

PCVUE 12 RELEASE NOTES

» SUMMARY:

This document contains information about changes in PcVue 12. It includes information up to Maintenance Release 12.0.32.

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Confidentiality	TLP:CLEAR

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1. Maintenance Release 12.0.32 (12.0.32900)

1. Fixes

Several stability fixes (SPR #76266, 76236, 76090, 76088)

The list of fixes includes:

- SPR #76088 - A fatal error could occur on disconnection on an unstable network.
- SPR #76090 - Improved control of the outgoing Network Interface Card.
- SPR #76236 - A fatal error could occur at startup if an expected node could not be found, typically after having deleted a node from a station and restarted.
- SPR #76266 - A fatal error could occur on connection/disconnection.
- Fix to audit counters: Size of receive buffer (in bytes), Deleting server objects, Deleting client object.

Networking

Also in: 17.0.0, 16.3.3, 15.2.13

2. Critical fixes

Multi-node no longer working (SPR #75685)

The communication between two stations using more than one node no longer worked when the security was not altered, only one could connect effectively.

The issue was a regression integrated with the security fix for CVE-2025-9998 and CVE-2025-9999 (SB2025-4) in PcVue 12.0.31, 15.2.12 and 16.3.1.

Networking

Also in: 17.0.0, 16.3.2, 15.2.13

3. Security

SB2025-4 - Client/Server networking instability (SPR #76197, 76112)

Since the introduction of the security fix described in the security bulletin SB2025-4, networking packets could be falsely detected as malformed, causing a server station to force a disconnection. This issue led to a situation where a client station would not be able to stay connected to a server station in a stable way.

It was a known issue since 16.3.1, 15.2.12 and 12.0.31.

The security bulletin [Security bulletin](#) is updated (Rev B).

Networking

Also in: 17.0.0, 16.3.3, 15.2.13

Settings to maintain backward compatibility (SPR #76308, 76222)

To make it possible to temporarily maintain compatibility while updating a system to a product release offering hardened packet sequence control, a new setting on the Networking node called 'Allow stations with altered security' and a new property also called 'Allow stations with altered security' on station's node configuration are available.

To facilitate the station by station update, when re-starting an existing project, the new global setting is checked by default. Once all stations of a system are updated, the setting shall be unchecked and all nodes shall have the property set to 'No' to ensure the packet sequence control is hardened for all client/server links.

Networking

Also in: 17.0.0, 16.3.3, 15.2.13

4. Other fixes & enhancements

SPR #76105

SPR #76274, 76284

Also in: 17.0.0, 16.3.3, 15.2.13

2. Maintenance Release 12.0.31 (12.0.31900)

1. Security

SB2025-4 - Vulnerabilities in the client/server Networking (SPR #74711, 74710, 74709) The following vulnerabilities are fixed. They affect the TCP-based client/server Networking feature: • CVE-2025-9998 - Improper validation of packets sequencing - Affects all versions. • CVE-2025-9999 - Improper validation of payload elements - Affects all versions. See our Security bulletin for more information. [Edit: The fix in 12.0.31, 15.2.12, 16.3.1 and 16.3.2 is not effective. Refer to the section Known issues for more information.]	Networking Also in: 17.0.0, 16.3.1, 15.2.12
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3. Maintenance Release 12.0.30 (12.0.30900)

1. Fixes

Fatal error with large .hds temporary file (SPR #73098, 69357, 66782) A fatal error occurred when the size of a temporary file exceeded 2 Gb. From now on, these files are limited to 2 Gb and are indexed when reaching this limit.	Historical data Also in: 15.2.0
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2. Enhancements

Driver Udp Genisys - Support for redundancy (SPR #73476) The Udp Genisys driver now supports field device redundancy.	Data Acquisition > Other built-in drivers Also in: 15.2.9
Driver Udp Genisys - Switch polling mode The driver Udp Genisys now supports the following SCADA Basic instruction to switch indication request from master poll to master recall: CIMWAY("SENDMSG", "network.device", "ResetRecallFlag");	Data Acquisition > Other built-in drivers Also in: 15.2.9

3. Installation

OPC UA Gateway version 1.6.0 Update of the installation package of the OPC UA Gateway available in the Add-ons & Tools section of the DVD.	Add-ons and Tools
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4. Security

Buffer overflow vulnerability (SPR #73486) The following vulnerability is fixed. It affects the IEC 61850 client driver: CVE-2024-34057 - Buffer overflow in the Triangle MicroWork's IEC 61850 Client library - Affects all versions since 10.0. See our Security alert page for more information	Data Acquisition > IEC 61850 Client Also in: 15.2.9
Vulnerability in the Microsoft Visual Basic for Applications runtime (SPR #73056) The following vulnerability is fixed. It affects the VBA runtime: CVE-2010-0815 & CVE-2021-1854 - Remote Code Execution - Affects all versions since 9.0. See our Security alert page for more information.	Scripting > VBA Also in: 15.2.8

5. Other fixes & enhancements

SPR #74125	Also in: 16.3.0, 16.2.3, 15.2.11
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4. Maintenance Release 12.0.29 (12.0.29900)

1. Fixes

Error with text variable in Data export name (SPR #69664, 68837, 68832) Text variables were not correctly supported when used in the Name property of a Data export item.	Data Export Also in: 15.2.0, 15.1.5
Failed to export all data (SPR #72532) Under some circumstances, when multiple data to export had the same timestamp, the data export could fail to export all archived data matching the time filter.	Data Export Also in: 15.2.6

