

NxE85 Installation and Upgrade Instructions

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Document Introduction

This document provides the detailed procedures for installing the NxE85 software on a new NAE85 or NIE85. In addition, this document covers the steps for upgrading an existing NxE85 installation. Software prerequisites for configuring your server-class operating system (OS) for NxE85 software installation are also provided.

Important: The NxE85 shuts down the software upon startup if you attempt to run the product unlicensed. Therefore, we recommend that you allocate time to license your NxE85 immediately after you install it. See [Licensing the NxE85](#) for licensing information.

Summary of Changes

The following information is new or revised:

- Two operating systems are no longer supported: Windows® Server 2008 R2 Standard with SP1 and Windows Server 2008 R2 Web with SP1.
- The NXE85 installation screens are updated for the new release. For details, see [Installing or Upgrading an NxE85](#).
- The NXE85 technical specifications table ([Table 1](#)) is updated for the new release.

NxE85 Installation and Upgrade Overview

The operating system on the computer that you want to use for *Metasys* software must have been installed on a cleanly formatted hard disk. Do not use a computer that was upgraded from a previous version of Microsoft® Windows® (for example, upgraded to Windows Server® 2012 R2 from Windows Server 2012). The Windows upgrade process can leave behind files and registry settings that may adversely affect the installation of *Metasys* system software. To verify, make sure a folder called WINDOWS.OLD does not exist on the hard disk. If the WINDOWS.OLD folder is present, reinstall the operating system from its media, making sure you format the hard disk during operating system installation. Before you reimage the computer, verify that you have all necessary software drivers.

Also, SCT cannot exist on the same computer as NxE85 software. You must uninstall SCT before you install the NxE85 software.

The NxE85 software disc installs the *Metasys* system NAE85 or NIE85 software or upgrades an existing NAE85 or NIE85 to the current software release. Carefully review the software prerequisites and OS setup before installation. Make sure to follow the steps outlined in the [Detailed Procedures](#) section in the order they are listed to ensure a successful installation or upgrade.

NxE85 Installation and Upgrade Prerequisites

To install or upgrade an NxE85, you need:

- a supported, dedicated server-class computer
- an NxE85 software disc
- a computer monitor, keyboard, and mouse (if the NxE85 does not have these devices already dedicated)

Software Prerequisites

The installation or upgrade of the NxE85 software requires one of the following 64-bit Windows server-class operating systems:

- Windows Server® 2016
- Windows Server 2012 R2 with Update 1 (KB2919355)
- Windows Server 2012 (64-bit)

- For any of the operating systems, NxE85 software requires the Microsoft .NET Framework 3.5 SP1 and Microsoft .NET Framework 4.6.1 software components. Steps to install these components are covered under [Detailed Procedures](#).
- If you are using the Windows Server® 2012 R2 operating system and have not run Windows Update recently, you may need to apply **Update 1**, which is a prerequisite for installing Microsoft .NET Framework 4.6.1. To obtain this update, go to <https://support.microsoft.com/en-us/kb/2919355>.
- We strongly advise that you do not browse to the Metasys® Site Management Portal (SMP) UI from a computer running a server-class operating system. By default, Windows® Internet Explorer® Enhanced Security Configuration is enabled on server-class operating systems, and may block the Launcher download page from which you install the Launcher application for access to the Site Management Portal. Open the SMP UI from a computer that is not running a server-class OS.

Detailed Procedures

Setting Up the Computer for NxE85 Software

To install new NxE85 software, you must first prepare the NxE85 computer and configure your server-class operating system. Follow the steps in the following sections:

- [Configuring Additional Network Cards](#)
- [Setting up the Roles and Features for the Windows Server Operating System](#)
- [Installing Microsoft .NET Framework 4.6.1](#)

Note: The NxE85 name and the computer name must match for proper functionality. You need to change the NxE85 name and computer name only on network applications that specify naming conventions for computers on the network. Refer to the *NxE85 Commissioning Guide (LIT-12011044)* for information and procedures on changing the NxE85 name and the computer name.

Configuring Additional Network Cards

You can install NxE85 software on a computer that has multiple network cards. If your computer has only one network card, skip this section and go to [Setting up the Roles and Features for the Windows Server Operating System](#). If your computer has two or more network cards, follow the steps in this section to specify the network card used for NxE85 software.

1. In Control Panel, select **System and Security > System > Device Manager**. If the User Account Control window appears, click **Continue** or **Yes**. The Device Manager window appears.
2. Expand the **Network Adapters** item.
3. If only one physical network card is listed, skip this section and go to [Setting up the Roles and Features for the Windows Server Operating System](#).

If more than one physical network card is listed, go to the next step.

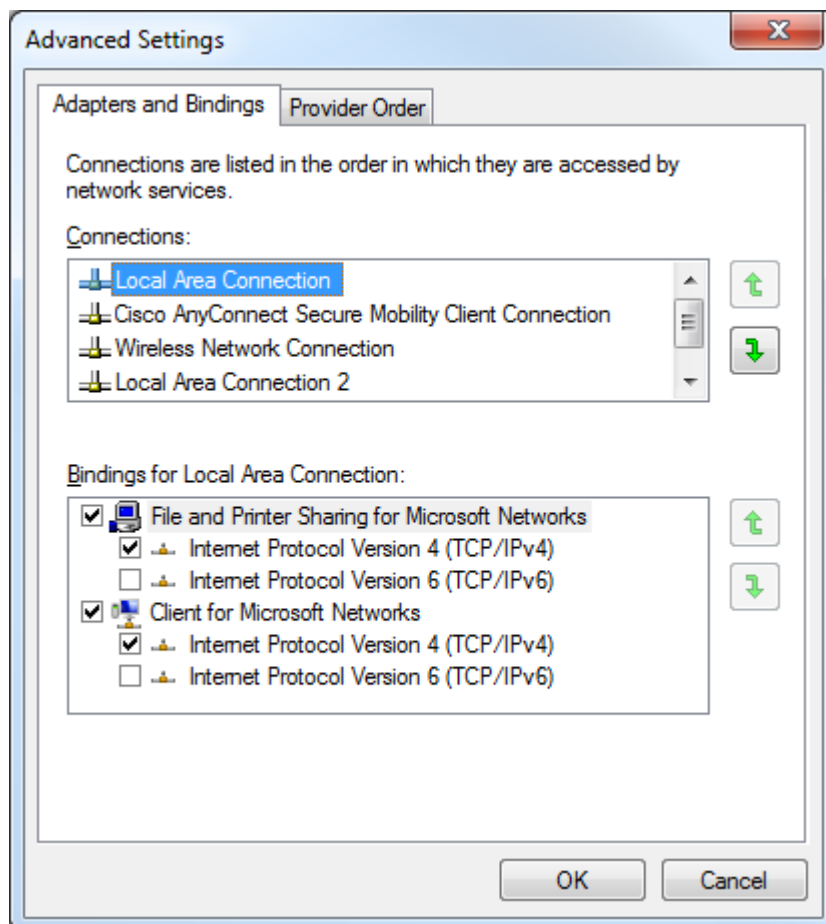
4. Close Device Manager. Return to Control Panel and click **Network and Internet > Network and Sharing Center > Change Adapter Settings**. The Network Connections window appears.

Note: If the menu bar is not displayed on the Network Connections window, press the **Alt** key.

5. Click **Advanced > Advanced Settings**. The Advanced Settings window appears.

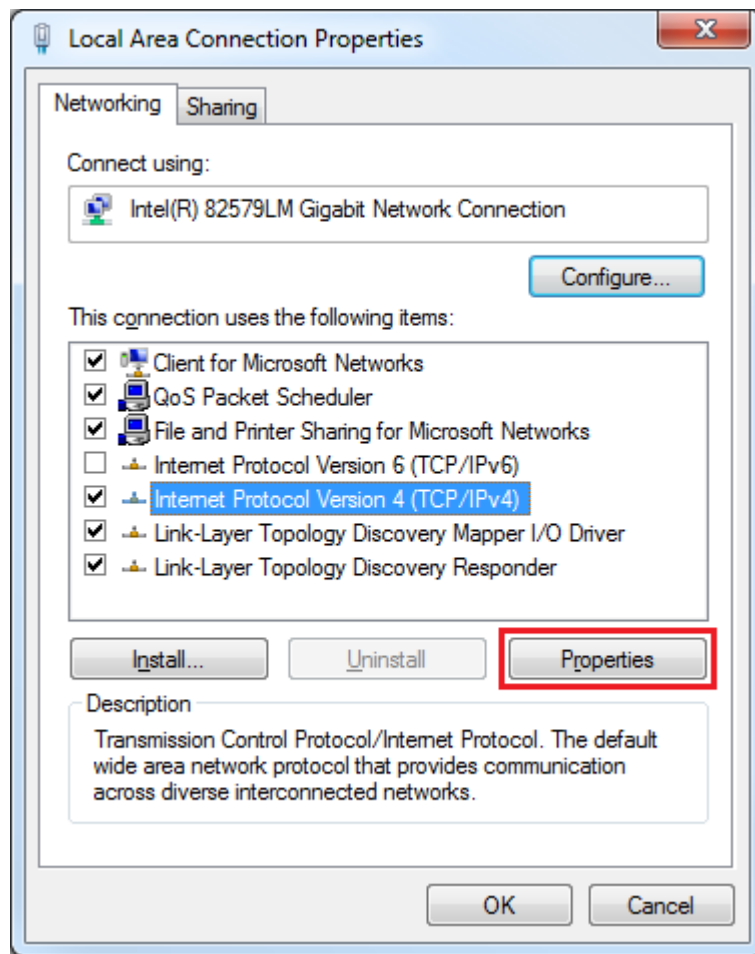
Note: If the menu bar does not appear, click **Organize**, then select **Layout** and then check **Menu bar**.

