

# System 800xA

800xA for Freelance  
Installation

System Version 6.0

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# **System 800xA 800xA for Freelance Installation**

**System Version 6.0**

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# About This Book

## General

This book describes how to install the connectivity software *800xA for Freelance* the first time (section 2) and how to run an upgrade (section 3) from a previous version to the current version.

For latest information see also the corresponding Release Notes.

## 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.

## Intended User

This instruction is intended for installation engineers with experience with process systems and Microsoft® Windows operating systems. In general, Microsoft Windows functions are not described in this instruction.

## Warning, Caution, Information, and Tip Icons

This publication 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 Planning (3BSE041389\*)*. 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
AE	OPC Alarms and Events
CBF	Freelance engineering tool Builder F
DA	OPC Data Access
OPC	OLE for Process



Term/Acronym	Description
PLC file	Standard file format for Programmable Logic
SFC	Sequential Function Chart

## Related Documentation

A complete list of all documents applicable to the System 800xA is provided in *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 your system. Released User Documents are 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.

Category	Title	Document Number
Connectivity	800xA for Freelance, Release Notes	2PAA112403*
	800xA for Freelance, Configuration	3BDD011812*
	800xA for Freelance, Operation	3BDD011811*
800xA System	System 800xA Language Package Installation	2PAA102031*
	System 800xA 6.0 Manual Installation	2PAA112455*
	System 800xA 5.1 to 6.0 Upgrade	2PAA111694*
	System 800xA 5.0 SP2 to 6.0 Upgrade	2PAA111695*
	6.0, Release Notes Known Problems 6.0, Release Notes Fixed Problems	2PAA111899* 2PAA112277*
Freelance	Freelance 2013, Release Notes	2PAA103593*
	Freelance 2013 Rollup1, Release Notes	2PAA105400R0901



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# Section 1 Introduction

## Product Overview

The Connectivity software **800xA for Freelance** and standard OPC® provide a connection between the control level established with Freelance modules and 800xA operator workplaces.

## Product Scope

Using interactive process graphics, the operator can monitor and control all Analog loops and Digital devices interfaced to the network through Freelance controller. Furthermore it also serves maintenance personnel with the capability to globally monitor the operating status of the process and associated devices.

The upload of engineering data to **800xA-System-Operation** and communication through standard OPC interfaces are the major features. Below is a brief summary:

- Object types for Freelance function blocks and variables.
- By default, faceplates for continuous control, drive control etc. are available.
- Data access to process data DA through OPC.
- Alarms and events AE through OPC.
- Object instantiation in 800xA by means of object types.
- Object tree within the control structure and functional structure.
- Creation and grouping of plant areas (Freelance => 800xA).
- Supports extended PLCopen® compliant export file (.ple).
- Delta upload and synchronize mode.

# Prerequisites and Requirements

## Operating System

The connectivity software requires a Windows operating system:

- Windows 2012 R2 Server (64 bit).
- Windows 8.1 Enterprise Edition (64 bit) (applicable to client machines).

Associated service packs, hot-fixes, roll-ups and security patches have to be installed too.

## Software

The connectivity software was developed, tested and released on basis of:

System 800xA, Operation	SV6.0
Freelance	Freelance 2013 Rollup1

## Hardware

For PC hardware requirements, refer to 800xA-System and Freelance user guides. Make sure your computers meet these requirements.

## User Role

To install the connectivity software, you should have Windows Administrator privileges.

## Procedures

Run the installation or upgrade after suitable preparation. Read the Release Notes and Installation guides of 800xA System and Freelance.

## Language Setting

The connectivity software supports English and German. The language for all human readable outputs of the connectivity (faceplates, dialog boxes etc.) depends on the operating system language (regional settings). The install shield itself opens always with English language.

- The ***user locale*** settings are defined for each user e.g. the administrator, operator(s), engineer(s).
- The ***system locale*** settings are defined for the PC node.



For installation the ***system locale*** settings must be US English and must not be changed afterwards.



For all other user(s) than operators, the ***user locale*** or ***system locale*** settings must be US English for any 800xA System configuration, with or without a language package installed.



To activate German local language for operator(s) in supported 800xA System configurations with installed language package, the ***user locale*** can be changed from US English to German language.

Text strings in faceplates and other user interfaces are changed to the local language.

Input keyboard language can be set to the same local language if a localized keyboard is used.

For detailed information, refer to *System 800xA Language Package Installation (2PAA102031\*)*.

## **Backup**

Standard software is recommended to create a backup of memory medium (CD). This backup will enable you to save data if the medium is damaged, or in the event of a fatal error on your computer. Make sure that the backup is clearly marked and carefully maintained.

---

## Section 2 Installation

### Overview

Install the Connectivity software version 6.0 as:

- Fresh installation on newly installed 800xA System Version 6.0 and Freelance 2013.
- Upgrade from previous versions of Connectivity software running on 800xA systems 5.1 and earlier. For upgrade procedure, the existing versions of 800xA system need to be upgraded before installing Connectivity Software 6.0. Refer to [Section 3](#) for more details.