2. Security

OPC UA Gateway version 1.5.14 Update of the installation package of the OPC UA Gateway available in the Add-ons & Tools section of the DVD. This version of the OPC UA Gateway addresses the following security vulnerabilities: • ZDI-CAN-20497 / CVE-2023-32172 • ZDI-CAN-20576 / CVE-2023-32173 • ZDI-CAN-20577 / CVE-2023-32174 Please note that the version 1.5.13 released earlier this year addressed the following security vulnerabilities: • CVE-2022-4304 • CVE-2023-0286 • ZDI-CAN-20353 / CVE-2023-41185 • ZDI-CAN-20494 / CVE-2023-32170 • ZDI-CAN-20495 / CVE-2023-32171 • ZDI-CAN-20497 / CVE-2023-32172 See our Security alert page for more information.	Add-ons and Tools Also in: 15.2.7
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3. Other fixes & enhancements

SPR #70346, 72458	Also in: 15.2.6
SPR #71732, 72461	Also in: 15.2.4

5. Maintenance Release 12.0.28 (12.0.28900)

1. Fixes

Alarm synthesis timestamp changed on server switchover (SPR #71548) On a server switch from passive to active, an alarm synthesis is recalculated, including its value and timestamp. If the alarm synthesis has not changed, the value is not set. But, since a regression introduced in Maintenance Release 12.0.20 the timestamp was updated, causing event triggering if any. This is a known issue in 12.0.20, all subsequent Maintenance Releases of version 12 until 12.0.27 (included) and all releases of version 15 until 15.2.3 (included).	Alarms Also in: 15.2.4
Could not delete actions associated to alarms (SPR #71293) Since 12.0.25, 15.1.5 and 15.2.0 it was no longer possible to delete actions associated to alarms in the behavior panel of the Application Explorer.	Configuration Environments > Application Explorer Also in: 15.2.3
Memory leak with BACnet objects (SPR #70978) Under some circumstances, a memory leak occurred on a client station (typically the web back end) when accessing BACnet Schedule or Calendar objects for the WebScheduler. The issue only occurred if the server station producing the BACnet objects was not available at the time of the request from the client station.	Data Acquisition > BACnet Client Also in: 15.2.3
Incorrect time restriction with development licenses (SPR #71147) If a development license was rented from a network slot, data acquisition was incorrectly limited to 1 hour instead of 4.	General > Licensing Also in: 15.2.3
Infinite loop at startup with a network license (SPR #71568) Under some circumstances, an infinite loop could occur at startup when using a network dongle. The issue occurred in a scenario when the license owner is not accessible. Clicking the Quit button caused the renter station to go in an infinite loop. It was a regression introduced in 15.2.3.	General > Licensing Also in: 15.2.4
Null timestamp for saved variables (SPR #67079) If a variable was saved while its status was inhibited, it was re-initialized with a null timestamp.	Real time data Also in: 15.2.5
<i>Upgrade</i> Error handling when importing configuration (SPR #71781) Error handling was not consistent across a number of SCADA Basic instructions designed to import configuration: • Instruction EXPRESSION mode IMPORT_FILE_ONVAR; • Instruction EXPRESSION mode IMPORT_FILE_TEMP • Instruction ASSOCIATEDACTIONS mode IMPORTBYFILE • Instruction EVENT mode IMPORTBYFILE They now return: • 0: If the file is not accessible or contains nothing to treat (add/delete/modify) • >0: Number of lines processed from the file (add/delete/modify) if the import succeeds or fails The error values documented in the online help were no longer in line with the implementation since version 10.	Scripting > SCADA Basic Also in: 15.2.5
Instruction EVENT mode ADDPROG - Variable with multiple events (SPR #70979) Since version 12, when for a given variable, multiple events were created with the SCADA Basic instruction EVENT mode ADDPROG, only the first and last ones were executed.	Scripting > SCADA Basic Also in: 15.2.3
Instruction WINDOW mode CHANGE - Intellisense (SPR #72098, 72077) The instruction WINDOW mode CHANGE was missing in the Intellisense.	Scripting > SCADA Basic
Animations on the tree-view control (SPR #70786) Animations on tree-view nodes were not executed. The issue was a regression introduced in 12.0.25.	Web Server Extensions > WebVue

2. Critical fixes

Invalid trend point on shutdown (SPR #71407, 71324, 71311)

When using an HDS archive unit, the invalid point (quality 64) was no longer stored when shutting down PcVue.
The issue was a regression introduced in Maintenance Releases 12.0.26 and 15.2.1.

Historical data

Also in: 15.2.4

3. Enhancements

Sunair - Support for new controllers

The Sunair driver now supports T-5000A 5 kW, T-10000A 10 kW and T-10000B 10 kW transmitter systems.

Data Acquisition >

Other built-in drivers

Also in: 15.2.3

Tyco POSM IP - Support for device redundancy (SPR #71218)

The data acquisition driver Tyco POSM over IP now supports a device standby address to manage the Centinel redundancy system.

Data Acquisition >

Other built-in drivers

Also in: 15.2.3

4. Installation

OPC UA Gateway version 1.5.11 (SPR #70709)

Update of the installation package of the OPC UA Gateway available in the Add-ons & Tools section of the DVD.

Add-ons and Tools

Also in: 15.2.4

5. Security

Denial Of Service vulnerability (SPR #71486)

The following vulnerability is fixed. It affects the ICCP/TASE.2 interface Add-on and the IEC 61850 Client driver:

- CVE-2022-38138 - Access of Uninitialized Pointer vulnerability in the stack used for the ICCP/TASE.2 interface and the IEC 61850 Client driver.

For the IEC 61850 Client driver, it affects all versions since 10.0.
For the ICCP/TASE.2 interface, it affects all versions since 15.1.