Figure 1: Advanced Settings - Adapters and Bindings Tab



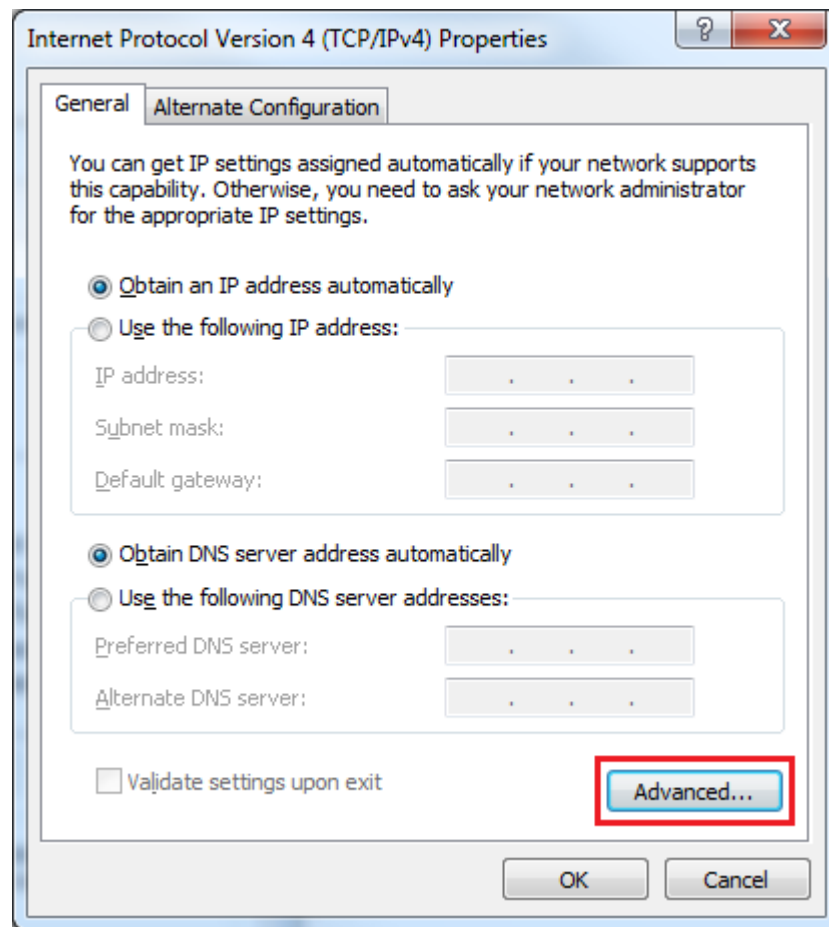
6. In the Connections list, click the network connection that the *Metasys* system uses. Use the arrow buttons to move that connection to the top position. With the Adapters and Bindings tab selected, clear the Internet Protocol Version 6 options if checked.
7. Click **OK** to save the change.
8. On the Network Connections window, right-click the network connection that the *Metasys* system uses, and select **Properties**. The Local Area Connection Properties window appears.

Figure 2: Properties for Local Area Connection - Networking Tab



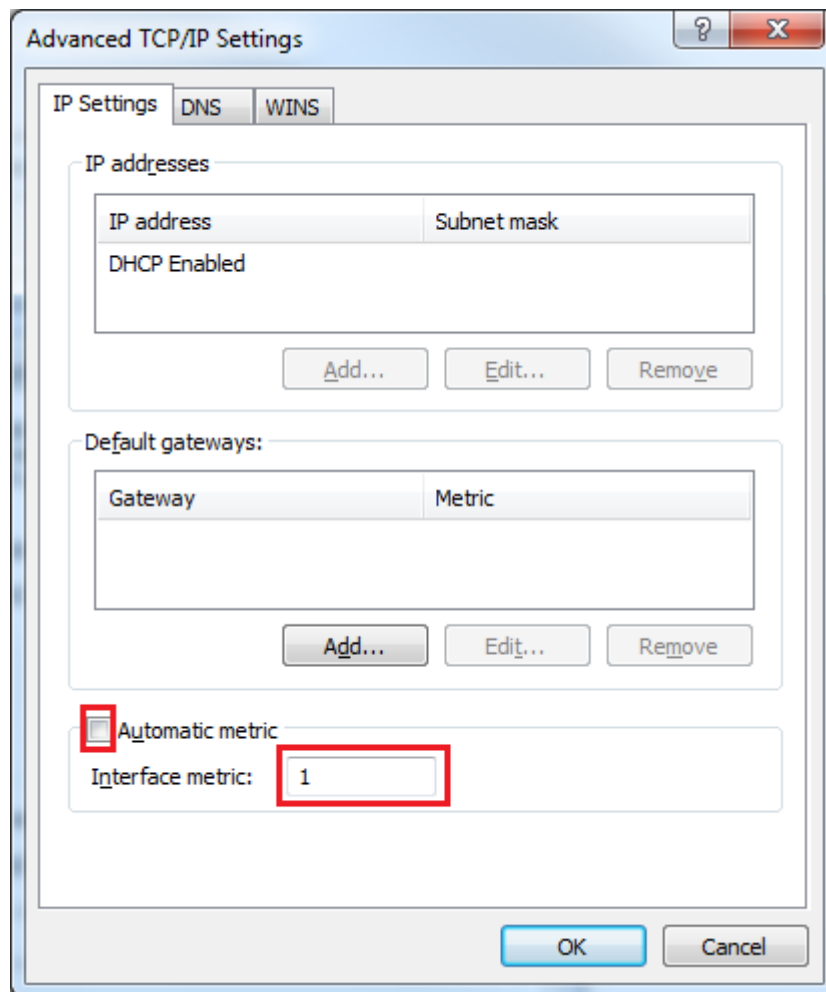
9. Click **Internet Protocol Version 4 (TCP/IPv4)**. Click **Properties**. The Internet Protocol Version 4 (TCP/IPv4) Properties window appears.

Figure 3: Internet Protocol Version 4 (TCP/IPv4) Properties - General Tab



10. Click **Advanced**. The Advanced TCP/IP Settings window appears.

Figure 4: Advanced TCP/IP Settings _IP Settings Tab



11. Clear the **Automatic metric** check box (if selected) and specify **2** in the Interface metric field. Providing a low Interface metric number to the computer ensures *Metasys* network traffic has the highest communication priority.
12. Click **OK** to save the changes.
13. Repeat steps 8 through 12 for the second (and each subsequent) active network card on the computer. However, for the second (and each subsequent) active card, increment the Interface metric value **by 1** for each card. Following these steps ensures communication priority between the NxE85 and network engines.
14. Close all windows and go to [Setting up the Roles and Features for the Windows Server Operating System](#).

Setting up the Roles and Features for the Windows Server Operating System

Before you install the NxE85 software on a Windows Server operating system, you must set up the roles and features for the OS. These steps apply to Windows Server 2016, Windows Server 2012 R2, and Windows Server 2012.

1. On the Start screen, click **Server Manager**. The Server Manager window appears.
2. Click **Manage > Add Roles and Features**. The Add Roles and Features Wizard appears.
3. On the Before You Begin window, click **Next**. The **Select installation type** window appears.
4. Click **Role-based or feature-based installation** and then click **Next**. The **Select destination server** window appears.

5. Click **Select a server from the server pool**, and then click the server name to highlight it in the Server Pool. Click **Next**. The Select server roles window appears.
6. Scroll down and click the **Web Server (IIS)** check box. The **Add features that are required for Web Server (IIS)?** window appears.
7. Click **Add Features**, and then click **Next** in the **Select server roles** window. The **Select features** window appears.
8. In the window, configure the features. See [Table 1](#) for the options to select. Select only the options listed in [Table 1](#). All other options must remain cleared.

Table 1: Features Configuration for Windows Server Operating System

Category to Select	Options to Select
.NET Framework 3.5 Features	.NET Framework 3.5 (includes .NET 2.0 and 3.0) HTTP Activation Note: When you select HTTP Activation, a dependencies dialog appears. Click Add Features .
.NET Framework 4.5 Features	.NET Framework 4.5 ASP.NET 4.5 WCF Services • HTTP Activation • Message Queuing (MSMQ) Activation • Named Pipe Activation • TCP Activation • TCP Port Sharing
Message Queuing	Message Queuing Services • Message Queuing Server
Remote Server Administration Tools	SNMP Tools
SMB 1.0/CIFS File Sharing Support	--
SNMP Service	SNMP WMI Provider
User Interfaces and Infrastructure	Graphical Management Tools and Infrastructure Desktop Experience Note: When you select Desktop Experience, a dependencies dialog appears. Click Add Features . Server Graphical Shell
Windows PowerShell	Windows PowerShell 4.0 Windows PowerShell 2.0 Engine Windows PowerShell ISE
Windows Process Activation Service	Process Model .NET Environment 3.5 Configuration APIs
WoW64 Support	--

9. Click **Next**.
10. Click **Next** in the Web Server Role (IIS) window. The **Select role services** window appears.

11. In the window, configure **Role Services**. See [Table 2](#) for the options to select in each category. Select **only** the options listed in [Table 2](#). All other check boxes must be cleared.