Freelance software (CBF, OPC server ...) can be upgraded if necessary, to the latest version before running the upload and performing basic setting.

# Installation Path

The Connectivity files will be stored in the directories location as shown in [Figure 1](#). When uninstalling the system later, these files will be removed.

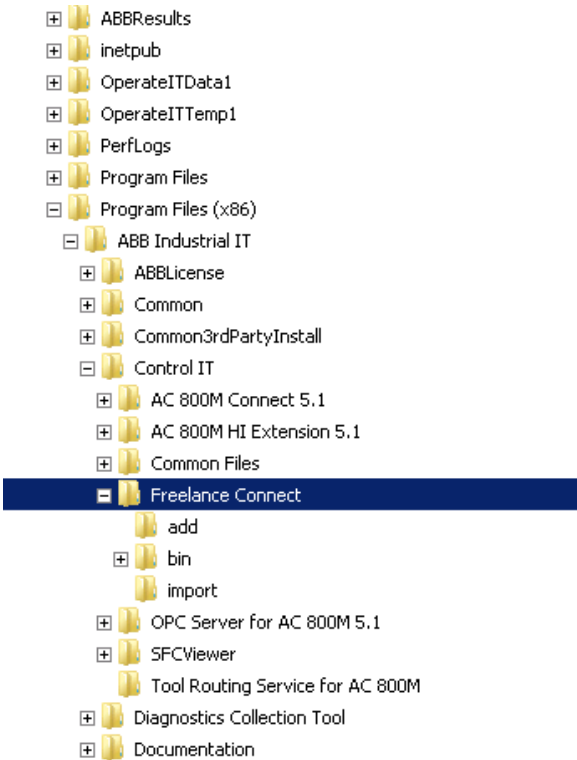


Figure 1. Installation Path

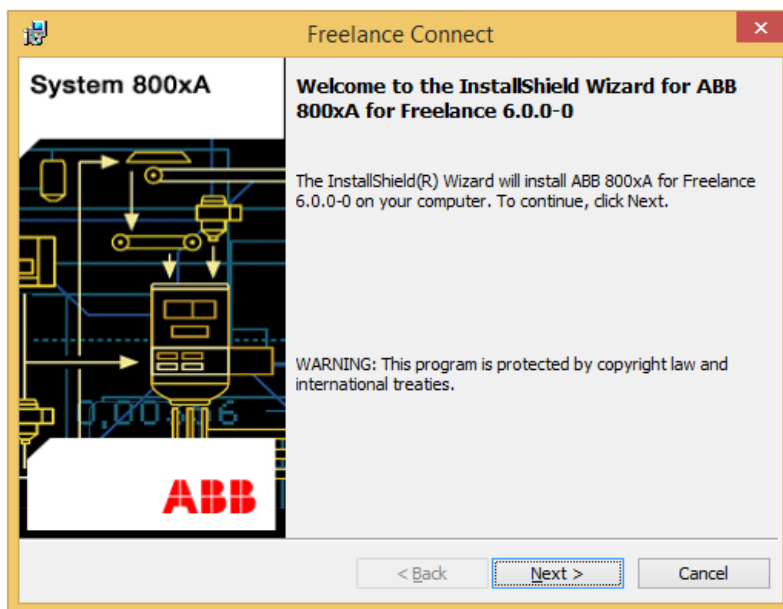


## Program Setup

To install the Connectivity Software Version 6.0, perform the following steps:

1. In the System 800xA Media, Browse to the following location: <System 800xA Media>:\Connectivities\Freelance
2. Double click on **ABB 800xA for Freelance 6.0.0-0.msi**.

The **ABB 800xA for Freelance 6.0.0-0** installation progress welcome screen appears as shown in [Figure 2](#).



*Figure 2. Welcome screen*

3. Click **Next**.

4. Select **I accept the terms in the license agreement** radio button and click **Next** in the License Agreement screen.