See our [Security alert page](#) for more information.

Data Acquisition > IEC

61850 Client

Also in: 15.2.3

Vulnerability in the email & SMS account configuration (SPR #69821, 65029)

The following vulnerability is fixed. It affects the configuration of the email and SMS accounts:

- CVE-2022-4312 - Cleartext Storage of Sensitive Information vulnerability, allowing a user able to authenticate locally to access the SMTP account credentials and the SIM card PIN code - Affects all versions since 8.10.

See our [Security alert page](#) for more information.

Miscellaneous

Also in: 16.0.0, 15.2.4

6. Other fixes & enhancements

SPR #71119, 71120, 71915, 71916

SPR #70713, 71058, 71134, 71235

Also in: 15.2.3

6. Maintenance Release 12.0.27 (12.0.27900)

1. Fixes

Fatal error on reading properties (SPR #70107, 69711) Under some circumstances, a fatal error could occur when an OPC client read some vendor-specific properties. This issue was a regression introduced in the following Maintenance releases: 11.2.06099, 12.0.22, 15.0.3 and 15.1.1.	Communication interfaces > OPC Server Also in: 15.2.1
Fatal error when sending multiple write commands (SPR #70802) Under some circumstances, a fatal error could occur on a data acquisition server when sending write commands. The issue only occurred when sending multiple write requests simultaneously, and only in case of connection issues with the device.	Data Acquisition > Other built-in drivers Also in: 15.2.3
Project name containing a space (SPR #71067) Fix of a regression, since version 12, a project with a space in its name failed to start when using the -wts command line argument.	General
Fatal error at start-up and shutdown (SPR #70803) Under some circumstances, a fatal error could occur at start-up or during shutdown.	Miscellaneous
Fatal error on the Web & Mobile back end server (SPR #69142, 66521) Under some circumstances, a fatal error could occur on the Web & Mobile back end server upon a call to the SubscriptionPolledRefresh method of the RealTimeData service for a large number of variables. The issue occurred more frequently when the subscription comprised optional properties or thresholds.	Web Server Extensions > Web Services Toolkit
Fatal error with alarm synthesis (SPR #70341) Under some circumstances, a fatal error could occur on the Web & Mobile back end server upon connection of a web client. The issue occurred if a population was configured with the property <i>Take the applied population into account</i> activated and the scope of at least one of its variable set to <i>Session context</i> .	Web Server Extensions > WebVue Also in: 15.2.2
Incorrect handling of the Beep on new alarm property (SPR #70460, 70222) The property <i>Beep on new alarm</i> on a user profile was incorrectly handled, leading to unwanted beeps on mimic opening even without active alarms.	Web Server Extensions > WebVue Also in: 15.2.2
Inhibited alarms not filtered properly (SPR #68617) Inhibited alarms were not filtered properly in the Log viewer when used in a web context.	Web Server Extensions > WebVue Also in: 15.2.1
Instruction TREND mode SETVAR - Legend not filled up properly (SPR #69098) When adding a trend with the SCADA Basic instruction <i>TREND</i> mode <i>SETVAR</i> in a web context, the trend label in the legend was not correctly updated with the variable name when its description was empty.	Web Server Extensions > WebVue Also in: 15.2.2
Support for @#V in the Trend viewer (SPR #70157) The Trend viewer now supports the substitution @#V used to refer to the context variable in a web context.	Web Server Extensions > WebVue Also in: 15.2.2
Memory leak when accessing timetables and schedules (SPR #70890, 70816, 70009) A memory leak occurred on the Web & Mobile back end server when using the WebScheduler to access timetable and schedule objects. In addition, under some circumstances, a fatal error could also occur on the producer of a BACnet schedule object upon login in the WebScheduler.	WebScheduler Also in: 15.2.3

2. Installation

Documentation update The product documentation has been updated: Online help in Russian - Now at the level of version 12.	General > Documentation Also in: 15.2.1
Sentinel System driver 7.6.1 Update of the installation package for the Sentinel System driver.	General > Licensing Also in: 15.2.1

3. Security

Dream Report version 2020 R2 SP1 Update of the installation package for Dream Report available in the Add-ons & Tools section of the DVD. This version of Dream Report addresses the following security vulnerabilities: - CVE-2020-13532 - CVE-2020-13533 - CVE-2020-13534 - CVE-2021-21957 See our Security alert page for more information.	Add-ons and Tools Also in: 15.2.1
OPC UA Gateway version 1.5.10 Update of the installation package of the OPC UA Gateway available in the Add-ons & Tools section of the DVD. This version of the OPC UA Gateway addresses the following security vulnerabilities: - CVE-2022-29862 – Chained Certificate Loop PoD - CVE-2022-29864 – Reference Counter Decrement DoS See our Security alert page for more information.	Add-ons and Tools Also in: 15.2.3
Vulnerability in the OAuth configuration (SPR #71066, 70710) The following vulnerability is fixed. It affects the configuration of the OAuth web service hosted in Microsoft IIS: CVE-2022-2569 - Cleartext Storage of Sensitive Information vulnerability, allowing a user able to authenticate locally to access session data of legitimate users stored in the OAuth database - Affects versions 12 & 15. See our Security alert page for more information.	Web Server Extensions Also in: 15.2.3

