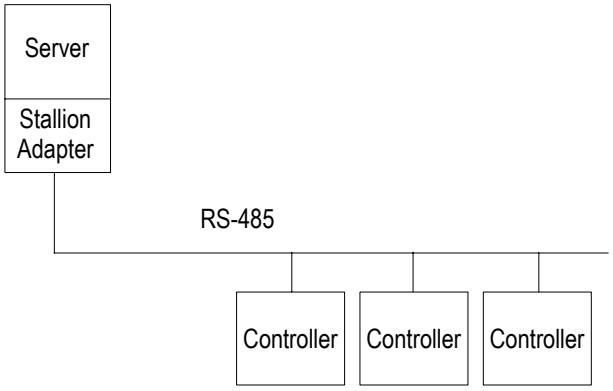
- When installing a Windows 2000 recommended serial adapter, the device will be detected and automatically configured during the Windows 2000 installation.

Installing a Stallion EasyConnection

ESD HAZARD

Ensure that you are properly earthed when installing any hardware in a computer. Honeywell recommends that you use an antistatic wrist strap. Alternatively, frequently touch metal parts on the computer to prevent the buildup of static electricity.

The Stallion EasyConnection serial adapter can connect RS-232, RS-422, and RS-485 devices. The following figure shows a typical configuration.



Prerequisites

- Stallion EasyConnection adapter.
- Disk or CD supplied with the adapter.

Considerations

- For details about connecting controllers to the adapter, see the *Server and Client Configuration Guide*.

To install a Stallion EasyConnection and configure its driver:

Step	Action
1	Install the adapter in accordance with the manufacturer's instructions, using the default DIP switch settings.
2	Choose **Start** > **Settings** > **Control Panel** to open the Control Panel.
3	Double-click the **Add/Remove Hardware** icon to open the Add/Remove Hardware Wizard.
4	Click **Add**, and then click **Have Disk** to install the Stallion EasyConnection driver from the Stallion 3.5-inch disk.
5	Browse to the `\i386` folder on the disk, or the `\winnt\i386` folder on the drive, and then follow the manufacturer's instructions.

STOP	You have completed this task. Return to the checklist that led to this task.

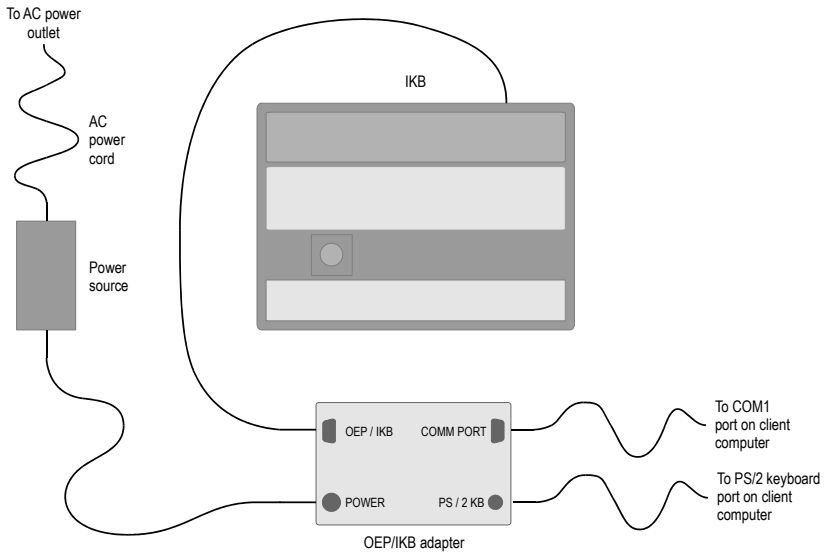
23.3 Connecting an integrated keyboard (IKB) to an OEP/IKB adapter

This section shows how to connect the Honeywell OEP/IKB adapter to a computer and a non-USB integrated keyboard (IKB).

CAUTION	Do *not* connect the AC power cord to the AC power outlet unless the OEP/IKB adapter is connected to the IKB and the COM1 and PS/2 ports of the computer.

To connect an IKB to an OEP/IKB adapter:

Step	Action
1	Shutdown and turn off the computer.
2	Turn off the IKB.
3	Connect the OEP/IKB, COMM, and PS/2 KB ports on the OEP/IKB adapter as shown in the following diagram.



4	Connect the power source to the OEP/IKB adapter.

Step	Action
5	Connect the AC power cord to the power source and the AC power outlet.
6	Turn on the computer and the IKB.

STOP	You have completed this task. Return to the checklist that led to this task.

23.4 Connecting an integrated keyboard (IKB) to a USB port

This section describes how to connect a USB integrated keyboard (IKB) to a USB port or USB hub connected to the computer.

Prerequisites

- IKB service is installed.
- You know the location of the USB drivers on your computer. If you accepted the default path when you installed the IKB service, the location of the USB drivers is:

  `C:\Program Files\Honeywell\IKB_USB_Drivers`

To connect the Integrated Keyboard and install USB drivers:

Step	Action
1	Insert the integrated keyboard (IKB) USB cable into a USB port on the computer or the USB hub that is connected to the computer within the Icon Console.
2	Insert the IKB power plug into a power outlet.
3	Ensure the power to the IKB is switched on.
4	The Found New Hardware wizard starts. Click **Next** to continue.
5	Click **Specify a location** and then click **Next**.
6	Type the location of the USB drivers and then click **OK**.
7	The Found New Hardware wizard restarts.
8	Click **Next** to continue.
9	Click **Specify a location** and then click **Next**.
	The location you typed in the step above appears.
10	Click **OK** to continue.
11	Click **Next**
12	Click **Finish**.
13	Restart the computer.

To configure the USB Serial port:

Step	Action
1	On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Click the **Device Manager** item to display a list of devices.
3	Expand the **Ports (COM & LPT)** item. In the list of ports is the **USB Serial** item with the port name displayed next to the item name. The port name must be COM3.
4	If the port name is *not* COM3: a) Right-click on the **USB Serial** item and choose **Properties**. b) Click the **Port Settings** tab. c) Click **Advanced**. d) In the **COM Port Number** list, choose **COM3**. e) Click **OK** to close the **Advanced Settings** dialog box. f) Click **OK** to close the **USB Serial Properties** dialog box.
5	Close the **Computer Management** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

23.5 Setting up a FlashPoint card

This section describes how to install the FlashPoint video capture card on the computer. The card enables you to include video "windows" in custom displays.

Prerequisites

- Video capture card (see 595).

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Install the card.	508	
Install the FlashPoint MCI driver.	509	
Configure `station.ini`.	511	

Installing the Card

To install the card:

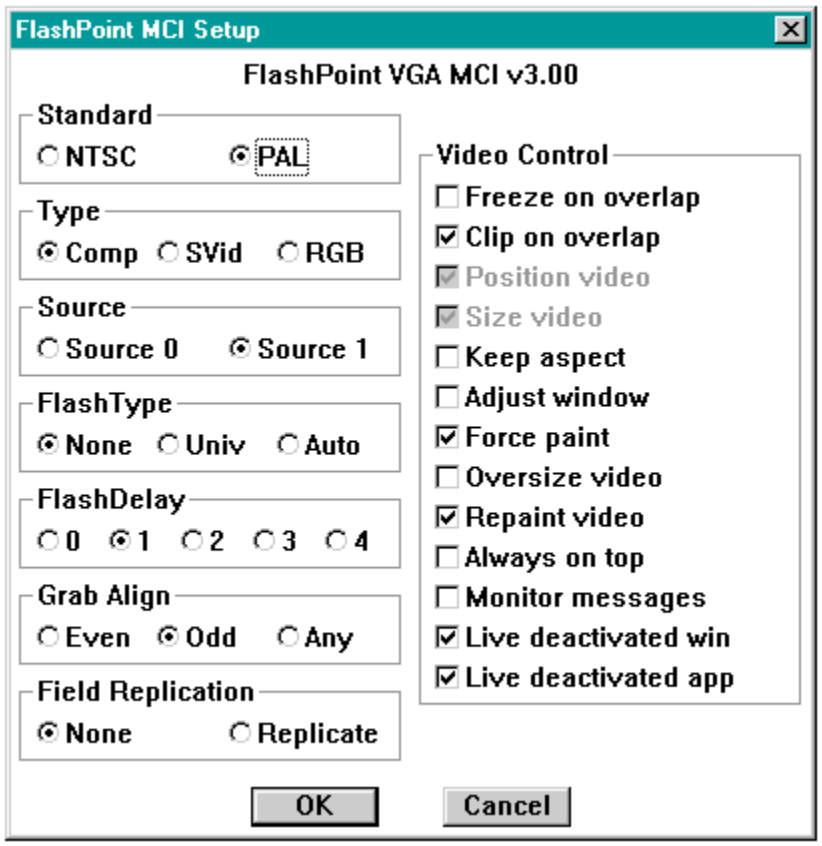
Step	Action
1	Install the card in accordance with the manufacturer's instructions.
2	Install the software supplied with the card accordance with the manufacturer's instructions.
3	Check the installation by plugging in a camera, and running the supplied video application, `fpg32`. See the manufacturer's documentation for guidance.

Installing the FlashPoint MCI Driver

To install the FlashPoint MCI driver for Windows 2000:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click the **Add/Remove hardware** icon
3	Click **Next**.
4	Click **Add/Troubleshoot a device** and click **Next**.
5	Click **Add a new device** and click **Next**.
6	Click **No, I want to select the hardware from a list** and click **Next**.
7	In the **Hardware Types** list, click **Sound, video and game controllers**, and then click **Next**.
8	Click **Have disk**.
9	Browse to `flashpt\fpvmci\mcint` (or `fp3d\mci\nt` if installing a FlashPoint 3D card).
10	Click **oemsetup** and then click **Open**.
11	Click **OK**.
12	In the digital signatures messages, click **Yes**.
13	In the **Select a Device Driver** dialog box, click **(MCI) FlashPoint MCI Driver (NT)** or **(MCI) FlashPoint 3D MCI Driver (NT)** in the list of models.
14	Click **Next** and then click **Next**.
15	In the digital signatures messages, click **Yes**.
16	If prompted, in the **Files Needed** dialog box, browse to `flashpt\fpvmci\mcint` (or `fp3d\mci\nt` if installing FlashPoint 3D card).
17	Click **mcifpv32.dll** (or **mcif3d32.dll** for FlashPoint 3D) and then click **Open**.
18	Click **OK**.

Step	Action
19	In the **FlashPoint MCI Setup** dialog box, click the settings as shown in below.



20	When prompted, click **Yes** to restart the computer.
21	In the **FlashPoint MCI Setup** dialog box, click **OK**.
22	In the **Multimedia Properties** dialog box, click **OK**.

Configuring Station.ini

You must configure `station.ini` to optimize the performance of the card.

To configure the file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to display a Command window.
2	Open the `station.ini` file by typing the following: edit c:*%SystemRoot%*\station.ini
3	Find the `[Video Overlay]` section, which contains entries that define the appearance of the video overlay on screen and when printed.
4	Modify the following entries as appropriate.

Entry	Description
`overlay_alias`	The internal alias for the overlay device used by the video object. It used in hardware-specific capture commands, and must be used consistently in `station.ini` to ensure that printing works correctly.
`capture_file`	The name of the file used to store an immediate image during printing.
`set_source`	Specifies whether the video source rectangle is set to the size of the video object. The default value is `0`. See the manufacturer's documentation for a description.
`set_frame`	Specifies whether the video frame rectangle is set to the size of the video object. The default values is 0.

Step	Action
	`set_fixed` — Specifies whether video image stretching is disabled. The default value is `0`. (This stretches the image to fit the video object). See the manufacturer's documentation for a description.
	`clipboard_command1` `clipboard_command2` — The MCI command strings used to capture the video frame buffer as a Windows Device Independent Bitmap (DIB). See the manufacturer's documentation for details about capturing a frame buffer as a DIB. The capture commands must use the values specified for `overlay_alias` and `capture_file` for printing to work correctly.
STOP	You have completed this task. Return to the checklist that led to this task.

23.6 Installing a printer

This section describes how to install a printer.

Prerequisites

- A suitable printer (see 597).
- You must be logged on to the computer using a Windows account with local administrator rights.

Considerations

- If you are installing an alarm printer, such as an Epson LQ 1070+ ESC P2, the paper size is usually set to `US Std Fanfold`.

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Connect the printer to the computer as specified by the manufacturer.		
Install the print driver.	514	
Specify the location of the print job spool.	519	
If this is an alarm/report printer and it is connected to a computer other than the server, create a guest account.	519	
Configure the printer as described in the *Server and Client Configuration Guide*.		

23.7 Installing a printer driver

The procedure for installing a printer driver and setting up printers depends on the printer connection and how it is to be used.

To install a printer driver for a	Go to
Local printer that is only used by that computer	514
Local printer that is used by other computers	515
Network-connected printer that has a suitable share name (That is, the name does not contain more than 30 characters, and does not contain any spaces.)	516
Network-connected printer that does not have a suitable share name.	517

Installing a printer driver for a local printer

This procedure is only applicable if the printer is connected to the computer, and is only used by this computer.

To install the printer driver:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Settings** > **Printers**.
3	Double-click the **Add Printer** icon. The Add Printer Wizard appears. Click **Next** to continue.
4	Click **Local Printer** and click **Next**.
5	Click the port to which the printer is connected. Click **Next** to continue.
6	Click the printer manufacturer from **Manufacturers**.
7	Click the printer model from **Printers**, and then click **Next**.
8	Name the printer. The name cannot contain spaces, and must not contain more than 30 characters.

Step	Action
9	Click **Yes** to use this printer as the default printer. Click **Next** to continue.
10	Specify whether or not the printer can be shared by other network users then click **Next**.
11	If you want to, specify **Location** and **Comments**.
12	Click **Next**.
13	Click **Yes** to print a test page.
14	Check the information is correct and click **Finish** to finish installing the printer.

STOP	You have completed this task. Return to the checklist that led to this task.

Installing a printer driver for a local shared printer

This procedure is only applicable if the printer is connected to the computer, and it is shared by other computers.

To install the printer driver:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Settings** > **Printers**.
3	Double-click the **Add Printer** icon. The Add Printer Wizard appears. Click **Next** to continue.
4	Click **Local Printer** and click **Next**.
5	Click the port to which the printer is connected. Click **Next** to continue.
6	Click the printer manufacturer from **Manufacturers**.
7	Click the printer model from **Printers**, and then click **Next**.
8	Name the printer. The name cannot contain spaces, and must not contain more than 30 characters.
9	Click **Yes** to use this printer as the default printer. Click **Next** to continue.

Step	Action
10	Click **Share as**, type the same name as above, then click **Next**.
11	If you want to, specify **Location** and **Comments**.
12	Click **Next**.
13	Click **Yes** to print a test page.
14	Check the information is correct and click **Finish** to finish installing the printer.

STOP	You have completed this task. Return to the checklist that led to this task.

Installing a printer driver for a shared network printer (with a suitable share name)

This procedure is only applicable if the printer is connected directly to the network, and the current share name does not contain spaces or more than 30 characters.

To install the printer driver:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Settings** > **Printers** to open the Printers dialog box.
3	Double-click the **Add Printer** icon. The Add Printer Wizard appears. Click **Next** to continue.
4	Click **Network Printer** and click **Next**.
5	Click **Next** to browse a list of shared printers on the network.
6	Click the printer you want to add and click **Next**.
7	Specify whether or not you want the network printer to be the default and click **Next**. Experion PKS does not require the printer to be the default. However, if it is your only printer, and you wish to print screen dumps, you must make it the default printer.
8	Check the information is correct and click **Finish** to complete the installation.

To set the paper size:

Step	Action
1	Choose **Start** > **Settings** > **Printers** to open the Printers dialog box.
2	Click the printer.
3	Choose **File** > **Printing Preferences** and click **Advanced**.
4	Click the correct paper size and click **OK**.
5	On the Layout tab, click the orientation: **Portrait**, **Landscape**, or **Rotated**.
6	Click **Apply** and then click **OK** to close the Printing Preferences dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

Installing a printer driver for a shared network printer (whose existing share name is unsuitable)

This procedure is only applicable if the printer's current share name contains spaces or more than 30 characters.

To install the printer driver:

Step	Action
1	Log on to the computer using a Windows account with local administrator rights.
2	Choose **Start** > **Settings** > **Printers**.
3	Double-click the **Add Printer** icon. The Add Printer Wizard appears. Click **Next** to continue.
4	Click **Local Printer** and click **Next**.
5	Click **Create a new port** and click **Next**.
6	Type the full network UNC path for the printer in the Port Name dialog box and click **OK**.
7	Click the printer manufacturer from **Manufacturers**.

Step	Action
8	Click the printer model from **Printers**, and then click **Next**.
9	Name the printer. The name cannot contain spaces, and must not contain more than 30 characters.
10	Specify whether or not you want the printer to be the default and click **Next**. Experion PKS does not require the printer to be the default. However, if it is your only printer, and you wish to print screen dumps, you must make it the default printer.
11	Click **Do not share this printer** and click **Next**.
12	If you want to, specify **Location** and **Comments**.
13	Click **Next**.
14	Click **Yes** to print a test page.
15	Check the information is correct and click **Finish** to finish installing the printer.

To set the paper size:

Step	Action
1	Choose **Start** > **Settings** > **Printers** to open the Printers dialog box.
2	Click the printer.
3	Choose **File** > **Printing Preferences** and click **Advanced**.
4	Click the correct paper size and click **OK**.
5	On the Layout tab, click the orientation: `Portrait`, `Landscape`, or `Rotated`.
6	Click **Apply** and then click **OK** to close the Printing Preferences dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

Setting up the print job spool folder

When you install a printer, Windows creates a folder to temporarily store print jobs before sending them to the printer. By default, the folder is `\winnt\System32\Spool\Printers`.

