System 800xA

Automated Installation

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ABB

System 800xA

Automated Installation

System Version 5.1

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About this User Manual

General

Any security measures described in this document, for example, for user access, password security, network security, firewalls, virus protection, etc., represent possible steps that a user of an 800xA System may want to consider based on a risk assessment for a particular application and installation. This risk assessment, as well as the proper implementation, configuration, installation, operation, administration, and maintenance of all relevant security related equipment, software, and procedures, are the responsibility of the user of the 800xA System.

This User Manual includes information as it pertains to using the System Installer and related installation tools to:

- Plan an 800xA System.

- Configure Windows, Windows services, and Windows Firewall specific to the 800xA System.

- Install and set up prerequisite third party software.

- Install and set up the 800xA Base System and Functional Area software.

- Upgrade an installed 800xA System from System Version 5.0 Service Pack 2 (800xA 5.0 SP2) to System Version 5.1 (800xA 5.1) online.

- Upgrade an installed 800xA System from System Version 5.0 Service Pack 2 (800xA 5.0 SP2) to System Version 5.1 (800xA 5.1) offline.

- Upgrade an installed 800xA System from System Version 4.1 (800xA 4.1) to 800xA 5.1.

This User Manual does not include information on site planning, engineering planning, software configuration, network design, security measures, tools, maintenance, etc. that can be found in other 800xA User Manuals.

Version Described in this Document

All information and procedures described in this document are specific to the latest release of 800xA 5.1.

Document Conventions

Microsoft Windows conventions are normally used for the standard presentation of material when entering text, key sequences, prompts, messages, menu items, screen elements, etc.

Feature Pack

The Feature Pack content (including text, tables, and figures) included in this User Manual is distinguished from the existing content using the following two separators:

Feature Pack Functionality _____

<Feature Pack Content>

_____

Feature Pack functionality included in an existing table is indicated using a table footnote (*) :

* Feature Pack Functionality

Unless noted, all other information in this User Manual applies to 800xA Systems with or without a Feature Pack installed.

Warning, Caution, Information, and Tip Icons

This instruction includes **Warning**, **Caution**, and **Information** where appropriate to point out safety related or other important information. It also includes **Tip** to point out useful hints to the reader. The corresponding symbols should be interpreted as follows:

Electrical warning icon indicates the presence of a hazard which could result in *electrical shock.*

Warning icon indicates the presence of a hazard which could result in *personal injury.*

Caution icon indicates important information or warning related to the concept discussed in the text. It might indicate the presence of a hazard which could result in *corruption of software or damage to equipment/property.*

Information icon alerts the reader to pertinent facts and conditions.

Tip icon indicates advice on, for example, how to design your project or how to use a certain function

Although **Warning** hazards are related to personal injury, and **Caution** hazards are associated with equipment or property damage, it should be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process performance leading to personal injury or death. Therefore, **fully comply** with all **Warning** and **Caution** notices.

Terminology

A complete and comprehensive list of Terms is included in *System 800xA System Guide Functional Description (3BSE038018*)*. The listing includes terms and definitions that apply to the 800xA System where the usage is different from commonly accepted industry standard definitions and definitions given in standard dictionaries such as *Webster's Dictionary of Computer Terms*. Terms that uniquely apply to this instruction are listed in the following table.

Term/Acronym	Description
Backup	**800xA Backup:** Backup using the 800xA Backup Definition aspect. **Functional Area Backup:** Backup via defined tools or copy of Functional Area configuration and/or data to a safe media for items not covered by 800xA Backup. The specific operations called out for the Functional Area within the Backup/Restore procedure in *System 800xA Maintenance (3BSE046784*)* for same version to same version backup and restore.

Term/Acronym	Description
Restore	**800xA Restore:** Restore via Configuration Wizard.
	Functional Area Restore: Restore via defined tools or copy of Functional Area configuration and/or data from a safe media for items not covered by 800xA Backup.
	The specific operations called out for the Functional Area within the Backup/Restore procedure in *System 800xA Maintenance (3BSE046784*)* for same version to same version backup and restore.
Upgrade	Moving from one 800xA release to a later 800xA release, whether it be a major or minor release.
Update	Adding service packs, patches, hot fixes, or rollups to an existing 800xA System.

Related Documentation

A complete list of all documents applicable to the 800xA System is provided in *System 800xA Released User Documents (3BUA000263*)*. This document lists applicable Release Notes and User Instructions. It is provided in PDF format and is included on the Release Notes/Documentation media provided with the system. The Released User Documents file is updated with each release and a new file is provided that contains all user documents applicable for that release with their applicable document number. Whenever a reference to a specific instruction is made, the instruction number is included in the reference.

Section 1 Introduction

Product Overview

This instruction reflects 800xA System and Functional Area software at the time of release. All 800xA System and Functional Area Release Notes must be read and understood before performing any automated or manual installation, post installation, update, or upgrade procedures. The Release Notes contain any last minute changes that must be performed when installing, updating or upgrading the 800xA System. All Release Notes can be found on the CD labeled *System Version 5.1 Released Documents.*

800xA for DCI is not included with the initial release of 800xA 5.1 and thus 800xA for DCI installation instructions are not documented in this user manual. Refer to *800xA for DCI 5.1 Installation - Post Installation - Upgrade Supplemental User Manual (3BUA001686*)* for installation of 800xA for DCI 5.1.

New system installations, updates, or upgrades can be executed either semiautomatically using the System Installer as described in this instruction, or manually as described in *System 800xA Installation (3BSE034678*)*, *System 800xA Post Installation (3BUA000156*)*, *and System 800xA Upgrade (3BSE036342*).*

The System Installer is more efficient since it performs many of the time-consuming and difficult tasks, and verifies that the software is installed in the correct order, the desired configurations are supported, etc.

Product Scope

The System Installer is a collection of tools to ease the planning, installation, post installation, update, and upgrade of the 800xA System.

The System Installer supports installation of all software described in *System 800xA Installation (3BSE034678*)* except TRIO Integration. TRIO Integration must be installed after all other 800xA System software has been installed and the post installation steps performed. Refer to *System 800xA Post Installation (3BUA000156*)* to install TRIO Integration software.

The System Installer:

- **Specifies system details:** Plans the desired system configuration.

- **Configures the Windows Operating System.**

- **Installs unlicensed third party software common to all 800xA System nodes.**

- **Verifies the Base System:** Controls if hardware and software requirements are fulfilled, and installs missing software.

- **Installs the 800xA System software.**

- **Configures the 800xA System software:** Guides the user through the post installation of the installed 800xA System software.

- **Upgrades an existing installation from 800xA 5.0 SP2 to 800xA 5.1.**

Refer to the 800xA for Harmony section of *System 800xA Release Notes New Functions and Known Problems (2PAA106188*)* before using System Installer to upgrade an 800xA 800xA 5.0 SP2 System if 800xA for Harmony is installed on any node in the system.

- **Upgrades an existing installation from 800xA 4.1 to 800xA 5.1.**

Refer to the 800xA for Harmony section of *System 800xA Release Notes New Functions and Known Problems (2PAA106188*)* before using System Installer to upgrade an 800xA 800xA 4.1 System if 800xA for Harmony is installed on any node in the system.

- **Configures Windows Firewall and Windows Services settings.**

- **Generates a System Report:** Provides a comprehensive installation report.

The icons in the installation program change appearance depending on installation progress. Initially, they are gray. When using a wizard or tool, its icon turns green. When completed, the icons turn blue.

New In The 800xA 5.1 Release

The new features provided with this release of the System Installer are:

- **Upgrade from 800xA 5.0 SP2 to 800xA 5.1:** System Installer can be used to upgrade an existing installation from 800xA 5.0 SP2 to 800xA 5.1.

- **800xA Common Third Party Install Tool:** Installs unlicensed third party software common to all 800xA System nodes.

System Security

It is very important to have a corporate security policy that is revised on a regular basis. This is the responsibility of the user of the 800xA System.

This document does not contain recommendations on system security, users, user groups. or user roles and permissions. Refer to *System 800xA Administration and Security (3BSE037410*), System 800xA Network Configuration (3BSE034463*)*, and *System 800xA System Planning (3BSE041389*)* for more information.

System Configuration Console

Some procedures described in this instruction use the 800xA System Configuration Wizard. A new feature, the System Configuration Console, can also be used to perform many of these procedures. Refer to *System 800xA Tools (2PAA101088*)* for information and instructions on using the System Configuration Console.

Graphics

800xA 5.1 supports Process Graphics 2 as a default with optional VB Graphics extensions that can be installed and loaded when upgrading. 800xA 5.0 SP2 supported VB Graphics as the default with Process Graphics 2 extensions that could be installed and loaded. 800xA SV 5.0 SP1 and earlier supported VB Graphics as the default with no option for Process Graphics.

Customers upgrading from previous 800xA versions can still view and modify their VB Graphics, but they must install their previously licensed version of Visual BASIC 6.0 with SP6 in order to do so. They must also install and load the VB Graphics extensions.

New 800xA 5.1 customers should not install the VB Graphics extensions as they will only have the VB runtime and will not be able to create and/or modify VB graphics.

Installation AUTORUN

Do not use the Installation AUTORUN from System Installation DVD 1 to access the Automated Installation Tools. Those tools must be accessed from the latest system release media.

Section 2 Prerequisites

Introduction

> **i** The user performing the procedures in this section must be proficient in the use of Windows Operating Systems. This section may not include detailed procedures on how to perform the described settings.

> **i** There may be differences in accessing the Microsoft Operating System settings described in this section depending on the selected operating system. It is the responsibility of the user to consult Microsoft documentation and online help to accurately make the settings.

This section provides instructions for installing the Windows operating system and other prerequisite software for the 800xA System. Additional application specific prerequisites may be required when installing software for the various Functional Areas such as Engineering Studio, Batch Management, and Information Management.

> **i** If Engineering Studio 5.1.0/0 is installed on Microsoft Office 2010, the message `The dependency of 800xA with Microsoft Office 2007` is displayed. Click **OK** to continue with the Engineering Studio 5.1.0/0 installation.

> **i** Hot fixes, service packs, and updates for third party prerequisites that the 800xA System software has been found to be compatible with are listed in *System 800xA 5.1, 5.0, 4.x, 3.1 Third Party Software (3BUA000500)*. This document can be found in ABB SolutionsBank.

> **i** It is recommended to make a full backup of all disks. With such a backup all work will be saved in the event of a disk crash or other serious malfunction. Make sure to place proper identification on the backup media or backup files.

> **i** Install optional hardware drivers if not supplied by the Windows operating system (video card, network adapter, sound card, etc.).

Windows Operating System

This section describes:

- Selecting the Windows Operating System on page 20.
- Considerations for Disks and File System on page 21.
- Windows Installation Guidelines on page 23.
- Windows Operating System Service Packs on page 25.

Selecting the Windows Operating System

800xA System software may be installed on the 32-bit (x86) US English version of Windows Server 2008 Standard or Enterprise edition with Service Pack 2, or 32-bit (x86) US English version of Windows 7 Professional or Enterprise edition with SP1. Windows Server 2008 R2 is not supported. The following conditions affect the decision on which operating system to use:

> Windows Server 2008 and Windows 7 will be used throughout the remainder of this document (service pack and edition info will not be repeated).

- Certain 800xA Server types can run on Windows 7 as well as on Windows Server 2008. Windows Server 2008 must be used for the following applications:

  – Domain Server.

  – Aspect Server when it runs the Domain Controller and Domain Name System (DNS).

  – Batch Server (except in a Single Node Engineering System).

  – Servers that run Asset Optimization (except in a Single Node Engineering System).

  – 800xA for Harmony Connectivity Server, Configuration Server, and Configuration Server with Connectivity Server.

  – 800xA for AC 870P/Melody Connectivity Server and Configuration Server.

  – 800xA for MOD 300 Connectivity Server.

- Systems using Windows 7 for the Aspect Server nodes are limited to nine PC nodes, not counting Domain Server nodes. Systems using Windows 7 for any

other server nodes, other than the Aspect Server nodes, are limited to 11 PC nodes, not counting the Domain Server nodes. These limitations depend on Microsoft licensing rules for Windows 7 and Internet Information Services (IIS).

- Windows 7 may be used in most other instances, although some performance benefits may be gained by using Windows Server 2008. If Windows Server 2008 is not required, then Windows 7 is generally recommended.

- The Windows operating system may be purchased from any Microsoft reseller.

- Preconfigured servers/clients that come from the server/client manufacturer must be preconfigured by the server/client manufacturer to meet 800xA System specifications. If they are not, they must be reconfigured by the user to meet 800xA System specifications.

- Existing nodes that *are not running* Windows 7 or Windows Server 2008 must be reformatted and the compatible Operating System must be installed.

Considerations for Disks and File System

There are several factors that may have an impact on 800xA System performance, for example: where the software is installed, the tendency toward fragmentation, and the file system. The following are some recommendations regarding these factors.

Installation Directory

It is generally recommended to use the Windows default location, the program files directory on the boot disk, for installation.

A faster disk subsystem will improve performance.

Defragmenting Disks

The default installation of Windows 7 is set to defragment the disk automatically. If desired, it can be turned off. The default installation of Windows Server 2008 is set to not defragment the disk automatically. If desired, it can be turned on.

The file system must be in a consistent state at all times. Defragment disks on a regular basis using the defragmentation software provided with the operating system.

- Size disks so they will be 25 percent empty for defragmentation purposes.

- Check the system for fragmented files on all nodes where trend and history logs reside, and defragment the applicable disks as required.

- History configuration impacts not only the History Server disks, but also Connectivity Server disks where trend logs are configured. Therefore, check the disks on Connectivity Servers where trend or history logs reside, and defragment them as required.

- Extensive use of the Bulk Configuration tool may cause disks to become fragmented. Check the system for fragmented files after any such procedure, and defragment disks as required.

- Configuration procedures that involve creating, deleting, and then recreating of a large quantity of objects may cause the associated disks to become fragmented. Check the system for fragmented files after any such procedure, and defragment disks as required.

- Deleting and then creating the Aspect System may cause associated disks to become fragmented. Check the system for fragmented files after any such procedure, and defragment disks as required.

Enabling Write Caching on Windows Server 2008 Hard Disks

To ensure Aspect Directory integrity, the write cache buffer flushing must be left enabled in the Microsoft Windows operating system. Depending on the configuration, choice of driver, type of hard disks, etc. Windows may allow disabling the write cache buffer flushing on the hard disks to improve performance.

For data integrity this otherwise performance increasing option must not be used.

Refer to Enable Write Caching on Windows Server 2008 Hard Disks on page 28 for more information and specific procedures.

File System

The 800xA System requires the NTFS file system. In addition to the partition where the Windows operating system and 800xA System software is installed, a dedicated NTFS partition (or partitions) is also needed for:

• Historical data storage - if Information Management is installed.

A FAT32 partition may be required if using certain disk imaging utilities; however, most disk imaging software now supports FAT32 or NTFS.

Windows Installation Guidelines

Make a fresh installation of the Windows operating system.

Before adding applicable service packs, it is important that all the correct device drivers are installed to match the hardware. This is especially important for elite server hardware with special RAID hard drives and server specific hardware that requires the latest drivers or drivers not included in the operating system media.

Install applicable service packs before installing other third party software. Install Windows hot fixes, and updates approved by ABB (refer to *System 800xA 5.1, 5.0, 4.x, 3.1 Third Party Software (3BUA000500)* after installing other third party software. This document is accessible from ABB SolutionsBank.

Follow the installation procedure as described in the documentation provided by Microsoft.

Table 1 indicates the settings specifically required for the 800xA System installation.

The U.S. English version of the operating system is required.

Table 1. Windows Installation Requirements

Step	Description
Choosing a partition for installing the operating system.	It is recommended to delete any previous partitions and create a new partition on which to install the Windows operating system. This partition MUST use the NTFS file system.
	Verify that the latest BIOS exists for all hardware (mother board, RAID cards, and anything else that uses BIOS)
	It is recommended that all server nodes (Aspect Directory, Connectivity Servers, Applications Servers, etc.) use at least one additional partition for the operateITData and operateITTemp folders. For best performance, the additional partition should be on a separate disk or disk array from the operating system.
	There may be additional disk requirements for Applications Servers. If installing the IM Server function on this node, at least one additional NTFS partition is needed for storing historical data. This partition can be the same as the operateITData and operateITTemp partition or be a separate partition. The amount of disks, disk space, and disk I/O needed for the IM node are dependent on the final configuration for the node.
	To maximize the performance for any server, any additional partitions should be a separate disk or disk array from the root partition.
	If planning on creating disk images on this server or workstation, a FAT32 partition may be required if using certain disk imaging utilities; however, most disk imaging software now supports FAT32 or NTFS.
Selecting Regional Settings	Refer to Regional and Language Options on page 26.
Time Zone	Make sure the **Automatically adjust clock for daylight saving changes** check box is enabled (if daylight saving time is used).

It is recommended to reboot from the Windows installation CD to begin the Windows operating system installation.

1. Insert the applicable CD in the CD drive.

2. Restart the server or workstation.

3. When the prompt to open the reboot menu is displayed, press the applicable function key to display the menu (function key varies per server or workstation model).

4. From the reboot menu, enable the option for rebooting from the Windows installation CD.

5. When the Windows Setup screen is displayed, enable the option for starting Windows Setup now (complete installation, DO NOT enable the option for repairing an existing installation).

6. Follow the Installation Wizard, and use Table 1 to choose the correct options for the 800xA System when applicable.

7. If reloading an operating system, select **Advanced Settings**, delete the partition, and recreate it. Otherwise the old operating system files will be saved on the disk.

Windows Operating System Service Packs

The Windows operating system service packs must be installed immediately after installing the operating system, and before performing any other procedures in this instruction.

Before adding applicable service packs, it is important that all the correct device drivers are installed to match the hardware. This is especially important for elite server hardware with special RAID hard drives and server specific hardware that requires the latest drivers or drivers not included in the operating system media. Verify that the latest BIOS exists for all hardware (mother board, RAID cards, and anything else that uses BIOS).

Follow the procedures provided by Microsoft to install the Windows operating system service packs.

Miscellaneous Operating System Setup

The following settings are required for use with the 800xA System:

*   Windows Search Index on page 26.
*   Regional and Language Options on page 26.
*   Disable Displaying Server Manager Console at Logon on page 28.
*   Enable Write Caching on Windows Server 2008 Hard Disks on page 28.

- Virtual Memory Configuration on page 29.
- Disable Show Window Contents While Dragging on page 30.
- Disable Energy Saver and Screen Saver on page 30.
- Disable Web Browser Popup Blocker on page 30.
- Disable Virus Checking Software During Installation and Post Installation on page 31.
- Change Local Security Policy on Windows 7 on page 31.

Windows Search Index

> Do not index the following folders under any circumstances, or the entire volume that contains them. These folders can exist on one or more disks and should not be indexed on any of them.
>
> - **OperateITData:** Runtime data from services is stored here.
> - **OperateITTemp:** Runtime data for client processes is stored here.
> - **ProgramData:** Various other runtime data is stored here.
> - **HsData, Oracle:** Applies only for IM Servers.

Refer to Microsoft Windows help for more information on the Windows Search Indexing feature and recommendations on types of folders to index and not to index.

Regional and Language Options

Perform the following procedure to set the regional and language options.

Windows Server 2008

1. Open Windows Control Panel.

2. Double-click **Regional and Language Options** to launch the Regional and Language Options dialog box.

3. Verify that `English (United States)` is the selection in the **Current format** drop-down list. If it is not, change it to `English (United States)` and click **Apply**.

4. Click **Customize this format** to launch the Customize Regional Options dialog box.

5.   Verify that the value in the **Decimal symbol** field drop-down list is a dot (.). If it is not, change it to a dot (.) and click **Apply** and then **OK**.

6.   Click the **Administrative** tab.

7.   Click **Change system locale** to launch the Regional and Language Settings dialog box.

> If a message box appears asking: `Would you like to apply your regional and language changes?`, Click **Apply**.

8.   Verify that the value in the **Current system locale** drop-down list is `English (United States)`. If it is not, change it to `English (United States)` and click **OK** to return to the **Administrative** tab of the Regional and Language Options dialog box.

9.   Click **Copy to reserved accounts** to launch another Regional and Language Settings dialog box.

10. Enable the **Default user account (new users)** and **System accounts (local system, local service, and network service)** check boxes and click **OK**.

11. Click **OK** to exit the Regional and Language Options dialog box.

12. Close Windows Control Panel.

Windows 7

1.   Open Windows Control Panel.

2.   Click **Clock, Language, and Region**.

3.   Click **Region and Language** to launch the Region and Language dialog box.

4.   Verify that `English (United States)` is the selection in the **Format** drop-down list. If it is not, change it to `English (United States)`.

5.   Click **Additional settings** to launch the Customize Format dialog box.

6.   Verify that the value in the **Decimal symbol** field drop-down list is a dot (.). If it is not, change it to a dot (.) and click **Apply** and then **OK**.

7.   Click the **Administrative** tab.

8.   Click **Change system locale** to launch the Regional and Language Settings dialog box.

9.   Verify that the value in the **Current system locale** drop-down list is `English (United States)`. If it is not, change it to `English (United States)` and click **OK** to return to the **Administrative** tab of the Regional and Language Options dialog box.

10. Click **Copy settings** to launch the Welcome Screen and New User Accounts Settings dialog box.

11. Enable the **Welcome screen and system accounts** and **New User Accounts** check boxes and click **OK**.

12. Click **OK** to exit the Regional and Language Options dialog box.

13. Close Windows Control Panel.

Disable Displaying Server Manager Console at Logon

This procedure only applies to Windows Server 2008 installations.

Perform the following procedure to disable displaying of the Server Manager Console at logon:

1.   Open Windows Control Panel.

2.   Double-click **Administrative Tools**.

3.   Double-click **Server Manager** to launch the Server Manager.

4.   Enable the **Do not show me this console at logon** check box.

5.   Close the Server Manager.

6.   Close Windows Control Panel.

Enable Write Caching on Windows Server 2008 Hard Disks

To ensure Aspect Directory integrity, the write cache buffer flushing must be left enabled in the Microsoft Windows operating system. Depending on the configuration, choice of driver, type of hard disks, etc. Windows may allow disabling the write cache buffer flushing on the hard disks o improve performance.

For data integrity this otherwise performance increasing option must not be used.

System 800xA configuration and application data is stored in the Aspect Directory. The Aspect Directory is transaction driven and enforces a two-phase-commit scheme. As part of that scheme it ensures that data is written to disk prior to considering the transaction complete. This behavior is used by several other third party databases.

A flush command is used to ensure that data is written to the disk.It is possible to configure the disk driver to neglect the flush command. This is normally configured in the Windows disk drives setting.

A consequence of, for example, a power or hardware failure can be that a flushing is not performed. Potentially the Aspect Directory can then become inconsistent and the system will no longer start. Furthermore the data and applications become impossible to recover.

Refer to Microsoft Knowledge Base article 234656 for more information.

Perform the following procedure on all Windows Server 2008 hard disks:

1.   Launch the Computer Management Console.

2.   Select `Device Manager` in the left pane.

3.   Right-click the hard drive in the right pane and select **Properties** from the context menu to launch the hard drive properties dialog box.

4.   Select the **Optimize for Performance** option.

5.   Select the **Enable write caching on the disk** check box (**Enable write caching on the device** for Windows 7).

6.   Click **OK**.

7.   Close the Computer Management Console.

It may be necessary to verify the Enable write caching on the disk check box is still enabled after rebooting.

Virtual Memory Configuration

Windows manages the virtual memory configuration by default. Although it can be customized, ABB recommends letting Windows manage the virtual memory.

Disable Show Window Contents While Dragging

To prevent CPU intensive redrawing of the window, disable the Windows Show Window Contents while dragging feature.

