System 800xA

Release Notes

System Version 5.1 Feature Pack 4 Revision E

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ABB

System 800xA

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2PAA109967-514 G

About this Release Note

⚠️ Any security measures described in this Release Note, for example, for user access, password security, network security, firewall, 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 release note describes the new functionalities, the fixed problems, and the known problems in the System 800xA 5.1 Feature Pack 4 Revision E.

How Feature Packs Work in System 800xA?

Feature Packs are intended to release new features and functions in between system version releases. Feature Packs are intended as **add-ons** to an already available system version. Feature Packs allow a more agile response to the market requirements without revising or releasing a system version.

Users are not compelled to adopt the Feature Pack. At a new installation, they can choose to install the main version only, or to also add the Feature Pack. Those having an existing installation, can choose to stay on the main version, or to install the Feature Pack at any time. Once any Feature Pack is installed in a 5.1 system, the system has to stay on the Feature Pack track.

The System Version 5.1 Revision E and System Version 5.1 FP4 Revision E are delivered as two separate install kits, which does the complete installation for the respective cases. One to be used by System Version 5.1 plain system users, one to be used by Feature Pack users.

The Release Notes have one common part that applies for both use cases, which are the two documents *System 800xA 5.1 Revision E Release Notes Fixed Problems (2PAA114364*)*, *System 800xA 5.1 Revision E Release Notes New Functions and Known Problems (2PAA114363*)*, and *System 800xA 5.1 Feature Pack 4 Revision E Release Notes (2PAA109967-514)* that is applicable to the Feature Pack users only.

For more information on Feature Pack deliverable, see the *System Guide Technical Data and Configuration Information* (*3BSE041434**).

Release Note 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.

Warning, Caution, Information, and Tip Icons

This Release Note 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 that could result in *electrical shock.*

Warning icon indicates the presence of a hazard that 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 that 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 Release Note are listed in the following table.

Released User Manuals and Release Notes

A complete list of User Manuals and Release Notes applicable to System 800xA is provided in *System 800xA Released User Manuals and Release Notes (3BUA000263*).   .*

System 800xA Released User Manuals and Release Notes (3BUA000263) is* updated each time a document is updated or a new document is released.

It is in PDF format and is provided in the following ways:

- Included on the documentation media provided with the system and published to ABB SolutionsBank when released as part of a major or minor release, Service Pack, Feature Pack, or System Revision.

- Published to ABB SolutionsBank when a User Manual or Release Note is updated in between any of the release cycles listed in the first bullet.

A product bulletin is published each time *System 800xA Released User Manuals and Release Notes (3BUA000263*)* is updated and published to ABB SolutionsBank.

Section 1 Release Notes

This document represents the release notes for System 800xA 5.1 Feature Pack 4 Revision E.

This document describes the functionality changes and new functionalities introduced for this product in this release. It also enumerates fixed and known problems encountered in the final testing of this product release and identifies correction or fix and workarounds that help to overcome the problem. The document contains additional notes that may be valuable to the customers and service personnel working with the product.

Known Problems are divided into categories by individual Functional Area or product. The categories are:

- Installation
- Administration
- Configuration
- Operation
- Instruction Manual Changes
- Miscellaneous

Some known issues are more important than others. Pay attention to the Workarounds, Clarifications and Helpful Hints provided, particularly for the issues that are marked ***Important***.

Products Participating in this Release

The following products are participating in System 800xA 5.1 Feature Pack 4 Revision E:

- Automated Installation
- Base System
- Engineering Studio
- AC 800M
- Application Change Management
- SFC Viewer
- Process Engineering Tool Integration
- IEC 61850
- Multisystem Integration
- Device Management FOUNDATION Fieldbus
- Device Management PROFIBUS & HART
- Batch Management
- 800xA for Advant Master

Release Notes Safety Notices

Failure to follow all Warnings and Instructions may lead to loss of process, fire, or death.

Read Release Notes carefully before attempting to install, operate, or maintain this software.

Install the software within the design limitations as described in the installation and upgrade instructions. This software is designed to operate within the specifications of the 800xA. Do not install this software to systems that exceed these limits.

Follow your company's safety procedures.

These Release Notes are written only for qualified persons and are not intended to be a substitute for adequate training and experience in the safety procedures for installation and operation of this software. Personnel working with this software must also exhibit common sense and good judgment regarding potential hazards for themselves and other personnel in the area. Should clarification or additional

information be required, refer the matter to your ABB sales representative and/or local representative.

File these Release Notes with other instruction books, drawings, and descriptive data of the 800xA. Keep these release notes available for the installation, operation and maintenance of this equipment. Use of these release notes will facilitate proper operation and maintenance of the 800xA and its software and prolong its useful life.

All information contained in release notes are based on the latest product information available at the time of printing. The right is reserved to make changes at any time without notice.

Related Documentation

The documents to be used in conjunction with this release note document are:

• *System 800xA 5.x System Software Versions (3BSE037782*):* Lists the rollups released for each Functional Area and product with each revision of System 800xA 5.x. It includes links to the rollups.

• *System 800xA, System Feature Pack Update Tool (2PAA107435*)*: The System Feature Pack Update Tool (FUT) is a wizard for installing the Feature Pack on System 800xA on a node by node basis.

• *Third Party Software System 800xA (3BUA000500*)*: Details the third party software that has been evaluated for use wit System 800xA including Microsoft operating system software, Microsoft software, service packs, and hot fixes.

• *System 800xA 5.1 Revision E Release Notes Fixed Problems (2PAA114364*)*: Lists the problems that were fixed in 800xA 5.1 Revision A, 800xA 5.1 Revision B, 800xA 5.1 Revision C, 800xA 5.1 Revision D release, and 800xA 5.1 Revision E release.

• *System 800xA 5.1 Revision E Release Notes New Functions and Known Problems (2PAA114363*)*: Lists the known problems reported in 800xA 5.1 Revision E release.

Upgrade

For information on performing upgrade of the 800xA Base System and Functional Areas from the current version to the latest release of 800xA 5.1, refer to *System 800xA Upgrade (3BSE036342*)*.

Table 1 describes the functionalities to be considered while performing the upgrade.

Table 1. Functionality Changes during Upgrade

Functionality	Description
Improved Control Builder compiler checks for *in_out* parameters	Code sorting has stricter checks for connections to extensible parameters with direction *in_out* have been added. This could lead to code loop error when upgrading, if improper use of the parameter has existed before.
Many mandatory items to acknowledge in Control Builder difference report at download	Several improvements have been done to the source code and difference report for new functionality. One result of the changes is that all mandatory items must be acknowledged when a download is performed from this version for the first time. The result may be that many items in the difference report need to be acknowledged.

Product Support

Contact ABB technical support or you local ABB representative for assistance in problem reporting.

Section 2 Functionality Changes

This section describes the functionality changes for the 800xA Base System and the functional area software with changes in System 800xA 5.1 Feature Pack 4 Revision E.

ℹ️ Since Feature Packs are accumulative, 800xA 5.1 Feature Pack 4 contains all the functionality changes described in this section.

Base System

This section describes the enhancements done in the Base System for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 4

The Operator Workplace is enhanced with the following features for 800xA 5.1 Feature Pack 4:

RNRP-Increase in the number of network areas

The maximum number of network areas is increased from 36 to 64. Improvements are also done so that the same node number can be used in different network areas. With this feature, larger and more distributed network topologies can be used and enables execution of very large projects.

High Performance Elements

A set of new High Performance HMI elements based on the best-practice principles in Human Machine Interfaces are added to the graphics library. It opens the possibility to produce high performance graphic displays, making the operators more situation aware of the process.

For more information, refer to *System 800xA Engineering, Process Graphics (3BSE049230*).*

Graphics enhancements

The following list of improvements are done to the Graphics Builder and Graphics Runtime:

- Password functionality is available as a String Dew input item where different characters can be used for hiding the text entered.

- Current User and User Role can be accessed from an expression to build graphics showing different views based on role or name.

- Renaming existing expression variables is possible that improves the ease of use when engineering.

- Defining different element sizes is possible if multiple views are used and makes it easier to control the behavior of created elements.

- The **Test data** dialog shows the possible values for enumeration that improves engineering and test effort.

- Any unsaved modifications existing in a graphic display can be determined.

- Object coordinates and sizes are displayed by selecting the element using the mouse, that makes it easier to place and align graphics.

- Horizontal and vertical spacing of elements such as increase, decrease, and remove spacing functions are available, which makes it easier to place and align graphics.

- Hot spots, which defines where a graphic element is placed in the graphic display during engineering, are supported for both generic elements and solution libraries.

Live Video integration support for 800xA

The VideONet Connect for 800xA is used to visualize and manage video cameras connected to the 800xA system through the VideONet Server. This enables the operator to have a live view of the process within the Operator Workplace.

It is also possible to include live video in Process Graphics and to view recordings. By associating a camera view with a process object, the operator can easily access the live video stream through the context menu for the object.

For more information on the VideONet Connect for 800xA, refer to *VideONet Connect for 800xA User Manual (2PAA109407*).*

Simplified installation and setup of EOW-X2 and EOW-X3

Installation and configuration of the Extended Operator Workplace (EOW) is simplified through a new installation package by creating and configuring the workplaces, applying the settings and options required to effectively operate the EOW.

For more information on Extended Operator Workplace, refer to *System 800xA Operations, Operator Workplace Configuration (3BSE030322*).*

AutoCAD support for File viewer

The CAD Drawing aspect allows integrating AutoCAD files into the system. DWG files (versions 13, 14, 2000, 2004, 2007, 2010) and DXF files (versions 12, 13, 14, 2000, 2004, 2007, 2010) are supported.

For more information on the **CAD Drawing** aspect, refer to *System 800xA, Configuration (3BDS011222*).*

Enhanced aspect link

Indication of the previously viewed display is now supported. This is used to improve navigation between Graphic Displays.

Operator Workplace support for mobile devices

The Operator Workplace now supports the use of mobile devices such as Ipad which requires 800xA TSA approval. For more information, refer to *System 800xA Operations, Operator Workplace Support for Mobile Devices (2PAA110154*).*

Operator Workplace Virtualization

The virtualized operator clients can now be used with remote desktop technology. For more information, refer to *System 800xA Virtualization (3BSE056141*).*

AC 800M Status Monitoring

AC 800M Status Monitoring can be used to display errors and warnings for each Hardware Unit in a Control Project. This also displays additional information of AC 800M S800 IO Modules such as number of channels in an IO module, the status and value of the channel. Users can also navigate from an IO Channel to the associated Tag Objects.

New Features for 800xA 5.1 Feature Pack 3

The Operator Workplace is enhanced with the following features for 800xA 5.1 Feature Pack 3:

Aspect Link with link to previous display

Aspect links can indicate if the link points to the previous display. This is useful when there are two or more aspect links pointing to the displays of each other and is a complement to the existing display history.

Tabbed Workplace

The Tabbed Workplace feature allows the operator to navigate between graphic displays using buttons, tabs, and drop-down lists.

The Tabbed Workplace is used for easy navigation and responsiveness to alarms. A few predefined Tabbed Workplace**s** are provided in the Workplace Structure from which the users can create new Tabbed Workplaces. It also includes a breadcrumb list, status indicators, and aspect links with the following features:

- The Buttons in the Application Bar can now navigate to other screens and are automatically created. The Area Navigation buttons are populated automatically similar to the tabs created to reflect the object hierarchy.

- The Breadcrumb functionality quickly identifies the current location and provides quick access to any parent object. The Breadcrumb list shows the

object path, starting from the currently displayed object to the navigation root object.

- The Tabs and the Area Navigation buttons can display the Alarm Status. These details are displayed based on the information in the graphic display. This simplifies the configuration and reduces the engineering time.

- The Status Indicators include an Alarm Indicator and a Status Indicator. The Alarm Indicator shows the alarm severity and state. The Status Indicator shows an additional status on an alarm or the object. These indicators guide the user through the object hierarchy to locate the graphic display that contains the alarm.

Combined Toolbar

Group all the tools in one bar to save vertical screen space. This works perfect with the wide screen displays.

A Combined Toolbar combines a collection of tools from the Operator Workplace Display bar, the Application bar, and the Status bar into one toolbar. This toolbar can be placed on the top or bottom of the workplace. This toolbar provides:

- More workplace area for the operator.

- One toolbar for the required tools.

Workplace Icon Settings

The new slick 24x24 pixel toolbar icons gives a modern appearance for the workplace. The classic style icons are still available for the users who prefer the existing look and feel.

The Workplace Icon Settings allow to configure different sizes for the Application bar, the Display bar and the Status bar icons. This enables the configuration of toolbar icons suitable to higher resolutions.

Hotkey action *Navigate next or Navigate previous*

The Display History can now be controlled using hotkeys.

The Hotkey action functionality enables the operator to navigate to the next and previous displays in the Workplace using keyboard shortcuts.

New Features for 800xA 5.1 Feature Pack 1

The Operator Workplace is enhanced with the following features for 800xA 5.1 Feature Pack 1:

Alarm Response Navigation

The Alarm Response Navigation feature allows the operator to navigate quickly different aspects from an object. The following are the features of Alarm Response Navigation:

- Quick navigation to single or multiple aspects using the object context menu or through the Alarm and Event List.

- One time configuration or detailed configuration to enable quick navigation for all types of objects or for an object or object instance respectively.

For more information on configuring the Alarm Response Navigation, refer to *System 800xA Operations, Operator Workplace Configuration (3BSE030322*).*

For more information on navigating different aspects, refer to *System 800xA, Operations (3BSE036904*).*

Alarm Grouping

An group alarm represents the alarm conditions added to a specific Alarm Group through configuration. Defining Alarm Groups in the system reduces the number of alarms displayed in the operator Alarm List.

For more information on Alarm Group configuration, refer to *System 800xA, Configuration (3BDS011222*).*

For more information on Alarm Group operations, refer to *System 800xA, Operations (3BSE036904*).*

System Services

This section describes the enhancements done in the System Services for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 1

Central Licensing System and Diagnostics Collection Tool is enhanced with the following features for 800xA 5.1 Feature Pack 1:

Central Licensing System

800xA 5.1 Feature Pack 1 is a licensed product included in the Automation Sentinel Software Lifecycle program.

800xA 5.1 Feature Pack 1 requires a valid Automation Sentinel license and a valid system license to install and use the Feature Pack.

Please contact the ABB support to obtain the updated and valid system license.

Diagnostics Collection Tool

A new feature is added to the Diagnostics Collection Tool for the data collection for consistency analysis of the installed 800xA System and associated software products. It allows data collection in simple steps. This information is to provide for the ABB service team for software consistency analysis.

Engineering Studio

This section describes the enhancements done in Engineering Studio for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 4 Revision D

Subscription of Live Data functionality

Following are the changes in Subscription of live data functionality:

- From the following user can enable only one option at a time:
    - Subscribe for Live Data All Output Ports
    - Subscribe for Live Data For Connected Output Ports
    - Subscribe for Live Data
    - Subscribe for Live Data For All diagrams

- Subscribing the live data for a current page will subscribe all the pages in that diagram.

Paste Rename Functionality

In the regular copy paste operation names are automatically decided by the function settings, where as, Paste Rename functionality enables renaming of Function Diagrams and its various components interactively.
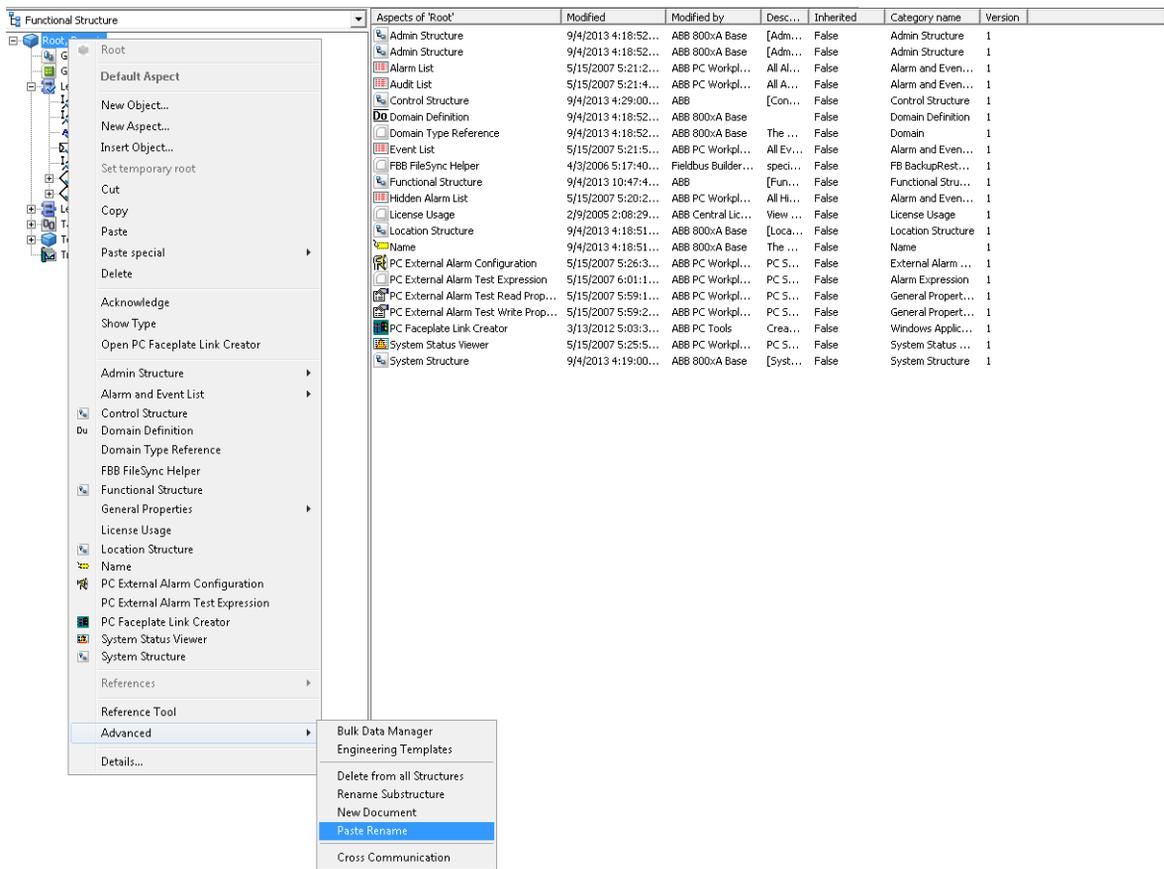
Figure 1. Paste Rename functionality

Synchronization between Control Builder Name aspect and Name aspect

Function Designer extensions enable synchronization between Name aspect and Control Builder Name aspect of an objects in 800xA System. In case engineering is not carried out using Function Designer, synchronization can be disabled. A new function setting has been introduced, which can be created under the **Main View** of the **function settings** aspect, and in this the **Value** can be set to **False** to disable the synchronization.

New Features for 800xA 5.1 Feature Pack 3

Engineering Studio is enhanced with the following features:

Bulk SPL Template

Bulk SPL template is a component of Engineering Workplace.It is an Excel template (.xltm) with predefined add in to configure steps, transition, jump, parallel step, and selections inside the sequence/sequence2D.

IO allocation support for Foundation Fieldbus Devices

Advanced IO for Foundation Fieldbus helps the user to use the Fieldbus Application Diagram (FBAD) in the Function Diagram Editor by creating the FF Proxy Object.

IO allocation support for PROFINET Devices

IO allocation for PROFINET allows the user to use IO allocation tool for the signal allocation of PROFINET devices.

IO allocation support for IEC61850 Devices

IO allocation for IEC61850 allows user to allocate IO signals to the hardware type of **CI868IEC61850HwLib**.

AC 800M

This section describes the enhancements done for AC 800M in 800xA 5.1 Feature Pack releases.

Safety Certification Status

The "NON-CERT" marking of the High Integrity firmware for SM810, SM811, and PM865 in this distribution of 800xA for AC 800M, specifies that it is not TÜV certified and is intended for engineering and test purposes only.

Before a High Integrity controller can be put into operation, any "NON-CERT" marked High Integrity firmware in the controller must be replaced with TÜV certified counterparts.

It is mandatory for the user to verify that all 800xA Safety products used in a safety critical installation, are certified according to the applicable standards, before they are put into operation for production. If the used hardware or software versions are not yet listed in the latest available TÜV Certification Report, Annex A, please contact your local ABB sales representative or TÜV Süd Group (+49 89 5791-4173), for further information.

In order to get the formal status of the safety certification of a 800xA Safety product (hardware and software components), please refer to the latest version of the TÜV Certification Report, Annex A, ABB Solutions Bank or ABB Library (3BSE074100).

Improved Functionality and Important Changes in 5.1.1-3 Release

Functionality changes for System 5.1 Feature Pack 4 Revision E:

- Increased maximum timeout for safe peer-to-peer. The maximum timeout for MMSReadHI control modules is increased to 30 seconds.

- Control Builder editor kept open if save fails. If save operation is failing due to aspect directory failure, the Control Builder editor will stay open and investigation can be performed to avoid loosing changes.

- Usage of 0-4 mA range on AI880. Description for usage of 0-4 mA range on AI880 has been added to Safety manual and technical description *3BSE078538 Technical Description - Decoding of transmitter status in AC 800M HI.*

- Improved fail over handling for redundant Process Controllers when low level software exceptions are detected. If CPU fail over occurs, it is important to collect Backup Controller log files for postmortem analysis.

- Library improvements included from 5.1.1-2 Library Update 1

  – PidCC and PidAdvancedCC have been enhanced to support controller types 'ClassicERF' and 'ClassicERF+D'. PidAdvancedCC has additionally been enhanced for controller type 'ABBERF' and 'ABBERF+D'.

  – On control modules PidAdvancedCC and PidC, the parameter ERF has changed name to EBV, External back value. The function is still the same if the EBV parameter is connected. If connected the EBV value is used instead of the backward value in the Control Connection in the controller output parameter.

  – Enhancement of TapCC and TapRealCC. A new node is added where the backward information is transferred in the forward direction. The addition is completely compatible with the present object. Backtracking to the new node is never possible.

  – Enhancement of RealToCC. A parameter UseBackwardRange has been added to make the selection to use the backward range as the forward one. The initial value follows the original functionality.

  – Enhancement of BranchCC and Branch4CC. A parameter Mode has been added to make the selection in backtracking strategy. The initial value follows the original functionality.

- Library improvements included from 5.1.1-2 Library Update 2.

  – BurnerLib version 1.0-3 included in this release. Separate license required for use, see *AC 800M Burner Library Safety and User Manual (3BSE079156*).*

Improved Functionality and Important Changes in 5.1.1-2 Release

- Restriction to configure CV Ack Group to Access Variables with direction out

  In previous release of 5.1.1 it was possible to configure Acknowledge groups also for communication variables used for communication within the same task and also for communication variables having direction out. These

configurations has no effect and the configuration is not relevant. This configuration is now restricted with a compiler check (800xACON-CN-5110-032).

This change could result in compile errors during upgrade that need to be corrected.

- Restriction to commit pending hardware changes during Online Upgrade

    As described in Product Alert *3BSE047421D0153 If SIL3 I/O Connection is changed with Online Upgrade, the I/O is Degraded to SIL2* (800xACON-AD-5020-036) no pending changes regarding hardware configuration should be applied by performing Online Upgrade. This is now enforced by a compiler check.

    This change requires special care when upgrading, all pending changes must be downloaded to the controllers before performing the upgrade.

New Features for 800xA 5.1 Feature Pack 4

The Control Software for AC 800M is enhanced with the following features for 800xA 5.1 Feature Pack 4:

Engineering Environment

• **Diagram Editor with Function Diagram up to SIL3**

Diagram is a new graphical language that graphically interconnects functions, function blocks, control modules and embedded ST and SFC code blocks on the same page.

– Automatic declaration while editing.
– Autorouting of graphical connections.
– Advanced insert dialog/tool with recent and favorites lists.
– Reference lists for I/O and communication variables in the diagram.
– Copy, Cut, Paste, Undo and Redo in several steps.
– Paste special dialog with advanced replace name options.
– Multiple select copy and paste between diagrams.
– Split / merge pages.
– Possibility to graphically connect sub-components of structures between blocks.
– A connection can be drawn through several blocks.
– Diagrams can be placed in diagram types that can be used as instances in other diagrams.
– Documentation/printing of diagrams, including embedded structured text and SFC code blocks.
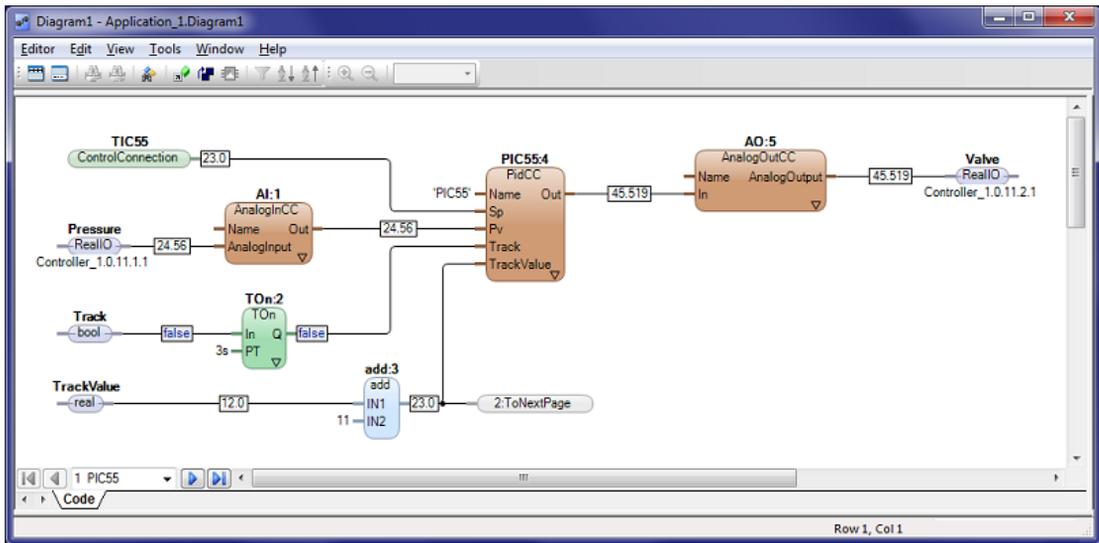
Figure 2. Diagram Editor

- **Improved Difference Report at Download**

  Several improvements have been made in the difference report.

  – More alike the 800xA Import difference report.
  – Differences are categorized as mandatory and optional acknowledgement.
  – It is possible to postpone acknowledgement of differences to a later point in time during engineering phase.

- **IAC support with Load Evaluate Go**

  Communication variables (IAC) are now supported in LEG. The evaluation report displays changes also to the communication variables.

- **Go to Object in Plant Explorer**

  It is now possible to navigate from Control Builder to 800xA Faceplate, Alarm and Event List, Trend Display in Plant Explorer.

- **Search and Navigation**

  Communication variable references from other projects within the same system do now appear as references, if the projects are downloaded.

- **Task Analysis Tool**

  The task analysis tool in Control Builder has been made more easy to use. The meaning of the different messages is now more precise. Time stamps have been added to the warning and error messages in the summery view of the Task Analysis tool, this makes it easier to relate between the messages and the graph.

- **Display of Unit Specific System Alarm and Event Generation**

  There is a new menu entry in Control Builder on hardware types called **Unit Specific System Alarm and Events**. It brings up a new user interface that shows what system alarms and events a unit can generate. The information is shown in Control Builder rather than being printed in a user manual.

- **Heap Utilization Dialog Available in Online Mode**

  The controller heap utilization dialog in Control Builder is now available also in online mode.

- **Additional Caution Dialog at Download with Init Restart**

  An additional caution dialog is shown before download of changes in case the user or the system suggested an init restart (i.e. loss of all cold retained values).

- **Compiler Warning in case Data Type used for IAC has been changed**

  If the user changes a structured data type used for communication variables, then the receiving controller will get ISP until both server and client have been downloaded to.

  With this new version, the user gets to know in advance in case a download of changes includes changed data types that will cause ISP on any communication variable.

- **Allowed to Jump from Last Step in SFC**

  It is now possible to create a jump from the last step in an SFC. The operation is not recommended and gives a color indication in the SFC. The color indication should be Yellow but in this version, it is Red.

AC 800M High Integrity

⚠ The Functionality Changes listed in AC 800M High Integrity are valid only for the AC 800M High Integrity controller.

- **Certification**

  The AC 800M High Integrity is now certified according to IEC 61508:2010 (second edition).

- **Inter Application Communication**

  Inter application communication has now been enhanced and approved for peer to peer communication up to SIL3.

  It is now possible to specify how communication shall be restarted after a communication failure (ISP value). Several communication variables may be grouped together in a so called acknowledge group that has been introduced. A group is acknowledged through the new *CVAckISP* control module.

  It is possible to set up inter application communication between different SIL, even from lower to higher SIL. The latter only if the new Diagram language is used.

  Non-SIL inter application communication is possible with AC 800M controllers running version 5.1.0.

- **New Communication Protocols, Previously not available in AC 800 M High Integrity Controller**

  The following protocols are now available to be used in non-SIL applications in the AC 800M High Integrity.

  – Advant Fieldbus 100, CI869
  – EtherNet/IP, CI873

- **SIL3 Classified Library for Machine Safety**

  The new Protection Libraries provides function blocks and control modules for implementation of functions for machine safety.

  The libraries contains the basic elements necessary to make the AC 800M High Integrity controller conformant with the European machine directive defined in EN ISO 13849:2008.

The libraries conforms to *PLCopen TC5 Part 1: Concepts and Function Blocks ver 1.0*. These libraries contain complete solution examples for machine safety implementations as well as components like guard and light barrier logic objects. It also contains examples on how to extend the solution between several applications and/or controllers.

The *ProtectionLib* contains control modules and function block types for supervision of machinery. Input objects like emergency stop buttons and guards, intermediate matrix to connect inputs to outputs, and output objects to control the machines.

The *ProtectionExampleLib* contains complete solution examples for machine safety implementations.

- **Remote Safe Online Write**

  It is now allowed to perform SOW from a remote workstation, as long as access enable is not required.

- **Indication of the use of Non-Certified Firmware**

  There will now be a permanent system alarm and an indication in the 800xA System Status Viewer, in the event the AC 800M High Integrity is running with non-certified firmware or an uncertified combination of SM81x and PM865 firmware.

- **SIL3 Rated Firmware Functions**

  The following functions have been SIL3 rated.

  – *RealInfo, ClearBit, ClearBits, SetBit, SetBits, TestBit, TestBits and GetCVStatus*

- **SIL3 Restricted Function Block**

  The *ApplicationInfo* function block has been rated SIL3 restricted.

- **Improved I/O handling**

  It is from this version possible change the invert settings of DI880 and AI880 in SIL applications, and still be able to make warm download of changes.

  It is now possible to make online download of changed analog ranges on AI880.

Control and I/O

- **CI873 EtherNet/IP**

    The CI873 EtherNet/IP has been improved. It now supports master redundancy by using two CI873s and has full support for Online Upgrade. The redundancy does not require the slaves to have the EtherNet/IP redundancy connection method implemented.

    There is now also support for native EtherNet/IP devices.

    CI873 supports logical segment Class 1 connection for reading and writing data to EtherNet/IP devices, and it originates Class1 for tag reading and Class 3 for tag writing to Allen Bradley Logix 5000 series PLCs.

    The Industrial Ethernet Protocol (EtherNet/IP) is the combination of traditional Ethernet and an industrial application layer protocol, called the Common Industrial Protocol (CIP).

- **CI868 Enhancements**

    The CI868 supports the IEC 61850 MMS protocol along with GOOSE protocol and both the protocols can be operated in parallel. Engineering of IEC 61850 has been made easier by the removal of the IET tool usage.

