
Process Automation Energy Industries

ABB Ability™ SCADA Advantage

Product Release Notes version 6.0.1



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Section 1 General

Introduction

ABB Ability™ SCADA^{Advantage} version 6.0.1 has been released, it enumerates known problems encountered in the final testing of this product release and identifies workarounds that help overcome the problem. The document contains additional notes that may be valuable to the customers and service personnel working with the product, it's recommended to review the 6.0.1 release notes first if you are upgrade from 5.6.5 or older versions. This document replaces the existing release notes for the prior releases and is included on the product media.

Any security measures described in this document, for example, for user access, password security, network security, firewalls, virus protection, and so on, represent possible steps that a user of a SCADA^{Advantage} 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 SCADA^{Advantage} System.

Supported Technology

The following technologies are supported in this version of SCADA^{Advantage}

- Microsoft Windows 10 Enterprise LTSC 2019 - Operations & Engineering computers
- Microsoft Windows Server 2019 LTSC (version 1809) - RTRDB and Disaster Recovery Servers
- Microsoft Windows Server 2022 LTSC - RTRDB and Disaster Recovery Servers
- Microsoft Visual Studio 2019 - professional or enterprise, version 16.11 or later
- Microsoft Office 2016 - 32-bit and 64-bit
- Microsoft .NET Framework 4.7.2 or 4.8
- ABB Licensing 6.1.01100529
- Citrix¹

¹ Citrix is only supported on Windows Server 2016 since desktop services is equivalent to Windows 10. Citrix has not been tested on Windows Server 2019 or 2022.

The following technologies supported in 5.6.5 and earlier releases are no longer supported

- Microsoft Windows Server 2012 R2 and 2016
- Microsoft Visual Studio 2015 and 2017
- Microsoft SQL-Server is no longer required
- Microsoft Internet Explorer 11 is no longer required.

The following features that were supported in 5.6.x and earlier are no longer supported

- APPRDB/PDH using SQL-Server
- SCADA**Advantage** Explorer and HMI connecting to SQL-Server
- Visual Basic Power Pack

Section 2 Installation and Upgrading

Before Installing or Upgrading

Operating systems must have Microsoft latest security patches installed before proceeding to install or upgrade SCADAventure servers.

If you are using Visual Basic Power Pack for drawing lines, rectangles or ovals in your existing HMI, these are automatically be converted when your HMI is migrated to Windows Performance Foundation (WPF).

You must have 5.6.5 June 2022 or newer server patch applied before upgrading to 6.0.1. Otherwise, the database will fail to start after upgrading to 6.0.1.

Instructions for installing a new APPRDB has been removed. All existing functionality is now available in the RTRDB. However, the instructions for upgrading or migrating an existing APPRDB are still included in the installation manual.

As a reminder, Windows Automatic Maintenance can interfere and cause installation or upgrade to fail or take a long time to complete. Make sure Windows Automatic Maintenance (located under Control Panel, Security and Maintenance, Maintenance) is not running and is run prior to installing SCADAventure.

Automatic Maintenance

No action needed

Last run date: 5/4/2016 6:43 AM

Windows automatically schedules maintenance activities to run on your computer.

 [Start maintenance](#) | [Change maintenance settings](#)

Installing and Upgrading

The SCADAventure Product help includes a product installation, upgrade, and migration guide. A printable PDF copy of the installation guide is located on the root of the DVD. The product help requires Microsoft OneNote. The product help OneNote book is in the Update\Release\Media\Documentation\ABBSVHelp folder on the DVD or ISO image. This folder can be copied to your personal computer where OneNote is installed for easier reading, searching, and printing.

This version of the product has not been tested to install or upgrade on operating systems with newer service packs, security patches or versions of malware protection than those listed above and in the Cyber Security Guide at the time of release. ABB may require you to use a newer version of the SCADAventure or install specific product updates to work-around these types of problems.

Future Compatibility

Support for ODBC in HMI clients will be removed.

SCADAventure BOT Expressions use Perl syntax for defining an expression. This syntax will be replaced by a new Regular Expression syntax in a future release.

Launching Explorer add-ins via HMI command button actions will no longer be supported.

The ability to print screen via an HMI command button action will no longer be supported.

Section 3 New Functionality and Resolved Issues

New Functionality

This section contains descriptions of the major new features present in this version of SCADA^{Advantage}.

HMI Controls Modernized based on ABB Ability™ Styling and Windows Presentation Foundation

SCADA^{Advantage} HMI controls have been modernized based on ABB Ability™ Styling and migrated to Windows Performance Foundation (WPF), allowing HMI Designers and Engineers to create fit for purpose HMIs solutions to meet the demands of the industry. These controls have been developed to be touch enabled and high performance.

Refer to the Display Builders Guide in the product help for the list of controls and how to create a new HMI.

It is highly recommended to participate in HMI training prior to migrating or creating an HMI.

SCADA^{Advantage} Explorer – Enhancements and Modernized User Interfaces

The following SCADA^{Advantage} Explorer configuration user interfaces have been modernized with ABB Ability™ Styling.

- Communication Analyzer
- EFM Metering Menu
- Extended Database Information
- User Message Management

Note: the remaining configuration user interfaces will be modernized in future versions.

The Communication Analyzer has been enhanced with a Quick Select feature and improved user experience with simplification of the layout and usage of slid-in panels.

Gas Quality Send Out Application - Engineering Tool Enhancement

Gas Quality Send Out (GQSO) application has been redesigned to provide a better user experience. This version allows more flexibility without the need to compile a mapping .dll file. It also provides the possibility to use files coming from multiple laboratories with different structures.

Licensing software version upgrade

A new version of the ABB Licensing Software is installed (6.1.1). This version fixes found vulnerabilities in the previous version.

Metering Application - ABB Totalflow AGA 7 Gas Meters

SCADA^{Advantage} support the ABB Totalflow AGA7 Gas Electronic Flow Meter within the Metering application and is fully integrated.

OPC UA Server - Alarm and Conditions (A&C), Historical Data Access (HDA) and Server Event Profiles

The OPC UA Server has been enhanced to include the Alarm and Conditions, Historical Data Access and Server Event profiles in addition to the Data Access (DA) profile included in the initial release in version 5.6.5. These additional profiles allow the OPC UA Server to provide device and SCADA^{Advantage} Host generated telemetry alarms, events and conditions, historical telemetry data and OPC UA Server events.

Patch distribution using MSI files

Hotfix patches are now using MSI files to install monthly hotfixes. The patch can be executed on Server or Client machines, only required files will be updated depending on the machine type.

Reporting Application - Upgraded Designer and Engine

The integrated Reporting application has been upgraded with user experience improvements to the Report Designer, upgrading the reporting creation engine and storing the report definitions in the RTRDB.

SCADA^{Advantage} HMI WinForms to WPF Project Migration Services

The SCADA^{Advantage} support team provides a migration service to convert an existing WinForms SCADA^{Advantage} HMI project to WPF. Contact either your SCADA^{Advantage} Sales representative or SCADA^{Advantage} Support for details.

Disaster Recovery - Support for a 2nd Backup Site

Disaster Recovery can now be configured with one main site and up to 2 backup sites. If a second backup site is installed, redundancy will not be supported at either backup site.

Engineering Command Line Tool

The Engineering Command Line Tool has been enhanced to allow the user to Extract the Configuration to JSON.

String Points - State Limit Group Enhancements

New State Limit Group's Limit Types have been added to support String Points. The new limit types include Match, Not Match, Contains, Not Contains, Starts With, Not Starts With, Ends With and Not Ends With.

Resolved Issues

This section details fixes delivered as patches to the previous release of SCADA Advantage that are now integrated into this version. The ID number used by ABB to track the issue is included.

Server Issues

Microsoft DOM Hardening

As of March 2023, Microsoft has entered phase three of their DCOM hardening campaign. When applying Microsoft security patches to an operating system that is hosting a DCOM server it is mandatory that you also apply the patch to all DCOM clients as well.

Please refer to the following article:

KB5004442—Manage changes for Windows DCOM Server Security Feature Bypass (CVE-2021-26414) - Microsoft Support

If you need a client specific patch for this issue without installed the entire Microsoft update you can install just the patch identified in the above article. The version of the patch to install is dependent on your operating system.

Server Issues	
WID	Release Note
75050	TextCallout: Fixed the issue that an error message was log in SV log when user acknowledge text callout alarm via SMS.
75318	Totalflow: Fixed the issue that Totalflow VCono Meter parameter download and upload not working.
75508	Totalflow: Added new Totalflow AGA3 and AGA7 application elements to support hourly gas analysis upload.
75875	FisherROC: Implemented FisherRoc device OpCode 203 (File Transfer) for WHM Truck Ticketing.
76175	EFM Reports: Fixed issue in C1 Report where 'producing' was not returning a value.
71665	TotalFlow: Fixed the issue that duplicated data will be inserted into the database when running a Totalflow Read Trendblock Data command.
72785	Issue: Twilio callout didn't go through DVI, the callout shows "pending" in callout queue but did not go through DVI, there is nothing shown in comm analyzer. Fixed the issue that Twilio Callout couldn't go through DVI.
73906	Fix issue with Bulk Web Template Loader not working.
73907	Disaster Recovery: Fixed a problem where the Cool Standby goes into Standby Pending if the Warm Standby is stopped.

Server Issues	
WID	Release Note
70623	Issue: When collecting Totalflow trend file, it appears the last data value is not being inserted. Fixed the issue that the trend file collection missing last data.
71082	Issue: DVI Memory Usage Too High for Routes with the Same TCP IP Port with No Response Fixed the issue that the memory usage is too high when configure routes with the same TCP/IP address without connections.
71238	Fixed insufficient permission error when updating the description of a Blackout Period.
71239	Fixed issue where partial attributes were missing from Hourly/Daily meter history.
71266	Added a real time poll before the execution of a write command in Totalflow EFM. To enable this feature, start the DVI with the command line "/protoparam:Totalflow:realtimePollFirst".
71568	Changed the default value of Read Limit/Write Limit to 0 to fix an issue being observed when creating a new FisherRocDeviceType object.
69732	Added new EFM meter type AGA7. Updated sorting order of the EFM meter parameter items on the GUI.
69911	Improved Totalflow EFM ADT for Liquid Meter with Log Period Gas Analysis.
70318	Fixed: 'Partial' EFM daily history data being treated as 'Original' upon a second upload
68810	StateLimits: Fixed an issue where duplicate 'stringValue changed' maintenance events where being generated when the 'value' of a statelimit is changed.
69061	Metering: Fixed a problem in Meter Parameter and Gas Analysis uploads where the Updated By user was not set to SYSTEM when the upload was performed by the Device (Communications) Scheduler.
68913	Totalflow: Added the new Totalflow Measurement event codes based on the latest list.
69106	BSAP: Fixed the serial number mismatch logging message.
68680	Metering: Fixed an issue in the EFM Meter Parameter editor where the save (edited values) timestamp was being updated on a Download even if there were no pending edits.
68443	SVCalcEngine enhancement

