

NxE85 Commissioning Guide

MS-NIE85SW-0, MS-NAE85SW-0

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Document Introduction

This document describes how to commission a Network Integration Engine 85 (NxE85) Series for operation on a *Metasys*® Building Automation System (BAS) network.

This document does not describe how to mount, wire, or power on an NxE85. Also, this document does not describe how to build or download an archive database for a *Metasys* system site or how to configure an NxE85 to monitor and control a specific BAS network or network devices.

This document supplements the *NAE Commissioning Guide (LIT-1201519)*. Refer to that document for background, related concepts, and general information regarding connecting to and commissioning a Network Automation Engine (NAE) or a Network Integration Engine (NIE) on a *Metasys* site.

Summary of Changes

The following information is new or revised:

- Updated [NxE85 Technical Specifications](#).
- Replaced Ready Access Portal with *Metasys* UI in [Figure 1](#).

NxE85 Network Engines

The NxE85 models are designed to provide supervisory-level control of *Metasys* networks that include a large number of BACnet® IP devices or N1 devices.

The NIE85 migrates large N1 networks into a *Metasys* network ([Figure 1](#)).

The NAE85 integrates large BACnet IP systems into a *Metasys* network ([Figure 2](#)).

Like the NAE55/NIE55, the NxE85 models provide the following:

- monitoring and control of the BAS
- a web-based user interface using HTTPS
- web services for access to data and services in the NAE85 or NIE85
- standard protocol clients:
 - Simple Network Management Protocol (SNMP) for network device management
 - Simple Network Time Protocol (SNTP) for time and date synchronization
 - Dynamic Host Configuration Protocol (DHCP) for dynamic IP address assignment (NAE85 only)
 - Simple Mail Transfer Protocol (SMTP) for sending email notification of alarms and events
- routing of event and alarm notification to an Application and Data Server (ADS), Extended Application and Data Server (ADX), or Open Data Server (ODS). (ADS-Lite does not support the NxE85.)
- the capability to send event and alarm notifications to pager and email destinations directly
- data collection, trend sampling, and audit trail logging

The NxE85 supports only one language at a time. A *Metasys* system site must have the same language for every NxE85 on the site.

See [Differences between NxE85 and NAE55/NIE55 Models](#) for information on how NxE85 models differ from NAE55 and NIE55 models.