    The Control Builder IEC 61850 Wizard now has the capability to export the created CI868 IEC 61850 configuration and allows to import one scd file per CI868 Module. This decouples the substation and process automation engineering processes, and eliminates the need for the IET tool.

    IEC 61850 Wizard Tool improvements

    –   No dependency of Substation section in scd-file for import.
    –   No dependency of Control Builder project name for import.
    –   Storage and retrieval of scd-file from Control Builder.
    –   Generate CI868 CID / ICD file from configured Hardware tree under CI868.
    –   Backward compatibility with SCD file generated from IET tool.

    IEC 61850 MMS Client functionality for CI868 Module

    –   Receive RCB data from other IEDs and send MMS Control Commands.

    – New function blocks in Control Builder application library *ProcessObjBasicLib* for application of IEC 61850 SBO functionality in IEC61131-3 programming.

    – Support of Process Alarms and Events with IED Timestamp (with AlarmCond FB).

- **Self-defined UDP and TCP Communication**

  The new *UDPCommLib* and *TCPCommLib* contains function block types that are used for self-defined UDP and TCP communication. These function blocks are used when the controller needs to communicate with external equipment. The used protocol is UDP and TCP, running on Ethernet.

  The function is similar to the already existing self-defined serial communication, but on Ethernet. It uses the inbuilt CN1 and CN2 on the PM8xx CPU. Redundancy is handled by RNRP.

- **Support for DI818, DO818, DI828, DO828**

  This version supports four new S800 I/O modules on modulebus and PROFIBUS via CI801/CI840.

  – DI818 - 32 channel digital input for 24VDC
  – DO818 - 32 channel digital output for 24VDC
  – DI828 - 16 channel digital input for High Voltage AC/DC
  – DO828 -16 channel relay output for High Voltage AC/DC

- **More memory with PM851A, PM856A, PM860A**

  These renewed CPUs have with this version more available memory:

  – PM851A - Now 12 Mbyte total RAM
  – PM856A and PM860A - Now 16 Mbyte total RAM

- **Backup Media in PM891**

  Memory cards larger than 2GB can now be used in PM891, by the introduction of support for SDHC and SDXC cards formatted as FAT32.

- **Enhanced Integration of ABB Devices**

  This version brings new ways of integrating ABB Drives and Motor Starters into AC 800M.

– **Support for ABB standard drive ACS880 with FENA-11 and PROFINET**

The new hardware library - *ABBDrvFenaCI871HwLib* - provides PROFINET connectivity to the ACS880 drive via the communication adapter FENA-11.

– **Support for ABB standard drives with FPBA-01 and PROFIBUS**

The new hardware library - *ABBDrvFpbaCI854HwLib* - provides PROFIBUS connectivity to ABB drives via the communication adapter FPBA-01.

– **New motor starters for MNS iS on PROFINET**

The MNS iS hardware library - *ABBMNSiSCI871HwLib* - offers support for the two new motor starter types - Sace Circuit Breakers (Sace CBR) and DC Feeder (DC MFeed).

• **Improved Analog Control**

Several improvements have been made in the area of analog control.

– **External Reset Feedback**

The *PidCC* and *PidAdvancedCC* control modules have a new mode called External Reset Feedback. The controller follows an auxiliary value in this mode.

– **Disable PD part**

It is now possible to disable the PD part at windup situations in the *PidCC* and *PidAdvancedCC* control modules. This can be useful if an override controller shall not take any action until its epsilon changes sign.

– **Auto tuning flag**

The *PidCC* and *PidAdvancedCC* control modules have a new parameter indicating to the outside that auto tuning is currently being performed.

– **Epsilon available as a parameter**

The *PidCC* and *PidAdvancedCC* control modules have a new parameter indicating the value of `Sp-Pv`.

- **Gain Scheduling based on Epsilon**

  Gain scheduling based on the value of epsilon is added to the *PidAdvancedCC* control module.

- **Continuous Moving Average function**

  New control module, *TimeAverageCC*, that determines the moving average of an analog input over a specified number of samples.

- **Library License Enforcement**

  Libraries belonging to the 800xA Control and IO license group are now subject for license enforcement of the actual usage. Control Builder determines the actual usage at every download and reports it to the 800xA license server.

- **Support for Accessing CI860 via AC 800M Web Interface**

  Like PROFIBUS with CI854 and PROFINET with CI871, FF HSE with CI860 is now also accessible via the AC 800M web interface. The list of supported functions is described in *AC 800M Foundation Fieldbus HSE (3BDD012903*).*

- **Increased RNRP Area Numbers**

  To enable an increased number of network areas, the AC 800M Ethernet setting Network Area now allows a maximum of 64 network areas.

- **Functions to convert an IP Address to/ from String/Dword**

  There are two new firmware functions to be used for conversion between dword and a string value containing an IP address.

  - *DWordToIPString* converts a dword to a string data type in an IP version 4 address formats.

  - *IPStringToDWord* converts a string data type in an IP version 4 address formats to a dword.

Multisystem Integration

This section describes the enhancements done in Multisystem Integration for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 3

Multisystem Integration is enhanced with the following features for 800xA 5.1 Feature Pack 3 release:

Point of Control

The System 800xA Multisystem Integration now supports Point of Control. Using Point of Control with Multisystem Integration, the responsibility can be taken locally on the provider system, and remote on the subscriber system. For more information, refer to *System 800xA, Multisystem Integration (3BSE037076*).*

Asset Optimization with Multisystem Integration

Using Asset Optimization with Multisystem integration, the Condition Reporting and Monitoring, and Work Order Management functions can be performed remotely from the subscriber system.

For more information, refer to *System 800xA Multisystem Integration (3BSE037076*).*

Application Change Management

Application Change Management (ACM) is a part of Advanced Engineering Workplace feature.

It is a version control tool used for engineering solutions in 800xA System. Multiple versions of 800xA application configuration can be archived in the ACM host and can provide an integrated configuration management system utilizing .afw files technology.

New Features for 800xA 5.1 Feature Pack 4 Revision E

This section includes functionalities changed for Application Change Management.

Shorter Check In time and optimized usage of ACM server space: All the entities which are not modified with respect to earlier checked in version will be skipped during subsequent check In which eventually improves the check In time and saves ACM server space.

Bulk Check In of Entities/Objects: Bulk check In intelligence has been implemented to optimize the memory usage during check in operation, which has made it possible to check In significantly large Control projects and entities in single operation.

Set Max number of versions: A new general setting is introduced to set the maximum number of versions of an entity/object in ACM server. If the number of checked in versions of a particular file exceeds the value set, then the first version of the file gets deleted from ACM server. This is a one-time setting, introduced to support database management and to have a control on the number of versions of an entity/object in ACM server.

ACM Scheduler: ACMScheduler synchronizes ACM system with corresponding aspect system. It identifies the differences between ACM server and aspect system and checks in the objects which are never checked in or have been modified after last check in. Synchronization can be restricted to certain structure by proper configuration. However, Functional structure and Control structure are configured by default.

For more information on ACM, refer to *System 800xA Application Change Management (2PAA108438*).*

SFC Viewer

This section describes the enhancements done in SFC Viewer for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 4

SFC Viewer is enhanced with the following features for 800xA 5.1 Feature Pack 4 release:

- **Support for IAC Communication Variable**

New Features for 800xA 5.1 Feature Pack 3

SFC Viewer is enhanced with the following features for 800xA 5.1 Feature Pack 3 release:

- **Support for System wide settings for Auto Scroll and Font Size**
- **Unfulfilled criterion for graph view**
- **SFC uploader aspect at application level**

    The SFC Uploader aspect is used to map the structured data type variables and communication variables to get the driving object path when configured using Control Builder M.

New Features for 800xA 5.1 Feature Pack 1

SFC Viewer is enhanced with the following features for 800xA 5.1 Feature Pack 1 release:

Default view of transition window can be configured

The default view of the transition window (List View or Function Plan View) can be configured.

Action display with target diagram reference name and its description

Before this release, the action display only showed the complete configuration code for qualifiers P1, N, and P0. This release additionally supports action display with target diagram reference name and its description for qualifiers P1, N, and P0. The default view can also be configured.

SFC Viewer also supports navigation to the AC 800M controller objects from the action display with target diagram reference name. The object navigation feature is enabled for actions that are linked to specific controller objects.

Object navigation for structured data type variables

The Object Navigation feature in SFC Viewer is now supported for structured data type variables, even when the respective control modules or function blocks are not direct child elements of the object with SFC viewer aspect. The navigation to the object is also supported when the structured data types used in an application are connected through communication variables within the application or global variables.

New property to ensure naming conventions

To ensure that naming conventions are followed for diagram names, the suffix required for diagram names can be specified through a property.

Dynamic Colors for project constants used in transition criteria

Process Engineering Tool Integration

This section describes the enhancements done in Process Engineering Tool Integration for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 1

Process Engineering Tool Integration is enhanced with the following features for 800xA 5.1 Feature Pack 1 release:

• **Process Engineering Tool Integration supports Foundation Fieldbus workflow**

IEC 61850

This section describes the enhancements done in IEC 61850 for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 4

The IEC 61850 solution is enhanced with the following features for 800xA 5.1 Feature Pack 4:

General

- Support of maximum 4 nos OPC Server instances per Connectivity Server node.

- Support of Multisystem Integration and Virtualization.

- Sample faceplates removed from Base IEC 61850 Object Type library.

Uploader

- Support of Additional Conducting Equipments PTR, GEN, CTR, VTR, CBR, DIS and Bay.

- Support of Multiple OPC Servers on a single IEC 61850 Subnetwork.

- Support of Multiple Subnetwork under a single OPC Server (max. 16).

- Support of uploading SCD file with or without Substation section.

- Control and Functional Structure objects with unique qualified names derived from information in scd file.

Operation Library for Substation Equipment

- Improved faceplates available as IEC 61850 Operation Library for Substation Equipment - option.

- Updated Control Connection Aspect properties available for each conducting equipment in IEC 61850 Operation Library for Substation Equipment.

- New IED Signal Mapping aspect for mapping signals of multiple IED types and update as new properties in Control Connection Aspect.

OPC Server / CET Enhancements

- Configurable analog signal alarm limits in OPC Server.

- Configurable Process and System Alarms.

- **Area Name** and **Area Description** in Alarm configuration.

- Export / Import templates for configured Alarm and Event.

- System consistency check tool to check SCD file version designation.

- Check configuration revision option for Import.

Simplified IEC 61850 Engineering Workflow

- Engineering with Control Builder and CCT 600 only.

- Compatible with PCM600 2.4.

- CI868 defined as IED instead of AC 800M in Control Builder.

- Editable Control Builder hardware tree under CI868 level.

- Import one scd file per CI868 Module.

- Consistency check of Control Builder hardware tree with SCD file before download.

- OPC Server ICD file included in IEC 61850 connect package for IEC 61850 Substation engineering.

New Features for 800xA 5.1 Feature Pack 2

IEC 61850 is enhanced with the following features for 800xA 5.1 Feature Pack 2 64-bit release:

- **IEC 61850 supports four instances of IEC61850 OPC Server for each Connectivity Server (Minimum 2.4GHz Dual Core CPU, Memory 4 GB)**

Device Management FOUNDATION Fieldbus

This section describes the enhancements done in Device Management FOUNDATION Fieldbus for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 2

Device Management FOUNDATION Fieldbus is enhanced with the following features for 800xA 5.1 Feature Pack 2 release:

Device List View

Following features are implemented in Fieldbus Builder Foundation Fieldbus Device (FBBFF) List:

– Active, Configured, and Assigned devices are displayed in the Device List.

– Device and Device Description revision is displayed in the Device List.

– Displays the Reservation State.

– Device assignment can be done within the Device List using drag and drop.

– Devices on the temporary Addresses are automatically assigned to a regular address.

– Live list status, LAS status, and download status is displayed as a text with an icon.

– Numerical values (**For example**: DD rev, dev address) are displayed in the decimal and hexadecimal.

Diagnostic List View

Following features are implemented in FBBFF Diagnostic List:

– Displays quantity of pass token timeouts, Live List changes, and quantity of compel data timeouts.

– Displays the timestamp of the run time statistics.

– Allows resetting of the statistic counters.

Updated LD800HSE Firmware

The following update is done in Linking Device.

– Timestamp included for the run time statistics.

Device Management PROFIBUS and HART

This section describes the enhancements done in Device Management PROFIBUS and HART for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 3

Device Management PROFIBUS and HART is enhanced with the following
features for 800xA 5.1 Feature Pack 3 release:

- The Basic HART DTM is enhanced with HART Revision 7 features. The
  functionality specific to HART Revision 7 devices can be seen once the first
  upload is done. New features like LongTAG, extended Manufacturer ID and
  Device IDs, viewing up to 8 variables along with the status, Squawk, and
  support for commissioning a WirelessHART device are also available.

Asset Optimization

This section describes the enhancements done in Asset Optimization for 800xA 5.1
Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 4

Asset Optimization is enhanced with the following features for 800xA 5.1 Feature
Pack 4 release:

Maintenance Workplace 2

The Maintenance Workplace 2 is introduced in this release of Feature Pack.

The new workplace is based on the Asset Structure and provides an easy,
enhanced, and efficient way for the user to view the Asset Status and Asset
Monitor condition details in a few clicks.

NAMUR NE107 Icons and Colors

Asset Viewer Aspect now uses the NAMUR NE107 recommended icons to
display the Asset Status. Asset Reporter Aspect, Asset Reporter With System
Status Aspect, Fault Report Submitter Aspect and Asset Monitor Aspect uses
colors based on NAMUR NE107 to indicate the Severity of the Asset
Conditions.

New Features for 800xA 5.1 Feature Pack 3

Asset Optimization is enhanced with the following features for 800xA 5.1 Feature Pack 3 release:

Asset Optimization with Multisystem Integration

Using Asset Optimization with Multisystem integration, the Condition Reporting and Monitoring, and Work Order Management functions can be performed remotely from the subscriber system.

For more information, refer to *System 800xA Multisystem Integration (3BSE037076*).*

New Features for 800xA 5.1 Feature Pack 1

Asset Optimization is enhanced with the following features for 800xA 5.1 Feature Pack 1 release:

In the 800xA 5.1 Feature Pack 1 release, the Computerized Maintenance Management System (CMMS) Integration is updated to support the following:

- Maximo version 7.1
- SAP/PM ERP Central Component 6.0 (ECC6)

PC, Network and Software Monitoring

This section includes functionalities introduced for PC, Network and Software Monitoring (PNSM).

New Features for 800xA 5.1 Feature Pack 4 Revision E

In order to monitor the IT assets in System 800xA, SNMP trap support is added to PC, Network and Software Monitoring. Users are enabled to create device specific Object Type using MIB file of the device, configure the OID based traps and customize them if needed. SNMP trap messages are presented as Alarms or Events in System 800xA. It is possible to configure the severity and notification type (alarm or event) for every trap message.

The Supported SNMP version is SNMP v3 - User–based security.

800xA for AC 870P / Melody

This section describes the enhancements done in 800xA for AC 870P / Melody for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 3

800xA AC 870P / Melody is enhanced with the following features for 800xA 5.1 Feature Pack 3.

Asset Management for HART Devices

This feature integrates the AC 870P / Melody System into the common Asset Management capabilities of System 800xA. The implemented functionality provides the existing 800xA Field Device Management capabilities for HART devices connected to AC870P / Melody via local AC 870P / Melody IO and S800/S900 IO. This can be done without additional communication, wiring or Hardware below the controller level.

Melody Simulation Events

This component enables a Melody system in conjunction with 800xA to automatically create events in 800xA if someone creates or changes or removes a simulation within a AC870P Controller.

800xA for Advant Master

This section describes the enhancements done in 800xA for Advant Master for 800xA 5.1 Feature Pack releases.

New Features for 800xA 5.1 Feature Pack 4 Revision E

The 800xA for Advant Master is enhanced with the following feature for 800xA 5.1 Feature Pack 4 Rev E:

Advant Master Alarm Refresh

The Advant Master Alarm Refresh helps retrieve the latest alarm status from Advant Master and Safeguard 400 controllers. For example, after communication disturbance between the Connectivity Server and the Controller.

Refer the *800xA for Advant Master 5.1 Configuration (3BSE030340*)* manual for more information.

New Features for 800xA 5.1 Feature Pack 4

The 800xA for Advant Master is enhanced with the following feature for 800xA 5.1 Feature Pack 4:

Advant Master Central Backup

Advant Master Central Backup is a licensed feature for backup and restore of ABB Master Programming Language (AMPL) controller applications.

For more information on configuring Advant Master Central Backup, refer to *800xA for Advant Master, Configuration (3BSE030340*).*

Section 3 Fixed Problems in Feature Pack 4 Revision E

This section details the problems for each functional area that have been fixed in System 800xA 5.1 Feature Pack 4 Revision E. A brief description of the correction is also provided. For a complete understanding of the problems fixed, refer also the Fixed Problems section in *System 800xA 5.1 Revision E Release Notes Fixed Problems (2PAA114364*).*

Base System

Table 1 and Table 2 lists the Configuration, and Operational issues that have been corrected in the Base System for the 800xA 5.1 Feature Pack 4 Revision E release.

Table 1 Configuration Issues

Issue	Correction or Fix
PG2 Graphics Editor may hang when an instance of an element is inserted and renamed followed by a right click on the element property. 800xASYS-CN-5140-016	This problem has been corrected.

Table 2. Operational Issues

Issue	Correction or Fix
Sometimes alarm status in Tabbed Navigation does not display the correct value. 800xASYS-OL-5130-027 800xASYS-OL-5141-082	This problem has been corrected.
Unable to input values with decimals in a real dew if the regional language is set to Swedish and a comma(',') is used as a decimal separator in Windows Regional Settings. 800xASYS-OL-5100-025	This problem has been corrected.
Aspect Columns in Plant explorer settings controlled by the Workplace Profile Values are changed when installing 5.1 RevD or 5.1 FP4 RevD. In 5.1 FP4 RevD the 'Visible Aspect Columns' in the 'Plant Explorer Settings' Workplace Profile Value is changed to display only the columns 'Aspect Category Name', 'Description', 'Inherited' and 'Modification Time'. 800xASYS-OL-5102-040	This problem has been corrected. The columns are reset and display the original columns: 'Aspect Category Name', 'Aspect Version', 'Description', 'Inherited', 'Modified Name' and 'Modification Time'. **Note**: This problem has been corrected in 800xA Base 5.1 FP4 RevD RU1.
On very few occasion the Operator Workplace has crashed during normal operations. The crash is caused by memory corruption. 800xASYS-OL-5130-032	This problem has been corrected.

Table 2. Operational Issues (Continued)

Issue	Correction or Fix
Security Definition update causes expensive reevaluation of all active OPC subscriptions. For the Feature Pack function, Point of Control, this may cause performance issues in the system when using operations such as request, accept, transfer responsibility. This happens when there are large number of active subscriptions on OPC items from Process Graphic displays. 800xASYS-OL-5110-071	This problem has been corrected.
When the Graphic Display in the base pane of the Tabbed Workplace is pinned then opening a Graphic Display by clicking on Level 1 button may not work and the overlap is shown as blank. 800xASYS-OL-5141-037	This problem has been corrected. **Note**: This problem has been corrected in 800xA Base 5.1 FP4 RevD RU1.
Long object names are not fully visible in the breadcrumb list (drop downs) below the tabs in the Tabbed Workplace. 800xASYS-OL-5130-026	This problem has been corrected. The breadcrumbs (drop downs) will auto adjust to show the complete name as tabs do with respect to the **MinWidth** and **MaxWidth** configuration specified in the Tab Appearance. The same **MinWidth** and **MaxWidth** configuration specified in the Tab Appearance will be used to show the breadcrumbs (drop downs) also. **Note**: This problem has been corrected in 800xA Base 5.1 FP4 RevD RU2.

Table 2. Operational Issues (Continued)

Issue	Correction or Fix
Sometimes the tabs in the Tabbed Workplace are not created correctly if the configured objects are in any of the following alarm states: '**AlarmInactiveShelved**', '**AlarmActiveShelved**' or '**AlarmDisabled**'. 800xASYS-OL-5130-025	This problem has been corrected. **Note**: This problem has been corrected in 800xA Base 5.1 FP4 RevD RU2.
Disabling the Limit 2 Visibility property of PG2 High Performance Bar does not disable the limit 2 functionality. 800xASYS-OL-5140-107	This problem has been corrected.

System Services

This section lists the issues that have been corrected for the System Services in this release.

Central Licensing System

Table 3 lists the Operational issues that have been corrected in the Central Licensing System in this release.

Table 3. Operational Issues

Issue	Correction or Fix
In case of licenses violation for "Batch Spreadsheet Scheduler", slow response (>30 seconds) is observed while scheduling the Batch from a non-800xA node. The problem is observed only on System 800xA in Domain environment and using "domain label separated with a dot".	A correction is done in NLS function of licensing. Eventually, no slow response is observed.
Example of "domain label separated with a dot" name are MyProcess.com, MyProcess.org etc. Refer to 3BSE034463-510_D_en_System 800xA_5.1_Network_Configuration manual, section Choosing Names for Domains and PCs.	
Additionally, License annoyance messages are not translated to Native Language and are displayed in English Language. 800xASRV-OL-5102-001	

SMS and e-mail Messaging System

Table 4 lists the Operational issues that have been corrected in the SMS and e-mail Messaging System in this release.

Table 4. Operational Issues

Issue	Correction or Fix
Alarm delivery to email and SMS subscriber fails, when Message handler, Alarm and Event message source and Alarm and Event list are configured as "Inherit to all instances" or "Copy to all instances" in object type definition Aspect. 800xASRV-OL-5025-004	Corrections are done in the message handler, Alarm and Event message source and the messenger service.

Engineering Studio

Table 5 lists the Function Designer issues that have been corrected in Engineering Studio in this release.

Table 5. Function Designer Operational Issues

Instruction	Correction or Fix
If a Function Diagram includes CBM Signals that are allocated to modules of Burkert 8640 or RACN, then the traffic light wrongly indicates that the CBM Signals are not allocated. Important 800xAENS-OL-5104-023	This problem has been corrected.
In rare cases, the Workplace closes abruptly during copy of components in Function Designer. Important 800xAENS-OL-5140-013 800xAENS-OL-5105-007	This problem has been corrected.

Table 5. Function Designer Operational Issues (Continued)

Instruction	Correction or Fix
Following issues are observed while editing the text box/label in a Function Diagram: • A blue background is seen in the text area, and when the user starts entering the text, the text is not visible. It is visible only after the *Enter* key is pressed. • When a language pack is used and some text is entered, a big preview appears making it difficult to edit the text. 800xAENS-OL-5103-001	This problem has been corrected.
In a Function Diagram, if a connection link is made between an output port of a block and an input port of another block having lower dataflow order, than the block with the output, a respective link variable is created and the variable attribute value is set to ***nosort***. As a result values are not retained for such link variables during the warm download. Important800xAENS-OL-5105-019	This problem has been corrected.

AC 800M

For a complete list of known problems see *System 800xA 5.1 Revision D Release Notes New Functions and Known Problems (2PAA111287*)* and *System 800xA Release Notes System Version 5.1 Feature Pack 4 Revision D (2PAA109967-514 B)*

AC 800M Version 5.1 FP1 Rollup 3 (5.1.1-3)

Changes to IEC 61131 Standard Libraries

Short description of relevant IEC 61131 library changes in System Version 5.1 Feature Pack 4 Revision E that might affect the application compatibility when upgrading.

Table 6. Library changes

Library	Version	Description
AlarmEventLib	1.6-1	Data type and control module description not shown in lower pane of project explorer window Description of the few data types was not shown in the lower pane of the project explorer window. 800xACON-CN-5100-068

Table 6. Library changes

Library	Version	Description
BasicLib	1.7-8	Data type and control module description not shown in lower pane of project explorer window. Description of the few data types was not shown in the lower pane of the project explorer window 800xACON-CN-5100-068
		ParError for Control Module CCInputGate and CCOutputGate might not be set in special cases. For CCInputGate the problem could occur if both Backward.UpperLimitActive and Backward.LowerLimitActive are set at the same time. 800xACON-OL-5000-094
		Range Check (ParError) for Control Modules CCInputGate and CCOutputGate in SIL Applications Not Automatically Activated A problem has been found with BasicLib support control modules CCInputGate and CCOutput-Gate. The description of the EnableParError parameter indicates that the range check (ParError) is automatically active if the module is used in SIL applications which is not the case. This problem could occur if CCInputGate or CCOutputGate have been used in user specific module solutions. 800xACON-CN-5020-088

Table 6. Library changes

Library	Version	Description
ControlAdvancedLib	1.5-13	MinCC, Min4CC, MaxCC and Max4CC. An active PID connected to Max or Min module could now pass the passive input. It is also possible to set the tolerance to zero. 800xACON-OL-5140-004
		In control module PidAdvancedCC, the parameter ERF has changed name to EBV (External back value). The function is still the same if the EBV parameter is connected. When connected the EBV value is used instead of the backward value in the Control Connection in the controller output parameter.
		PidAdvancedCC have been enhanced to support controller types 'ClassicERF' and 'ClassicERF+D'. PidAdvancedCC has additionally been enhanced for controller type 'ABBERF' and 'ABBERF+D'.
		Using Feed Forward in a PID-object in External Reset Feedback (ERF) mode did not result in the correct output value. 800xACON-OL-5141-002
		PidCC and PidAdvancedCC Output value could not be changed in PPA face plate for user with operator privileges. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5141-004
BurnerLib	1.0-3	New library, see Section 2, Functionality Changes new functionality.

Table 6. Library changes

Library	Version	Description
ControlBasicLib	1.3-6	MinCC, Min4CC, MaxCC and Max4CC. An active PID connected to Max or Min module could now pass the passive input. It is also possible to set the tolerance to zero. 800xACON-OL-5140-004
		Master output goes to zero in function block PidCascadeLoop and PidCascadeLoop3P When the master controller came to the limitation MaxReached at 100% the master output was set to zero and then started to ramp up. 800xACON-OL-5110-024
ControlExtendedLib	1.4-6	Windup handling updated as a part of changes for PidCC and PidAdvancedCC to support ERF.
ControlSolutionLib	1.3-1	VelocityLimiter removed in ControlSolutionLib VelocityLimiter is removed from all 5 examples in ControlSolutionLib since it is not needed, the PID should be configured to handle increase rate. 800xACON-CN-5020-086
ControlFuzzyLib	1.4-2	Display Element Value in FuzzyController3CC was corrected
ControlObjectLib	1.3-1	Windup handling updated as a part of changes for PidCC and PidAdvancedCC to support ERF.
ControlSimpleLib	1.3-2	Incorrect behavior of VelocityLimiterReal when using negative Values VelocityLimiterReal function did not correctly handled when one or more of the inputs OutIncLim, OutDecLim, TolPos or TolNeg had a negative value. 800xACON-OL-5020-065

Table 6. Library changes

Library	Version	Description
ControlStandardLib	1.5-17	Detection of limit values for analog output objects. The out-modules used in a control connection chain have got a different backwards signaling. Max- and Min-Reached are no longer set on Max and Min range but is set when the range is passed. This change affects the following modules: AnalogOutCC, SignalOutRealM, ThreePosCC, PulseWidthCC, SignalSimpleOutRealM, ACStdDriveM, DCStdDriveM and EngDriveM. 800xACON-OL-5100-105
		VelocityLimiterCC output freezes if disabled when backtracking While VelocityLimiterCC is backtracking and then when it is disabled, the Out.Forward.Value will no longer freeze but will continue to track backtracked value. The internal state (Out.Forward.Value) is used for value back instead of Out.Backward.Value. 800xACON-OL-5110-015
		Oscillating of the PID output when leaving Max reached/Min reached PIDCC and PidAdvancedCC, output does not oscillate when leaving Max-/Min-Reached. 800xACON-OL-5110-020
		MinCC, Min4CC, MaxCC and Max4CC. An active PID connected to Max or Min module could now pass the passive input. It is also possible to set the tolerance to zero. 800xACON-OL-5140-004

Table 6. Library changes

Library	Version	Description
		During windup mode, PidCC and PidAdvancedCC, sends back Pv in Sp.Backward.Value. A general condition for backtracking to the Sp input is that an upstream object exists that has a possibility to catch a backtracked value to an internal state, but also for an EFR controller algorithm to be able to work on that value. 800xACON-OL-5140-010
		PidCC and PidAdvancedCC with MaxReached set in Out.Backward not bump-less during download A bump on the output proportional to the Gain if the PID occurred when performing a re-configuration download and PidCC or PidAdvancedCC had MaxReached set in Out.Backward. 800xACON-AD-5110-015
		On control module PidCC, the parameter ERF has changed name to EBV (External back value). The function is still the same if the EBV parameter is connected. When connected the EBV value is used instead of the backward value in the Control Connection in the controller output parameter.
		PidCC have been enhanced to support controller types 'ClassicERF' and 'ClassicERF+D'. PidAdvancedCC has additionally been enhanced for controller type 'ABBERF' and 'ABBERF+D'.
		TapCC and TapRealCC - A new node is added where the backward information is transferred in the forward direction. The addition is completely compatible with the present object. Backtracking to the new node is never possible.