Server Issues	
WID	Release Note
	<p>Added a new command line argument to the SVCalcEngine called /ExecuteSqlRefreshRate:<ms>. This argument can be used to set the default refresh rate of all software points that use the ExecuteSql or ExecuteSqlAsUser functions. The default is 1000 (ms).</p> <p>Expressions enhancement: New, optional arguments have been added to the ExecuteSql and ExecuteSqlAsUser functions.</p> <p>executeSql(server, sql [, defaultValue] [, blocking] [, refreshRate] [, refreshOffset])</p> <p>executeSqlAsUser(server, user, password, sql [, defaultValue] [, blocking] [, refreshRate] [, pollMode] [, refreshOffset])</p> <p>The refreshRate argument can be used to tell the expression how often (in seconds) to re-execute the sql statement. 0 is used by default to indicate the default refresh rate (1 second) should be used. The refreshRate is normalized so the refresh occurs at a more predictable rate. For example, if refreshRate is set to 60 seconds then the refresh will occur at the top of each minute.</p> <p>The refreshOffset argument can be used to offset the refreshRate. For example, if refresh rate is set to 60 seconds and refreshOffset is set to 15 seconds then the refresh will occur at 15 seconds past the top of each minute.</p> <p>Note, for executeSqlAsUser, if refreshRate is 0 and pollMode is true then the default refreshRate (1 second) will be used.</p>
67290	<p>Issue: When an DNP3 outstation sends frozen analog (Object 31) in a response to the Class 0123 poll, all the other tags goes to Device failure.</p> <p>Fix: Fixed the issue that unsupported dnp3 object type would cause DVI failure.</p>
66744 (revised)	<p>Removed changes to ABB.Scada.Data as they were causing other parts of the system to fail.</p>
67579	<p>Issue: Cannot connect to the SCADA Advantage OPC UA server using the OPC UA Sample binaries provided on the ISO when the HTTPS protocol is selected.</p> <p>Fix: Provide new OPC UA sample binaries that use the latest HTTPS standards. After installing the patch, the new OPC UA binary ZIP files are located under SupportFiles\ThirdPartyPrograms\OPC Foundation within the SCADA Advantage install directory (C:\Program Files (x86)\ABB Industrial IT\Operate IT\SCADA Advantage)</p>
66744	<p>Issue: On the restart of the SVCalcEngine, sometimes, some expressions would not get reevaluated.</p>

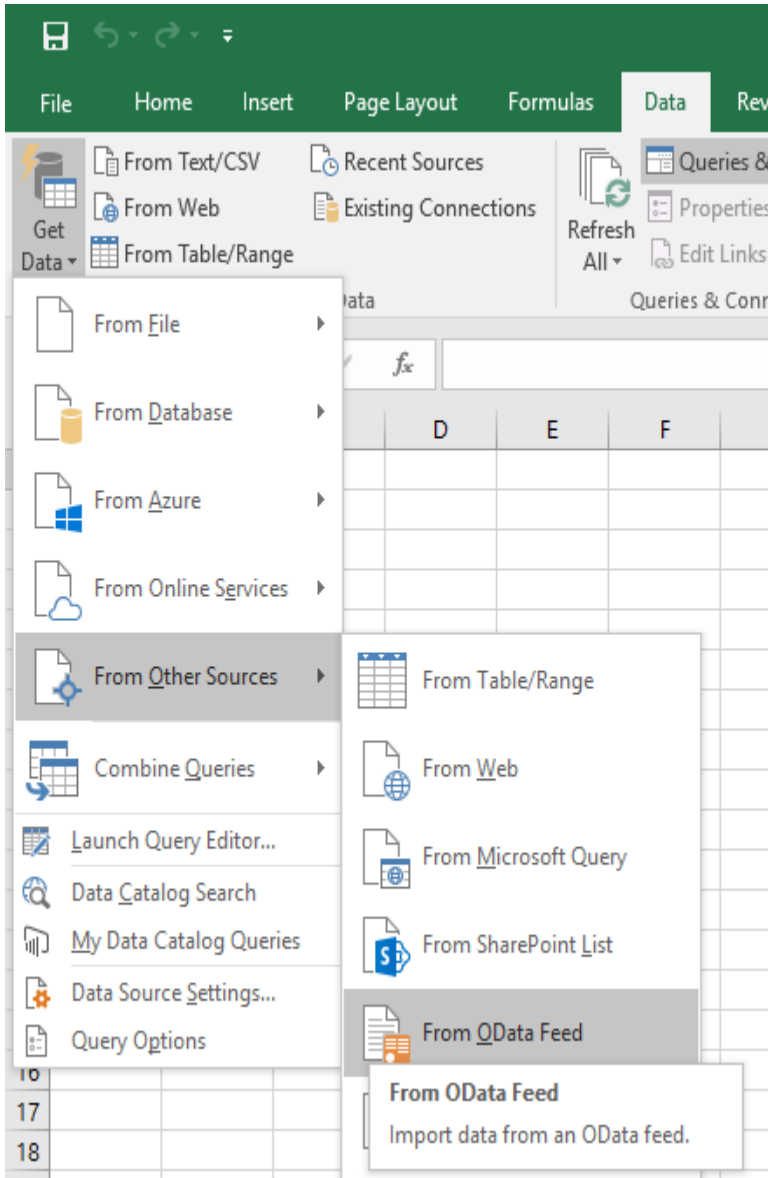
Server Issues	
WID	Release Note
	Fix: Fixed timer used to reevaluate expressions.
66980	Fixed an issue where the DVI occasional crashes on TextCallout.
66512	<p>Issue: When a user account is disabled, OData constantly tries to reconnect filling the security log with login/off messages.</p> <p>Fix: Recognize that the connection has been lost due to security and disable connection retries. Note, a few retries may occur before the disconnect reason is recognized as a security rejection.</p>
65428	Fix an issue in the Entity model that prevented NULL values from being written back to the database via an active query.
65442	<p>Enhancement: As a Metering User, I would like to set a command line argument on the DVI to add a Real-time poll prior to an Hourly, Daily, Meter Parameter, Gas Analysis, and Event poll to overcome a no response issue with older Totalflow devices.</p> <p>Add the following command line parameter to the DVI running the Totalflow protocol to issue a real-time poll prior to an EFM poll.</p> <p>/protoParam:Totalflow:realtimePollFirst</p>
65852	Software Point Expressions: Added 'short-circuit' support to the 'if', 'and', and 'or' expression operators to prevent the unselected expression from being evaluated. For example, the following expression now returns 2 instead of a divide by zero error: "if (1, 2, 1/0)".
65056	Fix an issue where newestindevice is set to null when the Datum Address is changed.
65283	Fixed various issues in the OPC UA DVI client protocol driver that prevented the client from establishing a connection to various third party OPC UA servers, including Matrikon and Ignition.
63380	<p>Callout: Improved the text callout acknowledge message format by making it configurable.</p> <p>2 more Callout Message Variables were added to support the new message,</p> <ul style="list-style-type: none"> • CalloutAckUserId: The identification of the user who acknowledged the alarm. • AckTimestamp: The timestamp that the alarm was acknowledged. <p>1 more entry, Text Acknowledge Message, was added to the Callout Method List. Its default format was also defined in the Default Callout Messages List.</p>


Server Issues	
WID	Release Note
63320 (update)	<p>Disaster Recovery:</p> <p>Problem: After a site failover, on the active site, sometimes the backup node times out in Standby-Pending causing recovery site to remain Idle.</p> <p>Resolution: Fixed race condition between SVService clearing request state and SVDRService setting it.</p>
63182	Totalflow: Fixed an issue where the status of telemetry associated with a Totalflow device did not reflect the current state of the device.
63259	Replication: Fixed a problem with 'mismatched attribute count' during the replication backfill of event history.
63274	FisherROC: On some older model FisherROC devices, fixed missing partial EFM daily records if multiple partial records happen within the same minute.
63293	Licensing: Fixed a problem where extra 'DVI' and 'APP-AGA' licenses were being requested from the STANDBY server.
63294	Modem Pool: Fix an issue where the FAST SCAN doesn't work on devices connecting via modem pool.
63319	Replication: Modified the behavior of the "Point ReplicationType Exception Override" parameter to also change historical trend collection from Periodic or Periodic/Exception to Exception (only) on the Host where the parameter is enabled.
63320	<p>Disaster Recovery: Problem: After a site failover, on the active site, sometimes the backup node gets stuck in Standby-Pending.</p> <p>Resolution: Updated DRSetup tool to create an action step to change Standby-Pending to Standby when partner goes Active.</p> <p>Customer action required. Customers need to rerun the DRSetup tool to generate a new SVDRConfig.xml file that will contain the new Action step.</p>
61717	Fixed an issue where Twilio endpoints stopped working due to changes in Twilio endpoint security.
61867	Fixed issue with the EFM properties screen showing "Pending" when "Metering - Override Manual history with Original data" is set to false.
62159	OPC UA Server: Enabled active monitoring of TrendValue nodes for historical updates and backfill/upload events.
62300	Fixed an issue where the Read Dynocard Data request was sent more than once.

Server Issues	
WID	Release Note
62609	To support TLS 1.2 in the SMTP callout the SVExternalProcessor application now runs using the .NET 4.7.2 framework or greater. Added a new parameter to SMTP callout devices to support encryption.
62694	Fixed an issue where the Totalflow driver wrongfully handles the application number.
62752	Fixed an issue where the Totalflow driver would crash if an error was returned from a device while attempting to uploading a trend file. (Such as invalid filename.)
62868	Diagnostics: Improved the message format in DVI Diagnostic Logging.
62869	Totalflow: Fixed problem with zero timestamps being recorded for some trend values. Totalflow: Improved trend processing performance.
62870	Totalflow: Fixed the "Unknown DVI error" issue that occurred during poll request.
62990	Totalflow: Fixed the "Unknown DVI error" appearing in the tooltip of device point controls.
63061	Software Points: Fixed problem where tags were not being recalculated after the calculation processor service was restarted.
63094	Database: Removed the ability to import/export the internal table EfmMeterType.
61479	Fixed a problem with the 'if' function in the software point expression engine. The expression would fail if an error occurred in the non-branched argument (such as 'divide by zero'). Note that all arguments are still evaluated. However, if an error occurs in the non-branched argument, then it is ignored. Example: "if(true,0,1/0)" now returns 0 instead of throwing a divide by zero exception
61502	Fixed the issue when creating analog point in the HexRepeater Device.
61522	Fixed: The 'firstout' attribute of an alarm was not being updated when a configuration change was made to the 'FirstOut' attribute of a statelimit.
61523	Fixed a problem where a top of the hour sample was being generated even though the History Summarization Type was set to "None".
61608	Fixed a problem with un-suppressing points when the RTN Alarm Acknowledge attribute is enabled on Point.
61626	Fixed a problem where you could not save the configuration of an analog or digital point when you change the software point expression (clear it for example) and disable Software Point at the same time (in the same transaction). (Note: you still need to clear/modify the expression before you disable the software point in order to edit the expression field.)