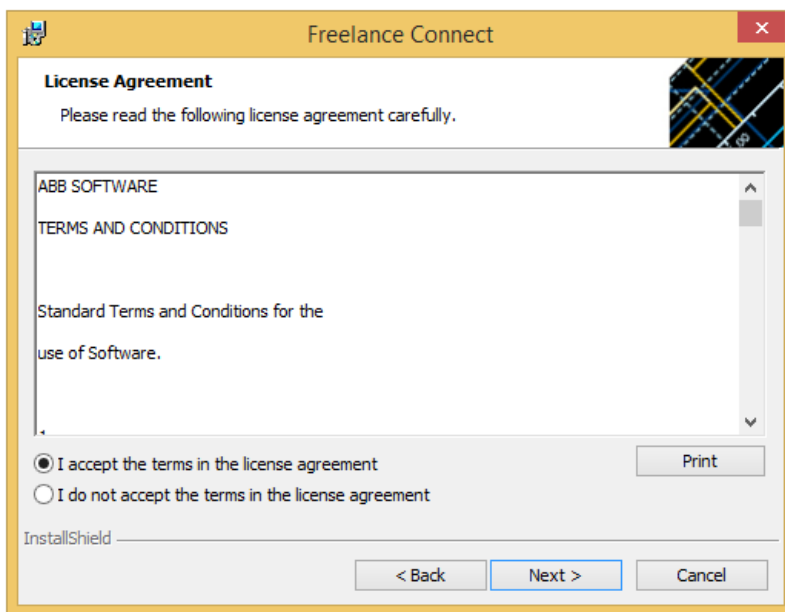
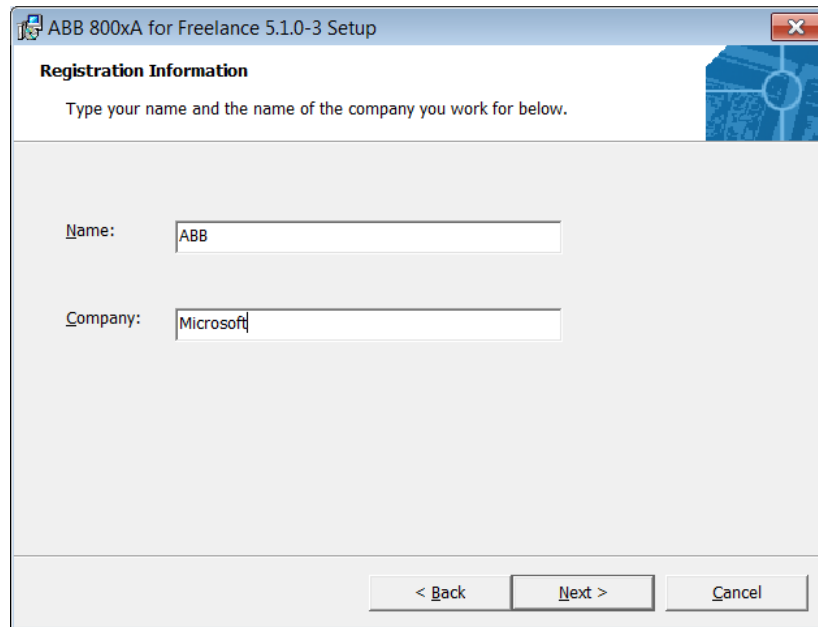


Figure 3. License Agreement screen

5. Enter the user name in the **Name** field and the company name in the **Company** field of the **Registration Information** screen and click **Next**.



The screenshot shows a Windows-style dialog box titled "ABB 800xA for Freelance 5.1.0-3 Setup". The main heading is "Registration Information". Below the heading is a prompt: "Type your name and the name of the company you work for below." There are two text input fields. The first is labeled "Name:" and contains the text "ABB". The second is labeled "Company:" and contains the text "Microsoft". At the bottom of the dialog, there are three buttons: "< Back", "Next >", and "Cancel". The "Next >" button is highlighted with a blue border.

*Figure 4. Registration Information screen*

6. Select the radio button **Complete** and click **Next** in the **Setup dialog**.

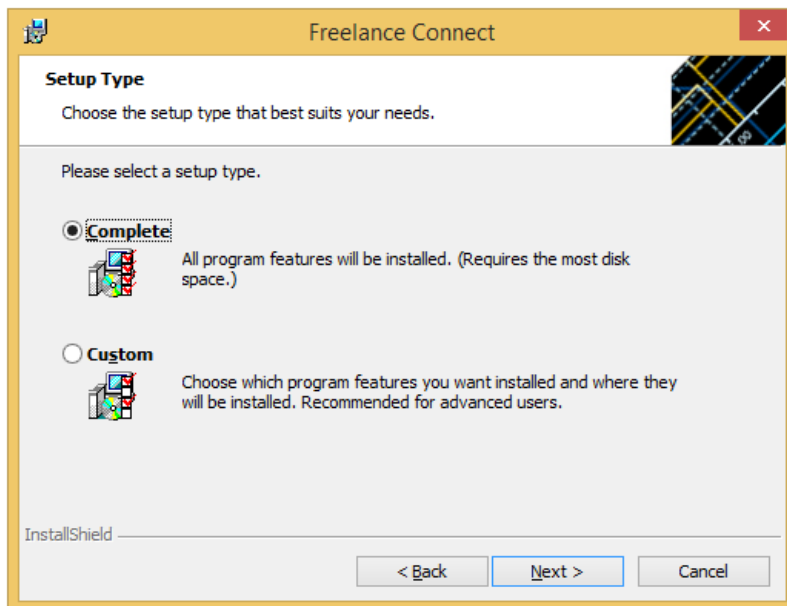
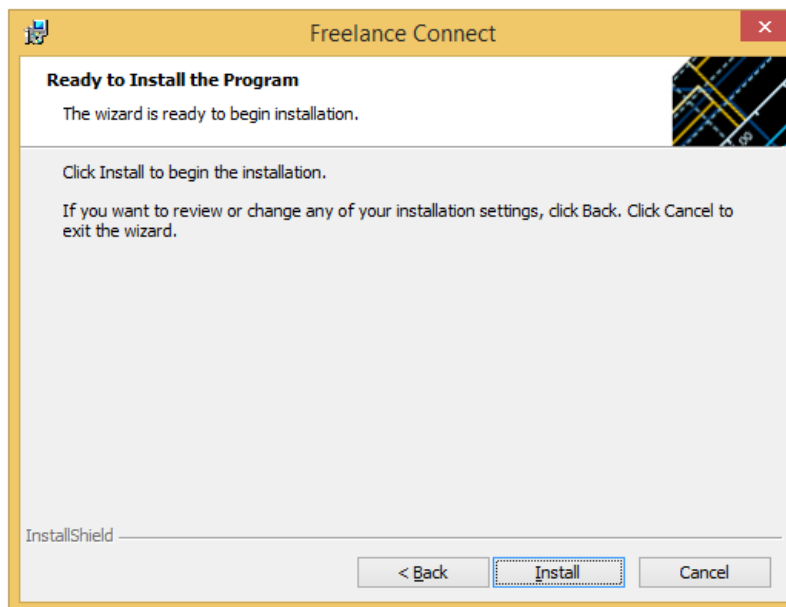