1. Access My Computer.

2. Right-click and select **Properties** from the context menu to launch the System Properties dialog box.

3. Select the **Advanced** tab.

4. Click **Settings** in the **Performance** frame to launch the Performance Options dialog box.

5. Select the **Visual Effects** tab (this should be selected when the dialog box is launched).

6. Select the **Custom** option.

7. Clear the **Show Window Content while Dragging** check box.

8. Click **Apply**, wait, and then click **OK** to close the Performance Options dialog box.

9. Click **OK** to close the System Properties dialog box.

Disable Energy Saver and Screen Saver

It is recommended to NOT have any Energy Saving and screen saver functionality activated on 800xA System nodes (especially operator Workplace Clients), as this might lead to longer reaction times in case of an emergency. If the server or workstation BIOS has an Energy Saver configuration, configure it on a node-by-node basis. The Windows energy saving data is user dependent.

The energy saving setting may be accessed in two ways. The BIOS setup is available whenever the server or workstation is powered up. It may also be accessed via Power Options in Windows Control Panel. The screen saver may be turned off in the Display Properties option in Windows Control Panel.

Disable Web Browser Popup Blocker

Some third party software may offer a web browser popup blocker. Do not use them with the thin client portions of the integrated applications (specifically Asset

Optimization), since these applications open child window browsers to display application data for the user. If a popup blocker is being used on a web browser, disable it during use of these web based applications.

Disable Virus Checking Software During Installation and Post Installation

The installer should make sure that the installation procedure completes without exposing the computers to malware or malicious network traffic of any sort.

This can only be done by limiting the communication to the system and by performing separate virus scanning of any portable media or disks before connecting them to the system nodes during the installation.

After completing the system installation it is recommended to perform a full virus scan of all computers in the system.

If virus checking software is installed, disable it during 800xA installation and post installation procedures.

Change Local Security Policy on Windows 7

In order to add a client to the 800xA System, the local security policy on Windows 7 should be verified. The settings described here are the default setting in the Windows 7 installation.

1. Select:

    Start > Control Panel

2. Double-click **Administrative Tools**.

3. Double-click **Local Security Policy** to open the Local Security Policy console.

4. Navigate to **Local Policies > Security Options** in the Local Security Settings console tree in the left pane.

5. Double-click **Network Access: Sharing and security model for local account** in the right pane to open the Local Security Setting dialog box.

6. Select **Classic- local users authenticate as themselves** in the drop-down list box.

7. Click **Apply** and then **OK**.

Other Third Party Software

The following subsections detail the installation of other third party software.

The software that requires additional licenses is not included in the 800xA Common Third Party Install Tool. This section contains information about those software programs. Software programs installed by the 800xA Common Third Party Install Tool are not described here.

Crystal Reports

Install Crystal Reports on any node where the Application Scheduler is installed, if Crystal Reports will be used as the reporting package on that node. Crystal Reports does not have to be installed on nodes where the Application Scheduler is running where Crystal Reports is not used as the reporting package.

Refer to the SAP Business Objects web site for more information and to purchase and download the software.

The current supported version of Crystal Reports is Crystal Reports 2008 with Service Pack 3 Full Build with Fixpack 3.3. The installation sequence is as follows:

1. Install Crystal Reports 2008 SP3 Full Build.

2. Install Crystal Reports 2008 Fix pack 3.3. This can be found under the hotfix section on the web site.

Process Engineering Tool Integration Specific Requirements

The following are requirements that exist only for Process Engineering Tool Integration. Before installing Process Engineering Tool Integration software, install the following prerequisites, if required:

- **INtools/SPI:** Must be installed on a non-800xA node. If installing the Web Services component on this node, Microsoft IIS with FrontPage server extensions must be installed.

- For viewing external CAD drawings, one of the following software components is required to be installed on the 800xA System node on which the 800xA Client component of Process Engineering Tool Integration is installed:

- **Autodesk DWG TrueView 2:** Recommended to be used for viewing of AutoCAD files. Autodesk DWG TrueView 2 (`SetupDWGTrueView2.exe`) is available on 800xA System Installation DVD 1 in the following directory:

  `3rd_Party_SW\AutoDesk`

The latest version of DWG TrueView 2 can be downloaded free of charge at:
  http://www.autodesk.com

- **AutoCAD**.

Information Management Specific Requirement

Do not install Oracle 11gR2 until the System Installer prompts you to do so.

Oracle 11gR2 server software is required for the Information Management historical services. The Oracle Client installation provides the client server information access for the applications that requires the ODBC connection to the System 800xA Information Manager. The applications includes reporting, data access to the information such as event, historical data and production data. Oracle Client Software is installed on the node that requires access to the Information Manager.

The Information Management installation wizard installs all Information Management software on the system drive. Install the Oracle program files on the system drive as well (recommended). If desired, designate different drives for storing Oracle data files, and file-based numeric log data.

Users must have their default passwords changed in order to prevent unauthorized access. Replace this password that conforms with the organization's security policy at the first possible opportunity. Failure to replace the default password makes the system susceptible to unauthorized access.

Default user accounts are created when Information Management and required third party software are installed. To add, remove, or otherwise edit any user accounts after installation, refer to *System 800xA Information Management Configuration (3BUF001092*)*. This includes certain Windows and Oracle users installed with the system. These users must have their default passwords changed in order to prevent unauthorized access.

The Oracle software is accessible from the latest System revision DVD. To install Oracle server software:

1. Insert latest System revision DVD into the DVD drive.

2. Use Windows Explorer to locate and run `OracleInstaller.exe` in the following location:

   `\3rd_Party_SW\Oracle\Oracle11R2`

3. If a Windows Security Warning - Open File dialog box appears, click **Run** to continue.

4. The Oracle Installer Wizard (Figure 1) containing the following components is displayed:

   – **Oracle (11.2.0.2)**.
   – **Oracle CPU Patch 1**.
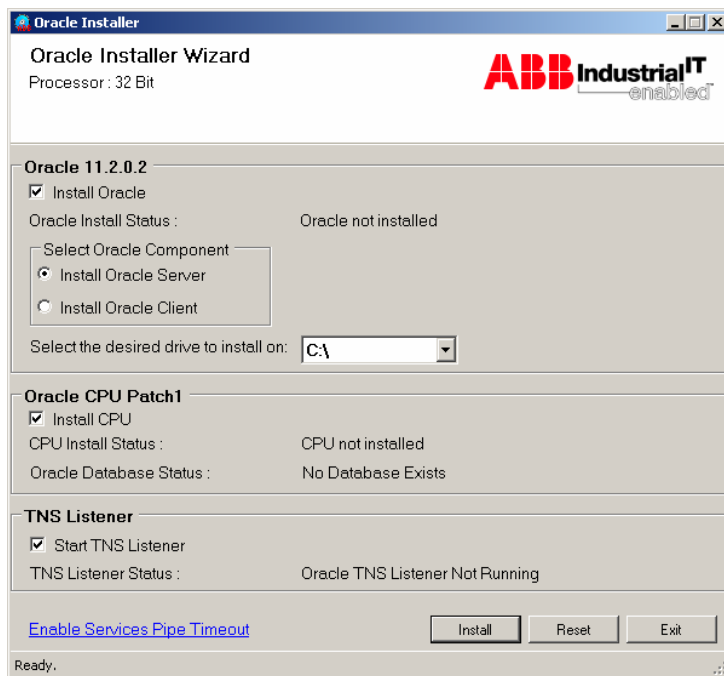   – **TNS Listener**.

TNS Listener.

Figure 1. Oracle Installer Wizard

The Oracle Server, CPU, and TNS Listener are enabled for installation, by default. The status for the Oracle components is displayed as shown in Figure 1 for a fresh installation.

5.   Select the Oracle Component - Server/Client.

6.   Select the path to install the Oracle Server.

7.   Click **Install** to install the oracle components.

8.   A dialog box is displayed with the following message:

> ```
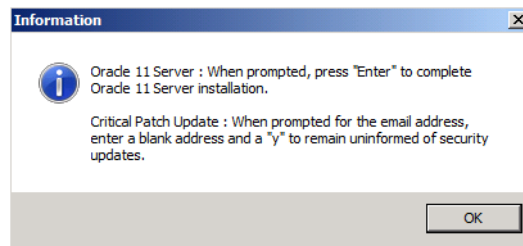> Are you sure you would like to install the following
> Components?
> ```
>
> ```
> Oracle 11 Server
> ```
>
> ```
> Critical Patch Update
> ```
>
> ```
> Oracle TNS Listener
> ```

Click **Yes** to continue.

9.   An Information message dialog box (Figure 2) is displayed describing the actions to be taken in the following steps. Click **OK** to continue.

Figure 2. Oracle Information Dialog Box

10. A Console Window is displayed with the installation information, the log file location, and the installation progress. When the Console Window indicates that the Oracle installation in complete, press **Enter** to exit.

11. The CPU installation starts in a Console Window and prompts for the following inputs:

     a. E-mail Address/User Name: Enter a **Blank** address and then **Enter** to continue.

     b. Do you wish to remain uninformed of Security issues ([Y] es, [N]o): Press **Y** and then **Enter** to continue.

     Perform the actions described in Figure 2.

12. The Console Window prompts `Is local system ready for patching.` Press **y** and then **Enter** to continue.

13. The Installer starts to configure the TNS Listener. The TNS Listener is configured and running, the Oracle Home Name and Home path is displayed.

14. The status message is displayed as **Ready**, which indicates the Installation is complete.

15. Click **Finish** to exit the Oracle Installer.

To install Oracle Client software:

1. Perform Step 1 through Step 4 from the Server Installation.

2. On the Oracle Installer Wizard, select **Install Oracle Client**.

> ℹ️ The Oracle Client is installed on a separate node.

3. Click **Install** to install the oracle components.

4. A dialog box is displayed with the following message:

    ```
    Are you sure you would like to install the following
    Components?
    Oracle 11 Client
    Critical Patch Update
    ```

    Click **Yes** to continue.

> ℹ️ TNS Listener is not installed with Oracle Client

5. Perform Step 7 through Step 10 from the Server Installation to install the Oracle and CPU patch.

6.   The status message is displayed as **Ready**, which indicates the Installation is complete.

7.   Click **Finish** to exit the Oracle Installer.

Backup Software

It is recommended that a third party backup/restore and/or disk imaging utility be used to save (and restore if necessary) server and workstation hard drives. A valid backup insures that the system can be restored.

User Account Privileges for Building Graphic Displays

Building Graphic Displays on a node in a domain requires that the user belong to the Administrators local user group. Refer to *System 800xA Administration and Security (3BSE037410*)* for information on how to add users to this group.

Group Policy Management

The following procedure must be performed on the Primary Domain Controller in a domain environment, and on every node in a Windows Workgroup environment. The procedures differ depending on the environment (domain or Windows Workgroup).

Domain Environment

Perform this procedure before installing 800xA System and Functional Area software.

Disabling Protected Mode. Perform the following procedure to disable the Windows Protected Mode feature:

This procedure only applies to Windows Server 2008 nodes in domain environments. Refer to Windows Workgroup Environment on page 42 to disable protected mode on every Windows Server 2008 node in Windows Workgroups.

1.   Select:

Start > Run

2. Enter `gpmc.msc` in the Run dialog box and click **OK**.

3. Navigate to the following in the tree view:

    Domains > Current Domain Name > GroupPolicy Objects

4. Right-click the `Default Domain Policy` object and select **Edit** from the context menu to launch the Group Policy Management Editor.

5. Navigate to the following in the tree view:

    User Configuration > Policies > Windows Settings > Internet Explorer Maintenance > Security

6. Select the security object.

7. Double-click **Security Zones and Content Ratings** in the right pane.

8. Select **Import the current security zones and privacy settings** in the Security Zones and Privacy section.

9. The Internet Explorer Enhanced Security Configuration dialog box appears. Click **Continue**.

10. Click **Modify Settings**.

11. Open the **Security** tab.

12. Select **Local Intranet Security**.

13. Clear the **Enable Protected Mode** check box.

14. Close all dialog boxes, making sure to click **OK** and not **CANCEL**.

Group Policy. This procedure must be performed on the Primary Domain Controller. It should be performed after all 800xA System nodes have been added to the domain so that the new Group Policy will replicate out to all nodes in the selected domain via the active directory. However, if the system is expanded at a later time, the Group Policy will replicate to the nodes added during the expansion.

1. Select:

    Start > Run

2. Enter `gpmc.msc` in the Run dialog box and click **OK** to launch the Group
    Policy Management Console.

!   *Do not* modify the default Group Policy Object itself. Create, link and modify a
    new Group Policy Object.

3. Right-click the domain name in the left pane of the Group Policy Management
    Console, and select **Create a GPO in this domain, and Link it here...** from
    the context menu to open the New GPO dialog box.

4. Type in a name for the new Group Policy Object in the New GPO dialog box;
    for example, `IntranetName` and click **OK** to return to the Group Policy
    Management Console.

5. Right-click on the new Group Policy Object in the left pane of the Group
    Policy Management Console, and select **Edit** from the context menu to open
    the Group Policy Object Editor.

6. Navigate to the following in the left pane of the Group Policy Object Editor:

        User Configuration > Windows Settings > Internet
        Explorer Maintenance > Security

7. Double-click the following in the right pane of the Group Policy Object Editor:

        Security Zones and Content Ratings

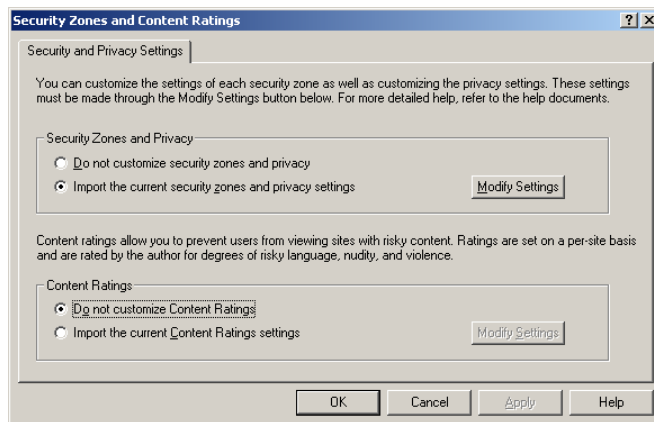to open the Security Zones and Content Ratings dialog box (Figure 3).

Figure 3. Security Zones and Content Ratings Dialog Box

8. Select the **Import the current security zones and privacy settings** option in the Security Zones and Privacy frame.

9. The Internet Explorer Enhanced Security Configuration dialog box appears. Click **Continue**.

10. Click **Modify Settings** in the Security Zones and Content Ratings dialog box to open the Internet Properties dialog box with the **Security** tab selected.

11. Select the Local Intranet icon.

12. Click **Sites** to open the Local Intranet dialog box (Figure 4).

13. Clear the **Automatically detect intranet network** check box.

14. Select the **Include all local (intranet) sites not listed in other zones** check box.

15. Verify that all other check boxes are cleared.

16. Click **OK** three times to close all open dialog boxes.

17. Close the Group Policy Object Editor.
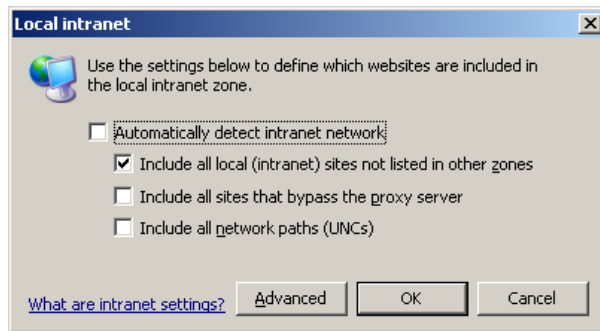
18. Reboot the node.

Figure 4. Local Intranet Dialog Box

Adding Workstations to the Domain Policy. Perform the following in order to prevent any user from being able to add workstations to the domain.

1. Select:

    Start > Run

2. Enter `gpmc.msc` in the Run dialog box and click **OK** to launch the Group Policy Management Console.

3. Navigate to the following:

    ```
    Forest: Domain Name > Domains > Domain Name > Group
    Policy Objects > Default Domain Controllers Policy
    ```

4. Right-click `Default Domain Controllers Policy` and select **Edit** from the context menu to launch the Group Policy Management Editor.

5. Navigate to the following:

    ```
    Default Domain Controllers Policy > Computer
    Configuration Policies > Windows Settings > Security
    Settings > Local Policies > User Rights Assignment
    ```

6. In the right pane, double-click `Add workstations to domain` to launch the Add workstations to domain Properties dialog box.

7. Select `Authenticated Users` and click **Remove**.

8. Click **Add User or Group** to launch the Add User or Group dialog box.

9.   Click **Browse** to launch the Select Users, Computers, or Groups dialog box.

10. Select the users and/or groups that are to have the authority to add workstations to the domain and click **OK** twice to return to the Add workstations to domain Properties dialog box.

Click **Find Now** in the Select Users, Computers, or Groups dialog box to display the available users and groups.

11. Click **Apply** and then **OK** to close the dialog box.

12. Close the Group Policy Management Editor.

Windows Workgroup Environment

Perform this procedure before installing 800xA System and Functional Area software.

Disabling Protected Mode. Perform the following procedure to disable the Windows Protected Mode feature:

This procedure only applies to Windows Server 2008 nodes in Workgroup environments.

1.   Select:

   Start > Run

2.   Enter `gpedit.msc` in the Run dialog box and click **OK** to launch the Local Group Policy Editor.

3.   Navigate to the following in the tree view:

   User Configuration > Windows Settings > Internet Explorer Maintenance > Security

4.   Select the security object.

5.   Double-click **Security Zones and Content Ratings** in the right pane.

6.   Select the **Import the current security zones and privacy settings** option in the Security Zones and Privacy section.

7.   The Internet Explorer Enhanced Security Configuration dialog box appears. Click **Continue**.

8.   Click **Modify Settings**.

9.   Open the **Security** tab.

10. Select **Local Intranet**.

11. Clear the **Enable Protected Mode** check box.

12. Close all dialog boxes, making sure to click **OK** and not **CANCEL**.

Group Policy. This procedure must be performed on every node in the Windows Workgroup. If the system is expanded at a later time, this procedure must be performed on each node added during the expansion.

1.   From the Windows Taskbar, select:

   Start > Run

2.   Enter `gpedit.msc` in the Run dialog box and click **OK** to open the Local Group Policy Editor.

3.   Navigate to the following in the left pane of the Group Policy Object Editor:

   ```
   User Configuration > Windows Settings > Internet
   Explorer Maintenance > Security
   ```

4.   Double-click the following in the right pane of the Group Policy Object Editor:

   ```
   Security Zones and Content Ratings
   ```

   to open the Security Zones and Content Ratings dialog box (Figure 3).

5.   Select the **Import the current security zones and privacy settings** option in the Security Zones and Privacy frame.

6.   Click **Modify Settings** in the Security Zones and Content Ratings dialog box to open the Internet Properties dialog box with the **Security** tab selected.

7.   Select the Local Intranet icon.

8.   Click **Sites** to open the Local Intranet dialog box (Figure 4).

9.   Clear the **Automatically detect intranet network** check box.

10. Select the **Include all local (intranet) sites not listed in other zones** check box.

11. Verify that all other check boxes are cleared.

12. Click **OK** three times to close all open dialog boxes.

13. Close the Local Group Policy Editor.

14. Reboot the node.

Adding Privileges to the 800xA Service User

This procedure only applies to the following node types. If these node types are not present in the system this procedure can be skipped.

- 800xA for Harmony Configuration Server nodes.
- 800xA for Harmony Connectivity Server nodes.
- 800xA for Harmony Configuration Server with Connectivity Server nodes.
- 800xA for AC 870P/Melody Configuration Server nodes.
- 800xA for AC 870P/Melody Connectivity Server nodes.

There are some services that run under the 800xA Service User account for the listed node types. Perform the following procedure to add the proper privileges to the 800xA Service User account.

1. Log off the 800xA Installing User account.

2. Log on the 800xA Service User account.

3. Log off the 800xA Service User account.

4. Log on the 800xA Installing User account.

Windows Updates and Hot Fixes

Refer to *System 800xA 5.1, 5.0, 4.x, 3.1 Third Party Software (3BUA000500)* to install the listed operating system updates and hot fixes. This document is accessible from ABB SolutionsBank.

Section 3 Work Flow

Introduction

This section outlines the basic steps in the work flow when using the System Installer to install a new system. These steps are described in more detail in subsequent sections.

ℹ️ Refer to Section 6, Upgrading an Installed System for information on using the System Installer to upgrade an installed system.

Basic Steps

The basic work flow elements are:

- Preparation.
- System Planning.
- System Installation.

Preparation

The steps for preparing the system are:

1. Determine the size and scope of the system being set up, including the number of server and client nodes.

2. Plan the network and domain topology.

3. Obtain all installation media.

4. Install the Windows Operating System.

5. Install the Windows Operating System service packs.

6. Acquire all the information needed for installation and setup with regard to network parameters, license files (software keys), etc.

7. Confirm that all required hardware is in place and meets the system requirements.

System Planning

The steps for system planning are:

Refer to Section 4, System Planner Tool for detailed procedures.

1. Move to the node where the system planning will be done, and log on with Administrator privileges.

2. Run the System Planner Tool from the latest System 800xA 5.1 release media.

3. Specify the system details, including:

    a. Number of Operator and Engineering Workplaces (an Engineering Workplace includes an Operator Workplace) in the system.

    b. Number of servers for remote thin clients in the system.

    c. Number of desired Connectivity Servers and redundancy options.

    d. AC 800M options.

    e. 800xA for Advant Master options.

    f. 800xA for Harmony options.

    g. 800xA for Melody option.

    h. 800xA for MOD 300 options.

    i. PLC Connectivity options.

    j. IEC 61850 Connect options.

    k. Device Management and Fieldbuses options.

    l. PC, Network and Software Monitoring options.

    m. Whether or not to use Batch Management and Manufacturing Management).

    n. Whether or not to use Information Management.

    o. Information Management options.

p. Desired Batch Management and Information Management server combinations and options.

q. Whether or not to use Asset Optimization and/or SMS and e-mail Messaging.

r. Engineering options.

s. Whether or not the Aspect Server will be redundant.

t. Whether or not Aspect Servers should be combined with Operator and/or Engineering Workplaces.

u. What to combine with the AC 800M Connectivity Server in the same node.

v. Depending on previous decisions, what to combine with other Connectivity Servers in the same node.

w. Whether to use a workgroup or existing domain, or set up a new domain.

x. View the node summary.

4. Specify general system-wide settings, including:

a. General system-wide settings.

b. User settings.

c. Node names.

d. Change the default network configuration settings (optional).

e. Change the default IP address settings (optional).

f. View a summary of configuration parameters.

g. View a graphical summary of the system.

5. Select the media type for the Setup Packages.

6. Generate Setup Packages for each node in the system.

7. View and print fact sheets.

System Installation

The steps for system installation are:

Refer to Section 5, System Installation for detailed information.

1. Move to a node in the system. Make sure to set up the nodes in the recommended order (refer to Setting up a Node on page 97).

2. Log on with Administrator privileges.

3. Install the System Installer from the latest System 800xA 5.1 release media.

4. Configure Windows, including:

    a. Configuring network setup.

    b. Configuring Windows components (Windows Hardening will be configured automatically during this step).

    c. Joining a Workgroup or domain.

    d. Configuring user groups, users, and the service account.

    e. Installing ABB common third party software.

5. Verify that the node fulfills the necessary hardware and software requirements.

6. Install missing third party software.

7. Perform the Group Policy Management procedure (this is a manual step).

8. Add privileges to the 800xA Service User (800xA for Harmony, 800xA for Melody, and Asset Optimization Server nodes only).

9. Install operating system hot fixes (this is a manual step).

10. Install and run the System Installer.

The installation of the Primary Aspect Server node must be completed before moving to other nodes in the 800xA System.