Server Issues	
WID	Release Note
61663	<p>Fixed problem with control sequence running multiple times with a single trigger.</p> <p>Fixed problem with control sequences not running in parallel.</p> <p>Fixed problem with triggers not honoring Startup Action.</p>
61681	Fixed problem with ExecuteSql expression function throwing a Null Reference Exception.
61716	Fixed problem with clearing software point expression error text when expression returns a good result.
61146	Added new system parameter called [EFM Metering - Update Scheduler on Manual Entry]. Setting this parameter to true will cause the latest(Day/Hour)upload time to be updated to the time of the manual entry. This will prevent the scheduler from attempting to upload this data from the device.
61215	Fixed bug where suppressed alarms would remain suppressed when first-out is acknowledged and then returns to normal.
61262	Fixed the issue by initialize the lastFromDevice field in the AuxinTelemetry table now - 1 hour.
61402	Fixed an issue where the schedule exception list was displaying a wrong state message.
60810	<p>OPC UA Server Improvements</p> <p>Executes as a 64-bit application to support large tag counts.</p> <p>Added ApplicationId to <ServerConnection> tag to allow the OPC UA server to run under a different application account other than 'opc'.</p>
61111	<p>Replication Server Improvements</p> <p>Added enhancement to allow overriding of tags set to Periodic Replication Type to Exception for multi-tiered replication architectures. Use the "Point ReplicationType Exception Override" system parameter to enable this behavior.</p> <p>Fix: Fixed problem with points set to ReplicationType=Periodic not updating every cycle.</p> <p>Enhancement: Enhanced internal thread monitoring in the replication server to detect hung threads.</p>
60496	Security Improvements

Server Issues					
WID	Release Note				
	Changes to socket handling to close socket in a more effective way and to handle Denial of Service (DOS) attacks.				
60508	<p>Web Service Application Security Improvements</p> <p>Improved security of the Web Service application with the following changes:</p> <ul style="list-style-type: none"> • Removed Anonymous access • Implemented Basic Authentication permission for the client applications • Implemented API_Key permission for the Swagger UI <p>Configuration:</p> <p>API_Key Permission for the Swagger</p> <ul style="list-style-type: none"> • Add the following System Parameter to the Web Service System Process <table border="1"> <thead> <tr> <th>Arguments</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>[/apikey:<key>]</td> <td>Provides the key value required to access data from swagger interface.</td> </tr> </tbody> </table> <p>Basic Authentication permission for Client Applications Basic Excel 2016 and 365 OData Connection</p> <p>On the Excel ribbon open: Data -> From Other sources -> From OData Feed</p>	Arguments	Description	[/apikey:<key>]	Provides the key value required to access data from swagger interface.
Arguments	Description				
[/apikey:<key>]	Provides the key value required to access data from swagger interface.				

Server Issues	
WID	Release Note
	 <p>The screenshot shows the Microsoft Excel interface. The 'Data' ribbon is active, and the 'From Other Sources' dropdown menu is open. The 'From OData Feed' option is highlighted. A dialog box titled 'From OData Feed' is open, showing the URL 'http://amserver1:8013/odata' in the 'URL' field. The dialog box has 'Basic' selected and 'Advanced' unselected. There are 'OK' and 'Cancel' buttons at the bottom right of the dialog box.</p> <p>OData feed</p> <p><input checked="" type="radio"/> Basic <input type="radio"/> Advanced</p> <p>URL <input type="text" value="http://amserver1:8013/odata"/></p> <p>OK Cancel</p> <p>Enter URI of OData feed, using the following format:</p> <ul style="list-style-type: none"> ○ <a href="http://<host name of server>:<port>/odata/[<Table name>]">http://<host name of server>:<port>/odata/[<Table name>] <p>When previewing within Excel, that the following error is displayed unless Basic Authentication is configured for the Data Source. Refer</p>

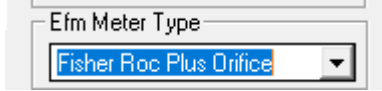
Server Issues							
WID	Release Note						
	<p>to the Setting credentials for OData source to configure the Authentication.</p> <div data-bbox="613 373 1458 617" style="background-color: #ffffcc; padding: 10px;"><p> DataSource.NotFound: OData: Request failed (404): The remote server returned an error: (404) Not Found. (Not Found) Details: DataSourceKind=OData DataSourcePath=http://amserver1:8013/odata/Alarms Url=http://amserver1:8013/odata/Alarms</p></div> <p>Setting credentials for OData source</p> <p>To specify a SCADAventure user account, from the Excel ribbon select: Data Source Settings</p> <div data-bbox="685 835 1354 1283" style="border: 1px solid #ccc; padding: 10px;"><p>Data Source Settings Manage settings for your data sources.</p><table border="1"><thead><tr><th>Edit Credential</th><th>Delete</th><th>Show All ▾</th></tr></thead><tbody><tr><td colspan="3">http://dssvtestdev:9000/odata</td></tr></tbody></table><p style="text-align: right;">Done</p></div> <p>Select the data source, and "Edit Permissions"</p>	Edit Credential	Delete	Show All ▾	http://dssvtestdev:9000/odata		
Edit Credential	Delete	Show All ▾					
http://dssvtestdev:9000/odata							

Server Issues	
WID	Release Note
	<div data-bbox="678 268 1481 905" data-label="Image"> </div> <p>Click "Edit" and choose the Basic setting, and enter the SCADAventure username and password</p> <div data-bbox="678 1037 1370 1396" data-label="Image"> </div> <p>To improve security, the RTRDB system account is denied automatically for any OData requests.</p> <p>Limitations:</p> <ul style="list-style-type: none"> • StoredQueries endpoints are not currently supported within Microsoft Excel or Visio.
60509	Adds a new system parameter "Override Manual history with Original data"
60527	OPC UA Server: Fixed the issue that the namespace URI shows up in the EventType of StateEventType.
60556	Fisher Roc Driver:

Server Issues	
WID	Release Note
	<p>On the Fisher ROC Device Type Properties dialog box, the default behavior of the option "Enable User Op Codes" is changed.</p> <p>This option is bypassed by default. A DVI command line parameter named EnableOpcodeDownload can be used to enable this feature, in the format,</p> <p>/protoParam:"Fisher ROC":EnableOpcodeDownload.</p> <p>Only when the parameter presents, this option is evaluated.</p>
60197	SVEventPrinter: Fixes an issue with data connection and permissions
60320	Limiting Device Commands (Real-time attribute) to the Device and not the associated Logical Devices.
60321	Add handler in Totalflow driver so that it can support Time Synchronization in DB2 METHOD.
60418	Updates the FisherRoc driver to support ROC800L device.
60096	SVOPcUaServer: Fixes an issue with Device Events acquisition
59905, 59911	SVOPcUaServer: Fixed Historical Event Acquisition issue
59888	Fixes an error message for StringPoint.
59704	Fixed crash in the SVOPcUaServer that can occur when closing a subscription containing a large number of points (40000+). Requires manual installation of SVOPcUaServerInstaller.msi
59714	<p>Adds 2 new system parameters to include or not Operator Alerts in Alarm Summary and/or Alarm Annunciation.</p> <p>This server patch is required to be able to use the fix in client.</p>
59765	<p>SVOPcUaServer :</p> <ul style="list-style-type: none"> Fixed a problem where some points that do not change value regularly (several times a day) stop updating completely after a couple of days. <p>Fixed a problem where subscribing to the same point from multiple subscriptions can cause its value to stop updating when one of the subscriptions is closed.</p>
59835	OPC UA Server: Fixed the issue that the reliable status code was not mapped correctly.
58829	<ul style="list-style-type: none"> Fixed the subscribed data value's Source Timestamp. Fixed the OPC UA Server crash issue that occurred when subscribe to data item value from more than one clients.

Server Issues	
WID	Release Note
	Fixed the OPC UA Server crash issue that occurred when subscribe to data item value.
59610	Modified EFM library to compensate for local time zone differences between client and server.
59267	Allow user to edit real-time meter data from history editor.
57318	<p>Resolves issues with the Partial and Suspect records upload.</p> <p>In addition, three new SCADAventure parameters have been added to provide you even more history upload functionality.</p> <ul style="list-style-type: none"> • Metering - History Suspect Validation Daily Over Time On Production: Defines the tolerance in time (hours ,minutes, seconds) you accept before considering a record as suspect. • Metering - History Suspect Validation Hourly Over Time On Production: Defines the tolerance in time (hours ,minutes, seconds) you accept before considering a record as suspect • Metering - History Suspect Validation Over Time On Production - Reason Message: Defines the reason message that will be used for suspect records. <p>When at least one of those parameters is updated, the Device Schedule Request Processor process needs to be restarted to use the new parameters values.</p> <p>If no tolerance time is defined in those parameters, the tolerance check won't be executed.</p> <p>In the case partial records exist for the same day and a tolerance value has been set, the process will sum all the partial records in the same day to validate if the total is above the tolerance.</p>
59515	Added K Factor and Density factor missing in CFX file
57318	<p>Resolves issues with the Partial and Suspect records upload.</p> <p>In addition, three new SCADAventure parameters have been added to provide you even more history upload functionality.</p> <ul style="list-style-type: none"> • Metering - History Suspect Validation Daily Over Time On Production: Defines the tolerance in time (hours ,minutes, seconds) you accept before considering a record as suspect. • Metering - History Suspect Validation Hourly Over Time On Production: Defines the tolerance in time (hours ,minutes, seconds) you accept before considering a record as suspect

Server Issues	
WID	Release Note
	<ul style="list-style-type: none"> Metering - History Suspect Validation Over Time On Production - Reason Message: Defines the reason message that will be used for suspect records. <p>When at least one of those parameters is updated, the Device Schedule Request Processor process needs to be restarted to use the new parameters values.</p> <p>If no tolerance time is defined in those parameters, the tolerance check won't be executed.</p> <p>In the case partial records exist for the same day and a tolerance value has been set, the process will sum all the partial records in the same day to validate if the total is above the tolerance.</p>
59270	Fixed Gas Analysis values in history records
58787	Fixed problem where Host status is not always being updated after a failover.
58831	Add specific device error section for TotalFlow so that every error code from device can be interpreted individually
58839	Fixed an issue when returning Totalflow alarm codes with CFX Export
58558	Fixed problem with cool standby not going IDLE after losing connection to active server. This was causing the cool standby to become stuck in a TRANSITION (DB_WAIT) state. It is recommended that you regenerate the SVDRConfig.xml file using the patched DRSetup application in order to generate required actions needed for this patch. The new actions are needed to restart the cool standby in case connection to the primary site is restored before a site activation is performed.
58600	Fixed problem with uploading history from devices that use End Of Period (eRemoteDtm) for specifying time range of data to retrieve.
58269	Changed update interval for the EfmMeter properties timefromlatestdayhistory and timefromlatesthourhistory so it updates within one minute of the upload event (instead of one hour).
58110	Fixed problem with issuing ADT poll requests to Micro1/C devices.
58012	History upload uses contract hour from DVI data if exists.
57990	<p>OPC UA Server: Event subscriptions and historical event retrieval are now supported.</p> <p>If you need to install that correction, execute the OPCUAServerInstaller.msi in the OPCUAServerInstaller folder.</p>
57533	Fixes performances issues in PDH to RTRDB (EFM) migration importer