Figure 5. Setup Dialog

7. Click **Install** to start the installation in the Install dialog.



*Figure 6. Install Dialog*

8. Click **Finish** to close the **Installation Wizard** after successful installation.

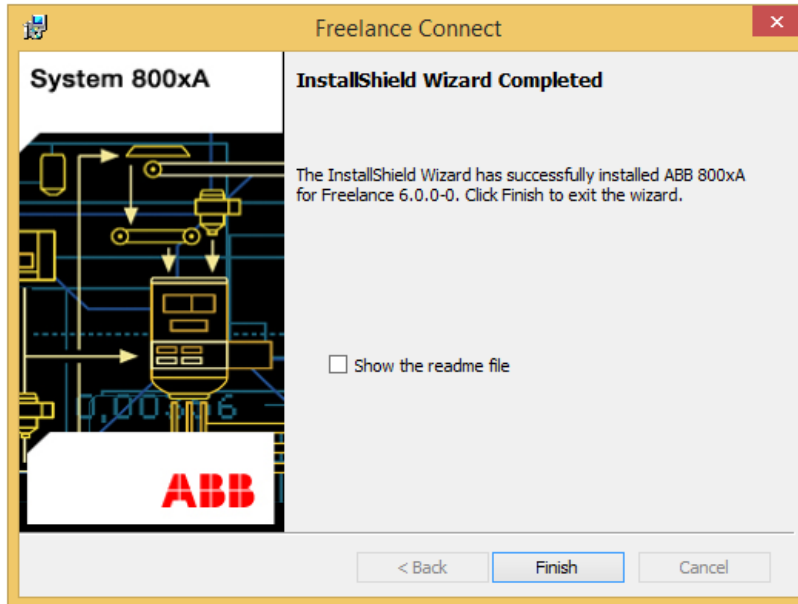


Figure 7. Install Complete Wizard

## Adding Connectivity 6.0 as 800xA System Extension

After the successful installation of the Connectivity 6.0.0-0, it can be added as 800xA System Extension using the **800xA Configuration Wizard**. For more information on adding the Connectivity 6.0.0-0 as System Extension, refer to [Section 4](#) in this document and also refer to (*System 800xA for Freelance Configuration 3BDD011812\**).



After the successful installation of Connectivity Software version 6.0.0-0, start the Uploader. If the software is installed for the first time, the upload time will be same for *Synchronize mode* or *Delta mode*.

---

# Section 3 Upgrade

## Overview

Upgrade to 800xA System version 6.0 requires likewise upgrade of the connectivity software. Upgrade to Freelance 2013 is recommended.

Product	Predecessor Version	Current Version
800xA-System	5.0 or 5.0 SP1/SP1a, RU1b, SP2 RU2e, 5.1, 5.1 Rev B, 5.1 RevC, 5.1 FP4, 5.1 RevD, 5.1 FP4.RevD	6.0
Freelance System	9.2 SP2 or 9.2 SP1	Freelance 2013
Connectivity	5.0.0/0, 5.1.0/0, 5.1.0/1, 5.1.0-2, 5.1.0-3	6.0.0-0

This section does not describe the upgrade, 5.1.0-3 and installation of 800xA System or Freelance. For individual steps of these products see the below mentioned documents for upgrade and installation.

## Workflow

Below you find the principle workflow with basic steps for upgrading 800xA System and Freelance Connect. Both System Upgrade and Update scenarios are explained in brief within this section.

### 800xA System

Upgrading directly from 800xA 5.0 or 800xA 5.0 SP1a to 800xA 6.0 is not supported. If running this version, it is necessary to upgrade to the latest revision of 800xA 5.0 SP2 Rev E (Supported by Freelance Connect) before upgrading to 800xA 6.0.

For detailed procedures of all upgrade paths to 800xA6.0, refer *System 800xA 5.0 SP2 to 6.0 Upgrade (2PAA111695\*)* manual along with *System 800xA 6.0 Tools (2PAA101888\*)* manual.