Figure 1: Metasys Network with an NIE85 N1 Migration

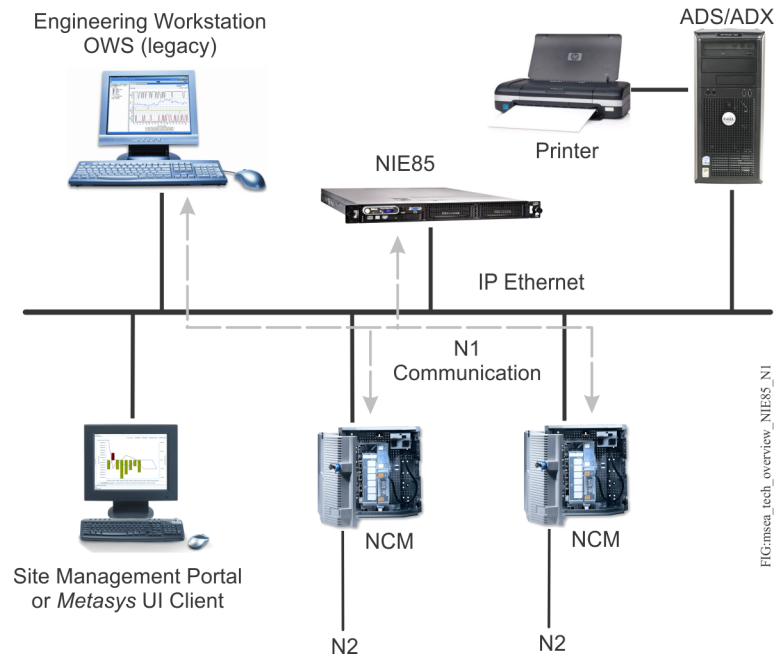
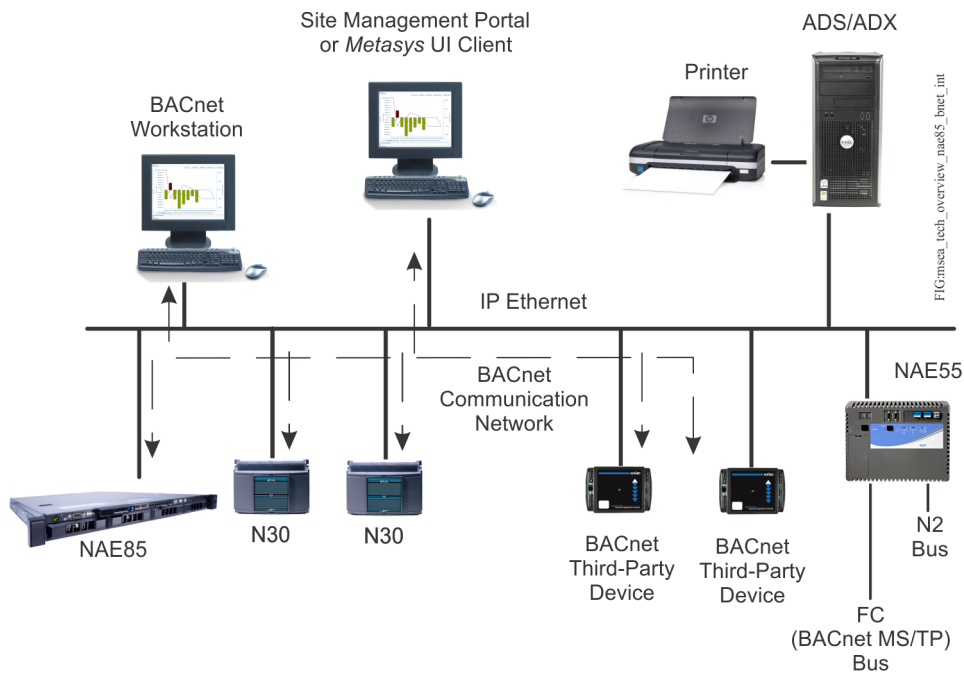


Figure 2: Metasys Network with an NAE85 BACnet IP Integration



Differences between NxE85 and NAE55/NIE55 Models

The NxE85 models have most of the same functions and capabilities as the NAE55/NIE55 models, **except** that an NxE85 :

- does not support N2 protocol
- does not support LONWORKS® network protocol
- does not support dial-out to an ADS/ADX or ODS

- does not support modem communication (except for sending pager alarm and event notifications through the pager Destination Delivery Agent [DDA])
- does not support the Reset Device command in the Site Management Portal (SMP) UI
- does not have NAE LED status indicators
- cannot be upgraded using the NAE/NIE Update Tool
- is limited to 10 simultaneous users when configured as a Site Director
- has no internal uninterruptible power supply (UPS) for orderly shutdown in the event of a sudden loss of power
- supports up to eight integrations (for example, four Modbus TCP and four KNX TCP)
- supports up to 10,000 objects
- provides for a 15,000 object upgrade to support up to 25,000 objects total

Guidelines for Commissioning an Nx85

Follow these guidelines when connecting to and commissioning an Nx85:

- When you configure the Nx85, browse to the SMP UI from a computer that is not running a server-class operating system (OS). See the [Configuring the Nx85 in the Site Management Portal UI](#) section for details.
- Connect the Nx85 to a reliable UPS to avoid data loss in the event of a power outage. We recommend APC® Smart-UPS™ SC450 (APC Part No. SC450RM1U).
- Do not install any software applications on the Nx85 other than the applications specifically recommended by Johnson Controls.
- Keep the computer operating system up to date by applying Microsoft® Windows® security updates to the Nx85.
- Designate one ADS/ADX as a Site Director if an Nx85 resides on a *Metasys* site with one or more ADS/ADXs. If an Nx85 is applied to a site without an ADS/ADX, the Nx85 can be the Site Director for up to four other network engines (NCE25, NAE35, NAE45 [excluding NAE45-Lite], NAE55, NIE55, NAE85, or NIE85).
- Set the time, date, and time zone settings for network engines in the SMP UI. Refer to the *Appendix: Time Zone, Date, and Time Management* in the *NAE Commissioning Guide (LIT-1201519)* for detailed procedures on setting time and date on an Nx85.
- If you need to reset the Nx85, simply restart the Windows operating system. The Nx85 does not support the Reset Device command from the SMP UI.
- When you commission an Nx85 on a network that supports DHCP and DNS, we recommend you configure DHCP to assign the same IP address to the Nx85 when the IP address lease expires and after the Nx85 device resets. If a different IP address is issued to the Nx85, the address binding to the Nx85 from other devices breaks.
- The Nx85 does not use DHCP or automatic private IP addressing (APIPA) for N1 networks. Disable DHCP on the Network tab in the NIE85 SMP UI.
- The NIE85 supports communication with N1 devices on one User Datagram Protocol (UDP) port.
- Back up the Nx85 data regularly by uploading the archive database to the SCT. Frequent backups preserve the Nx85 data and enhance the recovery procedure in the event of a system failure.
- Be sure to follow the power conservation options on the Nx85 computer that have been intentionally disabled. These settings are:
 - Under Power Schemes, the hard disk is set never to turn off and the computer is set never to enter Standby mode.
 - Under Hibernation, the computer is set never to enter Hibernation mode.
 - Under the Power Management tab of the network card's properties, the option **Allow the computer to turn off this device to save power** is disabled so that the Nx85 computer's network card never turns off.

Detailed Procedures

Commissioning Requirements

To commission an Nx85, you need the following:

- a server computer installed with the *Metasys* Nx85 software and connected to the building network
- a computer monitor, USB keyboard, and mouse (these do not have to be dedicated to the Nx85)
- an Ethernet patch cable
- the network values for setting up the Nx85 on the customer network

We strongly recommend using a UPS, such as the APC Smart-UPS SC450, APC Part No. SC450RM1U.

Commissioning the Nx85

1. Set up the Nx85 computer and the recommended UPS (if you have not already done so). Refer to the UPS manufacturer's installation documentation.
2. Connect a monitor, keyboard, and mouse to the Nx85 (if you have not already done so).
3. Connect the Nx85 to the BAS network with an Ethernet patch cable.

Important: Before powering on the Nx85 for the first time, you must connect the Nx85 to an active network on Ethernet Port 1. Failure to follow this sequence prevents the Nx85 object from appearing in the SMP UI navigation panel.

Note: We support the use of only one Ethernet port; any additional Ethernet ports should have been disabled before the Nx85 was installed. Refer to the *Nx85 Installation and Upgrade Instructions (LIT-12011530)*.

4. Power on the Nx85 computer.
5. Update the antivirus software and the virus definition files according to the antivirus software manufacturer's instructions, and then restart the computer.

Note: Updating the antivirus software and virus definition files requires Internet access. Some network applications require a proxy server or special permissions to access the Internet. Contact the network administrator for proxy server address, port number, or any required permissions to access the Internet.

6. Update the Windows OS. To update Windows, go to **Control Panel > System and Security > Windows Update.** Follow the instructions at the Windows Update website and then restart the computer.