11. Stop the System Installer:

    – **Primary Aspect Server node:** When System Installer indicates it is ready to perform the Create System step.

    – **All other nodes in the 800xA System:** When System Installer indicates it is time to join the node to the Primary Aspect Server.

12. Perform the following steps to update the system with the latest revision:

    a.   Use the System Update Tool (SUT) to update to the latest revision (refer to *System 800xA System Update Tool (2PAA106938*)*. To perform the update manually, refer to Section 30 in S*ystem 800xA Installation (3BSE034678*)*.

It is only necessary to perform the pre-update steps that have not been completed as part of the pre-upgrade process.

    b.   Stop the System Update Tool when it indicates it is ready to restart the nodes.

    c.   Resume the System Installer to complete the post installation steps.

    d.   Resume the SUT to complete the post update steps.

It is only necessary to perform the post update steps that have not been completed as part of the post installation process.

13. Repeat Step 1 to Step 12 for each other node in the system to update to the latest revision.

Feature Pack Functionality

14. Perform the following steps to update the system with the Feature Pack:

    a.   Run the System Feature Pack Update Tool. Refer to the *System 800xA 5.1 System Feature Pack Update Tool (2PAA107435-510)* for user instructions.

    b.   Resume the System Installer.

15. Repeat Step 1 to Step 11 and Step 14 for each other node in the system to update to the Feature Pack.

Section 4 System Planner Tool

Introduction

The System Installer tools must be launched from the latest System 800xA 5.1 release media. This can be done in the following ways:

- With the latest System 800xA 5.1 release media in the drive of the node where the tools are being run.
- With the contents of System Installer folder from the latest System 800xA 5.1 release media copied locally to the node where the tools are being run.

The tools can not be run from a file server.

The System Planner Tool can be used to:

- **Plan a New System:** Used to specify the desired system configuration. The System Planner Tool consists of a series of dialog boxes in which relevant information is specified, such as:

  - The number of Operator Workplace and Engineering Workplace Clients.
  - The number of remote client servers.
  - Connectivity Server options.
  - Device Management options.
  - Functional Area software that will run in the system and options for each.
  - Aspect Server redundancy options.
  - AC 800M options.
  - Other Connectivity Server options.
  - Whether the system will be part of a domain or workgroup.
  - Multisystem Integration options.
  - User and User Group settings.
  - Network and node parameters.
  - Network redundancy and control network areas.
  - Server and client IP addresses.
  - Setup Package media type selection.

When the planning phase is complete, node specific Setup Packages are generated. Refer to Planning a New System on page 52 for more information.

- **Upgrade an Installed 800xA 5.0 SP2 System:** Used to upgrade an existing system from 800xA 5.0 SP2 to 800xA 5.1. An upgrade information file, generated by the System Verifier Tool, is needed in order to use this option. Refer to Section 6, Upgrading an Installed System for more information.

- **Upgrade an Installed 800xA 4.1 System:** Used to upgrade an existing system from 800xA 4.1 to 800xA 5.1. An upgrade information file, generated by the System Verifier Tool, is needed in order to use this option. Refer to Section 6, Upgrading an Installed System for more information.

Planning a New System

The System Planner Tool is a stand-alone tool that can be run from the latest System 800xA 5.1 release media inserted into the drive. It can be run on any node and it does not have to be an 800xA System node.

1. Log on to the workstation with Administrator privileges.

2. Insert the latest System 800xA 5.1 release media into the drive.

3. Navigate to the following path from the media to access the System Planner executable file:

   ```
   \\System Installer\Installation Tools\System Planner
   ```

4.   Double-click `System Planner.exe` to launch the System Planner Wizard
     ([Figure 5](#)).
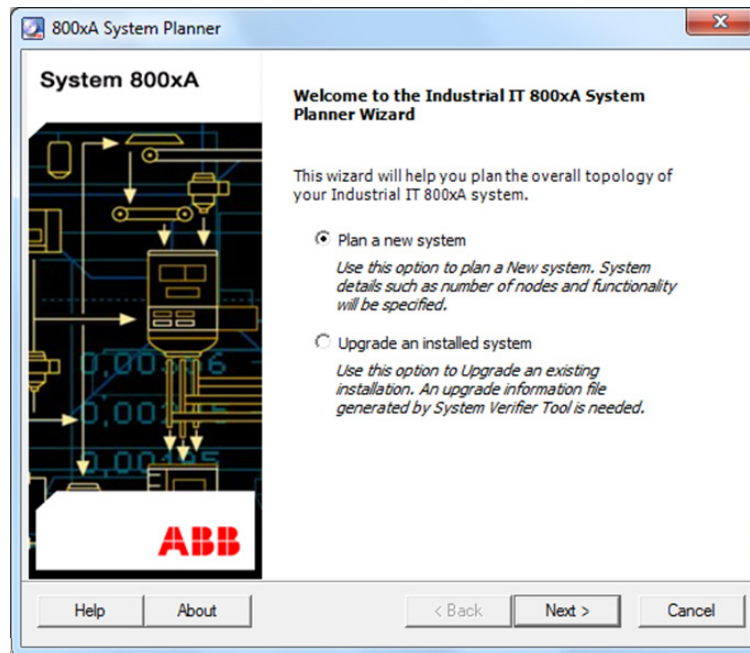
Figure 5. System Planner Wizard Welcome Dialog Box

5.   Select **Plan a new system** in the System Planner Wizard Welcome dialog box
     and click **Next**.

6.   Plan the 800xA System by following the information in the remainder of this
     section in the order presented.

System Details

Select the Number of Licensed Workplaces

Use the Select the Number of Licensed Workplaces dialog box (Figure 6) to specify the number of Operator Workplaces and Engineering Workplaces in the system.
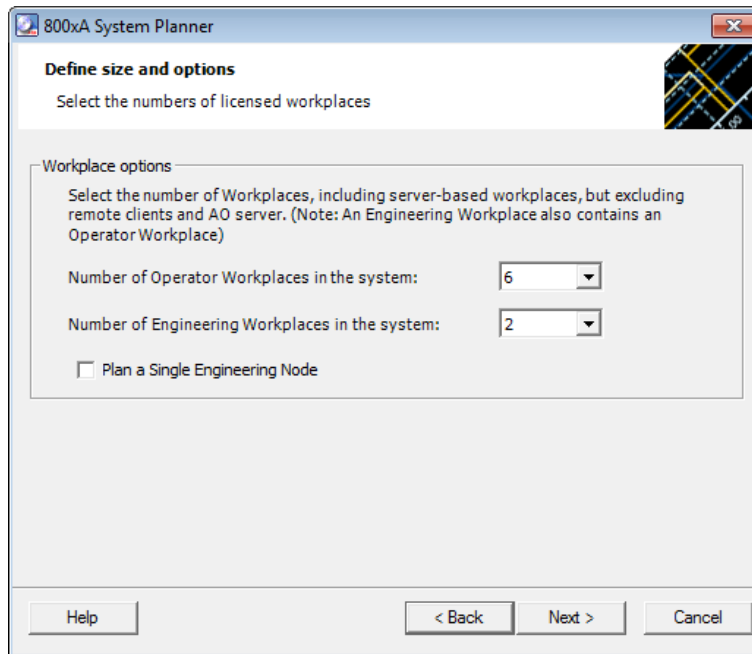
Figure 6. Select the Number of Licensed Workplaces Dialog Box

- This number includes server based clients (servers with Operator and/or Engineering Workplace functionality).

- Each Engineering Workplace includes an Operator Workplace; therefore, the number selected in the **Number of Operator Workplaces in the system** drop-down list is equal to the total number of Operator Workplaces minus the number selected in the **Number of Engineering Workplaces in the system** drop-down list. The system being planned in the example shown in Figure 6

will include eight Operator Workplaces (the six selected plus the two included in the Engineering Workplaces) and two Engineering Workplaces.

- Exclude remote thin clients. The number of servers for remote thin clients will be selected in the next dialog box.

If the **Plan a Single Engineering Node** check box is selected, the system will be set up with a Single Engineering node that will include an Engineering Workplace. If the check box is selected, the **Number of Operator Workplaces in the system** and **Number of Engineering Workplaces in the system** drop-down lists will not be active.

> If planning a system with a Single Engineering Node, not all dialog boxes described from this point forward will appear. Some of the dialog boxes will be merged and fewer options will be available. The differences will be noted where possible.

Select the Number of Remote Client Servers

> This dialog box will not appear if setting up a Single Engineering node.

Use the Select Remote Client Server Options dialog box to specify the number of servers for remote thin clients in the system. Each remote client server requires Windows 2008 Terminal Server. Select the desired number of Remote Client Servers in the **Number of Servers for Remote Clients** drop-down list.

Select the Number of Connectivity Servers and Define Redundancy

Use the Select the Number of Connectivity Servers dialog box (Figure 7) to specify the desired Connectivity Servers, and whether or not those selected are to be redundant.

Some Connectivity Servers can be combined in the same node. This will be specified in later dialog boxes.
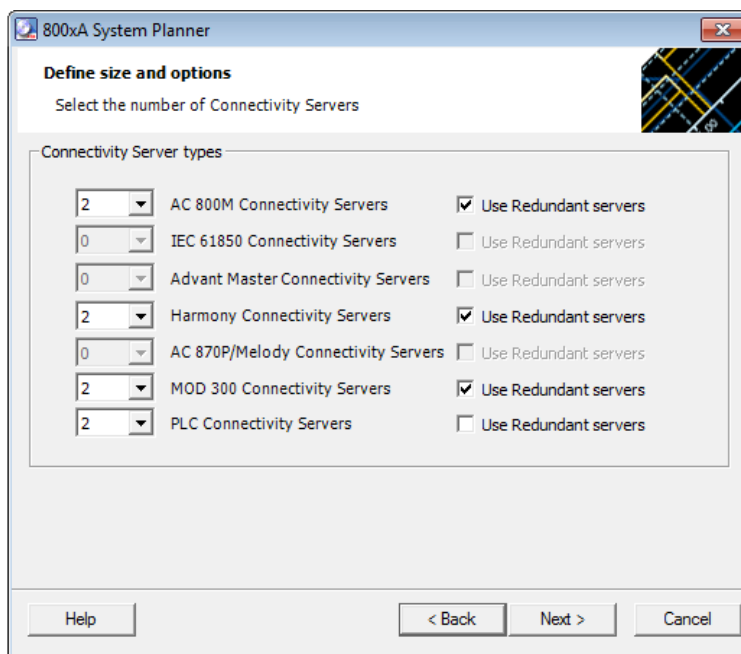
Figure 7. Select the Number of Connectivity Servers Dialog Box

This dialog box allows selection of whether or not to have redundant Connectivity Servers. Later dialog boxes for each Connectivity Server type will allow the number of redundant pairs to be selected.

Each type of Connectivity Server is used to connect to a certain type of controller. The exception is the PLC Connect Connectivity Server. It can be used to connect to a wide range of controllers.

Depending on how many Connectivity Servers are selected of a certain type, more or fewer of the other types can be selected. Not all types can be mixed. Refer to *System 800xA System Guide Technical Data and Configuration (3BSE041434*)* for information on supported combinations.

ℹ The dialog box shown in Figure 7 will be different if setting up a Single Engineering node. The redundancy options will not appear and all combinations are possible. It is only necessary to select the types of Connectivity Servers in that node.

Select how many of each type of Connectivity Server the system will have and whether the selected Connectivity Servers are to be redundant. After the selections are made, click **Next** to continue.

ℹ If 800xA for Safeguard is going to be installed, selecting **Advant Master Connectivity Servers** in the dialog box shown in Figure 7 is required.

Select Connectivity Server Options

ℹ There are more Connectivity Server options set later in the planning process. Refer to Set AC 800M Connect Combinations on page 75 and Set Additional Connectivity Server Options on page 77 for more information.

For each of the following Connectivity Servers selected, a dialog box with possible options will appear. Connectivity Servers not listed have no options to select at this point in the planning process.

• **AC 800M Connectivity Servers:** The Set AC 800M Options dialog box will appear with the following options available:

ℹ The Set AC 800M Options dialog box will not appear if setting up a Single Engineering node.

– **Use Base Software for Soft Control** check box: If selected, an extra Connectivity Server will be generated, because this option should be on its own separate node.

– **Use SFC Viewer** check box: This is selected by default and cannot be changed.

> The features of SFC Viewer in 800xA 5.1 Feature Pack depends on the 800xA 5.1 Revision A installation of Engineering Studio and Control Builder.

- **Advant Master Connectivity Servers:** The Set 800xA for Advant Master Options dialog box will appear with the following option available:

> An option to select either an internal real-time accelerator (RTA) PU515A PCI type board, or an external PU410 RTA unit will appear later in the planning process.

  - **Use SafeGuard Connect** check box: Select this check box to install 800xA for SafeGuard.

- **Harmony Configuration Servers:** The Set 800xA for Harmony Options dialog box will appear with the following options available:

> The Set 800xA for Harmony Options dialog box will not appear if setting up a Single Engineering node.

  - **Number of Harmony Configuration Servers** drop-down list: Select the number of Harmony Configuration Servers.

- **Set 800xA for Harmony Combinations:** Select whether to combine the 800xA for Harmony Configuration Server with the designated 800xA for Harmony Connectivity Server.

> The Set 800xA for Harmony Combinations dialog box will not appear if setting up a Single Engineering node.

- AC 870P/**Melody Connectivity Servers:** The Set 800xA for AC 870P/Melody Options dialog box will appear with the following options available:

> The Set 800xA for AC 870P/Melody Options dialog box will not appear if setting up a Single Engineering node.

  - **Enter Disk Partition for the** AC 870P/**Melody Management Runtime Database** field: Use this field to specify where the AC 870P/Melody Management Runtime Database will be located.

  - **Use SFC Viewer** check box: Select the check box to use the SFC Viewer option.

> The features of SFC Viewer in 800xA 5.1 Feature Pack depends on the 800xA 5.1 Revision A installation of Engineering Studio and Control Builder.

- • **MOD 300 Connectivity Servers:** There are no options to set at this point in the planning process (options are set in Set Additional Connectivity Server Options on page 77).

- • **IEC 61850 Connectivity Servers:** There are no options to set at this point in the planning process (options are set in Set Additional Connectivity Server Options on page 77).

- • **PLC Connectivity Servers:** The Set PLC Connect Options dialog box will appear with the following option:

  - – **IEC 60870 Protocol** check box: Select the check box to use IEC 60870 Protocol.

Select Device Management Options

Use the Select Device Management Options dialog box (Figure 8) to select which Fieldbus options there will be in the system.
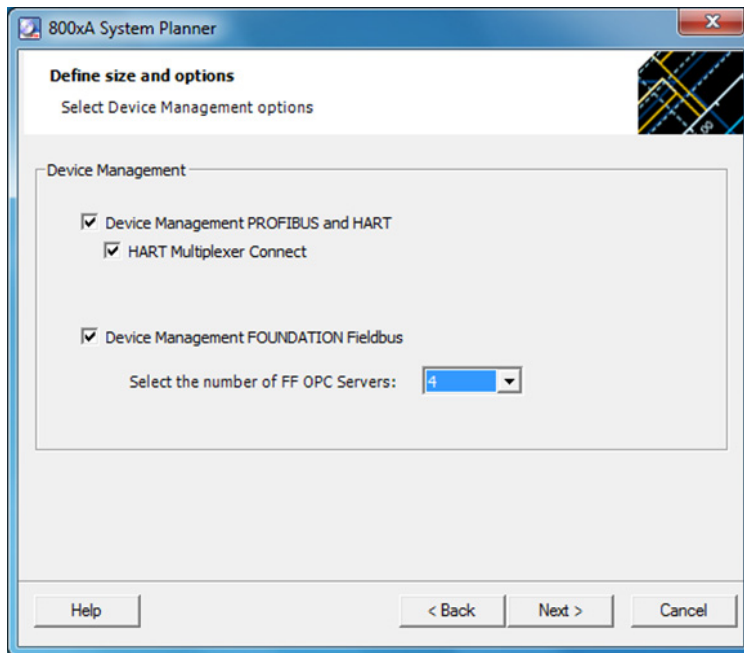
Figure 8. Select Device Management Options Dialog Box

Selections available are:

- **Device Management PROFIBUS and HART:** When selected, the **HART Multiplexer Connect** check box becomes active. Enable the check box to use HART Multiplexer Connect.

- **Device Management FOUNDATION Fieldbus:** When selected, the **Select the Number of FF OPC Servers** drop-down list becomes active. Select the number of desired FOUNDATION Fieldbus OPC servers. If desired, these can be combined with the AC 800M Connectivity Server later.

The **Select the Number of FF OPC Servers** drop-down list will not become active if setting up a Single Engineering node.

Set Batch Management Options

ℹ If setting up a Single Engineering node, the Set Batch Management Options
dialog box is combined in one dialog box with the Information Management and
Asset Optimization options. Refer to Select the System Options on page 79.

Use the Set Batch Management Options dialog box (Figure 9) to select whether or
not to use Batch Management in the system.
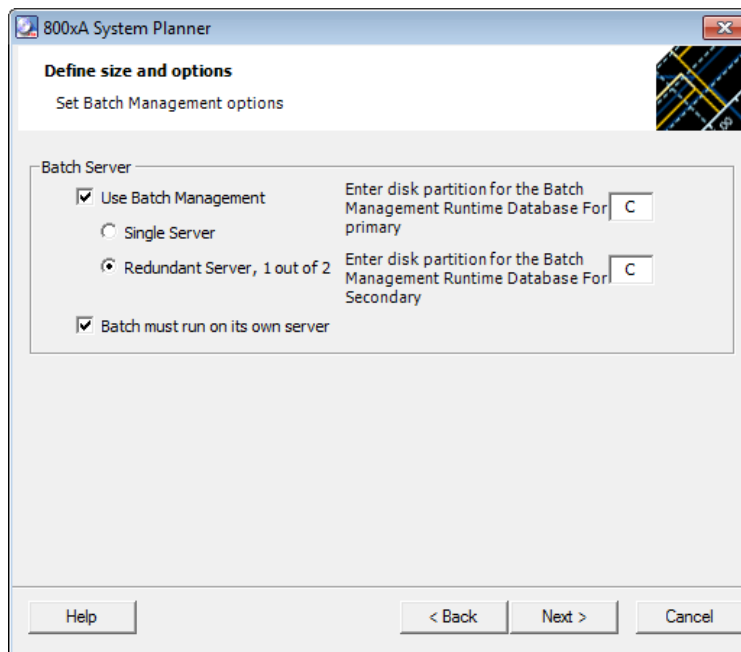
Figure 9. Set Batch Management Options Dialog Box

If the **Use Batch Management** check box is selected, set the following relevant
options:

- **Single server:** A nonredundant Batch Server.

- **Redundant Server, 1 out of 2:** A Batch Server with 1-out-of-2 redundancy.

- **Batch Must run on its own server** check box: Select the check box to specify
  that the Batch Management Server not be combined with any other server.

- **Enter disk partition for the Batch Management Runtime Database** field: Specify the disk partition for the Batch Management Runtime Database.

Set Information Management Options

ℹ️ If setting up a Single Engineering node, the Set Information Management Options dialog box is combined in one dialog box with the Batch Management and Asset Optimization options. Refer to Select the System Options on page 79.

ℹ️ Desktop Tools will be installed on all Engineering Workplaces.

Use the Set Information Management Options dialog box (Figure 10) to select whether or not to use Information Management in the system.

If the **Use Information Management** check box is selected, set the following relevant options:

- **Additional IM Servers** check box: Select this check box to add Information Management Servers. When selected, select the number of additional Information Management Servers in the **Quantity** drop-down list.

- **Open Data Access:**

  – **Use Open Data Access** check box: Select this check box to install Open Data Access.

- **Calculations Options:**

  – **Use Calculations** check box: Select this check box to install the Calculations Services.

  – **Calculations Must Run on its Own Server** check box: Select the check box to install the Calculations Server on its own server node.
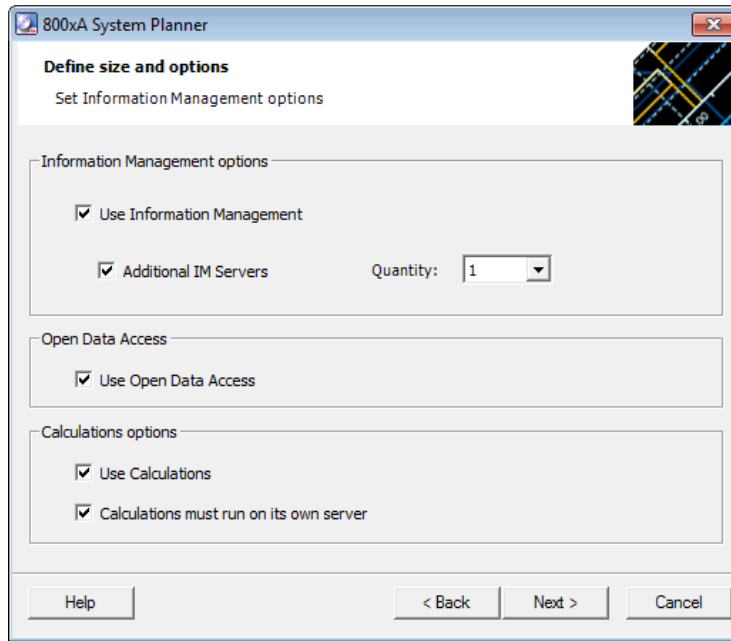
Figure 10. Set Information Management Options Dialog Box

Set Information Management Combinations

The Set Information Management Combinations dialog boxes do not appear if setting up a Single Engineering node.

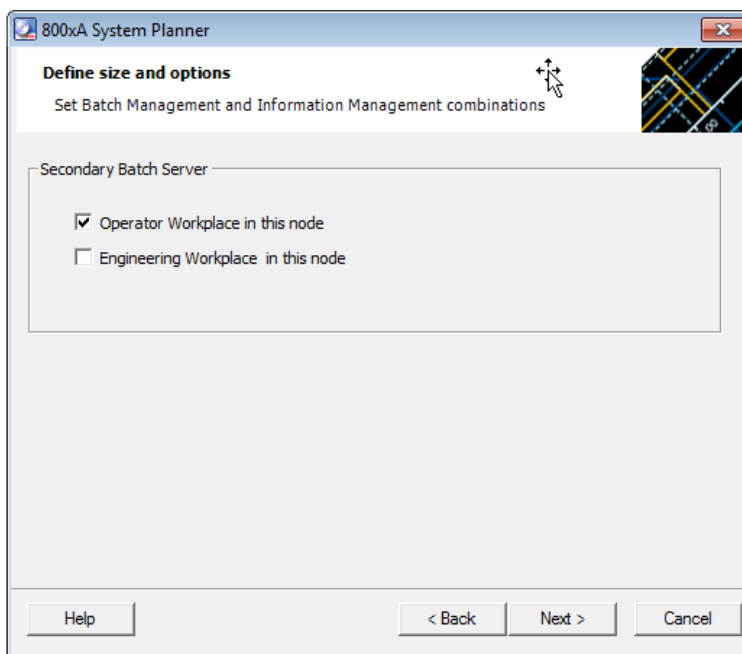Use the Set Information Management Combinations dialog box (Figure 11) to select whether or not the Information Management Server nodes will include Operator and/or Engineering Workplaces (referred to as server based clients).