Table 6. Library changes

Library	Version	Description
		RealToCC - A parameter *UseBackwardRange* has been added to make the selection to use the backward range as the forward one. The initial value follows the original functionality.
		BranchCC and Branch4CC - A parameter Mode has been added to make the selection in backtracking strategy. The initial value follows the original functionality.
		Control Module ThreePosCC range bounce causes temporary invalid output signal.If no position feedback signal is used and the input signal to the module reaches the boundary for the signal range and then returns; the digital output will be invalid until the signal stabilizes (after internal ramp-up). 800xACON-OL-5000-093
		The SplitRangeCC control module returned an incorrect back value to the preceding modules in case both its outputs are in backtracking mode. 800xACON-OL-5100-120
		If using PID Controller in ERF mode a warm re-configuration causes a bump in backwards value in the passive input. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5110-038
		If using control module SplitRangeCC with PID Controller in ERF mode the back value in some situations was not correct. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5110-040

Table 6. Library changes

Library	Version	Description
		PidCC and PidAdvancedCC Output value could not be changed in PPA face plate for user with operator privileges. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5141-004
		Using Feed Forward in a PID-object in External Reset Feedback (ERF) mode did not result in the correct output value. 800xACON-OL-5141-002
ControlSupportLib	1.4-17	MinCC, Min4CC, MaxCC and Max4CC. An active PID connected to Max or Min module could now pass the passive input. It is also possible to set the tolerance to zero. 800xACON-OL-5140-004
		Master output goes to zero in function block PidCascadeLoop and PidCascadeLoop3P When the master controller came to the limitation MaxReached at 100% the master output was set to zero and then started to ramp up. 800xACON-OL-5110-024
		PidCC and PidAdvancedCC with MaxReached set in Out.Backward not bump-less during download A bump on the output proportional to the Gain if the PID occurred when performing a re-configuration download and PidCC or PidAdvancedCC had MaxReached set in Out.Backward. 800xACON-AD-5110-015

Table 6. Library changes

Library	Version	Description
GraphicSupportLib	1.2-1	Alarm & Event lists not available from faceplate. When a language pack was installed, navigation from AC 800M faceplate's to alarm and event lists did not work. 800xACON-OL-5100-110
INSUMCommLib	1.3-1	INSUM Receive FB showed Error Code-19 INSUM Receive function blocks showed error code -19 after a re-configuration download of the application. 800xACON-CN-5020-078
MMSCommLib	1.4-2	The maximum communication Timeout for MMSReadHI control module has been extended from 10 to 30 seconds.
		Control modules CCToMMS and MMSToCC was not working correctly in backward direction. 800xACON-OL-4100-056
ProcessObjBasicLib	2.5-5	IEDCommandSend: FB is not sending Direct Mode Close command properly IEDCommandSend Function block did not send proper Commands to IED for controlling Control Breaker in Direct Mode Operation. 800xACON-CN-5110-017

Table 6. Library changes

Library	Version	Description
ProcessObjDriveLib	1.5-1	Detection of limit values for analog output objects. The out-modules used in a control connection chain have got a different backwards signaling. Max- and Min-Reached are no longer set on Max and Min range but is set when the range is passed. This change affects the following modules: ACStdDriveM, DCStdDriveM and EngDriveM. 800xACON-OL-5100-105
		Missing reset button The faceplate and interaction window for the drives object (ACStdDriveM, ACStdDrive, DCStdDriveM, DCStdDrive, EngDriveM and EngDrive) was missing a reset button. When the motor had been set in Priority mode, it could only be reset by the AlarmsAck parameter. 800xACON-OL-5100-104
ProcessObjExtLib	2.5-2	NLS texts for MotorValveM and MotorValve updated to be consistent. 800xACON-OL-5100-104
		If both Opened and Close feedback signals was set no ObjectError was given for MotorValve. 800xACON-OL-5140-014

Table 6. Library changes

Library	Version	Description
SignalLib	1.7-5	Detection of limit values for analog output objects.
		The out-modules used in a control connection chain have got a different backwards signaling. Max- and Min-Reached are no longer set on Max and Min range but is set when the range is passed.
		This change affects the following module: SignalSimpleOutRealM
		800xACON-OL-5100-105
		Function blocks SignalSimpleInReal and SignalInReal using OSP value when warning is active. The value on parameter In was not passed to parameter Out for function blocks SignalInReal and SignalSimpleInReal when warning was active, instead OSP value was used. If OSP was configured as pass through the function was correct, but for other settings the OSP value was activated already when warning became active.
		800xACON-OL-5101-024
		Status from control module SignalRealCalcOutM remained as uncertain also after predetermined value of the signal was reached.
		800xACON-OL-5100-126
SupervisionLib	2.6-3	DetectorLoopMonitored, no alarm from single scan fault. The DetectorLoopMonitored control module type (SupervisionLib) handled fault conditions of short duration incorrectly. If a fault condition (e.g., cable break or short circuit) was active for only one scan, the module would internally latch the fault, but there would be no alarm generated or presented.
		800xACON-OL-5020-062

Table 6. Library changes

Library	Version	Description
S3964CommLib	1.4-2	The 'Valid' parameter on the S3964Readcyclic Function Block in S3964CommLib was not stable, fixed toggling when data was updated. 800xACON-OL-5100-115
TCPCommLib	1.1-7	Library could not be inserted in system with other language than English 800xACON-IN-5110-001
		TCPRead did not always return all bytes to read. The TCPRead block in TCPCommLib has been corrected and now stays in pending state until the requested number of bytes has been returned. 800xACON-OL-5110-027
		The TCPRead Function Block has been improved by adding two new parameters: • The RdOffset is an input parameter that defines an index in the receivestructure where the data should be put. • The NoOfBytesLeft is an output parameter showing the number of bytes left in the buffer to be read.
		In rare cases the controller could crash when using TCPCommLib communication in 1131 tasks with short interval times. 800xACON-OL-5140-006
UDPCommLib	1.1-6	Library could not be inserted in system with other language than English 800xACON-IN-5110-001

Changes to AC 800M Control Software

Table 7 lists the issues that have been corrected in this release since Control Software Version 5.1 Feature Pack 1 Rollup 2.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Operation	
Wrong Severity assigned to Task Abort and Latency system alarms In earlier versions, the AC 800M system alarms for Task Abort and Latency were assigned Severity = High. This was incorrect. Task Abort shall have severity Fatal, and Latency shall have severity Medium. 800xACON-OL-5101-018	This problem has been corrected in the AC 800M firmware. Task Abort alarms now get severity = Fatal, and Latency alarms get severity Medium.
TCPRead did not always return all bytes to read. The TCPRead block in TCPCommLib has been corrected and now stays in pending state until the requested number of bytes has been returned. 800xACON-OL-5110-027	This problem has been corrected in TCPCommLib.
Load Evaluate Go evaluation not reporting all alarms, if alarm burst occurs If an alarm burst occurred during Load Evaluate Go, the evaluation report might fail to present some of the alarms. Single alarm activations during Load Evaluate Go were presented correctly. 800xACON-OL-5020-056	This problem has been corrected in the Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
OPC AE Subscription Stop Working AC 800M OPC Alarm & Event subscription could fail for systems with certain network configurations if an MMS A/E connection was broken and later re-established with a different source IP address than originally. 800xACON-OL-5020-058 Product Alert: 3BSE047421D0130	This problem has been corrected in the AC 800M firmware.
Compiler Statistics does not show all Applications The Control Builder's Compiler Statistics tool was only able to include a limited number of applications in the produced statistics. The content of the excess applications was ignored. 800xACON-OL-5100-093	This problem has been corrected in Control Builder.
Switching of Redundant Networks If two controllers were communicating over a network (several switches) and a network failure occurred on the primary network between the controllers, but communication between the primary and the backup network of the controller itself still worked, the controller did not switch to the secondary network. 800xACON-OL-5020-071	This problem has been improved in the AC 800M firmware.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Control Module ThreePosCC range bounce causes temporary invalid output signal If no position feedback signal is used and the input signal to the module reaches the boundary for the signal range and then returns; the digital output will be invalid until the signal stabilizes (after internal ramp-up). 800xACON-OL-5000-093	This problem has been corrected in ControlStandardLib and ControlSupportLib.
ParError for Control Module CCInputGate and CCOutputGate might not be set in special cases For CCInputGate the problem could occur if both Backward.UpperLimitActive and Backward.LowerLimitActive are set at the same time. For CCOutputGate the problem could occur if both Out.Backward.MaxReached and Out.Backward.MinReached are set at the same time. 800xACON-OL-5000-094	This problem has been corrected in BasicLib.
Load Evaluate Go: Changed I/O Out Channel Connection may result in Controller Shutdown If variable connections to Analog Out or Digital Out channels are added, moved, or removed during a LEG session the AC 800M controller may shut down when doing Abort or Accept. 800xACON-OL-5000-095	This problem has been corrected in the AC 800M firmware and Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Increase robustness for CEX interface drivers. Accessing CI855 over CEX bus could give spurious CEX bus timeouts which caused communication stop. A retry mechanism has been introduces in the CEX bus driver to make it more robust against these sporadic errors. The change has indirect effect on CI units using same CEX driver components i.e. MB300 (CI855), S100 (CI856), PROFINETIO (CI871), FF HSE (CI860), Profibus (CI854), Insum (CI857) and DriveBus (CI858). <div align=center>800xACON-OL-5020-061</div>	This problem has been corrected in AC 800M Controller Firmware.
DetectorLoopMonitored, no alarm from single scan fault The DetectorLoopMonitored control module type (SupervisionLib) handled fault conditions of short duration incorrectly. If a fault condition (e.g., cable break or short circuit) was active for only one scan, the module would internally latch the fault, but there would be no alarm generated or presented. <div align=center>800xACON-OL-5020-062</div>	This problem has been corrected in SupervisionLib.
DI880 SIL3 discrepancy An internal channel error on a DI880 caused a discrepancy on the connected BoolIO variable. If this value in turn affects the value of a SIL3 output this could lead to a controller shutdown. <div align=center>800xACON-OL-5020-063</div>	This problem has been corrected in the AC 800M High Integrity firmware.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Control Builder FBD Online view shows incorrect values In Online mode, the Control Builder's FBD view could sometimes display incorrect actual values. Typically, output values from simple assignment blocks would be displayed as zero or false even when the value was non-zero. 800xACON-OL-5020-064	This problem has been corrected in Control Builder.
Shut down of Redundant Controller having a disturbed Modulebus A redundant controller could perform a shut down if there were disturbances on the modulebus (like bad fibers, IO-modules going up and down and so on). 800xACON-OL-5020-072	This problem is corrected in AC 800MAC 800M Controller firmware.
Resetting Forces in a SIL3 application might shutdown the controller If I/O forces are reset by application code in SIL3 application with function ResetForcedValue and the diagnostic function block ForcedSignals is executed later in the same application this could result in a controller shut down. The shutdown occur since PM and SM units will have a different perception of the account of actual forced I/O signals for a short time. 800xACON-OL-5020-074	This problem is corrected in AC 800M Controller firmware.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Missing reset button The faceplate and interaction window for the drives object (ACStdDriveM, ACStdDrive, DCStdDriveM, DCStdDrive, EngDriveM and EngDrive) was missing a reset button. When the motor had been set in Priority mode, it could only be reset by the AlarmsAck parameter. 800xACON-OL-5100-104	This problem has been corrected in ProcessObjDriveLib.
Bad OPC Quality on structured Communication Variables' Status component When fetched from a controller via the OPC Server, the value of the Status component of a structured Communication Variable sometimes erroneously appeared as Bad or Uncertain. All other components of the Communication Variable would appear Good. 800xACON-OL-5100-109	This problem has been corrected in AC 800M OPC Server.
Alarm & Event lists not available from faceplates When a language pack was installed, navigation from AC 800M faceplates to alarm and event lists did not work. 800xACON-OL-5100-110	This problem has been corrected in GraphicSupportLib

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Network Port on Redundant PM891 might Stop Working if Exposed to Excessive ARP Communication Network ports on a redundant PM891 might stop working if exposed to excessive amount of ARP communication. Address Resolution Protocol (ARP) is a protocol used to resolve network IP-addresses and MAC addresses and is a standard part of TCP/IP communication. The problem will affect the network port exposed to excessive amount of ARP communication. In a redundant network configuration a failover will occur to the backup network port and the port will be error marked. The problem can only occur if a CPU failover previously has taken place and then the controller network port is exposed to excessive amount of ARP communication 800xACON-OL-5100-114 Product Bulletin: 3BSE047421D0171	This problem has been corrected in the PM891 Controller firmware.
AC 800M OPC server could not reestablish connection when lost connection to half an application If OPC server lost connection to one controller containing a distributed application, then communication could not be reestablished to the other controllers containing the same application after the OPC server was restarted. 800xACON-OL-5100-116	This problem has been corrected in AC 800M OPC Server.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Controller shutdown when using MMS on PPP The AC 800M controller may shut down if running MMS over PPP on CI853. The problem only occur if both channels on the CI853 is in use. 800xACON-OL-5100-119	This problem has been corrected in the AC 800M firmware.
SplitRangeCC does not Backtrack Correctly The SplitRangeCC control module returns an incorrect back value to the preceding modules in case both its outputs are in backtracking mode. The back value will be a copy of the value received from the preceding module. This results in a discontinuous control output once the backtracking ends. 800xACON-OL-5100-120	This problem has been corrected in ControlStandardLib
S800 I/O under PROFIBUS - DO818 incorrect OSP values Due to a parameter handling fault the values set for OSP are swapped byte-wise. This means the set OSP value will not be as expected unless the same value is set for all channels. Channels set as "keep current value" work as expected. 800xACON-OL-5110-022 Product Bulletin: 3BSE078480	This problem has been corrected in S800CI801CI854HwLib and S800CI840CI854HwLib.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Master output goes to zero in function block PidCascadeLoop and PidCascadeLoop3P. When the master controller came to the limitation MaxReached at 100% the master output was set to zero and then started to ramp up. 800xACON-OL-5110-024	This problem is corrected in ControlSupportLib and ControlBasicLib. Also included in 5.1.1-2 Library Update 1.
Communication Variables latched with bad status during LEG Session Communication Variables configured for manual acknowledge latched with bad status when an application change was downloaded using Load-Evaluate-Go, requiring a manual clear of the status before making the passive application active (Go command) 800xACON-OL-5110-026	This problem has been corrected in the AC 800M firmware.
RNRP out of sync In rare situations an RNRP internal state could get out of sync, leading to a failure to handle network redundancy. This situation was shown by the RNRP Fault Tracer Tool as "RNRP: SystErrLog=590, errNo=1074855937" 800xACON-OL-5110-028	This problem has been corrected in the AC 800M firmware.
Low Time Quality for SNTP between Controllers The time accuracy for clock synchronization using SNTP between controllers may be up to 10ms. The specified accuracy is 1ms. 800xACON-OL-5110-034	This problem has been corrected in the AC 800M firmware.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Increased Frequency of Backup Controller Stop due to LDB Buffer Overflow It was observed that redundant AC 800M controllers PM866 and PM865 with controller firmware versions 5.1.1-2 or 5.1.1-2 CC1 had an increased frequency of experiencing the problem Backup CPU error 'LDB Overflow in Backup'. 800xACON-OL-5112-002 Product Bulletin: 3BSE047421D0175	This problem is corrected in AC 800M Controller firmware.
PM891 crash at network storm A PM891 using RNRP could crash if exposed to a network storm. 800xACON-OL-5140-007	This problem has been corrected in the AC 800M firmware.
PID in ERF-mode with Feed Forward not responding correctly Using Feed Forward in a PID-object in External Reset Feedback (ERF) mode did not result in the correct output value. This problem is present in the following objects: PidCC, PidAdvancedCC. 800xACON-OL-5141-002	This problem is corrected in ControlStandardLib and ControlAdvancedLib
"MBException" block is not working for Modbus Serial, throws -6903 error message FB MBException did not Work. The MBException function block for reading exception status (Modbus Function code 7) did not work. 800xACON-OL-5100-099	This problem has been corrected in the ModBusHwLib.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
MTMReadCyc function block gets wrong value from MOD5 system The ACR values are not read correctly from MOD5 system when using MTMReadCyc function block 800xACON-OL-5100-122	Corrected in CI872MTM5Hwlib in AC 800MConnect
Maximum configurable RPI rate for LD 800DN and other EthernetIP devices Maximum configurable RPI rate for LD 800DN needs to be increased for LD 800DN and other Ethernet/IP devices. This would give option to the user to increase the RPI rate, if the load on the CI873 is high. 800xACON-OL-5100-123	Corrected in CI873EthernetIPHwlib in AC 800M Connect
No response from CI857 during network storm During the network storm of more than 300 packets/second, Ci857 does not respond however the unit status for CI857 doesn't showing the relevant information. Once after the network storm is over, the CI857 is not coming back to normal state. 800xACON-OL-5100-124	Corrected in CI857INSUMHwlib in AC 800M Connect
No communication with Modbus RTU slave after CI853 hotswap Communication with Modbus RTU slave may stop with timeout after a hot swap is made on the CI853 module. 800xACON-OL-5110-036	Corrected in ModbusHwlib in AC 800M Connect

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Modbus, FB MBConnect hanged with error -7000 after Double Power Failure Modbus RTU through the CI853 Could Fail after Power Fail Modbus Communication of Modbus RTU master on the serial interface of the CI853 with slaves could fail in case of repeated power failures on the AC 800M controller. The MBConnect block did show -7000 error status. 800xACON-OL-5020-068	This problem has been corrected in ModBusHwLib.
CI867 Resetting- Frequent disconnections on Modbus TCP network with CI867, acting as slave to external master, would lead to reset of CI867 CI867 Modbus TCP interface could crash when acting as slave to external master if there were repeated disconnections on the network. 800xACON-OL-5100-102	This problem has been corrected in CI867ModbusTcpHwLib.
CI867: Connect fails with -7001 for 75 seconds at removal of ethernet cable Modbus TCP Communication Failure During Switchover The Modbus TCP communication with certain slaves could fail for about 75 seconds in case of CI867 switchover and the CI867 acted as master.This was specific to slaves that did not respond in time to the disconnect requests from the CI867 during the switchover. 800xACON-OL-5100-106	This problem has been corrected in CI867ModbusTcpHwLib. Now the communication failure time has been reduced to a couple of seconds during a CI867 switchover.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Network check in CI873 has to be corrected EthernetIP – Download Aborted due to Sub Network Download of project from Control Builder was aborted if CI873 and the EthernetIP slave devices configured under it in the hardware tree in Control Builder were in the same sub network. Error message displayed: "Device is in different subnet that CI873" 800xACON-OL-5100-107	This problem has been corrected in CI873EthernetIPHwLib.
ABB drives ACS800 and ACS880 connected via RETA or FENA communication adapter on PROFINET have negative speed reference problem It is not possible to run the drives in the negative direction. "Speed Reference" is limited to unsigned values only. 800xACON-OL-5100-108 Product Bulletin: 3BSE047421D0166	This problem has been corrected in ABBDrvFenaCI871HwLib and ABBDrvRetaCI871HwLib. "Speed reference" is now defined as signed integer. Note: In case of having a workaround implemented e.g. addition/subtraction of 65536, this configuration has to be changed when using the modified HwLibs.
S3964ReadCyclic Valid Port toggles during valid Output The 'Valid' parameter on the S3964Readcyclic Function Block in S3964CommLib is not stable. It toggles true/false even though the data is getting updated. 800xACON-OL-5100-115	This problem has been corrected in S3964CommLib

Table 7. Fixed problems AC 800M

Issue	Change or Correction
S100: Optical S100 connection not working properly S100 IO Problem with Long Optic Fiber Cables. There could be communication failures with S100 IO modules when using long optic fiber cables between the CI856 and the S100 IO racks. 800xACON-OL-5110-018	This problem has been corrected in CI856S100HwLib.
Overflow and underflow indications are not seen for Ethernet/IP and DeviceNet Analog I/O modules The overflow and underflow indications are not set automatically to minimum and maximum values in case not specified by user during import 800xACON-OL-5100-069	Corrected in EthernetIP Device Import Wizard in Control Builder
Connection with Modbus TCP slaves fails during CI867 switchover Connection with Modbus TCP slave goes down for long time in case of a CI867 switchover scenario 800xACON-OL-5100-117	Corrected in CI867ModbusTCPHwlib in AC 800MConnect
CCToMMS and MMSToCC not working correctly in backward direction Control modules CCToMMS and MMSToCC was not working correctly in backward direction. 800xACON-OL-4100-056	This problem has been corrected in MMSCommLib

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Controller crash if only one MMS connection exist in the controller This problem has only been observed with soft controller. A controller crash could occur during warm re-configuration of a application with the only MMS connection of the controller. 800xACON-OL-5020-073	This problem has been corrected in the AC 800M firmware.
Discrepancy in SIL3 application if all MMS communication was disabled. A MMS discrepancy in SIL3 application could occur if all MMSHIRead control modules was disabled at the same time and then later enabled. This could lead to a controller shutdown if MMS input data was used in critical loop. 800xACON-OL-5020-075	This problem has been corrected in the AC 800M firmware.
Wrong OPC-status in Out value in SignalRealCalcOutM Status from control module SignalRealCalcOutM remained as uncertain also after predetermined value of the signal was reached. Status will now be good when predetermined value is reached. 800xACON-OL-5100-126	This problem has been corrected in $\mathrm{SignalLib}$.
Missing alarm texts in PPA for SM81x Several of the status bits from SM81x was missing alarm and status text to be presented in PPA alarm list. 800xACON-OL-5100-128	This problem has been corrected in BasicHIHWLib.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
TCPCommLib communication delay if sending more than 256 bytes of data TCPCommLib communication had a delay if multiple messages or messages longer than 256 bytes was sent at the same time. Now several messages will be packaged together for more efficient communication. 800xACON-OL-5110-023	This problem has been corrected in TCPHwLib.
RNRP Route add returns bad status During stress RNRP could return error status (SystErrLog= 590, 591, 593, 595 or 596) and in rare case fail to add network route 800xACON-OL-5110-030	This problem has been corrected in the AC 800M firmware.
Hanging communication causing controller shutdown In very rare case a network lockup situation in network stack could occur and cause the controller to shut down. 800xACON-OL-5110-032	This problem has been corrected in the AC 800M firmware.
Memory leak in Control Builder when going online with several diagrams open Control Builder was having memory leak when to on-line and off-line mode repeatedly with several diagrams open. 800xACON-OL-5110-033	This problem has been corrected in AC 800M Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Controller total load at 100% when network messages pending If a problem with network communication causing continued retry to read or write this could lead to the controller load reaching 100%. In rare case the load could stay at 100% for a long time. If total load is 100% in High Integrity controller for 24h this would lead to a controller shut down. 800xACON-OL-5110-035	This problem has been corrected in the AC 800M firmware.
Diagnostic Overview Communication variables not fully updated after cold start Diagnostic Overview Communication variables was empty and never updated after a Cold download to the controller. 800xACON-OL-5110-037	This problem has been corrected in the AC 800M firmware.
Bump in backward value for in MinCC and Min4CC during download If using PID Controller in ERF mode a warm re-configuration causes a bump in backwards value in the passive input. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5110-038	This problem has been corrected in ControlStandardLib

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Modbus RTU could stop after disabling and re-enabling If Modubs RTU was disabled and later re-enabled the communication was not always resumed. Controller restart was needed to restart communication. 800xACON-OL-5110-039	This problem has been corrected in ModBusHWLib
SplitRangeCC sends wrong back value in some situations If using control module SplitRangeCC with PID Controller in ERF mode the back value in some situations was not correct. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5110-040	This problem has been corrected in ControlStandardLib
Communication Variable faceplate not opening from SFC Viewer Aspect Communication Variable faceplate was not opening from SFC Viewer Aspect. This problem was only visible in version 5.1.1-2 due to changes to search and navigation. 800xACON-OL-5112-001	This problem has been corrected in AC 800M Control Builder.
Controller crash when stressing user defined TCPCommLib communication. In rare cases the controller could crash when using TCPCommLib communication in 1131 tasks with short interval times. 800xACON-OL-5140-006	This problem has been corrected in TCPCommLib

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Diagram Editor not showing online values for components in a data type. No online value was shown if a control module parameter was connected to a component of a structured data type 800xACON-OL-5140-011	This problem has been corrected in AC 800M Control Builder.
Online upgrade increasing communication load for internal MMS communication Internal MMS communication could be handled as external MMS communication after OLU and cause some increased communication load 800xACON-OL-5140-012	This problem has been corrected in the AC 800M firmware.
No feedback error in MotorValve if both Opened and Closed is active. If both Opened and Close feedback signals was set no ObjectError was given. 800xACON-OL-5140-014	This problem has been corrected in ProcessObjExtLib
High load when acknowledge many alarms from 3rd party OPC client. When acknowledging over 250 alarms from 3rd pary OPC client the controller load was 100% for some minutes. 800xACON-OL-5140-015	This problem has been corrected in the AC 800M firmware.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
PidCC and PidAdvancedCC Output value could not be changed in PPA face plate for user with operator privelges PidCC and PidAdvancedCC could only be changed in PPA face plate if user has "Administrate" privileges. This problem was only present if using 5.1.1-2 Library Update. 800xACON-OL-5141-004	This problem has been corrected in ControlStandardLib and ControlAdvanceLib
Controller unintentionally halted due to falsely detected interrupt. A single or dual AC 800M HI controller would unintentionally halt, if falsely detecting an interrupt designated for hardware diagnostics. 800xACON-OL-5020-067 Product Bulletin: 3BSE047421D0173	This problem is corrected in AC 800M Controller firmware.
Function blocks SignalSimpleInReal and SignalInReal using OSP value when warning is active The value on parameter In was not passed to parameter Out for function blocks SignalInReal and SignalSimpleInReal when warning was active, instead OSP value was used. If OSP was configured as pass through the function was correct, but for other settings the OSP value was activated already when warning became active. 800xACON-OL-5101-024 Product Bulletin: 3BSE047421D0160	This problem has been corrected in SignalLib. Also included in 5.1.1-2 Library Update 1.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
VelocityLimiterCC output freezes if disabled when backtracking While VelocityLimiterCC is backtracking and then when it is disabled, the Out.Forward.Value will no longer freeze but will continue to track backtracked value. The internal state (Out.Forward.Value) is used for value back instead of Out.Backward.Value. 800xACON-OL-5110-015 Product Bulletin:3BSE047421D0152	This problem has been corrected in ControlStandardLib. Also included in 5.1.1-2 Library Update 1.
Oscillating of the PID output when leaving Max reached/Min reached PIDCC and PidAdvancedCC, output does not oscillate when leaving Max-/Min-Reached. 800xACON-OL-5110-020 Product Bulletin: 3BSE047421D0152	This problem has been corrected in ControlStandardLib. Also included in 5.1.1-2 Library Update 1.
Detection of limit values for analog output objects. The out-modules used in a control connection chain have got a different backwards signaling. Max- and Min-Reached are no longer set on Max and Min range but is set when the range is passed. This change affects the following modules: AnalogOutCC, SignalOutRealM, ThreePosCC, PulseWidthCC, SignalSimpleOutRealM, ACStdDriveM, DCStdDriveM and EngDriveM. 800xACON-OL-5100-105	This problem is corrected in ControlStandardLib and ProcessObjDriveLib. Also included in 5.1.1-2 Library Update 1.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
MinCC, Min4CC, MaxCC and Max4CC. An active PID connected to Max or Min module could now pass the passive input. It is also possible to set the tolerance to zero. 800xACON-OL-5140-004	This problem is corrected in ControlBasicLib, ControlStandardLib, ControlAdvancedLib and ControlSupportLib. Also included in 5.1.1-2 Library Update 1.
During windup mode, PidCC and PidAdvancedCC, sends back Pv in Sp.Backward.Value. A general condition for backtracking to the Sp input is that an upstream object exists that has a possibility to catch a backtracked value to an internal state, but also for an EFR controller algorithm to be able to work on that value. 800xACON-OL-5140-010	This problem is corrected in ControlStandardLib. Also included in 5.1.1-2 Library Update 1.
Wrong aspect link in SingleLoop faceplate Control module in ControlSolutionLib for "trend display". Trend Display aspect link was opening the Config View instead of the Main View. 800xACON-OL-5100-103	This problem is corrected in ControlSolutionLibGraphExtLib. Also included in 5.1.1-2 Library Update 1.
Incorrect behavior of VelocityLimiterReal when using negative Values VelocityLimiterReal function did not correctly handled when one or more of the inputs OutIncLim, OutDecLim, TolPos or TolNeg had a negative value. 800xACON-OL-5020-065	This problem is corrected in ControlSimpleLib Also included in 5.1.1-2 Library Update 1.
Administration	

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Communication disturbed during Online Upgrade for redundant CI873 Ethernet/IP There may be a communication disturbance with devices under the redundant CI873 when an online upgrade is performed to SV 5.1 FP4 RU3 using redundant CI873 units. In such a case communication would resume after the step 7 on the online upgrade process. 800xACON-AD-5110-023	A correction has been done in the CI873EthernetIPHwlib in AC 800M Connect, due to which there shall not be any communication disturbance during online upgrade from SV 5.1 FP4 RU3 version to later versions.
Controller crashed when CI860 was hot removed. When a hot-remove of CI860 was performed second time, in a rare case resulted in a controller crash. 800xACON-AD-5020-032	This problem has been corrected in the AC 800M firmware.
IEC61850 - Outputs was mapped to wrong input on receiving client after Online Upgrade When importing and downloading new SCD file after online upgraded of CI868 severe mismatch of I/O channels could occur. This could lead to wrong I/O outputs being set or wrong input values read. 800xACON-AD-5110-007 Product Alert: 3BSE047421D0139	This problem has been corrected in CI868IEC61850HwLib.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Controller crash after using rename dialog in Control Builder If object types are replaced using the rename dialog in Control Builder, the controller could crash or wrong retain values could be applied. 800xACON-AD-5020-037 Product Bulletin: 3BSE047421D0157	This problem has been corrected in Control Builder.
AC 800M OPC server got no contact with controllers when Network Switch is restarted Windows cannot handle more than 64 simultaneous connection requests. If restarting network equipment was resulting in more than 21 controllers to reconnect to an already running OPC server this could block the OPC server connections. 800xACON-AD-5100-044	This problem has been corrected in the OPC Server
Import of Control Module failed if Control Builder was Open Import of a single Control Module (in an afw-file) was in one special case not successful in case the affected project was open in Control Builder. The changes in the imported file were not applied. The problem did not occur if the project was not open when the import took place. 800xACON-AD-5100-046	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
MMS Timeout when removing network cables from controllers simultaneously If removing the network cable of the active network from two controllers in different network areas at the same time, the network switchover time could be up to 10 seconds. A network switchover time of 10s will cause a MMS timeout if using Safe MMS communication. 800xACON-AD-5110-013	This problem has been corrected in Control Builder, OPC Server and AC 800M firmware. The reconnect time has been decrease from 10s to 2s.
Backup SM fail at download Configuring many Communication Variables in a SIL3 application could make the backup SM811 fail at download. Product Bulletin: 3BSE047421D0176 800xACON-AD-5110-014	This problem has been corrected in the AC 800M High Integrity firmware.
PidCC and PidAdvancedCC with MaxReached set in Out.Backward not bump-less during download A bump on the output proportional to the Gain if the PID occurred when performing a re-configuration download and PidCC or PidAdvancedCC had MaxReached set in Out.Backward. 800xACON-AD-5110-015	This problem is corrected in ControlStandardLib and ControlSupportLib. Also included in 5.1.1-2 Library Update 1.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Online Upgrade SIL3 failed during Firmware download Online upgrade could fail with CI857 INSUM module in case the CI857 was not able to connect to the gateway in time during the Online upgrade process. 800xACON-AD-5020-040	This problem has been corrected in CI857InsumHwLib.
Upgrade CI868 FP3 -> FP4. GOOSE LN0 Health Var disconnected CI868 LN0 Health variable disconnection upon migration. While migrating to newer Control Builder M version, the variable connected previously under LN0 Health IO channel gets disconnected after migration. 800xACON-AD-5110-009	This problem has been corrected in the Device Import Wizard integrated with Control Builder. The connected variables shall be retained after Migration.
Problem in Online Upgrade for CI857(INSUM) There may be problems in CI857 during like CI857 going to fault mode or rollback of CI857 not possible. 800xACON-AD-5110-021	Corrected in CI857INSUMHwlib in AC 800MConnect