Notes:

- Updating the Windows OS requires an Internet connection. Some network applications require a proxy server or special permissions to access the Internet. Contact the network administrator for proxy server address, port number, or any required permissions to access the Internet.
 - Update the Windows OS by downloading and installing all of the critical and security patches (only) for the OS. Do not install any service pack updates for the OS unless the service pack update is approved by Johnson Controls.
7. Use the ChangeModel utility to change the NIE85 to an NAE85 if necessary. Refer to the *Toggle Tunnel and ChangeModel Technical Bulletin (LIT-12011531)* for information and procedures on changing Nx85 models.
 8. If you need to change the Nx85 computer name, see [Changing the Nx85 Name and the Computer Name](#).

If you do not need to change the Nx85 computer name, the Nx85 is now commissioned and can be configured in the Nx85 SMP UI. See [Configuring the Nx85 in the Site Management Portal UI](#).

Changing the NxE85 Name and the Computer Name

Follow the steps in this section to change the name of an NxE85. The NxE85 name and the computer name must match (including the domain name, if used) 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.

Notes:

- When you follow these procedures for an NxE85 defined as the Site Director, all references used in user views, graphics, and control systems break. To update the user views after changing the name of the Site Director, open each user view in Edit mode in the SCT and save it. The Site Director portion of the reference updates to match the new Site Director name.
- If you are implementing certificate management on an existing NxE85 engine, keep in mind that adding a trusted certificate may require you to add a domain name to the original host name of a server and engine. This action requires you to **rename** all data in the *Metasys* historical databases. This renaming operation requires intensive database operations that significantly prolong a system upgrade. Therefore, be sure to allocate extra time if you are renaming historical data as part of an upgrade to the new *Metasys* release. (For details about renaming, refer to *Metasys® Database Manager Help (LIT-12011202)*).

Changing the NxE85 Name and the Computer Name - Overview

This section is an overview of the steps to change the NxE85 name and computer name. Follow all the steps in this document in the correct order to ensure success.

To change the NxE85 name and the computer name:

1. Prepare the computer. See [Preparing the Computer](#).
2. Create a new archive. See [Creating a New Archive](#).
3. Download the NxE85. See [Downloading the NxE85](#).
4. Test the NxE85. See [Testing the NxE85](#).

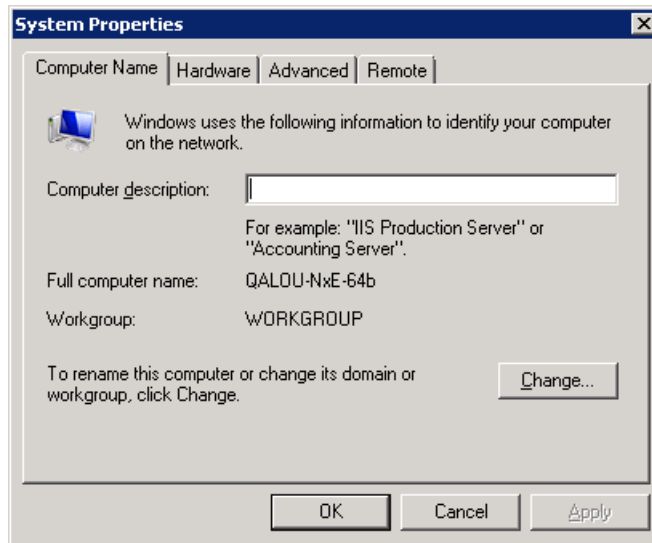
Preparing the Computer

1. Verify that the time zone, date, and time setting are correct in the SMP UI.

Note: Time Zone, Date, and Time must be set in the SMP UI. Do not use the Windows OS time dialog box to set time zone, date, or time on the NxE85.

2. Write down the name you want for the NxE85. Note the case of the name. The NxE85 name must:
 - begin with a letter
 - contain a maximum of 15 characters
 - contain only letters A to Z, numbers 0 to 9, and hyphens
3. In Control Panel, select **System and Security > System**.
4. Click **Change Settings**. The **System Properties** dialog box appears.
5. Select the **Computer Name** tab.
6. Write down the original computer name as it appears in the **Full computer name** field. Note the case of the name and also include the domain name, if present. See [Figure 3](#).