The number of Set Information Management Combinations dialog boxes that appear will vary depending on the number of additional Information Management Servers selected previously in the **Additional IM Servers** drop-down list in the Set Information Management Options dialog box. There will be one Set Information

Management Combinations dialog box for the Primary IM Server and one for each of the additional IM Servers.
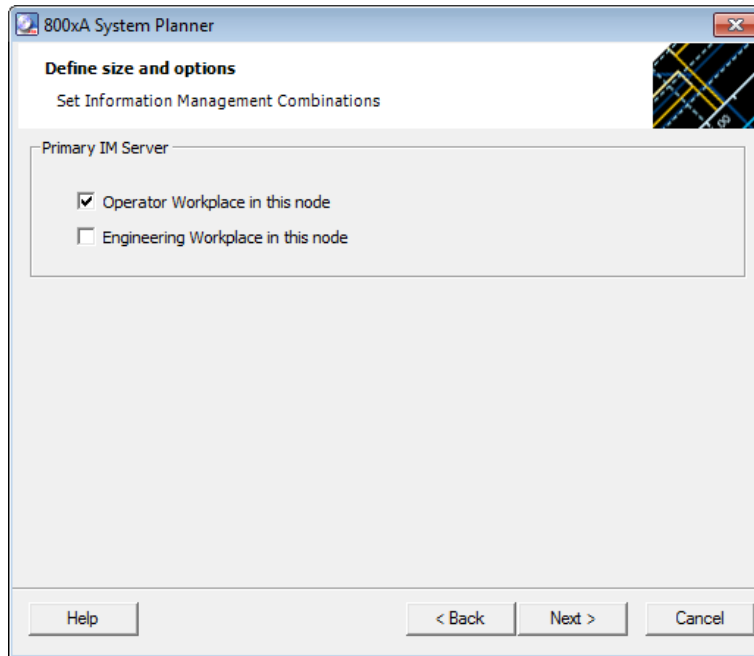
Figure 11. Set Information Management Combinations Dialog Box

Select the appropriate check box to include an Operator Workplace or an Engineering Workplace (which includes an Operator Workplace) in each IM Server.

The total number of Operator and Engineering Workplaces was defined previously in Select the Number of Licensed Workplaces on page 54. If the maximum number has been reached, the check boxes in these dialog boxes will not be active.

Set Batch Management and Information Management Combinations

The Batch Management Server and Information Management Server can be combined in the same node. Use the Set Batch Management and Information Management Combinations dialog box (Figure 12) to combine them.

The Set Batch Management and Information Management Combinations dialog box does not appear if setting up a Single Engineering node.

Figure 12. Set Batch Management and Information Management Combinations Dialog Box

Possible combinations include:

ℹ These options may not be available depending on previous selections and/or the size of the system.

- **Primary Batch Server:**

    – **Combine with Information Management** check box. Select this check box to combine the Batch Management and Information Management Servers in the same node.

ℹ The **Combine with Information Management** check box will not be active if the **Batch Must Run on its Own Server** check box was selected in the Set Batch Management Options dialog box.

    – **Operator Workplace in this node** check box: Select this check box to include an Operator Workplace in this node (referred to as a server based client).

    – **Engineering Workplace in this node** check box: Select this check box to include an Engineering Workplace in this node (referred to as a server based client).

ℹ If Information Management and Batch Servers are selected to be combined, and Information Management already has the Operator or Engineering Workplace options selected, the corresponding check box in the Batch Management dialog boxes will not be active.

💡 The total number of Operator and Engineering Workplaces was defined previously in Select the Number of Licensed Workplaces on page 54. If the maximum number has been reached, the check boxes in this dialog box will not be active.

- **Secondary Batch Server:** This dialog box only appears if Redundant Batch Servers were selected previously. It has all of the same options as the Primary Batch Server dialog box except for the option to combine with Information Management.

Set Asset Optimization Options

ℹ️ If setting up a Single Engineering node, the Set Asset Optimization Options dialog box is combined in one dialog box with the Batch Management and Information Management options. Refer to Select the System Options on page 79.

Use the Set Asset Optimization Options dialog box (Figure 13) to select whether or not to use Asset Optimization in the system.
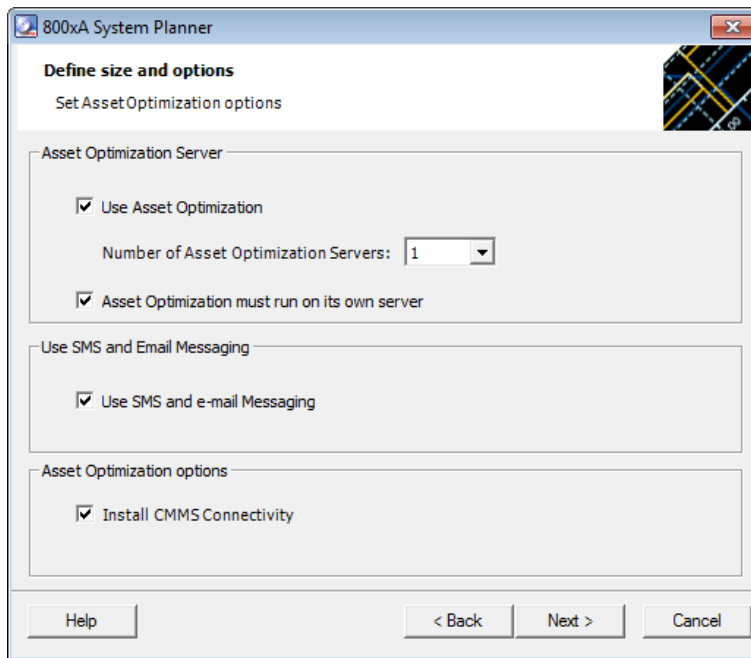
Figure 13. Set Asset Optimization Options Dialog Box

If the **Use Asset Optimization** check box is selected, set the following relevant options:

• **Number of Asset Optimization Servers** drop-down list: Select the number of Asset Optimization servers. There can be a total of four Asset Optimization Servers in the system; however, only one must be configured as the AO Main Server.

- **Asset Optimization must run in its own server** check box: Choosing this will mean that Asset Optimization will not be combined with any other Connectivity Server, including a combined Aspect and Connectivity Server.

- **Use SMS and e-mail Messaging** check box: Select the check box to install SMS and e-mail Messaging.

- **Install CMMS Connectivity check box:** Enable the check box to use CMMS Connectivity functionality.

Set 800xA for Harmony Options

The Set 800xA for Harmony Options dialog box does not appear if setting up a Single Engineering node.

If Harmony Connectivity Servers were selected under Select the Number of Connectivity Servers and Define Redundancy on page 56, the Set 800xA for Harmony Options dialog box (Figure 14) will appear. Use this dialog box to select

whether or not to use the Harmony Batch Extension and/or the Advanced Harmony Control System Monitoring Extension in the system.
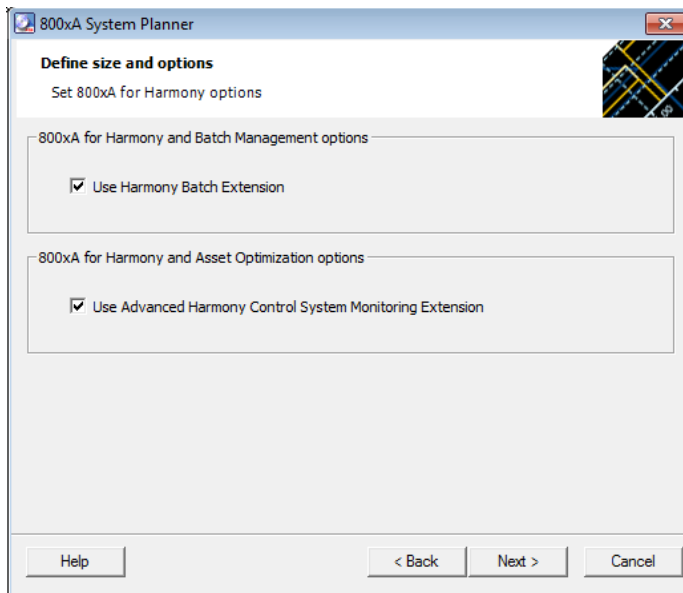
Figure 14. Set 800xA for Harmony Options Dialog Box

Set the following relevant options:

- **Use Harmony Batch Extension** check box: Select this check box to use the Harmony Batch system extension.

- **Use Advanced Harmony Control System Monitoring Extension** check box: Select this check box to use the Advanced Harmony Control System Monitoring system extension.

Set Engineering Options for the Engineering Clients

Use the Set Engineering Options for the Engineering Clients dialog box (Figure 15) to specify options for the Engineering Workplaces.
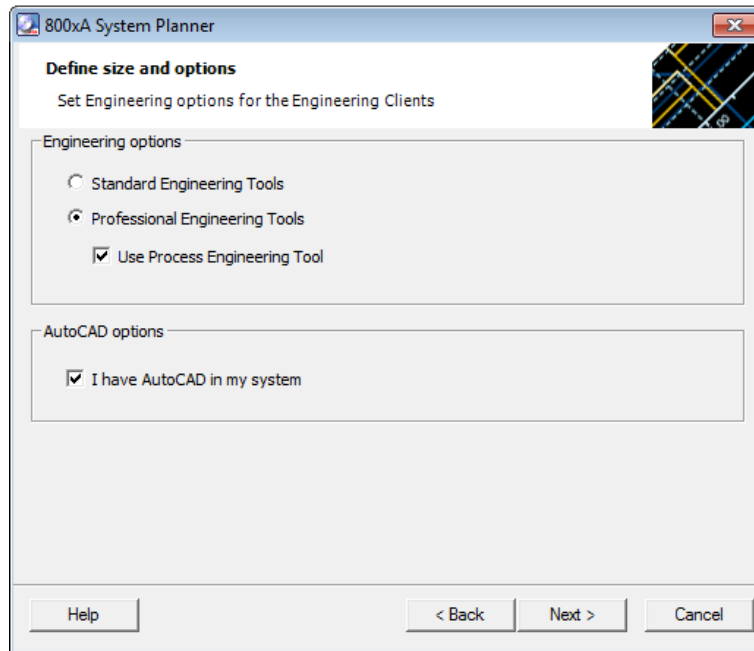
Figure 15. Set Engineering Options for the Engineering Clients Dialog Box

- **Engineering Options:**

  – Select which set of Engineering Tools (Standard or Professional) were purchased with the system. The selected set will be installed on Engineering nodes.

  – Select the **Use Process Engineering Tool** check box to install Process Engineering Tool Integration with the system.

- **AutoCAD Options:**

  – Select the **I have AutoCAD in my system** check box if the Engineering Workplaces will use AutoCAD.

Set Aspect Server Redundancy Options

ℹ️ The Aspect Server Redundancy dialog box does not appear if setting up a Single Engineering node.

Use the Aspect Server Redundancy dialog box (Figure 16) to select whether the Aspect Server will be redundant or not.
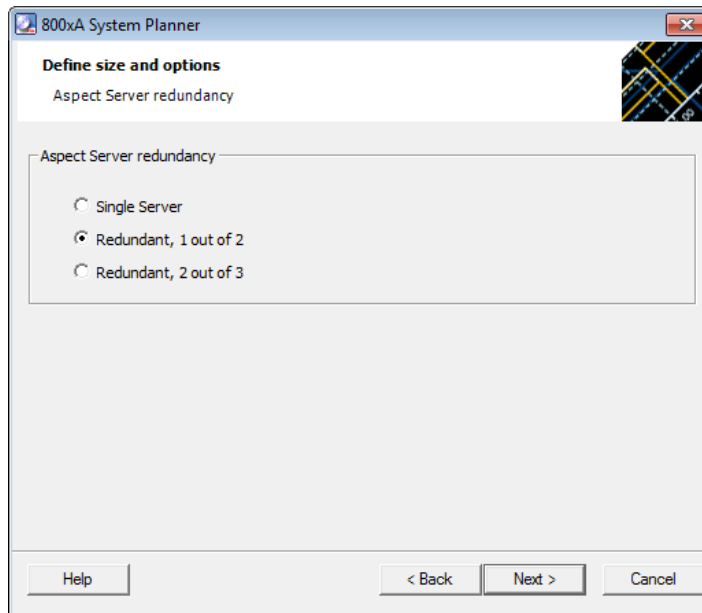
Figure 16. Aspect Server Redundancy Dialog Box

Available options are:

- **Single Server:** A nonredundant Aspect Server.

- **Redundant, 1 out of 2:** A redundant Aspect Server with 1-out-of-2 redundancy.

- **Redundant, 2 out of 3:** A redundant Aspect Server with 2-out-of-3 redundancy.

Set Aspect Server Options

ℹ️   The Set Aspect Server Options dialog box does not appear if setting up a Single
Engineering node.

Any Aspect Server can be combined with a Workplace in the same node (referred to
as a server based client). Use the Set Aspect Server Options dialog box (Figure 17)
to select the combinations.

ℹ️   This option may not be available depending on previous selections, especially the
number of workplaces.
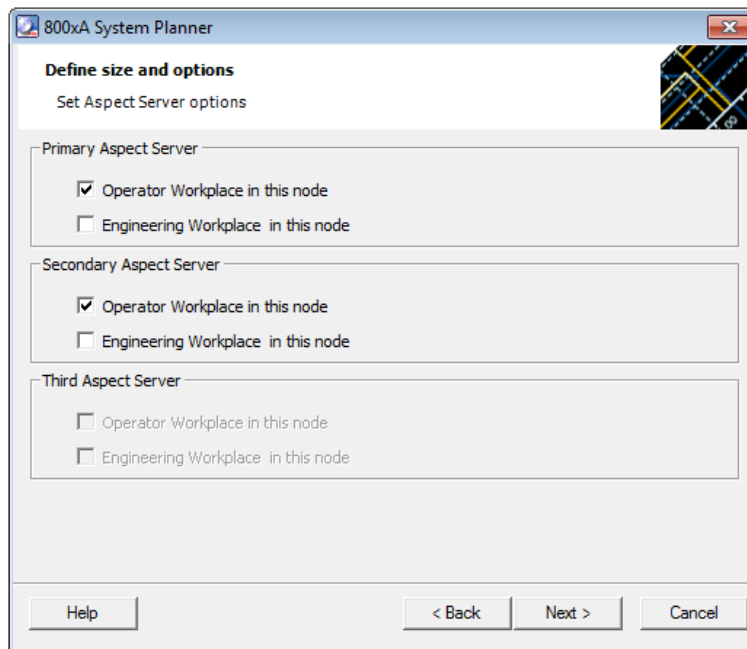
Figure 17. Set Aspect Server Options Dialog Box

💡   The total number of Operator and Engineering Workplaces was defined
previously in Select the Number of Licensed Workplaces on page 54. If the
maximum number has been reached, the check boxes in this dialog box will not
be active.

Set AC 800M Connect Combinations

The Set AC 800M Connect Options dialog box does not appear if setting up a Single Engineering node.

Use the Set AC 800M Connect Combinations dialog box (Figure 18) to select what will be combined with the AC 800M Connectivity Server in the same node.
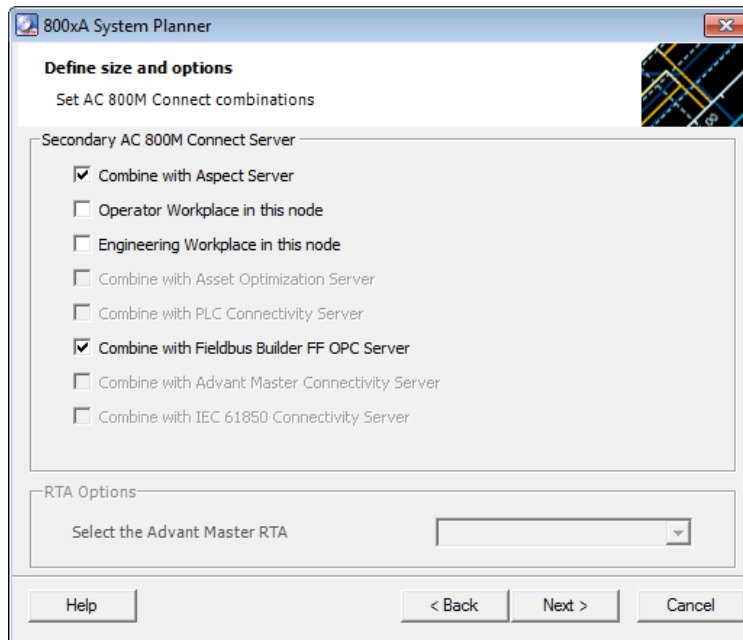
Figure 18. Set AC 800M Connect Options Dialog Box

Select the check boxes for the desired combinations. Available options are:

Some options may not be available depending on previous selections; for example, the number of clients.

The total number of Operator and Engineering Workplaces was defined previously in Select the Number of Licensed Workplaces on page 54. If the maximum number has been reached, the check boxes in this dialog box will not be active.

- **Combine with Aspect Server:** The AC 800M Connectivity Server will be combined in the Primary Aspect Server node.

- **Operator Workplace in this Node:** An Operator Workplace will be combined with the AC 800M Connectivity Server in the same node (referred to as a server based client).

- **Engineering Workplace in this Node:** An Engineering Workplace will be combined with the AC 800M Connectivity Server in the same node (referred to as a server based client).

- **Combine with Asset Optimization Server:** The AC 800M Connectivity Server will be combined with the Asset Optimization Server.

- **Combine with PLC Connectivity Server:** The AC 800M Connectivity Server will be combined with the PLC Connect Connectivity Server.

- **Combine with the Fieldbus Builder FF OPC Server:** The AC 800M Connectivity Server will be combined with the Fieldbus Builder FF OPC Server.

- **Combine with Advant Master Connectivity Server:** The AC 800M Connectivity Server will be combined with the 800xA for Advant Master Connectivity Server. If this selection is made, the **Select the Advant Master RTA** field will be enabled. Select either an internal real-time accelerator (RTA) PU515A PCI type board, or an external PU410 RTA unit. If this selection is not made, a dialog box will appear later allowing the selection of the 800xA for Advant Master RTA.

- **Combine with IEC 61850 Connectivity Server:** The AC 800M Connectivity Server will be combined with the IEC 61850 Connectivity Server.

- **Add a Redundant Server:** If the **Use Redundant Servers** check box is selected in Select the Number of Connectivity Servers and Define Redundancy on page 56, the **Add a Redundant Server** check box in this dialog box will also be selected. Use this check box in this and subsequent dialog boxes to select how many of the total Connectivity Servers will be redundant (clear the

check box so that the Connectivity Server in the current dialog box will not be redundant).

i Subsequent AC 800M Connect Options dialog boxes may appear with the same options depending on the number of AC 800M Connect Connectivity Servers selected, and whether or not those servers are to be redundant, as specified in Select the Number of Connectivity Servers and Define Redundancy on page 56.

Set Additional Connectivity Server Options

i The additional Connectivity Server Options dialog boxes do not appear if setting up a Single Engineering node.

Depending on the selections made in Select the Number of Connectivity Servers and Define Redundancy on page 56, additional dialog boxes similar to the Set AC 800M Connectivity Server Options dialog box may appear for the Connectivity Servers selected. Make the desired selections in all dialog boxes that appear before clicking **Next** to continue.

Set PC, Network and Software Monitoring (PNSM) Options

i The Set PC, Network and Software Monitoring Options dialog box will not appear if setting up a Single Engineering node.

Use the Set PC, Network and Software Monitoring Options dialog box (Figure 19) to select whether or not the PNSM Server will run on an existing Connectivity Server or if it requires its own server. This dialog box is also used to select whether or not the Structured Data Logger will be used and whether the Structured Data Logger will run on an existing Connectivity Server or if it requires its own server.

i PNSM and Basic Computer Monitoring share the same installation package. Basic Computer Monitoring is always installed.

The node where the PNSM Server component is installed will differ depending on the application.

• **PC, Network and Software Monitoring runs on Connectivity Server**: Select this option for 800xA Systems running only PNSM Basic Computer Monitoring. It does not have to be on its own Connectivity Server node. The footprint of Basic Computer Monitoring is small and should not affect the other
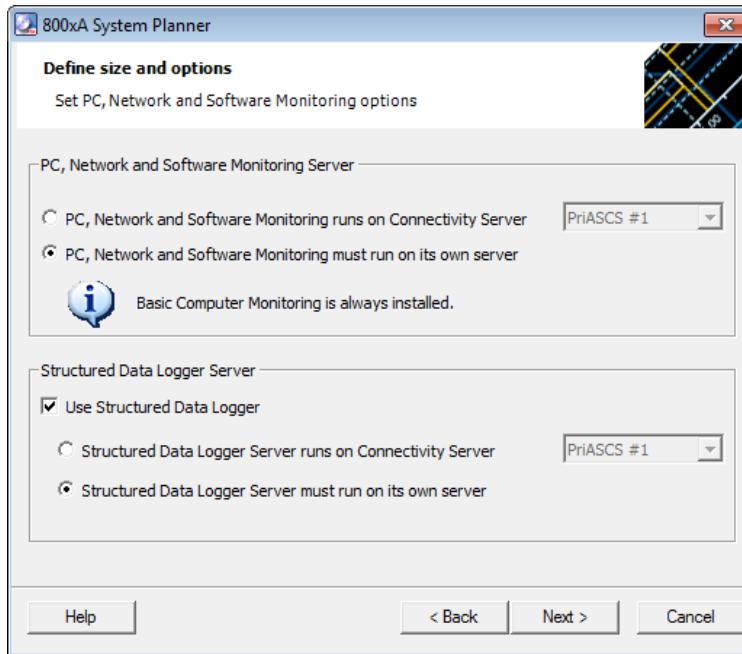
Figure 19. Set PC, Network and Software Monitoring Options Dialog Box

software running on the Connectivity Server. When this option is chosen, select the Connectivity Server from the drop-down list.

- **PC, Network and Software Monitoring must run on its own server:** Select this option for 800xA Systems with additional PNSM assets besides those used for Basic Computer Monitoring.

Selecting the Structured Data Logger Server check box will install the Structured Data Logger. The node where the Structured Data Logger is installed will differ depending on the application.

Structured Data Logger Server runs on Connectivity Server: Activate the SDL Service on precisely one server (nonredundant). Do not activate on any Connectivity Server that runs 800xA for Harmony or 800xA for AC 870P/Melody connectivity or configuration services.

Structured Data Logger Server must run on its own server: For large applications the Structured Data Logger can be installed on its own Application Server.

Select the System Options

This dialog box only appears if setting up a Single Engineering node.