To change the spool folder:

Step	Action
1	Choose **Start** > **Settings** > **Printers** to display the Printers window.
2	Choose **File** > **Server Properties** and click the Advanced tab.
3	Type a path for the print spool folder that is not in the primary partition.
4	Click **Apply** and then click **OK** to save your changes.

STOP	You have completed this task. Return to the checklist that led to this task.

Creating a guest account

When printing alarms, events, or reports on a printer that is connected to a computer other than the server, network security becomes a factor. This is because Experion PKS runs under the `mngr` account. When Experion PKS attempts to print via another computer, it logs into that computer using the `mngr` account and associated password. The print job will fail if the login fails.

To ensure that security does not become an issue when printing, you must create a "guest" account on the other computer called, `mngr`. If this account is only used for printing, you can set it up for only printing privileges.

STOP	You have completed this task. Return to the checklist that led to this task.

23.8 Installing a modem

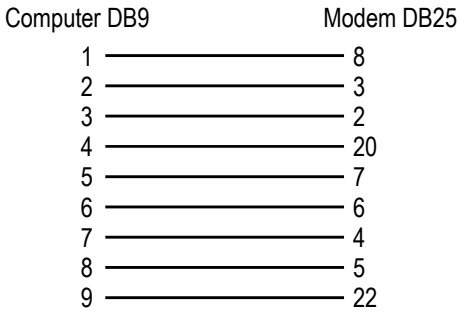
This section describes how to install a modem.

You can set up a modem for either:

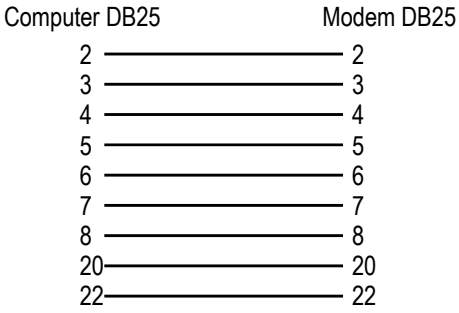
- Microsoft Remote Access Service (RAS) and a virtual network connection. This is the preferred way, and can be used by any client computer, regardless of the application it is running, such as Station, Quick Builder, and so on.
- Alarm Pager.

Prerequisites

- Modem (see 598).
- Appropriate modem cables, as shown in the following figures.
  - 9 pin COM port:



  - 25 pin COM port:



Considerations

- If you want to set up remote access as well as alarm paging, two modems need to be installed on separate COMs ports. For more information about Alarm Paging modems, see the *Server and Client Configuration Guide*.

Tasks

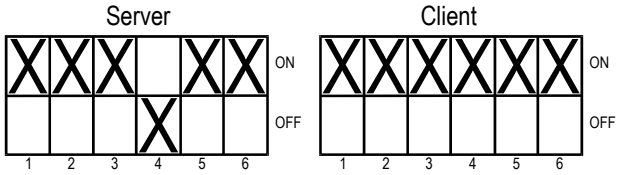
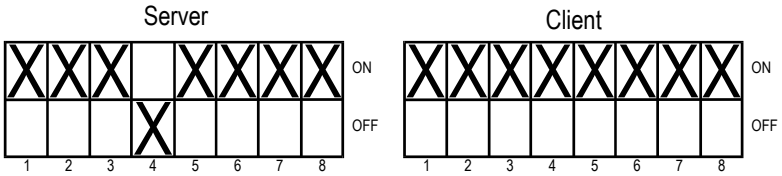
Complete the tasks in the following order.

Task	Go to	Done?
Set up the modem.	521	
Set up the modem connection on Windows 2000.	522	

Setting up the modem

The server modem is configured as the “dumb” modem and the client computer modem is configured as the “active” modem.

To set up the modem:

Step	Action
1	Set the DIP switch settings. • For NetComm M7F modems:  • For Sportster modems: 
2	Connect the modem to the computer's COM port using the modem cable, and switch on the modem.

STOP	You have completed this task. Return to the checklist that led to this task.

Setting up a connection on Windows 2000

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Set up the connection.	523	
Configure RAS.	524	

Task	Go to	Done?
Add a remote user.	525	

Setting up the connection

To set up the connection:

Step	Action
1	Make sure the modem is connected to the computer and switched on, because Windows searches for any modem connected during install.
2	Choose **Start** > **Setting** > **Control Panel**.
3	Double-click **Phone and Modem Options**.
4	Click the **Modems** tab.
5	Click **Add**. If you want to select your modem, click **Don't Detect my Modem, I will select it from a list**.
6	Click **Next**. Windows takes about a minute to search for your modem. If a modem is found, Windows will query it and you will see the lights blinking as Windows and the modem communicate to each other.
7	Click **Next** to accept the modem.
8	Click the port you want to install the modem on and click **Next**. The Modem is now installed.
9	Click **Finish**.
10	Click **OK** to close the Phone and Modem Options dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

Configuring RAS

To configure RAS as a server:

Step	Action
1	Choose **Start** > **Settings** > **Network and dial-up connections** > **Make new connection**.
2	The Network Connection wizard starts, click **Next**.
3	Click **Accept incoming connections**, click **Next**.
4	Click the modem and click **Next**.
5	Click **Do not allow virtual private connections** and click **Next**.
6	Select the users allowed to connect and click **Next**.
7	Click **Internet Protocol (TCP/IP)** and click **Properties**.
8	Assign the TCP/IP addresses, click **OK** and then click **Next**.
9	Click **Finish**.

To configure a RAS client for Windows 2000:

Step	Action
1	Choose **Start** > **Settings** > **Network and dial-up connections** > **Make new connection**.
2	The Network Connection wizard starts, click **Next**.
3	Click **Dial-up to private network** and then click **Next**.
4	Type the phone number and click **Next**.
5	Click the appropriate connection availability, click **Next**.
6	Type a name for the connection and click **Finish**.
7	Choose **Start** > **Settings** > **Control Panel**.
8	Double-click **Network and Dial-up Connections** and click the dial-up connection.

Step	Action
9	Choose **File** > **Properties** to open the **Properties** dialog box for the connection.
10	Make any changes that are required.

STOP	You have completed this task. Return to the checklist that led to this task.

Adding a remote user

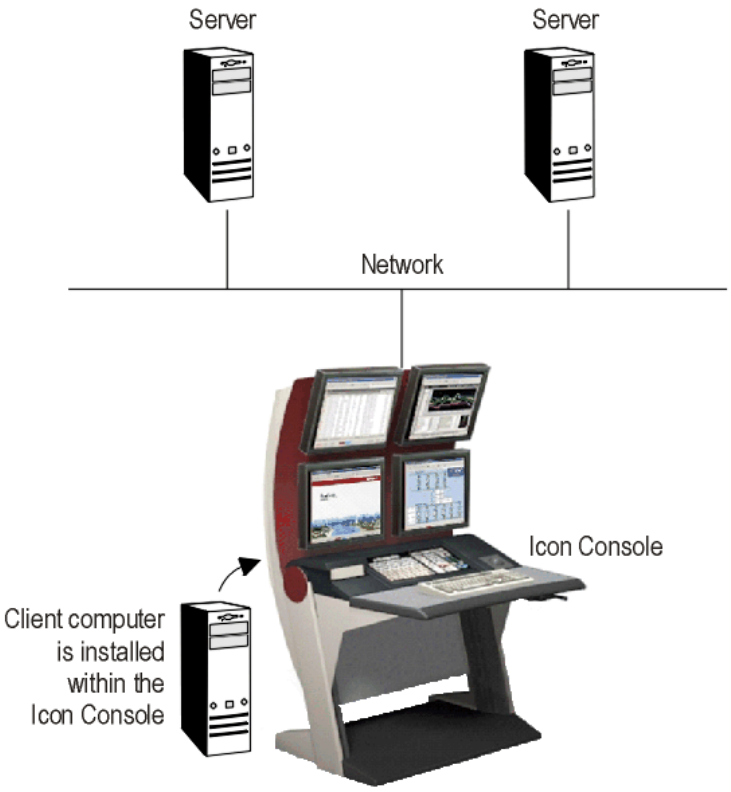
To add the remote user:

Step	Action
1	Choose **Start** > **Control Panel** > **Administrative Tools** > **Computer Management**.
2	Click **Users** from Local users and groups.
3	Choose **Action** > **New User**.
4	Type the **User name** and **Password** as specified in the site specification form.
5	Click User Cannot Change Password and Password Never Expires.
6	Click the **Dialin** icon, click **Grant dialin permission to user** and then click **OK**.
7	Click **OK** to finish.

STOP	You have completed this task. Return to the checklist that led to this task.

24. Preparing a client computer for an Icon Console

This section describes how to prepare a client computer for installation in a Honeywell Icon Console. The client computer is physically installed within the Icon Console and connected to the Experion PKS servers by the network. This connection is shown in the following figure.



Tasks

Installation type	Go to
XPPlus installations.	529

Installation type	Go to
NT5Plus, Windows XP, or Windows 2000 installations.	531

24.1 XPPlus installations

Prerequisites

- Honeywell Icon Console.

  The Honeywell Icon Console must be assembled, including installing the video displays, by following the instructions in the "Console Assembly" section of the *Honeywell Icon Series Console Planning, Installation and Service Guide*.

- Dell Precision Workstation 340 or 360 client computer.
- Matrox 450 MMS X2 or Matrox 450 MMS X4 video card.
- Honeywell operator entry panel (OEP).
- Honeywell OEP/IKB adapter kit.
- Experion PKS Common Component CD.

Tasks

Complete the tasks in the following order.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Task	Go to	Done?
If not already installed, install the Matrox 450 MMS video card.	*Video card installation instructions*	
Install the computer within the Icon Console, including connecting the video card to the video displays. For more information, see the "System Platform Installation" section in the *Honeywell Icon Series Console Planning, Installation and Service Guide*.	*Knowledge Builder*	

Task	Go to	Done?
Connect the OEP to the computer using the Honeywell OEP/IKB adapter.	539	
Install XPPlus.	177	
Install SafeView.	543	
Configure Station for an Icon Console. For more information, see the “Configuring Icon Series Console” section in the *Server and Client Configuration Guide*.	*Knowledge Builder*	

24.2 NT5Plus, Windows XP, or Windows 2000 installations

ATTENTION

Do *not* use this checklist for XPPlus installations.

Prerequisites

- Honeywell Icon Console.

  The Honeywell Icon Console must be assembled, including installing the video displays, by following the instructions in the "Console Assembly" section of the *Honeywell Icon Series Console Planning, Installation and Service Guide*.

- Matrox 450 MMS X2 or Matrox 450 MMS X4 video card.
- Honeywell operator entry panel (OEP).
- Honeywell OEP/IKB adapter kit.
- Experion PKS Common Component CD.
- Experion PKS Station computer. For more information on installing the Windows operating system and Experion PKS Station, see the appropriate checklist:
  - Installing Experion PKS Console Station on NT5Plus Professional (see 74).
  - Installing Experion PKS Console Extension Station on NT5Plus Professional (see 77).
  - Installing Experion PKS Flex Station on NT5Plus Professional (see 77).
  - Installing Experion PKS Console Station (see 107).
  - Installing Experion PKS Console Extension Station (see 111).
  - Installing Experion PKS Flex Station (see 111).

Tasks

Complete the tasks in the following order.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Task	Go to	Done?
If not already installed, install the Matrox 450 MMS video card and drivers.	*Video card installation instructions*	
Install the computer within the Icon Console, including connecting the video card to the video displays. For more information, see the “System Platform Installation” section in the *Honeywell Icon Series Console Planning, Installation and Service Guide*.	*Knowledge Builder*	
If you have installed a flat panel display touchscreen on a Windows XP or Windows 2000 installation, install the touchscreen drivers.	533	
Configure the computer for multiple video displays.	535	
Install the IKB service.	537	
Connect the OEP to the computer using the Honeywell OEP/IKB adapter.	539	
Configure the COM1 port as COM3.	541	
Install SafeView.	543	
Configure Station for an Icon Console. For more information, see the “Configuring Icon Series Console” section in the *Server and Client Configuration Guide*.	*Knowledge Builder*	

24.3 Installing the Flat Panel Display Touchscreen driver

Prerequisites

- You have installed a flat panel display touchscreen (see 597). For instructions on installing a flat panel display, see Experion PKS R210 > Installation and Upgrades > Honeywell Icon Series Console Planning, Installation, and Service Guide > Monitor Installation > Installing the 1850X, 1880X, and 2010X Flat Panel Displays or Installing the 2080UX Flat Panel Displays.
- The CD containing the flat panel touchscreen driver software.

To install the flat panel display touchscreen driver:

Step	Action
1	Connect the flat panel display USB cable to the USB hub within the Icon Series Console.
2	Insert the CD containing the touchscreen driver software into the CD-ROM drive.
3	In Windows Explorer, browse to the `sw500849.exe` file and double-click on it. The **Elo Touchscreen Setup** screen appears.
4	Select **Install USB Touchscreen Drivers** and then click **Next**.
5	Follow the on-screen instructions.
6	After installing the drivers, choose **Start** > **Settings** > **Control Panel** > **ELO**. The **Elo Touchscreen Properties** screen appears.
7	Click the **Mode** tab.
8	Select **Mouse emulation** and **Show tool tray utility**.
9	Click the **Sound** tab.
10	Select **Beep on touch**.
11	Move the **Tone** and **Duration** sliders to suitable settings. You can test the sound by touching **Touch here to test beep sound**.
12	Click **OK**.

Step	Action
13	Restart the computer.
STOP	You have completed this task. Return to the checklist that led to this task.

24.4 Configuring the computer for multiple video displays

This section describes how to configure multiple displays. There are different instructions for Windows 2000 and Windows XP computers. Follow the instructions for the operating system installed on your computer.

Prerequisites

- If you have installed the Matrox 450 MMS video card on a Dell Precision Workstation 360 computer, the BIOS revision level must be A02 or later. The BIOS revision level is identified on the Dell display when you start the computer.

  If the computer requires a BIOS upgrade, see the Dell web site for the upgrade installation and instructions.

To configure the multiple video displays on a Windows 2000 computer:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click the **Display** icon.
3	Click the **Settings** tab.
4	Move the **Screen Resolution** slider to **1280 by 1024**.
5	In the **Colors** list, click **High Color (16-bit)**.
6	Click **Advanced**.
7	Click the **Monitor** tab.
8	In the **Screen refresh rate** list, click **60 Hertz**.
9	Click **OK**.
10	Identify your primary monitor.
11	Drag the monitor icons to align them into the dual or quad configuration layout, as physically installed on the Icon Console.
12	Click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

To configure the multiple video displays on a Windows XP computer:

Step	Action
1	Choose **Start** > **Control Panel**.
2	Double-click the **Display** icon.
3	Click the **Settings** tab.
4	Move the **Screen resolution** slider to **1280 by 1024**.
5	In the **Color quality** list, click **Medium (16 bit)**.
6	Click **Advanced**.
7	Click the **Monitor** tab.
8	In the **Screen refresh rate** list, click **60 Hertz**.
9	Click **OK**.
10	Identify your primary monitor.
11	Drag the monitor icons to align them into the dual or quad configuration layout, as physically installed on the Icon Console.
12	Click **OK**.

STOP	You have completed this task. Return to the checklist that led to this task.

24.5 Installing the IKB service

Prerequisites

- Experion PKS Common Components CD.

Considerations

- If you select the complete installation of the IKB service, USB drivers are copied to your computer. Note the location where these USB drivers are installed for later use.
- If you are connecting a non-USB IKB, you do not need the USB drivers.

To install the IKB service:

Step	Action
1	Insert the Experion PKS Common Components CD into the CD-ROM drive.
2	In the **Common Component CD Browser** window, click **Experion PKS IKB/OEP Keyboard Drivers**. If you have disabled the autorun feature, use Windows Explorer and browse to the `ikb_service` folder on the drive and double-click the `honeywell_ikb_service.msi` file.
3	Follow the on-screen instructions.

To configure the IKB service:

Step	Action
1	On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Expand the **Services and Applications** item and then click **Services**. A list of services installed appears.
3	Right-click on the **ikb_Serv** service and choose **Properties**.
4	Click the **Log On** tab.
5	Click the **Allow service to interact with desktop** check box.

Step	Action
6	Click **OK**.
7	Close the **Computer Management** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

24.6 Connecting an operator entry panel (OEP) to an OEP/IKB adapter

This section shows how to connect the Honeywell OEP/IKB adapter to the client computer and an operator entry panel (OEP).

CAUTION	Do *not* connect the AC power cord to the AC power outlet unless the OEP/IKB adapter is connected to the OEP and the COM1 port of the computer.

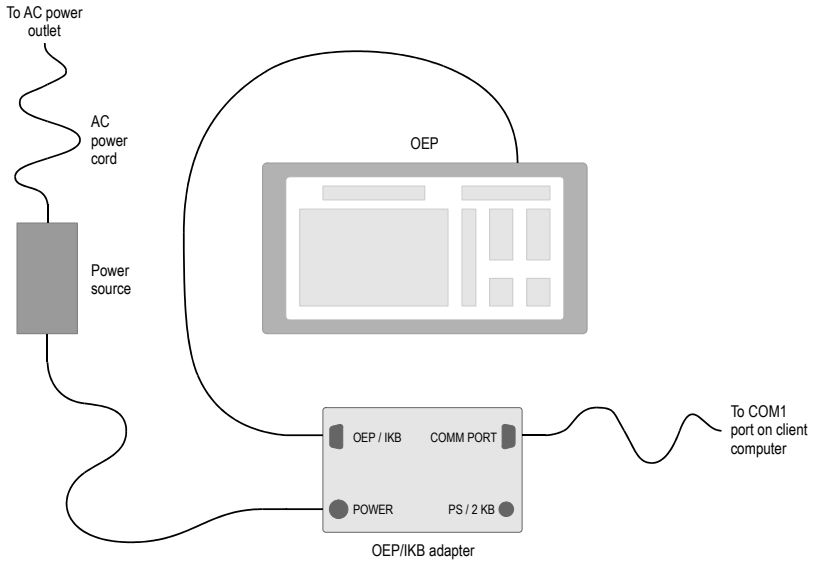
Considerations

- The PS/2 Keyboard port on the OEP/IKB adapter is not connected to any devices. It is only required for a non-USB IKB.