Figure 3: System Properties Dialog Box



7. Click **OK** to close the System Properties dialog box.
8. Log in to the NxE85 computer to verify that the NxE85 is running.

Note: Ignore the label for the NxE85 that appears in the Navigation Tree.

9. Exit the NxE85.
10. Go to [Creating a New Archive](#).

Creating a New Archive

1. Log in to the SCT.
2. Select **Item > New Archive**.
3. In the **New Archive Wizard** window, click **Create**.
4. When prompted to create a new site, click **Yes**.
5. Follow the wizard instructions to create a new site. In the Configure step, verify the Time Zone attribute exactly matches the time zone for the computer that you verified in [Step 1 of Preparing the Computer](#). If the time zone does not match that of the computer, select the correct time zone.

Note: The order of the time zones in the *Metasys* software does not match the order in which they are presented in the Windows operating system.

6. Finish the rest of the steps in the wizard.
7. When the **Create Device?** window appears, select **Supervisory Device** from the drop-down selection box. Click **OK**.
8. Follow the wizard instructions to create a new NxE85 device. On the Identifier screen, enter the name of the original computer name from [Step 2 of Preparing the Computer](#), making sure you use the same capitalization and include the domain name, if present. Finish the rest of the steps in the wizard.

When you are finished creating the new device, in the navigation tree, the name of the server should match the original computer name.

9. On the Tools menu, select **Manage Archive**.
10. On the Action screen, select **Update From Device** as the type.
11. Click **Next** and follow the wizard instructions.
12. On the Site Login screen, click **Test Login**. Finish the steps to start the upload process.

Note: If the upload is not successful, restart the computer and go to [Step 1](#) in this section.

13. When upload Completion Status reads OK, right-click the server in the navigation tree and select **Rename**. The Rename window appears.
14. In the New Name field, enter the desired NxE85 name from [Step 2 of Preparing the Computer](#) (including the domain name if used).
15. Click **OK**.
16. Exit the SCT. Do not download or make other name changes in the SCT.
17. Go to [Downloading the NxE85](#).

Downloading the NxE85

1. Log in to the SCT.
2. Select the *Metasys* server in the navigation tree.
3. On the Tools menu, click **Manage Archive**.
4. On the Action screen, select **Download to Device** as the type.
5. Click **Next** and follow the wizard instructions.
6. On the Site Login screen, click **Test Login**. Continue to follow the wizard instructions.
7. On the Device Change screen ([Figure 4](#)), select the **Use this option to rename a device via download** check box and enter the original computer name from [Step 6](#) in [Preparing the Computer](#). The computer name is case-sensitive.

Figure 4: Device Change Screen in the SCT

8. Click **Next**.
9. Click **Finish** in the Summary screen to begin the device download.
10. When download Completion Status reads OK, exit the SCT. The rename is complete.
11. Go to [Testing the NxE85](#).

Testing the NxE85

1. Log in to the NxE85.
2. On the View menu, select **Extended Labels**.
3. Double-click the server in the navigation tree.
4. On the Focus tab, click **Edit**.
5. In the Name attribute, enter the desired NxE85 name. Note the case of the name.
6. Click **Save**.
7. Right-click the navigation tree tab, and select **Refresh**.
8. Exit the NxE85.

The NxE85 name and computer name change is complete. Go to [Configuring the NxE85 in the Site Management Portal UI](#) to finish configuring the NxE85.

Configuring the NxE85 in the Site Management Portal UI

You can configure the NxE85 by connecting a computer with the Windows® Internet Explorer® web browser or the Apple® Safari® web browser to the network and browsing to the NxE85 SMP UI. You use the Launcher application to reach the login screen for the SMP UI. You must install the Launcher if it is not already installed on your computer. Refer to the *Launcher Installation Instructions (LIT-12011783)*.