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Modbus TCP Communication through CI867 does not resume through default gateway when next hop gateway is dead A connection is established between the CI867 as master and external slave on another network. Communication goes through the default gateway as configured. When an ICMP redirect message is received from the default gateway, the CI867 correctly updates the next-hop gateway to the new gateway. However if the new gateway is dead, then the communication does not resume through the default gateway. 800xACON-AD-5110-016	In order to revert to the default gateway, the CI867 has to be hot swapped or the CI867 configuration has to be downloaded from the control builder to the controller.
Error 'Unable to get parameter no=361' observed during 1794 AENT download Error after Import of EDS File – Scaling of Parameters When hardware types for some devices was inserted in the hardware tree, the following error message "Unable to get parameter no=xx" was displayed during download to controller. This happened after importing from EDS files which had parameters of data type other than real with scaling values. 800xACON-AD-5100-037	This problem has been corrected in the Device Import Wizard integrated with Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Redundant PM891 fail to restart after power fail If power fail occur during synchronization of backup CPU the power fail recovery in some cases could fail for redundant PM891 controller. 800xACON-AD-5001-001	This problem has been corrected in the AC 800M Controller Firmware.
Controller shutdown during rollback of aborted OLU If a OLU was aborted by exceeded handover limit the rollback could in some cases fail, resulting in a controller shutdown. 800xACON-AD-5020-043	This problem has been corrected in the AC 800M Controller Firmware.
Redundant PM865 fail to restart after power fail. Redundant PM865 controller did not restart after power fail if primary SM81x was missing. 800xACON-AD-5020-044	This problem has been corrected in the AC 800M Controller Firmware.
OLU failed in Controller switchover A timing issue could in rare case cause an OLU to be interrupted and a rollback initiated. This problem did not affect High Integrity controllers. 800xACON-AD-5110-019	This problem has been corrected in the AC 800M Controller Firmware.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
High Integrity controller fail to restart after power fail A timing issue with 1131 program flow monitoring could in rare case cause an power fail recovery to fail for High Integrity controllers. 800xACON-AD-5110-022	This problem has been corrected in the AC 800M Controller Firmware.
Online Upgrade aborted if fault Default Gateway settings detected If faulty / not working default gateway settings was configured either in Controller settings in Control Builder project or via IPConfig in hardware, the Online upgrade was aborted at step 7 before handover was completed. The controller continue to operate as singular controller. 800xACON-AD-5020-045	This problem has been corrected in the AC 800M Controller Firmware for the Trainee controller and is effective in this version.
Configuration	
Control Builder crash If a Control Module was converted to a Single Control Module the Control Builder crashed at download unless it had been restarted in between. 800xACON-CN-5020-084	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Range Check (ParError) for Control Modules CCInputGate and CCOutputGate in SIL Applications Not Automatically Activated A problem has been found with BasicLib support control modules CCInputGate and CCOutput-Gate. The description of the EnableParError parameter indicates that the range check (ParError) is automatically active if the module is used in SIL applications which is not the case. This problem could occur if CCInputGate or CCOutputGate have been used in user specific module solutions. 800xACON-CN-5020-088 Product Alert: 3BSE047421D0167	This problem has been corrected in BasicLib
Problem When Importing Application in Functional Structure Importing an Application that was linked into the Functional Structure could cause an inconsistency in that Application. This lead to errors at check, compile, or in source code handling. The inconsistency could be resolved by making a dummy change in the imported Application and then Save. 800xACON-CN-5020-089	This problem has been corrected in AC 800M Connect.
Memory leak in Control Builder Test Mode Depending on what hardware units were configured in the project, Control Builder was leaking memory when using Test Mode. 800xACON-CN-5020-091	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Not possible to navigate from I/O Address column to Hardware editor POU editors in offline had a column called I/O Address where connected I/O appeared once the project had been downloaded to controller. The pop up menu for this column lacked the possibility to navigate to the actual Hardware editor. 800xACON-CN-5100-016	This problem has been corrected in the Control Builder.
Communication Variables - Missing warning for Expected SIL Configuring Expected SIL for a Communication variable of simple data type with direction Out in a SIL application did not generate any warning message. Configuring Expected SIL for CV Out is not applicable - the CV always has the same SIL as the application. 800xACON-CN-5110-035	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Moving variable connected to SIL3 Communication Variable could cause variable discrepancy Moving a Communication Variable (CV) variable on the server side from one controller to another, for example, changing from controller internal to controller external CV or vice versa, could lead to discrepancy for the CV on the client side, that is, the value in SM811 and PM865 are not the same. Also changing the direction of bidirectional Communication Variables could cause discrepancy. 800xACON-CN-5110-009	This problem has been corrected in the AC 800M High Integrity firmware.
Controller Crash During Download when using S100 IO Controller crash could occur if the user perform repeated downloads of project with S100 IO modules and CI856. 800xACON-CN-5020-087	This problem has been corrected in CI856S100HwLib.
IEDCommandSend: FB is not sending Direct Mode Close command properly IEDCommandSend Function block did not send proper Commands to IED for controlling Control Breaker in Direct Mode Operation. 800xACON-CN-5110-017	This problem has been corrected in ProcessObjBasicLib.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Issues with 1732E 16 Input I/O EtherNet/IP ArmorBlock I/O:1 Error after Import of EDS File – ENUM Values. There could be error/warnings after importing an EDS files for certain devices having parameters fields that had ENUM values. Such EDS files were not imported correctly hence the error. 800xACON-CN-5100-061	This problem has been corrected in the Device Import Wizard integrated with Control Builder.
Issues with 1732E 16 Input I/O EtherNet/IP ArmorBlock I/O Problem Importing EDS File – Mapping Subset of IO Byte There is a problem is importing an EDS file in creating channels when the user wants to map only a subset of the IO bytes. 800xACON-CN-5100-062	This problem has been corrected in the Device Import Wizard integrated with Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Re-configuration of ISP value for Safety I/O in ISP state cause I/O discrepancy in SIL3 Application Input discrepancy will occur during the first IEC 1131 application execution after reconfiguring the ISP value for DI880 or AI880 when the channel is in ISP (Input Set as Predefined) state. This problem can only occur for I/O channels used in SIL3 applications. If the input signal is a part of the critical loop this can lead to an output discrepancy. Depending on Error Handler configuration an output discrepancy may result in a controller shutdown. 800xACON-CN-5024-004 Product Bulletin: 3BSE047421D0159	This problem has been corrected in the AC 800M High Integrity firmware.
Difference Report show non-existing changes in library paths When switching between different projects the difference report did show non relevant changes in library paths related to project paths. 800xACON-CN-5020-080	This problem has been corrected in Control Builder.
I/O values does not freeze for the reconfigured watchdog time (CI854 settings). PROFIBUS Slave Failed to Report Connection Down. The PROFIBUS slave did not report connection down in the Unit status in Control Builder as per the configured watchdog time for the CI854. 800xACON-CN-5100-060	This problem has been corrected in the CI854PROFIBUSHwLib.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Read communication error on INSUM units after download to the controller INSUM Receive FB showed Error Code-19 INSUM Receive function blocks showed error code -19 after a re-configuration download of the application. 800xACON-CN-5020-078	This problem has been corrected in the INSUMCommLib.
AC 800M HI Controller Shutdown when using Load Evaluate Go (LEG) after Power Fail or Online Upgrade (OLU) AC 800M High Integrity controller will shut down during Load Evaluate Go (LEG) after Power Fail or Online Upgrade (OLU). 800xACON-CN-5110-033 Product Bulletin: 3BSE047421D0156	This problem has been corrected in the AC 800M High Integrity firmware.
DIW/PROFIBUS parser generates CB warning subunits, Logical Numbers Discrete Number Error after Import of GSD File – Sub Unit Numbering Warning message was displayed during download of a project with some PROFIBUS devices that has been added in Control Builder after importing from the GSD file. Error message displayed: "Warning in the input file line xx: subunits, and Logical Numbers Discrete Numbers are mutually exclusive." 800xACON-CN-5100-059	This problem has been corrected in the Device Import Wizard integrated with Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
CI868 Hardware Library 2.x is Not compatible with AC800M Controller running FP4 CI868 Hardware Library 2.x is Not compatible with AC 800M Controller running FP4 firmware. Thereby CI868 Hardware Library 3.x should be used mandatorily with AC 800M controller upgraded/running on FP4 firmware or while performing Online Upgrade to FP4. 800xACON-CN-5110-014	This problem has been corrected in CI868IEC61850HwLib.
Support CI868 MMS Receive for RCBs containing LLN0 and LPHD signals - CI868 IEC61850 Wizard and CI868 did not import RCBs containing signals from LPHD and LLN0 Logical Nodes assigned to CI868. 800xACON-CN-5110-016	This problem has been corrected in the Device Import Wizard integrated with Control Builder and in CI868 firmware.
CI868 incorrect Protocol Info assignment for GOOSE send LNs CI868 GOOSE Sending LN IO channels are assigned Protocol Info for more Client IEDs than actually configured in CI868 GCB send dataset 800xACON-CN-5110-041	This problem has been corrected in the Device Import Wizard integrated with Control Builder.
Control Builder error message when undeclared variable used in SFC If the SFC Viewer option is enabled and an undeclared variable is used in a transition, an "Incorrect syntax" error message appeared at Save. 800xACON-CN-5100-077	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Problems when importing Diagrams to Bulk Data Manager When Diagrams were dragged-and-dropped to BDM, there were error messages and some diagram properties were lost. <center>800xACON-CN-5100-078</center>	This problem has ben corrected in AC 800M Connect.
Control Builder, SFC gives Parse Error dialog on Save If the SFC Viewer was enabled for an SFC code block, the Control Builder would sometimes launch a Parse Error dialog after a change to the SFC code block or to the POU containing the SFC. <center>800xACON-CN-5110-024</center>	This problem has been corrected in Control Builder.
Controller Shutdown during Download after Import of Updated Hardware Library The AC 800M controller can shut down when doing re-configuration changes of an updated hardware library. If the channel structure of the hardware library is changed and the Control Builder is not restarted before the re-configuration, the result could become inconsistent and cause a defensive mechanism in the AC 800M Controller to perform a dual shutdown. <center>800xACON-CN-5020-093 Product Bulletin: 3BSE047421D0174</center>	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Slow refresh of Libraries Reservation and engineering of Libraries in Control Builder could be very slow. 800xACON-CN-5100-065	This problem has been corrected in Control Builder.
Control Builder crash when having Project Constant as Task Connection If an application had a project constant as task connection, Control Builder would crash when downloading (or going to test mode). 800xACON-CN-5100-067	This problem has been corrected in Control Builder.
Control Builder crash after mismatch in instance-specific initial values If instance-specific initial values are defined in the Control Properties aspect, then a mismatch in the Change Analysis at download (e.g., after a function block instance is renamed) could lead to a Control Builder crash. This happened if the user Quit the analysis without doing Save. 800xACON-CN-5100-076	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Controller Shutdown during Load Evaluate GO (LEG) Download when 1131 Task without Assignment to Application is present in Controller The (dual) shutdown will occur if performing the LEG application download when an orphan IEC 1131 task exist in the controller i.e. a 1131 Task that is existing in the controller but the corresponding application is not present in the controller. 800xACON-CN-5100-082 Product Bulletin: 3BSE047421D0169	This problem has been corrected in Control Firmware.
Control Builder Crash when Tracing a sink of a Signal in FDB Editor When multiple sinks are found in the FBD editor, there is dialog opened for browsing multiple signal sinks. There was a problem when this dialog stayed open and the user is performing interactions from e.g. Plant Explorer. Control Builder will in this case end itself. 800xACON-CN-5100-085	This problem has been corrected in Control Builder.
Control Builder crash when reserving Diagram On rare occasions, the Control Builder could crash when a Diagram was reserved, especially if application changes had just been made that affected the Project Explorer view. 800xACON-CN-5110-034	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Erroneous restriction against multiple connections from Out ports in Diagrams In some cases when multiple connections were made to an Out port, this was erroneously considered as an error with the message 'Multiple connections are not allowed in both source and destination'. The problem affected both Function Diagrams and Control Diagrams 800xACON-CN-5140-002	This problem has been corrected in Control Builder.
Paste Special of invalid Characters causes problem in Diagram The diagram editor had an insufficient validation of the entered names in the Paste Special dialog. It is possible to include non-valid characters, for example '.' in the name. The result is a non-working diagram. 800xACON-CN-5140-007	This problem has been corrected in Control Builder.
Working with Structured Data Types in Diagram Editor There was two issues when working with variables of structured data type in the Diagram Editor: The component selection dialog did not appear for structured component with more than one layer. Split page for component connections can sometimes caused component connections to 'disappear'. 800xACON-CN-5140-008	This problem has been corrected in Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Maximum number of PROFINET devices reached in LifeList of WebInterface When having more than 128 PNIO devices connected to one switched Ethernet network, the lifelist in the webserver was not able to show all connected devices. The lifelist reported an error "Lifelist full". The error typically occurred when several CI871 (connected to one or several AC800M controllers) shared the same Ethernet network, so that all connected devices respond to the DCP requests, independent of being assigned to that CI871 or not. 800xACON-CN-5100-052	This problem has been corrected in CI871PROFINETHwLib. The number of supported devices has been increased to 252.
PROFINET Device Import Wizard: Data type 'Float32+Status8' not implemented When a gsdml with Float32+Status8 is imported, there is an error message for each channel which uses this type. Error message: "Data type [Float32+Status8] not implemented. No channels are created for it!" 800xACON-CN-5100-063	This problem has been corrected in Control Builder Device Import Wizard.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
PROFINET Device Import Wizard reported error due to CIGIO buffers When importing a gsd file for a device having many parameters on module/submodule level, the number exceeded the supported limits and the import failed. Errors were listed in the conversion results (final page of DIW) and session log of Control Builder. As a result, hardware units could not be inserted into the hardware library. 800xACON-CN-5100-055	This problem has been corrected in Control Builder Device Import Wizard.
Device Import wizard does not generate the hardware definition files correctly for eds files of analog devices that support little endian format. There are some Ethernet IP analog modules with channels of Real data type supporting little endian format. Channels of such devices not work properly after the eds files of such modules are imported using device import wizard. 800xACON-CN-5100-074	This problem has been corrected in Control Builder Device Import Wizard.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Communication problems with Drives on PROFINET after re-configuration If the configuration for an already downloaded device on PROFINET is changed, the cyclic communication after the succeeding download will not start up correctly. The IOPS status for the output values on PROFINET will stay on bad so that the PNIO device will stay in safe state, outputs are not operated. The problem was only seen with Siemens SINAMICS drives following the PNIO PROFIdrive profile by use of API=14848. 800xACON-CN-5100-071 Product bulletin: 3BSE047421D0164	This problem has been corrected in CI871PROFINETHwLib.
Controller crash during delete redundancy and download Controller Could Crash During Download if CI854A Redundancy was Removed. Deleting redundancy for CI854A during re-configuration download could lead to Controller crash. 800xACON-CN-5100-072	This problem has been corrected in CI854PROFIBUSHwLib.
Control Builder crash observed while DIW cancel of importing EDS files Control Builder Could Crash if EDS Import was Canceled Control Builder could crash if the user canceled the import of an EDS file during the import process. 800xACON-CN-5100-073	This problem has been corrected in Control Builder Device Import Wizard.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
PROFINET IO devices using high numbers for the hardware addresses do not start up communication When configuring physical device management (PDev) for a PROFINET IO device the device did not start up communication. PDev is supported if interface and port-sub modules with hardware addresses >=32768 are configured below the DAP. 800xACON-CN-5100-080	This problem has been corrected in CI871PROFINETHwLib.
I/O connection error with Beckhoff device on PROFINET A PROFINET device like the BK9053 from Beckhoff does not start up cyclic communication and indicates 'I/O connection error' in the Unit Status of Control Builder. This problem belongs only to devices that provide cyclic data also on sub modules directly configured below the DAP. 800xACON-CN-5100-083	This problem has been corrected in CI871PROFINETHwLib.
Missing attributes of Dataset Signals Not fully recorded in IEC61850 Wizard Log. IEC61850 Wizard Logging of Missing Signal Attributes Missing 'q' attributes of dataset signals was not recorded entirely in IEC61850 Wizard Log. 800xACON-CN-5110-025	This problem has been corrected in the Device Import Wizard integrated with Control Builder. IEC61850 Wizard shall log all missing 'q' attributes for Dataset signals assigned to CI868.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
CI868 does Not start after Import scd file in Control Builder M and Application Download. CI868 does Not start after Application Download. Importing scd-file containing CI868 subscribing to RCB signals from many LDs under each IED lead to large number of Hardware objects and IO channels in the Control Builder M hardware tree. Downloading such project increased the CI868 startup time beyond the controller timeout value was thereby halting the CI868 module. 800xACON-CN-5110-026	This problem has been corrected in CI868IEC61850HwLib.
CI868 FW error & Restart when only GOOSE signals are present in any IED among MMS signals in other IEDs. CI868 Firmware Error & Restart when only GOOSE signals was configured from certain IEDs to CI868 while other IEDs configured with MMS signals to CI868. 800xACON-CN-5110-027	This problem has been corrected in CI868IEC61850HwLib. It is now allowed to have IEDs configured with MMS signals only, GOOSE Signals only or a combination of both to CI868.
IEC61850 Wizard generated CID/ICD File GSESettings attribute needs correction. CI868 CID/ICD File attribute Error. CI868 CID or ICD file generated from Control Builder did contain GSESetting attribute 'dataSet' instead of 'datSet'. Because of this the dataset could not be assigned to any GCB in IET600 version 5.3 or higher. 800xACON-CN-5110-030	This problem has been corrected in the Device Import Wizard integrated with Control Builder. CI868 CID or ICD file generated from Control Builder M contains corrected attribute.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
IEC61850 Wizard to allow Import of Inconsistent Header SCD file with Warning IEC61850 Wizard Handling had Inconsistent SCD-File. IEC61850 Wizard did not provide proper error messages while aborting import of inconsistent SCD-file with invalid schema. 800xACON-CN-5110-031	This problem has been corrected in the Device Import Wizard integrated with Control Builder. Import shall abort and a brief message about SCD-file parsing fail shall be logged in the log file.
CI868 Error during re-configuring the Hw channel settings (IO ch Inversion) CI868 Error on IO Channel Inversion. CI868 Module went to error state upon setting IO Channel Inverted parameter to True and Download. 800xACON-CN-5140-006	This problem has been corrected in CI868IEC61850HwLib.
Multiple Signal Range parameters shown for analog modules in Ethernet/IP Signal Range parameters for analog modules was generated twice in HWD file 800xACON-CN-5110-038	Corrected in EthernetIP device Import Wizard in Control Builder
Connection timeout multiplier cannot be configured in the hardware type for Ethernet/IP devices The Connection timeout multiplier parameters was hidden parameter in hardware definition file hence user could not change the value 800xACON-CN-5020-095	Corrected in EthernetIP device Import Wizard in Control Builder

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Channel name renaming and selecting byte swap option for std. conversions not possible during import of EDS file. It was not possible to rename channel name and select bytes swap option for some standard conversion in the Io setting page during import of EDS file for Ethernet/IP devices 800xACON-CN-5100-086	Corrected in EthernetIP device Import Wizard in Control Builder
Advanced property cannot be selected for multiple channels during import of EDS file. Advanced property could not be selected for multiple channels in the IO setting page during import of EDS file. 800xACON-CN-5100-087	Corrected in EthernetIP device Import Wizard in Control Builder
I/O bytes field not editable EtherNet/IP device import The Input and Output bytes filed in the IO setting page during import of EDS file of EthernetIP device was not editable. 800xACON-CN-5110-039	Corrected in EthernetIP device Import Wizard in Control Builder

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Corrupt hardware attributes after power fail recovery if preceded by aborted LEG session A similar problem as described below in 800xACON-CN-5100-081 could occur after a power fail recovery if preceded by the following conditions. 1. LEG is performed with changed I/O connections 2. The LEG session is aborted (not accepted) 3. Power fail occur before a new LED or warm re-configuration is performed. 800xACON-CN-5110-047 Product Alert: 3BSE047421D0179	This problem has been corrected in the AC 800M Controller Firmware and AC 800M Control Builder.
Memory Corruption or Controller Crash after Restart when I/O Connections Removed or Added During a cold or warm restart of a controller a memory corruption of the controller memory could occur or the controller could fail to restart (crash). 800xACON-CN-5100-081 Product Alert: 3BSE047421D0168	This problem is corrected in AC 800M Controller firmware. If a power fail restart or cold restart already has been performed with I/O connection changes pending, a controller reset and cold download are needed to remove a potential memory corruption.
Control Builder crash when taking over reservation In some cases the Control Builder could crash when performing a take over operation of library reservation. 800xACON-CN-5100-088	This problem has been corrected in the AC 800M Control Builder.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Name of parameter in DO818 hardware definition not correct The internal name on OSP parameter for channel 26 in DO818 for Modulebus was wrong and have now been corrected. This change is only relevant if accessing parameters via open interface. 800xACON-CN-5110-040	This problem has been corrected in S800IoModulebusHwLib
Data type and control module description not shown in lower pane of project explorer window Description of the few data types was not shown in the lower pane of the project explorer window 800xACON-CN-5100-068	This problem is corrected in AlarmEventLib and BasicLib. Also included in 5.1.1-2 Library Update 1.
Not possible to change decimal digit representation in PPA faceplate It was not possible to change decimal digit representation (fraction) in process graphics faceplate for PID: SP and SP ramp values. 800xACON-CN-5020-085	This problem is corrected in ControlStandardLibGraphExt and ControlAdvancedLibGraphExt. Also included in 5.1.1-2 Library Update 1.
Not possible to change Hysteresis in Level6CC, Level4CC and Level2CC With a signal range of e.g. 60 to 85 it was only possible to set a hysteresis between 60 and 85 in the faceplate. In the Control Builder faceplate it was possible to set a more suitable value, e.g. 0.2. 800xACON-CN-5100-069	This problem is corrected in ControlStandardLibGraphExt. Also included in 5.1.1-2 Library Update 1.

Table 7. Fixed problems AC 800M

Issue	Change or Correction
VelocityLimiter removed in ControlSolutionLib VelocityLimiter is removed from all 5 examples in ControlSolutionLib since it is not needed, the PID should be configured to handle increase rate if needed. 800xACON-CN-5020-086	This problem is corrected in ControlSolutionLib. Also included in 5.1.1-2 Library Update 1.
IEC61850 Wizard throws 'Invalid SCD File' error due to Schema validation failure while importing inconsistent scd-files IEC61850 Wizard throws 'Invalid SCD File' error due to Schema validation failure while importing inconsistent scd-files (Eg. Duplicate LNs under Substation / Voltage Level Bay). 800xACON-CN-5110-044	Corrected in IEC61850 device Import Wizard in Control Builder. Inconsistent scd-file handling has been improved. Any scenario leading to SCL schema validation failure shall be logged in IEC61850 Wizard log as generic message `"Error detected in SCD-file by Parsing Component. Import Aborted".`
CI868 Firmware Error on importing scd-file containing unsupported Data Attribute signals CI868 Firmware Error on importing scd-file containing unsupported Data Attribute signals (Eg. dirGeneral of ACD type, stSeld of DPC type) in GCB assigned to CI868. 800xACON-CN-5020-094	Corrected in IEC61850 device Import Wizard in Control Builder. IEC61850 Wizard shall ignore unsupported Data Attribute signals while importing and not allocate any IO channel for the same. A log warning shall be provided in IEC61850Wizard.log file as follows: `"Unsupported data attribute "IEDName.LDInst.LNName.DOName.DAName" is found in inputs section of IED "SelectedIEDName".`

Table 7. Fixed problems AC 800M

Issue	Change or Correction
CI868 firmware error with Error log 'IED : IP is NULL string CI868 firmware error with Error log 'IED : IP is NULL string' when importing and downloading scd-file containing RCB signals to CI868 from IEDs (with valid IP addresses) from different sub-network. 800xACON-CN-5100-084	Corrected in IEC61850 device Import Wizard in Control Builder.
Control Builder crash when page connector in diagram was missing connection The Control Builder did crash when compiling the program and a page connector in a diagram was missing connection. 800xACON-CN-5110-042	Corrected in Control Builder by adding a compile error for the case when a PageConnector has no data connection.
Adding Join or Split in diagram could cause a crash in editor If already having a Join or Split with very short name, two characters or less, adding a new Join or Split in the diagram could cause a editor to crash. 800xACON-CN-5110-045	This problem has been corrected in Control Builder.
Installation	
TCPCommLib portability error TCPCommLib was not possible to insert in some systems not using English as display language. 800xACON-IN-5110-001	This problem has been corrected in TCPCommLib.
Miscellaneous	

Table 7. Fixed problems AC 800M

Issue	Change or Correction
Issues with Search & Navigation When using Search and Navigation online it was not possible to navigate from a reference in the reference pane to its target and if using Search and Navigation in offline mode, the references did not show up in the reference pane. Product Bulletin 3BSE047421D0131 800xACON-MS-5102-001	This problem has been corrected in Control Builder.

AC 800M version 5.1 FP1 Rollup 2 (5.1.1-2)

Table 8 lists the issues that have been corrected in this release since the initial release of System Version 5.1 Feature Pack 4.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Operation	
Memory Leak when using RNRP External Network Using RNRP External network could lead to a memory leak if the router does not support RNRP or is missing. Product Bulletin 3BSE047421D0137 800xACON-OL-5110-010	This problem is corrected in the AC 800M controller firmware.
Controller crash when communication not stable In rare cases a controller crash was observed when network communication to the controller was not stable i.e. using WiFi network or VPN. Product Bulletin 3BSE047421D0158 800xACON-OL-5110-019	This problem is corrected in the AC 800M controller firmware.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Controller crash when disconnecting serial communication using SerialCommLib In rare cases a controller crash could occur if a disconnection was made by disabling the SerialCommLib connect block when the communication was still ongoing. 800xACON-OL-5110-012	This problem is corrected in the AC 800M controller firmware.
Min, Max and Mux could give wrong result in PM891 It was possible to get the wrong result from the Min, Max, and Mux functions in a PM891 in some rare cases. A problem similar to issue 800xACON-OL-5100-070 could occur if the third or later parameter to the functions were not variables but real value return values from other functions of function blocks. 800xACON-OL-5100-098	This problem is corrected in the AC 800M Control Builder.
Communication with function block not stable when stressed All communication protocols using function block except MMS was experiencing temporary interrupted communication if the communication rate was high or stressed by e.g. frequent connect / disconnections. 800xACON-OL-5102-005	This problem is corrected in the AC 800M controller firmware.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
AC 800M HI Controller shutdown at CPU fail-over AC 800M High Integrity controller could shut down when a CPU fail-over occurred due to inaccessible Modulebus e.g. cluster modem fail or optic fiber fail on the primary Modulebus. Product Bulletin 3BSE047421D0143 800xACON-OL-5110-013	This problem is corrected in the AC 800M HI controller firmware. This problem is also corrected in Control Software for AC 800M version 5.1.1-1 CC1.
Wrong Access rights for Confirmed Write The access right for one variable might under special circumstances assumed the access right of the same variable as configured on a different object level. The problem could only occur if the same variable had different access levels configured on different hierarchical levels in the application. Product Bulletin 3BSE047421D0146 800xACON-OL-5010-042	This problem is corrected in the AC 800M controller firmware. This problem is also corrected in Control Software for AC 800M version 5.1.1-1 CC1.
Default Gateway setting lost when Network is Disconnected more than 10 minutes Default Gateway setting in the AC 800M Controller was lost when the network were disconnected or the switch connected to it was powered off for about 10 minutes. Product Bulletin 3BSE047421D0151 800xACON-OL-5110-016	This problem is corrected in the AC 800M controller firmware.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
MMS timeout when using Peer to Peer Communication between Controllers on different RNRP areas Communication timeouts for Control network communication (MMS). The timeouts have been observed for peer to peer communication between controllers on different network areas using RNRP routers and redundant networks. Product Bulletin 3BSE047421D0149 800xACON-OL-5110-017	This problem is corrected in the AC 800M controller firmware.
AND, OR and XOR Functions Miscalculated when parameter is Implicit Casted The functions AND, OR and XOR gave an erroneous result if the expression was of Boolean type (bool) and the last right hand operator was of integer type (int, dint or uint) causing an implicit cast. Product Alert 3BSE047421D0142 800xACON-OL-5100-100	This problem is corrected in the AC 800M Control Builder.
SFC Viewer missing dynamic status when used in Diagram Types When SFC viewer aspects was used in Diagram Types no dynamic status was presented. 800xACON-OL-5110-014	This problem is corrected in the AC 800M Connect.
PROFIBUS I/O freeze after PM891 switchover In rare case PROFIBUS I/O on CI854 could freeze when a CPU switch over occurred. This problem could only occur for redundant PM891 controllers. Product Alert 3BSE047421D0136 800xACON-OL-5100-097	This problem is corrected in the AC 800M PM891 controller firmware.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Status for Communication Variables, could erroneously be good during Power fail recovery on Inter Application Communication (IAC) Server Controller During power fail recovery of a controller acting as server for Communication Variables (CV), the status of the client CV could erroneously become temporarily good. If this problem occurred the value of the CV was the "Last Good Value", independently of the configured ISP setting. 800xACON-OL-5110-021 Product Alert 3BSE047421D0154	This problem is corrected in the AC 800M controller firmware.
Library Objects based on UniCore and BiCore Objects, Priority Commands Enabled when object is Out of Service Priority command was enabled when object was out of service for objects based on UniCore and BiCore library objects from ProcessObjBasicLib. 800xACON-OL-5100-101 Product Bulletin: 3BSE047421D0147	This problem is corrected in ProcessObjBasicLib.
Administration	

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Finalizing Load Evaluate Go (LEG) session could cause controller crash When accepting or aborting the changes for an ongoing Load Evaluate Go (LEG) session the AC 800M Controller might shut down due to a falsely detected inconsistency. The risk for this problem to occur was low, but is increased with shorter task interval times and the number of IEC 61131 tasks running LEG. Product Bulletin 3BSE047421D0133 800xACON-AD-5110-005	This problem is corrected in the AC 800M HI controller firmware.
Library Issue after Upgrade to System Version 5.1 Feature Pack 4 Library could not be opened nor could new major version of the library be created after upgrade, if the library was in released state or being password protected. Product Bulletin 3BSE047421D0148 800xACON-AD-5110-011	This problem is corrected in the AC 800M Connect.
PM891 Network Port configuration Mismatch after Controller Startup When using explicit port settings for PM891 a configuration mismatch could occur after Controller Startup without active network. In this case the PM891 reverted back to auto detect setting. This problem could also in rare cases occur after a CPU switchover. Product Bulletin 3BSE047421D0150 800xACON-AD-5100-040	This problem is corrected in the AC 800M PM891 controller firmware.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Control Builder crash when copy and paste single diagram In some cases copy and paste of a single diagram could lead to a Control Builder crash. 800xACON-AD-5140-002	This problem is corrected in the AC 800M Control Builder.
DP840 stop working after Online Upgrade Channel 2-8 on DP840 I/O unit used on Modulebus would fail after Online Upgrade. When performing an Online Upgrade using DP840 on Modulebus, all channels except channel 1 got error status. 800xACON-AD-5110-006	This problem is corrected in the AC 800M controller firmware.
SIL3 I/O Connection is changed with Online Upgrade, the I/O is Degraded to SIL2 If Online Upgrade procedure was performed and there were pending, uncommitted change in the controller configuration, this lead to degradation of SIL3 DO880 I/O to SIL2. Product Alert 3BSE047421D0153 800xACON-AD-5020-036	This problem is corrected in the AC 800M Control Builder. Also see Restriction to commit pending hardware changes during Online Upgrade on page 30.
Controller Shutdown during Online Upgrade if I/O Unit in B position A act as Primary when Configured for Hot-Replacement High Integrity controller might perform a dual shutdown during Online Upgrade (OLU) if Modulebus I/O is configured as Hot Replacement and any of the I/O Units in position B in the module termination unit (MTU) acted as Primary. Product Bulletin 3BSE047421D0144 800xACON-AD-5020-035	This problem is corrected in the AC 800M HI controller firmware.
Configuration	

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Not possible to import Diagram Types Importing Diagram Types to an already existing library was not working. 800xACON-CN-5110-028	This problem is corrected in the AC 800M Connect.
Online search of variables connected to system in_out parameters was not found When using Search and Navigation online it was not possible to find all variables connected to system function parameters of type in_out. 800xACON-CN-5100-056	This problem is corrected in the AC 800M Control Builder.
Text problems when using other code page than US-English in Diagrams Texts and comments entered in diagrams when using other code page than US-English (e.g. 1252) was presented as question marks. 800xACON-CN-5140-001	This problem is corrected in the AC 800M Control Builder.
Search and Navigation not finding in_out parameters in Diagrams Searching for a parameter with direction in_out with the Search and Navigation tool did not find any Diagram instances. 800xACON-CN-5110-023	This problem is corrected in the AC 800M Control Builder.
Alarm blocks with top level diagram as alarm owner and no source name not working Alarm blocks with top level diagram as alarm owner and source name not connected was not working. This problem occurred if an object in the top level diagram (directly on top level) was breaking the alarm owner chain. 800xACON-CN-5100-066	This problem is corrected in the AC 800M Control Builder.