To connect an OEP to an OEP/IKB adapter:

Step	Action
1	Shutdown and turn off the computer.
2	Turn off the OEP.

Step	Action
3	Connect the OEP/IKB and COMM ports on the OEP/IKB adapter as shown in the following figure.



4	Connect the power source to the OEP/IKB adapter.
5	Connect the AC power cord to the power source and the AC power outlet.
6	Turn on the computer and the OEP.

STOP	You have completed this task. Return to the checklist that led to this task.

24.7 Configuring COM1 port as COM3

This section describes how to configure the COM1 port as COM3. COM1 is the port that the Honeywell OEP/IKB adapter is connected to.

Prerequisites

- IKB service is installed.
- OEP/IKB keyboard cable is connected to the Honeywell OEP/IKB adapter.
- Honeywell OEP/IKB adapter COM port is connected to COM1 port on the computer.

Considerations

- If you restart the computer, the computer may report a keyboard failure and the QWERTY portion of the keyboard will not work. To correct this issue, shutdown the computer and then restart it.

To configure COM1 as COM3:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel**.
2	Double-click **System**.
	The **System Properties** dialog box appears.
3	Click the **Hardware** tab.
4	Click **Device Manager**.
	The **Device Manager** console appears.
5	Expand **Ports (COM & LPT)**.
6	Right-click **Communications Port (COM1)** and choose **Properties**.
	The **Communications Port (COM1) Properties** dialog box appears.
7	Click the **Port Settings** tab and then click **Advanced**.
	The **Advanced Settings for COM1** dialog box appears.
8	In the **COM Port Number** list, click **COM3**

Step	Action
9	Click **OK**.
10	Click **OK** to close the **Communications Port (COM1) Properties** dialog box.

STOP	You have completed this task. Return to the checklist that led to this task.

24.8 Installing SafeView

Prerequisites

- Experion PKS Common Components CD.

To install SafeView:

Step	Action
1	Insert the Experion PKS Common Components CD into the CD-ROM drive.
2	In the **Common Component CD Browser** window, click **SafeView**. If you have disabled the autorun feature, use Windows Explorer and browse to the `safeview` folder on the drive and double-click the `setup.exe` file.
3	Follow the on-screen instructions.

STOP	You have completed this task. Return to the checklist that led to this task.

25. Installing controllers

You can install controllers independently of Experion PKS. For example, you could install the communications wiring, and physically connect controllers, before purchasing the server.

After installing a controller, you perform Experion PKS-specific configuration tasks using Control Builder for configuring process points, and Quick Builder for configuring SCADA points. However, you can only download these configuration details to the server after you have installed Experion PKS. (The drivers/interfaces for the licensed controllers are automatically installed on the server when you install Experion PKS.)

Controller References

There is a separate Reference for each type of controller (or interface) supported by Experion PKS.

Each Reference includes detailed information specific to the controller, including:

- Hardware and firmware requirements.
- Communication options.
- Integration and configuration instructions.

Accessing the Controller References from Quick Builder

For each controller supported by Quick Builder, the reference is supplied as a separate help file within Quick Builder. However, if you want a printed version of a reference (in Acrobat PDF format), open the associated help file and follow the instructions in the first topic, “Getting Started”.

ATTENTION

You need Adobe Acrobat Reader version 3, or later, to view and print the PDF files.

26. Installing a terminal server

This section describes how to install a terminal server.

Prerequisites

- A terminal server qualified for use with Experion PKS (see 597).

Considerations

- Compared with a direct serial connection, connecting a device via a terminal server reduces maximum data throughput by 30-40%. If data throughput is of concern, install a serial adapter (see 502).

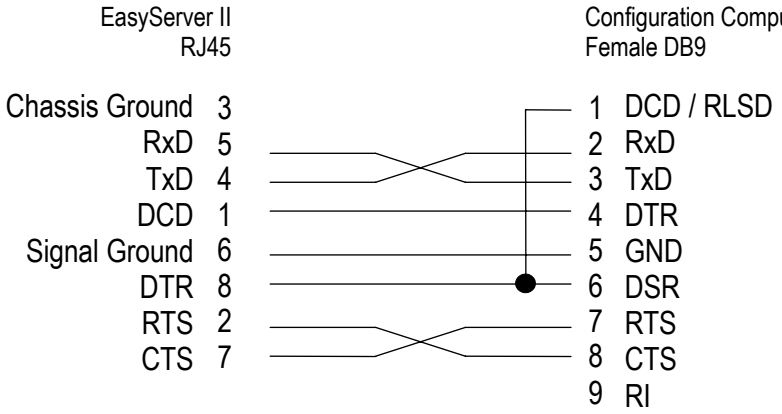
To install a	Go to
Stallion EasyServer II	548
Cisco 2610 Router	566
Systech RCS-3282 or RCS-6008	581

26.1 Configuring an EasyServer II

This section describes how to configure an EasyServer II so that the server can communicate with devices, such as controllers, connected to its serial ports.

Prerequisites

- A computer to configure the EasyServer II. It must be loaded with Windows 2000 HyperTerminal, the configuration application.
- A serial cable, as shown in the following figure, to connect the computer to the EasyServer II.



Considerations

- The computer must not be running any application that uses the COM1 port.

Tasks

Complete the tasks in the following order.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Task	Go to	Done
Reset the EasyServer II to its factory settings. (Only applicable if you are performing a complete install.)	549	
Connect a configuration computer to the EasyServer II, so that you can configure it.	549	
Specify the IP address of the EasyServer II.	550	
Configure the EasyServer II.	553	
Add the IP address the server's hosts file.	562	
Connect controllers as required.	563	

Resetting the EasyServer II

If you are performing a complete install of the EasyServer II, you must reset it to restore all settings to their factory defaults and erase the TCP/IP address.

To reset the EasyServer II:

Step	Action
1	Check that it is turned on.
2	Insert a straightened paper clip or similar blunt item into the opening labeled: • On an 8 port, **RESET** and press lightly. • On a 16 port, **ERASE** and press lightly.

Connecting the Configuration Computer

To connect the computer:

Step	Action
1	Connect a serial cable between COM1 port of the computer and Port 1 of the EasyServer II.

Step	Action
2	On the computer, start Microsoft Windows HyperTerminal by choosing **Start** > **Programs** > **Accessories** > **Communications** > **HyperTerminal**.
3	In the Connection Description dialog box, type the **Name** of the EasyServer II connection, click an icon, and then click **OK** to see the Connect To dialog box.
4	Complete the Connect To dialog box, setting **Connect Using** to `COM1` or `COM2`, then click **OK**.
5	Set the COM1 or `COM2` Port values as follows:

Parameter	Value
Baud Rate	`9600`
Data Bits	`8`
Parity	`None`
Stop Bits	`1`
Flow Control	`XON/XOFF`

6	Press ENTER several times in the HyperTerminal window until the EasyServer II responds with a prompt. When you see the prompt, you are ready to specify the EasyServer II's IP address.

Specifying the IP Address

You specify the IP address of the EasyServer II using HyperTerminal.

Considerations

- If you type an incorrect character while typing a command in HyperTerminal, use CTRL+D to backspace. (The BACKSPACE key does not work as expected when entering commands in HyperTerminal.)

To specify the IP address:

Step	Action

1	Check that something similar to the following appears at the HyperTerminal prompt. (This is an example of an EasyServer II 8 port display.)
	
	If this does not appear, switch off the EasyServer II, wait 10 seconds, turn it back on and start your connection again.
	
	`Stallion Technologies, EasyServer II ESII-8`
	
	`Copyright (c) 1996 Stallion Technologies Pty. Ltd., All Rights Reserved.`
	`Copyright (c) 1980, 1986, 1988 Regents of the University of California.`
	
	`ESII-8 Communications Server V5.1.1  Uptime:    0:00:01`
	
	`Ethernet:  00-60-1f-00-16-a8     Internet:   0.0.0.0`
	
	`Name:    ESII_00601F0016A8     Number:    0`
	
	`Determining IP address from network...`
	
	`Requesting BOOTP: No valid response.`
	`Requesting RARP: No valid response.`
	
	`Server is unable to determine internet address from network.`
	`To manually enter the address, press RETURN key a few times now.`
	`Otherwise server will retry BOOTP and RARP in two minutes.`
	`Server will retry BOOTP and RARP if nothing entered in two minutes.`

2	Press ENTER several times (five times is usually enough) until you are prompted to enter the Internet address.

Step	Action

3	To set the IP address:
	
	For an 8 port, type the following command:
	
	a.b.c.d [subnet mask *m.n.o.p*]
	
	where *a.b.c.d* is the IP address and *m.n.o.p* is its subnet mask. Note that the subnet mask will default to appropriate values if left blank.
	
	You are greeted with the prompt:
	
	`ESII-8 Communications Server is ready.`
	
	For a 16 port, type the following command:
	
	a.b.c.d
	
	where *a.b.c.d* is the IP address.
	
	You are then prompted for the subnet.
	
	`[subnet mask m.n.o.p]`
	
	where *m.n.o.p* is its subnet mask. Note that the subnet mask will default to appropriate values if left blank.
	
	You are greeted with the prompt similar to this:
	
	`ESII-8 Communications Server is ready.`

4	Press ENTER several times (five times is usually enough) until the EasyServer II responds with the prompt:
5	`Enter username:`
6	Type a user name, which can be anything you like, for example, **`root`**.
7	To disconnect from the terminal session type **`Logout`**. You do not have to save the HyperTerminal session.
8	Close HyperTerminal.

Setting up a Telnet Session

You configure the EasyServer II via a Telnet session.

Considerations

- Unless the Stallion and the computer you are running telnet from are on the same network, you will not be able to connect to the Stallion. If they are not on the same network, you need to configure the internet gateway on the Stallion using HyperTerminal, with a COM port connection.

To set up a Telnet session:

Step	Action
1	Choose **Start** > **Run** to open the Run dialog box.
2	Type **`telnet`** ***`a.b.c.d`*** and click **OK**, where *`a.b.c.d`* is the IP address of the EasyServer II.
3	Press ENTER several times (five times is usually enough) in the Telnet window until the EasyServer II responds with the prompt: `Enter username:`
4	Type a user name, which can be anything you like, for example: **`root`**.
5	At the `Local n>` prompt, type **`set privileged`** (this changes your security level to system security level, which is required to configure the EasyServer II).
6	At the `Privilege password` prompt, type **`system`** (the system password). Note the double angle brackets “>>”, which indicate privileged mode. (You can change this password using the **`set server privileged password`** command.)

Step	Action
7	Configure the EasyServer II by typing the appropriate configuration commands: • If the EasyServer II is connected to the Experion PKS server via a router/gateway, specify its address (see 554). • Configure the Ethernet Interface (see 555). • Configure the TCP ports (see 555). • Specify the inactivity timeout (see 557). • Configure the TCP keep alive timer (see 557). • Configure each serial port (see 558).
8	When you have finished, type **`logout`** to end the Telnet session.

Specifying a Router/Gateway Address

If the EasyServer II is connected to the server via a router/gateway, you must specify its IP address.

You must perform this procedure even though the EasyServer II automatically detects routers. (It may appear to function correctly if you do not perform this procedure, but its operation will be unreliable and might cause channels to fail.)

To specify the address:

Step	Action
1	Type: `change internet gateway` *`i.j.k.l`* `network any` where *`i.j.k.l`* is the IP address of the router. If you have a redundant server system in which the servers are in different domains (because they are physically separated), you must issue the command twice—once for each server IP.

To see the current address:

Step	Action
1	Type: `show internet gateway` If you have a redundant server system in which the servers are in different domains (because they are physically separated), you must issue the command twice—once for each server IP.

Configuring the Ethernet Interface

The Stallion EasyServer II does not auto-detect the type of attached Ethernet cable after restarting, unless the terminal server sends data to the interface. You must identify the Ethernet interface and configure EasyServer II.

To configure the Ethernet interface:

Step	Action
1	Type: `change ethernet mode` *`mode_type`* **Part** / **Description** *`mode_type`* — `AUI` (the 10Base-2/BNC port); `UTP` (the 10Base-T/UTP port)

Configuring TCP Port Numbers

The server communicates with the EasyServer II serial ports via TCP/IP, using TCP port numbers, which can be between 2001 and 2032.

The EasyServer II uses a Telnet listener, which only accepts connections if the TCP port number is specified.

To configure a port:

Step	Action

1	Type the following commands:
	`change telnet listener` *`tcp_port`* `ports` *`n`* `enabled`
	`change telnet listener` *`tcp_port`* `identification "`*`text_string`*`"`
	`change telnet listener` *`tcp_port`* `connections enabled`
	`change telnet listener` *`tcp_port`* `raw mode enabled`

Part	Description
`tcp_port`	The number of the TCP port, between `2001` and `20032`.
`n`	The number of the serial port.
text_string	Port identification string, such as `port_2`.

Example

These commands set up a Telnet listener on logical port 2003 and map to serial port 3.

```
change telnet listener 2003 ports 3 enabled
change telnet listener 2003 identification “Port_3”
change telnet listener 2003 connections enabled
change telnet listener 2003 raw mode enabled
```

To see which TCP port numbers are mapped to serial ports:

Step	Action
1	Type the following command: `show telnet listener`

Specifying the Inactivity Timeout

Honeywell strongly recommends that you specify an inactivity timeout for the EasyServer II. If the EasyServer II sees no communication on a particular serial port within the timeout period, it disconnects the connection between that port and the server.

To set the inactivity timeout:

Step	Action
1	Type: `change server inactivity timer m` where *m* is the inactivity timeout in minutes (an integer value, typically set to 1)
2	Check that you have set the correct timeout period by typing **`show server`**
3	Enable inactivity timeout for all ports by typing: `change port all inactivity logout enabled`
4	Check that you have enabled inactivity timeout by typing: `show port n characteristics` where *n* is a port number.

Configuring the TCP keep alive timer

If you have a redundant server system, you must configure the TCP keep alive timer so that the backup server can connect to the EasyServer II if the server acting as primary fails.

The keep alive timer ensures that the EasyServer II automatically disconnects and frees a connection to a port if it loses communication with the server—for example, if the server or the network connection fails.

If the keep alive time expires, the EasyServer II sends several keep alive packets to the server. (The interval between these keep alive packets is the greater of 2 seconds and the `keep alive time/96`.) If the server does not respond, the EasyServer II assumes that the connection has been broken and allows the backup server to establish a connection.

The following table shows the recommended settings for three sample redundant server configurations.

Redundant server configuration	Keep alive time (s)	Keep alive packets
Normal failover communicating with an EasyServer II on a high speed LAN	10	8
Fast failover communicating with an EasyServer II on a high speed LAN	5	3
Normal or fast failover communicating with an EasyServer II on low speed WAN	20	8

To configure keep alive timer:

Step	Action
1	Type: `change internet keepalive timer` *s* `seconds` where *s* is the keep alive time in seconds (an integer value).
2	Type: `change internet keepalive count` *c* where *c* is the number of keep alive packets
3	Check that you have set the correct values by typing **`show internet`**

Configuring a Serial Port

You must configure the characteristics—baud rate, parity and so on—of each serial port so that it can communicate with the device to which is attached.

Prerequisites

- The port must not have a connection with the server. If it has a connection, disconnect it by typing **logout port *n***, where *n* is the port number.

To view the port's current settings:

Step	Action
1	Type: `show port` *n* where *n* is the serial port number.

To configure a port:

Step	Action
1	Type the following command: `change port [all|`*n*`]` *parameter*

Part	Description
`all|`*n*	The port(s) being configured. Use `all` if you are changing all ports. Alternatively, specify the port number or range of numbers, for example `1`, or `1-5`.
parameter	The parameter being configured (see 560). You can only specify one parameter at a time, as shown in the following example.

Port Parameters

The following table lists the values for the main parameters.

See the *Stallion EasyServer II Installation and Reference Guide* for information about other port parameters, such as `broadcast` and `lock`.

Parameter	Values
`access`	`remote` (permits access by remote connection requests, and denies access by local log ins)
`autobaud`	`disabled`
	`enabled`
`broadcast`	`disabled` (disallows message reception)
	`enabled`
`command completion`	`disabled`
	`enabled`
`flow control`	`disabled`
	`cts`
	`xon`
`lock`	`disabled`
	`enabled`
`loss notification`	`disabled`
	`enabled`
`message codes`	`disabled`
	`enabled`

Parameter	Values
parity	none
	odd
	even
	mark
	space
speed	*BaudRate*
stop bits	1
	2
	dynamic
verification	disabled
	enabled

Example

These commands configure serial port 3.

```
change port 3 speed 9600
change port 3 stop bits 1
change port 3 parity none
change port 3 flow control disabled
change port 3 access remote
change port 3 autobaud disabled
change port 3 broadcast disabled
change port 3 lock disabled
change port 3 loss notification disabled
change port 3 message codes disable
```

```
change port 3 command completion disabled
change port 3 verification disabled
```

Adding the IP Address to the Server's hosts File

You must add the IP address and name of the EasyServer II to the server's `hosts` file.