Perform the 800xA backup from the Maintenance Structure (Aspect Directory backup type). Backing up the aspect directory (800xA System Backup), reports, history data, graphics, and other application data is required before performing the upgrade.

This ensures the Freelance project in previous 800xA version is backed up properly to restore in 800xA System version 6.0 after upgrade.

### 800xA Graphics

800xA 6.0 supports Process Graphics 2 as a default with optional VB Graphics extensions (800xA Base and Connectivities) that can be installed and loaded when upgrading.

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. All Customers upgrading from previous 800xA versions must install the 800xA Base VB Graphics extensions. Any previously installed VB Graphics extension for Connectivities must also be installed.



New 800xA 6.0 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.



To view VB Graphics in 800xA 6.0, additional licenses are required.

After upgrading to 6.0, the VB graphic displays shall not be impacted. Invoking the faceplate links within the graphic displays shall call up PG2 faceplates.

VB faceplates shall still be available under the respective function blocks in the control structure.

## Steps for System Upgrade/ System Update



All the steps mentioned below are applicable for upgrade from predecessor 800xA versions to 800xA SV 6.0 version.

Follow the steps below to upgrade:

1. Backing up the aspect directory (800xA System Backup), reports, history data, graphics, and other application data is required before performing the upgrade. Perform the steps as described in ***Preparing the 800xA 5.x System in Offline Upgrade Flow*** section of *System 800xA 5.1 to 6.0 Upgrade (2PAA111694\*)* or *System 800xA 5.0 SP2 to 6.0 Upgrade (2PAA111695\*)*.
2. On the connectivity server, delete Freelance OPC server Resource IDs by following the steps below:
  - a. Navigate to the Freelance Configure Tool and open it.
  - b. Select the OPC-Server Options to view the existing Resource IDs and Alias number.
  - c. Note all entries for new Installation. Remove all Resource IDs.
3. Uninstall the Freelance OPC Server on connectivity server.
4. Perform the steps as described in ***Preparing the 800xA 6.0 System in Offline Upgrade Flow*** section of *System 800xA 5.x to 6.0 Upgrade*.
5. Perform the **Steps 1-5** (800xA Installation) as described in ***Planning and Setting up the 800xA 6.0 System in Offline Upgrade Flow*** section of *System 800xA 5.x to 6.0 Upgrade*.

6. Before performing Maintenance Restore of System Backup, install the Freelance Connect software in all 800xA nodes, before performing Maintenance restore of System backup.
7. If 800xA for Freelance VB process Graphics Extension 5.x was used in the existing system, install ABB 800xA for Freelance VB Graphics Extension 6.0.0-0 in all the 800xA nodes.
8. In connectivity server, install Freelance 2013 OPC Server and Freelance 2013 RU1 for OPC Server.



As UAC is enabled in SV6.0, ABB configure tool needs to be run as administrator. ABB Configure> Right Click> Run As administrator

9. In connectivity server, add OPC Resource ID and Prog ID (Alias) using the Freelance Configure Tool.
10. Download the OPC-GWY Node from Control Builder F Project using Load> Whole station option
11. Restore the System Backup in primary aspect server and perform the Post installation steps as described in **Steps 6-8** under *Planning and Setting up the 800xA 6.0 System in Offline Upgrade Flow* section of *System 800xA 5.x to 6.0 Upgrade*.  
  
After successful restore, all Freelance Object types will be updated to 800A for Freelance 6.0 Object types.
12. Perform an Event collector Upload from Service Structure> Event Collector Service > Freelance> Service group> Special configuration Tab

## Freelance Upgrade

Refer to *Freelance 2013 Release Notes (2PAA103593\*)*.

Follow the steps below to upgrade from older version of Freelance to **Freelance 2013**.

1. Export project data (.csv file) using the export function.
2. Uninstall the predecessor Freelance version on CBF node.
3. Install Freelance 2013 on the CBF node.

4. Import the Freelance project data.
5. Check the project and create a new .ple file.

## Further Steps

For detailed information of further steps, refer *System 800xA for Freelance, Configuration (3BDD011812\*)* manual.



During Upload, select *Synchronize mode* to get a complete rebuild of Freelance 800xA objects in the Control Structure and Functional Structure.



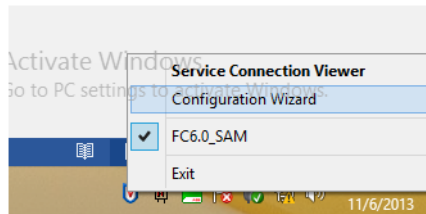
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## Section 4 System Extension

### Loading Connectivity Software as System Extension

The appropriate system extension 800xA for Freelance must be loaded after the system has been created the first time or after upgrade. Steps to be executed for adding 800xA for Freelance version 6.0.0-0 as 800xA System Extension are as follows:

1. Click **ABBnotification** icon on the task bar to start the Configuration Wizard.
2. Right click and click **Configuration** wizard.