Table 2: Role Services Configuration for Windows Server Operating System

Category to Select	Options to Select
Common HTTP Features	Default Document Directory Browsing HTTP Errors Static Content
Health and Diagnostics	HTTP Logging Request Monitor
Performance	Static Content Compression
Security	Request Filtering Windows Authentication
Application Development	.NET Extensibility 3.5 .NET Extensibility 4.5 ASP.NET 3.5 Note: When you select ASP.NET 3.5, a dependencies dialog appears. Click Add Features . ASP.NET 4.5 ISAPI Extensions ISAPI Filters
Management Tools	IIS Management Console IIS 6 Management Compatibility - IIS 6 Metabase Compatibility - IIS 6 Scripting Tools Note: When you select IIS 6 Scripting Tools, a dependencies dialog appears. Click Add Features. - IIS 6 WMI Compatibility IIS Management Scripts and Tools

12. Click **Next**. The **Confirm installation selections** window appears.
13. Click **Install**.
Note: If one or more of your installation selections is missing source files on the destination server, you receive a warning message. Click **Specify an alternate source path** and manually enter the path.
14. After server configuration is complete, go to [Installing Microsoft .NET Framework 4.6.1](#).

Installing Microsoft .NET Framework 4.6.1

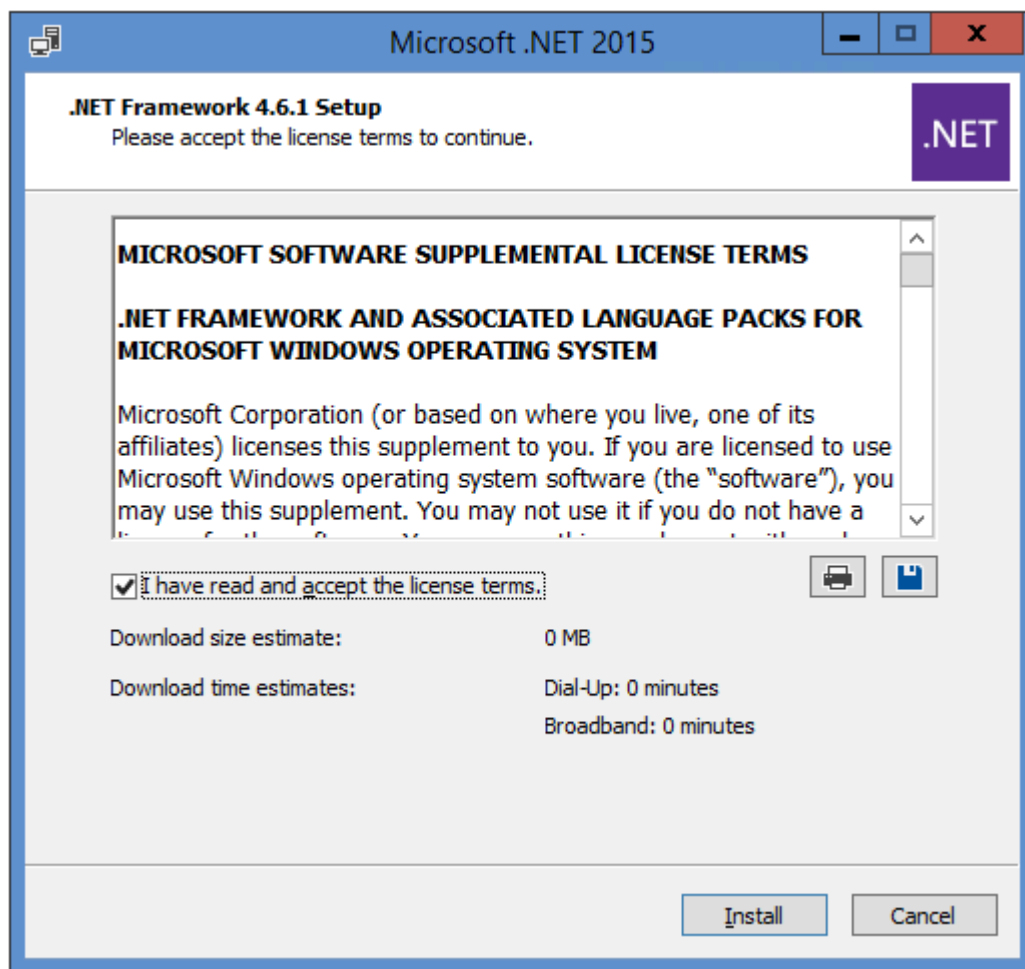
As a prerequisite step to installing Nx85 software, you must install the Microsoft .NET Framework 4.6.1 component. This necessary component is not installed by the Nx85 software installer. The Microsoft .NET Framework 4.6.1 component is available on the product media or from this website: <https://support.microsoft.com/en-us/kb/3102436>.

1. Insert the Nx85 product media. Or download the .NET Framework 4.6.1 component for your particular Windows operating system using the link above.
2. Using Windows File Explorer, browse to the following folder of the product media (or to the location where you downloaded the installer):

OEM > Microsoft > DotNet Framework > v4.6.1

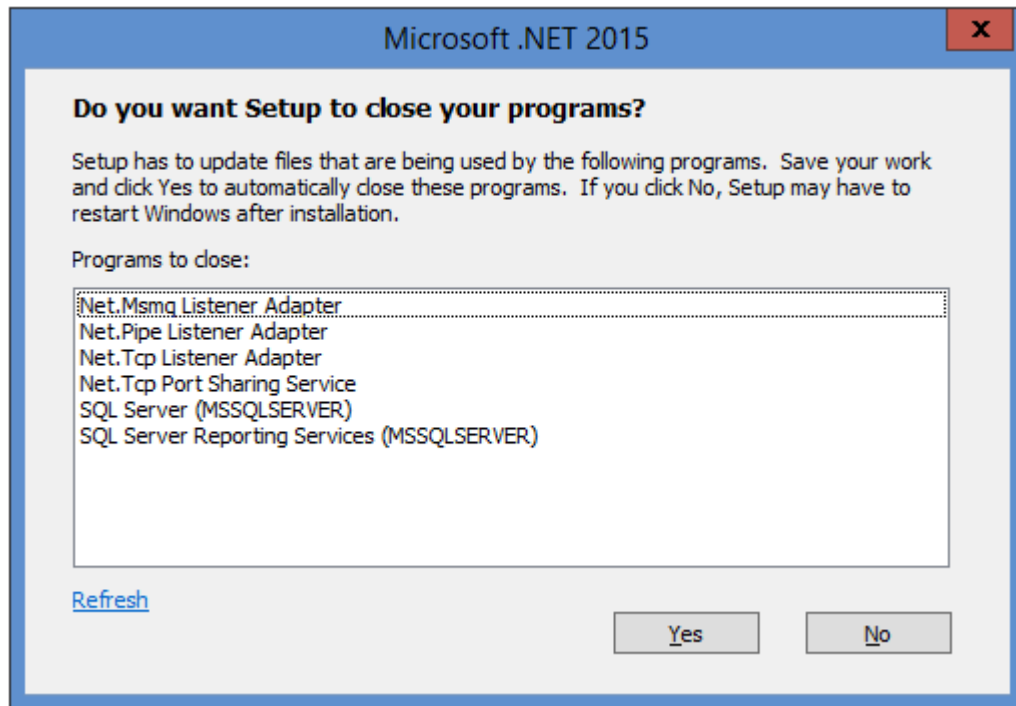
3. Double-click **NDP461-KB3102436-x86-x64-AllOS-ENU.exe**. The installation files are extracted and the Microsoft .NET Framework 4.6.1 Setup dialog box appears.

Figure 5: Microsoft .NET Framework 4.6.1 Setup Screen



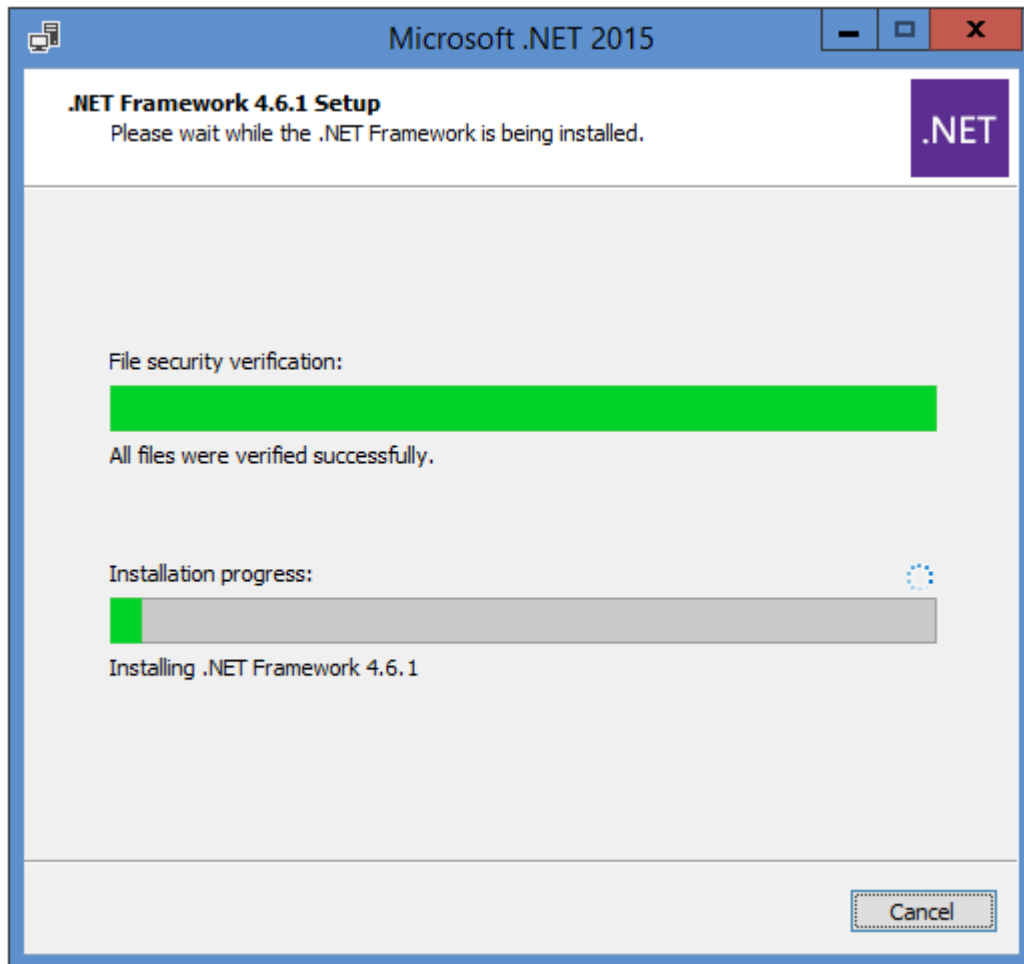
4. Click the box to accept the license terms, then click **Install** to begin. The program detects that several programs are currently in use that must be closed for the installation to continue. To avoid a restart, we recommend you allow these programs to close.