To add the IP address to the hosts file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to open a Command Prompt window.
2	At the `c:\>` prompt, change to the folder for the hosts file: `cd winnt\system32\drivers\etc`
3	Open the hosts file by typing: `notepad hosts`
4	Move to the last line and type: *`a.b.c.d terminal_server_name`* where, *`a.b.c.d`* is the IP address and *`terminal_server_name`* is the **TCP Host Name**. (You must specify this name in Quick Builder when configuring a controller that is connected to the this EasyServer II.) For example, the new line may look like this: `192.168.0.84 esii` After editing the server's `hosts` file, it is recommended you confirm that the computer can resolve the name that you have added.

To confirm the information added to the hosts file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to open a Command Prompt window.

Step	Action

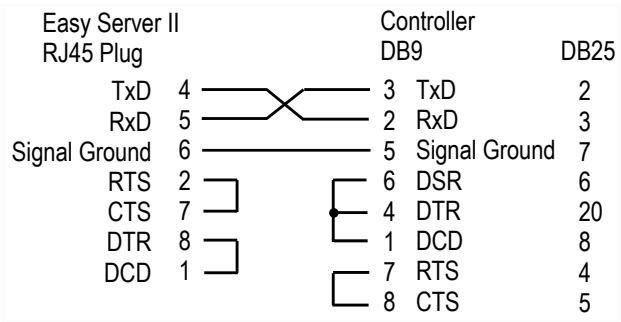
2	At the `c:\>` prompt, type:
	`ping terminal_server_name`
	where, *`terminal_server_name`* is the **TCP Host Name** which you added to the hosts file.
	For example, the new line may look like this:
	`ping esii`

Connecting Controllers

This section provides general instructions on connecting controllers to an EasyServer II. Note that you must also read the appropriate *Controller References* to see if there are any specific restrictions applicable to the controllers you want to connect.

Cabling

The following figure shows a no-handshaking, RS-232 cable, suitable for connecting most controllers to an EasyServer II.



Configuring the Port in Quick Builder

You use Quick Builder to configure each controller that is connected to the EasyServer II.

The following properties (Port tab) are specific to an EasyServer II.

Property	Description

Property	Description
Port Type	Click `Terminal Server`.
Terminal Server TCP Host Name	The name you defined in the server's hosts file for the EasyServer II to which the controller is connected. If you have not added the terminal server's details to the hosts file, you can type its IP address.
Terminal Server TCP Port No	The number of the TCP port to which the controller is connected. For example, if the controller is connected to serial port 2, and that is mapped to TCP port 2003, you would type **`2003`**.
Idle Timeout	Leave at `180 sec`.

Changing the TCP/IP Address

If you ever reconfigure your network, you have to define the EasyServer II's new TCP/IP address.

To change the TCP/IP address:

Step	Action
1	Disconnect the Ethernet cable from the EasyServer II to ensure that there are no current connections.
2	Change the IP address by typing: `define internet address` *`a.b.c.d`* `[subnet mask` *`m.n.o.p`*`]` where *`a.b.c.d`* is the IP address and *`m.n.o.p`* is its subnet mask. (The subnet mask will default to appropriate values if left blank.)
3	Re initialize the EasyServer II so that the new internet address takes effect by typing: `initialize server delay 0`
4	Reconnect the Ethernet cable.
5	Check the IP address by typing: `show internet`

26.2 Configuring a Cisco 2610 Router

This section describes how to configure a Cisco 2610 Router so that the server can communicate with devices, such as controllers, connected to its serial ports.

Prerequisites

- A computer to configure the router. It must be loaded with Windows 2000 and Windows HyperTerminal, the configuration application.
- A 4-port or 8-port asynchronous/synchronous network module.
- A "Console" cable (connects the router to the computer).
- An adapter, either RJ-45-to-DB-9 or RJ-45-to-DB-25, depending on the computer's COM ports.
- A 10baseT Ethernet cable (to connect the router to an Ethernet hub or switch).

Tasks

Complete the tasks in the following order.

ATTENTION

Make a copy of this checklist so that it is easier to keep track of where you are in the installation process.

Task	Go to	Done?
Preliminary setup.	567	
Configure the router's Ethernet properties.	567	
Configure the router's serial ports.	571	
Add the IP address to the server's hosts file.	577	
Connect controllers as required.	578	

Preliminary Setup

You must install the network module, connect the console cable and connect the router to the server.

To set up the router:

Step	Action
1	Install the module in the empty module slot located at the rear of the router.
2	Connect one end of the console cable to the light-blue port labeled **CONSOLE** on the rear of the router.
3	Connect the other end of the console cable to the adapter.
4	Connect the adapter to the COM1 port on the computer.
5	Connect the Ethernet cable to the yellow 10baseT port labeled **ETHERNET 0/0** on the rear of the router.
6	Connect the other end of the Ethernet cable to an Ethernet hub or switch.

Configuring the Router's Ethernet Properties

You use HyperTerminal to configure the router's Ethernet properties, including its IP address and passwords.

Considerations

- If you type an incorrect character while typing a command in HyperTerminal, use CTRL+D to backspace. (The BACKSPACE key does not work as expected when entering commands in HyperTerminal.)

To configure the Ethernet properties:

Step	Action
1	Start Microsoft Windows HyperTerminal by choosing **Start** > **Programs** > **Accessories** > **Communications** > **HyperTerminal**.
2	When prompted for the name of your new connection, type **`C2610`**. The Connect To dialog box opens.
3	Set **Connect Using** to `COM1` and click **OK**. The COM1 Properties dialog box opens.

Step	Action

4 Set the COM1 Port values as follows:

Parameter	Value
Baud Rate (Bits per second)	`9600`
Data Bits	`8`
Parity	`None`
Stop Bits	`1`
Flow Control	`None`

5 Check that something similar to the following appears at the HyperTerminal prompt:

```
System Bootstrap, Version 11.3(1)XA, PLATFORM SPECIFIC
RELATED SOFTWARE (fc1)


Copyright (c) 1998 by Cisco Systems, Inc.
C2600 platform with 32768 Kbytes of main memory
```

If this does not appear (while still connected through HyperTerminal), switch off the router, wait 10 seconds, and then turn it back on.

6 Follow the online instructions for configuring the router, until you reach the router's host name.

7 Specify the router's host name, for example `2600`.

8 Follow the online instructions to configure the router's passwords:

- Set the enable secret password to `system`. The enable secret password protects access to privileged EXEC and configuration modes.
- Set the virtual terminal password to `2600`. The virtual terminal password protects access to the router over a network interface (such as telnet).

Step	Action
9	Continue the setup until the messages stop and a prompt containing the host name appears as the prompt, for example: `2600>`.
10	Type **`enable`**
11	At the `Password:` prompt, type **`system`** where *`system`* is the privileged EXEC password. The prompt changes to `2600#`. (The "**#**" indicates privileged EXEC mode.) You must be in privileged EXEC mode to perform the remaining configuration tasks.
12	Configure the router by typing the appropriate configuration commands: • If the router and server are connected to LANs on different subnets, specify the gateway address (see 569). • Specify the router's IP address (see 570). • Set the TCP keep alive timer (see 570).
13	When you have finished, press CTRL+Z to exit to privileged EXEC mode.
14	To save the changes, type: `copy running-config startup-config`

Specifying the Router's Gateway Address

If the router and the server are connected to LANs on different subnets, you must specify the gateway address for the router in its global IP settings.

To specify the gateway address:

Step	Action
1	Type **`configure terminal`** The prompt changes to `2600(config)#`

2	Type:
	`no ip routing`
	`ip default-gateway a.b.c.d`
	
	where *`a.b.c.d`* is the IP address of your subnet's gateway.

Specifying the Router's IP Address

To specify the IP address:

Step	Action
1	Type **`configure terminal`** The prompt changes to `2600(config)#`

2	Type:
	`interface Ethernet 0/0`
	`ip address` *`e.f.g.h w.x.y.z`*
	`no shutdown`
	where *`e.f.g.h`* is the IP address of the router and *`w.x.y.z`* is its subnet mask.

Setting the router's TCP keep alive timer

If you have a redundant server system, you must configure the TCP keep alive timer so that the backup server can connect to the Cisco 2610 Router if the primary server fails.

The keep alive timer ensures that the Cisco 2610 Router automatically disconnects and frees a connection to a port if it looses communication with the server—for example, if the server or the network connection fails.

To set the keep alive timer:

Step	Action
1	Type **`configure terminal`** The prompt changes to `2600(config)#`
2	Type: `interface Ethernet 0/0` `keepalive` *`n`* where *n* is the keep alive time in seconds (an integer value, typically set to `10`).

Configuring Serial Ports

You configure the serial ports by logging into the router via Telnet and entering privileged EXEC mode.

To log on to Telnet and configure the serial ports:

Step	Action
1	Choose **Start** > **Run** to open the Run dialog box.
2	Type **`telnet`** ***`a.b.c.d`*** and click **OK**, where *`a.b.c.d`* is the IP address of the router.
3	Wait until the "User Access Verification" message and the `Password:` prompt appears.
4	Type virtual terminal password, for example **`2600`**
5	Type **`enable`**
6	At the `Password:` prompt, type **`system`** where *`system`* is the privileged EXEC password.
7	Configure each serial port by typing the appropriate configuration commands: • Set up the port (see 571). • Set the keep alive timer (see 573). • Set the communications characteristics (see 573). • Set the inactivity timer (see 576).
8	When you have finished, press CTRL+Z to exit to privileged EXEC mode.
9	To save the changes, type: `copy running-config startup-config`

Setting Up a Serial Port

The serial interface ports are those of the asynchronous/synchronous network module (with either 4 or 8 ports). For example, the port numbers for an 8-port module are:

- Port 0 = interface serial 1/0
- Port 1 = interface serial 1/1

- Port 2 = interface serial 1/2
- Port 3 = interface serial 1/3
- Port 4 = interface serial 1/4
- Port 5 = interface serial 1/5
- Port 6 = interface serial 1/6
- Port 7 = interface serial 1/7

To set up a serial interface:

Step	Action

1	Type:
	`configure terminal`
	`interface serial 1/`*x*
	`physical-layer async`
	`no ip address`
	`no ip mroute-cache`
	`async default routing`
	`async mode interactive`
	`no shutdown`
	`no fair-queue`
	where *x* is the number of the serial port.

Setting a serial port's TCP keep alive timer

To set the keep alive timer:

Step	Action
1	Type: `configure terminal` `interface serial 1/`*x* `keepalive` *n* where *x* is the number of the serial port, and *n* is the keep alive time in seconds (an integer typically set to `10`).

Configuring the Communications Characteristics

You must configure the characteristics—baud rate, parity and so on—of each serial port so that it can communicate with the device to which is attached.

You must also configure each serial port as a TTY line so that it has the same functionality as a serial line on a terminal server. You do this by assigning the appropriate TTY line number and TCP port number for each serial port, as shown in the following table.

Serial Port	TTY Line Number	TCP Port Number
Port 0	33	4033
Port 1	34	4034
Port 2	35	4035
Port 3	36	4036
Port 4	37	4037
Port 5	38	4038
Port 6	39	4039

Serial Port	TTY Line Number	TCP Port Number
Port 7	40	4040

ATTENTION

If the installed network module or 2600 series router is different from the configuration described here, see the *Cisco Network Modules Hardware Installation Guide*.

To configure characteristics of a serial port:

Step	Action

1	Type:
	`configure terminal`
	`line tty` *`n`*
	`terminal-type vt210`
	`no autobaud`
	`speed` *`baud_rate`*
	`parity` *`parity_setting`*
	`transport input telnet`
	`transport output telnet`
	`transport preferred telnet`
	`databits` *`x`*
	`flowcontrol` *`flowcontrol_setting`*
	`stopbits` *`num_stop_bits`*

Variable	Description
`n`	The TTY number associated with the serial port
`baud_rate`	The baud rate, for example `9600`
`parity_setting`	The parity setting, for example `NONE`
`x`	The number of data bits, for example `8`
`flowcontrol_setting`	The flow control setting, for example `NONE`
`num_stop_bits`	The number of stop bits, for example `1`

To check a serial port's settings:

Step	Action
1	Type **`show line`** ***n***, where *n* is the TTY line number.

Setting a Serial Port's Inactivity Timer

Honeywell strongly recommends that you specify an inactivity timeout for each serial port. If there is no communication on a port within the timeout period, the router disconnects the connection between that port and the server.

To set the inactivity timer:

Step	Action
1	Type: `line tty` *n* `session-timeout` *x* where *n* is the line number (for example `33`), and *x* is the inactivity time in minutes (for example `1`).

Examples

These commands set up serial port 3 for a typical controller.

```
configure terminal
line tty 36
session-timeout 1
terminal-type vt210
no autobaud
speed 9600
parity none
transport input telnet
transport output telnet
transport preferred telnet
```

```
databits 8
flowcontrol none
stopbits 1
```

Adding the IP Address to the Server's hosts File

You must add the IP address and name of the router to the server's `hosts` file.

To add the IP address to the hosts file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to open a Command Prompt window.
2	At the `c:\>` prompt, change to the folder for the hosts file: `cd winnt\system32\drivers\etc`
3	Open the host file by typing: `notepad hosts`
4	Move to the last line and type: *`a.b.c.d terminal_server_name`* where, *`a.b.c.d`* is the IP address and *`terminal_server_name`* is the **TCP Host Name**. (You must specify this name in Quick Builder when configuring a controller that is connected to the this router.) For example, the new line may look like this: 192.168.0.84 c2610 After editing the server's `hosts` file, it is recommended you confirm that the computer can resolve the name that you have added.

To confirm the information added to the hosts file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to open a Command Prompt window.

Step	Action

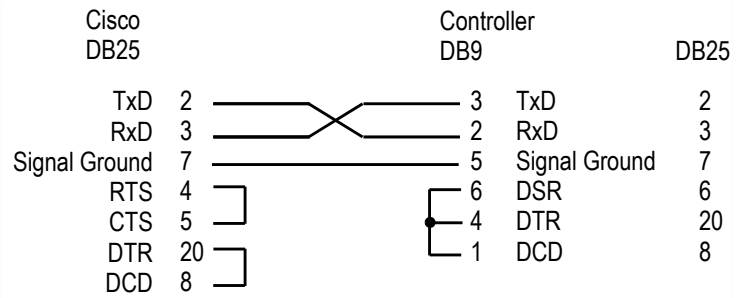
2	At the `c:\>` prompt, type:
	`ping terminal_server_name`
	where, *`terminal_server_name`* is the **TCP Host Name** which you added to the hosts file.
	For example, the new line may look like this:
	`ping c2610`

Connecting Controllers

This section provides general instructions on connecting controllers to an Cisco router. Note that you must also read the appropriate *Controller References*to see if there are any specific restrictions applicable to the controllers you want to connect.

Cabling

The following figure shows a no-handshaking, RS-232 cable, suitable for connecting most controllers to a Cisco router.



Configuring the Port in Quick Builder

You use Quick Builder to configure each controller that is connected to the router.

The following properties (Port tab) are specific to a Cisco router.

Property	Description
Port Type	Click `Terminal Server`.

Property	Description
Terminal Server TCP Host Name	The name you defined in the server's hosts file for the router to which the controller is connected. If you have not added the router's details to the hosts file, you can type its IP address.
Terminal Server TCP Port No	The number of the TCP port to which the controller is connected. For example, if the controller is connected to serial port 2, and that is mapped to TCP port 4035, you would type **`4035`**.
Idle Timeout	Leave at `180 sec`.

Advanced Cisco Router Commands

These commands allow you to change the router's IP address, passwords, and so on. For more information, see the *Cisco Network Modules Hardware Installation Guide*.

In order to use these commands:

Step	Action
1	Log on to the router via Telnet and enter privileged EXEC mode.
2	Type **`configure terminal`**, and then type one or more commands, as required.
3	When you have finished, press CTRL+Z to exit to the privileged EXEC mode.
4	Save the change by typing: `copy running-config startup-config`

To change the router's host name:

`hostname` *`name`*

where *`name`* is the new host name.

To change the Privileged EXEC m secret password:

```
enable secret password
```

where *password* is the new password.

To change the virtual terminal password:

```
line vty 0
password password
```

where *password* is the new password.

To view the router's configuration:

```
show configuration
```

This does not show the privileged EXEC password.

26.3 Configuring a Systech

This section describes how to configure a Systech RCS-3282 or RCS-6008 so that the server can communicate with devices, such as controllers, connected to its serial ports.

Prerequisites

- A computer to configure the Systech. It must be loaded with Windows Internet Explorer.

Considerations

- The computer must not be running any application that uses the COM1 port.
- The TCP port number assigned for each port cannot be changed.

  For the RCS-3282, the port numbers are:

  – Port 1 = 8001 (Raw TCP)

  – Port 2 = 8002 (Raw TCP)

  For the RCS-3282, the port numbers are:

  – Port 1 = 8001

  – Port 2 = 8002

  – Port 3 = 8003

  – Port 4 = 8004

  – Port 5 = 8005

  – Port 6 = 8006

  – Port 7 = 8007

  – Port 8 = 8008

Tasks

Complete the tasks in the following order.

Task	Go to	Done?
Specify the Systech's IP address.	582	
Log on to the Systech via Internet Explorer.	583	
Change the TCP/IP settings.	583	
If the Systech is connected to the Experion PKS server via a router, configure the route from the Systech to the Experion PKS server.	584	
Configure the TCP keep alive timer.	585	
Configure the Systech's serial ports.	586	
Connect controllers as required.	591	

Specify the IP Address

You specify the Systech's IP address using the NativeCOM software.

Prerequisites

- NativeCOM software is installed.

Considerations

To specify the IP address:

Step	Action
1	Click **Start** > **Programs** > **NativeCOM** > **NativeCOM Configuration Utility**.
2	From the Port Server group click **Add**.
3	Click **Add Unlisted Port Server**.