Table 8. Fixed problems AC 800M

Issue	Change or Correction
Long response time for POU editor with many variables When having a POU or hardware editor with many rows/variables i.e. more than 2000, the editor became very slow. 800xACON-CN-5110-022	This problem is corrected in the AC 800M Control Builder.
Possible to configure Acknowledge for Internal IAC and CV with direction out It was possible to configure Communication Variable (CV) Acknowledge groups also for communication variables used for controller internal communication within one task and also for access variables having direction out. These configurations had no practical effect. 800xACON-CN-5110-032	This problem is corrected in the AC 800M Control Builder. Also see Increased maximum timeout for safe peer-to-peer. The maximum timeout for MMSReadHI control modules is increased to 30 seconds. on page 28

Application Change Management

This section details the problems for Application Change Management that are resolved in this release.

Operation

Table 9 lists the major system or product operational issues that have been corrected since the previous version or service pack. A brief description of the correction has been given wherever possible.

Table 9. Operational Issues

Issue	Correction or Fix
In some instances, ACM client stops responding, or insufficient memory message is displayed during check in of large projects. 800xAACM-OL-5140-001	This problem has been corrected. Note: This issue is also corrected in 800xA 5.1 FP4 Rev D with Application Change Management S-FP 5.1.4-1 RU.
Loading the System extension, '**ACM for Engineering Studio**' fails due to missing dependent extension. 800xAACM-OL-6000-003	This problem has been corrected. Note: This issue is also corrected in 800xA 5.1 FP4 Rev D with Application Change Management S-FP 5.1.4-1 RU.
If an entity is being checked in to the ACM Server, the check in comment of all the dependent entities will be updated, even if those dependent entities do not change. 800xAACM-OL-6000-002	This problem has been corrected. Note: This issue is also corrected in 800xA 5.1 FP4 Rev D with Application Change Management S-FP 5.1.4-1 RU.

Table 9. Operational Issues (Continued)

Issue	Correction or Fix
Connection to an existing ACM server is not possible for first time launch of ACM client. 800xAACM-OL-5140-004	This problem has been corrected. Note: This issue is also corrected in 800xA 5.1 FP4 Rev D with Application Change Management S-FP 5.1.4-1 RU.
In some instances, GetLatest with dependencies may fail if *ACMClient.exe* memory in task manager is high (e.g. memory > 450MB). 800xAACM-OL-5140-002	This problem has been corrected. Note: This issue is also corrected in 800xA 5.1 FP4 Rev D with Application Change Management S-FP 5.1.4-1 RU.

Instruction Manual Changes

Table 10 lists the problems or issues in the instruction manuals that have been corrected since the previous version. A brief description of the correction has also been given wherever possible.

Table 10. Instruction Manual Changes

Issue	Correction or Fix
The ACM Client fails to connect if the 800xA System is configured in a different domain than the Microsoft Sharepoint Service on the ACM Server. 800xAACM-MC-6000-001 800xAACM-OL-5140-003	The ACM Server and the 800xA System should be configured in the same domain. Refer **Prerequisites** subsection of *System 800xA Engineering, Application Change Management (2PAA108438*)*. Note: This issue is also corrected in 800xA 5.1 FP4 Rev D with Application Change Management S-FP 5.1.4-1 RU.

SFC Viewer

Table 11 lists the Operational issues that have been corrected in SFC Viewer in this release.

Table 11. Operational Issues

Issue	Correction or Fix
Communication Variable faceplate is not opening from SFC Viewer Aspect. The following error occurs: `'Object not found'`. **Note**: This problem is only visible on ABB Control Software for AC 800M version 5.1.1-2. 800xASFC-OL-5140-005	This problem has been corrected. **Note**: After the Rollup has been installed, the upload needs to be done once again in all the existing SFC Viewer Uploader aspects. **Note**: ABB Control Software for AC 800M version 5.1.1-3 needs to be installed.
In the Transition window, the tool tip for graph view displays both tag name and object name but the list view displays only tag name. 800xASFC-OL-5130-002	This problem has been corrected.
SFC uploader displays only one variable and same path, even if different Control modules are written in the SDT variable. 800xASFC-OL-5130-004	This problem has been corrected.
After upgrade of Control Builder M from previous versions to 800xA 5.1 Feature Pack 4, SFC uploader links the variables to objects, but does not link to the faceplate. 800xASFC-OL-5130-005	This problem has been corrected.
In the transition window, the entries that are being displayed for Unfulfilled Criteria are not getting updated with the current OPC values. Important 800xASFC-OL-5110-008	This problem has been corrected.

Table 11. Operational Issues (Continued)

Issue	Correction or Fix
If the transition connecting the selection branch is not placed in the X and Y coordinates on the same level, then the lines connecting these selection branches in the SFC Viewer are not drawn correctly. 800xA-MEL-OL-5130-001	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
Continuous opening and closing of SFC Viewer aspect leads to memory leak up to 1800kb, and eventually the workplace closes. 800xASFC-OL-5130-003	This problem has been corrected. Memory leakage has been reduced. **Note**: On opening and closing the SFC Viewer aspect for 82 times, memory leakage has been reduced from 1800kb to 200kb (it is reduced by 89% approximately). **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
In SFC Viewer Uploader, if a Control Module type is instantiated in multiple levels inside the same application, then the Structured Data type variables are not listed in the SFC Viewer Uploader aspect at the application level. 800xASFC-OL-5130-006	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
On accessing the SFC Viewer Uploader aspect and Viewer aspect of a library Control Module Type element, in Object Type Structure, the workplace stops responding. 800xASFC-OL-5130-007	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.

Table 11. Operational Issues (Continued)

| Issue	Correction or Fix
Following software configuration message is displayed for first time, if a graphic display is accessed from any user account other than installed user account: 800xASFC-OL-5130-009	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
Communication Variables used in Single Control Module are not listed as part of SFC Viewer Uploader, and they are also not listed in SFC Viewer transition for navigation. 800xASFC-OL-5130-010	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
If the transition logic has a single condition, the variable name for that particular condition in SFC Viewer is not displayed correctly. 800xASFC-OL-5130-011	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
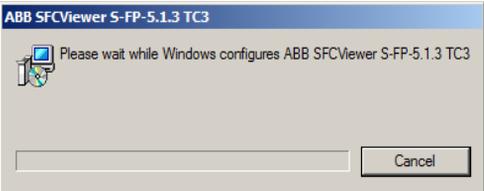
Table 11. Operational Issues (Continued)

Issue	Correction or Fix
In a transition, when trying to open a Faceplate other than a Unit Faceplate, the following error occurs: `'Object not found'.` 800xASFC-OL-5130-013	This problem has been corrected. **Note:** After the RollUp has been installed, the upload needs to be done once again in all the existing SFC Viewer Uploader aspects. **Note:** ABB Control Software for AC 800M version 5.1.1-2 needs to be installed. This feature requires ABB Control Software for AC 800M version 5.1.1-2 correction for 800xACON-CN-5110-023. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
In the application, if multiple children of same type are used, there is a conflict of these children when trying to upload them in SFC Viewer Uploader and results in navigating to wrong objects. 800xASFC-OL-5130-014	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
In SFC Viewer, when an SFC is configured in Diagram Types, the dynamic animation does not happen for instances created using the following type of animation at the application level: • Step animations in the step viewer. • Transition window logic animations. 800xASFC-OL-5130-015	This problem has been corrected. **Note:** ABB Control Software for AC 800M version 5.1.1-2 needs to be installed. This feature requires ABB Control Software for AC 800M version 5.1.1-2 correction for 800xACON-OL-5110-014. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.

Table 11. Operational Issues (Continued)

Issue	Correction or Fix
In SFC Viewer, object navigation does not work as expected when Communication Variables are used in Control Diagrams. 800xASFC-OL-5130-016	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
SFC Viewer aspects may have following issues with Jump box: • Overlapping jump with adjacent step box. • Jump of initial step box is partially visible in view area. • There is no clear visible connection between step box and transition box if there are any Jumps on the step box. **Or** If the Diagram Input Parameters are used in the Transition criterion logic, the resulting Transition Display of the SFC viewer will not show the live data. 800xASFC-OL-5130-018 800xASFC-OL-5102-001	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
In SFC Viewer transition view, on using multiplication block, animated logic may display wrong state for the logic. 800xASFC-OL-5130-019	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
In SFC Viewer, when more than 3 level operators are being used, the transition output text is not completely displayed in the Graph View of the transition viewer. 800xASFC-OL-5130-020	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.

Table 11. Operational Issues (Continued)

Issue	Correction or Fix
The text limit set in SFC Viewer is as follows: For Graph View • Uppercase Letters: 20 characters. • Lowercase Letters: 26 characters. For List View • Uppercase Letters: 28 characters. • LowerCase: 36 characters. When the number of characters exceeds the maximum limit set or the text has space in it, the text in the SFC Viewer overlaps. 800xASFC-OL-5130-021	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
When a same variable is used inside two control modules, the object navigation opens the "in" variable for CM1 faceplate which is incorrect. As a reason, the object navigation fails, because for one control module the variable is passed as "in", and for the other it is passed as "in_out". 800xASFC-OL-5130-022	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.

Table 11. Operational Issues (Continued)

Issue	Correction or Fix
Driving object path is not displayed correctly in the transition window. For example, the actual driving path to be displayed is **DrivingObject.AEL.Stat** or **DrivingObject.AEH.Stat**, instead **DrivingObject.Stat** is displayed. 800xASFC-OL-5130-025	This problem has been corrected. User can set the Tag Separator value based on the requirement in SFC Viewer Uploader aspect for that application. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.
In some instances, workplace closes while opening different SFC Viewer aspects continuously. 800xASFC-OL-5102-002	This problem has been corrected. **Note**: This issue is also corrected in 800xA5.1 FP4 Rev D with SFC Viewer S-FP 5.1.3-1 RU.

IEC 61850

Table 12, Table 13, and Table 14 lists the Installation, Configuration, and Operational, issues that have been corrected in IEC 61850 in this release.

Table 12. Installation Issues

Issue	Correction or Fix
Canceling IEC 61850 OPC Server installation Or Uninstalling IEC 61850 OPC Server does not remove Update Manager component from the system. 800xAIEC-IN-5101-003	This problem has been corrected.

Table 13. Configuration Issues

Issue	Correction or Fix
Descriptions added in PPA for objects IED, LD, LN and Control Connection Aspect Properties are not retained after second upload of same SCD file. 800xAIEC-CN-5104-008	This problem has been corrected.
Uploader crashes while uploading SCD file containing '&' character in description of any Conducting Equipment or Bay. 800xAIEC-CN-5104-009	This problem has been corrected. Message box is displayed about invalid scd-file.
OPC Server - IED communication 'Drop-out' occurs intermittently. 800xAIEC-CN-5104-013	For standard password recommendations for CET FTP File transfer, refer to Section 2, 800xA IEC61850 OPC Server, of *IEC 61850 Configuration manual (9ARD171387*)*.

Table 13. Configuration Issues (Continued)

Issue	Correction or Fix
Uploader stops during the append operation, when a generic object with the same name of the substation already exists at the same level of substation in Functional Structure. 800xAIEC-CN-5104-014	This problem has been corrected.
Occasionally IEC 61850 connect uploader may crash while uploading inconsistent scd file. For example, Dataset do not refer correctly to FCDAs in scd file. 800xAIEC-CN-5100-002	This problem has been corrected. Uploader generates pop-up error message mentioning Invalid scd-file. Ensure that scd-file contains the dataset signals, that is, FCDA for each signal have all attributes, namely, FC, doname, daname, lninst, lnclass, prefix and ldinst.
CET Tool crashes on second import of scd-file with missing "type" attribute of SubNetwork in Communication section. 800xAIEC-CN-5024-001	This problem has been corrected.

Table 14. Operational Issues

Issue	Correction or Fix
800xA Alarm and Events generated from LNs associated with Bay, Voltage Level and Substation do not indicate respective names of Bay, Voltage Level and Substation in Object name and Object description fields. 800xAIEC-OL-5101-002	This problem has been corrected. 800xA Alarm & Event list can now show the names of Bay, Voltage Level and Substation in Object name and Object description fields when alarm is generated by associated LNs.

Device Management FOUNDATION Fieldbus

Table 15 and Table 16 lists the Configuration and Operational issue that have been corrected in Device Management FOUNDATION Fieldbus in this release.

Table 15. Configuration Issues

Issue	Correction or Fix
After importing the SAMSON 373x device type the check will not finish successfully and a following upload of the FF library will fail. 800xDMF-CN-5100-022	This problem has been corrected.
The Backup of FF configuration fails if there is no interactive user logged in on the node where the backup is executed. 800xDMF-AD-5000-017	This problem has been corrected.
UTF-8 coded device specific strings from DD/EDD are not supported. The strings are shown with an additional special characters Â°C. 800xADMF-CN-5131-001	This problem has been corrected.
The 'Enter matrix' method in the Transducer block TR8007 in the H1 device Micromotion 2700 revision 07 stops execution with an error. 800xADMF-CN-5131-002	This problem has been corrected.
Version strings from read H1 devices may be displayed in a hexadecimal format. 800xADMF-CN-5131-005	This problem has been corrected.

Table 16. Operational Issues

Issue	Correction or Fix
OPC DA service for a HSE subnet may stay in undefined state after restore or restart. 800xADMF-OL-5131-003	This problem has been corrected.

Device Management PROFIBUS & HART

Table 17 and Table 18 lists the Configuration and Operational issues that have been corrected in Device Management PROFIBUS & HART in this release.

Table 17. Configuration Issues

Issue	Correction or Fix
An Upload executed in the Subscriber System will fail when: a) The selected structure / object in the Provider System has Device Management PROFIBUS/HART aspects. AND b) Plant Explorer is NOT open in the Provider System. 800xDPH-CN-5100-023	This problem has been corrected.
Following issues may occur on the system that have instances of 'PDP22-FBP with UMC100' Hardware Type of BMI_FBP_UMC100_HwLib library while updating or upgrading from System Version 800xA 5.1 Feature Packs. a. The AC 800M Status Monitoring System Extension load fail with Object Hook error for Fieldbus Management aspect. b. The Control Project upgrade fail with Object Hook error for Fieldbus Management aspect. 800xDPH-CN-5100-033	This problem has been corrected.

Table 17. Configuration Issues (Continued)

Issue	Correction or Fix
S800 IO DTM configuration cannot be saved after modification in composer field. For example, if user modify "OSP control" of a digital output channel from "set OSP value" to "keep current value", while reopening the DTM configuration, "OSP control" of that channel is still "set OSP value". 800xDPH-CN-5100-043	This issue has been fixed for S800 IO DTMs.
Delete the first S800 IO module will destroy channel parameter set in Composer Melody. For Example: Three modules created with Composer Melody: • Slot 1: DI810 • Slot 2: DO810 • Slot 3: AI835A Delete the first module DI810 will destroy the channel parameter set of subsequent modules. 800xDPH-CN-5100-044	This problem has been corrected.
DTM UI to enable HCIR is not available for CI840 Module. 800xDPH-CN-5100-045	This problem has been corrected. HCIR UI available for CI840.

Table 17. Configuration Issues (Continued)

Issue	Correction or Fix
AI830 and AI893 DTM Process Value and Bar Graph are not displayed if the signal range selected other than "0...400 ohms" 800xDPH-CN-5100-027	This problem has been corrected.
The Modulebus and CI854 module instances are counted for Device Management PH license count. 800xADPH-CN-5100-003	This problem has been corrected.
When user try to create an instance for device object with specific DTM from a system node on which required DTM is not installed the operation fails with error message "Failed to Create Object! Catastrophic failure". 800xDPH-CN-5100-038	In such case user will get more meaningful error message "*Failed to Create Object! E_AFW_DTM_MISSING (0x8abb4601) Object creation!!! The required DTM is either missing or not installed properly in this system*".

Table 18. Operational Issues

Issue	Correction or Fix
Some of the Asset Monitors of HART Devices connected under Module Bus and CI840 with S800 modules report bad status with alarm as "HART_RESPONSE_BYTE1 Input Record quality: badCommFailure" in one AO Cycle and the same HART Device Asset Monitors report Good status in the next AO cycle. For example: Devices with Good status in first cycle will report Bad status in next cycle and vice versa. This is a random behavior across the HART Devices connected under Module bus and CI840 with S800 modules. 800xADPH-OL-5100-022 800xADPH-OL-5100-020	This problem has been corrected. Asset Monitors report good status for devices connected under Module bus and CI840 with S800 IO Modules. Only exception is during Asset Optimization cycle, if DTM is open and cyclic update is selected for DTM, same device or any other device from same IO module may report bad status. Incase DTM is closed, bad alarm will get reset during subsequent AO cycle.
Communication problem is observed when some HART Device DTMs such as Endress+Hausser Liquiline M Cci / CM42, Liquiline M pH-ORP / CM42 are connected to S800 IO Modules. 800xDPH-OL-5100-040	This problem has been corrected.
Configure OPC Server hangs when PH OPC server is already in Service state. 800xADPH-OL-5100-0046	This problem has been corrected.

Table 18. Operational Issues (Continued)

Issue	Correction or Fix
S900 - IO Diagnosis error in running phase observed with Composer Melody. This issue occurs when 16 modules of type AI930 (AI4H A) are used within one S900 I/O Terminal Unit. 800xDPH-OL-5100-042	This problem has been corrected.
The DI828 and DO828 channels are being switched incorrectly in Freelance and Composer Melody. For Example: Channel 1 is switching output 9 LED, Channel 8 is switching output 16 LED, Channel 9 is switching output 1 LED, channel 16 is switching output 8 LED and so on..." 800xDPH-OL-5100-041	This problem has been corrected and Channel configuration is properly handled on Freelance and Melody Composer.

Device Library Wizard

Table 17 lists the Configuration issues that have been corrected in Device Library Wizard in this release.

Table 19. Configuration Issues

Issue	Correction or Fix
Installing some Device Types in System 800xA 5.x versions through Device Library Wizard, may result in "The 'DEP_Compatible' attribute is not declared" error message and the device type installation fails. The problem is caused by an additional Cyber security feature (Data Execution Prevention (DEP)) supported by the Device Type Manager (DTM) included in the Object Type. 800xADLW-CN-5100-010	This problem has been corrected.

Information Management

Table 20 lists the Operational issues that have been corrected in Information Management in this release.

Table 20. Operational Issues

Issue	Correction or Fix
Information Manager 5.1 Revision B in combination with any Feature Pack, fails to store Condition Events (Alarms). An error message indicating that this problem is being seen, can be found in the System Event List. The following error message is displayed: *Events of Category (CategoryName) will not be collected because of a definition error.* 800xAINM-OL-5103-036	This problem has been corrected.

800xA for Advant Master

Table 21, Table 22 lists the Operation and Configuration issues that have been corrected in 800xA for Advant Master in this release.

Table 21. Operational Issues

Issue	Correction or Fix
Process objects may be locked for operation in a period of 5 minutes. The faceplate view indicates 'locked by other', but there are no other users of the object. 800xAADM-OL-5010-005	The lock handling function has been made more robust against delayed lock responses from the controllers. **Note**: This problem has been corrected in 800xA for Advant Master 5.1 FP4 RevD RU1.
OPC DA Service Provider may crash when "Local Devices" system status displays are shown in the workplace. 800xAADM-OL-5111-005	This problem has been corrected. **Note**: This problem has been corrected in 800xA for Advant Master 5.1 FP4 RevD RU1.
The red cross is shown on the process displays until the Connectivity Server is restarted. This problem concerns version S-FP 5.1.1-1 TC1 only. 800xAADM-OL-5111-006	This problem has been corrected. **Note**: This problem has been corrected in 800xA for Advant Master 5.1 FP4 RevD RU1.
The function for re-send of subscription request signals which are not received by the controller. The function continues to send these request signals even if the subsequent signals are sent successfully. This can cause unnecessary load in RTA. 800xAADM-OL-5111-007	This problem has been corrected. **Note**: This problem has been corrected in 800xA for Advant Master 5.1 FP4 RevD RU1.

Table 21. Operational Issues (Continued)

Issue	Correction or Fix
The reversed time synchronization (from 800xA to controllers) does not work properly for redundant Connectivity Servers. 800xAADM-OL-5111-001	This problem has been corrected. **Note**: This problem has been corrected in 800xA for Advant Master 5.1 FP4 RevD RU1.
The 800xA for Advant Master Connectivity Server do not support Alarm refresh functionality. The Connectivity Server does not recreate and present the alarm state changes for objects in the controller that has occurred when the Connectivity Server (or the Event Collector) is not available. 800xAADM-OL-5100-006	The new function Advant Master Alarm refresh is supported in this version. Refer the *800xA for Advant Master 5.1 Configuration (3BSE030340*)* manual for more information.

Table 22. Configuration Issues

Issue	Correction or Fix
Sometimes a click on the button "RTA Board Config" fails to start On-line Builder. 800xAADM-CN-5111-008	This problem has been corrected. **Note**: This problem has been corrected in 800xA for Advant Master 5.1 FP4 RevD RU1.

Section 4 Fixed Problems in Feature Pack 4 Revision D

This section details the problems for each functional area that have been fixed in System 800xA 5.1 Feature Pack 4 Revision D. A brief description of the correction is also provided. For a complete understanding of the problems fixed, refer also the Fixed Problems section in *System 800xA 5.1 Revision D Release Notes Fixed Problems (2PAA111288*)*.

Base System

Table 23, Table 24 and Table 25 lists the Installation, Configuration, and Operational issues that have been corrected in the Base System for the 800xA 5.1 Feature Pack 4 Revision D release.

Table 23. Installation Issues

Issue	Correction or Fix
During upgrade of an 800xA System to 800xA 5.1 FP3 or 800xA 5.1 FP4, there is a small risk that the Alarm Manger will crash. 800xASYS-IN-5130-001	This problem has been corrected.

Table 24. Configuration Issues

Issue	Correction or Fix
Configured Alarm and Event list tool bars revert back to default setting after changes in the Alarm and Event list configuration. This error is introduced in 800xA 5.1 FP3. 800xASYS-CN-5140-008	This problem has been corrected.
Assigning OPC tags to PG2 High Performance element HP Radar 3 can cause the Graphics Builder to freeze. 800xASYS-CN-5140-014	This problem has been corrected.
Having multiple Profile Value Aspects on a Workplace Object might not function properly. 800xASYS-CN-5130-001	This problem has been corrected.
The current depth of objects from the root in a Tabbed Workplace is three and represent buttons, tabs and drop downs. 800xASYS-CN-5130-005	The depth of objects in a Tabbed Workplace is now configurable through the **Tab Grouping** aspect.

Table 25. Operational Issues

Issue	Correction or Fix
No support for shortcut key in Tabbed Workplace. 800xASYS-OL-5140-006	Shortcut key navigation is now supported in Tabbed Workplace. For more information, refer to Using Hotkeys in Tabbed Workplace on page 155.
In 800xA 5.1 FP4, functionality was added to support 64 network areas. However, no system alarms are generated for networks with ID greater than 35. 800xASYS-OL-5140-022	This problem has been corrected.
The Audible Alarm tool in the Combined Application Bar introduced in 800xA 5.1 FP3 does not work. 800xASYS-OL-5130-011	This problem has been corrected.
It is not possible to use an element-hosted Aspect View Invoker on a graphic display to call up a faceplate by clicking on a graphic background. 800xASYS-OL-5130-021	This problem has been corrected.

Using Hotkeys in Tabbed Workplace

Navigation in a tabbed workplace can now be done using keyboard shortcuts. The keyboard shortcuts can be defined through by adding the **Hot Keys** aspect (see Figure 3).
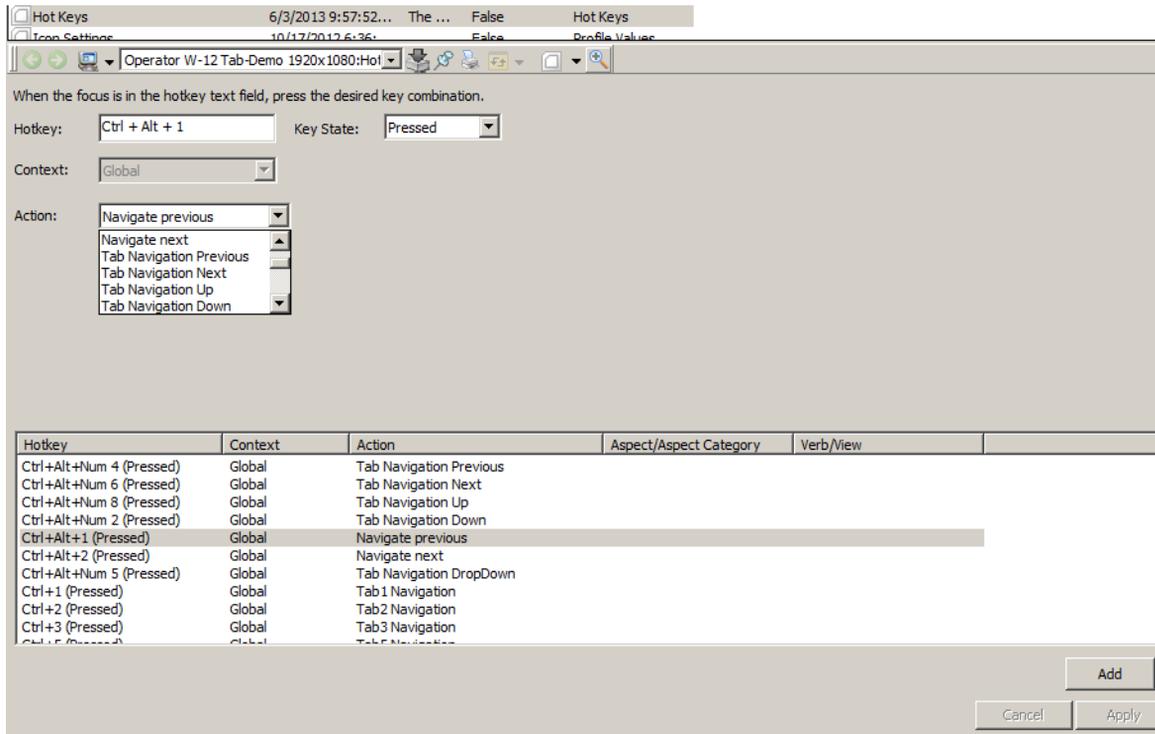
Figure 3. Hot Keys aspect

In **Hotkey**, enter the hotkey for keyboard navigation.

In **Action**, select the required tab navigation for the keyboard shortcut. Actions such as Tab Navigation Previous, Tab Navigation Next, Tab Navigation Up, Tab Navigation Down, and so on are available.

Figure 4 shows the objects in the Functional Structure and the appearance of the respective objects in the Tabbed Workplace.
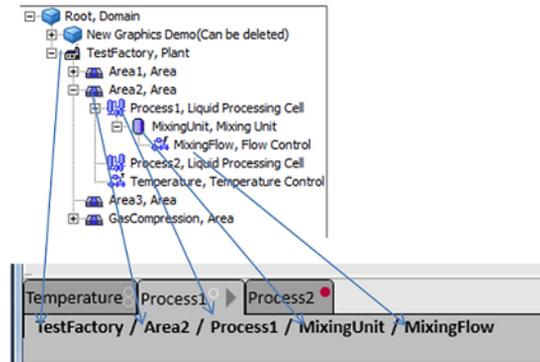
Figure 4. Objects in the Functional Structure and the corresponding view in Tabbed Workplace

Table 26 describes the hotkey navigation for the objects in the *Area2* object.

Table 26. Hotkey Navigation for Area 2 objects

Hotkey	Tab	Object
Ctrl + 1	Tab 1	Temperature
Ctrl + 2	Tab 2	Process 1
Ctrl + 3	Tab 3	Process 2

Table 27 describes the hotkey navigation from the *Process 1* object.

Table 27. Hotkey Navigation for Process 1 object

Hotkey	Object
Ctrl + Alt + Up	Area2 (Parent object)
Ctrl + Alt + Down	Navigates to the child object

Table 27. Hotkey Navigation for Process 1 object

Hotkey	Object
Ctrl + Alt + Right	Process 2 (Tab to the right)
Ctrl + Alt + Left	Temperature (Tab to the left)

No navigation happens for the following keyboard shortcuts:

- <Ctrl + Alt + Left> from *Temperature*.
- <Ctrl + Alt + Right> from *Process 2*.
- <Ctrl + Alt + Down> from *Mixing Flow*.
- <Ctrl + Alt + Up> from *TestFactory*.

Engineering Studio

Table 28 lists the Operational issues that have been corrected in the Engineering Studio for the 800xA 5.1 Feature Pack 4 Revision D release.

Table 28. Function Designer Operational Issues

Issue	Correction or Fix
On using Paste Rename functionality for the Function Diagrams having diagram references with property "Keep connection to the source", Engineering Workplace may stop responding. Important 800xAENS-OL-5104-034	The problem has been corrected.

Device Management FOUNDATION Fieldbus

Table 29 lists the Configuration issues that have been corrected in Device Management FOUNDATION Fieldbus for the 800xA 5.1 Feature Pack 4 Revision D release.

Table 29. Configuration Issues

Issue	Correction or Fix
FBB crashes in print preview of Schedule Printing the preview of the H1 schedule object leads to a crash of the Fieldbus Builder FF. 800xADMF-CN-5141-001	This problem has been corrected.
Linking device initialization may fail While the device type reader is running the Linking device initialization may fail with the error LD 800HSE Initialization Error: "Write failed (Error: Response not awaited)". 800xADMF-CN-5141-002	This problem has been corrected.
Device type reader may fail Device type reader may fail with the error 0x603 for every device. 800xADMF-CN-5141-003	This problem has been corrected.

Table 29. Configuration Issues (Continued)

Issue	Correction or Fix
Check is slowed down The check of the configuration is slowed down after the device list was displayed. 800xADMF-CN-5141-004	This problem has been corrected.
Differences between redundant OPC servers Adding the second OPC server in the configuration to create a redundant pair may lead in seldom cases to different configurations between both OPC servers. 800xADMF-CN-5141-005	This problem has been corrected.

Asset Optimization

Table 30 lists the Operation issues that have been corrected in Asset Optimization for the 800xA 5.1 Feature Pack 4 Revision D release.

Table 30. Operational Issues

Issue	Correction or Fix
The following error messages are logged in the Operator Messages List: Expression error at **Picture3.Picture.VBDescription = Required argument is missing** appears when CLAM Faceplate VB aspect is called. Expression error at **cboCascade.Text. VBDescription = 'Text' property is read-only appears when Log Configuration** tab is selected in CLAM Faceplate VB Aspect. 800xASRV-OL-5120-011	This problem has been corrected.

Batch Management

Table 31 lists the Operation issues that have been corrected in Batch Management for the 800xA 5.1 Feature Pack 4 Revision D release.

Table 31. Operational Issues

Issue	Correction or Fix
Batch State (Batch.BStateNLS), Batch Scheduled Status (Batch.BStatusNLS), and Batch Mode (Batch.BModeNLS) OPC properties information format are not consistent as the same corresponding information format in the Batch Overview (*For example: semiautomatic verses SemiAutomatic*). These properties are used in Batch graphic elements for display purposes on graphics. 800xAPMB-OL-5141-083	Three new Batch properties are now available. Batch.BStateNLS Batch.BStatusNLS Batch.BModeNLS These match the Batch Overview properties and support NLS. The new Batch properties should be used in place of the original values: Batch.BState Batch.BStatus Batch.BMode The original values behavior has not changed.
The standard tool bar in the Batch Dialog window is not fully visible. 800xAPMB-OL-5141-084	The software has been corrected to make the Batch Dialog window visible.
Users unable to view the three Batch functionalities like Batch Overview, Batch History Overview and Batch Equipment Overview in a combined toolbar. 800xAPMB-OL-5141-085	The software has been corrected to make all the three functionalities available in one combined toolbar.