The Launcher is a software application installed on each client computer that lets you access any *Metasys* server or supervisory engine on the building network, regardless of its software version. Its purpose is to remove the dependency on the public Java® Runtime Environment (JRE) for the SMP UI at Release 6.0 or later by placing a private edition of the JRE on the client computer. For details, refer to the *Launcher Installation Instructions (LIT-12011783)*.

Refer to the *NAE Commissioning Guide (LIT-1201519)* for detailed procedures on connecting to the NxE85 in different network scenarios.

To configure the NxE85 in the SMP UI, follow these steps:

1. Enter your user name and password in the login window of the NxE85 SMP UI.

Notes:

- All NxE85s install with the same initial login user name and password. The initial login user name is **MetasysSysAgent** and is not case sensitive. For the MetasysSysAgent default password, contact your local Johnson Controls® representative.
- For added security, the user name is obscured as you type it.

2. Click **Login**.

Note: When you log in for the first time, you must change the account password immediately.

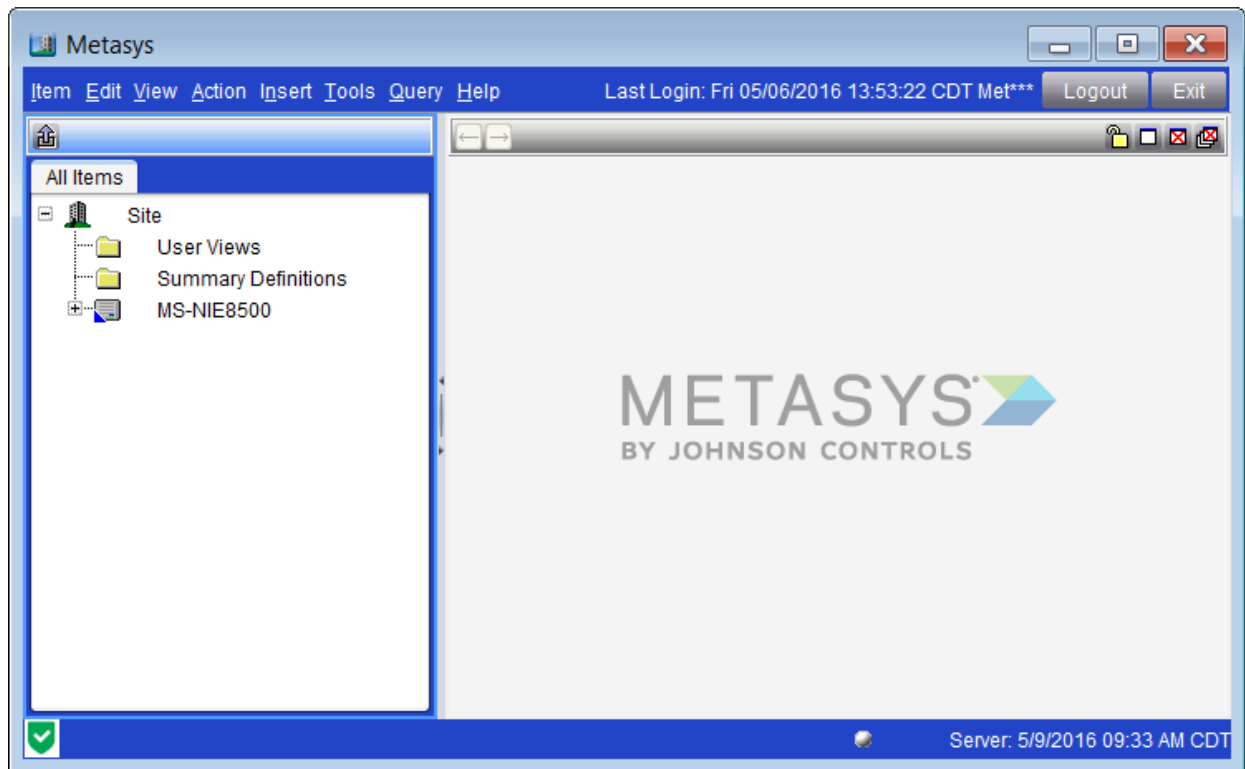
3. Click **OK** when the **Password has expired** message appears. The Change Password dialog box appears.