Server Issues	
WID	Release Note
57622	Changed license feature requested for EFM meters from APP_AGA to APP-AGA.
57363	Fixed couple of minor issues in the CFX Generator for version 8
57602	Fixed problem processing ADT 'ExtraData' values in the Totalflow driver.
57622	Changed license feature requested for EFM meters from APP_PDH to APP_AGA.
57714	Fixed a problem where the RTRDB becomes so busy during bulk insert/update operations that one or more connections to the RTRDB timeout and close.
57318	SVAPPRDBExecutorEngine - Fixes an issue when uploading small amount of data - Processes Hourly partials
57363	Fixes an issue in the CFX Generator for Orifice Material and Pipe Material.
4660	Fixed problem with StateLimit QualityIndicator icons not being displayed for point controls after a failover.
56201	Improved performance and resolved issues with Trend/Event Backfill in the replication server.
57533	Fixes some issues in the PDH to RTRDB (EFM) migration importer
37923	Fixes an issue shown on calculated point when value is updated from Calc Engine
43158	<p>In the case you are using the Fisher Roc Plus with MVS ADT, before using a meter of that type, you need to set in the ADT the EFM Meter Type associated with it.</p> <p>Open the Fisher Roc Plus with MVS ADT and set the EFM Meter type with "Fisher Roc Plus Orifice"</p> 
54780	Increased number of requested days by one to support older types of remote devices.
57249	<p>OPC UA Client (DVI) Issues</p> <ul style="list-style-type: none"> • Fixed problem with sending client certificate in CreateSession request. • Fixed problem with sending acks in Publish request. • Fixed problem with establishing connection when security mode is set to 'None'.

Server Issues	
WID	Release Note
56858	<ul style="list-style-type: none"> Fixed: Client (DVI) fails to reconnect to UA server after server or DVI is restarted. Fixed: Client (DVI) fails to reconnect to UA server after Network or Device scan inhibit is toggled. Fixed: Comm Analyzer is flooded with 'initial value pending' errors when initial connection to server is established. Fixed: Points with an unknown address are reported as 'waiting for initial value' rather than 'unknown nodeId'
56512	Resolves a Callout issue, eliminates the second alarm acknowledgement call when using a Dialogic Voice callout method.
55302	Fixed problem in EtherNetIp protocol where messages from IP device were being handled by the wrong Device instance (causing various unwanted side-effects including garbage values and DVI crashes.) Fixed problem with the handling of CIP points when protocol was set to Class3 mode.
54802	Fixes CFX file generation
56201	Improved performance and resolved issues with Trend/Event Backfill in the replication server.
56206	Some applications and protocols now use new license features
55293	Fixed problem with issuing multiple trend upload requests for the same trend file when a device has multiple logical devices associated with it.
55301	Fixed a problem with Polyhedra authentication when ABB.Scada.Data is hosted in ASP.NET.
55302	Fixed problem in EtherNetIp protocol where messages from IP device where being handled by the wrong Device instance (causing various unwanted side-effects including garbage values and DVI crashes.)
55356	Enabled multi-select on Product view in SVExplorer.
55363	Fixed issue where user gets denied access to zone control permissions over time.
54802	Fixes CFX file generation
54803	Gap Analyser, added a feature to allow to export the results into a CSV file.
54780	Fixes multiple issues with the Totalflow driver
55141	Fixes exception dead band processing for historical data collection (trends) that was broken when string tags were introduced.
55149	Fixes issue where invalid trend group intervals could be saved to the database.

Server Issues	
WID	Release Note
55163	<p>Fixes problem with some expression functions not setting the error text when an error is detected.</p> <p>Fixes problem with setting and clearing the software point expression error text.</p>
55229	<p>Fixed an issue where invalid control sequence trigger expression error text could not be cleared even after correcting the expression.</p> <p>Fixed crash in control sequence engine process when a newly added trigger is enabled with an invalid expression.</p>
55263	Fixed the behavior of the Frozen Value indicator.
53084	Fixes replication crash during history data backfilling at long network latency environment
53085	Fixes an issue in EFM Meter Gas Analysis when change in ADT are done
52595	<p>Fixed the DNP3 protocol to handle IP communication over a serialized network (IP Radio).</p> <p>An inter-byte timeout has been introduced to prevent a hang in communication if an incomplete frame is received due to communication issues.</p> <p>The default is set to 2000 ms but can be overridden by adding a command line argument to the DVI:</p> <p style="text-align: center;">/ProtoParam:DNP3:InterByteTimeout:5000</p>
46071	Fixes an issue with Totalflow to download gas analysis and meter parameters on SUAGA3 application
52040	Fixes an issue with text callout to use TLS v1.2 connections
52041	Fixes an issue to validate that the Twilio service is online or not
52421	Added device quality support for DNP3 points.
51380	Fixes an issue when processing Totalflow laptop files with names containing spaces
51571	Fixes an EthernetIp issue when the server uses two network adapters
51656	Fixes an issue with ordering of limits within a statelimitgroup
50425	Modified the control type (access privileges) of user fields on the point type, from configuration maintenance to operation maintenance.
50455	Gas Quality Send Out: All meter types are now downloaded when auto download option is set. The GQSO no longer creates scheduled entries.

Server Issues	
WID	Release Note
49486	Allows Dynocard upload when logical device (Instance number is zero) is associated to a device.
49586	Fixes a memory leak with Totalflow protocol
49587	Fixed problem in OPC DA server where it was not detecting failover properly.
49717	Fixed memory leaks in both the managed (NSPlugin.dll) and unmanaged (DANSrvAE.exe) code related to OPC AE.
49780	Fixes an issue when processing Totalflow Laptop files
49810	<p>Fixes an issue with replication client RTRDB when server (Tier1) attempts to overwrite commissioning information set on client (Tier2).</p> <p>The issue arises when points that have been commissioned on Tier2, as opposed to commissioning on Tier1. In this case, when a point has updated on Tier1 and is replicated to Tier2 the transaction will fail causing the Tier2 RTRDB to crash. This is due to protections preventing the modification of the Commissioned, Commissioned By and Commissioned Date attributes on Tier2 - modification is reserved for users with Configuration Maintenance privileges. Since Tier1 is considered the reference for point data in this scenario, it is not recommended to reconfigure replicated points on the Tier2 system - commissioning data in particular.</p> <p>The patch will allow for overwriting of Tier2 points regardless of point privilege restrictions - data sourced from Tier1 is considered "reference" quality data and is permitted to overwrite data on downstream replication Tiers.</p> <p>However, for affected systems the following resolutions are recommended:</p> <ul style="list-style-type: none"> • Migrate point commissioning information from Tier2 to Tier1. This would require effort from the SCADA Administrator to identify the affected points and ensure the Commission Date, Commissioned By and Commissioned attributes are mirrored between Tier1 and Tier2. • Alternatively, the SCADA Administrator can delete the affected points on the Tier2 system. Upon re-connection with Tier1 the removed points will be re-synced and the Commissioning information can be applied from the Tier1 site. <p>Once complete, install the May 2019 patch to remedy the issue.</p>
50159	Allows deleting of Infopad messages from Infopad Category configuration screen

Client Issues

Client Issues	
WID	Release Note
75875	FisherROC: Implemented FisherRoc device OpCode 203 (File Transfer) for WHM Truck Ticketing.
76175	Fixed issue in C1 Report where 'producing' was not returning a value.
73824	Fixed problem with changing Plot Line Style when using the Dyno-Plot Properties dialog.
71420	Fixed the issue that the Replication Setting dialog box crashes on open.
71568	Changed the default value of Read Limit/Write Limit to 0 to fix an issue being observed when creating a new FisherRocDeviceType object.
69147	Replication: Fixed the issue that the compression level slider control doesn't validate the user input.
68279	Metering: Fixed an issue where editing EFM hourly or daily attribute values does not update reason and does not set quality status to manual.
68680	Metering: Fixed an issue in the EFM Meter Parameter editor where the save (edited values) timestamp was being updated on a Download even if there were no pending edits.
68443	<p>Expressions enhancement: New, optional arguments have been added to the ExecuteSql and ExecuteSqlAsUser functions.</p> <pre>executeSql(server, sql [, defaultValue] [, blocking] [, refreshRate] [, refreshOffset]) executeSqlAsUser(server, user, password, sql [, defaultValue] [, blocking] [, refreshRate] [, pollMode] [, refreshOffset])</pre> <p>The refreshRate argument can be used to tell the expression how often (in seconds) to re-execute the sql statement. 0 is used by default to indicate the default refresh rate (1 second) should be used. The refreshRate is normalized so the refresh occurs at a more predictable rate. For example, if refreshRate is set to 60 seconds then the refresh will occur at the top of each minute.</p> <p>The refreshOffset argument can be used to offset the refreshRate. For example, if refresh rate is set to 60 seconds and refreshOffset is set to 15 seconds then the refresh will occur at 15 seconds past the top of each minute.</p> <p>Note, for executeSqlAsUser, if refreshRate is 0 and pollMode is true then the default refreshRate (1 second) will be used.</p>
66743 (revised)	Removed changes to ABB.Scada.Data as they were causing other parts of the system to fail.
66743	Fixed some issues with the activation of point controls in an HMI.