Use the Select the System Options dialog box (Figure 20) to use those features in a Single Engineering node.
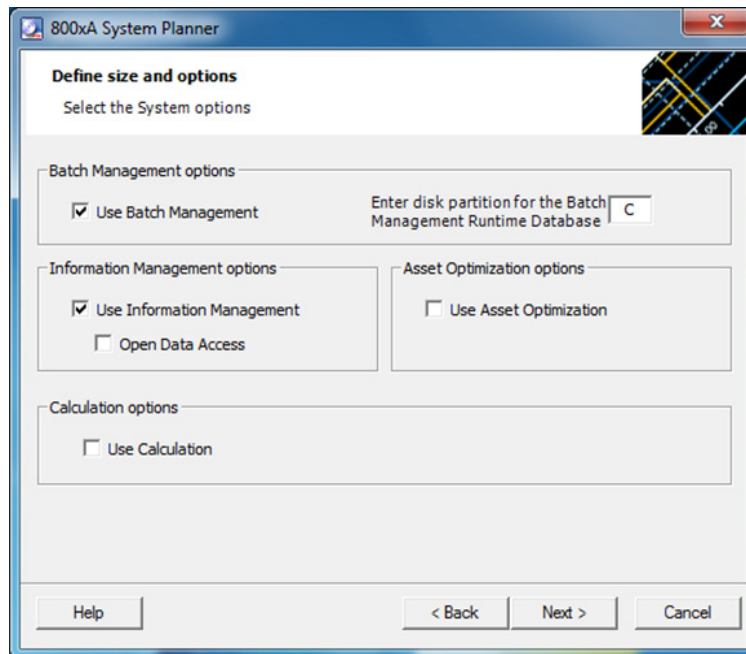
Figure 20. Select the System Options Dialog Box (Single Engineering Node Only)

Select the System Network Options

Use the Select the System Network Options dialog box (Figure 21) to select
whether to use a domain or workgroup.
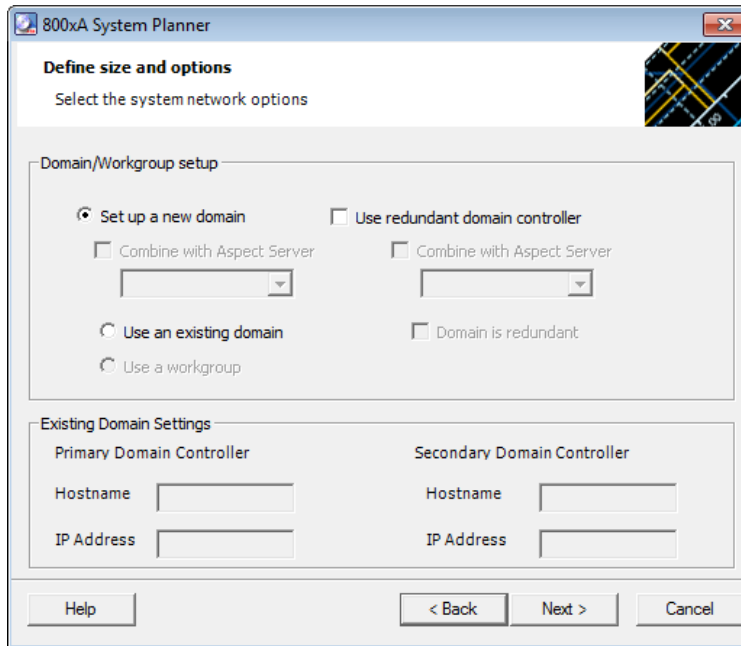
Figure 21. Select the System Network Options Dialog Box

Available options are:

- **Set up a new domain:** If selected, select also whether or not to use a redundant
  Domain Controller and whether or not to combine the Domain Controllers with
  the Aspect Servers or Aspect Servers combined with AC 800M Connectivity
  Servers. If the Domain Controllers are to be combined with the Aspect Servers,
  select the Aspect Servers from the drop-down lists. If setting up a Single
  Engineering node, it is not possible to make these selections.

- **Use an existing domain:** If selecting an existing domain, it will be necessary
  to have administrator privileges on the domain in order to join. Select also if the
  domain is redundant. If an existing domain is chosen, the settings in the

Existing Domain Settings frame become active. Enter the Hostnames and IP Addresses of the existing primary and secondary (if redundant) Domain Controllers.

The hostname is the unique name by which a network attached device (in this case the Domain Controller) is known on a network.

- **Use a workgroup:** When deciding on a domain or workgroup, consider the restrictions described in *System 800xA System Guide Technical Data and Configuration (3BSE041434*).*

Select the Multisystem Integration Options

Use the Select the Multisystem Integration Options dialog box (Figure 22) to select whether Multisystem Integration will be used to supervise and operate multiple 800xA Systems from one central control room.

If this system is part of a multisystem integration, make sure that the node names for the Provider System are different from the node names for the Subscriber System.

The Select the Multisystem Integration Options dialog box does not appear if setting up a Single Engineering node.

Available options are:

- **This system is part of a Multisystem Integration:** Select the check box if the system being planned is a part of a Multisystem Integration.

- **Multisystem Integration must run on its own Connectivity Server:** Select the check box to specify that Multisystem Integration not be combined with any other Connectivity Server.

  - Redundant Server, 1 out of 2: If the This system is part of a Multisystem Integration and Multisystem Integration must run on its own Connectivity

Server are selected, this check box becomes active. Select this check box
to use redundant servers for Multisystem Integration.
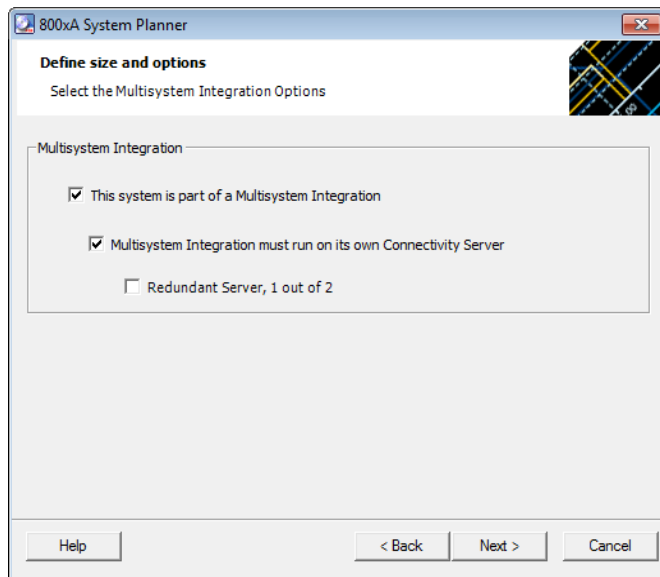
Figure 22. Select the Multisystem Integration Options Dialog Box

Summary of Selected Nodes

Use the Summary of Selected Nodes dialog box to view a list of the system nodes to
be set up. If not satisfied, go back and change the selections.
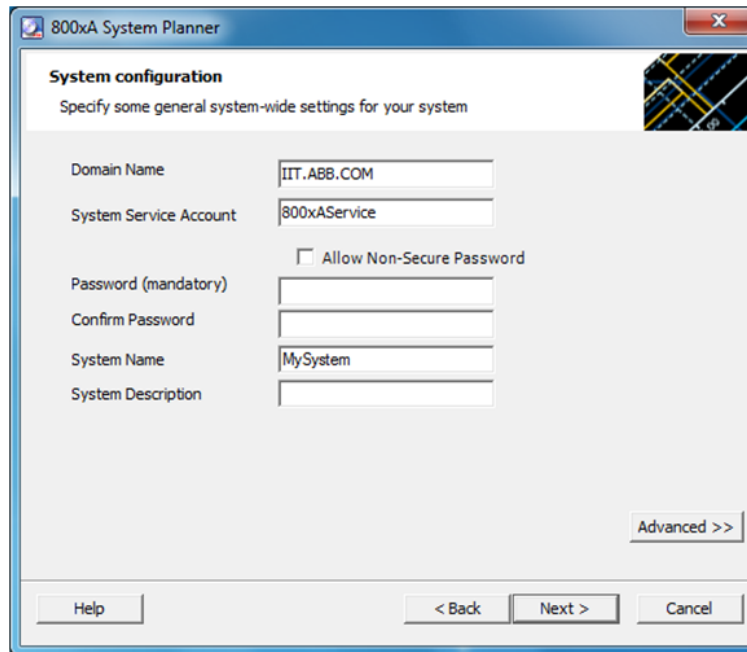
After clicking **Next**, the System Installer will check dependencies. When complete,
the subsequent set of dialog boxes is used to specify system-wide settings.

System-Wide Settings

System-wide settings are those such as network and node parameters. These will be
used later to properly configure Windows.

Specify General System-Wide Settings

Use the Specify General System-Wide Settings dialog box (Figure 23) to specify basic node settings.

Figure 23. General System-Wide Settings Dialog Box

- **Domain Name:** Enter which domain or workgroup the nodes in the system should belong to. If it was previously selected to create a new domain, this will be the new domain name.

If using an existing domain with a Domain Controller, make sure to enter the full Domain Name in the form shown in the Domain Name field in Figure 23.

Enter the Domain Name as per Microsoft guidelines. Failure to follow the guidelines will not allow nodes that are trying to be joined to the domain to join.

- **System Service Account:** Enter the Service Account name. This account is used when the system is up and running, and must not be used for installation.

The Service Account must be created by the System Installer; that is, make sure **not** to use a manually created account.

Define separate accounts and different passwords for the Installation and the Service Account.

- **Password:** The system supports both secured and unsecured passwords. Leaving the **Allow Non-Secure Password** check box cleared requires that passwords must meet the following minimum requirements:

    – Cannot contain all or part of the user's account name.
    – Must be at least seven characters in length.
    – Must contain characters from three of the following four character sets:

        English uppercase characters (A through Z).
        English lowercase characters (a through z).
        Base 10 digits (0 through 9).
        Nonalphabetic characters (for example: !, $, #, %).

If the password does not meet the requirements, a warning dialog box will appear when **Next** is clicked. Click **OK** to exit the dialog box and enter a password that meets the requirements.

If the **Allow Non-Secure Password** check box is selected, the password rules do not apply; however a warning dialog box will appear to warn that selecting this option can be a potential security risk. Select **OK** to proceed or **Cancel** to leave the **Allow Non-Secure Password** check box cleared**.**

- **System Name:** Enter the system name.

- **System Description:** Optionally enter a short description (currently for information purposes only).

- Click Advanced to set the following:

    – Server Data Path.
    – System Data Path.
    – Workplace Data Path.

Enter User Names and Passwords, and Add Users to User Groups

Use the Enter User Names and Passwords, and Add Users to User Groups dialog box (Figure 24) to specify the user settings. Do not to change the Service Account settings.
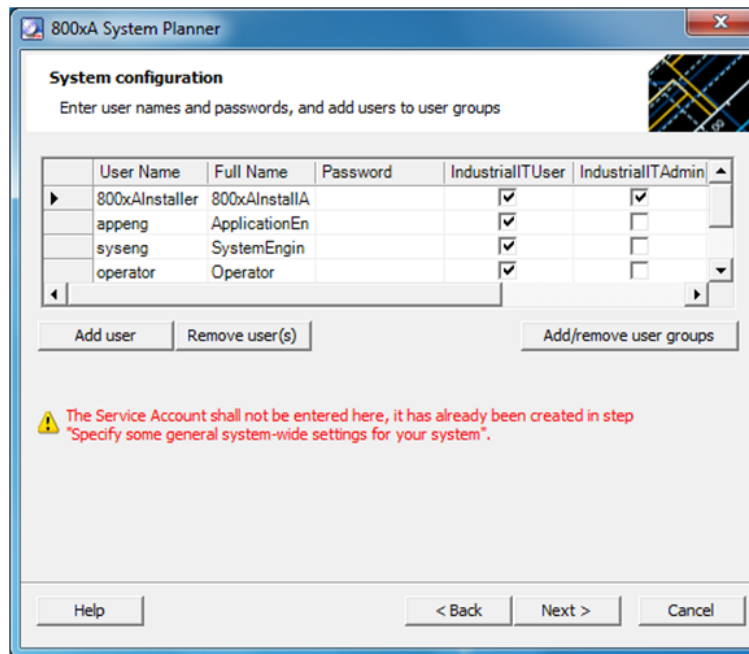
Figure 24. Enter User Names and Passwords, and Add Users to User Groups Dialog Box

- **Add User:** Click **Add User** to add the desired users. The new user will be added to the lowest row. Click in a cell to change the user information and select the desired check boxes.

  ℹ️ Use the same user and user group names, and passwords if using an existing Domain Controller.

  ℹ️ Use the same user rights if using an existing Domain Controller.

- **Remove User(s):** Select a row and click **Remove User(s)** to remove a user.

- **Add/Remove User Groups:** Click **Add/Remove User Groups** to launch the Add/Remove User Groups dialog box.

    – Enter a User Group name and click **Add User Group** to add a User Group.

    – Select a User Group and click **Remove Selected User Group** to remove a user group.

    – Click **OK** when completed.

- For each user, enter the password and what groups each user should belong to. Passwords must meet the following minimum requirements:

    – Cannot contain all or part of the user's account name.
    – Must be at least seven characters in length.
    – Contain characters from three of the following four character sets:

        English uppercase characters (A through Z).
        English lowercase characters (a through z).
        Base 10 digits (0 through 9).
        Nonalphabetic characters (for example: !, $, #, %).

    If the password does not meet the requirements, a warning dialog box will appear when **Next** is clicked. Click **OK** to exit the dialog box and enter a password that meets the requirements.

The users and user groups will be added to Windows during configuration.

User information can be copied from the dialog box to an Excel spreadsheet, edited, and then pasted back into the dialog box. To paste the information back into the dialog box:

1. Hold down the SHIFT key while clicking in the blank cell to the left of each desired User Name to select them.

2. Press CTRL+V. When prompted, select whether to add or replace users. Add means to append the new user information to the table, while replace means to update the table with the new information.

Name the System Nodes

Use the Name the System Nodes dialog box (Figure 25) to enter the node names in the system.

⚠ If using existing servers or clients where node names and IP addresses are already set, make sure to enter their correct names. Further, the installation procedure depends on each Setup Package having the same name as the actual node name.
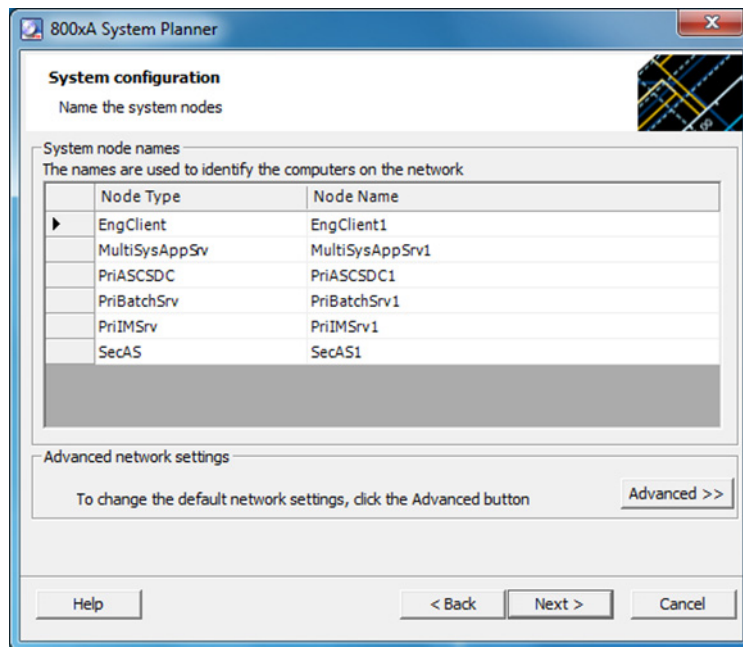
Figure 25. Name the System Nodes Dialog Box

Besides node names, it is also possible to enter advanced network settings; that is, change the default network and IP address settings by clicking **Advanced**. If the default settings are accepted, continue with Summary of System Configuration Parameters on page 90.

⚠ Change the advanced settings only if it is necessary to change the defaults and all implications are known. The default setting is a nonredundant combined client/server network and an AC 800M control network.

If it is not required to have redundancy or Control Networks, but if it is desired to edit the IP addresses, click **Advanced** to launch the Define Network Redundancy and Control Network Areas dialog box. Once there, do not select any options but click **Next** to go to the Define Computers IP Addresses dialog box.

Define Network Redundancy and Control Network Areas

Use the Define Network Redundancy and Control Network Areas dialog box (Figure 26) to change the default network configuration settings.

Before changing the default settings, refer to *System 800xA Network Configuration (3BSE034463*)* for details on planning and physical setup for networks and domains.
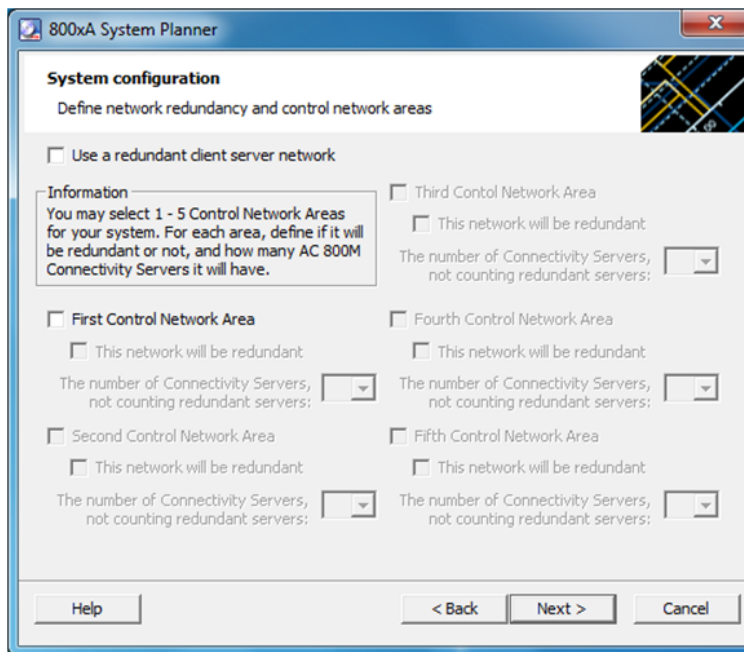
Figure 26. Define Network Redundancy and Control Network Areas Dialog Box

- **Use a Redundant Client Server Network:** Select the check box to use a redundant client server network.

- **Control Network Areas:** Select desired control networks. For each control network, select whether or not to use redundancy, and also the number of connected Connectivity Servers.

Define Computers IP Addresses

Use the Define Computers IP Addresses dialog box (Figure 27) to edit the IP addresses. Click in a cell to change the desired information.
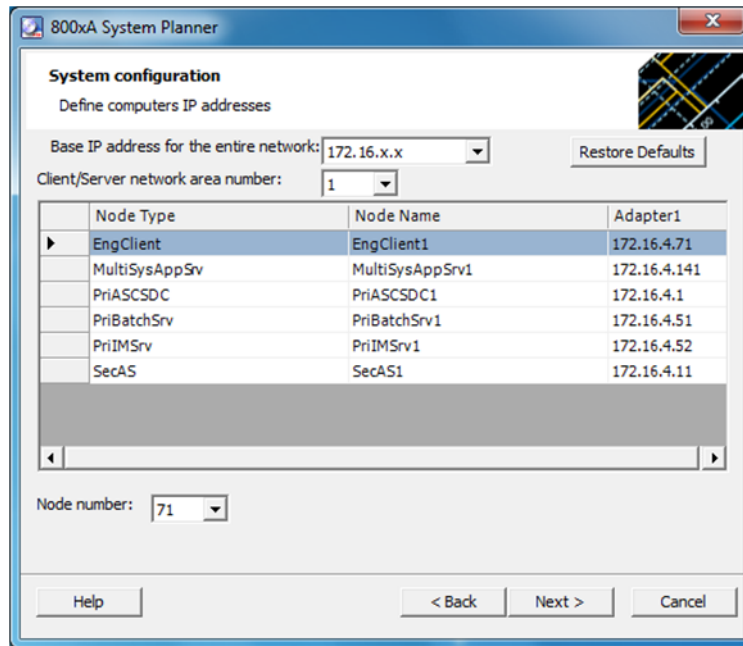
Figure 27. Define Computers IP Addresses Dialog Box

Summary of System Configuration Parameters

Use the Summary of System Configuration Parameters dialog box to view a list of the network settings to be set up for the nodes in the system. If not satisfied, go back and change the selections.

Graphical Summary

A graphical summary of the system will be shown in the Graphical Summary dialog box.

After clicking **Next**, the subsequent set of dialog boxes is used to create Setup Packages.

Setup Packages

After specifying the system configuration, the next step is to create Setup Packages based on the entered information. For each node, a specific Setup Package will be generated. These packages will later be used to set up the nodes in the system as specified.

Use the Select the Setup Package Media Type dialog box (Figure 28) to select which media type will be used for distributing the Setup Packages.   ,
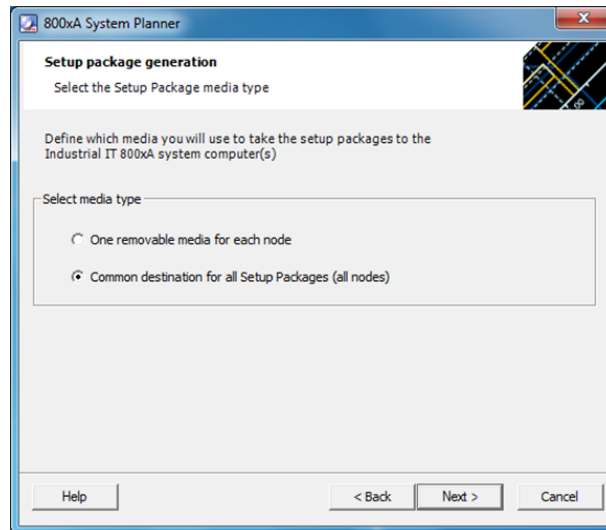
Figure 28. Select the Setup Package Media Type Dialog Box

Available options are:

When saving the setup packages, do not use a dash (-) in the path name. Doing so will cause problems during the configuration phase.

• **One Removable Media for Each Node:** Floppy disks or a USB flash memory stick. One floppy disk is needed for each Setup Package. Upon continuing, a prompt will ask for the media location.

• **Common Destination for all Setup Packages (all nodes):** The Setup Packages will be saved on a server share. Upon continuing, a prompt will ask for a folder location on the server share.

No media is necessary when the system consists of a single node. The Setup Package will be saved locally on the node.

The location of the setup packages must have write permissions enabled.

After the media type is selected, the Setup Packages will be generated.

If removable media was selected, make sure to label the media for each node.

It is a good idea to save the Setup Packages to the local disk on the planning node while using the System Planner Tool and copy them to removable media. If the removable media is lost or fails, the Setup Package can be recopied to removable media rather than having to repeat the planning process.

If the creation of a floppy disk fails, the information can be copied to another floppy disk by going to the following folder:

```
%TEMP%\IIT800xA Setup Package
```

The information file for the failed floppy disk can be retrieved and copied to a new floppy disk.

View and Print Fact Sheets

To help set up the system, a fact sheet will be created for each node. Use the View and Print Fact Sheets dialog box to access and print them.

The fact sheets are saved locally on the node used for system planning. It is recommended to back them up to a safe location, such as a server share.

Click on the link in the dialog box to view the fact sheets.

Setup Complete

Click **Finish** when the Setup Complete dialog box appears.

Section 5 System Installation

Introduction

After the system is planned and Setup Packages have been created for each node in the system, it is possible to start to install the system.

The System Installer requires that the Setup Package be in a writable path (floppy disk, USB memory stick, file server share, local disk, etc.). The Setup Package path should be available during all stages of installation.

System installation works as follows:

- Move to a node in the system and use the media with the Setup Package for the node to install and configure the software properly.

- Repeat this for each node in the system, each time using the relevant Setup Package.

If the system will be set up to be part of an existing domain, administrator privileges on the domain are required to join it.

The System Installer does not support software installation for TRIO Integration. TRIO Integration must be installed after all other 800xA System software has been installed and the post installation step performed. Refer to *System 800xA Post Installation (3BUA000156*)* to install TRIO Integration software.

Using a File Server Share

Do not include spaces in the path to the file server share, as this will cause installation of SQL Server to fail.

The information in this section reflects installations where 800xA System Installation DVD 1 is installed in the drive on the node being set up. It is possible to

perform these procedures from a file server share (i.e. with the contents of 800xA System Installation DVD 1 copied to the file server share).

Security issues introduced in Internet Explorer 8.0 make it necessary to perform one of the following in order to avoid constant Internet Explorer 8.0 security warnings when installing the 800xA System software on a node.

1. Use the Domain Controller node as the file server share (preferred method).

    a. Set up the Domain Controller node first (as specified in this section).

    b. Copy the contents of 800xA System Installation DVD 1 to the hard drive of the Domain Controller node.

    c. Map each node being set up to the Domain Controller node in order to install the 800xA System software.

    d. After the node being set up is joined to the domain at the end of the Windows Configuration portion of the Automated Installation program, the mapping to the Domain Controller will be lost, so it will be necessary to remap before continuing with the installation.

2. Temporarily change the security settings in Internet Explorer 8.0.

    a. Copy the contents of 800xA System Installation DVD 1 to the hard drive of a node that is not part of the domain.

    b. Internet Explorer 8.0 should have been installed on the node immediately after installing the Windows operating system and operating system service packs. When the System Verifier portion is complete, open Internet Explorer.

    c. Select **Tools > Internet Options**.

    d. Select the **Security** tab.

    e. Select the zone to modify (normally Local intranet).

    f. Click **Custom level...**.

    g. Scroll down to `Launching applications and unsafe files`.

    h. Change the setting from `Prompt` to `Enable`.

    i. Change the setting back when the 800xA System software installation is complete.