800xA for Advant Master

Table 32 lists the Operation issues that have been corrected in 800xA for Advant Master for the 800xA 5.1 Feature Pack 4 Revision D release.

Table 32. Operational Issues

Issue	Correction or Fix
An annoying license message will be displayed when an Advant Master Central Backup license is not installed and while performing an 800xA Aspect Directory backup. 800xAADM-OL-5110-001 Product Bulletin: 3BSE074004	This problem has been corrected.

Section 5 Fixed Problems in Feature Pack 4

This section details the problems for each functional area that have been fixed in 800xA 5.1 Feature Pack 4. A brief description of the correction is also provided. For a complete understanding of the problems fixed, refer also the Fixed Problems section in *System 800xA 5.1 Revision C Release Notes Fixed Problems (2PAA109826*).*

System Services

This section lists the issues that have been corrected for the System Services in this release.

Central Licensing System

Table 33 lists the Operational issues that have been corrected in the Central Licensing System in this release.

Table 33. Operational Issues

Issue	Correction or Fix
In case of licenses violation for "Batch Spreadsheet Scheduler", slow response (>30 seconds) is observed while scheduling the Batch from a non-800xA node. The problem is observed only on System 800xA in Domain environment and using "domain label separated with a dot". Example of "domain label separated with a dot" name are MyProcess.com, MyProcess.org etc. Refer to 3BSE034463-510_D_en_System 800xA_5.1_Network_Configuration manual, section Choosing Names for Domains and PCs. Additionally, License annoyance messages are not translated to Native Language and are displayed in English Language. 800xASRV-OL-5102-001	A correction is done in NLS function of licensing. Eventually, no slow response is observed.

SMS and e-mail Messaging System

Table 34 lists the Operational issues that have been corrected in the SMS and e-mail Messaging System in this release.

Table 34. Operational Issues

Issue	Correction or Fix
Alarm delivery to email and SMS subscriber fails, when Message handler, Alarm and Event message source and Alarm and Event list are configured as "Inherit to all instances" or "Copy to all instances" in object type definition Aspect. 800xASRV-OL-5025-004	Corrections are done in the message handler, Alarm and Event message source and the messenger service.

Engineering Studio

Table 35 and Table 36 lists the Operational, Function Designer and Instruction Manual issues that have been corrected in Engineering Studio in this release.

Table 35. Operational Issues

Issue	Correction or Fix
Local variables created in Function Diagram and allocated to CI860 board are disconnected after performing Configuration Data Generation. 800xAENS-OL-5130-006	This problem has been corrected. • Local variables are disconnected from CI860 board on performing Configuration Data Generation of a diagram which has both FF proxy objects and local variables. • Local variables are not disconnected from CI860 board on performing Configuration Data Generation of a diagram which only has local variables. • Deleting FF proxy object from a diagram which also has local variables and performing Configuration Data Generation will disconnect the local variables from CI860 board.

Table 36. Instruction Manual Issues

Instruction	Correction or Fix
Description for Configuration of Cascaded loop back FF signals in function diagrams is missing in the user manual *System 800xA Engineering Engineering Studio Function Designer (3BDS011224-510 C)*. 800xAENS-MC-5140-001	This information has been updated in the user manual *System 800xA Engineering Engineering Studio Function Designer (3BDS011224*)*.

AC 800M

> ⚠️ The Fixed Problems listed in AC 800M High Integrity are valid only for the AC 800M High Integrity controller. Refer to Safety Certification Status on page 28 for information on certification status of the AC 800M High Integrity controller.

Table 37, Table 38, Table 39 and lists the Administration, Configuration, and Operational issues that have been corrected in AC 800M in this release.

Table 37. Administration Issues

Issue	Correction or Fix
High Integrity	
Controller might shutdown when restarting interrupted Online Upgrade If the Control Builder for some reason was stopped during step 4 in an Online Upgrade (OLU) or in another step when Primary and Trainee PM was not synchronized, this resulted in the OLU being aborted. Attempting a new OLU shortly after an aborted OLU, led to a Controller Shutdown. 800xACON-AD-5022-001	This problem has been corrected.
Controller crash when SM Link cable is removed during hot-Insert of SM811 If SM Link cable was removed from primary SM811 during hot-insert of backup SM811, this resulted in a controller shut down. 800xACON-AD-5020-030	This problem has been corrected.

Table 37. Administration Issues (Continued)

Issue	Correction or Fix
Communication	
I/O status for CI873,CI872, and CI869 indicates Ok before receiving *Waiting for Init* at hot insert The I/O channel status for I/O under the CEX modules CI869(AF100), CI872(MOD5) and CI873(EthernetIP/Devicenet) displayed Ok (I/O Unit with no errors) for a short moment (approximately, 1s) during hot insert process, before it received the status *Waiting for init*. 800xACON-AD-5100-031	This problem has been corrected.
DeviceNet	
No status indication in Control Builder DeviceNet I/O modules There were no status indication in Control Builder while removing the I/O module for DeviceNet or swapping I/O module to a new position, which was different from Control Builder configuration. Important 800xACON-AD-5101-008	This problem has been corrected.
Communication Down with LD800DN after CI873 hot swap Repeated hot swap of the CI873 module led to communication down with LD800DN and the DeviceNet devices. Important 800xACON-AD-5101-009	This problem has been corrected.

Table 37. Administration Issues (Continued)

Issue	Correction or Fix
Multiple removal and insertion of ethernet cable for the LD 800DN may lead to DeviceNet communication failure Multiple removal and insertion of the ethernet cable for the LD 800DN lead to DeviceNet communication failure. This was indicated by all the LED's of the CI873 going off. Important 800xACON-AD-5101-010	This problem has been corrected.
Re-import of EDS file after the Version change is displayed as aborted import If the user tried re-import of an EDS file with higher major version using DIW in Control builder, the import was successful. However the indication of the import was seen as aborted import on page 1 of the Device Import Wizard. Important 800xACON-AD-5100-019	This problem has been corrected.

Table 38. Configuration Issues

Issue	Correction or Fix
Controller	
Possible data mix-up with bidirectional Inter Application Communication A possible data mix-up could have happened when a user-defined data type used for bidirectional Inter Application Communication between two controllers was changed. This problem occurred if there was only one component of simple data type in any of the directions (with/without the Reverse attribute) and any of the following attributes of that simple component was changed: 1. The name 2. The Reverse setting **Note**: A corresponding modification of the user application (reading/writing) was necessary in order not to get a compilation error. 800xACON-CN-5100-041	This problem has been corrected.
MODBUS RTU	
Controller crash when removing Modbus RTU from hardware configuration Controller crash occurred when performing re-configuration download to remove Modbus RTU from hardware configuration, if the function block was still active and communicating in the application. 800xACON-CN-5100-050	This problem has been corrected.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
Controller Builder Crash compiling project with constants connected to by_ref parameters. If structures and function block containing parameter with attribute by_ref, connected to constants were used, this could lead to a Control Builder crash. 800xACON-CN-5020-077	This problem has been corrected in Control Builder
CI873 IO connection error for all four LDs during Automatic Cable Break for one LD. Ethernet cable removal for one of the LD 800DN's could lead to "IO Connection" shown for the other LD 800DN's on the network. 800xACON-AD-5102-002	This problem has been corrected in CI873EthernetIPHWLib in AC 800M Connect.
Controller crashed during power fail restart when tool routing was used in CI854 PROFIBUS. Controller crashed after a power reset, if the tool routing is configured for PROFIBUS devices through CI854. 800xACON-AD-5100-038	This problem has been corrected in CI854ProfibusHwLib in AC800MConnect.
CI873 module may reset while doing some re-configuration for DeviceNet devices. On re-configuration of DeviceNet modular devices, for example, adding new IO modules to the DeviceNet adaptor followed by download, may lead to CI873 reset. 800xACON-AD-5100-036	This problem has been corrected in CI873EthernetIPHwLib in AC800MConnect.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
PM891 could not access SD card of specification 2 or 3. PM891 only supports SD card of type 1, so spec 2 and 3 SD-cards showed error during start up and was not possible to use. 800xACON-AD-5100-035	This problem has been corrected in Controller Firmware in BasicHWLib in AC 800M Connect.
I/O Handling	
Controller may Shutdown at Re-configuration of DI880 or DO880 if Field Power is Missing An AC 800M High Integrity controller could have shut down if one or more DO880 and DI880 modules were re-configured when they were in Safe Config State. I/O modules would enter Safe Config State if field power was not present during module startup, that is, during Initial download or Hot Insert of I/O module. 800xACON-CN-5023-007 Product bulletin: 3BSE047421D0093	This problem has been corrected.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
DeviceNet	
Re-configuration of DeviceNet devices through Control Builder will interrupt communication The input and output communication were stopped for re-configuration of the following communication parameters of DeviceNet devices: • Electronic keying • MAC ID change • Trigger type • Heart beat • Ack time • Inhibit time 800xACON-CN-5101-011	This problem has been corrected.
Reconfiguration of DeviceNet parameters for LD 800DN causing network to stop and restart Hot Configuration In Run (HICR) did not work for DeviceNet when certain parameter changes were made. If any of the configurable parameters Interscan delay, Expected packet ratio, ADR enable flag or Background poll ratio of LD 800DN were changed in Control Builder during re-configuration, the communication for the DeviceNet network would be stopped and restarted again. 800xACON-CN-5101-012	This problem has been corrected.
Reconfiguration related to IP address in CI873 will lead to restart of CI873 module Re-configuration related to IP address in CI873 led to restart of CI873 module. 800xACON-CN-5101-013	This problem has been corrected.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
EDS Selection page does not save the user input regarding the files selected EDS Selection page did not save the user input regarding the files selected. 800xACON-CN-5101-014	This problem has been corrected.
Re-import of modular I/O EDS file shows the default channels in Device import wizard Re-import of modular I/O EDS file showed default channels in Device Import Wizard. 800xACON-CN-5101-015	This problem has been corrected.
DeviceNet Devices with configurable connection sizes are not supported CI873 with LD 800DN could not communicate with DeviceNet devices for which the connection size depended on the configuration. Important 800xACON-CN-5100-008	This problem has been corrected.
Only Devices with a Maximum of 100 Parameters Supported on DeviceNet Only devices with less than or equal to 100 parameters were supported on DeviceNet. Any device that had more than 100 parameters could not be configured. 800xACON-CN-5100-019	This problem has been corrected.
High Integrity	
Controller might shut down if the task name is sub-part of SIL3 application name In rare cases, depending on creation order, a High Integrity Controller would have shut down when a task name was a sub-part of the SIL3 application name. 800xACON-CN-5020-072	This problem has been corrected.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
IEC 61850	
IEC 61850 Wizard does not detect same signals from different LDs under the same IED IEC 61850 Wizard did not update protocol information for IO channels when two or more signals were configured within same dataset from LNs under different LDs of same IED. For example, CVMMXU1.TotW.mag was configured from LD1 and LD2 of same IED. 800xACON-CN-5100-025	This problem has been corrected.
Import Wizard shows Warning with incorrect count of CI868 subscribed datasets Import Wizard showed Warning in CCF View with incorrect count of CI868 subscribed datasets. 800xACON-CN-5100-026	This problem has been corrected.
IEC 61850 Wizard dependency on Substation section IEC 61850 Wizard displayed an error when LNs under each IED used for GOOSE communication were not present in the Substation section under the Bay or Conducting equipment of the scd file. 800xACON-CN-5100-048	This problem has been corrected. IEC 61850 Wizard does not depend on Substation Section in scd file to import the scd file into Control Builder M.
IEC 61850 Wizard does not update changed CI868 IED Name from scd file into Control Builder M MyIED object name IEC 61850 Wizard did not update CI868 IED Name from scd file into Control Builder M MyIED object name. This led to CI868 module error after download. 800xACON-CN-5100-049	This problem has been corrected. On subsequent import, IEC 61850 wizard shall detect difference in IED name and update IED name from scd file into Control Builder M Hardware tree object name.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
IEC 61850 Wizard does not provide warning about missing quality attributes for signals in datasets Status for disconnected IEDs was not updating in Control Builder Hardware tree when online. Hardware status of disconnected IEDs would have been in error state. 800xACON-CN-5020-071	It is required to have quality signals mapped to each signal in dataset for updating the proper Status in Control Builder M Hardware tree. During the scd file import, IEC 61850 Wizard displays a message about missing 'q' attribute and provide an option to proceed or cancel import. Proceed with option YES. A Warning is generated in IEC 61850 log about import despite Quality attribute missing for certain Data objects in scd file. Press option NO. All Data Objects with missing 'q' attribute is listed in IEC 61850 log.
CI868/IEC 61850 module Error when exposed to unwanted Broadcast When CI868 communicating over GOOSE was exposed to a Ethernet broadcast storm of above 10,000 packets per second, CI866 stopped communicating and did not respond any further. 800xACON-OL-5101-022	This problem have been corrected in CI868IEC61850HwLib in AC 800M Connect.
PM891 Controller Crash when Using Modbus TCP (CI867) to Write Real Values A problem was found with handling of real (float) values in PM891. When acting as Modbus TCP master and attempting to write one or more real values this was resulting in a controller crash. Product Bulletin 3BSE047421D0127 800xACON-OL-5100-094	This problem has been corrected in Controller Firmware in BasicHWLib in AC 800M Connect.

Table 38. Configuration Issues (Continued)

Issue	Correction or Fix
CI867 crash when acting as slave to 3rd party Modbus TCP master/Modbus RTU master In rare cases, CI867 crash could occur when acting as slave to 3rd party Modbus TCP master or Modbus RTU master (for example, Allen Bradley PLC). 800xACON-OL-5025-001	This problem has been corrected in CI867ModBusTcpHwLib in AC 800M Connect.
Lost RNRP message When exposed to Ethernet communication that need to be filtered away example, broadcast messages, also some RNRP messages was erroneous removed. This could read to network switch over in a redundant network and prolonged communication time in some cases. 800xACON-OL-5020-059	This problem has been corrected in Controller Firmware in BasicHWLib in AC 800M Connect
Controller Crash when Function Diagram resulted in an Internal Compiler Error. When Diagrams gave an Internal Compiler error in Control Builder, it lead to Control Builder crash, an interrupted download or in some case a controller crash. Product Bulletin 3BSE047421D0134 800xACON-CN-5100-057	This problem has been corrected in Control Builder Device Import Wizard

Table 39. Operational Issues

Issue	Correction or Fix
PROFINET IO	
Data inconsistency with PROFINET The I/O access between IEC 61131-3 application and the PROFINET communication is not operated in a synchronized way. Therefore it might happen that changed output data is split into several PROFINET cycles or changed input data belong to more than only one PROFINET cycle. Since the split can take place at all byte positions within the PROFINET frame, data inconsistency might be related to several channels of the same device or even to the specific bytes of an individual channel. For example, in latter case, the first 2 bytes of a 4 bytes DINT channel might be of new updated information and belong to the latest PROFINET cycle, but the last 2 bytes might be of old information and belong to the previous cycle. 800xACON-OL-5100-091 800xACON-OL-5100-092 800xACON-OL-5100-095	The problem has been corrected in Control Builder, the AC 800M Firmware and the Hardware Libraries for MNS iS, RETA-02 and FENA-11. To get the inconsistency issue solved for a 3rd party device, a new import or re-import of the gsd-file with a succeeding download must be done. **Note:** When having the synchronization active in the controller, the CPU load of the PM8xx processor module and the CI871 might increase in the range of 1-3%.

Table 39. Operational Issues (Continued)

Issue	Correction or Fix
IEC 61850	
IEC 61850 Wizard did not support DO types containing CMV data types IEC 61850 Wizard did not support DO types containing CMV data types. IEC61850 wizard displayed an error while importing scd file containing DO types such as WYE and DEL containing CMV data types. For example, in a project, it was not possible to send the following phase currents of CMV type from the IED to the AC 800M over GOOSE communication. For example, A.phsA MmuPriMMXU1/A.phsA (WYE) A.phsB MmuPriMMXU1/A.phsB (WYE) A.phsC MmuPriMMXU1/A.phsC (WYE) A.neut MmuPriMMXU1/A.neut (WYE) **IEC 61850 Wizard did not support all DO Names under currently supported DO Types** IEC 61850 Wizard did not support all DO Names under currently supported DO Types. CI868 Import Wizard displayed an error while importing scd file containing certain DO names under currently supported DO types. For example, in a project, it was not possible to import DO names EnaOpn, EnaCls, Loc that belonged to the supported DO type SPS. 800xACON-OL-5020-055	This feature has been implemented in IEC 61850 Wizard Module. This version supports importing DO types WYE and DEL that contain the phase currents within CMV data types. On import, the magnitude of phase currents from IED (phsA, PhsB, phsC, neut, net, res) shall be mapped to channels of MVGroup object in Control Builder M hardware tree. Phase current angle from IED (if any) is not supported and shall be ignored while importing. This version supports all DO names under currently supported DO types as per IEC 61850 Ed1 specification. Currently supported DO types are SPS, ACD, ACT, DPS, MV and INS.

SFC Viewer

Table 40 lists the Operational issues that have been corrected in SFC Viewer in this release.

Table 40. Operational Issues

Issue	Correction or Fix
In the Transition window, the tool tip for graph view displays both tag name and object name but the list view displays only tag name. 800xASFC-OL-5130-002	This problem has been corrected.
SFC uploader displays only one variable and same path, even if different Control modules are written in the SDT variable. 800xASFC-OL-5130-004	This problem has been corrected.
After upgrade of Control Builder M from previous versions to 800xA 5.1 Feature Pack 4, SFC uploader links the variables to objects, but does not link to the faceplate. 800xASFC-OL-5130-005	This problem has been corrected.
In the transition window, the entries that are being displayed for Unfulfilled Criteria are not getting updated with the current OPC values. Important 800xASFC-OL-5110-008	This problem has been corrected.

IEC 61850

Table 41, Table 42, and Table 43 lists the Installation, Configuration, and Operational, issues that have been corrected in IEC 61850 in this release.

Table 41. Installation Issues

Issue	Correction or Fix
Canceling IEC 61850 OPC Server installation Or Uninstalling IEC 61850 OPC Server does not remove Update Manager component from the system. 800xAIEC-IN-5101-003	This problem has been corrected.

Table 42. Configuration Issues

Issue	Correction or Fix
Descriptions added in PPA for objects IED, LD, LN and Control Connection Aspect Properties are not retained after second upload of same SCD file. 800xAIEC-CN-5104-008	This problem has been corrected.
Uploader crashes while uploading SCD file containing '&' character in description of any Conducting Equipment or Bay. 800xAIEC-CN-5104-009	This problem has been corrected. Message box is displayed about invalid scd-file.
OPC Server - IED communication 'Drop-out' occurs intermittently. 800xAIEC-CN-5104-013	For standard password recommendations for CET FTP File transfer, refer to Section 2, 800xA IEC61850 OPC Server, of *IEC 61850 Configuration manual (9ARD171387*)*.

Table 42. Configuration Issues (Continued)

Issue	Correction or Fix
Uploader stops during the append operation, when a generic object with the same name of the substation already exists at the same level of substation in Functional Structure. 800xAIEC-CN-5104-014	This problem has been corrected.
Occasionally IEC 61850 connect uploader may crash while uploading inconsistent scd file. For example, Dataset do not refer correctly to FCDAs in scd file. 800xAIEC-CN-5100-002	This problem has been corrected. Uploader generates pop-up error message mentioning Invalid scd-file. Ensure that scd-file contains the dataset signals, that is, FCDA for each signal have all attributes, namely, FC, doname, daname, lninst, lnclass, prefix and ldinst.
CET Tool crashes on second import of scd-file with missing "type" attribute of SubNetwork in Communication section. 800xAIEC-CN-5024-001	This problem has been corrected.

Table 43. Operational Issues

Issue	Correction or Fix
800xA Alarm and Events generated from LNs associated with Bay, Voltage Level and Substation do not indicate respective names of Bay, Voltage Level and Substation in Object name and Object description fields. 800xAIEC-OL-5101-002	This problem has been corrected. 800xA Alarm & Event list can now show the names of Bay, Voltage Level and Substation in Object name and Object description fields when alarm is generated by associated LNs.

Device Management FOUNDATION Fieldbus

Table 44 and Table 45 lists the Configuration, and Operational issues that have been corrected in Device Management FOUNDATION Fieldbus in this release.

Table 44. Configuration Issues

Issue	Correction or Fix
Tree order of links does not match physical connections: The tree order of H1 links does not match the physical connections. 800xADMF-CN-5130-001	This problem has been corrected.

Table 45. Operational Issues

Issue	Correction or Fix
In seldom cases communication faults in the OPC server FF HSE part may occur. 800xADMF-OL-5130-002	This problem has been corrected.

Device Management PROFIBUS & HART

Table 46 lists the Configuration issues that have been corrected in Device Management PROFIBUS & HART in this release.

Table 46. Configuration Issues

Issue	Correction or Fix
The tags (DTM Tag and 4 Segment tags) assignment to PF HD2 instances while creating several PF HD2 instances using Bulk Data Manager fails except for first PF HD2 instance. Other PF HD2 instances are updated with default tags. 800xDPH-CN-5100-007	This problem has been corrected.
When property values of 'Property Management' aspect on PF HD2 instance are modified using Bulk Data Manager, the modified values are not retained by 'Property Management' aspect, if user closes and reopens the Plant Explorer Workplace and access the Property Management aspect without performing any DTM related operations such as accessing PF HD2 DTM or right click on PF HD2 instance in Control Structure. 800xDPH-CN-5100-008	This problem has been corrected. Property Management aspect now retains modified value regardless of any DTM operations.
The copy paste of PF HD2 instance on same PF Port in Control Structure will create two new PF HD2 nodes instead of one in FDS Topology of FieldConnex DTM. 800xDPH-CN-5100-009	This problem has been corrected.
Third party DTMs cannot be opened if entity is not reserved by the user. Important 800xDPH-CN-5100-015	DTM UIs can be opened by the user, who is part of IndustrialIT User group only or has not reserved the entity as well. This behavior might change from DTM to DTM based on the user role implementation in DTM.

Information Management

Table 47 lists the Operational issues that have been corrected in Information Management in this release.

Table 47. Operational Issues

Issue	Correction or Fix
Information Manager 5.1 Revision B in combination with any Feature Pack, fails to store Condition Events (Alarms). An error message indicating that this problem is being seen, can be found in the System Event List. The following error message is displayed: *Events of Category (CategoryName) will not be collected because of a definition error.* 800xAINM-OL-5103-036	This problem has been corrected.

Section 6 Fixed Problems in Feature Pack 3

This section details the problems for each functional area that have been fixed in 800xA 5.1 Feature Pack 3. A brief description of the correction is also provided.

800xA 5.1 Feature Pack 4 contains all the corrections specified in this section.

Base System

Table 48 lists the Configuration issues that have been corrected in the Base System for 800xA 5.1 Feature Pack 3.

Table 48. Configuration Issues

Issue	Correction or Fix
The High Performance HMI workplaces will open the default view of the graphic aspect or the view class configured in the View Class Reference aspect for the following aspect types or aspect categories: • Alarm and Event List, Aspect Type • Faceplate, Aspect Type • Bookmarks, Aspect Type • File Viewer, Aspect Type • Graphic Display PG2, Aspect Type • Navigation Display PG2, Aspect Category • Graphic Display, Aspect Type • Trend Display, Aspect Type • Web Page Type, Aspect Type These aspect types or categories will not use the View Class Mapping information if not configured for the override settings. Important 800xASYS-CN-5110-003	All the View Class Reference aspects in the system are overridden by default.

SFC Viewer

Table 49 lists the Operation issues that have been corrected in the SFC Viewer for 800xA 5.1 Feature Pack 3.

Table 49. Operational Issues

Issue	Correction or Fix
In SFC viewer, **Disable All Actions** and **Block All Transition** are not working for 2D sequences. 800xASFC-OL-5020-006	This problem has been corrected. A new functionality **SFC Debug Mode** is added. For more information, refer Printing Documentation in section 9, SFC Viewer in *System 800xA Operations (3BSE036904-510 C*)*.
SFC Viewer shows incorrect data of the transition when the variable used within that transition has hidden attribute. 800xASFC-OL-5101-002	This problem has been corrected.

Device Management FOUNDATION Fieldbus

Table 50, Table 51, and Table 52 lists the Installation, Configuration, and Operation issues that have been corrected in Device Management FOUNDATION Fieldbus for 800xA 5.1 Feature Pack 3.

Table 50. Installation Issues

Issue	Correction or Fix
Procedure for updating from 800xA 5.0 to 800xA 5.1 and 800xA 4.1 to 800xA 5.1. Download errors for H1 devices during upgrade. Important 800xADMF-IN-5101-003	This problem has been corrected.

Table 51. Configuration Issues

Issue	Correction or Fix
Fieldbus Builder FF crashes during check after deleting the last Client/Server signal so that there is no more Client/Server signal left. Important 800xADMF-CN-5101-005	This problem has been corrected.
Apply button in Alarm Properties Changing only one or more Alarm Texts is not stored in the database with Apply. 800xADMF-CN-5120-011	This problem has been corrected.
Automatic Address Assignment If an H1 link has multiple configured devices with the same device type, the Automatic Address Assignment will take the first found configured device of this device type for giving the address and tag to the active device. This can lead to the situation where the active device receives the wrong address and tag. During Device Assignment, the user identifies adequate address and tag for both, configured and active device, in the device list and will assign the wrong pair. 800xADMF-CN-5120-012	This problem has been corrected.

Table 51. Configuration Issues (Continued)

Issue	Correction or Fix
For FP2 64-bit only **Limited number of linking devices** The number of connections from FBB FFF to linking devices is limited to 20. One connection is required for each linking device connected to the HSE network and one connection for each _not_ reserved linking device that is selected in online mode. No new connection can be established if more than 20 connections in total, are used. Important 800xADMF-CN-5120-013	This problem has been corrected.
Block properties dialog shows "Internal error" "Internal error" is shown if Block property dialog of transducer block is opened for VEGAPULS devices. 800xADMF-CN-5102-002	This problem has been corrected.
Endless loop in Echo Curve menu If the Echo Curve in the diagnostics section is called the EDD methods will be executed in an endless loop for VEGAPULS devices. 800xADMF-CN-5102-003	This problem has been corrected.
Duplicate bus addresses for configured devices after Device Assignment When Assignment Mode is set to Config, during device assignment a detected address conflict will remain unresolved. 800xADMF-CN-5120-003	This problem has been corrected.

Table 51. Configuration Issues (Continued)

Issue	Correction or Fix
Wrong DD is used for blocks After installation of a new device type, it may happen that in the block properties dialog, • certain values of drop down list boxes are indicated as invalid, • values are rejected during download by the device, • values of drop down list boxes lists the Installation, Administration, Configuration, and Operation issues that have been corrected in Device Management FOUNDATION Fieldbus for 800xA 5.1 FP 3. not matching the device type since the wrong DD is used for the blocks. 800xADMF-CN-5120-014	This problem has been corrected.
Block parameters not readable in online mode In online mode the block parameters including block mode are not readable if the device belongs to a link that is not reserved. 800xADMF-CN-5120-015	This problem has been corrected.
Download request after online changes Online parameter changes create a download request after plausibility check in configuration mode for online changed devices. 800xADMF-CN-5120-016	This problem has been corrected.

Table 51. Configuration Issues (Continued)

Issue	Correction or Fix
Devices sometimes shown as "Device Not Present" In Fieldbus Builder FF (in commissioning mode) Devices sometimes shows as "Device Not Present", when actually they are assigned and functioning correctly. 800xADMF-CN-5120-017	This problem has been corrected.
Download status shows only "Full Download" Device List - "Download Status" shows only "Full Download" required, not other possibilities. 800xADMF-CN-5120-018	This problem has been corrected. Only "Download" is possible to be displayed in the device list. The type of download - full or incremental download - is displayed after version check in Online Dialog.
Vendor specific error codes Vendor specific error codes are displayed (device depended) with information like error class, subclass and a hexadecimal error code. This is also not interpretable for a normal user. 800xADMF-CN-5120-019	This problem has been corrected. Error code will be displayed like "See device specific documentation for *ErrCls/ErrSubCls 0x8888 AddCode 0x9999*".
Linking device initialization may fail The linking device initialization fails if other FBB FF instances of the same subnet are in commissioning mode. 800xADMF-CN-5120-020 800xADMF-CN-5120-011	This problem has been corrected.

Table 52. Operational Issues

Issue	Correction or Fix
Memory usage of Fieldbus builder FF increases continually In commissioning mode, the Fieldbus Builder FF increases its memory usage continually. This may lead finally to an application stop. The amount of used memory depends on the number of active devices and their diagnostic state as shown in the device list. 800xADMF-OL-5120-005	This problem has been corrected.
Online help is not updated to latest revision. 800xADMF-OL-5120-010	This problem has been corrected.
OPC values are shown BAD OPC values are shown BAD after OPC single read requests. 800xADMF-OL-5101-009	This problem has been corrected.
The OPC server FF may crash if new items are added in parallel with inactivity on other items.)800xADMF-OL-5101-010	This problem has been corrected.
HSE host (CI860) shown as 'Not available' HSE host (CI860) device is displayed in the Device List in Online mode as 'Not available' with red text, even if the device is working properly. 800xADMF-OL-5120-004	This problem has been corrected.

Table 52. Operational Issues (Continued)

Issue	Correction or Fix
Connection error during download During download of H1 link connection errors may occur if new devices have been added and assigned before. 800xADMF-OL-5120-007,006 800xADMF-CN-5120-021	This problem has been corrected.
Device assignment is not possible on newly created H1 links. 800xADMF-OL-5120-023	This problem has been corrected.

Batch Management

Table 53 and Table 54 lists the Configuration and Operation issues that have been corrected in Batch Management for 800xA 5.1 Feature Pack 3.

Table 53. Configuration Issues

Issue	Correction or Fix
Corrections made to formula sheets may not always become reflected in the currently open spreadsheet. 800xAPMB-CN-5110-005	It has been determined that this is a procedural problem. The Batch documentation has been updated to provide the correct procedures for updating information in the Batch Scheduler Spreadsheet.

Table 54. Operational Issues

Issue	Correction or Fix
Plant Explorer Workplace may shutdown when selecting the **Batch Events** tab from the Status dialog. Important 800xAPMB-OL-5110-008 Product Bulletin: 3BUA002148	This problem has been corrected. Plant Explorer Workplace works fine when the Batch Events tab is selected.
The Web Services Interface call, "GetProcedures" does not return the correct procedure path for nested procedure hives if there is more than one hive at the same level. If the incorrect procedure path applies to a duplicate procedure name then this incorrect path will appear in the procedure list for the Simple Batch and Parameter Management Scheduler. 800xAPMB-OL-5110-003	This problem has been corrected. Correct path is displayed now in the procedure list for the Simple Batch and Parameter Management Scheduler.
The error message "Batch Schedule operation failed because BatchID *<invalid ID>* has already been used" is encountered when a Batch procedure is scheduled with an invalid Batch ID (that is, a Batch ID containing any characters other than **a-z A-Z 0-9 and _ (underscore)**). This misleading message is seen when using the Batch Web Service. 800xAPMB-OL-5110-001	The message has been updated to correctly indicate the nature of the error.

Table 54. Operational Issues (Continued)

Issue	Correction or Fix
The error message "Cannot resolve object specifier to an ID. Error = 0x80070057" will be displayed while scheduling a procedure that has the following special characters in the procedure name: . { [/ \ 800xAPMB-OL-5110-007	Batch Configuration manual has been updated to indicate the valid characters to use when naming procedures.
Batch OPC expressions "putm" and "subscribe" were causing unnecessary OPC loading, memory leaks and overall poor OPC performance in applications where they were being used. 800xAPMB-OL-5111-001	This problem has been corrected. The OPC Batch expressions have been corrected and are now providing optimum performance.