Client Issues	
WID	Release Note
65852 (updated)	<p>HMI Expressions: Issue - expressions containing the "IF" where "if" was not lowercase would fail. This affects clients (the HMI and SVExplorer) only. Software points are not affected by this issue.</p> <p>Fix: Fixed case-insensitive check for the "if" keyword.</p>
66512	<p>Issue: When a user account is disabled, a client may constantly try to reconnect filling the security log with login/off messages.</p> <p>Fix: Recognize that the connection has been lost due to security and disable connection retries. Note, a few retries may occur before the disconnect reason is recognized as a security rejection.</p>
66517	<p>Issue: Opening the Command Warning using the "CW" StartApplication command (from CBGrid for example) resulted in a blank dialog, even if a command warning was entered from SVExplorer.</p> <p>Resolution: Data entity attached to the dialog is now activated properly.</p>
66572	<p>Issue: When opening an existing operator alert configuration page as a configurator a security dialog is displayed about requiring system maintenance privileges. This is not required for operator alert configuration.</p> <p>Fix: Removed annoyance security dialog when opening operator alert configuration page.</p>
66665	<p>Issue: Expressions containing the "or" or "and" operator may fail depending on value of the left operand. For example: (false and true), and (true or false) would fail.</p> <p>Fix: Corrected issue with evaluating "and" and "or" operators.</p>
65426	<p>Problem: The context menu was not behaving properly after a property assignment changed the DataObject property of a Point Control.</p> <p>Fix: The original context menu is now torn down properly when the underlying entity changes (due to a Property Assignment update.)</p>
65428	<p>Fixed a problem where the Inhibit->Command Warning dialog does not open in the HMI. Also, fixed a problem with the 'Clear' button not updating the database.</p>
65440	<p>Fixed a problem with processing the CBGisMap PlotObjectTypeFilter property when it contained whitespace between entries.</p>
65441	<p>Fixed the opening of EFM Meter configuration screens when using the CONFIG option of the EFM StartApplication command.</p>
65747	<p>Fixed an issue in GISMap where double clicking on a plot object multiple times before the template is displayed can cause the HMI to crash.</p>

Client Issues	
WID	Release Note
65794	Fixed a problem in the GISMap where the Group icons were not displayed in the correct color. Group icons are used when multiple plot objects have the same location.
65852	HMI Expressions: Added 'short-circuit' support to the 'if', 'and', and 'or' expression operators to prevent the unselected expression from being evaluated. For example, the following expression now returns 2 instead of a divide by zero error: "if (1, 2, 1/0)".
61867	Fixed issue with the EFM properties screen showing "Pending" when "Metering - Override Manual history with Original data" is set to false.
61967	Fixed a problem where the Prover tab was missing when opening the configuration screen from the Meter Prove dialog.
62609	Added new SMTP Encryption Enabled option to the SMTP device callout tab.
61499	Fixes an issue in the Meter Parameters when a numeric value is used for a string parameter.
61517	Fixed problem with expression 'if' function (in HMI and SVExplorer) that would cause the expression to fail when an error occurred in the unselected argument. For example: "if(true,0,1/0)" should return 0 but instead it was returning a divide by zero error.
61681	Fixed problem with ExecuteSql expression function throwing a Null Reference Exception.
61715	Fixed problem with not honoring the 'blocking' flag when executing the ExecuteSql expression function.
61170	Fixed problem with CBResizer not resizing loaded templates. Fixed problem where CBResizer was doubling the scaling of fonts in a template when loading a template after a template view has been resized.
61189	<p>A new VSIX package for Visual Studio 2015/2017. Removed the behavior where project settings would be automatically updated when a solution gets loaded. This behavior was preventing the customization of certain critical build settings. Instead, there is a new "Upgrade Project Settings" command in the SCADAventure menu. This command only needs to be executed once when upgrading a project from a previous version of SCADAventure.</p> <p>Known Issue In SCADAventure 5.6.5, the GISMap will stop fetching map data from ESRI due to changes in the SSL/TLS layer. This can be addressed by changing the Visual Studio project settings for your HMI to use .NET Framework 4.7 or higher. Note you will not be able to change the project settings unless you install the latest SCADAventure VSIX package noted above.</p> <p>Installation:</p>

Client Issues	
WID	Release Note
	<ol style="list-style-type: none"> 1. Open a PowerShell window using "Run as Administrator" 2. Run the following command to grant script permissions to the current user <pre>Set-ExecutionPolicy -Scope CurrentUser -ExecutionPolicy AllSigned</pre> 3. Using the same PowerShell window, navigate to the folder containing the hotfix and run ".\UpdateVsixPackage.ps1". <p>If you encounter an error to install the package, replace the powershell command described in step 2 by:</p> <pre>Set-ExecutionPolicy -Scope CurrentUser -ExecutionPolicy Unrestricted</pre> <p>When opening Visual Studio, ensure the SCADAventure Extension is enabled. If the SCADAventure extension is disabled, enable it.</p>
61192	Removed obsolete "Process Account" checkbox from the System User configuration screen in SVEplorer.
61217	Fixed problem where a template was taking a long time to open due to expression reevaluation threading issues when the template is opened from a GISMap.
60874	Fixes an issue in the Daily Gas History Export (Advanced) report when file is used to define the meter list to use for the report.
60508	Fixes cybersecurity issues with client components.
60509	History Editor: Adds the possibility to override or not Manual entries with newer data. Use the system parameter "Override Manual history with Original data" to set the way you want the history editor behaves.
60521	Real Time Meter history editor: Fixed a privilege issue not allowing edition.
60558	EFM Metering: Fixes an issue causing Daily Gas History Export (Advanced) report to crash.
60394	Fixes an issue in FisherRoc Protocol editor to avoid changing the value of "Enable User Op Codes" by mistake.
59850	Fixed problem in System Process editor where postStartDelay could not be configured.
59858	Fixed memory leak caused by point controls not fully unbinding when used in a template.
59892	Disabled the Software Point option under String Point properties to avoid popping up message.

Client Issues	
WID	Release Note
59714	<p>Fixed an issue with Operator Alerts within Alarm Summary and Alarm Annunciation</p> <p>Added the following system parameters to set if Operator Alerts are included in Alarm Summary and/or in the Alarm Annunciation:</p> <ul style="list-style-type: none"> ○ Alarm Summary - Include Operator Alerts Alarm Annunciation - Include Operator Alerts
59764	Density Conversion property form is opening as expected in Pipeline Segment configuration.
59837	Adjusted LineSegment padding to compensate for scaling by the CResizer. This should prevent gapping when line segments have perfect overlap.
59554	Removed "Top Most" behavior from configuration screens when opened from an HMI. It caused too many side effects including inability to open drop down lists and opening child forms behind config form.
59555	Added a 'pin' button to the trend window used to display trends opened from a point control (PointLabel for example). This button will toggle the TopMost behavior of the window. The state of the button is stored in the user's profile.
59561	Trends displaying digital raw historical data are now displayed using step interpolation instead of ramp.
59562	Fixed problem where an error dialog would appear if the line style of a DynoCard overlay was changed.
59610	Modified EFM library to compensate for local time zone differences between client and server.
59612	Fixed a crash bug in SVExplorer when opening the Communication Analyzer using the Tools menu.
59411	Fixed problem where SVExplorer does not start properly if the %TMP% directory does not exist.
59014	Fixed problem where dipstick dialog timestamp was not being updated when dipstick was moved using the keyboard arrow keys.
58697	Fixed problem: If the first screen opened in an HMI contains a variable with an expression that accesses the database (for example: GetDatabaseValue or ExecuteSql,) then a single sign-on attempt is made (windows authentication) even if the UseWindowsAuthentication app setting has been disabled. This causes 'audit failure' message/alarm to be generated with no way of disabling them.
58254	Fixed symbol used in the GIS Map to represent multiple plot objects at the same location.
58065	Fixed slow callup times when opening a template using ShowPlotObject

Client Issues	
WID	Release Note
58070	Flowcal Export: added a new option to exclude CPrime values from History in CFX file
58065	Fixed slow callup times when opening a template using ShowPlotObject
57488	Fixed a problem where certain controls would not bind properly if their DataObject property was changed in the Shown display command (via SetProperty).
56496	Fixed problem with creating OPC UA specific routes.
55301	Fixed a problem with Polyhedra authentication when ABB.Scada.Data is hosted in ASP.NET.
55332	Made Trend dipstick window a child of the trend window so it always remains on top of the trend window.
55356	Fixed error that occurs when you try to acknowledge a callout from the Callout Properties dialog in SVExplorer.
55072	Fixes units displayed in columns in liquid reports
55162	Fixed an 'access denied' problem with the Invoke Add-In command when executed by the SYSTEM user.
55248	Fixed issue in EFM Meter Parameter editor where Totalflow string parameters were not being presented properly.
53366	Fixes issues with SVImportExport when running from the command line, particularly when exporting specific attributes, using templates files and queries.
51066	Allows Operators to Edit Gas Analysis and Meter Parameters
51095	Fixed handling of dynamic menu when a point has device sourced history.
50343	Fixed an issue with the "Alarm Summary Set Default Menu Policy" system parameter.
50344	<p>Meter Prover: Fixes the following issues.</p> <ul style="list-style-type: none"> • Prover Details button is not enabled until after data activation. • Make ManualMasterFactorDialog TopMost and owned by the prover window. <p>Fixed problem with opening configuration screens from the HMI.</p>
50345	Made YesNoDialog used by Send Command to be non-modal and Top Most.
50456	<p>Excel Addin:</p> <ul style="list-style-type: none"> • Fixed issue with SvUpdateSoftwareValue <ul style="list-style-type: none"> ○ function now defaults to update software value for analog point types only.

Client Issues	
WID	Release Note
	<ul style="list-style-type: none"> • Added additional functions to handle individual updates for specific point types. <ul style="list-style-type: none"> ○ svUpdateAnalogSoftwareValue ○ svUpdateDigitalSoftwareValue svUpdateStringSoftwareValue
50457	Fixed a problem in certain configuration screens where 'enumeration' data sources (like Zone) are not displayed in alphabetical order.
50675	Fixed an issue with the CFX Exporter scheduler
48875	Cosmetic change in Totalflow configuration form.
49433	Hide unnecessary columns in history editor
49511	Display the correct Application Meter Type in the EFM menu (gas/liquid), when opening the menu from a selected meter type.
49746	Fixes issues with Activation/Deactivation of InfoPad
49747	Meter Prover: Date is now displayed in 24 Hours format.

Section 4 Known Issues

This section lists known limitation in this version of SCADA Advantage.

Alarm Suppression

Multi group membership for a point (a member of more than one group that may be suppressed by more than one first out) is not working. As a result, cascading suppression (one group suppresses another group) is also not working. This issue will be corrected in a future patch.

Calculation System Process

Repeated loading and unloading a large number of points containing software expressions can cause the Calculation Engine to consume CPU for a few minutes before calculations resume.

Control Sequence Engine

Sequences are not run in parallel which can limit its performance if a large number of sequences are triggered at once. If control sequences that are triggered every minute, are taking more than 1 minute to complete, the control sequence engine may appear to leak memory. It's recommended to allow more time to process the commands before new ones are triggered. This issue will be corrected in a future patch or release.

Database Business Logic

The product does not support adding custom business logic to the real-time database.

Database Upgrade - System Account

During the RTRDB database upgrade, renaming the system account isn't working. For now, enter 'system' for the account name to complete the upgrade. After upgrade, login to SCADA Advantage Explorer, navigate to Security and rename the system user account. This bug will be fixed in a future release.

Database Upgrade from versions older than 5.1.1. is not supported.

Only SCADA Advantage database that is version 5.1.1 or newer are supported by the database upgrade process. Contact support for assistance in upgrading the database older than 5.1.1

Database Upgrade fails if system password has expired

A database cannot be upgraded if the system password has expired. To work-around, make sure a new password is entered before attempting the upgrade.

Device Scheduler

If a device is inhibited after a request is scheduled, the request remains stuck in the scheduler until manually removed.

Dynocards fails when name contains & character

When a dynocard name contains & character, the diagram doesn't update after upload

EFM Daily Gas History - Advanced Report Export Restrictions

Restrict By Reason for Change is now case-sensitive.

Filtering based on connections to upstream or downstream Plants or Batteries is not implemented.

EFM History Editor - Daily History Displayed Date

If the server and the client are not in the same time zone, the date displayed may not appear in the correct day.