Figure 6: Close Programs Request



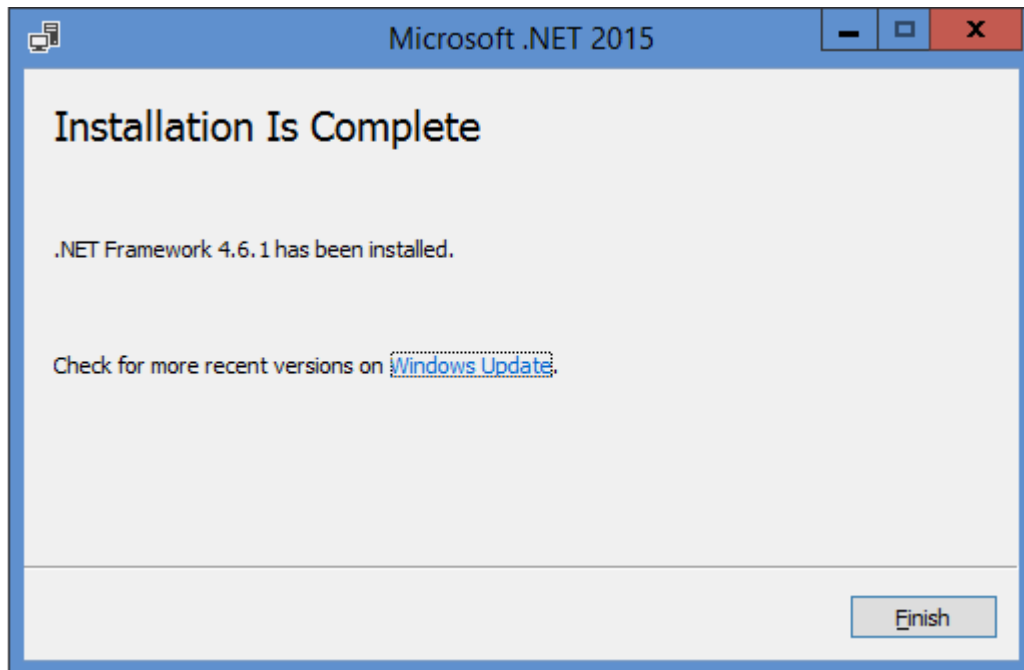
5. Click **Yes** to allow the setup program to close the programs and continue. The progress screen appears. The installation process takes several minutes to complete.

Figure 7: Microsoft .NET Framework 4.6.1 Progress Screen



6. Click **Finish** when the Installation is Complete window appears. No computer restart is necessary unless prompted by the setup program.

Figure 8: Installation Complete

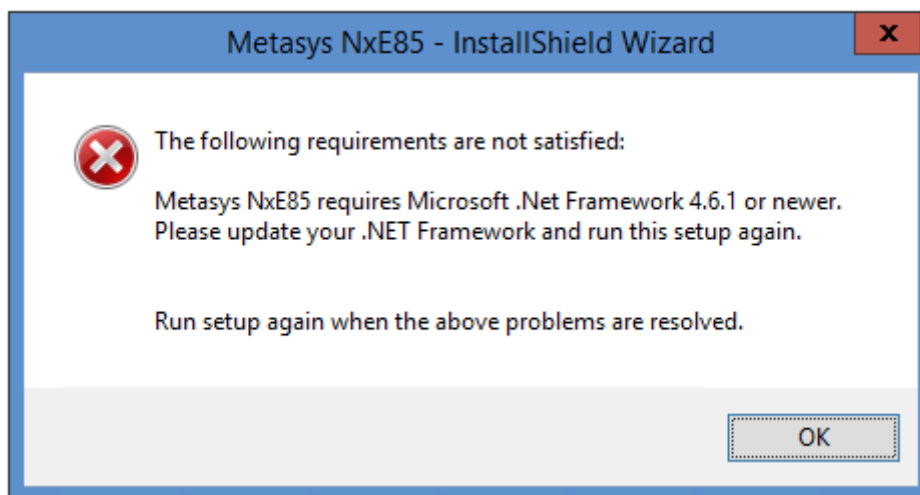


7. Go to [Installing or Upgrading an Nx85](#) to begin Nx85 installation.

Installing or Upgrading an Nx85

Note: If the following message appears when you start Nx85 installation, you must manually install the Microsoft .NET Framework 4.6.1 component. Follow the steps in [Installing Microsoft .NET Framework 4.6.1](#), then come back to this section.

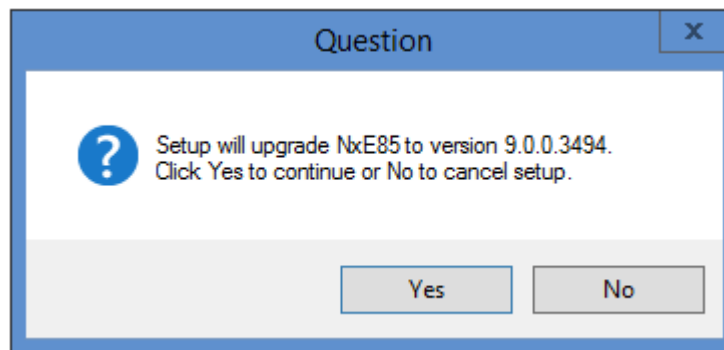
Figure 9: Missing Microsoft .NET Framework 4.6.1 Component



1. Connect the computer monitor, keyboard, and mouse to the Nx85 (if these are not already connected), and power on the Nx85 and computer monitor.
2. If you have only one network card, go to the next step. If you have two or more network cards, go to [Configuring Additional Network Cards](#) for instructions **before** installing or upgrading the Nx85 software.

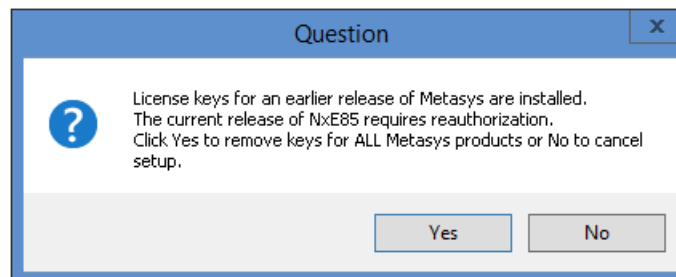
3. Connect Port 1 to an active hub or switch to obtain a valid IP address.
4. If you are installing the NxE85, verify the roles and features for the OS are configured. See [Setting up the Roles and Features for the Windows Server Operating System](#) for instructions.
5. If you are upgrading the NxE85, stop the *Metasys III Device Manager* service. To stop the *Metasys III Device Manager* service:
 - a. Go to **Start > Administrative Tools > Services**.
 - b. In the Services window, right-click **Metasys III Device Manager** and click **Stop**.
6. Insert the NxE85 disc into the NxE85 computer's disk drive.
7. In the Windows UI, locate the disk drive and navigate to the NxE85 folder.
8. In the NxE85 folder, navigate to and click the **setup.exe** file to start the InstallShield® Wizard.
9. If the setup detects a previous version of the NxE85 software, the NxE85 Upgrade Question screen appears ([Figure 10](#)). Click **Yes** to continue.