Automated Installation Flow

Figure 29 and Figure 30 shows the high level automated installation flowchart for the latest revision and Feature Pack.
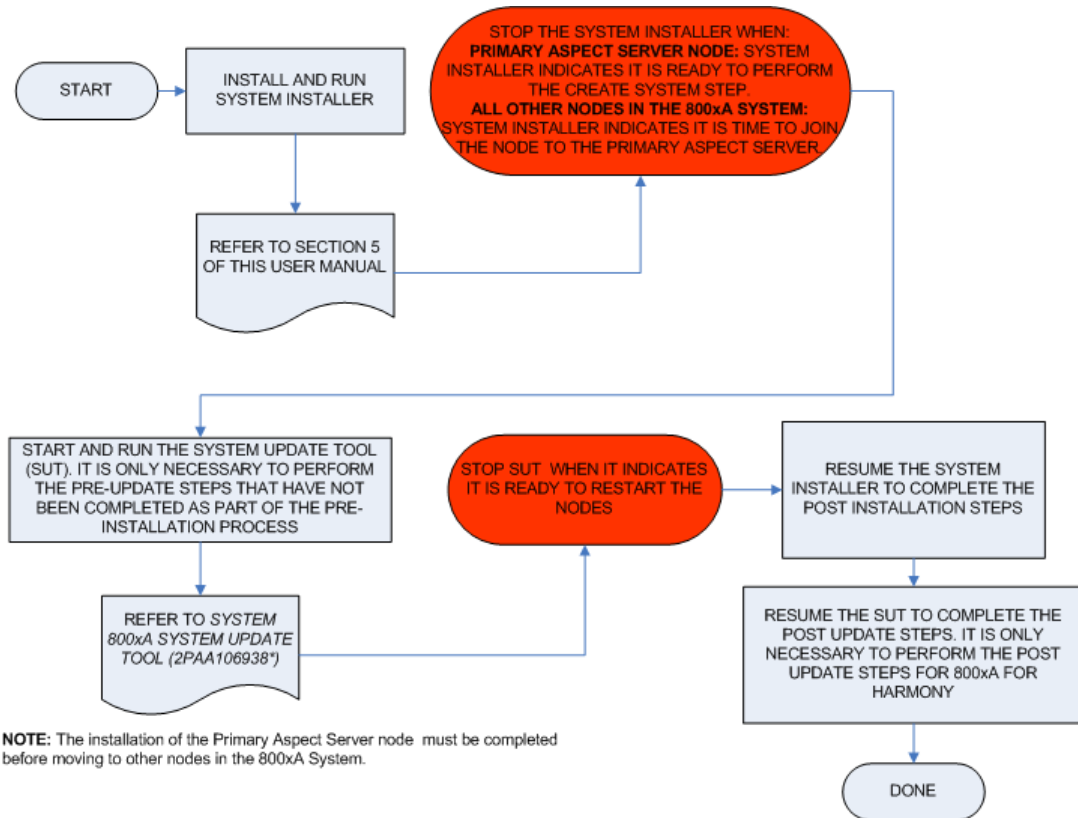
Figure 29. High Level Automated Installation Flowchart of Latest Revision
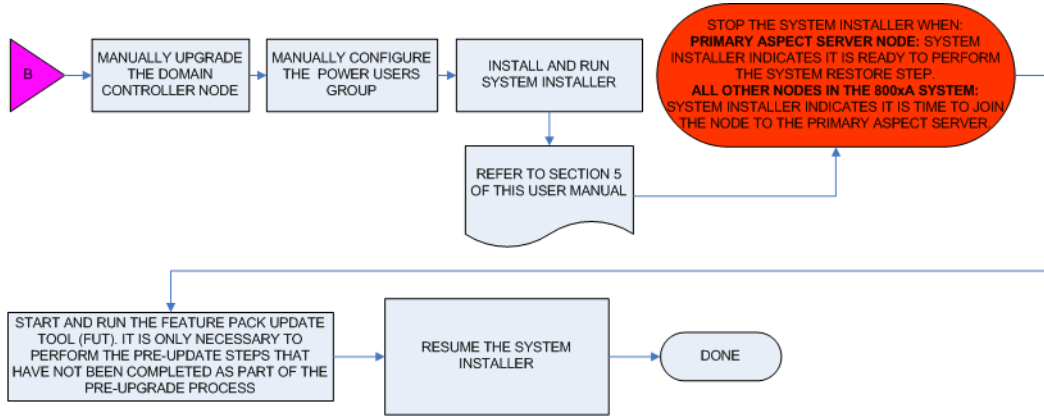
Feature Pack Functionality

Figure 30. High Level Automated Installation Flowchart of Feature Pack

Setting up a Node

To set up a node:

1. Move to a node in the system. Make sure to set up the nodes in the following recommended order:

    –   Domain controller and DNS (includes combinations).
    –   Aspect Server.

    ⚠️ If the system will contain combined Aspect/Connectivity Servers, the 800xA for Harmony or 800xA for Melody Configuration Servers must be installed before the combined Aspect/Connectivity Servers.

    –   800xA for Harmony or 800xA for Melody Configuration Servers.
    –   Connectivity Servers.
    –   Workplace Clients.
    –   Engineering Workplaces.
    –   Application Servers.
    –   Information Management Consolidation nodes.
    –   Windows Terminal Servers (thin client).

2. Install the System Installer.

3. Run the System Installer. The System Installer integrates all phases of the installation process, including:

    –   Windows Configuration, including:
        •Network Adapters.
        •Windows Components.
        •Windows Users and Groups.
        •Windows Services.

    –   Base System Verification, including:
        •Hardware Verification.
        •Third Party Software Verification and Installation.

    –   800xA System Installation.
    –   Current 800xA Release Installation.
    –   800xA System Configuration (post installation).
    –   Windows Firewall Configuration.
    –   Generating a system report.

Install the System Installer

The System Installer does not, at this point, create the 800xA Installing User account. The 800xA Installing User account was defined during the planning process. It will become available after the Windows configuration process.

1. Create a new user account with Administrator privileges manually (User settings in Control Panel). If the node is to be part of a workgroup, create the account on the node. If the node is to be part of a domain, create the account on the domain.

2. Insert the removable media with the relevant Setup Package.

3. Insert the latest System 800xA 5.1 release media into the drive.

4. Navigate to the following folder to access the System Installer setup executable file:

   `\\System Installer\Setup.exe`

5. Double-click `Setup.exe` to launch the Welcome to System Installer Installation Wizard. Verify that the **ABB 800xA System Installer 5.1** check box is selected and click Install. The installation will proceed silently until it is complete.

If using this procedure as part of an upgrade, refer to the 800xA for Harmony section of *System 800xA Release Notes New Functions and Known Problems (2PAA106188*)* before installing System Installer if 800xA for Harmony is installed on any node in the system.

The installation program checks to see if the .NET Framework 3.5 SP1 package is installed.

- If the .NET Framework 3.5 SP1 package is already installed, the System Installer installation continues.
- If the .NET Framework 3.5 SP1 package is not already installed, a dialog box asking to install the .NET Framework 3.5 SP1 package appears. Click **Yes** to continue and follow the .NET Framework 3.5 SP1 Installation Wizard.

System Installation

1. When the installation of System Installer is complete it may or may not request that the node be restarted. After the restart, the System Installer should start

automatically. If the node is not restarted, or if the program does not start automatically after restarting, start the program from:

Start > All Programs > ABB Industrial IT 800xA > System > System Installer > Start Install & Setup of this node

-or-

Select **Automated Installation > Run Automated Installation** from the Installation AUTORUN screen.

Click **Next** in the Welcome dialog box to advance to the Initialization dialog box.

The Current User: Administrator dialog box (Figure 31) may appear with information about the 800xA Installing User account. It is recommended to click **Yes** to continue during this phase as the System Installer will create the 800xA Installing User account while running the Windows Configuration Tool. After the Windows Configuration Tool is finished, and before the System Verifier Tool starts, it will be possible to log on under the 800xA Installing User account.
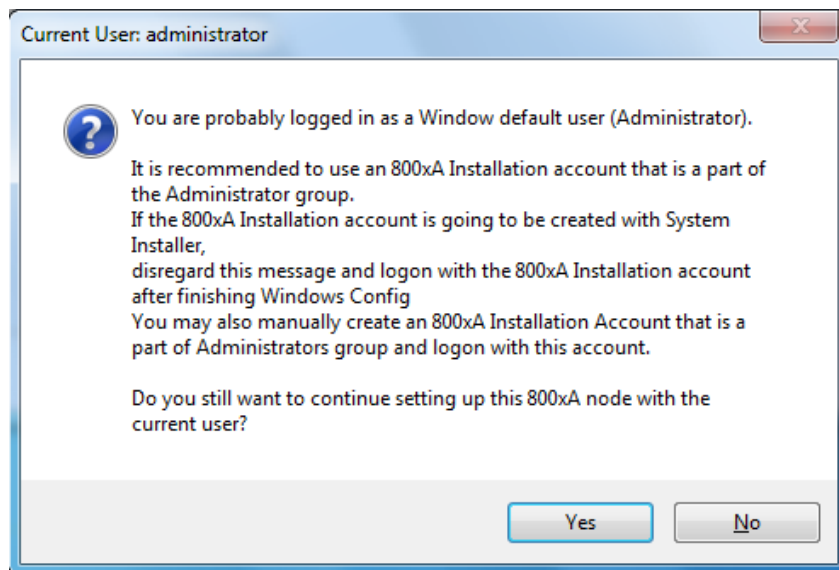
Figure 31. Current User: Administrator Dialog Box

For setup packages created for upgrade of an installed system, the System Installer will not create a new 800xA Installing User account. The following cases describe the actions to be taken:

- If the 800xA Installing User account is not present in the existing system, create it manually on the nodes and make it a member of the local Administrators group. This must be done before starting the 800xA System installation.

- If the 800xA Installing User account is present in the existing system, the account will be recreated by the System Installer (if not existing on the node or domain). After it is recreated by the System Installer, it must be made a member of the local Administrators group manually.

- If an existing domain server is being used, the 800xA Installing User account should have local administrator rights on each node in the 800xA System.

2. The System Installer will check for a Setup Package on removable media. If it finds more than one Setup Package, a dialog box will appear asking that the desired Setup Package be selected. If no Setup Package is found, (if it is on the local drive or a file server share), after the progress bars are completely full, click **Next** to advance to the Installation Type dialog box.

Installation Type

1. The Installation Type dialog box is shown in Figure 32.
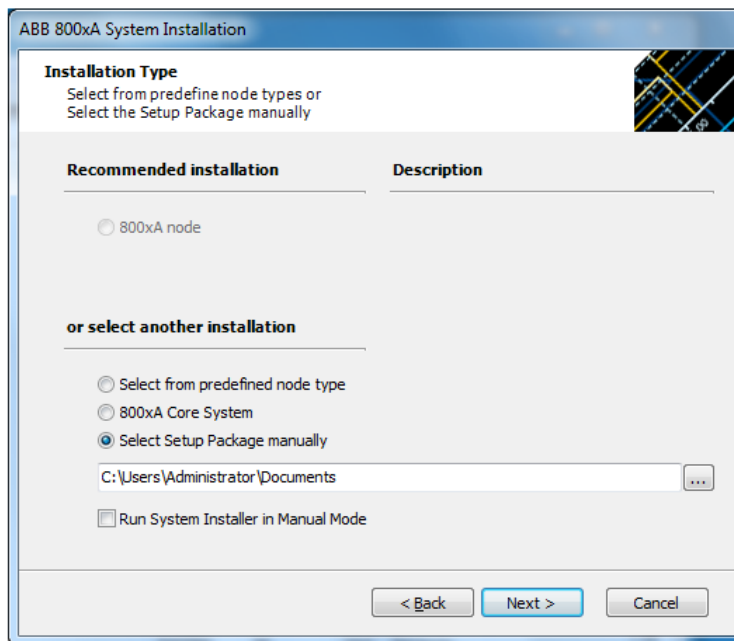
Figure 32. Installation Type Dialog Box

The available selections are:

–   **800xA Node:** This is the recommended selection if a Setup Package was found in the previous dialog box.

–   **Select from Predefined Node Type:** Use this selection to install predefined node types if the System Planner Tool was not used. Limit this selection to one or two node systems. It can be used for larger systems, but some manual post installation procedures will have to be performed. If this is chosen, make a selection in the **Predefined Node Types** drop-down list. The available node types are listed and described in Table 2.

- – **800xA Core System:** This is the same as the 800xA Base selection in the **Predefined Node Types** drop-down list.

- – **Select Setup Package Manually:** Choose this selection if the Setup Package is on the local drive or a file server share. When chosen, a field appears to select the location of the Setup Package. Click **...** to open a dialog box to navigate to the desired location.

- – **Run System Installer in Manual Mode check box:** This selection will affect how the Windows Configuration Tool and the System Verifier Tool are launched and run (refer to Windows Configuration on page 103).

Table 2. Predefined Node Types

Selection in Predefined Nodes Drop-Down List	Description
AC 800M Aspect Server	Includes 800xA Base System with License Server and Client, and AC 800M Connect.
Batch Aspect Server	Includes 800xA Base System with License Server and Client, AC 800M Connect, and Batch Client.
Batch Server	Includes 800xA Base System with License Client, Batch Server (Single or Primary), and AC 800M Connect.
AC 800M Client	Includes 800xA Base System with License Client and AC 800M Connect.
AC 800M Connectivity Server	Includes 800xA Base System with License Client, 800xA for AC 800M with OPC Server, and AC 800M Connect.
AC 800M Engineering Client	Includes 800xA Base System with License Client, AC 800M Connect, and Control Builder M.
AC 800M Single Node Engineering System	Includes 800xA Base System with License Server and Client, SoftController, Control Builder M, 800xA for AC 800M with OPC Server, and AC 800M Connect.
SoftController Single Node Eng System	Includes 800xA Base System with License Server and Client, SoftController, Control Builder M, 800xA for AC 800M with OPC Server, and Ac 800M Connect.
Advant Master Single Node Prod System	Includes 800xA Base System with License Server and Client, and 800xA for Advant Master with RTA Board or RTA Unit support.

Table 2. Predefined Node Types (Continued)

Selection in Predefined Nodes Drop-Down List	Description
Advant Master Aspect Server	Includes 800xA Base System with License Server and Client, and 800xA for Advant Master without RTA Board or RTA Unit support.
Advant Master Client	Includes 800xA Base System with License Client, and 800xA for Advant Master without RTA Board or RTA Unit support.
Advant Master Connectivity Server	Includes 800xA Base System with License Client, and 800xA for Advant Master with RTA Board or RTA Unit support.
Single Node Batch Server with IM	Includes 800xA Base System with License Client, Batch Server (Single or Primary), Information Management Server, and AC 800M Connect.
800xA Base	Includes 800xA Base System with only Process Portal and License Client. Basic configuration of IP address, hostname, Windows components, services, and third party software. Install additional functions manually.

2. Click **Next** after making the desired selection. If the selection in the Installation Type dialog box was **800xA node** or **Select Setup Package manually** proceed with Step 3. If the selection in the Installation Type dialog box was Select from predefined node types or 800xA Core System, skip to Manual Mode on page 112.

3. The License Agreement Acceptance dialog box appears.

    a. Click **Read** to read the license dialog box. Close the window when finished.

    b. Select the **I accept the term in the license agreement** check box and click **Next**.

    c. The Confirm Product Installation dialog box appears. Verify the selections and click **Finish** to launch the Windows Configuration Tool.

Windows Configuration

The Windows Configuration Tool can run either in the Automatic or Manual mode. This is determined by the status of the **Run System Installer in Manual Mode** check box in the Installation Type dialog box (refer to Installation Type on page 101).

Automatic Mode

The Windows Configuration Tool will not run in Automatic mode on a node that is to be configured as a Domain Controller.

When the Windows Configuration Tool is run in the Automatic Mode, all required configuration steps are carried out without user interaction. All required reboots during the configuration will be automatic and the user will be logged in after the reboot as Windows Auto Logon is selected during this configuration.

The Windows Configuration Tool will also check the present state of the configuration before proceeding with each configuration. If the configuration on the node matches the configuration specified in the setup package, the Windows Configuration Tool will skip the configuration step. This prevents reconfiguration of nodes that have already been configured.

The following configurations are performed by the Windows Configuration Tool in the Automatic Mode.

• Disable User Account Control.
• Network adapters configuration.
• Installation of Windows Components and configuration of Windows Services.
• Join node to Domain or to Workgroup.
• Add Windows Users and Groups.
• Installing Common Third Party Software using the 800xA Common Third Party Install Tool.

The Windows Configuration Tool displays the dialog box shown in Figure 33 during the Automatic Mode execution.

Figure 33. Windows Configuration Tool in Automatic Mode

The configuration that is ongoing is displayed in bold text. Configurations that are completed are indicated by a green check mark.

Manual Mode

Windows is configured via the Windows Configuration Tool in a series of dialog boxes where relevant settings and services are configured and then the changes are executed. This is repeated a number of times with restarts in between.

ℹ️ During restart, remove the floppy disk from the drive (if used). Once the restart process has started, insert the floppy disk again. When using a USB flash memory stick, let it remain inserted during the restart.

The System Installer can configure network adapters with already assigned IP addresses. Network adapters will be configured in the same order as listed in the hardware list.

Click **Next** in the Welcome dialog box to launch the Network Configuration dialog box.

Network Configuration. 1.The Network Configuration dialog box displays information about the netset.xml file that will be used for the node being

configured. The netset.xml file is based on the Setup Package selected for this node.

– If the file is found automatically, its location is shown in the dialog box. Click **Next** to continue.

– If the file is not found automatically, a prompt will appear asking for the file location. Browse to the inserted floppy disk, USB flash memory stick, file server share, or the location on the local drive.

Click **Next** to launch the Network Settings dialog box.

2. Select the network adapter to be configured. Use the Simple View of the Network Settings dialog box (Figure 34) to:

– View the node name in the Computername field.

– Drag and drop a listed network adapter from one network connection to another network connection item.
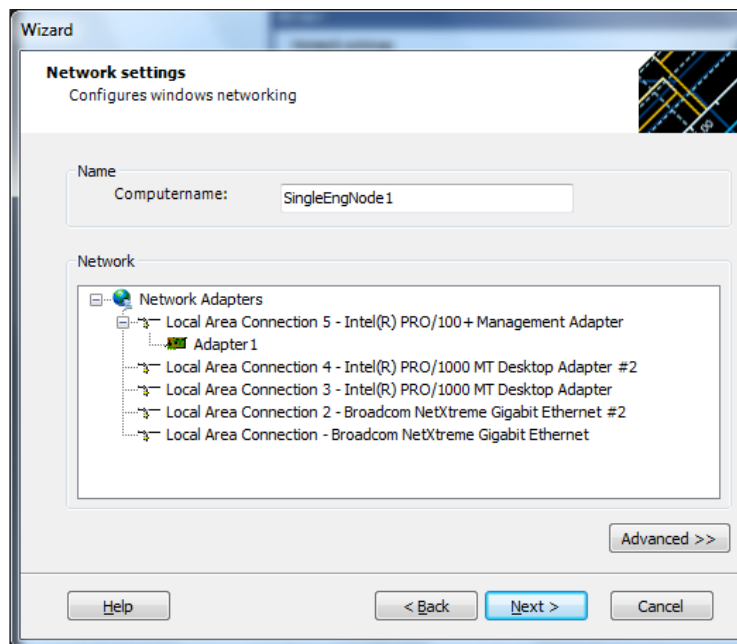
Figure 34. Network Settings Dialog Box (Simple View)

a.   Click **Advanced** to open the Advanced View in order to see other network settings found in this node. It is not possible to assign more than one adapter item to a network connection.

⚠️ It is strongly recommended not to change the settings in the Advanced View, unless all implications are known.

b.   If all implications of changing the settings in the Advanced View are known, click in a cell to change the settings. Clicking in the Configurable Adapters column will cause the selected cell in the column to show a drop-down list for selecting the available network adapters.

3.   Click **Next** after making the desired selection to launch the Wizard Execution dialog box.

4.   The Wizard Execution dialog box contains information about the settings that will be applied after clicking **Next**. At this point in the process, the listed settings show yellow triangles with exclamation points in them. Click **Next** after reviewing the settings.

5.   The Windows Configuration Tool will execute the settings. When it is complete, the Wizard Execution Result dialog box will appear. Green check marks indicate that each set of settings was successfully applied. Click **Next** to advance to the System Restart dialog box.

6.   **Restart Now** is selected by default in the System Restart dialog box. After the node restarts, the Wizard will continue. If **Restart Later** is selected (if work needs to be saved before restarting), the node must be manually restarted to restart the Windows Configuration Tool.

7.   When the Windows Configuration Tool continues after the restart, click **Next** in the Welcome dialog box to launch the Configure Windows Components dialog box. If the node is not restarted, or if the program does not start automatically after restarting, start the program from:

Start > All Programs > ABB Industrial IT 800xA > System > System Installer > Resume Install & Setup on this node

Windows Components Configuration. 1.The Windows Configuration Tool will configure the base Windows Components for optimal use.

a.   Click **Next** in the Simple View of the dialog box to accept the default configuration and launch the Wizard Execution dialog box.

b.   Click **Advanced** to switch to the Advanced View (Figure 35), where the components that will be configured are listed. Click **Next** after viewing the components list.
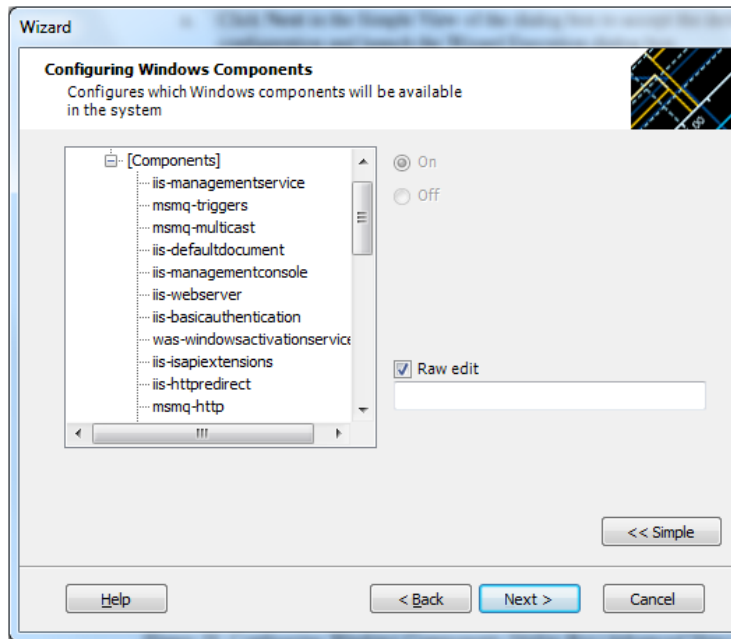
Figure 35. Configuring Windows Components Dialog Box (Advanced View)

2.   The Wizard Execution dialog box contains information about the settings that will be applied after clicking **Next**. At this point in the process, the listed settings show yellow triangles with exclamation points in them. Click **Next** after reviewing the settings.

3.   The Windows Configuration Tool will execute the settings. When it is complete, the Wizard Execution Result dialog box will appear. Green check marks indicate that each set of settings was successfully applied. Click **Next** to advance to the System Restart dialog box.

4. **Restart Now** is selected by default in the System Restart dialog box. After the node restarts, the Wizard will continue. If **Restart Later** is selected (if work needs to be saved before restarting), the node must be manually restarted to restart the Windows Configuration Tool.