EFM History Editor - Print Orientation

Several of the history editors provide the ability to switch print settings from portrait to landscape. Changes to print orientation are not working. This issue will be fixed in a future release once the components have been ported to Microsoft .NET.

EFM Meter Configuration

Viewing the audit history for changes to individual attributes of an EFM is currently not supported. To work-around, use the event summary, maintenance view and filter on the meter name to see a history of configuration changes.

Viewing which objects an EFM meter references is currently not supported. Its currently only supported for real-time and connector objects.

A deep copy version of Save As is not supported for EFM meters.

EFM Meter History

Hourly and Daily History Editor, right click actions that open new windows, results in duplicate windows each time Show Associated Events is selected.

Hourly and Daily History editor grid doesn't always refresh. To work-around, right click and Refresh.

EFM Metering Application Settings

Changes to EFM Meter Application settings can take up-to 5 minutes to be effective within the HMI or SCADA^{Advantage} Explorer. Restarting the client causes the new settings to be immediately used.

EFM Meter Parameters

Some meter parameters that were visible in a PDH meter are not visible via EFM meter parameters editor.

EFM Metering Names

Names for any object under metering cannot contain the '/' (slash) character, or the single quote character as these are used internally.

Meter name cannot contain ':' (colon), otherwise it will cause meter failed to upload.

EFM Mercury Gas Analysis

Attempting to view gas analysis fails with the following errors:

Unable to correctly process configuration data.

Refresh of configuration information failed.

IndexOutOfRangeException: There is no row at position -1.

classId = EfmGasAnalysis:merc_GasAnalysis

methodId = guiReadAll

This is expected and not a bug. Not all Mercury ADT's implement commands to upload/download gas analysis.

Event Summary Properties

Accelerator keys (Alt+<key>) are not working. Use the Mouse to select options and buttons.

Excel / OData

OData StoredQueries endpoints are not supported within Microsoft Excel or Visio.

HMI applications should be restarted once every month.

If a Trend Display or Event Viewer display is left open on a SCADAventure Client machine (in SCADAventure Explorer or a SCADAventure HMI) the application will eventually crash. ABB recommends an HMI or Client application be restarted once per month.

HMI Crash Closing a Form during Failover

The HMI may crash if a form containing a SCADAventure component is closed at the exact moment the real-time database is failing over.

HMI Crash when Configuration window Open when Server goes Offline

For any point control on display, if the State Limit, Fleeting Limit or Properties window is open when the server goes offline, clicking anywhere in the window besides the Close button might result in crashing the HMI. This problem happened in older releases and has not been fixed in this release.

HMI - Command button Run Report does not support parameters.

The Command Button supports a Run Report command. However, this command does not support the ability to have any parameters passed to the report.

HMI - Communication Summary Quality Indicators

Support for displaying Quality indicators is missing from the .NET Communication Summary grid control. This will be added in a future release.

HMI - Event Summary configuration screen does not open on active monitor

When opening a view that contains an event summary where the event log type has not been defined, SCADAventure will display a dialog requesting which event log to display. This dialog is displayed on the 'primary' monitor instead of the 'Active' monitor. This issue will be corrected in the next version of SCADAventure.

HMI - SCADAventure configuration views do not remain on top of HMI views

Certain HMI commands can open SVExplorer configuration views in the HMI. These views will 'fall behind' an HMI view if the HMI view gains focus. To bring the configuration view forward again you need to re-invoke the command that displays the configuration view.

HMI - GIS Map Geographic Coordinate Support

The SCADAventure GIS Map component only supports loading Shape Files saved using the WGS84 Geographic coordinate system (SRID=4326)

HMI - GIS Map Shape File Path

The GIS Map Shape File layer requires selecting a path to .shp and .dbf files. To avoid errors when deploying to an operator station, the .shp and .dbf files must be located in a folder relative to %svhome%\custom\bin. It is recommended to store them in a sub-folder called GISData and use the same folder when designing the GIS Map Shape File layer on an engineering station.

HMI - GIS Map Shape File Complexity

SCADAventure GIS Map does not spatially index the contents of a shape file. This limits the complexity to a few hundred points, lines or polygons only. Higher than this results in slow performance during map call-up or movement.

HMI - GIS Map MapTilesLayer

If MapTilesLayer is used, GIS Map will not release memory if closed. Closing and opening HMI will cause the memory to be released.

HMI - GIS Map MapTilesLayer reconnecting issue

MapTilesLayer has issue to recover from network disconnect in some cases due to .NET Framework limitation. Sometimes GIS Map recovers within a few minutes but most of the time restart of HMI is required.

HMI - Infopad Text Formatting not preserved when printing

When printing information from the InfoPad HMI control, text formatting is not preserved.

HMI - 64-bit HMI Applications are not supported.

All SCADAventure HMI applications must be compiled as 32-bit applications. The option to compile HMI applications as 64-bit exists when developing .NET HMI's but is unsupported. HMI applications will be compiled as 32-bit by default.

HMI performance will be degraded if the "Store User Preferences on this Server" option is utilized.

"Store User Preferences on this Server" is an option available to System User objects in a SCADAventure server. This option causes an increase in the amount of data transferred to a machine running a client HMI and results in a decrease in performance.

HMI Runtime Error Popup when Application is Closed

The HMI may briefly show a popup indicating a runtime error as the application is closing. While undesirable, it is expected and does not generate a Windows System Error Report.

HMI Start when server Offline or First Login Cancelled

If an HMI is started when the server is offline or first login is cancelled, an event summary may display <Error>, with the tooltip indicating "unknown column referenced: timestamp". Selecting Filter when in this state causes the HMI to crash.

HMI Slow to Exit

After the final window closes, an HMI may take up-to an additional 10 seconds to exit. This is more likely to happen when accessing features of the metering system.

HMI with a large number of Event Summary displays will use an excessive amount of CPU and sometimes crash.

Each event summary pops up a dialog to pick the type of log and period. After picking 'Event Log' and a 1-minute period on the first several, if no period is selected on subsequent calls to the event summary, an error indicating too many rows will appear followed by an HMI crash.

OPC DA Client Protocol

When the SCADAventure OPC client is connected to a remote OPC server, Windows DCOM is used. OPC Client Protocol DCOM Configuration provides details on configuring this scenario.

If the network between the SCADAventure OPC client and remote OPC server is interrupted, timeouts in SCADAventure can be a lot longer than configured. This is a limitation of Windows DCOM, not SCADAventure.

SCADAventure route switching does not work as expected for an OPC device configured for a remote OPC server with multiple IP addresses. Windows DCOM does not support protocol switching when a remote computer is multi-homed (has multiple IP addresses). To work-around, use network teaming to present a single IP address at the remote computer. This way, switching is done at the hardware level.

Windows DCOM can be bypassed by using MatrikonOPC Tunneller™.

OPC DA and HDA Server

During installation, an account is associated with the SCADAventure OPC DA server. The identity of the server is not created correctly and will result in the OPC DA server failing to start. Also, the

identity of the SCADA[®] Advantage OPC HDA server is not set during installation. It must be setup manually. See product help for more details.

The SCADA[®] Advantage OPC Server only supports connecting to 5.6.0 or newer version of the real-time database.

OPC DA and HDA Server Identity

When OPC server is selected for installation, after setup, the identity of an OPC DA and HDA servers is not correct. The service account password must be re-entered using Windows DCOMCNFG tool. See [Setup OPC Server](#) for more details.

OPC UA Client

Output telemetry for String Points is not currently supported for OPC UA Protocol.

Operator Log Book

While new Information entries can be configured in Operator Log Book mode, it's not possible to view the operator log book from SVExplorer; only the HMI.

Package HMI

Selected folder and sub-folder names must be unique. If not unique, the following error is output.

Wix Light: ... error LGHT0091: Duplicate symbol 'Directory:...' found...

If this error occurs for a different reason, try renaming sub-folders until the error clears.

Packaged HMI Installation on Engineering Station

Installing a Packaged HMI on an engineering station is not supported. When the package is uninstalled, some components of the engineering station are also removed resulting in a non-functional engineering station. The same issue occurs for administration tools on a server. The only way to correct is to re-install. This will be corrected in a future version.

PDH - Migrating Configuration and History

Migrating PDH Configuration and/or history is only supported in 5.6.X release.

Quick Trend Syntax

Because the Quick Trend syntax uses a '.' to separate class from point name when defining a pen, point names containing '.' are not supported. It is recommended to configure trend groups instead and use the Display Trend Group command.

Replication

Long-term replication between different versions of SCADA[®] Advantage is not supported. Different versions are only supported during commissioning and upgrading your SCADA[®] Advantage solution.

When **Alarm Acknowledge Replication** is enabled, when an alarm for a point in manual is acknowledged at the replication publisher, the alarm does not acknowledge as expected at replication subscribers.

Replication of EntityXXXX tables and history is not implemented. As a result, connectors and real-time meters are not replicated. Also, replication of dynocards is not implemented. Contact SCADA[®] Advantage support if this feature is a requirement for your project or installation.

Reports - Email a report is not retried

Only one attempt is currently made to email a report. No retries are attempted. An error is recorded in the event log when this happens. This will be corrected in a future version.

Reports – Exporting

When logged in with domain credentials using Windows Authentication: when exporting reports it is recommended to export to the users Documents folder. Attempting to export to the root of the C:\ drive will result in the file being saved to the %appdata%\Local\VirtualStore\ path. The file explorer will display the file at the C:\ however the file does not exist at that location.

Reports - 5.6.5 (or earlier) Reports cannot be run locally from a 6.0 HMI or SVExplorer

When connected to an older version of the RTRDB database, reports in that database cannot be run locally using a 6.0.0 client. This is true for both SVExplorer and an HMI (via the 'RunReport' command). The database (and the reports it contains) must be upgraded to 6.0.0 before the reports can be executed locally.

Reports - Upgrading from 5.6.5 (or earlier) with script does not upgrade the script.

Any script used in 5.6.5 (or earlier) reports is not upgraded with the report upgrade tool. Any scripting in the report will need to be updated manually after the report upgrade tool has been run. (refer to product help)

Reports - Vcone Report

Opening a Vcone report fails with an error similar to the following.

Unable to export report to file 'Vcone Report.pdf': ActiveReports PDF export DLL error
Error 212: Couldn't export PDF using font 'Arial' because characters referencing this font could not be represented with the character encoding 'WinAnsiEncoding.'

This only happens if ROCLINK800 is installed on the same computer as a SCADAverage client such as an engineering station. Removing ROCLINK800 corrupts SCADAverage ability to generate reports.

SCADAverage Client Server Compatibility

SCADAverage client applications such as SCADAverage Explorer or SCADAverage HMIs cannot connect to a SCADAverage Server that is older than version 5.4.0. A warning popup appears and login is prevented.

A SCADAverage client (Explorer or HMI) cannot use Windows Authentication to connect to an older RTRDB server. Polyhedra authentication is the only mechanism supported. While it may appear to work, it is not supported.

When connecting to a server older than 5.6.0, the CAM application, group and elements still appear in the navigation tree, but result in an error when selected. CAM configuration is no longer supported.