Figure 10: NxE85 Upgrade Question



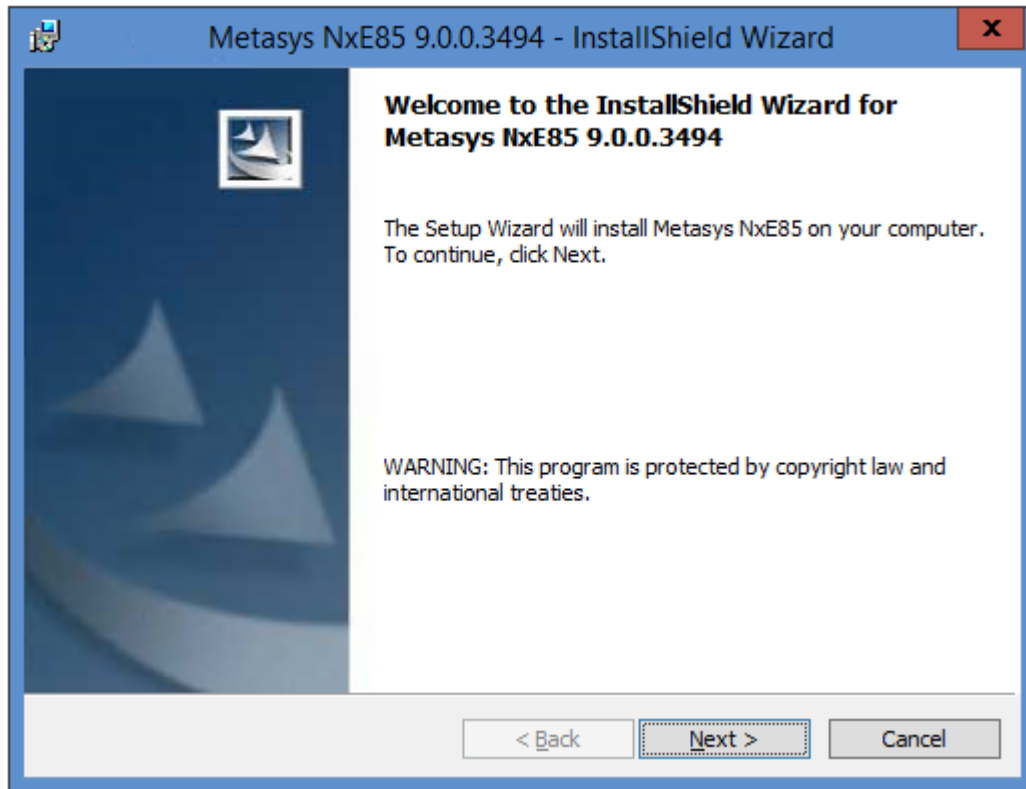
10. If you are upgrading your NxE85 to a new major release (such as from Release 8.0 to Release 9.0), the remove license keys prompt appears ([Figure 11](#)). An upgrade to a major release requires you to re-license your software. Click **Yes** to remove the license keys and proceed with the upgrade.

Figure 11: Remove License Keys



11. After the InstallShield Wizard preparation is complete, click **Next** in the wizard welcome screen ([Figure 12](#)).

Figure 12: NxE85 Wizard Welcome Screen



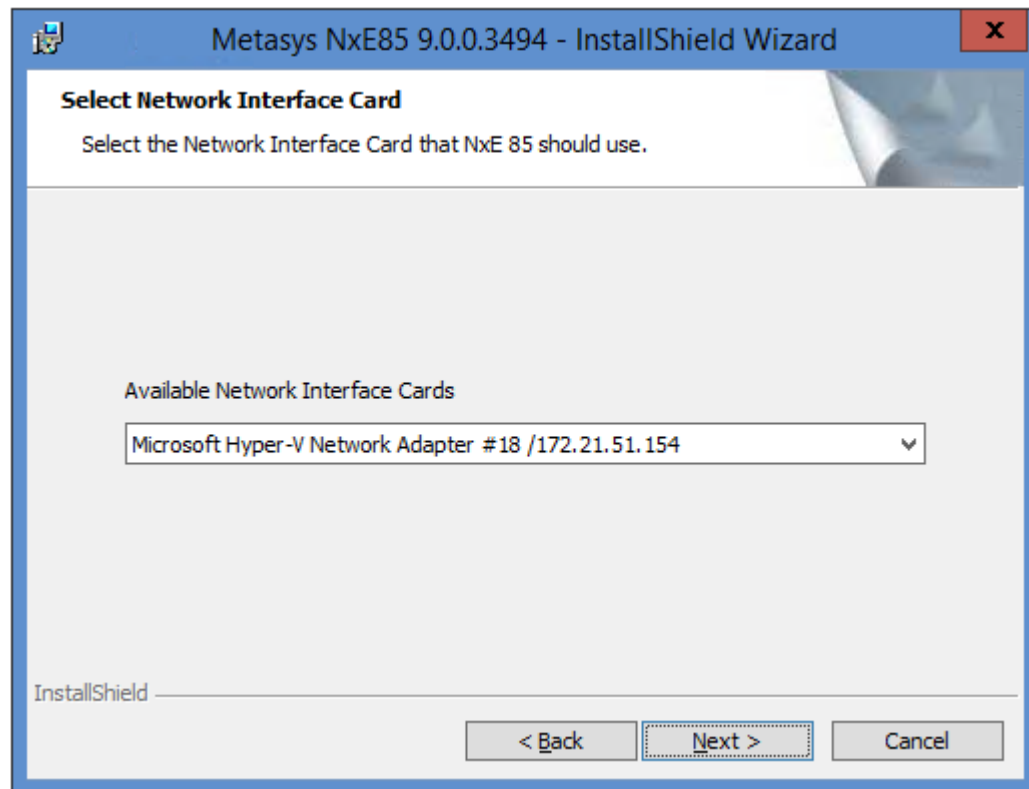
The Select Network Interface Card screen appears ([Figure 13](#)).

12. In the **Available Network Interface Cards** list, select the network interface card you that intend to use for the *Metasys* system ([Figure 13](#)).

Notes:

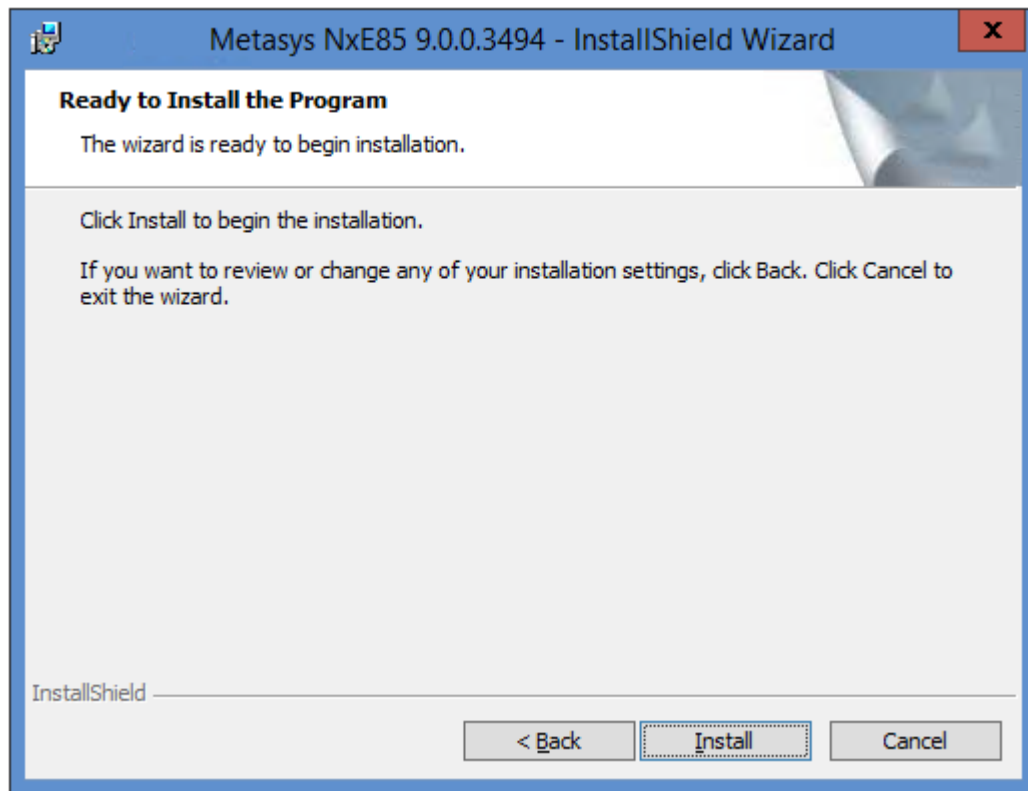
- If the network interface card is disabled, it does not appear in the list.
- If the drop-down box lists multiple network cards, make sure you select the card that you configured with Interface Metric=1 in [Configuring Additional Network Cards](#).