The following password rules are enforced for English (en_US) users only. The password rules are as follows:

- The password must include a minimum of 8 characters and a maximum of 50 characters.
- The password cannot include spaces or include a word or phrase that is in the Blocked Words list.
- The password and the username cannot share the same three consecutive characters.
- The password must meet the four following conditions:
 - Include at least one number (0–9)
 - Include at least one special character (-, ., @, #, !, ?, \$, %)
Note: Only the special characters listed above can be used; all other special characters are invalid.
 - Include at least one uppercase character
 - Include at least one lowercase character

4. Type the old password, and then type your new password twice. Make sure to follow the password rules when you create your new password.
5. Click **OK**. The message **Successfully changed the password** appears.
6. Click **OK**. The Terms and Conditions window appears.
7. Click **Accept** to accept the terms and conditions. The SMP UI opens ([Figure 5](#)).

Figure 5: NxE85 in the SMP UI



Note: The user name in the upper right corner of the SMP UI is partially obscured for added security ([Figure 5](#)).

8. Double-click the NxE85 in the navigation tree. Check for and establish the required Computer Name (host name) value on the Network tab. Establish other required network values on the Network tab. Set the DHCP value to False if DHCP is not required on the network. Refer to the *Establishing the NAE Network Parameters* section of the *NAE Commissioning Guide (LIT-1201519)* for detailed procedures.
9. Establish the time zone, date, and time settings in the NxE85 NIE89 SMP UI. Refer to *Appendix: Time Zone, Date, and Time Management* in the *NAE Commissioning Guide (LIT-1201519)* for detailed procedures on setting time and date on an NxE85

Note: Time Zone, Date, and Time must be set in the SMP UI. Do not use the Windows OS time dialog box to set the time zone, date, or time on the NxE85.

10. Establish the Site Director and Object Name for the NxE85 on the Focus tab. Refer to the *Establishing Basic NAE Parameters in the Focus Screen* section of the *NAE Commissioning Guide (LIT-1201519)* for detailed procedures.

The NxE85 is now configured for the network and ready for Auto-Discovery (of BAS devices) and site configuration using the SCT.

Licensing the NxE85

The NxE85 requires an active, valid license. A license becomes active when you enter your Site Key in the License Activator application and click **Activate**. A license is valid if the software is running within the maximum object count for which it is licensed. The following licensing scenarios affect software operation:

- During NxE85 startup, the *Metasys* system checks for an active license. If an active license is not found, the NxE85 *Metasys* software, including Ethernet and trunk communications to the *Metasys* system, automatically

shuts down. The NxE85 *Metasys* software does not permit you to log in, and a message appears that indicates the product is not licensed.

- During operation, the *Metasys* system periodically checks the product license. If the license has been deactivated or if the license becomes invalid because the object count limit has been exceeded, the NxE85 software continues to run, but displays a warning message every 10 minutes to indicate that the product license is inactive or invalid.

For additional licensing information, refer to the *NxE85 Installation and Upgrade Instructions* (LIT-12011530) and the *Software License Activator Technical Bulletin* (LIT-1201654).