SCADAverage Explorer - Hang or Crash

The application may crash or hang on server restart, when configuring, when monitoring or when changing login.

When deleting a large number (>200) of rows such as Scheduled Requests or Exceptions, the application will be unresponsive for several minutes. Closing the application will abort the request in the server.

These problems will be corrected in a future release when the application has been ported to Microsoft .NET.

SCADAverage Explorer - Import/Export

For now, SCADAverage only supports import/export configuration using the database SYSTEM account. This is different than previous versions which supported any user with Administrator privilege in the system zone. A future version shall restore the need for only Administrator privilege.

The default location for importing and exporting has changed from %svhome%\database\text to %userprofile%\Documents\SCADAventure\database\text.

When importing System User configuration, accounts are Disabled by default. This is an expected change in behavior. Accounts must be enabled manually or in bulk using SQL-Editor.

SCADAventure Explorer

Any Summary: Right click -> Print or File -> Print : page setup has landscape mode option, but print preview always shows page in portrait

Any Summary: Right click -> Find or Edit -> Find : scroll bar moves to bring found row into view, but doesn't highlight/select it

Text editing in any property's forms: Ctrl-A doesn't select all text (although Right click -> Select All does work)

Switching between opening a trend window using SCADAventure Explorer and opening a trend window from a .NET HMI on the same computer causes the window to appear small in the upper left corner of the screen or hugely magnified. This problem does not happen on a computer that is dedicated to showing a .NET HMI only.

These problems will be corrected in a future release when the application has been ported to Microsoft .NET.

SCADAventure Explorer - Trend Importer Crash

Make sure the instantaneous, hourly and daily archive streams are enabled, otherwise, SCADAventure Explorer can crash when importing large files that result in archives being created while importing.

SCADAventure Installation - Disaster Recovery

When selecting this feature during installation, only RTRDB can be selected.

Uninstall of Disaster Recovery does not work. Installing Disaster Recovery, then uninstalling it, the server still thinks disaster recovery is installed.

SCADAventure Installation - Folder

During installation it's possible to Browse to an alternate folder to install the SCADAventure software. Installing to the My Documents folder does not work since the folder is user specific and not visible to system accounts.

SCADAventure Installation - Uninstall Licensing

After uninstalling licensing, the ABB Client License Provider remains listed under Windows Services. This has no negative impact to re-installing the ABB licensing software again.

SCADAventure Servers will use excessive CPU resources if more than 300 zones and/or users exist.

In situations in which more than 300 zones and/or users exist, log-in times can be more than 2 seconds.

SCADAventure has not been tested on VMWare

SCADAventure has been tested using Microsoft Hyper-V for virtual environment compatibility. VMWare ESXi server has not been used for testing virtual machine compatibility - please be advised that choosing VMWare ESXi as the hypervisor may require additional configuration and expertise that is out of scope for the SCADAventure product support.

SMS Callout Acknowledgement

Upon acknowledgement of a SMS callout via SMS (regardless of if it is acknowledged by level 1 user or escalated user), ONLY level 1 users will receive an 'Alarm Acknowledged by - <user>' SMS message.

Also, level 1 SMS callout user will not receive such SMS message if the alarm was acknowledged by non-SMS method, such as acknowledging from HMI.

SMS Modem

The SMS modems Multi-tech MTCDA-E1 for EDGE and MTCBA-C1 for CDMA are both obsolete and there are limited functional replacements, therefore, the SMS Modem feature has not been validated in version 6.0.1. The user is responsible for testing the functionality, however, there will be no software maintenance provided for this feature.

SMS Web Service

A SCADAventure text callout device is currently limited to one type of SMS Web Service account.

TLS/SSL and Replication

The Replication Server system process supports TLS/SSL communications between itself and the RTRDB. However, the communications path between the Replication Publisher and Replication Subscriber IS NOT encrypted.

Trusted Server Login

Trusted Server login to real-time servers older than version 5.6.x is not supported. Upgrade all servers to version 5.6.0 first. After this, trusted server login is only supported for SCADAventure accounts mapped to Windows Accounts. If accounts are mapped to Windows workgroup accounts, be sure to use \ in front of the account name, e.g. .\wguser, otherwise, login will fail. If accounts are mapped to Windows domain accounts, this work-around isn't needed.

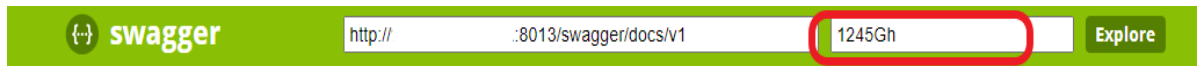
Web Bulk Template Loader

When using the Web Bulk Template Loader to load BOT Collections, please note that currently a single instance Collection is supported.

Web Service

Swagger UI does not support basic authentication. Using the 'Try Me' button will result in a 404 error.

You can start the WebService with the /apikey argument (e.g: /apikey:1245Gh) and use the key in the swagger page.



When the browser is on the same computer as the web service, using the Swagger UI and entering invalid parameters causes the inner error in the result to include a stack dump. This doesn't happen when the browser is remote and so is not considered a security issue.

Well Test - Configuration Import

When migrating well test configuration, an informational message similar to the following is reported by the web service in the SCADAventure diagnostic log

SVWebServices(Information): Unable to find property acknowledge_state for object <name>.

The property name may be different. These properties are now internal to integrated well testing, so not supported for importing. These messages are expected and can be ignored.

Visual Studio 2022 Support

HMI development using Visual Studio 2022 is not currently supported.

HMI Translation to non-English Languages

Section 5 Work Arounds

Following an upgrade installation, SCADA Advantage Service Manager Error

Starting the ABB SCADA Advantage Service Manager may display an error message regarding a "The dependency service or group failed to start". In this case the user account passwords used for the ABB Client License Provider and ABB SCADA Advantage Service will need to be reset. To do so, open the Windows Computer Management console and reset the password for the Windows user account used to run the service. The ABB SCADA Advantage Service may now be started.

Adding Disaster Recover

Adding Disaster Recover to an existing RTRDB installation does not correctly register the Disaster Recovery Windows Service, to work-around, run the following commands as an Administrator user

```
cd /d %svhome%\bin
```

```
%windir%\Microsoft.NET\Framework\v4.0.30319\installutil .\SVDRService.exe
```

Reboot the computer and continue with the instructions for configuring Disaster Recovery.

RTRDB stops responding when archive device unavailable

When an archive device (such as a network share), is unavailable for several hours, the RTRDB may become unresponsive (clients are disconnected) when retrying to load archives. To work-around, move the archives to a different device to allow them to come online. Leaving the database unable to load archives for a prolonged period is not recommended and will cause a failover when redundant. ABB will correct this issue with a release.

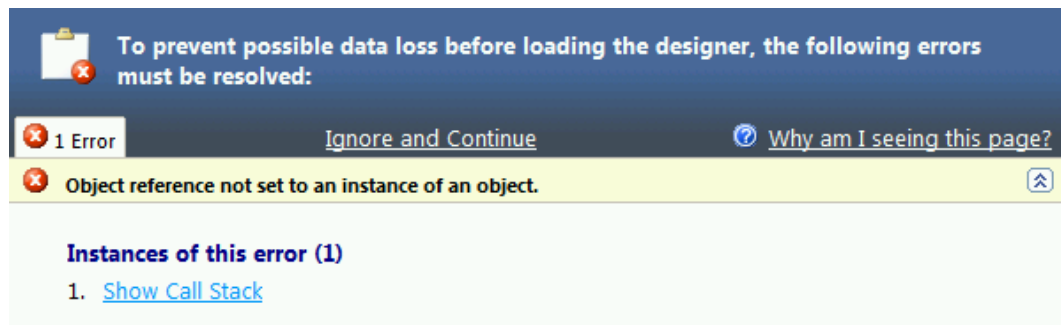
EFM Meter Settings

After changing EFM Meter application settings Device Scheduler First History Upload Days setting, the Device Scheduler System Process must be restarted before the new value takes effect.

Error Opening HMI Form Design in Visual Studio

Creating a new HMI application in Visual Studio, closing the solution, then creating a second new HMI application and opening a form, result in the error "Object reference not set to an instance of an object".

To work-around, restart Visual Studio. This problem only happens when creating a second new HMI without restarting Visual Studio. It doesn't happen if opening or switching between existing HMI's.



ExecuteSQLAsUser and ExecuteSurrogateSQLAsUser Functions

Make sure all SQL statements use views. SQL statements using direct table access will result in an insufficient privilege error in the security event log.

Both functions include a parameter for specifying the password of the user to execute the SQL statement. This is stored as clear text in the real-time database and HMI compiled code. Use an account with the least privilege needed to complete the operation. It is not recommended to use the system account name or password.

Excel Add-in

The Excel add-in uses a function with clear text username and password to connect to the database. It's recommended to Set a Password on an Excel Spreadsheet to encrypt the file.

APPRDB Monitor

The APPRDB Monitor system process is removed during upgrade. The equivalent functionality is now in SCADA[®] Advantage Monitor by adding the /sqlserver command line argument. This argument isn't automatically added during upgrade and must be manually added.

Running Report Fails

Running reports fail due to changes in security.

Error 5000 : Error in processing report.

[Extended Info:[Polyhedra][ODBC Driver]Communication link failure]

Edit the report definition. Review the username of the ADO connection. The guest user is disabled by default. It's recommended to create a specific user account for reports, rather than enabling the guest account. Once changed, reports work as expected.

HMI Errors connecting to Previous Version RTRDB

Before a 5.6 HMI can connect to an older server, the previous version server must be patched. Without this, the HMI will exhibit errors in the point controls such as the tooltip showing the error "unknown column referenced: 'dvioreliable'", exception popups on server failure or failover and errors in trend displays.

If the older RTRDB is version 5.5, the server must have the 550Server-v1.15 or higher patch installed to clear this error.

If the older RTRDB is version 5.4, the server must have the 540Server-v1.16 or higher patch installed to clear this error.

In both cases, the latest version of the server patch is recommended.

SCADA[®] Advantage Explorer

After changing a password, at the first login prompt, entering valid credentials does not show the tree view. To work-around, click Cancel after the first login prompt. After this, right click on the DSN and select Connect or double click to login normally.

Creating a new real-time meter or connectivity type causes SCADA[®] Advantage Explorer to hang. To work-around, make sure latest Microsoft security patches are installed.

Script Errors when opening PDH Meter Configuration

When opening PDH meter configuration errors such as "javascript:parent.ABB_SV_PDH_GRAPHICS()" or "javascript://parent.ABB_SV_PATH_TEXT()" appear in a popup window. To work-around,

On Windows Server, open the Windows Server Manager application. On the Local Server properties, locate the "IE Enhanced Security Configuration" option and set to Off. IT security or group policy rules may prevent changing this option. The rules must be overridden for this feature of SCADA[®] Advantage to function correctly.