*Figure 8. Configuration Wizard selection*

3. Select **System Administration** and click **Next**.

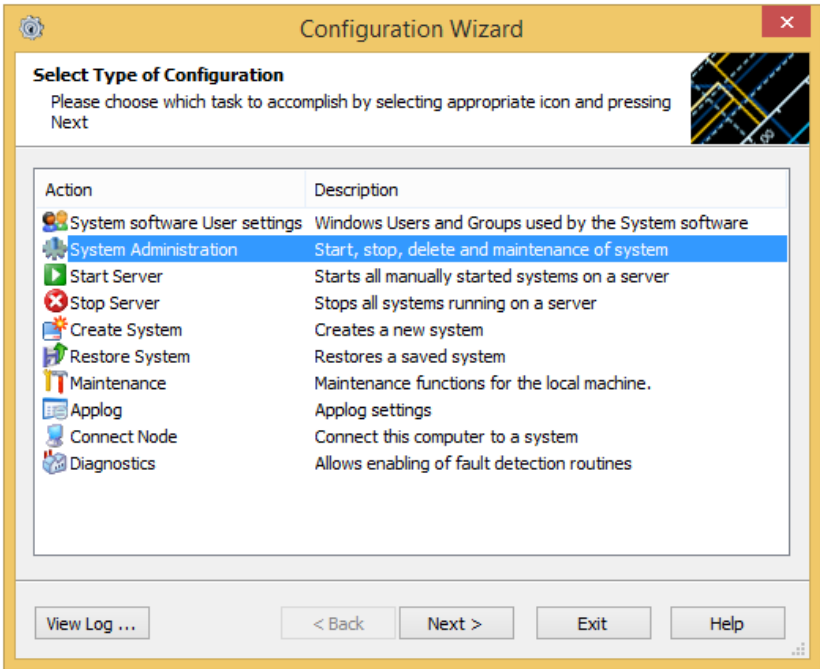
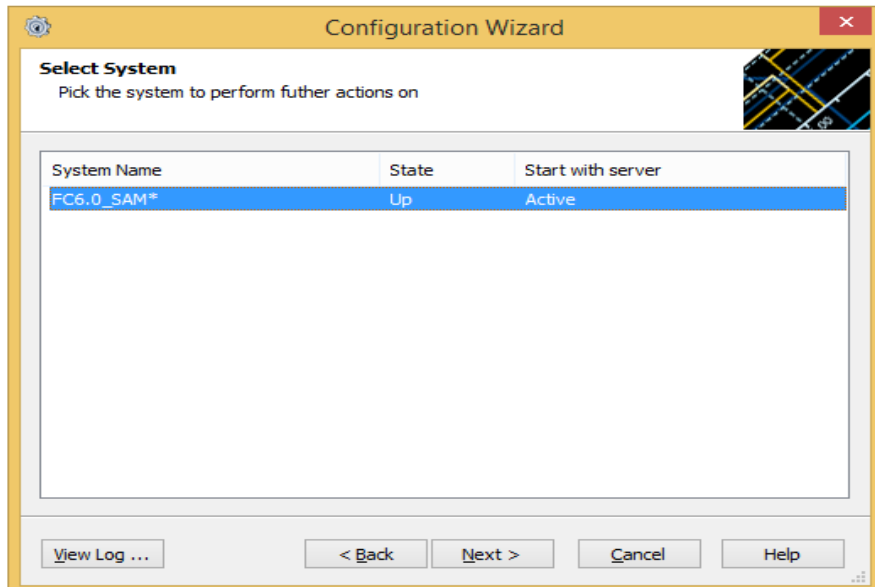


Figure 9. Configuration Wizard - Selecting type of Configuration

4. Select a system by clicking it and click **Next**.



*Figure 10. Configuration Wizard - Selecting System*

- 5. Double-click **System Extension Load** or double-click **System Extension Maintenance**, if upgraded from the previous version.