Section 7 Known Problems

This section details the Known Problems for the System 800xA 5.1 Feature Pack 4 Revision E. A brief description of the correction is also provided. For a complete understanding of the known problems, refer also the Known Problems section in *System 800xA 5.1 Revision E Release Notes New Functions and Known Problems (2PAA114363*)*.

Base System

Operation

Table 55 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 55. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints

The Find Tool does not open when it is launched from the Tabbed workplace through the Combined app bar tools. This is an issue and can be seen in all the versions after the new Find Tool implementation.
 	
800xASYS-OL-5141-089
	Enable launch of find tool from the Find Tool button in the combined toolbar of the tabbed workplace
	
	This is applicable only for tabbed workplaces using the combined toolbar.
	
	In order to open the new Find Tool from the icon follow the instructions below:
	
	1. Open the **Plant Explorer Workplace** and go to: ***Library Structure\Tools\Combined Appbar Tools:Find Tool***.
	
	2. Select **IAfwHTMLTool**
	
	3.Copy and paste the following text into the text box and Press **Apply**.
	
	`<ABB:Tool type="button"`
	`id="me_btnFind"`
	`title=#NLS_STRING#(NLSID_FIND_TOOL)`
	`onclick="return me_onclick()"`
	`Image="#resource#(Icon)">`
	`</ABB:Tool>`
	`<script defer>`
	`function me_onclick()`
	`{`
	`var theWorkplace =`
	`document.body.ABBContent.Workplace;`
	`if(theWorkplace != null)`
	`{`
	`theWorkplace.LaunchFindTool();`
	`}`
	`}`
	`</script>`

Table 55. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
When Trace current value property of PG2 Trend Primitive is configured with an expression written with if else condition, the expression is not evaluated correctly leading to a wrong trace to be plotted. 800xASYS-OL-5105-003	No workaround exists for this issue.
It is not possible to open the Find Tool by using the Ctrl + F hotkey. 800xASYS-OL-5105-002	To configure the Ctrl+F hotkey for the New Find Tool: 1. Open Hot keys aspect for any workplace in the workplace structure. 2. Select Ctrl + F hotkey in the hot keys list and then remove. 3. Add the hotkey by entering the combination Ctrl + F in the hot key area with context "global" and with Action "Execute Verb". 4. In 'Aspect' browse to the Global verbs aspect in the Web system workplace. 5. Under Verb select 'Show Find Tool'. 6. Add the newly Configured Find Tool Hotkey in the hotkeys list aspect.
It is not possible to use the Find Tool on a node where the update is performed, before the system extension is applied. 800xASYS-OL-5105-001	Release all reservations before using the System Extension Maintenance. It is not possible to use the Find Tool to get all the reserved objects after 5.1 FP4 Rev E is installed. Hence, it is recommended to perform the Release Reservations from a node where 5.1 FP4 Rev E is not installed.

Automated Installation

This section lists the Known Problems of Automated Installation that exist in the system at the time of release.

Table 56 lists the installation issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 56. Installation Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Installation may fail when a read-only file server share is used for installation. 800xASYI-IN-5140-001	When a file server share is used for installation, ensure the user has both read and write access throughout the installation.
During Installation/Uninstallation of ABB software may fail in some cases. The following errors appears: **Failed to Open database! Open Failed.** OR **Failed to open View!** 800xASYI-IN-5130-001	Click **OK** to ignore the message and proceed with uninstallation/installation process.
AC 800M Status Monitoring is not marked for uninstallation, but during the installation it shows a Pop-up as "Do you want to Uninstall ABB AC 800M Status Monitoring S-FP 5.1.1-0" 800xASYI-IN-5105-001	Press "Yes" on the pop-up and continue. This will uninstall and Install the product again automatically.
System 800xA 5.1 FP4 RevE Feature Pack Update Tool does not update of the following 800xA products: ABB 800xA for Harmony 5.1 FP4 RevD Rollup 3 (ABB 800xA for Harmony 5.1.0/3) 800xASYI-IN-5105-005	A new version of System 800xA 5.1 FP4 RevE Feature Pack Update Tool (9ARD114102-006) is now available in ABB Library. Download and unzip the file to a shared location and run the SystemUpdateTool.exe and follow the instructions in the tool.

Table 56. Installation Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
System 800xA 5.1 FP4 RevE Feature Pack Update Tool does not update the following 800xA product: ABB 800xA for Advant master 5.1 FP4 RevD Rollup 1 (ABB 800xA for Advant Master S-FP 5.1.1-1 RU1) 800xASYI-IN-5105-006	After all System 800xA 5.1 FP4 RevE products have been installed and before reboot node, uninstall ABB 800xA for Advant Master S-FP 5.1.1-1 RU1 from the **Control Panel**, **Programs and Features**. Answer yes to the question to uninstall On-line Builder. 1.Install the new version of 800xA for Advant Master from the distribution media. 2.Reboot the node. **Note:** Be aware that 800xA for Advant Master will not be visible in the Configuration Wizard - System Extension Maintenance, and thus it will not be possible to update the System Extension after the software is updated from FP4 RevD Rollup 1 to FP4 RevE. However, this is not a problem since FP4 RevD Rollup1 and FP4 RevE include the same functionality. The valid Build number for FP4 RevE (as shown in the System Extensions aspect in the Domain object in Admin Structure) is either 238522230 or 238535720.
System 800xA 5.1 FP4 RevE feature pack Update Tool does not update ABB Asset Optimization S-FP 5.1.3-1 to ABB Asset Optimization S-FP 5.1.3-2 on 32-bit 800xA 5.1 FP4 RevD Systems. 800xASYI-IN-5105-007	A new version of System 800xA 5.1 FP4 RevE Feature Pack Update Tool (9ARD114102-006) is available on ABB Library. Download and unzip the file to a shared location and run the SystemUpdateTool.exe and follow the instructions.

Table 56. Installation Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
System 800xA 5.1 FP4 RevE Feature pack Update Tool does not update ABB S800 I/O DTM S-FP 5.3.1.1 to ABB S800 I/O DTM S-FP 5.4.1.2 RU1 on 32-bit 800xA 5.1 FP4 RevD Systems. 800xASYI-IN-5105-008	A new version of System 800xA 5.1 FP4 RevE Feature Pack Update Tool (9ARD114102-006) is available on ABB Library. Download and unzip the file to a shared location and run the SystemUpdateTool.exe and follow the instructions.

IPsec Configuration Tool

This section lists the Known Problems of the IPsec Configuration Tool that exist in the system at the time of release.

Table 57 lists the configuration issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 57. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
When IPsec is enabled on System 800xA 5.1 Rev A or later versions, the Batch client loses communication with the Batch server and goes offline. 800xAIPS-CN-5110-001	In the IPsec Configuration Tool: • when performing a new configuration, select the **Add New Rule** option • when editing an existing configuration, select **User Defined Protocol** option and add the following exemption: **Subnet or IP address**: Provide the Subnet of client server network, for example, 172.16.4.0/22 **Protocol (UDP or TCP)**: UDP **Port on node in the 800xA Domain**: any **Port on node outside the 800xA Domain**: 50061 If redundant client server networks are used, add individual exemptions for each network.

System Services

This section lists the Known Problems of the System Services that exist in the system at the time of release.

Central Licensing System

Table 58 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 58. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
The Licensing software fails to disable **Logging** feature for ABB License website located under default websites in Internet Information Services (IIS) Manger. As a result, the *%SystemDrive%\inetpub\logs\LogFiles\W3 SVC1* folder may completely fill the disk on CLS server over a period of time. The Aspect Server running in the CLS Server may not respond, redundant Aspect Severs may stop responding too. Sometimes, all clients will be rendered non-operational in case of 800xA systems. However, this is not an issue on CLS Standalone installation. In case of non-800xA product line, CLS Server become non-operational, this may impact rest of the nodes. 800xASRV-OL-5140-007	Disable Logging by performing following steps on CLS server node: Launch Internet Information services (IIS) Manager from **Start**->**Settings**->**Control Panel**->**Administrative Tools**. a) On Windows 2008 server: Expand->Roles->Web server (IIS)->Internet Information Services (IIS) Manager. Locate Default Web Sites-> **ABBLicense** and double click on **Logging** in the Feature View. b) On Windows 7: Locate Default Web Sites-> **ABBLicense** and double click on **Logging** in the Feature View. In the **Logging** feature under actions that appears on the extreme right-hand side click **Disable**.

Table 58. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Selecting Available IDs under Machine IDs without creating system causes ABB License Entry tool to crash. Additionally, the Available IDs are not displayed. 800xASRV-OL-5140-008	Create the system and then select Available IDs.

Diagnostics Collection Tool

Table 59 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 59. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
While using the DCT, it is observed that the Node Interrogator Service is gradually utilizing the memory and there by resulting in **System.OutOfMemoryException**. 800xADCT-OL-5110-006	Node Interrogator service has to be restarted. To restart: 1. Select **ABB Node Interrogator** service in **Control** **Panel** > **Administrative Tools** > **Services**. 2. Select **Restart** from the Action menu. This restarts the Node Interrogator service. 3. Re-open the **Diagnostics Collection Tool**.

Table 59. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints

Collect Software Consistency Data tool fails to collect data from 800xA nodes. Typically the failure happens in a 800xA system having more than 20 nodes, where data collection can fail after any node.
 	
The following error messages are displayed in the Collecting Software Consistency Data window:
 	
`Exception of type 'System.OutOfMemoryException' was thrown`
 	
(or)
 	
`The server did not provide a meaningful reply; this might be caused by a contract mismatch, a premature session shutdown, or an internal server error`
 	
 Important
800xADCT-OL-5110-001
	The data collection failure happens due to large size data.
	
	Close the Collect Software Consistency Data tool and follow the steps below to modify the Software Consistency Data configuration and run the collection.
	
	1 Open Collection Tool, and select the following plug-ins:
	- 800xA -> System->System Report
	- Standard -> Task Manager, Installed Software and Registry Dump
	
	2 Press **Ctrl+Shift+S**.
	
	3 Click **Yes** in the Save Command File For Software Consistency window to proceed.
	
	4 Close Collection Tool and run Collect Software Consistency Data.

Engineering Studio

This section lists the Known Problems of the Engineering Studio that exist in the system at the time of release.

Table 60, Table 61, and Table 62 lists the Bulk SPL Operation, Function Designer, and IO Allocation operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 60. Bulk SPL Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Reference variables in the Function Diagrams, created using Bulk SPL template, may go beyond the template limit if the number of reference variables are more. This is due to references position going beyond the template size. 800xAENS-OL-5130-001	Change the template size in Function Diagram so that all the components are visible; drag the components inside the template area and save it.
In a sequence overview diagram, if steps/transitions are placed beyond the T column on the horizontal axis and the diagram is imported to Bulk SPL template, may result in placing these steps/transition beyond the template range. 800xAENS-OL-5130-003	Insert new columns in the template equivalent or more than the exceeded number of columns.
Deleting the number of inputs to the logic operand in the SPL_Detailed sheet deletes the inputs but the number of associated inputs remain same in the operand which throws error while writing to 800xA. 800xAENS-OL-5130-004	Delete the Operand along with all the inputs and reinsert.
First time opening of a large sequence diagram, created using Bulk SPL template may take some time. 800xAENS-OL-5130-005	No workaround exists for this issue.

Table 61. Function Designer Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
In a sequence 2D created in Function Designer Diagram, connection to output reference cannot be established through SFC step block inside the action. 800xAENS-OL-5101-011	No workaround exists for this issue.

Table 62. IO Allocation Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
FF proxy object does not work for the hardware library versions prior to **BasicHWLib5.1-1.** 800xAENS-OL-5140-004	Replace the library in Control Builder.
If the user deletes an unallocated Function Diagram having FF proxy object with variables allocated to CI860 board, then the variables are not getting deleted. 800xAENS-OL-5130-002	Delete the allocated Function Diagram.

AC 800M

This section lists the Known Problems of AC 800M that exist in the system at the time of release.

Version Designation

Control Software for AC 800M System Version 5.1 Feature Pack 1 Rollup 3 contains software support for the following products.

⚠ Control Software for AC 800M version 5.1 Feature Pack 1 Rollup 3(5.1.1-3) shall be installed on top of 800xA System Feature Pack 4 Rev D or Rev E.

Table 63. Software Support

Released Software	Version
Control Builder M Professional	5.1.1-3
AC 800M Connect (800xA for AC 800M)	5.1.1-3
Firmware for PM851/PM856/PM860	5.1.1-3
Firmware for PM861(A)/PM864(A)/PM865/PM866	5.1.1-3
Firmware for PM891	5.1.1-3
Firmware for PM865 in AC 800M HI	5.1.1-3
OPC Server for AC 800M	5.1.1-3
MMS Server for AC 800M	5.1.1-3
Base Software for SoftControl	5.1.1-3
Tool Routing Service for AC 800M	5.1.1-3
IP Config	5.1.11
Serial Firmware Upgrade	5.1.11

Supported Versions

Online Upgrade Paths

Redundant AC 800M controllers can be upgraded with new firmware versions online. Online upgrade is initiated from Control Builder by a 9-step wizard, that describes the complete upgrading process. For more information, refer to the *Maintenance and Trouble-Shooting* section in *System 800xA Control AC 800M Configuration (3BSE035980*)* manual.

Online upgrade is supported from the controller versions listed in document *800xA Online upgrade and Co-existence, versions compatibility (3BSE080447)* on ABB SolutionsBank. Note that this document is an aid document and before executing online upgrade or co-existence for a safety system, check the valid safety certificate annex.

Supported Versions for Coexistence of Controller Versions

Coexistence is supported between the controller versions listed in document *800xA Online upgrade and Co-existence, versions compatibility (3BSE080447)* on ABB SolutionsBank. Note that this document is an aid document and before executing online upgrade or co-existence for a safety system, check the valid safety certificate annex.

Included Library Version

Table 64 lists the Library versions and the version compatibility.

Included library versions in this release.

Table 64. Library version

Library	Version of this release
S3964HWLib	2.2-2
ModBusHWLib	2.3-1
CI865SattIOHwLib	2.2-0
CI854PROFIBUSHwLib	2.2-1
CI860FFHSEHwLib	2.1-10
CI858DriveBusHwLib	2.2-2
CI872MTMHWLib	2.3-0
PrinterHwLib	2.1-2
SerialHwLib	2.1-2
S900IoCI854HwLib	2.0-0 (Version Compatibility 1.1-2)
CI868IEC61850HwLib	3.1-2 (Version Compatibility 2.10-1)
COMLIHWLib	2.3-0
CI867ModbusTcpHwLib	2.2-3

Table 64. Library version

Library	Version of this release
CI855MB300HwLib	2.1-2
CI856S100HwLib	2.3-0
CI857InsumHwLib	2.3-0
ABBDrvFenaCI871HwLib	1.0-3
ABBDrvFpbaCI854HwLib	1.0-2
ABBDrvNpbaCI854HwLib	1.0-2
ABBDrvRetaCI871HwLib	1.0-6
ABBDrvRpbaCI854HwLib	1.0-2
ABBMNSiSCI871HwLib	1.0-6
ABBPnl800CI854HwLib	1.1-0
ABBProcPnlCI854HwLib	1.0-1
BasicHwLib	5.1-1
BasicHIHwLib	5.1-1
CI853SerialComHwLib	1.0-1
CI869AF100HwLib	2.1-1
CI871PROFINETHwLib	1.3-11
CI873EthernetIPHWLib	2.1-2
ModemHwLib	1.0-0
S200IoCI854HwLib	1.0-1
S800CI801CI854HwLib	1.3-3
S800CI830CI854HwLib	1.0-10
S800CI840CI854HwLib	1.3-3
S800IoModulebusHwLib	1.3-3

Table 64. Library version

Library	Version of this release
TCPHWLib	1.0-8
UDPHWLib	1.0-7
COMLICommLib	1.4-0
FFHSECommLib	1.4.0
INSUMCommLib	1.3-1
MB300CommLib	1.3-0
MMSCommLib	1.4.2
ModBusCommLib	1.4-1
ModBusTCPCommLib	1.3-1
ModemCommLib	1.3-0
MTMCommLib	1.2-0
S3964CommLib	1.4-2
SattBusCommLib	1.4-0
SerialCommLib	2.2-0
TCPCommLib	1.1-7
UDPCommLib	1.1-6
AlarmEventLib	1.6-1
BasicGraphicLib	1.3-0
BasicLib	1.7-8
Batchlib	1.3-0
ControlAdvancedLib	1.5-13

Table 64. Library version

Library	Version of this release
BurnerLib	1.0-3
ControlBasicLib	1.3-6
ControlExtendedLib	1.4-6
ControlSolutionLib	1.3-1
ControlFuzzyLib	1.4-2
ControlObjectLib	1.3-1
ControlSimpleLib	1.3.2
ControlStandardLib	1.5-17
ControlSupportLib	1.4-17
FireGasLib	2.5-0
GraphicSupportLib	1.2-1
GroupStartLib	1.5-0
IconLib	1.4-0
ProcessObjBasicLib	2.5-5
ProcessObjDriveLib	1.5-1
ProcessObjExtLib	2.5-2
ProcessObjInsumLib	1.5-0
SeqStartLib	1.3-0
SignalBasicLib	1.2-0
SignalLib	1.7-5
SignalSupportLib	1.2-0
SupervisionBasicLib	1.2-0
SupervisionLib	2.6-3

Table 64. Library version

Library	Version of this release
Supportlib	1.4-0
VMTLib	1.1-0

Known Problems

This section details new Known Problems for AC 800M that exist in the system at the time of release in addition to known problems listed in *System 800xA Release Notes System Version 5.1 Feature Pack 4 Revision D (2PAA109967-514 B)*

All issues and problems categorized as *Controller* are valid for both the AC 800M and AC 800M High Integrity controllers.

The Known Problems listed in AC 800M High Integrity are valid only for the AC 800M High Integrity controller. Refer to Safety Certification Status on page 28 for information on certification status of the AC 800M High Integrity controller.

Configuration

Table 65 lists the issues that may exist and affect configuration of the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 65. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Erroneous Order to Open PilotValve is Set during Application Reconfiguration. If BurnerLib burner is Active an Erroneous Order to Open PilotValve is Set during Application Reconfiguration. Product Bulletin 3BSE047421D0177 800xACON-CN-5112-001	Do not make warm reconfigurations of burner application whiles burner is active.
Download to controller aborted if changes made to RNRP settings. If changes to RNRP settings is made and download of this change is attempted from a Control Builder located on a different RNRP area than the controller, the download will fail and no further downloads will be possible without cold restart of the controller. 800xACON-CN-5110-043	Only download changes to RNRP settings if the Control Builder is on the same RNRP area as the controller.
Varning limit for total load in task download analysis to low The warning limit in task analysis tool is set to 70% for AC 800M High Integrity controllers in stead of the supposed limit of 90%. 800xACON-CN-5020-090	The warning for high total load can be ignored if below 90%

Table 65. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Large code blocks in SFC transitions can not be scrolled. If the transition step of a SFC contain large amount of code it will in some cases not be possible to scroll the text to see the complete code. 800xACON-CN-4100-053	This problem has existed for a very long time, no workaround exist for this problem.
SIL3 IAC status discrepancy if changing server IP-address When moving a SIL3 Communication Variable between server controllers or changing IP-address of the server controller there can be an IAC status discrepancy for a short time. This problem is more likely to occur if IAC interval time is higher than IEC 61131 task interval time. If the IAC status is used in critical loop a controller shutdown could occur. 800xACON-CN-5110-046	Avoid changing server system for IAC variable already for SIL3 application if IAC interval time is higher than IEC 61131 task interval time.
Safety Shutdown when Writing to Min and Max Components of I/O data types in SIL3 Application Writing to the Parameter component of a RealIO variable (e.g. Min, Max) connected to an AI880 in a SIL3 application is not permitted and may lead to a safety shutdown of the controller. Notice that a compiler check for this is missing. 800xACON-CN-5020-092	No workaround exists for this issue.

Operation

Table 71 lists the issues that may exist and affect operation of the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 66. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
SIL3 Discrepancy when range changed for I/O variable from 1131 code If range components min or max is changed from 1131 application code in SIL3 applications this can lead to a input discrepancy for the I/O channel. If the channel is used in critical loop a controller shutdown could occur. 800xACON-OL-5020-076	Ensure that range (min/max) for I/O variables is not changed from SIL3 1131 application code. This function will be restricted with a compiler error in future versions of Control Builder.
Search & Navigation tool, missing or erroneous results if duplicated hardware unit name If more than one hardware unit has been assigned the same hardware instance name in the Project Explorer, the Search and Navigation tool will not be able to correctly identify and present all references to and from these units. 800xACON-OL-5100-112	Assign unique names to hardware units.
CI867 as slave may reset if there are frequent disconnections from external master. 800xACON-OL-5110-041	There is no workaround, but there should not be frequent disconnections from the external master due to network disturbances.

PLC Connect and SoftPoint Server

This section details the Known Problems for the PLC Connect and SoftPoint Server that exist in the system at the time of release.

Configuration

Table 67 lists the issues that may exist and affect configuration of the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 67. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
PLC connect aspects shows error after updating the system from 5.1 Rev E to 5.1 FP4 Rev E. 800xAPLC-CN-5144-001	After an update from 5.1 Rev E to 5.1 FP 4 Rev E, repair PLC Connect in Control Panel / Programs & Features.

Application Change Management

This section lists the Known Problems of Application Change Management (ACM) that exist in the system at the time of release.

Table 68 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 68. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
ACMClient application closes down if the last column of the Object view pane is selected. 800xAACM-OL-5141-002	No workaround exists for this issue.

Table 68. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Selecting any object in the object view pane and double-clicking the scroll bar opens the corresponding *.afw* file. 800xAACM-OL-5141-003	There is no impact. The opened file can be closed.
In ACM client, **Delete at Import** functionality is not functional. 800xAACM-OL-5140-005	No workaround exists for this issue.
In few instances, check-in of objects/entities with more than 100 child objects may take significant amount of time. 800xAACM-OL-6000-001	Planning is required before performing the operation.
The custom entities, configured prior to ACM update from 5.1 FP4/5.1 FP4 Revision D to S-FP 5.1.4-1A do not appear in custom entity window. 800xAACM-OL-5141-001	No impact is seen on functionality and ACM still considers the earlier configured object as the custom entity.

Table 69 lists the installation issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 69. Installation Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Updating ACM from S FP 5.1.4-1 to S FP 5.1.4-1A using Feature Pack Update Tool leaves two entries in 'Programs and Features'. 800xAACM-INS-5141-001	Uninstall the previous build (S FP 5.1.4-1) from the 'Programs and Features' manually.

Instruction Manual Changes

Table 70 lists the Instruction Manual Changes that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 70. Instruction Manual Changes

Issue	Workarounds, Clarifications, and Helpful Hints
New version of an entity/object always get checked in to ACM server even if they are not changed. 800xAACM-MC-5141-001	Ensure that, windows logged in user is configured/added to the SharePoint service of ACM Server. Refer to *System 800xA Engineering Application Change Management (2PAA108438*).*

SFC Viewer

This section lists the Known Problems of SFC Viewer that exist in the system at the time of release.

Table 71 lists the operational issues that may exist and affect of the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 71. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
In some cases, after clicking Upload in the SFC Uploader aspect window, the following error message appears even though the correct project is opened in Control Builder. **Get Object Path** ☒ The Project opened could be diffrent. Please open the correct CBM project OR there are no Structure Data Types being used OR could be some other error. OK Important 800xASFC-OL-5110-001	No workaround exists for this issue.
If a variable is used multiple times in the logic in the transition and if the value of the variable is false (in Online mode), clicking Unfulfilled Criteria in the transition window results in display of multiple entries of this variable. 800xASFC-OL-5110-009	No workaround exists for this issue.
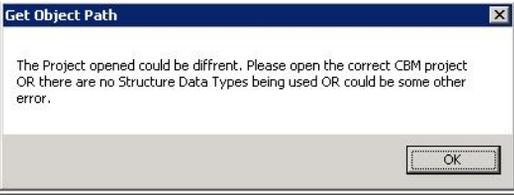
Table 71. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
If a parameter with direction *in*, used in a sequence, is modified after obtaining the driving object path, further upload (through SFC Uploader aspect) does not update this modified signal. Important 800xASFC-OL-5110-005	No workaround exists for this issue.
If an output reference variable, introduced in a step, is used as input reference in transitions in the same sequence or a different sequence, the action window corresponding to this step displays multiple tags with the same output reference variable name. 800xASFC-OL-5110-006	No workaround exists for this issue.
The object navigation feature from the tag displayed in the List View of transition window is not supported if the description of the tag contains an "_" (underscore) character. Important 800xASFC-OL-5110-007	No workaround exists for this issue.
Multiple assignments for variables using structured text in Control Diagrams may not generate the driving object path using SFC Viewer Uploader. 800xASFC-OL-5130-024	No workaround exists for this issue.
If the description of the tag or the diagram reference variable is long, the description text is not completely visible in the List View of transition or in the action display with target diagram reference name. 800xASFC-OL-5110-011	No workaround exists for this issue.

Table 71. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
If the project constant used in transition is of non-Boolean type, clicking Unfulfilled Criteria (in online mode) in the transition window results in display of two entries of this project constant. Important 800xASFC-OL-5110-010	No workaround exists for this issue.
The 800xA Workplace Application closes down due to excessive memory allocation, when there are more than 1000 SFCViewer aspects on Control Module and Diagram Types. 800xASFC-OL-5131-001	Limit SFC Viewer Aspect counts created in Object Type Structure to below 1000.

Process Engineering Tool Integration

This section lists the Known Problems of Process Engineering Tool Integration (PETI) that exist in the system at the time of release.

Table 72 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 72. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
IO modules under Module Bus for Safety Controller-PM865, may not be transferred to 800xA node. High 800xAENP-OL-5140-002	No workaround exists for this issue.
If the **ABB Function Designer** and **ABB DM&PM Application** extensions are not loaded, PETI transfer is unsuccessful for the Pure CB workflow. 800xAENP-OL-5140-007	No workaround exists for this issue.
FF Global Variables do not get created at the application level when a PETI transfer is done. 800xAENP-OL-5140-008	No workaround exists for this issue.

Table 72. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Sometimes PETI may have the following IO Allocation issues: • PETI does not connect application level IO variables. • PETI considers the Single Control Module name and not variable name for IO Allocation. High 800xAENP-OL-5140-009	No workaround exists for this issue.
After upgrade of PETI from previous versions to 800xA 5.1 Feature Pack 4 using FUT, the following issues are observed: 1. Add or Remove programs contains two entries of PETI. 2. PETI transfer using sample mapping file is not successful for the Hardware objects of BasicHwlib. 800xAENP-OL-5140-005	**Workaround for PETI transfer:** User has to edit the mapping file to map respective objects to the latest version of the Libraries in 800xA.

Table 72. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
FF applications with two or more FF Blocks, with its attributes such as signals, Device allocation and Block Name does not support mapping. If one of the block attribute is mapped, then the rest of the blocks are duplicated with attributes of the first block on 800xA mapping side. Mapping of individual signal to a particular function block is not supported by PETI. Option to connect a signal and Blocks like AI, AO,PID and their respective pins is not available in the mapping menu of PETI. 800xAENP-OL-5110-001	No workaround exists for this issue.
Using PETI, while transferring data to 800xA Process Portal A, some objects are not created, but in Transfer window **Object was created** is displayed. However the objects are not created in Process Portal A/Control Builder. 800xAENP-OL-5110-002	No workaround exists for this issue.
If PETI is used to create the Function Diagram with the objects and **CreatedByPETI** aspect is not added, then new child objects are added to the diagram instead of modifying or renaming the original child objects. 800xAENP-OL-5110-003	No workaround exists for this issue.

Table 72. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Function Diagram cannot be allocated to specified control application, on mapping CBApplication and CBController properties of Allocatable Group aspect of the Function Diagram. 800xAENP-OL-5110-004	No workaround exists for this issue.
An exception message appears if Process Engineering Tool Integration is asked to perform a transformation without selecting any transformation. 800xAENP-OL-5100-009	Select at least one transformation before performing **Transformer** in Process Engineering Tool Integration. Also, when an exception occurs, click **Continue** to ignore the exception and then click **Back** to exit the Transformer and proceed.
System stops with **System out of memory** error message, whenever loading a huge (more than 60 MB) CAEX file for the second time. Important 800xAENP-OL-5100-010	Close the application. Reopen it and reload the file.
Unhandled exception error is displayed, if the CAEX Editor is closed using the **X** (close) button placed in the top right corner of the window. 800xAENP-OL-5100-011	Always use the **Cancel** button to close the CAEX Editor.

IEC 61850

This section lists the Known Problems of the IEC 61850 that exist in the system at the time of release.

Table 73, and Table 74 lists the configuration and operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 75 lists the issues that exist in the instruction manuals that have not been corrected since the previous version.

Table 73. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
When an existing IED in scd-file is re-named and re-imported into CET project, the previously imported IED with old name is retained in CET along with the IED with new name. Important 800xAIEC-CN-5140-001	After import in CET, check that the IED with new Name has been imported and manually delete the IED with old name.
IEC 61850 Uploader hangs while uploading scd-file having multiple subnetworks successively. Important 800xAIEC-CN-5140-002	After uploading one subnetwork, close and reopen the Plant Explorer Workplace and then select the IEC 61850 Uploader Aspect to continue with other Subnetwork. Repeat this step until all the Subnetworks are uploaded.
IEC 61850 CET OPC Server does not generate condition events for Analog Measurement Monitoring of High and Low Levels. Hence High and Low Level Alarms are Not available in 800xA Alarm List. Important 800xAIEC-CN-5140-005	Analog Measurement Monitoring of High and Low Levels are available in 800xA Event List.

Table 73. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
After scd-file is Re-uploaded with modified Objects / Aspects / Properties in IEC61850 Object type Library, the modifications are not updated in instantiated objects in 800xA Control Structure and Functional Structure. 800xAIEC-CN-5140-006	No workaround exists for this issue.
In CET, it is not possible to use Vertical scroll bar for navigation of IED list in System Consistency Check tool. 800xAIEC-CN-5140-007	Use keyboard arrow keys instead of vertical scroll bar for navigating the IED list in System Consistency Check tool.
CET crashes while Importing *CETEventCategories.xml* by Event Template Tool during project migration. Important 800xAIEC-CN-5140-011	To prevent CET crash during project migration, Import *CETEventCategories.xml* using Event Template Tool by selecting only the following six new event categories. **Under Simple Event Categories**: • ProcessSimpleDiscreteEvent • ProcessSimpleLevelEvent • SystemSimpleDiscreteEvent **Under Condition Event Categories**: • ProcessConditionDiscreteEvent • ProcessConditionLevelEvent • SystemConditionDiscreteEvent Then repeat the Import of `CETEventCategories.xml` using Event Template Tool by selecting all items with the *Overwrite Existing definitions in import* option selected.

Table 73. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
CET EventCategories.xml file is not available to complete the Post Installation Steps. 800xAIEC-CN-5140-025	Create the necessary Event Categories Manually in CET as below: **Add New Event Categories**: Computer Node > Common Event Settings > Simple Event Categories • ProcessSimpleDiscreteEvent • ProcessSimpleLevelEvent • SystemSimpleDiscreteEvent **Add New Event Categories**: Computer Node > Common Event Settings > Simple Event Categories • ProcessConditionDiscreteEvent • ProcessConditionLevelEvent • SystemConditionDiscreteEvent

Table 74. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Select Before Operate command operation from Faceplate to IED through IEC 61850 OPC Server, does not work during Connectivity Server redundancy switch over. Important 800xAIEC-OL-5140-003	No workaround exists for this issue.