Figure 13: Select Network Interface Card Screen



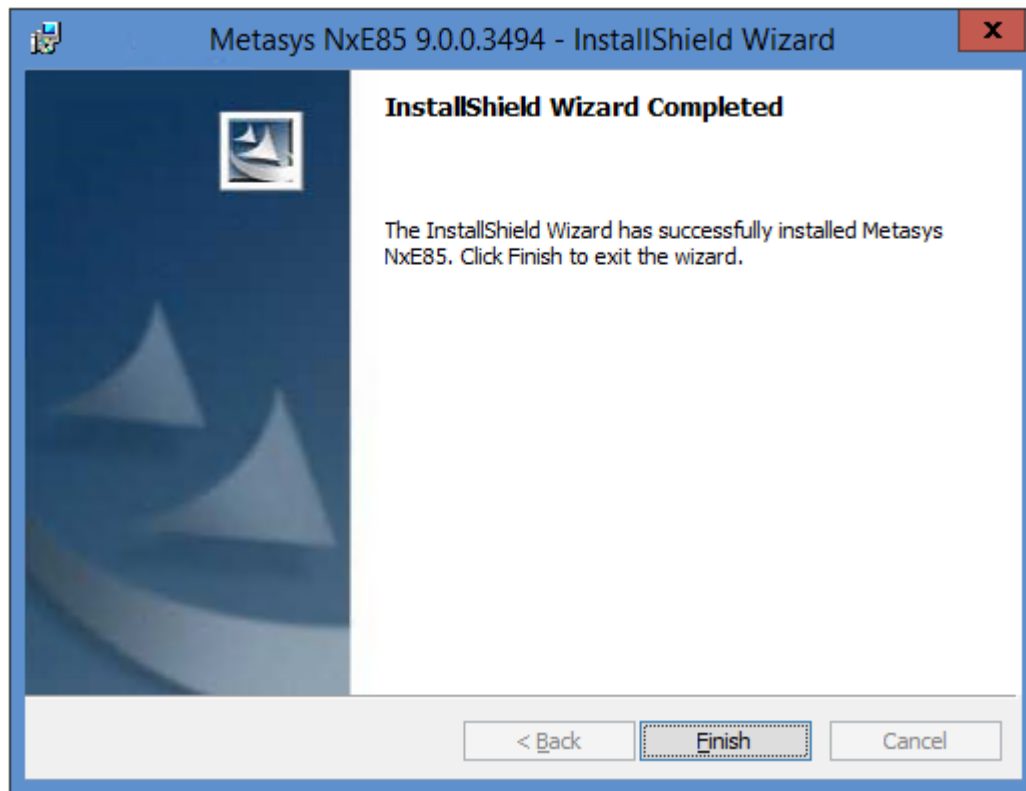
13. Click **Next** to continue. The **Ready to Install the Program** screen appears ([Figure 14](#)).
14. In the **Ready to Install the Program** screen ([Figure 14](#)), click **Install** to begin the installation. A progress indicator bar appears.

Figure 14: Ready to Install the Program Screen



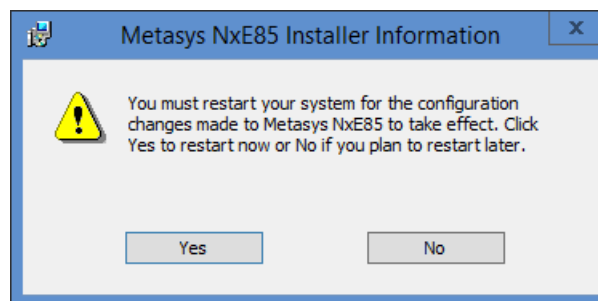
15. When the **InstallShield Wizard Completed** screen appears ([Figure 15](#)), click **Finish** to exit the wizard.

Figure 15: InstallShield Wizard Completed Screen



16. Use the ChangeModel utility to configure the software as an NAE85. Refer to the *Toggle Tunnel and ChangeModel Technical Bulletin (LIT-12011531)* for information and procedure on changing Nx85 models. If you intend to use the Nx85 software as an NIE85, no model change is necessary; go to the next step.
17. When prompted to restart the server, click **No**.

Figure 16: Restart Screen



Note: You do not need to restart the server until after you license the Nx85.

18. Go to [Licensing the Nx85](#) and follow the instructions for licensing.

Important: You must license your Nx85 software after installation. Otherwise, the software automatically shuts down.

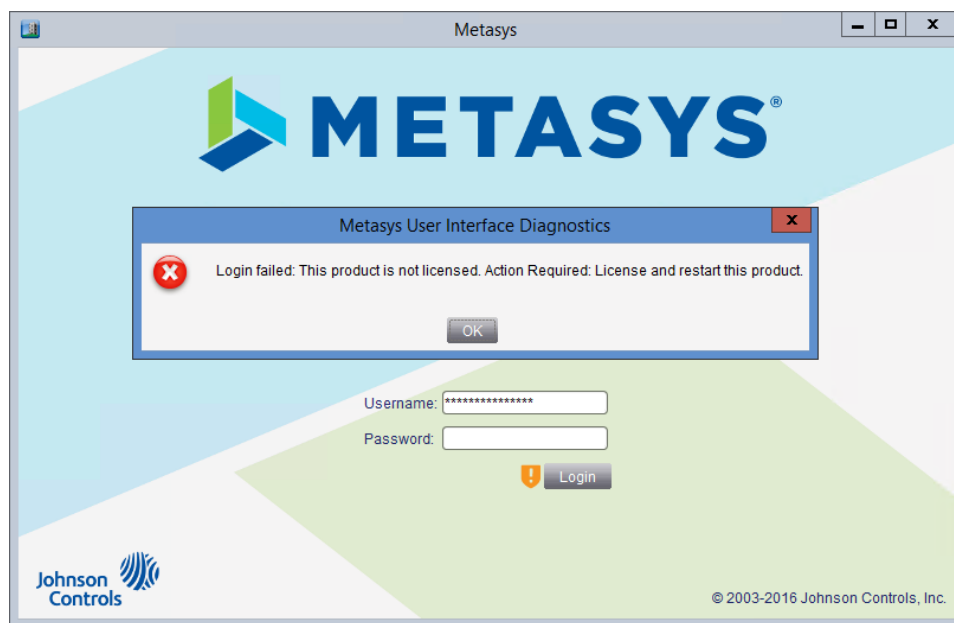
Licensing the NxE85

You must license the NxE85 when you install new NxE85 software at any release. You must re-license the NxE85 after a major upgrade (for example, Release 8.0 to Release 9.0). You can continue using the same license if you are upgrading to a minor release (for example, Release 8.0 to Release 8.1). To verify whether your software is licensed, see [Verifying and Maintaining the Software License](#).

The *Metasys* system checks for an active license at startup. If an active license is not found, the NxE85 software, Ethernet, and trunk communications to the *Metasys* system automatically shut down. If you try to log in to the SMP after the NxE85 software has shut down, a message appears indicating that the product is not licensed ([Figure 17](#)). You must license the NxE85 software by using License Activator, and then restart the computer in order for the *Metasys* system to operate.

Note: All system-generated warnings and error messages related to licensing are logged at **Control Panel > System and Security > Administrative Tools > Event Viewer > Applications and Services Logs > NXE8500 Log**.

Figure 17: Product Not Licensed



To license your NxE85, follow these instructions:

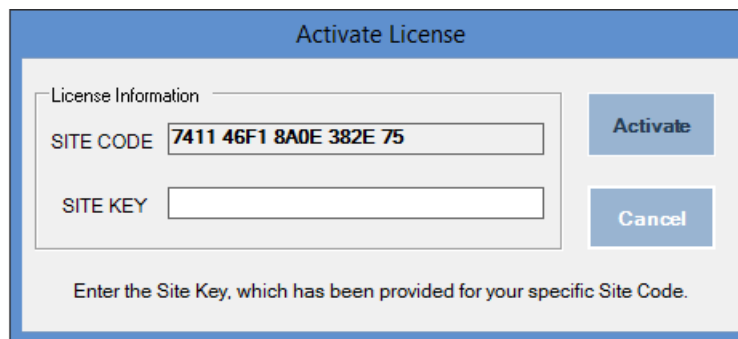
1. On the Start menu, go to **All Programs > Johnson Controls > Metasys > License Activator**. (If you are using Windows Server 2012 R2 or Windows Server 2012, type **License Activator** on the Start screen, then select **License Activator** from the Apps results.) The License Activator window appears ([Figure 18](#)).

Figure 18: License Activator



2. Click **Activate** to open the Activate License dialog box (*Figure 19*). You need to provide the site code listed here when requesting a site key.

Figure 19: Activate License Dialog Box



3. Obtain a site key in one of the following ways:
 - **For a site in North America, Asia, the Middle East, or Latin America**, contact Johnson Controls Product Sales in North America at 1-414-524-7906 or 1-800-333-2222, extension 7906, **during North American business hours** (Monday through Friday, 7:30 a.m. to 4:15 p.m. CST) or email them at software.manufacturing@jci.com. Provide the following information:
 - the product serial number from the software disc. (If you purchased upgrade software [MS-15KUPG-x], provide this serial number.)
 - the project name
 - the object count limit that you selected at the time of purchase (either 10,000 objects, or 25,000 objects if you purchased the 15,000 object upgrade)
 - the site code from the License Activator
 - **For a site in North America outside of North American business hours**, go to the Johnson Controls Site Key Generator site at <http://LicenseKeyGenerator:8080> (*Figure 20*). **You must be on the Johnson Controls**

network in order to access this site. After you accept the Site Usage Terms and Agreement, enter your information in each of the fields. Some of the fields are pre-filled from your Johnson Controls user profile. Select an option from License Details, and then select the product and options to license. (If you are making a correction to a previously issued license, select **Correction to an Issued License** in the License Details section.) Click **Generate** and your site key appears in the Site Key field.

Figure 20: North American Site Key Generator

Johnson Controls Site Key Generator [After Hours (Only) Field Use]

SITE USAGE TERMS AND AGREEMENT

This online License Key Generator for JCI Products is meant to provide access to license keys for specific JCI products outside of the normal business hours of Product Sales Operations.

Please refrain from using this site on non-holiday weekdays between the hours of 7:30am - 4:15pm CST. Instead contact Product Sales Operations directly at 414-524-7906 to obtain license keys for JCI products.

Outside of the normal business hours, JCI Field personnel may generate a license key by completing all the required fields on the License Key Generator form. Upon generating a license key, an email will be sent to the Product Sales Operations team to verify submitted information. In the event the submitted information is incomplete or invalid, a Product Sales Operations team member will contact the Field person for additional information.