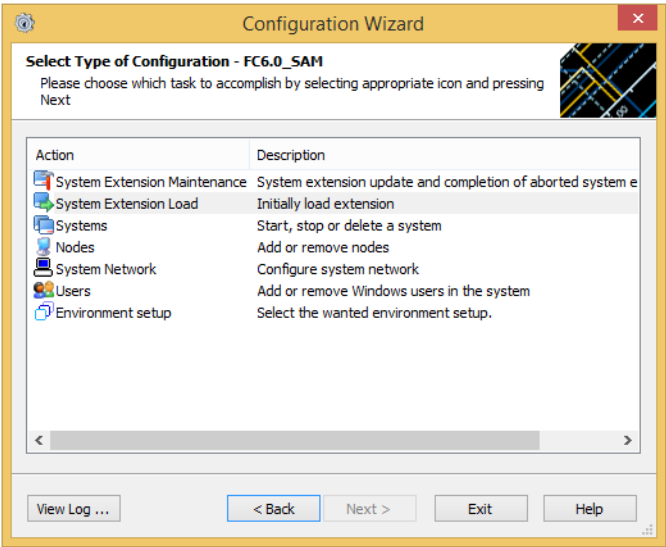


Figure 11. Configuration Wizard - System Extension Load



6. Select the system extension **800xA for Freelance** from the list on the left.

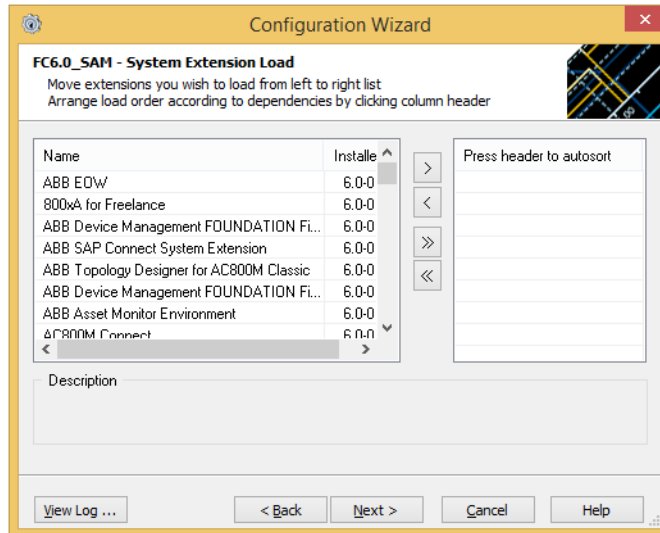


Figure 12. Configure Wizard - Select System Extension

7. Following system extensions should be loaded first.
- **ABB Central licensing Extension**
  - **ABB SFC Viewer**
  - **ABB 800xA SymbolFactory**

After successful loading of above system extensions, proceed to load **800xA for Freelance** System extension.

- 8. Click > to move **800xA for Freelance** to the list on the right and click **Next**.

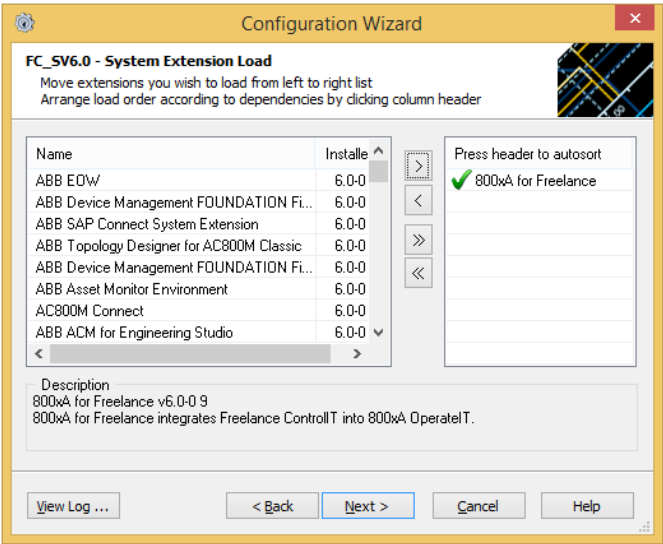


Figure 13. Configuration Wizard - Moved extensions for loading

9. Click **Finish** to load the system extensions.

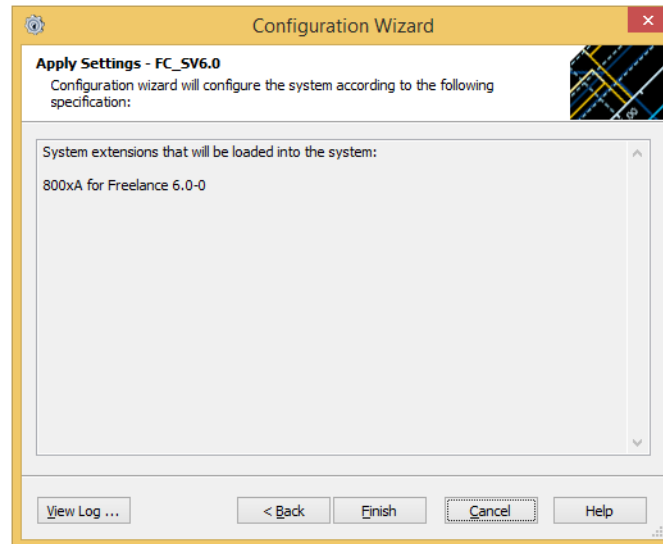


Figure 14. Configuration Wizard - Finish

10. In the **Loading imports screen**, click **Abort** to cancel the system extension loading.

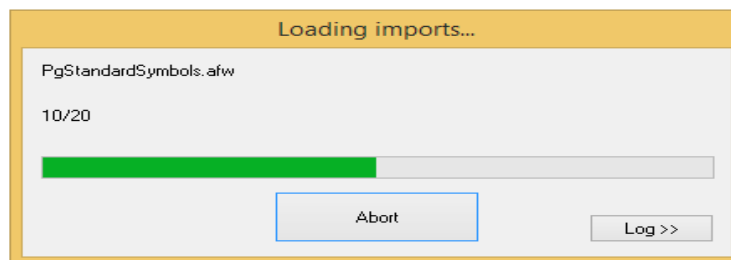


Figure 15. Loading imports - Abort

- 11. Click **Finished** to finish the system extension load.