Step	Action
4	Click **Assign IP Address**.
5	Type the Ethernet Address and the New IP Address of your Systech Terminal Server and click **Assign IP Address**. After assigning an IP address the Add Port Server dialog box will appear.
6	In the **Step 1 - Select a port server** area, click the terminal server.
7	In the **Step 2 - Configure the port template** area, type a name for the serial ports and click **Driver Settings**.
8	In the Driver Settings dialog box, make sure only **Write Errors on Failed Network Connection** is selected, then click **OK**.
9	In the **Step 3 - Select COM ports** area, leave the defaults. Although this dialog will assign virtual COM ports COM3 and COM4, this feature of the terminal server must not be used. The Experion PKS terminal server driver must be used instead.
10	Click **OK** and then click **Close**.

Logging into the Terminal Server using Internet Explorer

Once your terminal server's IP address is configured it is recommended to log on to the terminal server using Internet Explorer.

To log on using Internet Explorer:

Step	Action
1	Start Internet Explorer.
2	In the address bar type: ***//a.b.c.d*** Where *a.b.c.d* is the IP address of your Systech terminal Server. For example: `//220.0.0.1`. The main configuration menu appears.

Changing the TCP/IP Address

If you ever reconfigure your network, you have to define the Systech's new TCP/IP address.

To change the TCP/IP address:

Step	Action
1	Click the **IP Address** link.
2	Type the IP address and IP Netmask addresses.
3	Click **Apply Changes**.
4	Click **Save Changes**. You need to reboot the terminal server for the new settings to take effect. Do this by cycling the power.

Configuring the Router/Gateway Address

If your terminal server is connected to the Experion PKS server via a router, you need to configure the route from the terminal server to the Experion PKS server.

ATTENTION

For the terminal server to be able to be reached by all computers on a different subnet, use that subnets router or gateway address, as the destination address in the terminal server.

To configure the gateway:

Step	Action
1	Click the **Routing/Gateways** link.
2	Type the Destination address. This is the address of your Experion PKS Server.
3	Type the Gateway address. This is the address of the router that the terminal server communicates with.
4	From the Flags options, select **net**. “Net” indicates that the destination IP address is a computer on the specified network.
5	In Metric, specify the number of jumps to reach the destination address.

Step	Action
6	From the Gateway type options, select **address**. Address indicates that the Gateway is an address.
7	Click **Add Entry**.
8	Click **Save Changes**.
9	You need to reboot the terminal server for the new settings to take effect. Do this by cycling the power.

Example

Your server is connected and has IP address 192.168.0.3 and the Systech Terminal Server is connected and has IP address 220.0.0.1.

The settings would be:

Parameter	Value
Destination	`192.168.0.3`
Gateway	`220.0.0.240`
Flags	`net`
Metric	`1`
Gateway Type	`address`

Configuring the TCP keep alive timer

It is highly recommended that you configure the TCP keep alive timer. This will ensure that a TCP connection will quickly be released if one side of the connection is terminated abnormally. The TCP keep alive timer is essential in redundant systems where it is vital that the backup server can connect to the terminal server if the server acting as primary fails.

To configure the TCP keep alive timer:

Step	Action
1	Click the **TCP Keep Alive** link.
2	Set the **tcp_keepidle** to `10`.
	This sets the keep alive timer to 10 seconds.
3	Set the **tcp_keepcnt** to `8`.
	This sets the number of TCP keep alive packets.
4	Click **Apply Changes**.
5	Click **Save Changes**.

Configuring Serial Ports

To configure the serial ports:

Step	Action
1	Click the **Port Parameters** link.
2	Click either **Port 1** or **Port 2**.

Step	Action

3 Use the following table to set the ports characteristics.

Command	Option	Typical Settings
Baud Rate	`300` to `115200`	`9600`
Inactivity Timeout	`0` (default)	`60`
Character size	5	`8`
	6	
	7	
	8	
Stop Bits	1	`1`
	2	
Parity	None	`None`
	Even	
	Odd	
	Mark	
	Space	
Interface Type	RS-232	`RS-232`
	RS-422	
	RS-485	
Flow Control	Input Software Flow Control	No to all
	Output Software Flow Control	
	RTS/CTS Hardware Flow Control	
	DTR/DSR Hardware Flow Control	
Need DCD to open port	Ignore	`Ignore`
	Required	
Reverse-Telnet (RTN)	`Enabled`	`Enabled`
	`Disabled`	

Step	Action
4	After you have made the changes, click **Apply Changes**.
5	Click **Save Changes**.

Adding the IP Address to the Server's Hosts File

You must add the IP address and name of the Systech to the server's `hosts` file.

To add the IP address to the hosts file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to open a Command Prompt window.
2	At the `c:\>` prompt, change to the folder for the hosts file: `cd winnt\system32\drivers\etc`
3	Open the hosts file by typing: **`notepad hosts`**
4	Move to the last line and type: *`a.b.c.d terminal_server_name`* where *`a.b.c.d`* is the IP address and *`terminal_server_name`* is the **TCP Host Name**. (You must specify this name in Quick Builder when configuring a controller that is connected to this EasyServer II.) For example, the new line may look like this: `220.0.0.1 systech` After editing the server's `hosts` file, it is recommended you confirm that the computer can resolve the name that you have added.

To confirm the information added to the hosts file:

Step	Action
1	Choose **Start** > **Programs** > **Accessories** > **Command Prompt** to open a Command Prompt window.

Step	Action

2	At the `c:\>` prompt, type:
	`ping terminal_server_name`
	where *`terminal_server_name`* is the **TCP Host Name** which you added to the hosts file.
	For example, the new line may look like this:
	`ping systech`

Upgrading the Systech Terminal Server to Current Release

The Systech terminal server software consists of the following components:

- Firmware—boot-time code
- Operational Software—run-time code
- Factory Configuration—the configuration to return to if you corrupt your current configuration

To upgrade the Systech:

Step	Action
1	Download the latest files from the Systech web site, `http://www.systech.com`.
2	Check if the Systech Port Server Utilities program is installed on the computer. If it is not installed, install it from the Systech CD.
3	Start the Port Server Utilities program.
4	If there is no Port server listed, click **Add Unlisted Port Server**.
5	In the Existing IP address field, type the IP address of the terminal server and click **Add this Port Server**.
6	Click the Update/Reboot Unit tab.
7	In **BDNL Files to Update**, type the path of the file that will update the terminal server.
8	Click **Reboot unit (required for new BDNL to take effect)**.
9	Click the terminal server from the list.

Step	Action
10	Click **Update/Reboot Unit**.

Configuring the Terminal Server for use with Fast Failover

In a redundant server system, the backup server must be able to communicate with the field devices as soon as it becomes the primary server.

Terminal servers implement the concept of a *TCP keep alive timer*. The TCP keep alive timer ensures that the terminal server automatically disconnects and frees a connection to one of its ports if communication with the server is lost (if the server fails or the network connection is broken). This enables the backup server to take over communication with the field devices.

Once the keep alive time has expired, a keep alive packet is sent from the Systech terminal server to the server. The interval between these keep alive packets is the greater of `2` seconds and the `keep alive time/96`. If the server does not respond to a configured number of keep alive packets the terminal server assumes that the connection has been broken and it allows the backup server to establish a connection.

This means that the Systech terminal server will free up a connection to one of its ports if communication with a server has been lost for the `keep alive time + number of keep alive packets * 2` seconds. That is, for a 10-second keep alive time, the connection to one of its ports is freed up after 26 seconds of lost communication with the server (assuming the number of keep alive packets is 8).

The following table shows the recommended settings for the keep alive time and the number of keep alive packets for various redundant server configurations.

	Servers configured for:		
	Normal failover communicating with terminal servers on a high-speed LAN	**Fast failover communicating with terminal servers on a high-speed LAN**	**Normal or fast failover communicating with terminal servers on low-speed WAN**
Recommended keep alive time (seconds)	10	5	20

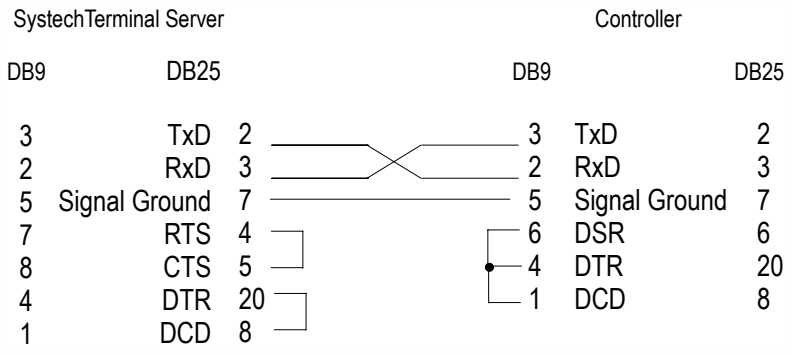
	Servers configured for:		
	Normal failover communicating with terminal servers on a high-speed LAN	**Fast failover communicating with terminal servers on a high-speed LAN**	**Normal or fast failover communicating with terminal servers on low-speed WAN**
Recommended number of keep alive packets	8	3	8

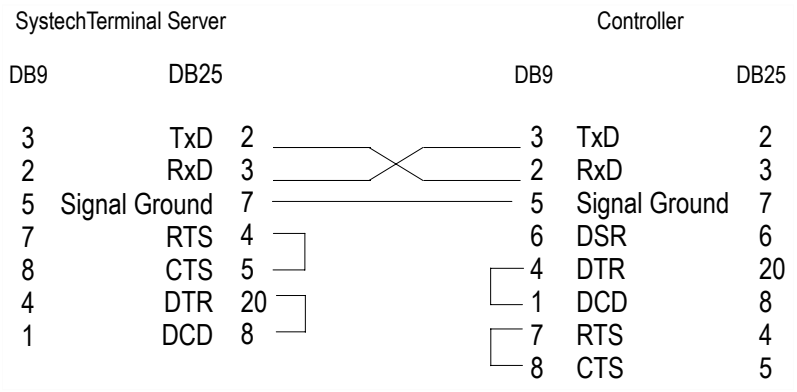
Connecting Controllers

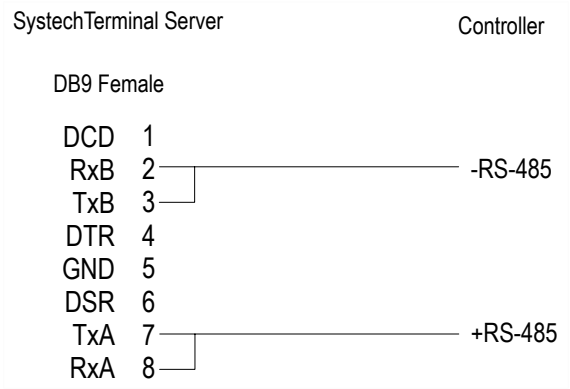
This section provides general instructions on connecting controllers to an Systech. Note that you must also read the appropriate *Controller References*to see if there are any specific restrictions applicable to the controllers you want to connect.

Cabling

The following figures show typical cables, suitable for connecting most controllers to a Systech.







Configuring the Port in Quick Builder

You use Quick Builder to configure each controller that is connected to the Systech.

The following properties (see Port tab) are specific to a Systech.

Property	Description
Port Type	Click `Terminal Server`.

Property	Description
Terminal Server TCP Host Name	The name you defined in the server's hosts file for the Systech to which the controller is connected. If you have not added the terminal server's details to the hosts file, you can type its IP address.
Terminal Server TCP Port No	The number of the TCP port to which the controller is connected, which is equal to 8000 plus the serial port number. For example, if the controller is connected to serial port `2`, you would type **`8002`**.
Idle Timeout	Leave at `180 sec`.

27. Hardware and software requirements

This section specifies the hardware and software requirements.

ATTENTION

The hardware and software requirements are subject to change without notice. Contact your Honeywell representative for the latest requirements.

Item	Go to
Server hardware	596
Network interface cards	596
Serial adapters	597
Terminal servers	597
Printers	597
Modems	598
Server software	599
Client hardware and software	601
Video capture cards	601

27.1 Server hardware

For recommended server hardware specifications, see the "Specifications and Sizing" section of the *Experion PKS Server Specifications and Technical Data*.

Disk storage requirements

The cost of purchasing a large hard disk at installation is very small, whereas the inconvenience of upgrading a running system is considerable. Consequently, Honeywell strongly recommends that you purchase a suitably-sized hard disk at the start.

Major disk space requirements include:

- 5 GB for Windows 2000, Experion PKS system components, and 100,000 online events
- Event Archiving (to calculate storage requirements, see the *Server and Client Planning Guide*).
- History Archiving (to calculate storage requirements, see the *Server and Client Planning Guide*).
- Typical custom displays, which require between 30 and 120 KB. However, if they include imported bitmaps or other graphic files, their size may increase dramatically, to the order of 500 KB.

Backup facilities

It is essential that you provide backup facilities for the server, to protect against a hard disk failure or other problems. The recommended backup devices are DAT tapes.

Network interface cards

It is recommended that you use either the network interface card (NIC) supplied with the computer (if it is a DELL computer), or an Etherlink XL NIC. However, you can use any NIC supported by Windows 2000.

ATTENTION

The Etherlink III NIC, which was recommended in earlier versions of Experion PKS, is not supported in this release of Experion PKS.

Serial adapters

Honeywell has qualified the following serial adapters:

- Stallion EC8/64-PCI-K EasyConnection Smart Host Adapter PCI bus with Stallion PA-EC-8D4K, 8-Port RS-232/-422/-485 Async module (DB25)

Terminal servers

Terminal servers enable you to connect serial interface devices—for example, Stations and many types of controllers—to the network so that they can communicate with the server. (From the point-of-view of the server, a terminal server looks like a set of network-connected serial ports.)

Honeywell has qualified the following terminal servers:

- Stallion EasyServer II
- Cisco Router
- Systech RCS-3282 (2 serial ports) or RCS-6008 (8 serial ports)

Printers

When selecting a printer, choose a type that is appropriate to its use.

Use	Notes
Alarms	Alarm printers must be 132-column, Epson-compatible. An example of a suitable alarm printer is the Epson LQ-2070+ ESC P2. Although you can use an Epson-compatible 132-column printer as a report printer, Honeywell does not recommend it, because of the possible low print quality and slow printing speed.
Reports	Any printer supported by Windows 2000.
Screen prints	A color printer is recommended for screen prints. An example of a suitable color printer is the Epson StylusPro XL.

Experion PKS allows you to configure up to 50 printers.

Modems

Modems supported for Station connection

Any modem that is supported by Windows 2000 for RAS communications or has a Windows 2000 driver.

Modems supported for Alarm Pager

- Default Modem
- US Robotic Sportster 28, 800, 33, 6
- X-Link XL-V336E
- ELSA MicroLink 28.8TQV, 2460TL
- 3Com US Robotics 56K Fax Modem (Model Number 5676)

27.2 Server software

ATTENTION

The software requirements and recommendations are subject to change if new versions and service packs are released. Please contact your local Honeywell representative for the latest requirements and recommendations.

Microsoft Windows 2000

Microsoft Windows 2000 Server Service Pack 4 is required. (Service Pack 4 is supplied on the Experion PKS media.)

Microsoft Office 2000 or Microsoft Office XP

Microsoft Office 2000 or Microsoft Office XP is required if you use Microsoft Excel Data Exchange or ODBC driver.

Microsoft Internet Explorer

Experion PKS , Station, HMIWeb Display Builder, Display Builder and Quick Builder require Microsoft Internet Explorer 6.0 Service Pack 1 (included on the Experion PKS media).

RSLinx

RSLinx 2.42.00 (build 18) is required if you use controllers that will be communicating with the Experion PKS server via RSLinx.

Backup applications

Honeywell has qualified the following backup applications:

- ARCServer Backup and Disaster Recovery V6.5
- Seagate Backup Exec V7.0

Calculating the number of network connections

You need a networking license that is appropriate to your needs. Use the following list to calculate the number of Microsoft Network connections to the server:

- One connection exists if a computer (other than the server):
  - Maps the server's disk drive (for example, to access displays)
  - Shares the server's printers

- Add one extra connection if the Network Server option is selected on the server. (The Network Server only adds one connection because it sequentially processes requests from client computers.)

27.3 Client hardware

For recommended client hardware specifications, see the "Specifications and Sizing" section of the *Experion PKS Experion Station Specifications and Technical Data*.

Video capture cards

Honeywell has qualified the following video capture cards for use with Station:

- FlashPoint 128 series.
- FlashPoint 3D.

Flat Panel Display Touchscreens

Honeywell has qualified the following flat panel display touchscreens for use with Station:

- NEC 2010 with ELO touchscreen.
- NEC 2080UX+ with ELO touchscreen.

28. Removing Experion PKS

This section describes how to remove Experion PKS and its associated applications from the server and client computers.

ATTENTION

These procedures are not used any longer during upgrades. These instructions are included here for custom applications.

CAUTION You must back up all Experion PKS database files on the server before removing Experion PKS because the removal process destroys the server database.

Prerequisites

- You have backed up all database files.

Considerations

- The setup program only removes files that it installed. It does not remove files created after installation, such as Quick Builder projects. After you have removed Experion PKS, it is recommended you check and, if appropriate, manually delete, any files left in the `C:\Program Files\Honeywell\Experion PKS` folder and its subfolders.

Tasks

Select the required task.

Task	Go to
Remove the Experion PKS server components.	604
Remove Experion PKS ACE.	606
Remove Experion PKS SCE/SIM-C200.	608
Remove Experion PKS client applications from client computers.	609

28.1 Removing Experion PKS server components

This section describes how to remove all Experion PKS server components.

Prerequisites

- Experion PKS R210 media.