4. Other fixes & enhancements

SPR #69235	
SPR #67079, 70003, 70906, 71074	Also in: 15.2.3

7. Maintenance Release 12.0.26 (12.0.26900)

1. Fixes

IP-ISO-S7 driver - Handle leak (SPR #69989, 69911) Under some circumstances, a handle leak could occur when using the IP-ISO-S7 driver.	Data Acquisition > Other built-in drivers Also in: 15.2.1
Line printers not supporting long server list name (SPR #70170) A server list with a name longer than 14 characters could not be used to configure a Line printer.	General Also in: 15.2.1
Incorrect historical trends (SPR #70197) Under some circumstances, invalid points were recorded in HDS databases, leading to inconsistent Trends display. The issue could occur after a project restart for variables that were invalid when stopping the project.	Historical data Also in: 15.2.1
OnMimicClose function not executed (SPR #70035) When closing a mimic using the SCADA Basic instruction WINDOW mode CLOSE, the SCADA Basic function configured to be executed upon mimic close was not executed.	Scripting > SCADA Basic
Incorrect statistical values in the Trend viewer legend (SPR #70075) Statistical values (min, max, average...) displayed in a Trend viewer legend were not always correct due to data compression.	Web Server Extensions > WebVue Also in: 15.2.1
Trend cleared when scrolling (SPR #70076) After a request in historical mode, the trend was cleared when using the horizontal scrollbar. Now, the horizontal scrollbar is disabled in historical mode, as it requires executing a new historical request.	Web Server Extensions > WebVue Also in: 16.0.0, 15.2.1

2. Other fixes & enhancements

SPR #66129	
SPR #70141	Also in: 15.2.1

8. Maintenance Release 12.0.25 (12.0.25900)

1. Fixes

Fatal error on alarm apparition (SPR #69996, 69874) Under some circumstances, a fatal error could occur when a new alarm was triggered while a log request was in progress if the alarm matched the log request filter criteria.	Alarms Also in: 15.2.0
Fatal error when browsing through mimics (SPR #66838) Under some circumstances, a fatal occurred when browsing through mimics while a mimic was being closed.	HMI Also in: 15.0.0

2. Critical fixes

Control animations not executed (SPR #70070, 69124) Since Maintenance Release 12.0.24, control animations in mimics were not executed if rendered in Web & Mobile clients. The issue affected WebVue and TouchVue. This is a known issue in 12.0.24.	Web Server Extensions
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3. Enhancements

Udp Genisys - Ability to send value 0 (SPR #70038) A new property is available for the <i>Udp Genisys</i> nodes to enable sending value 0 for bits. Defaults to <i>false</i> since the control data should be reset by the device itself.	Data Acquisition > Other built-in drivers Also in: 16.0.0, 15.2.1
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4. Other fixes & enhancements

SPR #69894, 69895	Also in: 15.2.0, 15.1.5
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9. Maintenance Release 12.0.24 (12.0.24900)

1. Fixes

Wrong alarm timestamp set (SPR #69559) Fix of regression, since 12.0.20 and 15.0.0, writing the value of an alarm in a SCADA Basic script was causing the timestamp to be changed even if the value was the same.	Alarms Also in: 15.2.0, 15.1.3
Fatal error on Log report modification (SPR #69558) A fatal error occurred when modifying or creating a Log report while the print spooler service was unavailable.	Configuration Environments > Application Explorer Also in: 15.2.0, 15.1.4
Tooltip truncated (SPR #69339) Under some circumstances, the tooltip of an animation was truncated.	HMI > Animations Also in: 15.2.0, 15.1.3
Fatal error when adding trends by script (SPR #69477) A fatal error occurred when removing and adding trends to a Trend viewer via a SCADA Basic script.	HMI > Trend viewer Also in: 15.2.0, 15.1.3
Several fixes related to Recipes (SPR #69322) The list of fixes includes: - An incorrect error message was displayed when a recipe file name was over 8 characters, - A fatal error occurred when validating a recipe without a title or recipe number, - Under some circumstances, updating the title or recipe number was not taken into account or created a duplicated recipe.	Miscellaneous Also in: 15.2.0, 15.1.5
Variables @DATE & @TIME not updated (SPR #69349) Under some circumstances, the variables @DATE and @TIME could no longer be updated. The issue occurred after having applied a population.	Miscellaneous Also in: 15.2.0, 15.1.4
Instruction FTP modes DOWNLOAD & UPLOAD - GDI object leak (SPR #69306) A GDI object leak occurred when using the SCADA Basic instruction FTP with modes DOWNLOAD and UPLOAD.	Scripting > SCADA Basic Also in: 15.2.0, 15.1.4
Instruction VARIABLE mode GET_TYPE - Did not work with HMI variables (SPR #69337) The instruction VARIABLE mode GET_TYPE returned an error when used with HMI variables.	Scripting > SCADA Basic Also in: 15.0.0
Could not execute animation (SPR #69124, 66762) After cancelling a <i>Send Text</i> or <i>Send Register</i> animation, all the other animations were locked.	Web Server Extensions > WebVue
Multiple animations executed at once (SPR #69124) All the Send or Run animations configured on a graphic item were triggered at once, without considering their order. Now they are performed one after the other when successful and not cancelled (if a <i>Send Register</i> animation is cancelled for example)	Web Server Extensions > WebVue Also in: 15.0.0

2. Critical fixes

Memory leaks (SPR #69240, 69217) Memory leaks occurred when Web or Mobile clients were connected. The issue was a regression since release 15.0.0.	Web Server Extensions Also in: 15.2.0, 15.1.1
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3. Other fixes & enhancements