Any license keys generated for products that cannot be validated may invoke a purchase contract for such product that the Field will be expected to pay.

The Product Sales Operations team appreciates your cooperation to ensure this site remains a useful licensing aid for the Field.

Current User: CG*****
License Server Date: Friday, November 07, 2014
License Server Time: 5:11:51 PM

ACCEPT: Site Usage Terms and Agreement

Site Usage Terms and Agreement: Click 'ACCEPT: Site Usage Terms and Agreement'

Change the Default Values in the Fields below:

Requestor's Name: *
Requestor's Phone Number: * +1 414 555 5555
Requestor's Email Address: * *****@jci.com
Requestor's Location: * Michigan Street Facility WI
Original CD/DVD Serial Number: * e.g. Original Serial Number
Upgrade CD/DVD Serial Number: * e.g. NONE or If Applicable - Upgrade Serial Number

NOTE: Serial Number Availability - If the CD/DVD software is not accessible provide the contract, project, or activity number for the installed software in the 'Original' and 'Upgrade' text boxes.

License Details: *
Select one of the following:
Original Software Install
Upgrade Software Install
Migration Software Install

Site Code from License Activator: * e.g. 99E7 F875 BC78 1827 FF

Select Product:
☐ Nx8500/LCS8520 Series 10K Objects
☐ Nx8500/LCS8520 Series 25K Objects/15KUPG
☐ NIE89 Series 10k Objects
☐ NIE89 Series 25k Objects / 15KUPG
☐ ODS 25K Objects-5 Users

Select Option (s):

Reset ALL Selections and Start Again

Site Key: **Generate**

Note: Use the North American Site Key Generator site only in North America and only outside of North American business hours when you cannot reach Johnson Controls Product Sales.

- **For a site in Europe during European business hours** (Monday through Friday, 8:00 a.m. to 6:00 p.m. CET), contact Johnson Controls Customer Service Centre by emailing SW.Authorize@jci.com or faxing a **typed** request to +49 201 244 434. Provide the following information:
 - end user company name
 - site address (street, city, postal code, and country)
 - AOMS order number
 - site code number from the License Activator
 - project, building, or room (needed for large sites only)
 - item code of software to be authorized (needed for large sites only)
- **For a site in Europe outside of European business hours**, go to the Johnson Controls Site Key Generator site at <http://LicenseKeyGenerator:8081> (*Figure 21*). **You must be on the Johnson Controls network in order to access this site.** After you accept the Site Usage Terms and Agreement, enter your information in each of the fields. Some of the fields are pre-filled from your Johnson Controls user profile. Select an option from License Details, and then select the product and options to license. (If you are making a correction to a previously issued license, select **Correction to an Issued License** in the License Details section.) Click **Generate** and your site key appears in the Site Key field.

Figure 21: European Site Key Generator

Johnson Controls Site Key Generator [After Hours (Only) Field Use]

SITE USAGE TERMS AND AGREEMENT

This online License Key Generator for JCI Products is meant to provide access to license keys for specific JCI products outside of the normal business hours of the Customer Service Centre. Please refrain from using this service during normal business hours, Monday to Friday 8:00hrs to 18:00hrs, except public holidays. During normal business hours please contact Essen Customer Service Centre, SW.Authorize@jci.com to obtain license keys for JCI products.

Outside normal business hours, JCI field personal and official agents for JCI may generate a license key by completing all the required fields on the license key generator form. Upon generating a license key an email will be sent to the Essen Customer Service Centre team to verify the submitted information. In the event the submitted information is incomplete or invalid, a Customer Service Centre team member will contact the requester for additional information.

Any license keys generated for products that cannot be validated and where an existing purchase order is not available will be charged.

The Customer Service Centre appreciates your cooperation to ensure that this service is used correctly and remains a useful licensing aid.

Current User: CG*****
 License Server Date: Friday, November 21, 2014
 License Server Time: 9:56:47 PM

ACCEPT: Site Usage Terms and Agreement

Site Usage Terms and Agreement: Click 'ACCEPT: Site Usage Terms and Agreement'

Change the Default Values in the Fields below:

Requestor's Name: *
 Requestor's Phone Number: *
 Requestor's Email Address: *
 Site Name: *
 Site Address: *
 AOMS Order No.: *

NOTE: AOMS Order No. If the AOMS order no. is not available at the time of making the request using the on-line SKG, the AOMS Order number for the original purchase of the software should be emailed to the customer service centre during the next working day. SW.Authorize@jci.com

License Details: *
 Select one of the following:
 Original Software Install
 Upgrade Software Install
 Migration Software Install

Site Code from License Activator: *
 e.g. 99E7 F875 BC78 1827 FF

Select Product:

☐ Nx/E8500/LCS8520 Series 10K Objects
☐ Nx/E8500/LCS8520 Series 25K Objects/15KUPG
☐ NIE89 Series 10k Objects
☐ NIE89 Series 25k Objects / 15KUPG
☐ ODS 25K Objects-5 Users

Select Option(s):

Reset ALL Selections and Start Again

Site Key: Generate

Note: Use the European Site Key Generator site only in Europe and only outside of European business hours when you cannot reach Johnson Controls Customer Service Centre.

4. Return to the Activate License dialog box (Figure 19) and enter your site key.
5. Click **Activate**. The license status in the License Activator window (Figure 18) changes from **Not licensed** to **Licensed**.

6. In the License Activator window, click **View**. Verify that you have selected the correct licensing option.

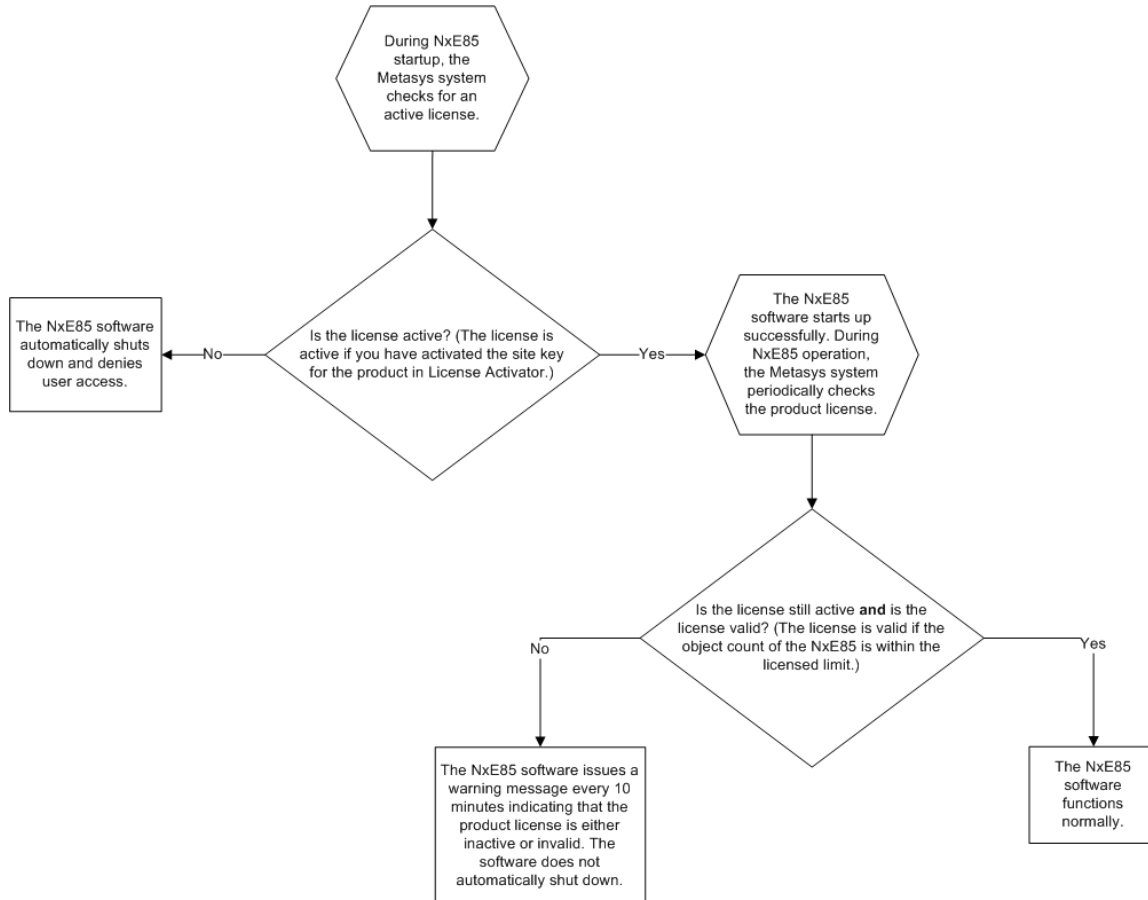
If you have **not** selected the correct option, click **Remove** in the License Activator window. Remove the incorrect license, restart the Nx/E85 computer, and return to Step 1 to repeat the licensing process.

7. Restart the Nx/E85 computer for the system to recognize the active license.

Verifying and Maintaining the Software License

You must have an active, valid license in order for the Nx E85 to be fully functional. [Figure 22](#) provides an overview of how *Metasys* licensing operates.

Figure 22: Licensing Flowchart



To verify that the Nx E85 has an active license, type **License Activator** in the Search box of the Start screen, then select **License Activator** from the Apps results. If **Not licensed** appears in the dialog box, go to [Licensing the Nx E85](#) and follow the directions in that section to activate your license.