To remove Experion PKS server components:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel** and double-click the **Add/Remove Programs** icon.
2	Select **Experion PKS – CAB** and then click **Remove**. The CAB package is uninstalled.
3	If the `C:\Install\RemoveHwlSoftware.bat` file exists, double-click on this file. Otherwise, insert the Experion PKS R210 media into the appropriate drive, browse to the `Tools` folder, and then double-click the `RemoveHwlSoftware.bat` file.
4	Press the SPACE BAR to acknowledge the warning message in the Command window.
5	On the Continue to remove Experion PKS message, click **Yes** to continue.
6	If you are removing Experion PKS for use with process points, click **Yes** to confirm the uninstallation of the process detail displays.
7	On the Welcome to the InstallShield for Experion PKS server screen, click **Next**.
8	On the Program Maintenance screen, click **Remove** and then click **Next**. There may be a delay of several minutes.
9	On the Retain Old Database screen, click **No** and then click **Next**.
10	On the Remove the Program screen, click **Remove**. This application removal may take several minutes to complete.
11	On the InstallShield Wizard Completed screen, click **Finish**.
12	On the restart system message, click **No**.

Step	Action
13	If an InstallShield complete appears, click **Finish**.
14	On the Welcome to the Knowledge Builder Setup Maintenance screen, click **Remove** and then click **Next**.
15	On the confirm uninstall message, click **OK**. This application removal may take several minutes to complete.
16	On the Maintenance Complete screen, click **Finish**.
17	On the remove Microsoft SQL Server 2000 message, click **Yes**.
18	If a remove shared file message appears, click **Yes to All** and then click **Yes** on the following remove shared file message. This application removal may take several minutes to complete.
19	When the uninstall is complete, click **OK**.
20	Click **OK** to acknowledge that Experion PKS - Remove this last has been removed.
21	On the finished removing Experion PKS sub-systems message, click **OK**.
22	Locate the Command window and then press the SPACE BAR to close it.
23	**For R101 and R201 installations only.** Do the following: • Choose **Start** > **Settings** > **Control Panel** and double-click the **Add/Remove Programs** icon. • Remove the Experion PKS - Remove this last program.
24	Restart the computer. If you removed Experion PKS for use with process points, an error in the `VirtualBackplane.sys` file for the PCIC drivers causes a blue screen error during the computer shutdown. This error is expected and can be ignored.

STOP	You have completed this task.

28.2 Removing Experion PKS ACE components

This section describes how to remove Experion PKS ACE components.

Prerequisites

- Experion PKS R210 media.

To remove Experion PKS ACE components:

Step	Action
1	If the `C:\Install\RemoveHwlSoftware.bat` file exists, double-click on this file. Otherwise, insert the Experion PKS R210 media into the appropriate drive, browse to the `Tools` folder, and then double-click the `RemoveHwlSoftware.bat` file.
2	Press the SPACE BAR to acknowledge the remove warning message.
3	Click **Yes** to confirm that you want to remove all Experion PKS software.
4	On the Welcome to the Knowledge Builder Setup Maintenance screen, click **Remove** and then click **Next**.
5	Click **OK** to confirm the uninstallation of Knowledge Builder.
6	Click **Finish** to complete the uninstallation of Knowledge Builder.
7	When the uninstall is complete, click **OK**.
8	Click **OK** to acknowledge that Experion PKS - Remove this last has been removed.
9	Click **OK** to acknowledge the finished removing Experion PKS subsystems message.
10	Press any key to close the Command window.
11	Choose **Start** > **Settings** > **Control Panel** and then double-click the **Add/Remove Programs** icon.

Step	Action
12	Remove these programs, if installed, in the following order: a) System Displays (any version) b) Quick Builder c) ODBC Client (any version) d) OPC Server Connect (any version) e) Shape Library (any version) f) Display Builder (any version) g) Network API (any version) h) HMIWeb Station and Display Builder i) VBScript Documentation
13	**For R101 and R201 installations only.** Remove the Experion PKS - Remove this last program.
14	Remove the Experion PKS - Remove this last program.
15	Restart the computer.
16	Log on to the computer using a Windows account with local administrator rights.

STOP	You have completed this task.

28.3 Removing Experion PKS SIM-C200 components

To stop the Experion PKS CDA-SP service:

Step	Action
1	On the Windows Desktop, right-click on the **My Computer** icon and choose **Manage**.
2	Expand the **Services and Applications** item, and then expand the **Services** item.
3	Right-click on the Experion PKS CDA-SP item and choose **Stop**.

To remove Experion PKS SIM-C200 components:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel** and double-click the **Add/Remove Programs** icon.
2	Click **Experion PKS Simulation Control Environment** and then click **Remove**.
3	Follow the on-screen instruction to complete the removal of SIM-C200.

STOP	You have completed this task.

28.4 Removing Experion PKS client applications from client computers

This section describes how to remove Experion PKS client applications from a computer.

Task	Go to	Done?
Remove Experion PKS client components for use with process points.	609	
Remove common Experion PKS client components.	610	

Removing Experion PKS client components for use with process points

Prerequisites

- Experion PKS R210 media.

To remove Experion PKS client components for use with process points:

Step	Action
1	If the `C:\Install\RemoveHwlSoftware.bat` file exists, double-click on this file. Otherwise, insert the Experion PKS R210 media into the appropriate drive, browse to the `Tools` folder, and then double-click the `RemoveHwlSoftware.bat` file.
2	Insert the Experion PKS R210 media into the appropriate drive.
3	In Windows Explorer, browse to the `Tools` folder on the drive, and double-click the `RemoveHwlSoftware` file.
4	Press the SPACE BAR to acknowledge the remove warning message.
5	If prompted, click **Yes** to confirm that you want to remove all Experion PKS software.
6	Click **Yes** to confirm the uninstallation. This removes the process detail displays.
7	If an information message appears, click **OK**.
8	On the Experion PKS Client Software Setup screen, click **Remove**.

Step	Action
9	On the Knowledge Builder Maintenance screen, click **Remove** and then click **Next**.
10	Click **OK** to confirm the uninstallation of Knowledge Builder.
11	Click **Finish**.
12	Click **OK** to acknowledge the message.

Removing common Experion PKS client components

Prerequisites

- Experion PKS R210 media.

To remove common Experion PKS client components:

Step	Action
1	Choose **Start** > **Settings** > **Control Panel** and double-click the **Add/Remove Programs** icon.
2	Remove these programs, if installed, in the following order: a) System Displays b) Quick Builder c) ODBC Client d) OPC Server Connect. It may be necessary when removing OPC Server Connect to insert the Experion PKS R210 media into the appropriate drive and then browse to the `\server-client\opcservconnect` folder, click **Open**, and then click **OK**. e) Shape Library f) Display Builder g) Network API h) HMIWeb Station and Display Builder i) Experion PKS Server client side components
3	Remove the Experion PKS - Remove this last program.
4	Restart the computer.

Step	Action
5	Log on to the computer using a Windows account with local administrator rights.
STOP	You have completed this task. Return to the checklist that led to this task.

28.5 Removing the Migration Readiness Tool

This section describes how to remove the Migration Readiness Tool.

ATTENTION

If you are doing an on-process migration from the R210 On-Process Beta to the R210 Release, skip this task.

To remove the migration readiness tool:

Step	Action
1	Close all applications.
2	Choose **Start** > **Settings** > **Control Panel**.
3	Double-click **Add/Remove Programs**, click **Migration Readiness Tool** and then click **Remove**.
4	Click **Yes** to confirm the action.

STOP	You have completed this task. Return to the checklist that led to this task.

29. Tuning Experion PKS performance

This section describes the components of the supervisory network and the features in Experion PKS that affect reliability, system availability, and performance.

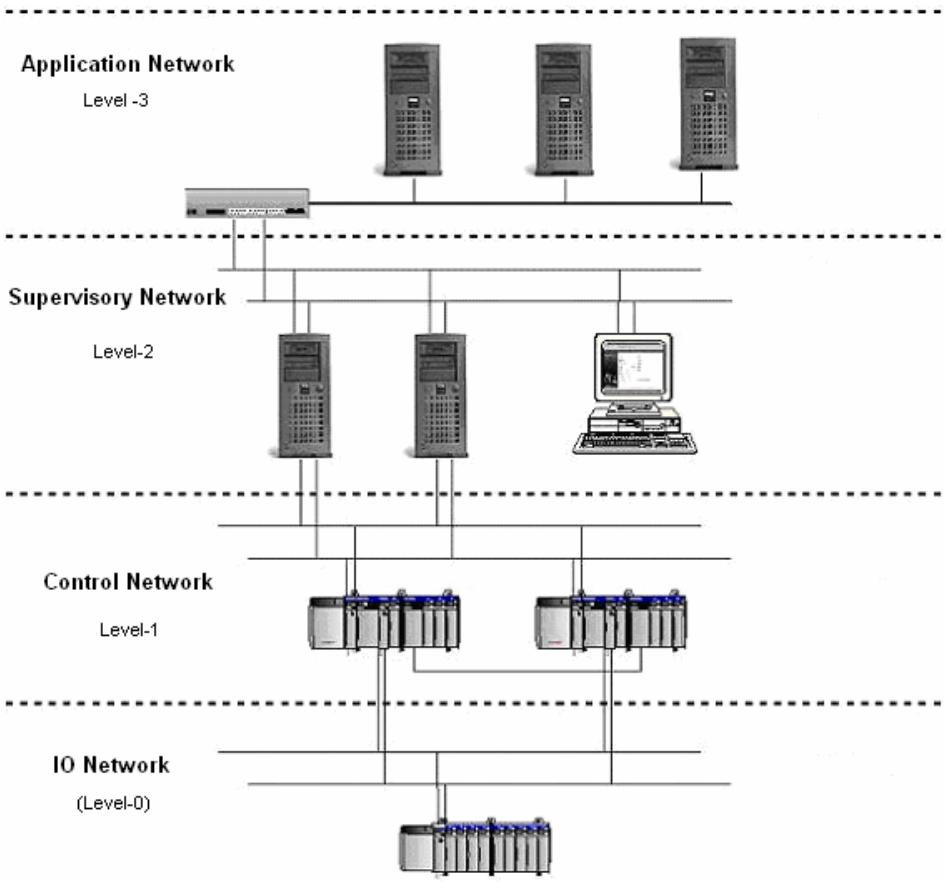
Performance describes the speediness of a system to react to a series of tasks, and the ability to perform those tasks in a reliable manner. There are two aspects of performance:

- *Overall system performance*. This type of performance is most affected by the configuration of drivers and related software that make up the system.
- *Individual application/subsystem performance*. This type of performance is typically configured through the use of software settings and hardware components.

Reliability and system availability are the primary concern of process control systems. The main goals are to make sure that the system is available to the user at any point it time, and that Experion PKS is responsive and presents the correct data.

29.1 Network layers

The following figure shows how a process control system contains several network layers: IO, Control, Supervisory, Application, and Plant Information.



IO network (level 0)

This is the network between controllers and their IO devices. Various IO interfaces and protocols are supported in Experion PKS to connect a variety of IO types.

Examples of devices communicating on this network:

- C200 to Remote IO.

- FIM to FieldBus devices.

Control network (level 1)

This is the network between PC devices and controllers. There are various options for this network type:

- CIP over Ethernet.
- CIP over ControlNet.
- Fault Tolerant Ethernet (FTE) (see the Attention below).
- LCNP interface.

Examples of devices communicating on this network:

- Server to C200.
- Console Station to FIM.
- ACE to C200.

Supervisory network (level 2)

This communication network is for distribution of data between data collection devices (typically servers) and user interfaces. Two options exist for this network:

- Ethernet.
- Fault Tolerant Ethernet (FTE) (see the Attention below).

Examples of systems communicating over this network:

- Server to Console Station.
- Server to Flex Station.
- Server to ACE.
- Server to EHG.

Application network (level 3)

This communication network is for applications to manage control devices, but not necessary for control process itself. Two options exist for this network:

- Ethernet.

- Fault Tolerant Ethernet (FTE) (see the Attention below).

Examples of systems communicating over this network:

- @ssetMAX
- ProfitMAX

Plant information network (level 4, not shown)

This communication network is for applications that interface between business systems and the control system. Two options exist for this network:

- Ethernet
- Fault Tolerant Ethernet (FTE) (see the Attention below).

Examples of systems communicating over this network:

- OptiVision PKS

ATTENTION

With Experion PKS R200 and higher, FTE can be used as either a co-joined (combined level 1 control network and level 2 supervisory network) or a level 2 network. When co-joined, it is physically one network, but logically separated by the use of subnet masks.

29.2 Tuning the operating system

Computers ordered from Honeywell with the installation services option (NT5Plus/XPPlus) already have the operating system tuned for operations. Operating system (or kernel) tuning changes the way the operating system assigns process priorities.

ATTENTION

Operating system tuning tasks must be completed by logging on to the computer with a Windows account with administrative privilege.

Windows 2000 Professional

To tune Windows 2000 Professional:

Step	Action
1	Right-click the **My Computer** icon on the Desktop, and choose **Properties**.
2	Click the **Advanced** tab.
3	Click **Performance Options**.
4	For Flex Stations, click **Applications**. For Console Stations, click **Background Services**.

Windows XP Professional

To tune Windows XP Professional:

Step	Action
1	Choose **Start** > **My Computer**.
2	Right-click the **My Computer** icon in the menu and choose **Properties**.
3	Click the **Advanced** tab
4	Click **Settings** in the Performance group. The **Performance Options** dialog box appears.
5	Click the **Advanced** tab.

Step	Action
6	In the Processor scheduling group, click **Programs**.
7	In the Memory usage group, click **Programs**.
8	Click **OK**.

Windows 2000 Server

Tuning Windows 2000 Server is a two step process:

1. Setting the application response.
2. Tuning the server service.

To set the application response:

During the configuration phase, applications that run on the server are affected by the application response setting. This setting can be set to Applications during the configuration phase and then changed to Background Services for the operational phase.

If you run applications on the server during the operational phase, it is recommended that you set the application response to Applications.

Step	Action
1	Right-click the **My Computer** icon on the Desktop, and choose **Properties**.
2	Click the **Advanced** tab.
3	Click **Performance Options**.
4	For “headless” node servers, click **Background services**. For a “non-headless” node server, click **Applications**.
5	Click **OK**.

To tune the server service:

During the configuration phase, applications that run on the server are affected by the server service setting. Follow these guidelines, based on system configuration:

- On small systems, and medium-to-large systems with the Engineering Repository running on a separate server, the Server service can be set to Minimize memory used

on during the configuration phase and then changed to Maximize data throughput for network applications for the operational phase.

- On medium-to-large systems with the Engineering Repository running on the Experion PKS server(s), the Server service can be set to Balance during the configuration phase, and then changed to Maximize data throughput for network applications for the operational phase.

Step	Action	
1	Right-click the My Network Places icon on the Desktop, and choose **Properties**.	
2	Right-click one of the network connections (it does not matter which one) and choose **Properties**.	
3	Click File and Printer Sharing for Microsoft Networks and then click Properties.	
4	Click the appropriate option based on the server's use:	
	If the server is:	**Click this:**
	Experion PKS server	Maximize data throughput for network applications.
	ACE/SCE server	Balance.
	Console Station	Balance.
	Experion PKS Highway Gateway	Balance
	Remote Engineering and Station Server	Maximize data throughput for network applications.

29.3 Managing the hard disks

Disk performance, or the capability of a computer to access and store files on the hard disk, can greatly affect its overall performance. Other than hard disk failures, the two main file system (the format of storage on the hard disk) issues that affect a computer are:

- file system errors
- hard disk fragmentation

File system errors

File system errors can be caused by the following events:

- power outages
- improper shutdown
- disk hardware malfunction

To check and fix file system errors, you must start the file system scan, and then restart the computer.

Requirements

- Your process must be "off control" before scanning for file system errors.
- Check that no other applications are running as this task requires restarting the computer.

To check for file system errors:

Step	Action
1	On the Windows Desktop, double-click the **My Computer** icon.
2	Right-click on the hard drive to check and choose **Properties**.
3	Click the **Tools** tab.
4	Click **Check Now**.
5	Select **Automatically fix files system errors**. Unless a previous check for file system errors revealed bad sectors, do not select **Scan for and attempt recovery of bad sectors**.

Step	Action
6	Click **Start**. Due to the file system (NTFS) locking the hard disk, the computer cannot scan for file system errors until the computer is restarted.
6	Click **Yes** to schedule the operation to occur the next time the system is started.
7	Restart the computer. The computer checks for file system errors during startup.
8	Log on to the computer.
9	Review the disk report in the Event Viewer. To display the Event Viewer: a) On the Windows Desktop, right-click the **My Computer** icon and then choose **Manage**. b) Expand the **Event Viewer** item and then click the **Application** item.
10	If the disk report contains bad sector errors, you must restart this task, and select the **Scan for and attempt recovery of bad sectors** option. If the disk report continuously reports bad sectors, it should be scheduled for replacement as it usually indicates that the hard disk is experiencing hardware malfunctions.

File system defragmentation

Although the Windows file system (NTFS) attempts to minimize file system fragmentation, it is the most frequent performance issue to occur during normal computer operations.

"Fragmentation" means that, when a file or piece of data is written to the hard disk, it is not written contiguously. Consequently, the computer must perform multiple read and lookups every time that file/data is accessed.

The process of defragmentation optimizes the file system so that each file is written contiguously on the disk. In addition, certain files, such as the operating system or frequently accessed files, are moved to the first sectors on the hard disk, so that they can be found and accessed faster.

Requirements

- Your process must be "off control" before defragmenting the hard disk because the performance of the computer is severely degraded during the defragmentation process.
- Check that no other applications are running because the procedure involves 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.
- Fragmentation occurs during the configuration phase of the system. Consequently, you should defragment the hard disk immediately after the configuration phase (but before starting the operation phase).
- 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.