SPR #68404, 69531, 69570

SPR #69820	Also in: 15.2.0, 15.1.5
SPR #69218	Also in: 15.2.0, 15.1.3

10. Maintenance Release 12.0.23 (12.0.23900)

1. Fixes

Could not deactivate the Network dongle role (SPR #68063) It was not possible to deactivate the property <i>Network dongle role</i> in the advanced tab of a station.	Configuration Environments > Application Explorer
Fatal error on disconnection (SPR #69276, 66623) Under some circumstances, a fatal error could occur when disconnecting from an OPC Server.	Data Acquisition > OPC Client Also in: 15.2.0, 15.1.2
OPC items with bad quality not ignored (SPR #69148) Since version 11.1, the setting defined in the OPC Server configuration that allows ignoring the value of an item with quality Bad was not working properly with bit and alarm variables.	Data Acquisition > OPC Client Also in: 15.2.0, 15.1.1, 15.0.3
Incorrect aggregated value (SPR #69283, 67600) Under some circumstances, invalid aggregated values were exported. The issue occurred when no record was found in the exported time period, causing a random value to be exported.	Data Export Also in: 15.2.0, 15.1.2
Clipboard paste (SPR #68372) Better control of the clipboard Paste command to prevent side effects when the type of data contained in the clipboard is not supported and not supposed to be pasted in a mimic.	HMI Also in: 15.2.0, 15.1.2
#V not resolved (SPR #65319) The #V substitution string was not resolved in the Trend viewer, preventing from using it in the legend or Data export wizard.	HMI > Trend viewer Also in: 15.1.0, 15.0.3
Instruction MAPDISPLAY - Fatal error with modes LOADDEFAULT and EXPORT (SPR #69019) Under some circumstances, a fatal error could occur when calling the modes LOADDEFAULT and EXPORT in sequence.	Scripting > SCADA Basic Also in: 15.2.0, 15.1.1
Setting FirstDayOfWeek not correctly taken into account (SPR #69314, 68462) The setting <i>FirstDayOfWeek</i> was not correctly taken into account in the Standard week display.	WebScheduler Also in: 15.2.0, 15.1.2

2. Enhancements

Checks before running Component Registration Tool (SPR #65708) The Component Registration Tool now checks whether an affected process is still running before proceeding. In addition, a warning message is displayed to warn the user about the potential overwrite of system configuration settings such as services accounts.	Deployment tools > Component Registration tool Also in: 15.0.0
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3. Performance

Time to open/close a session (SPR #69199)

The time to open and close a WebVue session has been significantly improved, in particular when the project comprises a large amount of alarm syntheses.
For example on a project with 6000 alarms, 3000 alarm syntheses and 15000 alarm synthesis counters:

Before performance improvement:

- Time to open a WebVue session: 18.5 sec, including 17 sec to load alarm synthesis,
- Time to close a WebVue session: 3 min 9 sec, including 3 min 5 sec to unload context variables.

After performance improvement:

- Time to open a WebVue session: 4.9 sec, including 3.5 sec to load alarm synthesis,
- Time to close a WebVue session: 2.5 sec, including 1 sec to unload context variables.

Real time data

Also in: 15.2.0, 15.1.1

4. Security

Vulnerabilities in the Web back end modules

This is a follow-up to fixes available since 11.2.06097, 12.0.17 and 15.0.0. This fix covers other ways to exploit similar Remote Code Execution vulnerabilities uncovered after more tests of the initial fix.

The following vulnerability is fixed. It affects the interface between the Web & Mobile back end and the web services hosted in Microsoft IIS:

- CVE-2020-26867 - A Remote Code Execution vulnerability due to the unsafe deserialization of messages received on the interface - Affects all versions since 8.10.

See our [Security alert page](#) for more information.

Web Server Extensions

Also in: 15.2.0, 15.1.2

5. Other fixes & enhancements

SPR #69217

SPR #69216, 69235

Also in: 15.2.0, 15.1.1

SPR #68423, 68424

Also in: 15.1.0

SPR #66177, 66223, 69424

Also in: 15.0.0

11. Maintenance Release 12.0.22 (12.0.22900)

1. Fixes

DBImport - Log suffix not correctly managed (SPR #68868, 68864, 68744) When using the DBImport for importing logged events, the Log suffix was not correctly managed, leading to incorrect import.	Add-ons and Tools Also in: 15.1.0, 15.0.3
Fatal error with OPC Server interface (SPR #68813) Under some circumstances, a fatal error could occur when using the OPC Server interface, due to some resources not being released properly.	Communication interfaces > OPC Server Also in: 15.2.0, 15.1.1, 15.0.3
Memory leak with array of strings (SPR #68954) A memory leak occurred when variables were mapped to an OPC DA item of type array of strings. The amount of leaked memory depended on the size of the array.	Data Acquisition > OPC Client Also in: 15.1.0, 15.0.3
Alarm timestamps not saved (SPR #69032) When an alarm was configured with the <i>Saved</i> property enabled, not all of its timestamps (<i>AlaOn</i> , <i>AlaAck</i> , <i>AlaOff</i>) were stored. Only the timestamp of its last state was recorded. These timestamps can be used in the Alarm viewer.	General Also in: 15.2.0, 15.1.1, 15.0.3
Unable to close mimics (SPR #69069) Under circumstances, it was not possible to close mimics when the <i>Cache</i> property was enabled.	HMI
Empty Alarm and Log viewers (SPR #68670) Alarm and Log viewers displayed in a mimic in TouchVue remained empty even when there were alarms and/or events to display. Displaying the same mimic in WebVue worked properly.	TouchVue Also in: 15.0.0

2. Enhancements

Instruction EMAIL - Support for UNC path for attached files (SPR #68852) When using the EMAIL instruction, it is now possible to reference attachment files by using UNC path (e.g. \\hostname\folder\file.txt).	Scripting > SCADA Basic Also in: 15.1.0, 15.0.3
Filtering HDS log list with Sql-like syntax (SPR #68855, 68823) It is now possible to use Sql-like syntax when filtering Log lists for a Log viewer with the SCADA Basic instruction <i>LOGDISPLAY</i> mode <i>FILTER</i> .	Web Server Extensions > WebVue Also in: 15.2.0, 15.1.1, 15.0.3