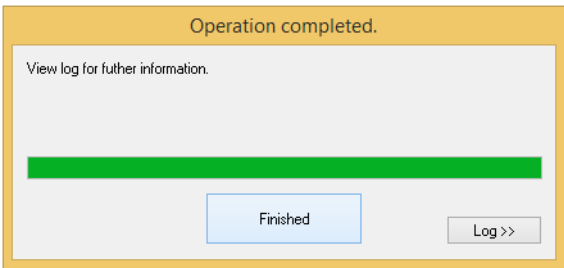


Figure 16. Operation completed wizard

- 12. Click **Exit** to close the wizard.

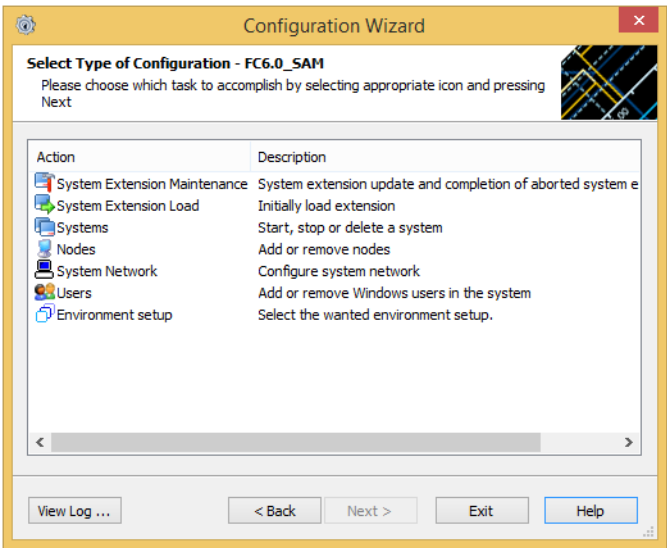


Figure 17. Exit Wizard



Restart the Freelance connectivity server for the changes to take effect.

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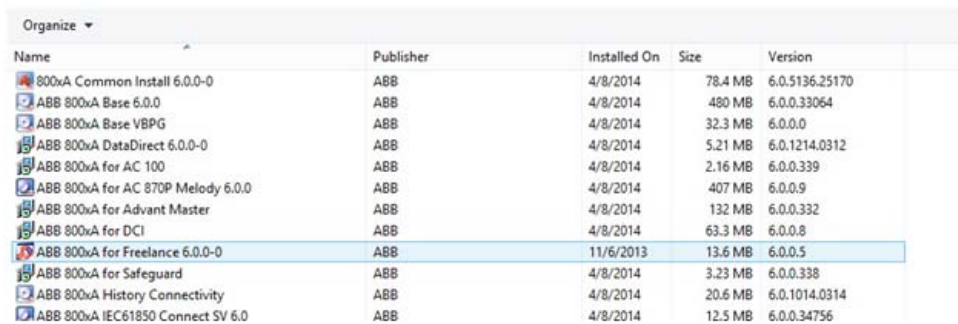
## Section 5 Uninstall

### Uninstalling Connectivity Software

To uninstall the Connectivity software:

1. Go to the **Panel** and in the installed programs list check for **ABB 800xA for Freelance** instance.
2. Click appropriate version of **ABB 800xA for Freelance** instance.
3. Click **Remove** or **Uninstall** to uninstall the selected version.

If a previous version of the **SFC Viewer** is installed, uninstall the SFC viewer. The current SFC viewer will be installed with the 800xA core system.



Name	Publisher	Installed On	Size	Version
800xA Common Install 6.0.0-0	ABB	4/8/2014	78.4 MB	6.0.5136.25170
ABB 800xA Base 6.0.0	ABB	4/8/2014	480 MB	6.0.0.33064
ABB 800xA Base VBPg	ABB	4/8/2014	32.3 MB	6.0.0.0
ABB 800xA DataDirect 6.0.0-0	ABB	4/8/2014	5.21 MB	6.0.1214.0312
ABB 800xA for AC 100	ABB	4/8/2014	2.16 MB	6.0.0.339
ABB 800xA for AC 870P Melody 6.0.0	ABB	4/8/2014	407 MB	6.0.0.9
ABB 800xA for Advant Master	ABB	4/8/2014	132 MB	6.0.0.332
ABB 800xA for DCI	ABB	4/8/2014	63.3 MB	6.0.0.8
ABB 800xA for Freelance 6.0.0-0	ABB	11/6/2013	13.6 MB	6.0.0.5
ABB 800xA for Safeguard	ABB	4/8/2014	3.23 MB	6.0.0.338
ABB 800xA History Connectivity	ABB	4/8/2014	20.6 MB	6.0.1014.0314
ABB 800xA IEC61850 Connect SV 6.0	ABB	4/8/2014	12.5 MB	6.0.0.34756

Figure 18. Freelance 6.0 instance in installed program list





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