To defragment the hard disk:

Step	Action
1	On the Windows Desktop, double-click the **My Computer** icon.
2	Right-click it the hard disk to defragment and choose **Properties**.
3	Click the **Tools** tab.
4	Click **Defragment** now in the Defragmentation group.
5	Click the hard drive to defragment, and then click **Analyze**. This analyses the fragmentation level of the hard drive. Large areas of red indicate that the hard disk is fragmented. Large areas of blue indicate that the hard drive is mostly contiguous.

Step	Action
6	On the Analysis Complete dialog box, click **Defragment** to start defragmenting the hard disk, even if this dialog box recommends that no defragmentation is required. Depending on the level of fragmentation and usage, the task may take some time to complete.

29.4 Optimizing memory usage

Computers have two types of memory: physical and virtual. Multi-tasking operating systems, such as Windows, can move data from the RAM (physical memory) and swap it to a file on the hard disk (virtual memory). This technique frees up the RAM for other processes. If a process requires data which has been swapped to a file, the data is first swapped back from the file to RAM so that the process can continue. This technique is called paging, and the file is called the pagefile.

Viewing memory usage

In the Windows Task Manager dialog box you can view memory usage. Click the Performance tab to view the Commit Charge (K) group, which displays the total memory available in physical and virtual memory combined (the Limit value), and Physical Memory (K) group, which displays the amount of physical memory available for use.

Checking the pagefile settings

The pagefile settings include a lower and upper limit. The lower limit is typically the amount of physical RAM plus management space. This is almost always 1.5 times the amount of physical RAM.

It is recommended that the upper limit be set to around three times the amount of physical RAM.

Windows 2000, in normal operation, will only use the lower limit size, and therefore only the value of the lower limit (Initial Size) is pre-allocated. If the usage exceeds this limit, the computer will then continue to allocate additional space until the upper limit (Maximum Size) is reached or the computer runs out of hard disk space. If this occurs, it usually means that an application/process is leaking memory.

Adding more memory to reduce paging

Some paging is normal. However, excessive paging affects computer performance during the swapping and allocation phases.

If a computer pages frequently during normal operation, you can significantly improve its performance by adding more physical RAM. However, if you do add more RAM, you must make the appropriate adjustments to the virtual memory configuration.

Recommendations for servers and Console Stations

Based on the operating system and application usage, the server/Console Station is not affected by paging as long as the memory specifications are followed for the computer

size and usage. If adjustments are needed, you must follow the default rules of the Operating System suggestion (approximate example for a 1024 MB computer):

- Initial size: 1.5 times physical or default operating system suggestion (for example, 1536 MB).
- Maximum size: 3 times physical or default operating system suggestion (for example, 3072 MB).

Recommendations for Console Extension Stations and Flex Stations

Based on the operating system and application usage, the client/Flex Station is not affected by paging operations as long as the memory is at the specified amount of 512 MB. If adjustments are needed, you must follow the default rules of the operating system suggestion (approximate example for a 512 MB computer):

- Initial size: 1.5 times physical or default operating system suggestion (for example, 768 MB).
- Maximum size: 3 times physical or default operating system suggestion (for example, 1536 MB).

Adjusting the size of the pagefile

Requirements

- Check that no other applications are running as this task requires restarting the computer.

To adjust the pagefile size on Windows 2000 Professional and Server:

Step	Action
1	On the Windows Desktop, right-click on the **My Computer** icon and choose **Properties**.
2	Click the **Advanced** tab.
3	Click **Performance Options**.
4	Click **Change**
5	Click the hard drive containing the pagefile.
6	Type the **Initial size** and **Maximum size** values that you calculated.

Step	Action
6	Click **Set**, and then click **OK**. You are prompted to restart the computer. Click **Yes** to restart the computer so these changes can take effect.

To adjust the pagefile size on Windows XP:

Steps to change the swapfile/pagefile on Windows XP Professional:

Step	Action
1	Click **Start**.
2	Right-click the **My Computer** icon and choose **Properties**.
3	Click the **Advanced** tab.
4	In the Performance groups, click **Settings**.
5	Click the **Advanced** tab.
6	Click **Change**.
7	Click **System managed size** and then click **Set**. You are prompted to restart the computer. Click **Yes** to restart the computer so these changes can take effect.

29.5 Optimizing network performance

A network is the communication media between servers, clients, and devices. If this network is not tuned properly, the following problems may occur:

- The performance of the client application may be poor.
- There may be intermittent or complete device communication failures.
- Redundant servers may lose synchronization.
- There may be intermittent or complete loss of communication between clients and servers.

In Windows, there are several settings to optimize the network. It is recommended that these settings be combined with an overall plan to monitor and adjust to the traffic on the network. Consult your networking equipment vendor for tools and management applications that works best with your hardware.

Tuning the operating system (page 617) also affects the ability of the computer to respond to network traffic.

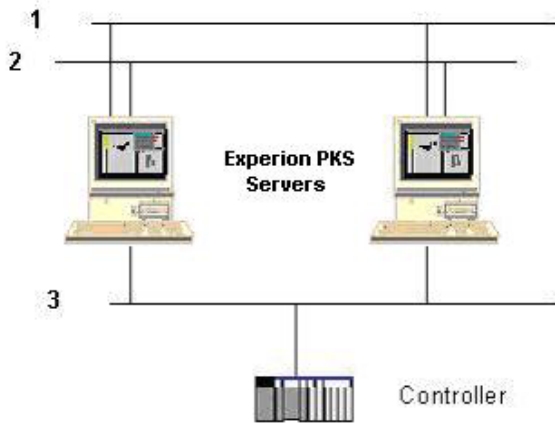
The order in which the system accesses the network is also important — this is known as the binding order. It is recommended the binding order is adjusted so that each computer accesses the network in the same order. If your computer has more than one network card, you must verify that the bindings for each computer are in the correct order.

Managing network traffic

If your control system uses Ethernet as the control network, you can achieve network performance benefits by restricting the type of traffic over this network.

Windows, by default, uses all network cards defined in a computer for communication with other systems as long as the networks are common between the initiator and target.

The following figure shows a configuration in which all three Ethernet networks are common between the two servers. Effective server-to-server communication management would direct all server-to-server traffic across networks 1 and 2, and reserve network 3 for control traffic.



Server-to-server communication (Windows networking traffic), mostly uses the NetBIOS transport protocol. You can restrict this type of communication on network 3 by disabling this protocol.

Note that special handling/restrictions placed on NetBIOS are required if networks 1 and 2 use a Fault Tolerant Ethernet (FTE) topology.

Adjusting bindings and disabling protocols on standard networks

If you have the Installation Services option, the network connection names *Primary Supervisory Network*, *Backup Supervisory Network*, and *Supervisory Control Network* are created. You must use these names in the following instructions. If you do not have the Installation Services option, you need to determine the names of the network connections that handle each task before using this procedure.

To adjust bindings or disable protocols on standard networks:

Step	Action
1	On the Windows Desktop, right-click on the **My Network Places** icon and choose **Properties**.
2	Choose **Advanced** > **Advanced Settings**.

Step	Action
3	In the **Connections** list, the order of items must be: • Primary Supervisory Network. • Backup Supervisory Network, if you have redundant networks. • Supervisory Control Network, if you are doing control over Ethernet. Use the Up and Down arrows buttons on the right of the Connections list to order these items.
4	If the system has the Supervisory Control Network, do the following: a) Select the **Supervisory Control Network** item in the **Connections** list. b) Clear the **File and Printer Sharing for Microsoft Networks** check box in the **Bindings** list.
5	Click **OK**.

Adjusting bindings and disabling protocols on Fault Tolerant Ethernet (FTE) networks

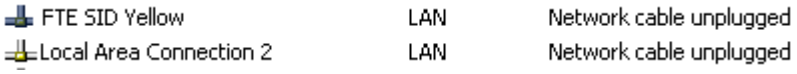
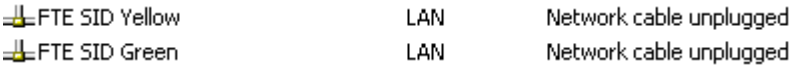
Included with FTE is the NDISUIO layer. Due to the inclusion of this layer, traditional commands such as `nbtstat –n` will no longer show the correct NetBIOS binding order. For Windows XP, use the `netdiag /test:Bindings` command.

For Windows 2000 and XP, adjustments to the TCP/IP binding order also change the NetBIOS binding order.

To set the network interface card (NIC) names:

If your network interface cards (NICs) are unnamed, you need to set the connection names. The NIC labeled “Local Area Connection” should be named as the Yellow NIC and the card labeled “Local Area Connection 2” should be named as the Green NIC.

Step	Action
1	On the Windows Desktop, right-click the **My Network Places** icon and choose **Properties**.
2	Right-click on **Local Area Connection** and choose **Rename**.

Step	Action
3	Type the new NIC name based on the following convention: `FTE` *`Community Name`* `Yellow` In the following example, the community name is “SID”: 
2	Right-click on **Local Area Connection 2** and choose **Rename**.
3	Type the new NIC name based on the following convention: `FTE` *`Community Name`* `Green` For example: 

To identify the network interface card ports and connecting network cables:

Use the following instructions to identify which adapter port the Yellow network cable must be attached to and which adapter port the Green network cable must be attached to.

Step	Action
1	Connect the Yellow network cable (yellow boot) to one of the network interface cards.
2	On the Windows Desktop or Start menu, right-click the **My Network Places** icon and choose **Properties**.
3	If the status of the FTE Yellow connection is **Network cable unplugged**, connect the Yellow network cable to the other network interface card port, and then connect the FTE Green connection to the remaining network interface card port. If the status of the FTE Yellow connection is **Enabled**, connect the FTE Green connection to the remaining network interface card port.
4	Connect the Yellow network cable to the switch in the Yellow Tree.
5	Connect the Green network cable to the switch in the Green Tree.

To adjust the TCP/IP and NetBIOS binding order:

Step	Action
1	On the Windows Desktop, right-click the **My Network Places** icon and choose **Properties**.
2	Choose **Advanced** > **Advanced Settings**.
3	In the **Connections** list, the order of items must be: • FTE Yellow • FTE Green Use the Up and Down arrow buttons to the right of the **Connections** list to correctly order these items.

To adjust the NetBIOS protocol settings:

Step	Action
1	On the Windows Desktop, right-click the **My Network Places** icon and choose **Properties**.
2	Right-click on the **FTE Yellow** connection and choose **Properties**.
3	Click **Internet Protocol (TCP/IP)** and click **Properties**.
4	Click **Advanced**.
5	Click the **WINS** tab.
6	Click **Enable NetBIOS over TCP/IP** and then click **OK**.
7	Click **OK** on the **Internet Protocol (TCP/IP) Properties** dialog box.
8	Click **OK** on the **FTE Yellow Properties** dialog box.
9	Right-click on the **FTE Green** connection and choose **Properties**.
10	Click **Internet Protocol (TCP/IP)** and click **Properties**.
11	Click **Advanced**.
12	In the **Interface Metrics** box, type **5**.
13	Click the **DNS** tab.
14	Clear the **Register this connection's address in DNS** check box.

Step	Action
15	Click the **WINS** tab.
16	Click **Disable NetBIOS over TCP/IP** and then click **OK**.
17	Click **OK** on the **Internet Protocol (TCP/IP) Properties** dialog box.
18	Click **OK** on the **FTE Green Properties** dialog box.

To set the link speed:

Step	Action
1	On the Windows Desktop, right-click the **My Network Places** icon and choose **Properties**.
2	Right-click on the **FTE Yellow** connection and choose **Properties**.
3	Click **Configure**.
4	Click the **Advanced** Tab.
5	In the **Property** list, click **Link Speed & Duplex**.
6	In the **Value** list, click **100Mbps/Full Duplex**.
7	Click **OK**.
8	Right-click on the **FTE Green** connection and choose **Properties**.
9	Click **Configure**.
10	Click the **Advanced** Tab.
11	In the **Property** list, click **Link Speed & Duplex**.
12	In the **Value** list, click **100Mbps/Full Duplex**.
13	Click **OK**.

Special considerations for Fault Tolerant Ethernet/EHG networks

EHG systems combine a FTE network with an additional network connection to the Data Highway. Honeywell suggests that you identify the NIC as the DHEB Network to differentiate it from participation in the FTE network.

To adjust TCP/IP and NetBIOS binding order:

If you have not done so yet, assign FTE Yellow to the first port on the dual port NIC, FTE Green to the second port on the dual port NIC and DHEB Network to the remaining NIC (see 629).

Step	Action
1	On the Windows Desktop, right-click on the **My Network Places** icon and choose **Properties**.
2	Choose **Advanced** > **Advanced Settings**.
3	In the **Connections** list, the order of items must be: • FTE Yellow • FTE Green • DHEB Network Use the Up and Down arrow buttons to the right of the **Connections** list to correctly order these items.

To adjust the NetBIOS protocol settings:

Step	Action
1	On the Windows Desktop, right-click the **My Network Places** icon and choose **Properties**.
2	Right-click on the **DHEB Network** connection and choose **Properties**.
3	Click **Internet Protocol (TCP/IP)** and click **Properties**.
4	Click the **DNS** tab.
5	Clear the **Register this connection's address in DNS** check box.
6	Click the **WINS** tab.
7	Click **Disable NetBIOS over TCP/IP** and then click **OK**.
8	Click **OK** on the **Internet Protocol (TCP/IP) Properties** dialog box.
9	Click **OK** on the **DHEB Network Properties** dialog box.

To set the link speed:

Step	Action
1	On the Windows Desktop, right-click the **My Network Places** icon and choose **Properties**.
2	Right-click on the **DHEB Network** connection and choose **Properties**.
3	Click **Configure**.
4	Click the **Advanced** Tab.
5	In the **Property** list, click **Link Speed & Duplex**.
6	In the **Value** list, click **10Mbps/Full Duplex**.
7	Click **OK**.

Optimizing other network services

By optimizing the use of Network Browsing services, you can reduce the number of broadcasts a computer performs while communicating and maintaining itself on the network.

If you use a Workgroup model, you must rename the computer's Workgroup Name to a name other than the default WORKGROUP. When integrating other systems and networks, you must create independent workgroups by naming all of the systems that communicate together with the same workgroup name, but different from other workgroup names.

If you use other services to provide directory and resolution information, you can also optimize networking while minimizing management tasks, for example, Active Directory, WINS, DNS, Domains, and so on. However, this can make some functions of the Control System dependent on these services for operation. In order to integrate these types of services into the computer, you need to carefully plan and take care when implementing the plan.

29.6 Optimizing other computer settings

Other factors affect the performance of a computer.

File sharing

It is possible for easier management to share custom displays and other files from the servers with Flex Stations and other computers.

Considerations:

- Due to the performance settings for the Servers, you are limited in the amount of information that can be shared.
- The movement of such files can cause additional network activity.
- This will degrade the performance of the server to perform its other tasks.

Video settings

There are no great performance gains to be made by adjusting the video settings. The system applications and displays have been optimized for resolutions of 1024 by 768 and 1280 by 1024 with 65K (High Color 16 bit) colors. Using other setting than this may produce anomalies in some displays.

In order to receive the best performance, the video card should use a specialized video bus (AGP or PCI Express), have a dedicated RAMDAC capable of 300 MHz (or better), and contain at least 32 MB of VRAM per video display port. This frees up the computer bus and gives the video processor a more direct line to the CPU and memory resources.

System usage

The system usage itself will have an impact on the performance of the system. Most memory and CPU recommendations are based on "average" use of the system, which means that your system may require servers with, for example, more memory, higher CPU speed or larger disks.

These adjustments can only occur over time as you gain experience with your system. The following will affect the performance of your system:

- Number of Stations, and:
  - The display update rate.
  - Shared versus local displays.
  - Chart Visualization.

  - The number of parameters viewed (across all Stations) and their frequency of change.

- Frequency of report generation.
- Frequency of performed maintenance, for example, defragmentation level of the hard disk.
- If you have a DSA system, the number of servers participating in the DSA and the number of parameters shared.
- The amount of history collected.
- The frequency that events are archived and the duration that events are kept online.
- Server synchronization with the file backup.
- Size of the system, including the size of the Engineering Repository database for Process systems.

As you system is adjusted over time and customized to your control environment, you should regularly evaluate how your systems are performing and make the appropriate adjustments.

Topology-related settings

Physical location of computers

The location and distance between each node becomes a factor in the performance. Experion PKS servers are designed to be within the same network. Consequently, if "hops" are introduced, then timing parameters need to be adjusted due to the increased time to perform such things as synchronization. As tasks take longer to complete, they affect the other running tasks on the system.

Station performance will also be affected if it is running remotely.

See the documentation for setting up the server to support these types of architectures. Monitor the server performance.

Physical location of components

During the operational phase of the system, client response will be better when applications are not run on the server itself.

If you have Process Controllers and the server is being overwhelmed, you may want to change the configuration and move the Engineering Repository database to its own

dedicated node. Depending on system usage, this can have a dramatic impact on system performance.

Service integration

Adding services, such as Active Directory, to the Experion PKS server have an impact on the server's CPU and memory usage. This must be taken into consideration when planning the hardware purchase for your server. See the Advanced Documentation set for more information.

Network integration

Integrating the Plant Networks with the Companies Business Network can also impact the system's performance. If Active Directories are going to be integrated, you must plan to be able to support the whole Business Network Infrastructure. Depending on the size of the company, this can have a large impact on the server's CPU and memory usage.

29.7 Monitoring the system

Assessing the need for hardware upgrades

Most monitoring of the system should be done during the Operational Phase of the system.

The Windows Event Viewer

The Windows Event Viewer (System and Application Logs) should be checked immediately after installation and major configuration changes. Errors in configuration and problems with components in the system are reported in these logs. If you locate any, you should contact your Honeywell Technical Assistance Center (TAC) for assistance in getting them resolved.