3. Other fixes & enhancements

SPR #66794, 68848

12. Maintenance Release 12.0.21 (12.0.21901)

1. Fixes

Timestamp type for IEC 104 Sectors (SPR #68569) It was not possible to configure the Timestamp type (UTC or Local) for IEC 104 Sectors modeled with the Application Architect.	Configuration Environments > Application Architect Also in: 15.1.0, 15.0.2
Memory leak on modification of text extended attributes (SPR #68634) A memory leak occurred when writing text extended text attributes of a variable.	General Also in: 15.1.0, 15.0.2
Virtual keypad for user animations (SPR #68669) The virtual keypad could not be used with some user animations (user name, signature ...).	HMI > Animations Also in: 15.1.0, 15.0.2
Fatal error on web session opening (SPR #68602) A fatal error of the Web back end could occur when opening a web session if an alarm synthesis was defined and the corresponding variable was missing in the configuration.	Web Server Extensions Also in: 15.1.0, 15.0.2
Trends not displayed (SPR #68698, 67972) Trends were not displayed when the style of invalid points was set to <i>Invisible</i> .	Web Server Extensions > WebVue Also in: 15.1.0, 15.0.2
Incorrect text encoding (SPR #67999, 61478) Some cultures relying on non-latin characters were not correctly managed by the WebScheduler, leading to incorrect text display.	WebScheduler Also in: 15.1.0, 15.0.2
Setting FirstDayOfWeek not taken into account (SPR #68462) The setting <i>FirstDayOfWeek</i> defined in the <i>web.config</i> file was not correctly taken into account. Starting from version 15, this setting can be set with the Web Deployment Console when deploying the WebScheduler.	WebScheduler Also in: 15.1.0, 15.0.2

2. Enhancements

New BITMASK expression (SPR #68570) It is now possible to use the custom field BITMASK(x) in the advanced properties of OPC variables. The variable value is then the result of the logical bit AND operation between the OPC item value and the mask.	Data Acquisition > OPC Client Also in: 15.1.0, 15.0.2
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3. Security

Password displayed with virtual keypad (SPR #68668) When unlocking a user with the virtual keypad, the password was displayed in the input dialog instead of '*' characters.	HMI Also in: 15.1.0, 15.0.2
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13. Maintenance Release 12.0.20 (12.0.20900)

1. Fixes

Masked alarm reappearing after passive server restart (SPR #68378) Under some circumstances, saved alarms were incorrectly reloaded when a passive server was restarting. Specifically, their saved <i>Masked</i> status could be corrupted and trigger reappearance or disappearance of such alarms upon a restart.	Alarms Also in: 15.1.0, 15.0.1
OPC-XML server not correctly created (SPR #68568, 68486) OPC-XML servers were not correctly created if modeled with the Application Architect. The Url property was missing.	Configuration Environments > Application Architect Also in: 15.1.0, 15.0.2
SG-OPC - Incorrect server after synchronization (SPR #68454) Under some circumstances, an incorrect server was set after an import synchronization. The issue occurred when multiples servers were configured and the selected server was different from the first one.	Configuration Environments > Smart Generators Also in: 15.1.0, 15.0.1
Fatal error on passive server (SPR #68426) A fatal error could occur when stopping a passive server due to pending reports not deleted correctly.	Data Acquisition > IEC 61850 Client Also in: 15.1.0, 15.0.1
Report groups disabled (SPR #68460) Under some circumstances, a report group was disabled after receiving a report that had the buffer overflow flag set.	Data Acquisition > IEC 61850 Client Also in: 15.1.0, 15.0.1
Fatal error when writing an SNMP variable (SPR #68479) Under some circumstances, a fatal error could occur when writing an SNMP variable.	Data Acquisition > SNMP Manager Also in: 15.1.0, 15.0.1
Memory leak on errors (SPR #68511) Under some circumstances, a memory leak could occur when facing connectivity issues with devices refreshed by polling. Some polled read requests were not correctly freed after errors.	Data Acquisition > SNMP Manager Also in: 15.1.0, 15.0.1
AD user login failure (SPR #68106) Active Directory users could not login after a restart of the computer and until it had reached the Domain controller at least once. From now on, group SIDs are managed in addition to user names and their associated groups.	General > User management Also in: 15.0.0
Fatal error upon HDS shutdown (SPR #66900) A fatal error could occur during shutdown when the HDS tried to record the exit invalid trend points. It only occurred when one of the trend had no previous record available in the database.	Historical data Also in: 15.0.0
HDS fatal error upon shutdown (SPR #68338) Under some circumstances, a fatal error of the HDS could occur upon project shutdown.	Historical data Also in: 15.1.0
HDS not stopping (SPR #68314) Under some circumstances, the HDS was not correctly stopped at project exit. The issue occurred after having added a new trend associated to a long update rate, and the project exit being triggered before the end of the first update period of the new trend.	Historical data Also in: 15.1.0, 15.0.1
Fatal error when closing a mimic (SPR #67571) Under some circumstances, a fatal could occur when closing a mimic. The issue occurred when trying to close a mimic while it is already being closed. For example, it could happen when mimic closure required the execution of a with VBA or SCADA Basic script taking some time to execute.	HMI Also in: 15.0.0
Incorrect cursor value (SPR #68428) The cursor value displayed in the Trend viewer was incorrect for curves whose rank was over 8.	HMI > Trend viewer Also in: 15.0.0