Table 74. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
IEC 61850 OPC Server internal events for Select Before Operate Commands are not updated in PPA event list. Important 800xAIEC-OL-5140-004	No workaround exists for this issue. This problem occurs when Select Before Operate command is being executed via OPC DA server in one Connectivity Server machine while the Event collector service is active in the redundant Connectivity Server machine. This is because for redundant IEC61850 OPC Servers, Internal events of primary OPC Server instance are not updated into redundant OPC server due to which the active event collector service does not get the events to provide to PPA Event list. Affinity Configuration can be used to resolve this problem. For details on configuring Affinity, refer to *System 800xA Post Installation (3BUA000156*)* Manual.
Uploader unable to provide access to Logical Node signal values for Conducting Equipment or Bay objects that do not have the Logical Node assigned directly. For example, Phase current values from MMXU LN assigned to CTR can be accessed only by Control Connection Aspect of CTR and Not by Control Connection Aspect of other Conducting Equipment or Bay. If LN assignment is moved from CTR to CBR in Scd-file, then access to the LN signal value is possible only in CBR Control Connection Aspect and not in CTR Control Connection Aspect or Bay. Important 800xAIEC-OL-5140-010	No workaround exists for this issue.

Table 74. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Default Update rate of Control Connection Aspect properties of LN object in Object Type Structure is not retained in Control Structure instances after upload. 800xAIEC-OL-5140-012	No workaround exists for this issue.

Table 75. Instruction Manual Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Section 10 of *System 800xA IEC 61850 Configuration (9ARD171387*)* manual does not mention the restriction about instantiation of new versions of IEC 61850 Object Type Library. When IEC 61850 Operation Library is loaded in 800xA System, any instantiated IEC 61850 Object Type Library cannot have <Major.Minor> version number that is higher than the Feature version number specified in the License (*.sla) file for Feature IEC61850_FP_LIB. Otherwise, the License Status Viewer shows version error for feature IEC61850_FP_LIB. 800xAIEC-MC-5140-015	Ensure that the Major version number of instantiated IEC 61850 Object Type Library is not higher than the feature version number specified in the License (*.sla) file for feature IEC61850_FP_LIB.

Device Management FOUNDATION Fieldbus

This section lists the Known Problems of the Device Management FOUNDATION Fieldbus that exist in the system at the time of release.

Table 76, Table 77, and Table 78 lists the installation, configuration, and operational issues that may exist and affect the system or product at time of release.

Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 76. Installation Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Fieldbus Builder FF setup does not replace all system files. After uninstall an old Fieldbus Builder FF version the files dgmfbbc.dll, dgmopcc.dll and f2kopcda.dll in the windows\system32 folder may be left. The files will not be overwritten by a new installation. As a consequence the windows performance monitor and other diagnostic tools may not work as expected. 800xDMF-IN-5010-007	Before installing the Fieldbus Builder FF 5.0 SP2 the following files must be removed manually from the Windows\System32 folder: • dgmfbbc.dll • dgmopcc.dll • f2kopcda.dll
After a former primary aspect server has been reconnected to the system, the FF distribution servers may not be able to replicate the new data from the secondary aspect server. In this case the file versions for some files in the FFDSD status viewer ([Service Structure]FFDataStorageAndDistribution/Basic Service Group, Special Configuration tab) differ. In some cases this will also cause an error "The specified file could not be found on the Distribution server" during opening of a HSE subnet. 800xDMF-IN-5100-002	Restart the Distribution server FFDSD: In the workplace, navigate to [Service Structure]FFDataStorageAndDistribution/Basic Service Group. Clear the selection in "Enabled" check box and click "Apply". Now select the "Enabled" check box again and click "Apply".

Table 76. Installation Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Loss of OPC DA communication This may occur after install/ restore FF Device Object types at • Faceplates (values are not further updated) • Trends and logs are not updated • Control Connection Aspect shows "addItem error" when live values are displayed Important 800xDMF-IN-5100-004	After installation/ restoration of FF Device Object Types immediately upload the library.
Component installation failed. During manual installation the installation dialog may indicate with a red cross that a component is not installed correctly. Important 800xADMF-IN-5101-001	Repeat the installation with another user out of the PPA user group.
Configure dialog missing during manual installation. 800xADMF-IN-5101-002	Open the configure dialog after installation has been completed.
Procedure for updating from 3.1 to 5.1 FP2 and 4.1 to 5.1 FP2 Restoring data from a backup stored in 3.1 or 4.1 to 5.1 FP2 may fail. FF relevant data are not restored. 800xADMF-IN-5120-001	Restore the system in 5.1 Revision A and then update the system to 5.1 FP2.

Table 76. Installation Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Message box during installation During installation a message box 'The following Application should be closed before continuing the install: WMI Provider Host (Process Id: xxxx)' is shown, if FF relevant performance monitor counter are used in applications. Important 800xADMF-IN-5120-006	To continue without forcing a reboot, the Windows Management Instrumentation service can be restarted. This terminates the displayed process and starts a new one. The installation can be continued by pressing the "Retry" button. Alternatively the "Ignore" button can be pressed. In this case the installation continues, but a reboot is required afterwards.

Table 77. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
FF data in backup cannot restored: The FF data stored in a backup of this version 5.1 FP4 Rev E cannot be restored successfully. Important 800xADMF-CN-5141-006	Perform following steps after system update: • Open the FF Library from the Object Type Structure. • Check the content of the FF Library. • Close and Save the FF Library. • Upload the FF Library.
Standard Dialog Editors are not available User defined dialogs are not available for imported Device Object Types. 800xADMF-CN-5102-002	Import user Dialogs manually from Device Object type folder typically found at: `\Program Files\ABB Industrial IT\Engineer IT\ABB Device Integration Library\FF Device Integration Library\\CFF\ST FF Dialogs\*.dge`
After restore it may happen that a plausibility check will not eliminate all error indicators. Important 800xADMF-CN-5101-008	Reserve the whole subnet. Check the project manually multiple times until no more error indicators occur. Start download of Control Builder M only after subnet has been uploaded.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
HSE Project damaged after CUT and PASTE of HSE objects within Fieldbus Builder FF. Important 800xADMF-CN-5101-007	Use COPY, PASTE, DELETE instead of CUT and PASTE.
Inserting OPC server objects simultaneously in different FBB instances will lead to a non repairable project database. The conflict resolution dialog may show that a redundant OPC server is already created. 800xDMF-CN-5100-001	Do not insert OPC server objects simultaneously in different FBB instances. In case the conflict resolution dialog occurs anyway do not rename the OPC server within the conflict resolution dialog. Instead cancel the action, delete the second OPC server, and delete the used tag out of the tag list. **CAUTION**: It is mandatory to follow the above mentioned workflow, otherwise it leads to non repairable project database.
After function blocks have been deleted, the version check within the Online dialog shows that the config has changed. The following download action runs without error, but the download arrow icon on the link in the hardware tree still remains. A new online version check still reports that the config has changed. 800xDMF-CN-5100-002	Perform a full download.
Check after import fails with error message: "The signal <signal name> is not a FF signal". Important 800xDMF-CN-5100-004	Open corresponding FBAD, select the red indicated signals and click Enter. Occasionally the signal properties dialog may occur and needs to be confirmed. The former red marked signals now appear in black color.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
If two exports are running simultaneously which export the same object (Example: the library as a dependency), the first export will be successful, whereas the second export fails. Important 800xDMF-CN-5100-005	Export parts sequentially.
Time out during initialization of H1 link while pre-commissioning or activating the H1 Link. 800xDMF-CN-5100-006	When adding new pre-configured devices to existing and running H1 Links, PD Tags and node addresses shall not conflict with already connected devices.
Afw files from earlier versions (SV3.1 and SV4.0/4.1) cannot be imported correctly into SV5.1. 800xDMF-CN-5100-007	The FBBFF objects can be exported and imported by using HWM files (Block import).
Occasionally, a long idle time is observed when an HSE subnet is saved or uploaded in case the client notes is not available. 800xDMF-CN-5100-008	Rearrange nodes in the *Node Administration Structure* so that the nodes which are not always available occur after all OPC server nodes.
The error output of the FFHSEWrite function block indicates also a True if a warning occurs (error code starts with "2"). 800xDMF-CN-5100-011	Adapt your Control Builder M application accordingly.
After import of a library with duplicate device types referenced device types are missing at the device instances. Important 800xDMF-CN-5100-013	Delete device type and import the correct one again.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Communication is out of cycle The schedule calculates the communication (default values for gaps) at the end of the second FBAD cycle. Adding a second signal to an FBAD may produce a plausible error: *... communication is out of cycle, with xx% free communication time.* Important 800xDMF-CN-5100-014	Small modification in the gap timings will allow a successful schedule generation For example, Typ C/S PDU delay: 72 -> 74 Typ C/S PDU duration: 40 -> 38
Import of complete HSE Subnet failed with the following error message: "There is no free slot for this type of resource." Important 800xDMF-CN-5100-015	Do not import complete HSE Subnets. Subparts can be imported instead.
Rosemount Device assignment is not successful if additional blocks are instantiated. Important 800xDMF-CN-5100-017	Do not add instantiable blocks in Rosemount devices.
After deleting a H1 link it may happen that the linking device is unchecked during save. Important 800xDMF-CN-5100-018	• Export the linking device including sub nodes with PPA Export/Import tool • Delete the LD in FBB • Recheck the subnet • Reconcile the OPC Server FF • Import the linking device with PPA Export/Import tool • Pre-commission and download the devices

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
In Service Structure, it is not possible to get the 'Event Collector Service Provider' of an HSE Subnet into 'Service'. 800xDMF-CN-5100-019	Delete the entire 'Service Group' of the affected HSE subnet in the 'Event Collector Service'. Later run an 'Upload' of the affected subnet in the Control Structure. The service provider should now work as desired.
Change Type of FF object instances may lead to upload errors in very rare cases. Important 800xDMF-CN-5100-020	Do not exchange FF object instances through "Change Type".
Moving a CI860 object in a tree or detail view of the FBB FF will change the IP address of the object. Due to the changed IP address, system will enforce a reboot of CI860 during the next download from Control Builder. Important 800xADMF-CN-5103-002	Avoid moving of CI860 objects in the FBB FF. Before checking the project and after moving a CI860 object, retain the original IP address.
Restrictions in VEGAPULS devices Not all menus from the Device Description are usable within DD menus part of block properties dialog. Menus that are not working: • Diagnostics/Echo Curve: Upload and display of Echo, False signal suppression, setup curves. • Setting of False signal suppression. • Reset (partially), only major options work. 800xADMF-CN-5102-004	Use **Advanced > Properties**, in Properties Dialog or device local functionality to configure these items.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Download Arrow after Upload of Alarm Limit Checking the HSE subnet after uploading online changed alarm limits will show download arrows at OPC server FF and H1 link indicating that the OPC server FF has to be loaded. 800xADMF-CN-5120-022	Perform an incremental download of the marked H1 link in order to download its missing OPC server part.
Full download of H1 link A H1 link may require a full download if the device type reader is running during the start of online dialog. 800xADMF-CN-5120-002	Start the online dialog after the device type reader is switched to standby mode. It is a best practice to disable the device type reader after the pre-commissioning phase is finished.
FF object merge instead of exchange during import or deploy of FF configuration parts In cases where an import or deploy should replace FF configuration parts, it may happen that the replaced parts are not removed. Important 800xADMF-CN-5120-005	Before importing or deploying FF configuration parts, the parts that would be replaced should be deleted.
Online version check not finished Occasionally it may happen that the online version check is not complete due to an outstanding response from a H1 device, in this case the progress indicator for the online version check will be frozen. 800xADMF-CN-5120-010	Close the progress indicator dialog box manually after it is inactive for 90 sec.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Commissioning	
Moving a device in the tree view of the FF Object Editor, also inside a single tree, forces a full download of this device. 800xDMF-CN-4100-015	Avoid moving of devices in the tree view for optical reasons.
Factory Reset Not Indicated in Fieldbus Builder FF If a device is reset using the RESTART parameter in the resource block, this has no influence on the displayed assignment and download state in the tree structure of the FF Object Editor. 800xDMF-CN-4100-017	Use the context menu of the device to initiate a factory reset.
Restarting an H1 device by writing the RESTART parameter in the Resource Block parameter dialog may time out with an error after 60 seconds. Important 800xDMF-CN-4100-019	For restarting an H1 device select the *Restart device* context menu entry at the H1 Device object.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Assignment of a pre-configured H1 device may fail in the following cases: **Case 1:** Assignment of an H1 device where the tag name and node address already match, may fail in rare cases with the message *Error writing FBAP Server VCR* **Case 2:** Assignment of an H1 device which supports instantiable blocks and which has been pre-configured with a 3rd party configuration tool supporting configuration of instantiable blocks, may fail. **Case 3:** Assignment of an H1 device with Softing stack version < 2.11 may fail, if the device was configured with a 3rd party configuration tool or in another project before and Publisher/Subscriber VCRs were active in the device. The device assignment does not finish. Important 800xDMF-CN-4100-020	Workaround for Case 1: Perform a Clear Address and then repeat the device assignment. Workaround for Case 2: Perform a factory reset of the H1 device using hardware means described in the user manual of the device. Then repeat the device assignment Workaround for Case 3: Power down and power up the device. Then repeat the device assignment. Alternatively perform a factory reset and then repeat the device assignment.
OPC Server interfere Fieldbus Builder FF download During download it may occasionally happen that the OPC Server interfere FBB FF on writing to FBAP. In some cases this may prevent a successful download. 800xDMF-CN-5010-002	Retry download or retry download with a different download scope.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Device fails to download and connect Function Block Application Process Virtual Field Device (FBAP VFD) access is not possible after download by inconsistent code generation. This shows up with capabilities file which include a section like [NM VCR Usage 2] FasDllResidualActivitySupported=RESIDUAL) 800xDMF-CN-5010-005	Patch the capabilities file: Remove the entry on all but the F8 server VCR or Replace RESIDUAL with NORESIDUAL.
CI860 will reboot after change of IP configuration (IP address, HSE Default Gateway or HSE Subnet mask) - Immediately if client/server signals are already configured or - Unexpectedly at a later time during downloading of any signal configuration changes. 800xADMF-CN-5101-006	Avoid changing the IP configuration of CI860. If it cannot be avoided, force an immediate download by any signal configuration change.
System and Plant Explorer Handling	
The system synchronization rollback does not restore the FF library. Devices will not be removed from a library. 800xDMF-CN-4100-025	No workaround exists for this issue.

Table 77. Configuration Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
No Online Access to HSE Subnet after Disconnecting HSE Subnet from One Node of a Redundant Pair of Connectivity Servers FF Disconnecting the HSE Subnet from one node of a pair of redundant Connectivity Servers FF may disable online access of Fieldbus Builder FF to the HSE Subnet. Thus communication between Fieldbus Builder FF and the HSE Subnet is interrupted for the time of disconnection. 800xDMF-CN-5000-004	For accessing the HSE Subnet, Fieldbus Builder FF uses the first available Connectivity Server FF with DMS connection regardless of the HSE connection state of this node. Workaround: Reconnect HSE Subnet to Connectivity Server FF.
Bulk Data Manager	
It is not possible to create FF objects and parameterize them in the same step with Bulk Data Manager (BDM). A second save creates a BDM error sheet. Important 800xDMF-CN-5100-009	After first save, read the just imported FF objects into the same Excel sheet. The original specified values are overwritten. Re-enter the correct values and save the BDM sheet again. Or Create separate BDM sheets: one for object creation and one for parameterization.

Table 78. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Plausibility check causes download requests after online parameter changes After parameter changes are done in Online Mode of Fieldbus Builder, a plausibility check in the Offline Mode creates a download requests that is visible as download arrows in the tree view. 800xADMF-OL-5102-001	A download has to be performed to remove the download arrow.

Table 78. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
Crash of OPC server in Trace Module The OPC servers FF may crash in the Trace Module after a loop in the Ethernet network creates a high broadcast load. 800xADMF-OL-5101-016	Avoid loops in the Ethernet network.
On cancelling a download the OPC server FF displays No Connection On cancelling a download, the OPC server FF may display **No Connection** in the tree view. 800xADMF-OL-5120-009	Reboot the connectivity server or perform the following steps: 1. Close all Fieldbus Builder FF applications on all the nodes. 2. In the Service Structure of the Workplace stop both OPC service provider (`Event Collector` and `OPCDA`) of the Subnet. 3. Restart the `ABB FFNameserver` in Windows Services (Use Task Manager). 4. Enable Service providers again in Service Structure that is stopped in the Step 2.
Fieldbus Builder FF Crashes in Diagnostic View Fieldbus Builder FF crashes after the following sequence: • Diagnostic View is selected. • OPC Server Object or HSE Host Object (CI860) is selected in Tree View. • Switched back in Tree View to Object other than those before (HSE Subnet, LD or H1 link). • Mouse click in Device List View (anywhere). Important 800xADMF-OL-5120-012	Do not select OPC Server Object or HSE Host Object (CI860) in Tree View when the Diagnostic View is displayed. Select the Device List Tab before selecting those objects.

Table 78. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
The FBBFF shuts down while changing to commissioning mode, if duplicate IP addresses are used on the HSE network. Important 800xADMF-OL-5130-003	Avoid duplicate IP addresses on the HSE network.
Frozen or bad values in Faceplates, Graphics and Trends Properties such as OPC Control Connection/OPC Control Connection.xxxxx from FF objects used in BDM sheets may lead to frozen or bad OPC values in faceplates, graphics and trends. 800xADMF-OL-5103-001	Do not use properties such as OPC Control Connection/OPC Control Connection.xxxxx from FF objects in BDM sheets if plant is in operation.

Device Management PROFIBUS & HART

This section lists the Known Problems of the Device Management PROFIBUS and HART that exist in the system at the time of release.

Table 79, and Table 80 lists the configuration and operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 79. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Multiple Port objects having large number of ADM objects, when dragged and dropped to another FDS object, FDS DTM topology may not get updated completely with all new dropped port objects. Also, dragged objects will not be shown under original FDS DTM. In such situation, upon closing 800xA Workplace, the recent changes will not be saved and results in multiple Device Management Server processes. Important 800xDPH-CN-5100-012	Do not use drag and drop functionality with P&F DTM objects. However, if such situation occurs, follow the below steps: 1. Kill Device Management Server process using Task Manager. 2. In Control Structure, delete port objects which are not updated in FDS DTM topology and recreate them using BDM tool.
If any Configuration/Parameter changes are done on one instance of P&F DTM, changes will not be shown or updated in instance of same DTM on another node, if already open, unless Frame Application is closed and reopened on second node. Important 800xDPH-CN-5100-013	To see Configuration/Parameter changes, 1. Close the Frame Application on second node. 2. Reopen Frame Application. 3. Launch the DTM.
If control entity is reserved by any other user than the logged in user, ABB third party DTMs does not show any DTM view. Important 800xDPH-CN-5100-017	This is DTM specific Implementation. No workaround available.

Table 79. Configuration Issues

Issue	Workarounds, Clarifications, and Helpful Hints
When DTM is opened or accessed by right-clicking on Device instance in Control Structure without reserving the entity, the same DTM can not be accessed again with user role 'Planning Engineer' after reserving the entity. 800xDPH-CN-5100-019	Close and reopen the Plant Explorer Workplace and then access the DTM with entity reserved. or Before accessing the DTM, release the Control project from Controller level and reserve it again.
When the DTM is opened as a separate window and if the window is maximized after moving scroll bar, then the DTM view is not proper. 800xADPH-CN-5100-010	If such a problem occur, user needs to close and reopen the aspect view. And before scroll bar movement, maximize the window.
In Basic HART DTM, company name will be shown as blank if connected HART 7 device has 2 byte manufacturer ID. 800xADPH-CN-5100-014	No workaround exists for this issue.

Table 80. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Some times during upload operations for HART 7 devices using Basic HART DTM, "9 - Invalid Selection" error message may appear and upload may fail. 800xDPH-OL-5100-013	1. Open Basic HART DTM. 2. In the **Observation** UI, change the variable codes not supported by the device in the default list under **Device Variable with Status > Variable code**. 3. Press **Read**. 4. Perform the upload operation.
In the Basic HART DTM Wireless Configuration user interface, **Join status** field shows Join status code instead of Join status description. 800xDPH-OL-5100-014	Refer to **Flow of Join status Information** area in the Basic HART DTM Wireless Configuration user interface.

800xA for Advant Master

This section lists the Known Problems for 800xA for Advant Master that exist in the system at the time of release.

Configuration

Table 81 lists the issues that may exist and affect the configuration of the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 81. Configuration Issues

Issue	Workarounds, Clarifications and Helpful Hints
The online help for On-line Builder Commands may not function for RTA board Configuration in Windows 7 and Windows Server 2008. 800xAADM-CN-5100-004	A Windows Help and Support window is displayed if any error occurs. It is possible to correct the error by following the instructions provided in Microsoft Help and Support website. This instruction includes download of a program that helps to view the On-line Builder Commands help file.
The function Advant Master Alarm Refresh cannot be started manually, if more than one aspect with the name "General Properties" is placed on the Controller node object in the Control Structure. The property FORCE_REFRESH, which is used for manual refresh of the alarms, will not be found. 800xAADM-CN-6000-001	Do not create new aspects named "General Properties" on the controller node objects, if function Advant Master Alarm Refresh is enabled. Use the already predefined "General Properties" aspect and add the additional needed properties.
Object has wrong type in control structure in System 800xA after upload. The issue is created by following this sequence: 1. Create a DI object in the controller 2. Upload the controller 3. Delete the DI object 4. Create an AI object with the same name as the deleted DI object 5. Upload the controller 800xAADM-CN-5102-001	Do the following to ensure that the correct object instance is added to the control structure in System 800xA: 1. Create a DI object in the controller 2. Upload the controller 3. Delete the DI object 4. Upload the controller, to ensure that the DI object is removed from the control structure 4. Create an AI object with the same name as the deleted DI object 5. Upload the controller to add the correct object instance to the control structure

Operation

Table 82 lists the issues that may exist and affect the operation of the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 82. Operational Issues

Issue	Workarounds, Clarifications and Helpful Hints
Presentation of module position (field Pos) are wrong in the S800 IO Module Detailed View display, if S800 I/O clusters are used. 800xAADM-OL-5110-007	The problem can be manually corrected in the S800 IO Module Detail View graphic display as follows: 1) Go to the library *AdvantMasterObjectTypesPG2Ext 1.0-n* (where *n* is the revision of the library) Extension Library Version object, and open the *Extension Library Version Definition* aspect. Change the library state from Closed to Open. 2) Go to the *S800 IO Modules* object type object, and edit the *S800 IO Module Detail View* aspect. 3) Select the Pos value field (AdvantNumeric3 text) at the right of the text *Pos*. 4) Change expression for property Text (AdvantNumeric3 text) to `Format("{0:#0}", e_POS1 / 16 * 100 + e_POS1% 16)` 5) Save and exit from the Process Graphics editor, and Close the library.
Problem occurs when adding a Redundant Connectivity Server. After performing Add Redundant Server followed by the Configuration Wizard action *Add RTA*, the Event Collector Service provider for the newly created server does not enter the Service or Standby state. 800xAADM-OL-5110-008	Restart the Connectivity Server.

Table 82. Operational Issues (Continued)

Issue	Workarounds, Clarifications and Helpful Hints
Misleading information appears in display elements when opening a process display, if the controller is in configuration mode. 800xAADM-OL-5100-008	Some display elements show a valid symbol for a minute, even if the related controller is stopped. For example, a valve symbol shows *Closed* position. After sometime, the display elements indicate bad data.
The Local device status display used for AC 410, AC 450 and Safeguard controllers may indicate wrong status for the second Program/Application card. 800xAADM-OL-5111-002	No workaround exists for this issue.
The following MMCX-base object types do not support Alarm Refresh: • MB300 Engineered drive • MB300 Standard drive • MB300 MMCX1 • MB300 MMCX2 • MB300 MMCX3 • MB300 MotconI 800xAADM-OL-5111-003	To get latest alarm status in the alarm list after a communication failure with the controller: Open the faceplates for all instance of these object types. If object indicates alarm state, toggle the Alarm Block button twice.This will update the alarm list. Quick list can be used to search for MB300 MMCX1, MB300 MMCX2 and MB300 MMCX3 objects in alarm state.
Some alarms cannot be acknowledged after restart of Connectivity Server. 800xAADM-OL-5103-001	No workaround exist for this issue. These alarms can however be acknowledged when the object is in normal state and no other unacknowledged alarms exist in the alarm list for this object.
Alarms generated first few seconds after a controller restart may not be sent to a Connectivity Server, due to late reaction in the Connectivity Server when the controller becomes available again. 800xAADM-OL-5103-002	No workaround exist for this issue.

Asset Optimization

This section lists the Known Problems of Asset Optimization that exist in the system at the time of release.

Table 83 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 83. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
After update/upgrade, sometimes it is observed that the Asset Viewer propagated status shows last updated status for objects with Asset Monitor that are inserted into the Asset Structure. 800xAASO-OL-5140-010	Re-insert those Objects having Asset Monitors or restart the AssetTree service located in the Service Structure. To restart: 1. Under Service Structure, Service, go to **AssetTree, Service** and then expand **AssetTree SG_1, Service Group**. 2. Click **AssetTree SP_1, Service Provider**. 3. Select **Service Provider Definition** from the Aspect list on the right-hand pane. 4. Clear the selection in **Enabled** check box to disable and then check it again to restart the **AssetTree** Service.

Information Management

This section lists the Known Problems of Information Management that exist in the system at the time of release.

Table 84 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 84. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Security scanning has identified a vulnerability in the Oracle TNS Listener. 800xAINM-OL-5104-122	See Technical Bulletin 3BUA002979 for information on how to work around the problem.

Batch Management

This section lists the Known Problems of Batch Management that exist in the system at the time of release.

Installation

Table 85 lists the issues that may exist and affect the installation of the system or product. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 85. Installation Issues

Issue	Workarounds, Clarifications, and Helpful Hints
Batch Web Services fail to work in a node when an error message "**BatchWebcreate has stopped working during installation**" is displayed. 800xAPMB-IN-5105-001	User need to execute the below procedure manually: 1. Launch the command prompt with Administrator privileges and browse to *<Installed drive>\Program Files (x86)\ABB Industrial IT\Produce IT\Batch\bin.* 2. Run *BatchWebCreate.exe/Au:<800xAServiceAccountName> px:<Password> /P"<Installed drive>\Program Files (x86)\ABB Industrial IT\Produce IT\Batch\BatchWebServices".*

Table 83 lists the operational issues that may exist and affect the system or product at time of release. Workarounds, clarifications, or helpful hints have been provided for each issue wherever possible.

Table 86. Operational Issues

Issue	Workarounds, Clarifications, and Helpful Hints
The Date/Time entry window used with the Batch Scheduler is only opening on the primary monitor in a multiple screen workstation. This is regardless of monitor screen used to schedule the Batch. 800xAPMB-OL-5130-001	Look into the main screen (primary display) for the Date/Time entry window.

Table 86. Operational Issues (Continued)

Issue	Workarounds, Clarifications, and Helpful Hints
A VB runtime error 91 is displayed if the Excel sheet is closed during loading of parameters in Batch Spreadsheet Scheduler. 800xAPMB-OL-5110-002	Close and re-open the Microsoft Excel sheet.
The error message "Failed to get Batch ID aspect interface" is encountered when using the Batch Web Service Interface. Users are unable to schedule Unit and Operation Batch Procedures. This same issue will occur with the Simple Batch and Parameter Management Excel Spreadsheet Scheduler. 800xAPMB-OL-5110-004	To schedule these procedures, the users need to add a Batch ID aspect to the unit and operation procedures. This is required regardless of using the auto generate functionality.
The "putm" function returns inaccurate statuses for points after the first point that failed to write. 800xAPMB-OL-5110-006	The statuses of all points up to and including the first point that failed to write are correct, but the statuses of the remaining points indicate success regardless of whether the writes actually succeeded. Therefore, statuses after the first failed status should not be considered reliable.

Revision History

This section provides information on the revision history of these Release Notes.

The revision index of these Release Notes is not related to the 800xA 5.1 System Revision.

The following table lists the revision history of these Release Notes.

Revision Index	Description	Date
-	Published for 800xA 5.1 Feature Pack 4 release.	March 2013
A	Published for 800xA 5.1 Feature Pack 4 release, with minor correction.	June 2013
B	Published for 800xA 5.1 Feature Pack 4 Rev D release.	December 2013
C	Published for 800xA 5.1 Feature Pack 4 Rev D release.	April 2014
D	Published for 800xA 5.1 Feature Pack 4 Rev E release.	July 2015
F	Published for 800xA 5.1 Feature Pack 4 Rev E release.	November 2015
G	Published for 800xA 5.1 Feature Pack 4 Rev E release.	November 2015

Updates in Revision Index A

The following table shows the updates made in this Release for 800xA 5.1 Feature Pack 4.

Updated Section/Sub-section	Description of Update
Chapter IEC 61850, under Section 3 Fixed Problem in Feature Pack 4	The description under Correction or Fix for 800xAIEC-OL-5101-002 fixed issue has been modified.

Updates in Revision Index B

The following table shows the updates made in this Release for 800xA 5.1 Feature Pack 4 Revision D.

Updated Section/Sub-section	Description of Update
Section 3. Fixed Problems in Feature Pack 4 Revision D	Newly added section with following subsections updated: • Engineering Studio • Asset Optimization • 800xA for Advant Master • IEC 61850 • Base System • Device Management FOUNDATION Fieldbus • Batch Management • Device Management PROFIBUS & HART

Updated Section/Sub-section	Description of Update
Section 2. Functionality Changes	Updated Engineering Studio Enhancements in the New Features for 800xA 5.1 Feature Pack 4 Revision D subsection.
Section 1. Introduction	Changes are updated in the following subsections: • Products Participating in this Release • Related Documentation

Updates in Revision Index C

The following table shows the updates made in this Release for 800xA 5.1 Feature Pack 4 Revision D.

Updated Section/Sub-section	Description of Update
About this Release Note	Information on **How Feature Packs work in 800xA** is added
Section 4: Fixed Problems in Feature Pack 4	Added additional issues from Controls that were fixed in this version.

Updates in Revision Index D

The following table shows the updates made in this Release for 800xA 5.1 Feature Pack 4 Revision E.

Updated Section/Sub-section	Description of Update
Section 1. Introduction	Changes are updated in the following subsections: • Products Participating in this Release • Related Documentation
Section 2. Functionality Changes	Updated subsections AC 800M, Application Change Management, 800xA for Advant Master, and PC, Network and Software Monitoring (PNSM).

Updated Section/Sub-section	Description of Update
Section 3. Fixed Problems in Feature Pack 4 Revision E	Updated the following subsections: • Base System • System Services • Engineering Studio • AC 800M • Application Change Management • SFC Viewer • IEC 61850 • Device Management FOUNDATION Fieldbus • Batch Management • Device Management PROFIBUS & HART • 800xA for Advant Master
Section 7. Known Problems	Updated the following subsections: • System Services • Engineering Studio • AC 800M • Application Change Management • SFC Viewer • Process Engineering Tool Integration • IEC 61850 • Device Management FOUNDATION Fieldbus • 800xA for Advant Master

Updates in Revision Index F

The following table shows the updates made in this Release for 800xA 5.1 Feature Pack 4 Revision E.

Updated Section/Sub-section	Description of Update
Section 2. Functionality Changes	Added TÜV Süd Group phone number

Updates in Revision Index G

The following table shows the updates made in this Release for 800xA 5.1 Feature Pack 4 Revision E.

Updated Section/Sub-section	Description of Update
Section 7. Known Problems	Added known issues to the Automated Installation subsection.

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