After initial configuration, periodically you should check for any new errors in the log. This should be part of your normal maintenance routines.

Using Dell OpenManage

If your computer is ordered with the installation services (NT5Plus or XPPlus), the Dell OpenManage tools are pre-installed and configured on the computer. These tools monitor the performance and operation of the internal hardware components that make up the system. If any type of hardware event occurs, the system will notify the user and, if necessary, perform critical actions to prevent more major problems from occurring.

These tools are also available on computers without the installation services, but you need to download, install, and configure the software.

There are two types of Dell OpenManage client software:

- Dell OpenManage Server Administrator (OMSA) for server operating systems.
- Dell OpenManage Client Interface (OMCI) for client operating systems.

OMSA provides a view application to look at hardware events and internal sensor readings. OMCI requires a central application (Dell's IT Administrator) to view the hardware events and internal sensor readings. (This does not stop the software from reporting events local on the system.)

Dell's IT Administrator application cannot be installed on any Experion PKS node, and must be on its own dedicated system if used with an Experion PKS system. Dell IT Administrator application is not required, as both client applications are SMTP and CIM compliant. They can interoperate with any central system monitoring utilities such as HP OpenView, Tivoli, or other systems that support these standards.

29.8 Monitoring performance

If your computer is ordered with the installation services (NT5Plus or XPPlus), a performance monitoring tool is configured and installed. To start monitoring performance, choose **Start** > **Programs** > **Experion PKS** > **PC Performance Tools**, then double-click the **System Performance** icon.

To configure the Performance Monitor:

You only need to perform this task if your computer was not ordered with the installation services.

Step	Action
1	Choose **Start** > **Programs** > **Administrative Tools** > **Performance**.
2	Click the + button on the toolbar.
3	Add each counter specified in the following table: a) Select the performance object from the **Performance Object** list. b) Select the counter in the **Select counters from list**. c) If required, select the instance in the **Select instance from list**. d) Click **Add**.

#	Performance Object	Counter	Instance
1	Paging File	% Usage	<\\??\C:\Pagefile.sys>
2	System	Processor Queue Length	
3	System	Context Switches/Sec	
4	Processor	% Processor Time	_Total
5	Processor	% Interrupt Time	_Total
6	Server Work Queues	Queue Length	0
7	Server Work Queues	Bytes Transferred/Sec	0
8	TCP	Segments/Sec	

Interpreting the performance counter values

Paging file usage

Evaluating the Paging File Usage counter tells you whether or not your computer has enough physical RAM. The counter itself tells you how often the computer is using the Paging File. Average values approaching 40% or higher are a strong indication that the computer is running without enough memory.

Processor speed and quantity

In order to evaluate whether or not your computer has adequate processing power, you must look a several counters:

- System/Processor Queue Length
- System/Context Switches/Sec
- Processor/% Processor Time
- Processor/% Interrupt Time
- Server Work Queues/Queue Length

The **Processor Queue Length** indicates how many threads are waiting for CPU time. Evaluating the Average gives you an idea of how well the system is supporting the configuration. Generally, numbers averaging from 2 to 15 indicate the system could benefit by moving to a faster CPU. Numbers averaging above 15 indicate the system could benefit by moving to a Multiple CPU system. (Microsoft states that systems with average queue lengths above 2 indicate processor congestion.)

Evaluating the **Context Switches/Sec** gives you an idea of how busy the system is. The counter measures the number of times a thread:

- Voluntarily relinquishes the processor
- Is preempted by a higher priority thread
- Switches between user-mode and privileged (kernel) mode to use an Executive or subsystem service

The **Percent Processor Time** indicates the utilization of the processor measured in a percentage. Average percentages higher than 25% usually indicate that the system could benefit from an upgrade to a faster processor or multiple CPU system.

The **Percent Interrupt Time** indicates how often the system is handling hardware-related tasks, and where CPU congestion might exist. Evaluating this counter may assist you in customizing your system configuration and usage to gain the best performance.

The **Server Work Queue Length** indicates the workload the server is performing. A sustained queue length greater than four might indicate processor congestion.

It is recommended that you evaluate all these counters before considering an upgrade for the CPU. Faster speed processors will not always solve CPU performance problems. Some systems will require the use of multiple CPUs. If you are unsure of the CPU requirements of your system, it is recommended you purchase a system capable of supporting multiple CPUs. This leaves you the option of going to higher speed CPUs as well as the ability to add a second.

Networking

Network utilization is best-measured using third-party tools to evaluate the network hardware itself. However, you can gain knowledge by how a particular server node is performing by looking at the following counters:

- Server Work Queues/Bytes Transferred/Sec
- TCP/Segments/Sec

With these counters, you can also evaluate the network using the pre-installed network diagnostic tools provided with the network drivers. Two exist depending on platform and configuration:

- 3Com Diagnostic Tool: For use with 3Com Cards on Precision 340.

  To access, choose **Start** > **Programs** > **3Com NIC Utilities** > **3Com NIC Doctor**.

- Intel Pro Set: For use with Intel Pro Cards on Precision 340 with FTE, and all PowerEdge Servers.

  To access, choose **Start** > **Settings** > **Control Panel** and then double-click the **Intel ProSet** icon.

Experion PKS clients utilize two methods to communicate with the server. To adequately evaluate the performance of this mechanism, it requires viewing both counters at the server to determine how busy the network/server is performing these tasks:

- **Bytes Transferred/Sec** shows how busy the server is servicing network clients. This is the rate at which the server is sending and receiving bytes with the clients.
- **TCP/Segments/Sec** shows the amount of TCP traffic sent or received by the server.

30. Troubleshooting

This section provides troubleshooting information.

Topic	Go to
Isolating problems	644
Fixing common problems	645
Getting further assistance	654

30.1 Isolating problems

If you cannot install Experion PKS, check the log file, `setup.log`, by opening it with Notepad or other text editor.

The first time you attempt to install Experion PKS, the log file is created in the folder specified by the TEMP environment variable. During subsequent installations, the log file is created in `Server\Setup`.

30.2 Fixing common problems

Operations

Display performance is slow

Diagnostic check	Check that the video display color depth is set to 16-bits and the resolution is 1280 by 1024 pixels.
Cause	The video display color depth and resolution are not supported.
Solution	Change the screen's color depth and screen resolution to the supported settings (see 204).

Network data or applications are slow to start on a client computer

The first time a spreadsheet is called up or a network-based application is run, it takes one to two minutes to start or display the application data.

Diagnostic check	Check that you have defined a hosts file on each computer in the Experion PKS system and that the entries for all Experion PKS servers are correct.
Cause	Without a hosts file, the computer uses the Domain Name Service (DNS) to resolve the server computer name. It can take up to 30 seconds to resolve a computer name to an IP address and up to 2 minutes to determine the network architecture, find a valid link, and then return requested data.
Solution	Edit the hosts file (see 207).

Configuration

Cannot communicate with a terminal server through HyperTerminal

Diagnostic check	Check the Experion PKS Server Daemon service status. To do this, display the Services Console (see 387).
Cause	The Experion PKS Server Daemon service is not running.

Solution	Right-click on the Experion PKS Server Daemon service and choose **Start** in the pop-up menu.

Diagnostic check	Check the cable between the configuration computer and the terminal server.
Cause	You may be using an incorrect cable or is may not be firmly connected to each device.
Solution	Use the correct cable type (see 547) and ensure the cable connections are secured correctly to the device.

Diagnostic check	Identify if other applications, except HyperTerminal, are using the same COM port.
Cause	The COM port is being used by more than one application.
Solution	Close other applications using the same COM port and then restart the HyperTerminal application.

Diagnostic check	Check that the terminal server is switched on.
Cause	The terminal server is switched off.
Solution	Switch on the terminal server.

Diagnostic check	Check that the COM port settings are correct for the terminal server you are configuring.
Cause	You are using incorrect COM port settings that are causing communication problems between the configuration computer and the terminal server.
Solution	Use the correct COM port settings for your terminal server (see 547).

Cannot communicate with the terminal server through Telnet

Diagnostic check	Check the Experion PKS Server Daemon service status. To do this, display the Services Console (see 387).
Cause	The Experion PKS Server Daemon service is not running.
Solution	Right-click on the Experion PKS Server Daemon service and choose **Start** in the pop-up menu.

Diagnostic check	Check that the terminal server is switched on, connected to the LAN, and the network activity light is flashing. Check that the configuration computer is connected to the LAN.
Cause 1	The terminal server is not switched on.
Solution 1	Switch on the terminal server.
Cause 2	The terminal server is not connected to the network or the network connections are not securely attached.
Solution 2	Ensure all network cables are securely connected to a network port. Use the Windows ping command to test the connection from the configuration computer to the terminal server.

Diagnostic check	Check the terminal server's IP address is correct.
Cause	The terminal server has the same IP address as another network device in your network causing communication conflicts.
Solution	Enter or change the terminal server's IP address (see 547).

Diagnostic check	If the terminal server is connected to the Experion PKS server through a router, check the gateway IP address is correct.

Cause 1	The gateway address in the terminal server is not correct or incorrectly configured.
Solution 1	Enter or change the terminal server's gateway IP address (see 547).
Cause 2	The IP address of the terminal server has not been entered, or is incorrect, in the hosts file on Experion PKS servers.
Solution 2	Edit the hosts file (see 207) to include the router's IP address on all Experion PKS servers.

Terminal server channel fails immediately after enabling the channel

Diagnostic check	Check the Experion PKS Server Daemon service status. To do this, display the Services Console (see 387).
Cause	The Experion PKS Server Daemon service is not running.
Solution	Right-click on the Experion PKS Server Daemon service and choose **Start** in the pop-up menu.

Diagnostic check	Check that the terminal server is switched on and that the controller communicating through the terminal server is switched on.
Cause	The terminal server or controller is not switched on.
Solution	Switch on the terminal server and controller.

Diagnostic check	Check that all cables between the controller, terminal server, and Experion PKS server are connected.
Cause	The components are not connected or the connections are not securely attached.
Solution	Ensure all cables are securely connected to the correct port.

Diagnostic check	Check that the channel properties are correctly defined for the terminal server in Quick Builder.
Cause	Incorrect channel parameters have caused a terminal server failure.
Solution	Enter or change the channel properties for the controller in Quick Builder (see 547).

Diagnostic check	Check that you have defined a hosts file on each computer in the Experion PKS system and that the entries for all Experion PKS servers are correct.
Cause	If servers are incorrectly defined in the hosts file, network devices may be communicating with the wrong server.
Solution	Edit the hosts file (see 207).

Diagnostic check	The IP address is not being used by any other devices.
Cause	If the terminal server has the same IP address as another network device there may be communication problems.
Solution	Enter or change the terminal server's IP address (see 547).

Terminal server channel fails intermittently

The terminal server channel fails intermittently.

Diagnostic check	If the terminal server is connected to the Experion PKS server through a router, check the gateway IP address is correct.
Cause 1	The gateway address in the terminal server is not correct or incorrectly configured.
Solution 1	Enter or change the terminal server's gateway IP address (see 547).

Cause 2	The IP address of the terminal server has not been entered, or is incorrect, in the hosts file on Experion PKS servers.
Solution 2	Edit the hosts file (see 207) to include the router's IP address on all Experion PKS servers.

System administration

Computer displays restarts and displays stop error (blue screen)

When the computer restarts, a stop error (blue screen) appears.

Diagnostic check	During an installation or upgrade, the computer restarts and then displays a stop error, also known as a "blue screen". When you restart the computer again, the stop error appears. Continued restarting of the computer results in this stop error.
Cause	The cause of this problem is unknown and is being investigated.
Solution	a) Restart the computer. b) When you see the message **Please select the operating system to start**, press F8. c) Use the arrow keys to highlight the **Safe Mode** option, and then press ENTER. d) Once in safe mode, choose **Start** > **Administrative Tools** > **Services**. e) In the Services list, right click on **Windows Management Instrumentation** and choose **Properties** in the popup menu. f) Click the **Recovery** tab. g) In the **First failure**, **Second failure**, and **Subsequent failures** lists, choose **Take No Action**. h) Click **OK**. i) Restart the computer.

Automatic removal starts

If your Experion PKS installation or upgrade fails and the automatic removal starts, follow this recovery procedure.

Diagnostic check	During an installation or upgrade, automatic removal starts.
Cause	The Experion PKS installation or upgrade failed.
Solution	a) Identify where the installation or upgrade failed. b) Follow the relevant procedure for removing the component (see 603). c) When the removal is successfully completed, restart the Experion PKS installation or upgrade on the current system from the beginning.

Experion PKS server is slow to start or does not start at all

The Experion PKS server is slow to start-up or does not start at all.

Diagnostic check	Check whether network drives are listed in the system variable path. To view system variables: a) In the Windows Control Panel, double-click the **System** icon to display the system settings. b) Click the **Advanced** tab and then click **Environment Variables** to display the environment settings for the system and user variables. c) Under **System Variables**, scroll-down to the Path variable, and then double-click it. d) In the **Edit System Variable** dialog box, scroll through the Variable name and identify if any network paths are listed.
Cause	A network drive is defined within system variables and is causing poor system performance.
Solution	Remove network drive paths from the system variable Path and add them to the user variable Path.

Experion PKS server performance is slow

The Experion PKS server performance is slow.

Diagnostic check	Check that there is no graphics- or CPU-intensive screen saver.
Cause	There screen saver requires significant CPU effort causing poor performance of core applications.
Solution	Change the screen saver to a non-graphic, non CPU-intensive setting.

Diagnostic check	Check if the system performance is set to Applications. To do this: a) Double-click the **System** icon in the Control Panel. b) Click the **Advanced** tab. c) Click **Performance Options**.
Cause	The system performance is set to applications and the Windows operating system is not giving priority to background services.
Solution	Set the system performance to Background Services.

Diagnostic check	Check if the computer is optimized for network applications. a) In the Control Panel, double-click the **Network and Dial-up Connection** icon or the **Network Connections** icon. b) Right-click the network connection and choose **Properties**. c) Click **File and Printer Sharing for Microsoft Networks** and then click **Properties**.
Cause	Other settings are not optimized for Experion PKS performance.
Solution	Click **Maximize data throughout for network applications** and then click **OK**.

The modem connects but doesn't stay connected

Diagnostic check	Check if the phone line has "call waiting" enabled.
Cause	If "call waiting" is enabled, incoming calls may throw the modem off-line.
Solution	Disable "call waiting". Contact your telecommunications provider for instructions.

Diagnostic check	Check that the modem's flow control is set to hardware flow control.
Cause	For modems with a baud rate of 9,600 or greater, flow control must be set to hardware flow control.
Solution	See the instructions supplied with your modem for details on how to set the hardware flow control.

30.3 Getting further assistance

If you cannot resolve a problem, forward the Experion PKS server log file to your Honeywell representative for help.

31. Glossary

Term	Definition
ACE	Application Control Environment node.
Clean installation	Occurs on nodes that do not contain any Experion PKS software, but may contain the Windows operating system.
CNet	Control Network for communications between C200 controllers (Level 2). This network requires a PCIC card be installed in your Experion PKS servers.
Client Station	The previous name for Flex Station (prior to Experion PKS R210).
Common Components	Software components that are common between the Experion PKS product and the TPS product.
Console Station	This station can communicate with the C200 without a server on-line. The only Level 2 network allowed is FTE.
FTE	Fault Tolerant Ethernet.
FTEB	Fault Tolerant Ethernet Bridge is the FTE replacement for the C200 Supervisory CNI card.
Flex Station	The new name for a Client Station, which was the term prior to Experion PKS R210.
Level 1 network	Communications between the Controller and I/O devices. In the C200, the downlink CNI to the I/O rack is a level 1 network.
Level 2 network	In Experion, the network between the server and C200 controller. Typically this has been a CNet connected from the server PCIC card to the C200 supervisory CNI. With the introduction of FTE and the FTEB, Level 2 has been co-joined with the Level 3 FTE. While FTE is physically one network, the link between the switch and FTEB is considered Level 2 and is further restricted using subnet masking in the FTEB (and potentially the switch as well).

Term	Definition
Level 3 network	Typically an FTE or single Ethernet that connects servers and stations.
Migration	See OPM.
NT5Plus	A Honeywell developed CD that includes the Windows 2000 operating system and Experion PKS-specific system configuration, such as FTE NIC card binding order. Only customers who purchase hardware from Honeywell receive this option. If you do not have an NT5Plus CD you must load the Windows operating system using the Windows CDs that came with your PC.
OLE	Object Linking and Embedding – a Microsoft Technology.
OPC	OLE for Process Control.
OPM	On-process migration is the updating of Experion PKS software in an on-control system to a newer system release. R210 OPM is only supported for R201 and R101 systems. OPM is a separately licensed option and can only be performed on redundant servers
OS	Operating system.
Process	A Process system includes Experion PKS Engineering Tools such as Control Builder.
Redundant Server	Consists of a server A and a server B.
SCE	Simulation Control Environment (renamed SIM-C200 in Experion PKS R210)
SIM-C200	Simulation node that emulates the C200. Previously known as SCE.
SIUG	Software Installation and Upgrade Guide.
Terminal Server	A terminal server allows you to connect several controllers and Stations to a LAN even though they only have serial or parallel ports.

Term	Definition
Upgrade	The updating of Experion PKS software in an off-control system to a newer system release. Upgrades are supported from the last two previous releases.
Windows 2000 Server	Applicable for server, ACE, SIM-C200.
Windows 2000 Professional	Applicable for Flex Stations.
Windows XP	Applicable for Flex Stations.
Workstation Security	A security template applied to the node that establishes security access to registry and files based on local groups created. It also establishes a base computer policy. This package is required for components like System Management Display, System Performance Server, System Event Server, and the High Security Policy.
XPPlus	Honeywell developed media that includes the Windows XP operating system and Experion PKS-specific system configuration.

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