Initial value of new variables not loaded (SPR #68578) When updating a project version on a passive server, newly created variables (in this project version) were not correctly initialized with their initial value after a server switchover.	Networking Also in: 15.1.0, 15.0.1
Multiple active servers in a single active server association (SPR #68379) In a single active server historical association, multiple servers could be active simultaneously when started at the same time or after a network failure.	Networking Also in: 15.1.0, 15.0.1
BeforeClose script not triggered (SPR #68418) The SCADA Basic function called upon closing a mimic was not correctly triggered when the mimic was closed via SCADA Basic. This fix applies to PcVue desktop only.	Scripting > SCADA Basic Also in: 15.1.0
Instruction FOPEN - Fatal error with unknown access mode (SPR #68097) A fatal error could occur when using the instruction FOPEN with an unexpected access mode argument.	Scripting > SCADA Basic Also in: 15.1.0, 15.0.1
Instruction SVLOG - Last line missing in buffer (SPR #68234) When exporting data with the SCADA Basic instruction SVLOG, the last line was missing in the exported buffer.	Scripting > SCADA Basic Also in: 15.0.0
Instruction SVLOG mode EXTRACT - Lines enclosed with double-quote (SPR #68234, 66631) Since version 11.2.06066, every lines returned by the instruction SVLOG mode EXTRACT were enclosed with double-quotes. This could cause compatibility issues with 3rd party software or scripts used to parse the exported files.	Scripting > SCADA Basic Also in: 15.0.0
Instruction WINDOW mode CLOSEALL - Mimics close failed (SPR #68639) The SCADA Basic instruction WINDOW mode CLOSEALL was not working properly in a web context. Some mimics could fail to close and remained open.	Web Server Extensions > WebVue Also in: 15.1.0, 15.0.1
Trend viewer average value updated in historical mode (SPR #67633) In the Trend viewer legend, the average value of a paused/historical trend was incorrectly updated based on real-time values.	Web Server Extensions > WebVue Also in: 15.0.0
Access to previous user session (SPR #66317) Under some circumstances, a session reuse could occur.	WebScheduler Also in: 15.0.0

2. Critical fixes

Loss of variables (SPR #68541, 66899) Under some circumstances, session context and client context variables were lost when a Web user logged in. The issue only occurred if the compatibility setting <i>Auto-number internal identifiers</i> was disabled.	Web Server Extensions > WebVue Also in: 15.0.0
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3. Enhancements

New interop property (SPR #68568, 68486) A new interop property is available for OPC-XML servers. It enables adding the http basic authentication header to all requests and is designed for OPC-XML servers that do not send the HTTP 401 error if the header is required.	Data Acquisition > OPC Client Also in: 15.1.0, 15.0.2
Writing the same value (SPR #68416) Until this change, writing the same value to an internal variable was not triggering notifications in components such as the <i>SV Manager Toolkit</i> even if the global variable setting <i>Send write request even if the value to write is the same as the current value</i> was enabled. In such circumstances, it is now possible to send multiple times the same value and be notified accordingly, which is required by some on add-ons such as the KNX driver. It was working properly with I/O variables.	Real time data Also in: 15.0.0

4. Installation

Availability of the KNX add-on (SPR #68513) The KNX add-on, available since version 11.2, was not shipped with the installation package and had to be downloaded from the Technical Ressources web site. It is now part of the installation package.	Data Acquisition > KNX Also in: 15.0.0
Support for Microsoft SQL Server 2019 Update of the readme file and the online help to reflect support for SQL Server 2019 which is effective since Maintenance Release 12.0.14.	Historical data Also in: 15.0.0
Timestamping server for Authenticode signature Change of the timestamping server used for Authenticode signature of installation packages and binary files. The trust chain of the new timestamping server is attached to the following root certificate: - Friendly name: DigiCert - Serial number: 0ce7e0e517d846fe8fe560fc1bf03039 - Common name: DigiCert Assured ID Root CA - Valid from : Friday, November 10, 2006 1:00:00 AM - Valid to : Monday, November 10, 2031 1:00:00 AM Make sure this certificate is in the list of trusted certificates.	Installation Also in: 15.0.0

5. Security

Secret storage (SPR #68391) The storage of the Authentication password for IEC 61850 devices is now protected and can include quotes.	Data Acquisition > IEC 61850 Client Also in: 15.0.0
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6. Other fixes & enhancements