Trend Pen Properties Drop-down Lists

For an historical trend, when configuring the properties, on the Historical tab, Granularity sub-tab, drop-down lists under the Roll-up, Sample Period and F(x) columns may not appear as expected when running on Windows 10, Windows 2012R2 Server or newer. To work-around, the up and down arrow keys can be used to cycle through the options. Note that the possible options are listed in the Bulk Pen Settings drop downs which can also be used to change the pen settings.

Error Renaming User with Administrator privilege

Trying to rename or delete user with System Zone privilege set to Administrator, results in the following error

Could not delete from table users because of referential integrity constraint:...

To work-around, change the System Zone privilege to Configurator and Save. Then rename or delete.

OPC HDA Not Shutting Down

When a SCADAventure Device that's configured to communicate with the SCADAventure OPC HDA server is inhibited, the HDA server does not shutdown. To work around, inhibit the corresponding network instead.

System Processes Don't Start the First Time

After installing a new SCADAventure server, the first time the server starts, the System Processes may not start. To work-around, reboot the computer and, if using a central license server, make sure it's available.

After Upgrading, HMI Login Problems when using Polyhedra Authentication

When starting an HMI, the login prompt is slow, login fails for no reason or the security log records "Anonymous logon failed". To work-around, add the following to the HMI's app.config and recompile.

```
<appSettings>
```

```
<add key="UseWindowsAuthentication" value="false"/> </appSettings>
```

HMI Upgrades

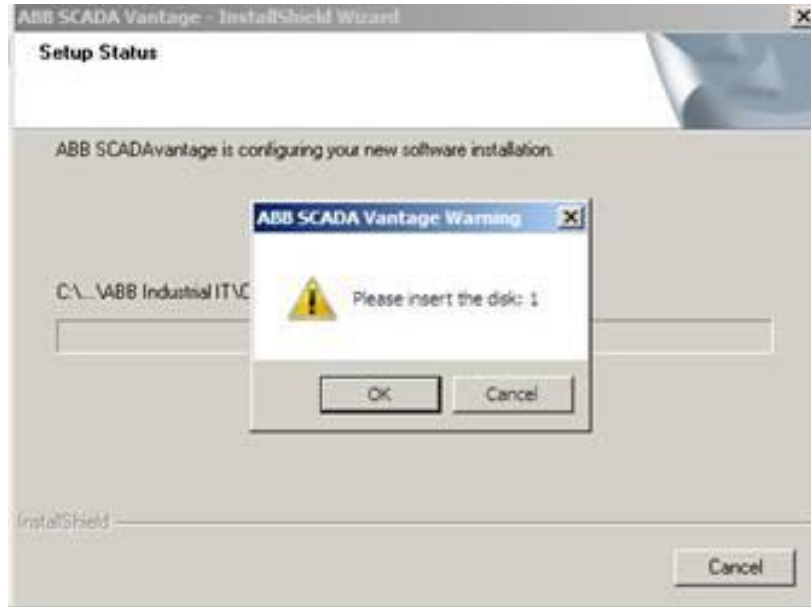
Upgrading an HMI from Visual Studio 2008 or earlier directly to Visual Studio 2015 is not supported. To work-around, use Visual Studio 2012 or 2013 to open the Visual Studio 2008 solution and perform an HMI optimization. After this, the solution can be opened in Visual Studio 2015. The Winforms designer in Visual Studio 2015 is not 100% compatible with code behind layout prior to Visual Studio 2010.

Virtualization

SCADA Advantage does not function correctly on a virtual machine with only 1 CPU assigned. To work-around, 2 or more CPUs are required.

"Please insert disk 1" during installation

To work-around, copy the contents of the DVD to a folder on the hard disk and install from there.



I/O List Export add-in removed from SCADA Advantage Explorer

The I/O List Export add-in is a customer specific solution. It requires a specific set of BOT variables, components and templates which are not shipped with the product. The source code is provided under %svhome%\Media\SampleCode\SVIOList for those customers who wish to continue using this functionality and/or improve/customize the original implementation.

File Must exist before Upgrading RTRDB

After upgrading in-place from a previous version, make sure %svhome%\supportfiles\upgrade\poly.PRE05.06.00.00.00.cfg exists. If not, copy the previous version %svhome%\poly.cfg to this file name.

ExecuteSQLAsUser Runtime Error

A software expression containing this function fails with a runtime error "Connection must be valid and open", "Lost Connection" or "Login Failed!" when the user account is disabled, blocked, the password has expired, or the maximum connections has been exceeded. To work-around, correct the blocked account using security configuration tools. The same problem occurs for the ExecuteSurrogateSqlAsUser function too.

Standby Shuts Down with Error

Occasionally, the standby shuts down and the SCADA Advantage.log.txt contains the following error message:

```
RTRDB state ... frozen JCP transaction count detected
```

This occurs because the active server becomes too busy for short periods of time to send updates to the standby. Rather than the standby becoming out-of-sync for long periods of time, it is designed to shut down after not receiving updates. It's recommended to determine the root cause of the active being busy before working around the problem. Details for the work-around are documented in the topic Arbitrator Troubleshooting.

Path to SCADAventure Explorer has changed

In 5.3.1, SCADAventure Explorer is located in the %svhome%\bin folder. After upgrading, the application is now located in the %svhome%\custom\bin\system folder. Any short-cuts on the Windows desktop or task bar will need to be updated.

Historical Playback not working when HMI on server

Make sure the workstation name is not LOCALHOST and the name is entered in uppercase.

EFM Meter History Replication

EFM Meter history appears to be missing from the subscriber. To work-around, increase real-time replication buffer from default of 100K to 100M.

SCADAventure Explorer or HMI crashes opening a Trend graphic

Open Windows regedit tool and navigate to HKEY_CURRENT_USER\SOFTWARE\Smartcore Systems\iVision\V2.1\Generic\Trend. Right click and Export to a file with extension .txt. Please email the exported file to SCADAventure support. To work-around the crash, delete the Trend registry key.

PDH Configuration and History Migration to Integrated Metering

The Web Service is required for migrating meter configuration and history from PDH into the new integrated metering system. If you don't want to buy a license just for migration, you must tolerate the license annoyance messages until migration is complete or request ABB to perform the migration at an hourly rate. It's probably better to just buy the license and enable the ability for future mobile applications.

HMI Packaging

When packaging HMI, ensure third party assemblies (e.g.: Visual Basic Power Pack) are included within the package.

Section 6 Cyber Security

Cyber Security Guide

The product help includes a new Cyber Security guide which covers the following topics:

- Authentication
- Access Control
- Security Zones and Network Security
- Virtualization Security
- Intrusion Detection Systems
- Audit Logging
- Secure Storage
- Secure Patch Management
- Physical Security
- Windows Host Hardening
- SCADA Advantage Hardening
- Default Security Settings Reference

Known Security Limitations

The following security limitations are known to ABB. It is ABB's intention to address these in future releases.

- **Remote DVI - Waiting to be Connected State**
 - A remote DVI when it's in the waiting to be connected to the database state, will process malformed packets and reject the connection request. This concern can be mitigated by ensuring the operating system firewall is configured to limit the DVI port to the database computers and applications.
- By default, all System Processes are installed. Only the most common are enabled.
- By default, all application user accounts are enabled.
- By default, all Protocols are installed. Only those on the DVI command line are enabled.
- .NET code is not obfuscated and can be reverse engineered
- The SCADA Advantage Windows service uses an account that requires Administrator privileges
 - If configured, the Control Sequence Spawn Executable command could allow Administrator access to the machine. This issue is flagged in the Baseline Security Analyzer.
 - If configured, a Scheduled Task entry can launch a command that allows Administrator access to the machine.

- If configured, a System Process can launch a command that allows Administrator access to the machine.
- The password policy allows setting the minimum password length to zero.
- The Excel add-in uses a function with clear text username and password to connect to the database.
- The real-time database does not support encrypted communication using SSL.
- The real-time database does not support separate security administration from configuration of field operations. Users with System Maintenance automatically inherit Configuration Maintenance.
- The real-time database does not restrict user login to specific times of the day or specific workstations.
- When using SMS to Twilio web service, the port that listens for responses does not restrict access via authentication nor is encrypted. Setting up a VPN connection is possible, but has not been tested by ABB.
- SCADAventure applications do not support communication via TCP/IP version 6 (IPv6).

Section 7 Technical Support

Contact ABB SCADAverage technical support at SCADAveragesupport@ca.abb.com or your local ABB representative for assistance in problem reporting.

Reporting Issues

When submitting an issue, ABB support and development places highest priority on critical problems such as data loss, data corruption or prolonged server downtime and high priority problems such as application crashes and data or alarms not being presented correctly in the HMI. These types of problems are candidates for a patch unless a work-around is provided.

Patches are typically released once a month. Patches should be tested in a QA or test environment first to confirm there are no side effect. For patches immediately installed into a production environment that exhibit side effects, ABB reserves the right not to fix the lesser side effect if the original problem is corrected. ABB also reserves the right to withhold patches if the customers Software Maintenance Agreement (SMA) is not in good standing. Finally, in some cases, ABB may require a customer to upgrade to newer 3rd party software such as Windows or Windows patch level, SQL-Server, or Microsoft Office in order to fix an issue before releasing a patch.

Before reporting an issue, confirm that rebooting Windows does not fix the issue. When reporting an issue to ABB support, please include the following common information as well as information specific to understanding and repeating the issue.

SCADAverage Version:

SCADAverage Feature:

Severity:

ID: <any ID you are using to track the issue>

Site Name:

Is this an ongoing issue or has it just started happening?

How often is it happening?

Is it specific to one tag or meter or all?

Is it specific to one computer/server or all?

What patches are installed?

Is it easy to repeat? (If Yes, provide specific steps or a simple HMI that demonstrates the problem)

Is this in production or testing?

Is this running on physical hardware or a Virtual Machine? Does it meet ABB's Hardware requirements?

Is this running in a Windows workgroup or domain?

Is the server running any customize or 3rd party extensions? (system processes, views, protocols, etc.)

In some cases, a backup of your real-time database or HMI source code is needed to repeat an issue. ABB understands there may be privacy issues and guarantees no copies will be

retained after closing the issue if requested. Otherwise, support will retain a copy for future support and internal future upgrade testing.

Issues such as unsupported devices or data processing or presentation, unexpected or occasional failovers or restarts of system processes, duplicate data, less than optimal performance under normal load or HMI window management, graphic sizing, call-up time, UI response or backwards compatibility are not considered high priority or candidates for patches. ABB will review these for inclusion in a future release. Customers are encouraged to confirm submitted issues like these are fixed by participating in the beta or release candidate programs for the next release.

Customers with custom System Processes on the server must disable these processes and confirm the issue remains before submitting to ABB. Customers running a server in a virtual machine must ensure the VM is not sharing any hardware with other VMs before submitting any performance related issues to ABB.

Section 8 How to Order

Contact ABB Product Sales at [SCADA**Avantage**.info@abb.com](mailto:SCADAAvantage.info@abb.com) or your local ABB representative for ordering and technical sales support.

Contact us

ABB
Process Automation Energy Industries
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