Related Documentation

Table 1: NxE85 Related Documentation

For Information On	See Document
Installing or Upgrading the NxE85 Software, Licensing NxE85 Software	<i>NxE85 Installation and Upgrade Instructions</i> (LIT-12011530)
Commissioning the NIE89 for the Modbus Protocol	<i>NIEx9 Commissioning for Modbus Vendor Integration Application Note</i> (LIT-12011928)
Commissioning the NIE89 for the M-Bus Protocol	<i>NIEx9 Commissioning for M-Bus Vendor Integration Application Note</i> (LIT-12011927)
Commissioning the NIE89 for the KNX Protocol	<i>NIEx9 Commissioning for KNX Vendor Integration Application Note</i> (LIT-12011926)
Changing an NIE85 to an NAE85	<i>ToggleTunnel and ChangeModel Technical Bulletin</i> (LIT-12011531)
Connecting, Accessing the SMP UI, Commissioning, Troubleshooting, and Enabling a Serial Printer on a Network Automation Engine	<i>NAE Commissioning Guide</i> (LIT-1201519)
Setting up Secure Communication with Trusted Certificates	<i>Metasys® SCT Help</i> (LIT-12011964) ¹
Installing the Launcher Application	<i>Launcher Installation Instructions</i> (LIT-12011783)
Creating, Editing, and Loading Archive Databases with the System Configuration Tool (SCT)	<i>Metasys® SCT Help</i> (LIT-12011964) ¹
Daily Operation of the <i>Metasys</i> System Network, Navigating the SMP UI, Monitoring and Controlling BAS Networks, and Connecting to Cloud-Based Applications	<i>Metasys® SMP Help</i> (LIT-1201793) ¹
Integrating BACnet IP Devices into the <i>Metasys</i> System Network	<i>BACnet System Integration with NAE Technical Bulletin</i> (LIT-1201531)
Migrating N1 Networks to the <i>Metasys</i> System Network	<i>N1 Migration with the NIE Technical Bulletin</i> (LIT-1201535)
General Network and Information Technology Definitions and Concepts	<i>Network and IT Guidance Technical Bulletin</i> (LIT-12011279)
Security Issues, Including Adding Users and Roles to the System, and Configuring Standard and Basic Access Modes	<i>Security Administrator System Technical Bulletin</i> (LIT-1201528)

¹ This LIT number represents a print-friendly version of the *Help*.

NxE85 Technical Specifications

Table 2: NAE85 Software System Recommendations for Installation/Upgrade

Recommended Computer Platform	Intel® Xeon® E5506, 2.13 GHz, 4 MB Cache 2 x 160 GB 7.2K , 8.9 cm (3.5 in.) Cabled 3 Gbps, RAID 1 configuration with add-in SAS6/iR (SATA/SAS Controller)
Recommended Memory	2 GB RAM minimum
Hard Disk	160 GB minimum
Supported Operating Systems and Software	Windows® Server® 2016 (64-bit) Windows® Server® 2012 R2 with Update 1 (64-bit) Windows® Server® 2012 (64-bit) Note: The NAE85 software requires two Windows components: Microsoft .NET Framework Version 3.5 SP1 and Microsoft .NET Framework Version 4.6.1.
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 Notes: • Apple® operating systems are supported for <i>Metasys</i> client computers only. • In Apple® OS X®, you cannot view Graphics+ graphics in the Site Management Portal UI.
Internal Optical Drive	DVD ROM, SATA
Recommended Antivirus Software	Symantec Endpoint Protection version 12
Supported Web Browser Software for Metasys 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.) Note: You use the web browser to download the Launcher application. After you install the Launcher application, you use the Launcher, not the web browser, to log in to <i>Metasys</i> Site Management Portal (SMP) UI.
Supported Virtual Environments	Microsoft Hyper-V™, VMware®
Network Communication	Network Interface: 1 Gbps Ethernet network interface card connects at 10 Mbps, 100 Mbps, or 1 Gbps (100 Mbps or better recommended)
Recommended Data Protection	UPS for NxE85 model: APC Smart-UPS SC 450VA, 280 W, 120 VAC input/output, National Electrical Manufacturers' Association (NEMA) 5-15R output connections, OEM Part No. SC450RM1U

Table 3: Nx E85 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 Metasys 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 Nx E85 installation, select the network card that was configured for Metasys 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



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