5. When the Windows Configuration Tool continues after the restart, click **Next** in the Welcome dialog box to launch the Domain or Workgroup Configuration dialog box. If the node is not restarted, or if the program does not start automatically after restarting, start the program from:

> **Start > All Programs > ABB Industrial IT 800xA > System > System Installer > Resume Install & Setup on this node**

Domain or Workgroup Configuration. 1.One of the following dialog boxes will appear depending on the Setup Package created during system planning.

–   **Workgroup Name:** Use this dialog box to view the workgroup name. To change the user name, select the **Join as Different User** check box and enter the relevant user name and password. It is recommended to accept the defaults and continue.

> The user must have administrator privileges on the Workgroup to join.

–   **Join a Domain:** Use this dialog box to view the domain name. To change the user name, select the **Join as Different User** check box and enter the relevant user name and password.

> It is recommended to select the **Join as Different User** check box in this dialog box, because the user must have administrator privileges on the domain to join. The 800xA Service User account may not have proper privileges to join the node to the domain.

–   **Create a Domain:** When the system is set up to be part of a new domain, use this dialog box to view the new domain name. It is recommended to accept the defaults and continue.

> The Create a Domain dialog box only pertains to nodes being set up as a Domain Controller node. Only nodes with Windows Server 2008 with SP2 can be set up as a Domain Controller using the Windows Configuration Tool.

Click **Next** in the appropriate dialog box to continue.

2. The Wizard Execution dialog box contains information about the settings that will be applied after clicking **Next**. At this point in the process, the listed settings show yellow triangles with exclamation points in them. Click **Next** after reviewing the settings.

3. The Windows Configuration Tool will execute the settings. When it is complete, the Wizard Execution Result dialog box will appear. Green check marks indicate that each set of settings was successfully applied. Click **Next** to advance to the System Restart dialog box.

4. **Restart Now** is selected by default in the System Restart dialog box. After the node restarts, the Wizard will continue. If **Restart Later** is selected (if work needs to be saved before restarting), the node must be manually restarted to restart the Windows Configuration Tool.

5. When the Windows Configuration Tool continues after the restart, click **Next** in the Welcome dialog box to launch the System and Service Account dialog box. If the node is not restarted, or if the program does not start automatically after restarting, start the program from:

   Start > All Programs > ABB Industrial IT 800xA > System > System Installer > Resume Install & Setup on this node

Windows Users and Groups Settings. 1. The Windows Configuration Tool will configure the Windows users and groups.

1. The Add Groups dialog box shows the Groups configured in previous dialog boxes. Click **Next** to continue.

2. The Add Users dialog box shows the Users configured in previous dialog boxes. Click **Next** to continue.

3. The Service Account Configuration dialog box shows the Service Account user name. Click **Advanced** to switch to the Advanced View where the password of the Service Account will be listed. It is recommended to accept the values as they are and click **Next** to continue.

The 800xA Service Account must be created by the System Installer program, that is, make sure not to use a manually created account.

4. The Wizard Execution dialog box contains information about the settings that will be applied after clicking **Next**. At this point in the process, the listed

settings show yellow triangles with exclamation points in them. Click **Next** after reviewing the settings.

5. The Windows Configuration Tool will execute the settings. When it is complete, the Wizard Execution Result dialog box will appear. Green check marks indicate that each set of settings was successfully applied. Click **Next** to advance to the System Restart dialog box.

6. **Restart Now** is selected by default in the System Restart dialog box. After the node restarts, the Wizard will continue. If **Restart Later** is selected (if work needs to be saved before restarting), the node must be manually restarted to restart the Windows Configuration Tool.

7. When the Windows Configuration Tool continues after the restart, click **Next** in the Welcome dialog box to launch the System and Service Account dialog box. If the node is not restarted, or if the program does not start automatically after restarting, start the program from:

> **Start > All Programs > ABB Industrial IT 800xA > System > System Installer > Resume Install & Setup on this node**

Base System Verification (Installing Third Party Software)

The System Installer will start the System Verifier Tool that will verify the Base System and install third party software.

The System Verifier Tool can run either in the Automatic or Manual mode. This is determined by the status of the **Run System Installer in Manual Mode** check box in the Installation Type dialog box (refer to).

Automatic Mode

When the System Verifier Tool is run in the Automatic Mode, it performs an initial check to see if all required third party software is already installed and correct. If it is installed and correct, a hot fix dialog box appears. If it is not installed and correct, the System Verifier Tool will start in the Manual Mode.

Manual Mode

The System Verifier Tool, when run in the Manual Mode, consists of a series of dialog boxes for checking if the node fulfills the necessary hardware and software requirements.

Requirements will either pass ✔ or fail ❌ the check. Each requirement in a dialog box must pass the check before continuing with the next dialog box. The check can also result in a warning ⚠. It is possible to continue with a warning, but node performance or software functionality may be affected.

It will either be possible to install missing software directly, or information on how to fulfill the requirement will be displayed.

> ℹ Installations of the Oracle 11 is not supported by the System Installer. Instead, refer to Information Management Specific Requirement on page 33.

The System Verifier Tool start page lists the categories that will be checked and verified:

– User information.
– Hardware.
– Windows components.
– Software.
– Hotfixes.

> ℹ Anytime during this procedure that a prompt appears asking to restart the node, answer **Yes** and restart the node before proceeding with the wizard.
>
> • If using a floppy disk, both the floppy disk and any DVD must be removed from the node during a restart. After the restart is complete, insert the floppy disk and then the DVD.
>
> • If using a USB flash memory stick, the memory stick does not need to be removed; however, remove any DVD from the node during restart. After the restart is complete, insert the DVD.

Checking the User Rights

1. Click **Next** to continue to the Checking the User Rights dialog box (Figure 36). In order to successfully install and configure the node, the user performing this procedure needs to be a member of the Administrators Group. If this condition

is not fulfilled, the ⊗ symbol will appear in the Status column. This symbol signifies a no-go situation.
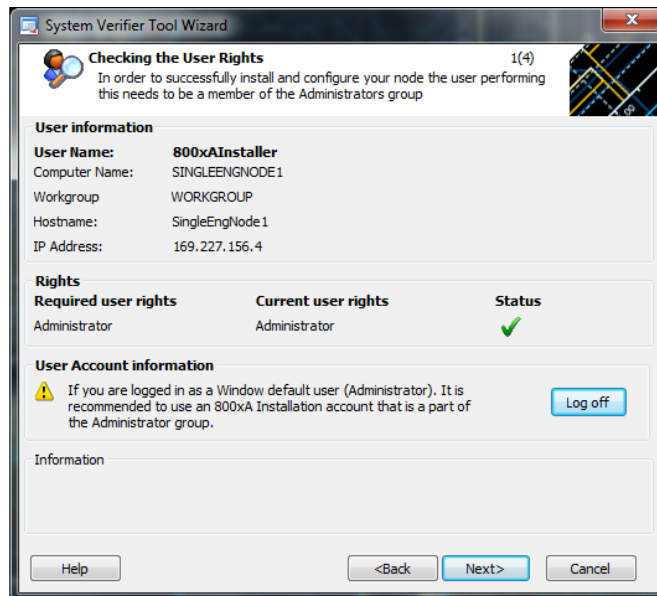
Figure 36. Checking the User Rights Dialog Box

    a.   If the check fails, click **Log off** and then log back on under the 800xA Installing User account that was created during Windows configuration.

    b.   If the check passes, and the current account is not the 800xA Installing User account that was created during Windows configuration, click **Log off** and then log back on under the 800xA Installing User account that was created during Windows configuration.

Checking the Hardware

1.   After the User Rights check is verified, click **Next** to advance to the Checking the Hardware dialog box.

2.   If all the Hardware requirements are fulfilled, click **Next** to advance to the Checking Microsoft Software Components dialog box.

Checking Microsoft Software Components

1.   After clicking **Next** in the Checking the Hardware dialog box, The Checking
      Microsoft Software Components dialog box (Figure 37) appears.
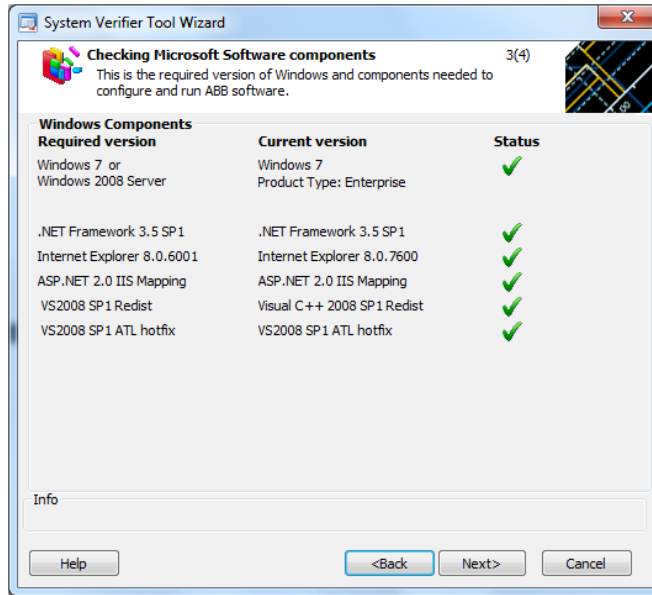
Figure 37. Checking Microsoft Software Components Dialog Box

a.   In the case of a software deficiency, a symbol will be displayed either
      Install or **Info** will appear next to the symbol.

b.   Click **Install** to install the needed software package from the 800xA
      installation media.

c.   Click **Info** to display a dialog box describing what steps to follow to install
      the software package.

d.   After these steps are performed the system will verify the software
      package has been installed and update the status on the Checking
      Microsoft Software Components dialog box.

2. After the Microsoft Software Components are verified, click **Next** to advance to the Checking Additional Software Components dialog box, which displays information similar to the previous dialog box, except that it is for other third party software packages.

3. After the Additional Software Components are installed as required, click **Next** to advance to the Checking for Hotfixes dialog box, which displays information similar to the previous dialog box, except that it is for hotfixes and updates.

4. After completing all preconfigured hotfixes and updates, a Security Warning dialog box appears that allows installing any security fixes from Microsoft that were released after the 800xA distribution.

    a. If this is the Domain Controller node, exit the System Installer at this point and perform the Group Policy Management on page 37 procedure for a domain environment.

    b. If this is any node in a Windows Workgroup, exit the System Installer at this point and perform the Group Policy Management on page 37 procedure for a Windows Workgroup environment.

    c. If this is one of the following node types, exit the System Installer at this point and perform the procedure for Adding Privileges to the 800xA Service User on page 44.

        •800xA for Harmony Configuration Server nodes.
        •800xA for Harmony Connectivity Server nodes.
        •800xA for Harmony Configuration Server with Connectivity Server nodes.
        •800xA for AC 870P/Melody Configuration Server nodes.
        •800xA for AC 870P/Melody Connectivity Server nodes.

5. Upon completion the System Verifier finish page appears. When the wizard is completed and the requested software is installed, the node fulfills all the necessary requirements. The System Verifier finish page contains a report of the hardware and software installed in the node. If desired, save it for later reference.

800xA System Installation

1. When the base system for a node is verified, the next part is to install the 800xA System software. The Installation Wizard (Figure 38) lists the products to be installed. Click **Install** to begin the installation. During the installation, the progress bar will indicate which application is being installed and the progress of the installation.
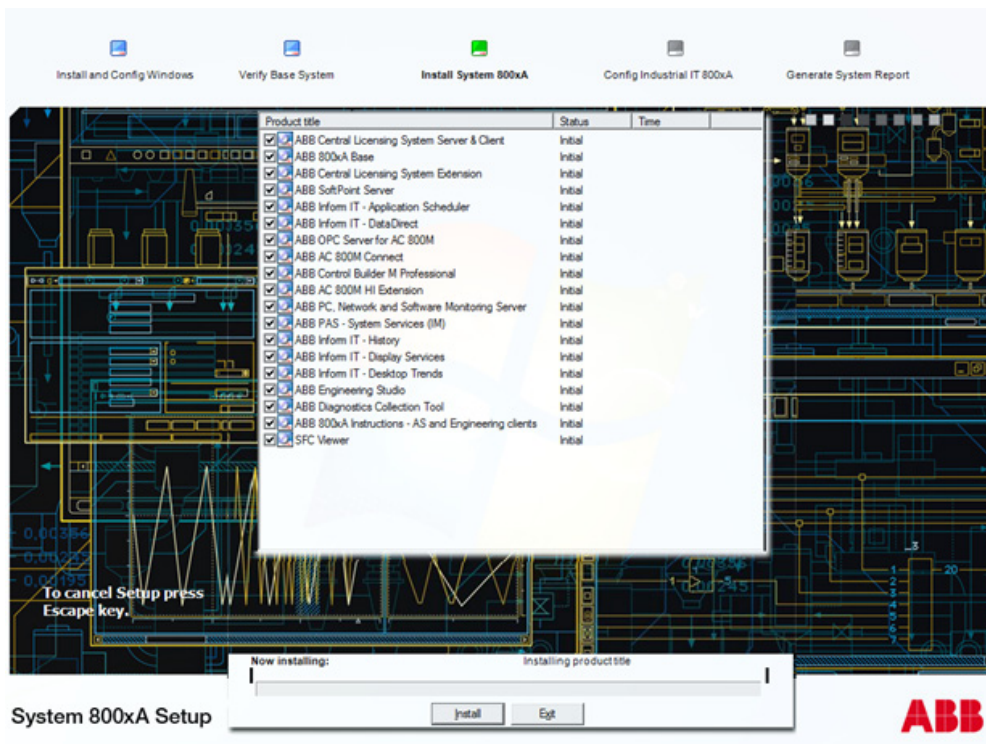
Figure 38. Installation Wizard Example

2.   When the installation is started, the products will be installed in sequence. Once properly installed, a dialog box will appear indicating that all products are installed.

ℹ Do not close the System Installer during product installation, even if prompted to do so during the 800xA Base System installation. When all products have been installed, the node will restart automatically.

⚠ If the installation fails and the installation is restarted, the last installed product will have a green check mark even though not properly installed. Make sure to select to re-install this product.

3.   This step only applies if installing the following:

–   800xA for Advant Master Connectivity Server.

–   Combined Aspect Server and 800xA for Advant Master Connectivity Server.

–   800xA for MOD 300 Connectivity Server.

–   Combined Aspect Server and 800xA for MOD 300 Connectivity Server.

a.   The RTA Driver Install dialog box shown in Figure 39 will appear if RTA Board PU515 Support is to be installed.
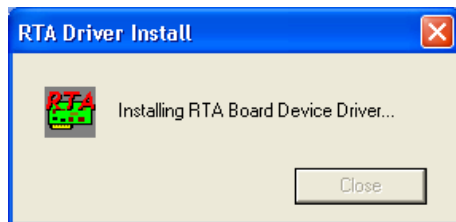
TC05732A

Figure 39. RTA Driver Install Message

b.   The Windows Security dialog box shown in Figure 40 will appear once if PU515 was selected and twice if PU410 was selected. Click **Install this driver software anyway** to continue.

Figure 40. Windows Security Dialog Box

The driver installation will take a few minutes and create 40 driver instances and 40 WudfHost processes that will be visible in the Windows Task Manager if PU410 was selected,

4.   During the installation, dialog boxes may appear prompting for information. Use the default values if possible, but enter additional data when needed.

5.   After restarting, the Aspect Configuration Wizard will start. Use it to configure the aspect system as described in Configuring the 800xA System on page 119.

–   If using a floppy disk, both the floppy disk and any DVD must be removed from the node during a restart. After the restart is complete, insert the floppy disk and then the DVD.

–   If using a USB flash memory stick, the memory stick does not need to be removed; however, remove any DVD from the node during restart. After the restart is complete, insert the DVD.

Updating to the Latest Revision

Perform the following to update to the latest revision of the 800xA System:

1. Stop the System Installer:

   – **Primary Aspect Server node:** When System Installer indicates it is ready to perform the Create System step.

   – **All other nodes in the 800xA System:** When System Installer indicates it is time to join the node to the Primary Aspect Server.

2. Use the System Update Tool (SUT) to update to the latest revision (refer to *System 800xA System Update Tool (2PAA106938*)*. To perform the update manually, refer to Section 30 in S*ystem 800xA Installation (3BSE034678*)*.

   It is only necessary to perform the pre-update steps that have not been completed as part of the pre-installation process.

3. Stop the System Update Tool when it indicates it is ready to restart the nodes.

4. Continue with Configuring the 800xA System.

Feature Pack Functionality

Updating to the Latest Feature Pack

Perform the following to update to the latest Feature Pack:

1. Stop the System Installer:

   – **Primary Aspect Server node:** When System Installer indicates it is ready to perform the Create System step.

   – **All other nodes in the 800xA System:** When System Installer indicates it is time to join the node to the Primary Aspect Server.

2. Run the System Feature Pack Update Tool. Refer to the *System 800xA 5.1 System Feature Pack Update Tool (2PAA107435-510)* for user instructions.

3. Resume the System Installer.

Configuring the 800xA System

When the 800xA System software has been installed in a node, a post installation set up of the software must be performed.

1. The Aspect Configuration Wizard progresses through the necessary steps. Only tasks relevant to what was specified during system planning are shown.

On Windows Server 2008 and Windows 7nodes, the following warning may appear when clicking on a link in the Aspect Configuration page:

```
An ActiveX control on this page might be unsafe to
interact with other parts of the page. Do you want to
allow this interaction?
```

If the message appears, click **Yes** to continue.

Each dialog box in the Aspect Configuration Wizard describes how to complete a certain task.

2. Follow the instructions and perform the task. The buttons in the dialog box can be used to open relevant aspects. Make sure to perform the tasks in the described order; that is, complete the task in one dialog box before continuing with the next. Figure 41 shows an example of configuration instructions.
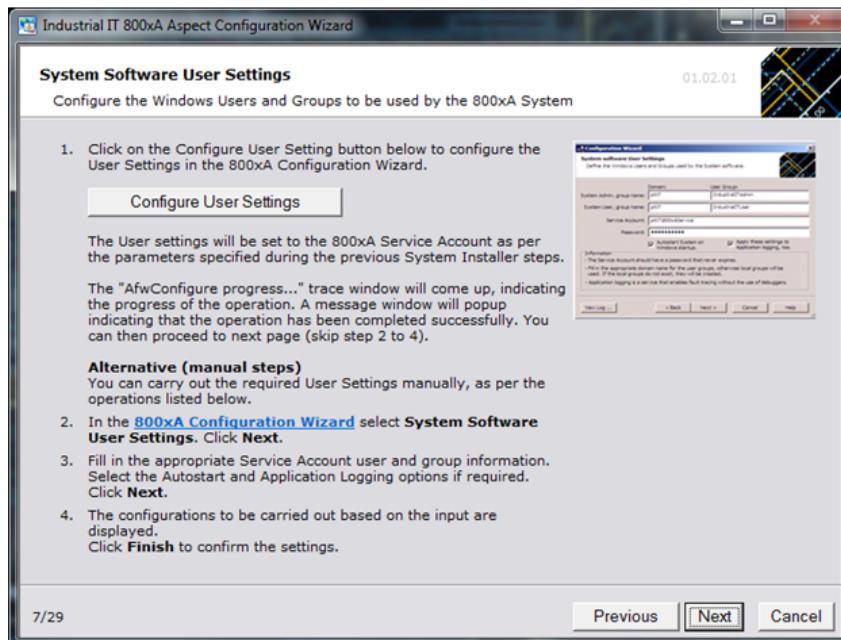
Figure 41. Configuration Instructions Example

After clicking **Configure User Settings** in Figure 41 and the process completes, go to:

Configuration Wizard > System Software User Settings

and verify that the settings are correct.

Windows Firewall Configuration

When the Windows Firewall Configuration dialog box appears (Figure 42), stop the configuration on the current node and perform the procedures in this section up to this point on all 800xA System nodes. Remember to set up the nodes in the correct order (refer to Setting up a Node on page 97).
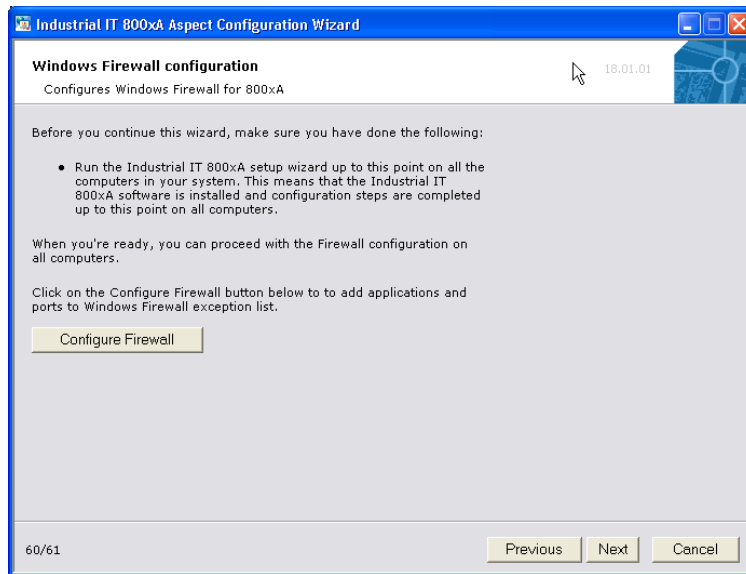
TC08340A

Figure 42. Windows Firewall Configuration Dialog Box

1. When all 800xA System nodes are configured up to this point, click **Configure Firewall** on each 800xA System node.

2. A Windows Firewall Configuration dialog box will appear notifying whether or not the configuration succeeded or if some applications could not be added to

the Windows Firewall exceptions list. When the dialog box appears, click **OK**. If the configuration failed, refer to Common Causes of Errors.

3. To verify the list of applications and ports added to the firewall exception list, select:

<div align="center">

Start > Control Panel > Windows Firewall > Exceptions

</div>

Common Causes of Errors. The most common causes of errors when configuring the Windows Firewall are:

- The Windows Firewall Service is not running on the target system. The service name is SharedAccess. Make sure this service is running on the target system and try again.

- The programs mentioned in the respective fwc files are not installed on the system. Clear the check boxes for those programs and try again.

- The fwc files provided as input to the Windows Configuration Tool are not present in the exe directory (the folder from which the exe is launched). Make sure the fwc files are in the proper directory and try again.

Log File. The Windows Configuration Tool will create a log file of the Windows Firewall configuration in a temp folder (`%temp%\ ABB Industrial IT 800xA`). The name of the log file is:

```
windows.config + date + time + .log.
```

When the wizard is complete, the System Report Wizard will start. Use it to generate an installation report as described in System Report Generation.

> ℹ️ Before continuing, consider the information on necessary user privileges described in User Account Privileges for Building Graphic Displays on page 37.

System Report Generation

When the 800xA System software has been installed and configured in a node, the next part is to generate an installation report. It will cover, among other things, installed hardware and software, Windows settings, and 800xA System configuration.

1. Use the displayed System Report Wizard to generate a report for the node. If a selection is made to view the generated system report, it will be displayed when finished with the wizard.

2. The report is saved locally in the node. It is recommended to back the report up to a safe location, such as removable media.

3. Continue with Completing the Update to the Latest Revision.

Completing the Update to the Latest Revision

Perform the following to complete the update to the latest revision:

Resume the SUT to complete the post update steps.

It is only necessary to perform the post update steps that have not been completed as part of the post installation process.

Modification of the Diagnostics Collection Tool Service Account for a Domain Controller Installation

The Service Account for the Diagnostics Collection Tool for a Domain Controller Installation must be performed manually. Refer to the Diagnostics Collection Tool section in *System 800xA Post Installation (3BUA000156*)* to perform the modification.

Section 6 Upgrading an Installed System

Introduction

Refer to the 800xA for Harmony section of *System 800xA Release Notes New Functions and Known Problems (2PAA106188*)* before using System Installer to upgrade an 800xA 800xA 4.1 System if 800xA for Harmony is installed on any node in the system.