During Nx E85 operation, the *Metasys* system periodically checks the product license. If the license is deactivated or becomes invalid, the Nx E85 software continues to run, but displays a warning message every 10 minutes to indicate that the product license is either inactive or invalid.

For your license to remain valid, the object count of the Nx E85 must stay within the object count limit (either 10,000 objects, or 25,000 objects if you purchased the 15,000 object upgrade). If you go over your object limit, a warning message appears in the *Metasys* SMP UI. You also receive a warning message if you download an archive database from SCT that exceeds your object count limit. Warning messages appear every 10 minutes until you delete enough objects to return within your limit or purchase an upgrade.

Note: To check the object count at any time, see the Object Count field on the Diagnostic tab of the Nx E85.

Setting Time, Date, and Time Zone Control

You must perform all changes to the time, date, or time zone through the SMP UI, not through the Windows Date and Time UI. Refer to the *NAE Commissioning Guide (LIT-1201519)* for information on setting time, date, and time zone control.

Modifying Security Policies to Prevent a Time Change from the OS

1. Type **Local Security Policy** in the Search box of the Start screen, then click **Local Security Policy** in the Apps results.
2. In the left pane, click **Local Policies > User Rights Assignment**.
3. In the right pane, double-click **Change the system time**. The **Change the system time Properties** window appears.
4. Hold down the Ctrl key and click each user and group shown in the window except **LOCAL SERVICE**.
5. Click **Remove**.
6. Click **OK** to close the window and return to the User Rights Assignment.
7. Double-click **Change the time zone**. The **Change the system time Properties** window appears.
8. Hold down the Ctrl key and click every user and group shown in the window except **LOCAL SERVICE**.
9. Click **Remove**.
10. Click **OK** to close the window.

Note: An administrator can add users and groups at a different time, if needed.

Troubleshooting

See [Table 3](#) for troubleshooting information.

Table 3: Troubleshooting

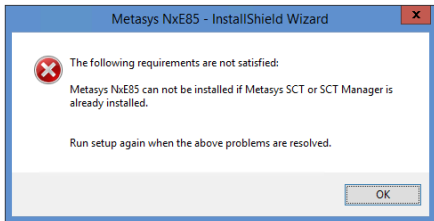
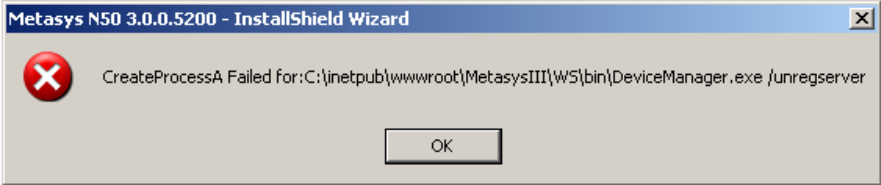
Problem	Solution
The following error message appears when you begin installing NxE85 software: Metasys NxE85 requires Microsoft .Net Framework 4.6.1 or newer. Please update your .NET Framework and run this setup again.	You must install the Microsoft .NET Framework 4.6.1 component before you can install NxE85 software. See Installing Microsoft .NET Framework 4.6.1 for the required steps.
You receive the following error message when installing an NxE85: Figure 23: SCT Error Message 	Metasys SCT is installed on the computer. Click OK, and uninstall SCT on the computer. Once the SCT is uninstalled, follow the steps in Installing or Upgrading an NxE85 to install the NxE85.
The following message appears when you try to log in to an NxE85: Login failed: This product is not licensed. Action Required: License and restart this product.	Activate the site key for the NxE85 by using the License Activator, and then restart the NxE85 computer. For details, see Licensing the NxE85.
The following message appears when you are logged in to an NxE85: This product is not licensed. Action Required: License and restart this product.	Your license has been deactivated. Reactivate the site key for the NxE85 by using the License Activator, and then restart the NxE85 computer. For details, see Licensing the NxE85.
The following message appears when you are logged in to an NxE85: This product exceeds the licensed object count limit. Action Required: Delete objects or obtain a license that supports more objects.	Do one of the following: - Delete objects until you are within your licensed limit. (The number of objects is listed in the Object Count field on the Diagnostic tab of the NxE85 in the SMP UI.) - If you have a license for 10,000 objects, purchase the 15,000 object upgrade.

Table 3: Troubleshooting

Problem	Solution
You experience installation problems and would like to consult the error log.	Error messages for installation problems are located here: C:\Users\<name_of_currently_logged_in_user>\AppData\Local NxEInstallLog.htm
You experience problems when upgrading your NxE85.	Uninstall the previous version of NxE85 software. Follow these steps to resolve the issue: - Uninstall existing NxE85 software. - Delete the following folder, including all of its contents: C:\inetpub\wwwroot\MetasysIII - Delete the following folder, including all of its contents: C:\Users\All Users\Johnson Controls\MetasysIII - Restart the computer. - Install the new NxE85 software. - License the software.
You are using a static IP address and experience problems connecting to devices outside of your current subnet.	A problem in Windows Server 2008 may have removed the default gateway address. Follow these steps to resolve the issue: - Enter ipconfig in a command prompt. - Check that your default gateway address appears. - If the Default Gateway field is blank, install Microsoft Corporation Update for Windows OS (KB973243). - When prompted, restart your computer.
During the upgrade procedure, the following error message appears and the progress bar does not advance: Figure 24: Service Could Not Be Deleted 	The device manager service could not be deleted during the installation. Click OK to proceed with the installation. If you click OK and the upgrade does not progress, continue with these steps: - Go to the Windows Task Manager. - On the Applications tab, click the NxE installation and then click End Task. - Uninstall the NxE software. - Install the NxE software.
During the upgrade from Release 3.0, the following error message appears: CreateProcessAFailedfor: C:\inetpub\wwwroot\MetasysIII \WS\bin\DeviceManager.exe /unregserver	Click OK to continue the installation. Figure 25: Create Process Failed 

Related Documentation

[Table 4](#) provides a list of documents related to NxE85 software installation and upgrade.

Table 4: Nx85 Installation and Upgrade Related Documentation

For Information On	See Document
Features and Benefits of the NAE85	<i>Network Automation Engine Product Bulletin (LIT-1201160)</i>
Features and Benefits of the NIE85	<i>Network Integration Engine Product Bulletin (LIT-1201537)</i>
Complete Metasys Software Installation or Upgrade Process	<i>Metasys® Server Installation and Upgrade Instructions Wizard (LIT-12012162)</i> ¹
Specific Configuration and Commissioning Requirements and Detailed Procedures for Nx85s	<i>Nx85 Commissioning Guide (LIT-12011044)</i>
General Configuration and Commissioning Requirements and Detailed Procedures for NAEs	<i>NAE Commissioning Guide (LIT-1201519)</i>
Using the ChangeModel Utility	<i>ToggleTunnel and ChangeModel Technical Bulletin (LIT-12011531)</i>

1 Use the wizard to generate instructions specific to your system.

NxE85 Technical Specifications

Table 5: NxE85 Software System Recommendations for Installation/Upgrade

Product Code Number	MS-NXE85SW-0 Network Integration Engine Software for 10,000 objects (new projects only software)
Recommended Computer Platform	Intel® Xeon® E5506, 2.13 GHz, 4 MB Cache 2 x 160 GB 7.2K SATA, 8.9 cm (3.5 in.) Cabled 3 Gbps, RAID 1 configuration with add-in SAS6/iR (SATA/SAS Controller)
Recommended Memory	8 GB RAM minimum
Hard Disk	160 GB minimum
Supported 64-bit Operating Systems and Software	- Windows® Server® 2016 (64-bit) - Windows® Server® 2012 R2 with Update 1 (64-bit) - Windows® Server® 2012 (64-bit) Note: Microsoft .NET Framework 3.5 Service Pack (SP) 1 and Microsoft .NET Framework 4.6.1 are required for any of the operating systems.
Supported Operating Systems for Metasys Client Computers	Windows® 10 Pro and Enterprise Editions with Anniversary Update (version 1607) (64-bit) Windows® 8.1 Pro and Enterprise Editions with Update 1 (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (32-bit) Apple® macOS® 10.12 Sierra Apple® OS X® 10.11 El Capitan Apple OS X 10.10 Yosemite Note: Apple operating systems are supported for <i>Metasys</i> client computers only. Also, in Apple OS X, you cannot view Graphics+ graphics in the Site Management Portal UI.
Internal Optical Drive	DVD ROM, SATA
Supported Web Browser Software for Metasys Site Management Portal Client Computers	Windows® Internet Explorer® 11.0.9600.18449 Update version 11.0.35 or later Note: In Internet Explorer 11, select the Use Microsoft compatibility lists option, found under Tools > Compatibility View Settings, to ensure that websites appear and function correctly. Google® Chrome™ version 54 or later Apple® Safari® 10 or later Other browsers, such as Mozilla® Firefox®, may also be used but are not fully supported.
Supported Virtual Environments	Microsoft Hyper-V™, VMWare®
Network Communication	Selectable Network Interface (if computer has multiple network cards, during NxE85 installation, select the network card that was configured for <i>Metasys</i> system use before installation) Ethernet network interface card 10/100/1000 Mbps (100 Mbps or better recommended)
Recommended Data Protection	Uninterruptible power supply (UPS) Smart-UPS SC 450VA, 280 W, 120 VAC input/output, NEMA 5-15R output connections, OEM Part No. SC450RM1U

The performance specifications are nominal and conform to acceptable industry standard. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products.

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