System Installer does not support online upgrade of redundant Domain Controllers. This procedure must be performed manually. Refer to *System 800xA Upgrade (3BSE036342*)* to manually perform an online upgrade of redundant Domain Controllers.

System Installer does not support upgrading from SB 2.1/2 or 800xA 3.1 SP3 to 800xA 5.1.

The System Installer does not support 800xA for DCI product installation. Alternate installation instructions will be provided with the 800xA for DCI 5.1 release documentation.

Supported upgrade paths are:

- 800xA 5.0 SP2 to 800xA 5.1 online.
- 800xA 5.0 SP2 to 800xA 5.1 offline.
- 800xA 4.1 to 800xA 5.1 offline.

Upgrade Sequence

Refer to Figure 43, Figure 44, and Figure 45 for a graphical representation of the flow to follow when using System Installer to upgrade from a previous version to 800xA 5.1 and System Update Tool (SUT) to update the system to the latest revision. The same information is contained in the steps that follow.

Feature Pack Functionality

Refer to Figure 43, Figure 44, and Figure 46 for a graphical representation of the flow to follow when using System Installer to upgrade from a previous version to 800xA 5.1 and System Feature Pack Update Tool (FUT) to update the system to the Feature Pack. The same information is contained in the steps that follow.
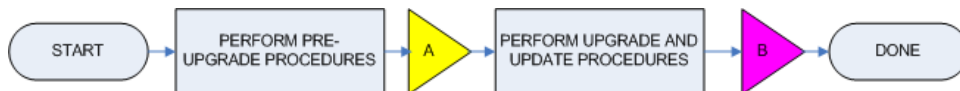
Figure 43. High Level Upgrade Flowchart
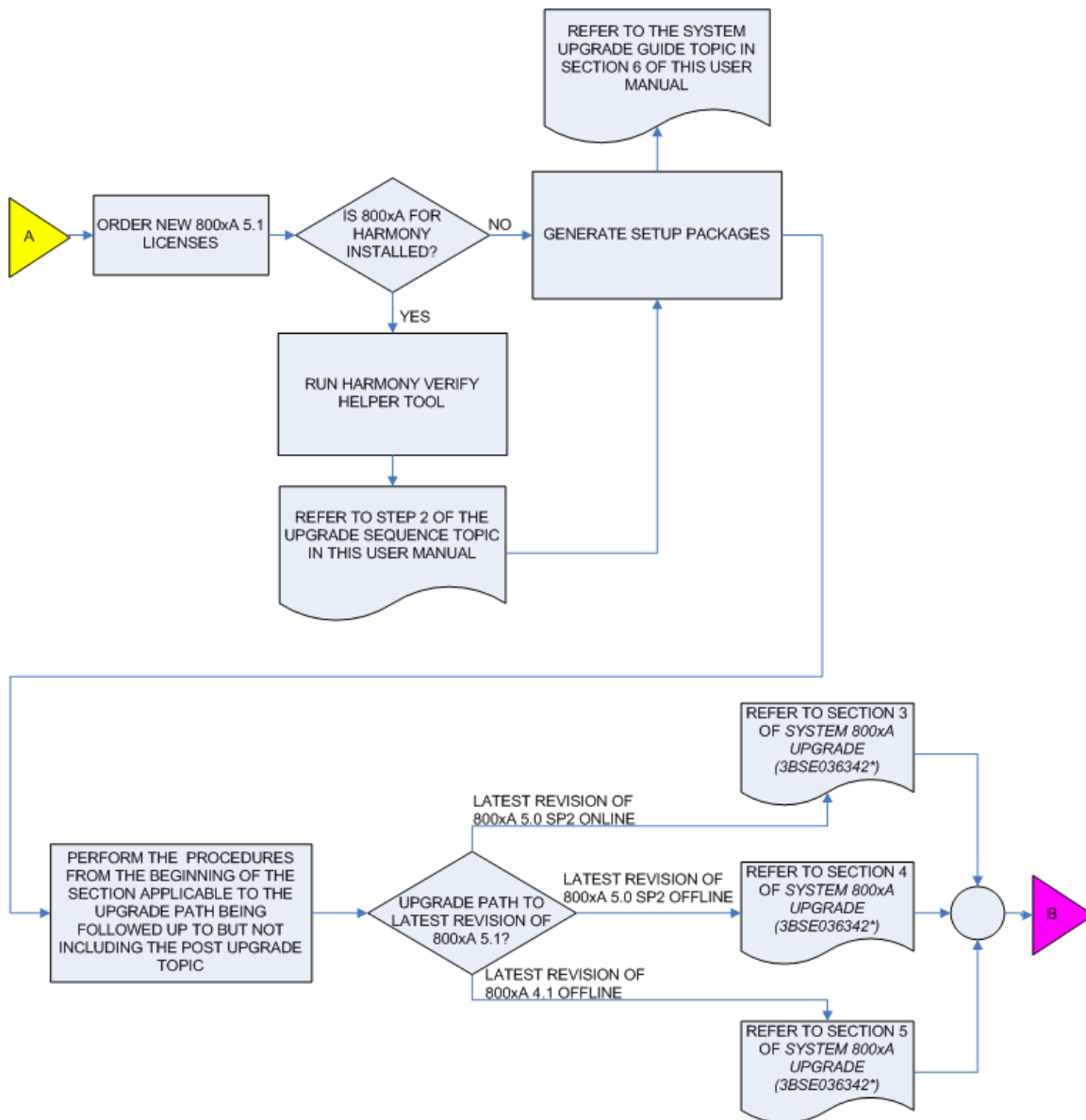
Figure 44. Pre-Upgrade Flowchart
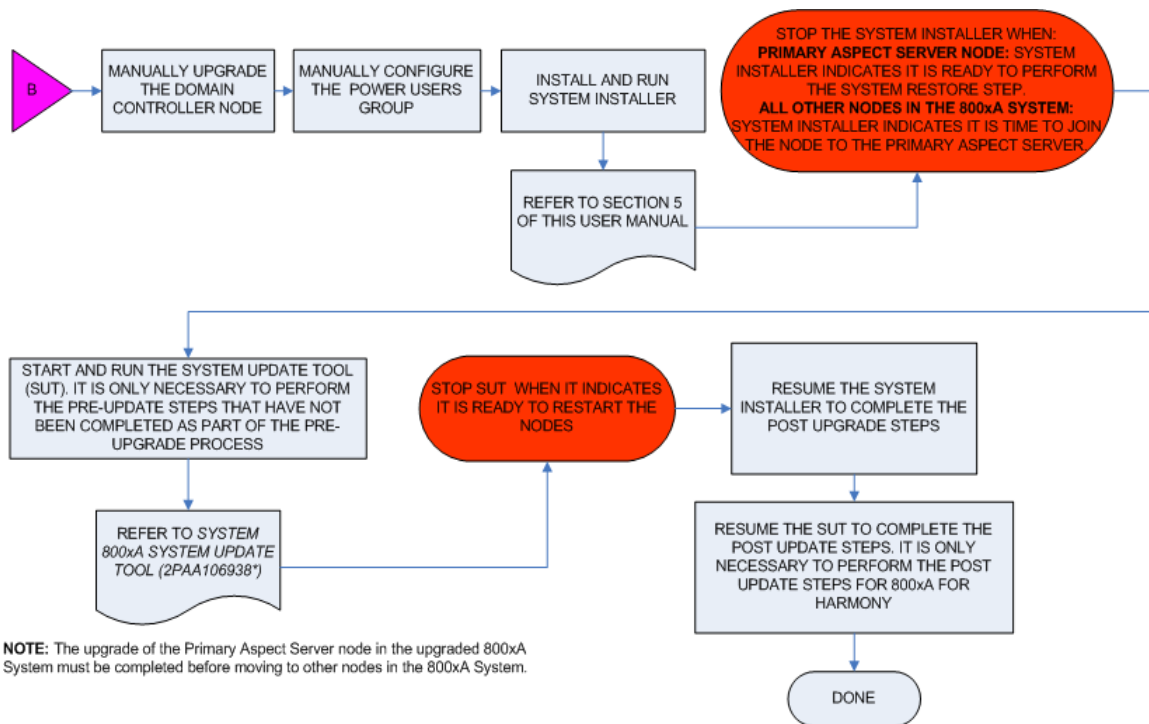
Figure 45. Upgrade and Update Flowchart of latest revision

Feature Pack Functionality
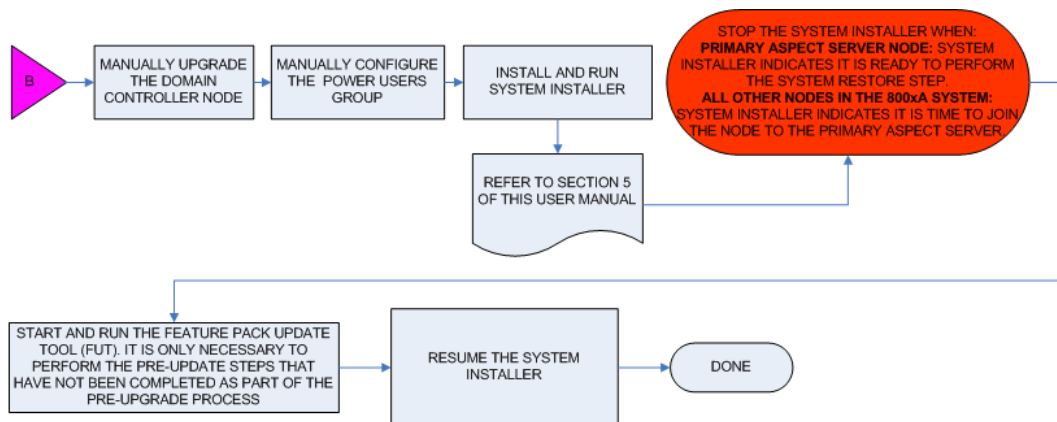
NOTE: The upgrade of the Primary Aspect Server node in the upgraded 800xA System must be completed before moving to other nodes in the 800xA System.

Figure 46. Upgrade and Update Flowchart of Feature Pack

A high level upgrade sequence for upgrading 800xA Systems is as follows:

The upgrade of the primary Aspect Server node in the upgraded 800xA System must be completed before moving to other nodes in the 800xA System.

Refer to Group Policy Management on page 37 when indicated by System Installer.

1. Order new 800xA 5.1 licenses.

2. If upgrading from 800xA 4.1 to 800xA 5.1 and 800xA for Harmony is installed in the system, run the Harmony Verify Helper tool. Perform the following procedure on all Harmony Configuration Server and Configuration Server with Connectivity Server nodes, and on the node (usually the Aspect Server) on which the upgrade system report will be generated.

Windows Firewall should be turned on at this point in the upgrade process. If Windows Firewall is not turned on, it must be turned on before running the Harmony Verify Helper Tool.

    a.   Insert the latest System 800xA 5.1 release media into the drive. If a Windows Security Warning appears, click **Run** to continue.

    b.   Use Windows Explorer to navigate to:

```
System Installer\Installation Tools\
Upgrade\HarmonyVerifyHelper
```

    c.   Double-click `800xA for Harmony System Verify Helper.exe` to execute the program.

3. Refer to System Upgrade Guide on page 131 to generate Setup Packages and prepare for the upgrade to the new system version.

4. Refer to *System 800xA Upgrade (3BSE036342*)* and perform all procedures from the beginning of the applicable upgrade section up to but not including the Post Upgrade topic.

> During the upgrade process, it will be necessary to return to Section 2, Prerequisites of this User Manual to install and configure any third party software that the System Installer does not perform automatically.

    The applicable upgrade sections are as follows:

– Section 3 - Latest revision of 800xA 5.0 SP2 to latest release of 800xA 5.1 online.

– Section 4 - Latest revision of 800xA 5.0 SP2 to latest release of 800xA 5.1 offline.

– Section 5 - Latest revision of 800xA 4.1 to latest release of 800xA 5.1 offline.

5. Manually upgrade the Domain Controller node according to the instructions in *System 800xA Upgrade (3BSE036342*)*.

6. Manually configure the Power Users group.

7. Refer to Section 5, System Installation and perform all steps to properly install the 800xA System, using the Setup Packages created in Step 3.

8. Stop the System Installer:

– **Primary Aspect Server node:** When System Installer indicates it is ready to perform the Restore System step.

– **All other nodes in the 800xA System:** When System Installer indicates it is time to join the node to the Primary Aspect Server.

9. Perform the following steps to update the system to the latest revision:

a. Use the System Update Tool (SUT) to update to the latest revision (refer to *System 800xA System Update Tool (2PAA106938*)*. To perform the update manually, refer to Section 30 in S*ystem 800xA Installation (3BSE034678*)*.

It is only necessary to perform the pre-update steps that have not been completed as part of the pre-upgrade process.

b. Stop the System Update Tool when it indicates it is ready to restart the nodes.

c. Resume the System Installer to complete the post upgrade steps.

d. Resume the SUT to complete the post update steps.

It is only necessary to perform the post update steps that have not been completed as part of the post upgrade process.

Feature Pack Functionality

10. Perform the following steps to update the system to the Feature pack:

a. Run the System Feature Pack Update Tool. Refer to the *System 800xA 5.1 System Feature Pack Update Tool (2PAA107435-510)* for user instructions.

b. Resume the System Installer.

System Upgrade Guide

The System Upgrade Guide uses the Upgrade.ini file generated by the System Verifier Tool as input for upgrading an existing system. The System Upgrade Guide reads the existing system configuration from the Upgrade.ini file and generates Setup Packages that can be used for installing the current system version.

This procedure can be performed from any node in the 800xA System.

1. Log on to the node with Administrator privileges.

2. Insert the latest System 800xA 5.1 release media into the drive. If a Windows Security Warning appears, click **Run** to continue.

3. Navigate to the following path in the System 800xA 5.1 release media to access the system upgrade guide executable file:

   `\\System Installer\Installation Tools`

4. Double-click `ShellUpgrade.exe` to launch the System Upgrade Guide (Figure 47).
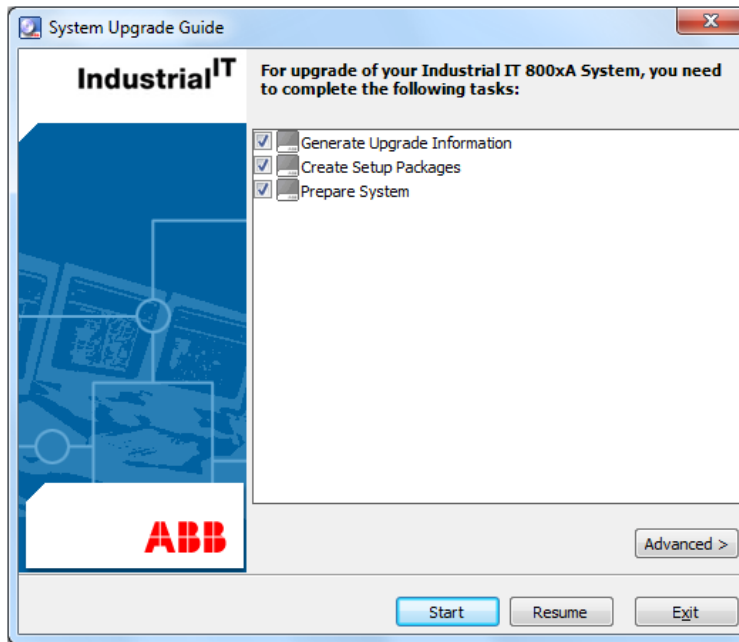
Figure 47. System Upgrade Guide

5. Select all three check boxes and click **Start** to launch the Welcome dialog box.

6. Click **Next** to open a Browse for Folder dialog box.

7. Select the location in which to store the upgrade data (Upgrade.ini) file and click **OK** to launch the Generating System Report dialog box.

The System Planner Tool will identify redundant servers as primary servers. This does not impact the functionality of the System Planner Tool or the installed system.

8. Click **Next** and then **Finish** to launch the System Planner Tool.

9. Click **Next** in the Upgrade a System dialog box to launch a Windows Open dialog box.

10. Click **Next** to launch a Windows Open dialog box.

> System Installer can recognize only one IP address for a single network card. Additional IP addresses must be configured manually.
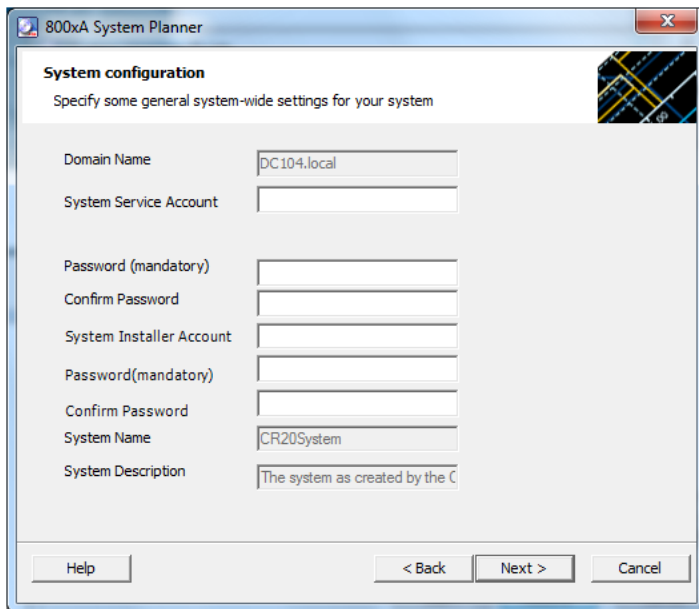
> The System Planner Tool tries to find the Upgrade.ini file from the removable media connected to the node. If it fails to find the Upgrade.ini file, a dialog box will appear allowing the file structure to be browsed to select the folder containing the Upgrade.ini file.

11. Navigate to the location of Upgrade.ini file and click **Open** to launch the Node Information Summary dialog box.

12. The System Planner Tool reads the configuration of the existing system and displays the list of nodes for which Setup Packages will be created. Click **Next** to launch the Finished Defining Size and Options dialog box.

General System-Wide Settings

1. Click **Next** to launch the General System-Wide Settings dialog box
    (Figure 48).

Figure 48. General System-Wide Settings Dialog Box

2. The Specify General System-Wide Settings dialog box displays the system-
    wide settings as derived from the Upgrade.ini file:

    –   **Domain or Workgroup Name:** This value is read from the Upgrade.ini
        file.

    –   **System Service Account:** Enter the 800xA Service Account. This must
        be exactly as specified in the existing system.

    For security reasons, the 800xA Service Account can not be acquired from the
    existing installation.

    –   **Password and Confirm Password:** Enter the 800xA Service Account
        password. This must be exactly as specified in the existing system. The

password security policy must be modified manually according to the settings made here.

For security reasons, the 800xA Service Account password can not be acquired from the existing installation.

- **System Installer Account:** Enter the System Installer account.

- **Password and Confirm Password:** Enter the System Installer account password.

- **System Name:** This value is read from the Upgrade.ini file.

- **System Description:** This value is read from the Upgrade.ini file.

Enter the required information and click **Next** to launch the Enter User Names and Passwords, and Add Users to User Groups dialog box.

Enter User Names and Passwords, and Add Users to User Groups

1. After clicking **Next** in the General System-Wide Settings dialog box, the Enter User Names and Passwords, and Add Users to User Groups dialog box appears.

2. This dialog box displays the User Names and other information as derived from the Upgrade.ini file. Enter the user passwords. They must be exactly as specified in the existing system.

For security reasons, the user passwords can not be acquired from the existing installation.

It is recommended to require that users change their passwords at first login to make the system more secure. The passwords entered in this dialog box are not encrypted by this application. The service account password should not be changed once the 800xA System is installed.

3. Click **Next** to launch the Summary of System Configuration Parameters dialog box.

4. Click **Next** to launch the Graphical Summary dialog box.

5. A graphical summary of the system will be shown in the Graphical Summary dialog box. After clicking **Next**, the subsequent set of dialog boxes is used to create Setup Packages. Refer to Setup Packages on page 90 for more

information on these dialog boxes. After the Setup Packages are generated, the Fact Sheet and Setup Instructions dialog box appears.

6. Follow the instructions on the Fact Sheet and Setup Instructions dialog box and click **Next** to prepare the 800xA System for upgrade.

7. Follow the instructions on the Upgrade Wizard pages until reaching the initial System Upgrade Wizard dialog box (Figure 47) and click **Exit**.

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Revision History

Introduction

This section provides information on the revision history of this User Manual.

ℹ️ The revision index of this User Manual is not related to the 800xA 5.1 System Revision.

Revision History

The following table lists the revision history of this User Manual.

Revision Index	Description	Date
-	First version published for 800xA 5.1	June 2010
A	Updated for Windows 7 Versions	Feb 2011
B	Updated for 800xA 5.1 Rev A	May 2011
C	Updated for 800xA 5.1 Feature Pack	Aug 2011

Updates in Revision Index A

The following table shows the updates made in this User Manual that were made to correct supported versions of Windows 7.

Updated Section/Sub-section	Description of Update

Section 2, Selecting the Windows Operating System	Changed the following statement
	    from:
	800xA System software may be installed on the 32-bit (x86) US English version of Windows Server 2008 Standard edition with Service Pack 2, or 32-bit (x86) US English version of Windows 7 Business or Enterprise edition.
	    to:
	800xA 5.1 System software may be installed on the 32-bit (x86) US English version of Windows Server 2008 Standard or Enterprise edition with Service Pack 2, or the 32-bit (x86) US English version of Windows 7 Professional or Enterprise edition. Windows Server 2008 R2 is not supported.

Updates in Revision Index B

The following table shows the updates made in this User Manual for 800xA 5.1 Rev A.

Updated Section/Sub-section	Description of Update
About this User Manual	Added the Password Caution in the sub-section *General*.
Section 2 Prerequisites	Added information in the sub-section *Introduction*.
Section 2 Prerequisites	Removed Information Management information from the sub-section *Selecting the Windows Operating System*.
Section 2 Prerequisites	Changes updated in the sub-section *Crystal Reports*.

Updated Section/Sub-section	Description of Update
Section 2 Prerequisites	Changes updated in the sub-section *Information Management Specific Requirement*.
Section 3 Workflow	Changes updated in the sub-section *System Installation*.
Section 4 System Planner Tool	Added a caution stating to define separate accounts and different passwords for the Installation and the Service Account.
Section 5 System Installation	Added a caution in the sub-section *Using a File Server Share*.
Section 5 System Installation	Changes updated in the sub-section *Install the System Installer*.
Section 5 System Installation	Added a new sub-section *Updating the Latest Revision*.
Section 5 System Installation	Added a new sub-section *Completing the Update to the Latest Revision*.
Section 5 System Installation	Added a new sub-section *Automated Installation Flow* including a high level flowchart.
Section 6 Upgrading an Installed System	Included flowcharts indicating how to upgrade directly to the latest revision of 800xA 5.1.
Section 6 Upgrading an Installed System	Rewrote the section to reflect the flow depicted in the flowcharts.

Updates in Revision Index C

The following table shows the updates made in this User Manual for 800xA 5.1 Feature Pack.

Updated Section/Sub-section	Description of Update
About this User Manual	Added a new section *Feature Pack* describing the user manual conventions used for indicating the Feature Pack content. Minor changes was done in the section.
Section 1 Introduction	Minor changes was done in the section.
Section 3 Workflow	Minor changes was done in the section. Updated changes in the sub-section *System Installation*. Feature Pack Icon added.
Section 4 System Planner Tool	Updated the information on SFC Viewer in the sub-section *System Details*. Along with Minor changes. Feature Pack Icon added.
Section 5 System Installation	Added high level Automated Installation flow chart for Feature Pack in the sub-section *Automated Installation Flow*. Added a new sub-section *Updating to the Latest Feature Pack*. Feature Pack Icon added.
Section 6 Upgrading an Installed System	Added the new Flow chart sequence to upgrade Feature Pack in the sub-section *Upgrade Sequence*. Updated the description correspondingly. Feature Pack Icon added.

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