SPR #68450	Also in: 15.1.0, 15.0.1
SPR #68268, 68498	Also in: 15.0.0

14. Maintenance Release 12.0.19 (12.0.19900)

1. Fixes

Ethernet/IP Add-on - Handling of large arrays (SPR #68352) The Ethernet/IP add-on did not handle large arrays of DWord correctly. If the array was larger than 50 items, variables were always set to status NS (invalid).	Add-ons and Tools Also in: 15.0.0
Mimic design screen resolution no longer forced to 1440*900 (SPR #66529) Mimic generated with the Application Architect were always configured with the resolution 1440*900 for the property <i>Design screen resolution</i> . They are now using the active resolution at the time of the generation.	Configuration Environments > Application Architect Also in: 15.0.0
Fatal error when configuring a license renter station (SPR #67689, 67090) A fatal error of the Application Explorer occurred when modifying the configuration of a station to make it a license renter. The issue occurred if no license owner station was configured, or if the owner station had been previously deleted.	Configuration Environments > Application Explorer Also in: 15.0.0
Unable to start BRCB on a newly active server after switchover (SPR #68309) In a configuration containing several IEC 61850 networks managed by the same server association, the server switchover was not correctly processed for all produced networks. Some networks remained active on the passive server, meaning that URCB/BRCB were not stopped, and thus forbade the newly active server to start them.	Data Acquisition > IEC 61850 Client Also in: 15.0.0
Incorrect quality if range dependent on other variables (SPR #67969) Under some circumstance, the quality of register variables could be incorrect. The issue only occurred with OPC variables, when the variable range was defined by dependency to other variables.	Data Acquisition > OPC Client Also in: 15.0.0
OPC-XML - Data types handling caused a fatal error (SPR #67622) Under some circumstances, a fatal error could occur when processing data received from an OPC-XML server. The issue only occurred for data of type <i>long</i> , <i>uint</i> , <i>ushort</i> , <i>ulong</i> , if they were not already converted on the OPC server side.	Data Acquisition > OPC Client Also in: 15.0.0
OPC-XML - Fatal error with a disconnected server (SPR #65755) A fatal error occurred when a <i>GetStatus()</i> request was sent to a disconnected server.	Data Acquisition > OPC Client Also in: 15.0.0
Fatal error on exit (SPR #66105) A fatal error occurred upon exit when using frames of type Info or Command not set to the maximum size.	Data Acquisition > Other built-in drivers Also in: 15.0.0
Host name resolved even when communication not started (SPR #66228) Resolution of the hostname of an SNMP device was executed even when the device was not started. Hostname resolution is now executed only when data acquisition is started for the device.	Data Acquisition > SNMP Manager Also in: 15.0.0
Fatal error with .ico file in B directory (SPR #67904) A fatal error could occur when opening the Image selector on a library containing a .ico file. It was due to an improper handling of the thumbnails for this type of files.	HMI Also in: 15.0.0
Incorrect display if Print format includes tabs (SPR #67841) Alarm viewer columns were incorrectly filled when the <i>Print format</i> was empty or set with tabulation characters.	HMI > Alarm viewer Also in: 15.0.0
Virtual keypad - Validate text input with key Enter (SPR #66378, 65503) Text input could not be validated by pressing the hardware keyboard key <i>Enter</i> (if any). The input could only be validated with the <i>OK</i> button of the Virtual keypad.	HMI > Animations Also in: 15.0.0
Blinking effect (SPR #65506) Fix of a blinking effect on the map control when a marker position was updated.	HMI > Map control Also in: 15.0.0

Fatal error on text color modification (SPR #67988) A fatal error could occur when editing the text color of a Text marker.	HMI > Map control Also in: 15.0.0
Textbox control not initialized with variable content (SPR #67452) The Textbox control was not correctly initialized with the value of a variable when used in a mimic with a branch.	HMI > Textbox control Also in: 15.0.0
Trends not displayed correctly on large screens (SPR #68081) Curves were not rendered properly if the Trend Viewer was larger than 3200 pixels.	HMI > Trend viewer Also in: 15.0.0
OPC watchdog treatment not fully executed (SPR #66922) Under some circumstances, watchdog treatment on OPC variables was not working properly and only part of the variables were set to NS WD on watchdog failure.	Real time data Also in: 15.0.0
Instruction EXPORT_LOG mode GETSTATISTIC - Sort order argument ignored (SPR #68221, 68211) The argument <i>StatSortOrder</i> was not correctly taken into account when using the instruction EXPORT_LOG mode GETSTATISTIC. No error was returned when passing an inappropriate value, and with a correct value, it was not taken into account and sorting was not effective.	Scripting > SCADA Basic Also in: 15.0.0
Instruction VARIABLE mode ASSOCIATEDLABEL - Incorrect return value (SPR #67675) The label name was returned instead of the label current value when the instruction VARIABLE mode ASSOCIATEDLABEL was called for a variable of type Bit.	Scripting > SCADA Basic Also in: 15.0.0
Fatal error on the Web back end (SPR #67721) Under some circumstances, a fatal error could occur on a Web back end server, due a trace message with an incorrect format. The issue could only occur when the <i>Mimic Details</i> trace level was activated in the Web back end configuration.	Web Server Extensions
Alarm viewer sorting not working with checkbox selection (SPR #68143) In WebVue, sorting was incorrectly done on the adjacent column when the <i>Line selection mode</i> was set to <i>By checkbox</i> .	Web Server Extensions > WebVue Also in: 15.0.0
Tooltip displayed for hidden buttons (SPR #68024, 67993) The tooltip was displayed on graphic objects, even if it was hidden due to a Visibility animation.	Web Server Extensions > WebVue Also in: 15.0.0
Web client no longer refreshed (SPR #68066, 67305) Under some circumstances, when using popup mimics, WebVue was no longer refreshed and was disconnected after a while.	Web Server Extensions > WebVue Also in: 15.0.0

2. Enhancements

OPC-XML - Support for Http Basic Authentication (SPR #67279, 67278, 65932) The OPC-XML driver now supports Http Basic Authentication.	Data Acquisition > OPC Client Also in: 15.0.0
Driver XBUS-IP-MASTER - Handling of connection termination (SPR #66310) In order to improve interop with some devices, it is now possible to select if a connection shall be terminated using the TCP RST_ACK or FIN_ACK flag.	Data Acquisition > Other built-in drivers Also in: 15.0.0

3. Other fixes & enhancements

SPR #65348, 68261	Also in: 15.0.0
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15. Maintenance Release 12.0.18 (12.0.18900)

1. Fixes

Event OnSelectionChanged improperly triggered in Combo-box (SPR #68123) The event <i>OnSelectionChanged</i> was improperly triggered in the Combo-box control when navigating in the dropdown list using the keypad. It is now only triggered upon validation of the new item selection.	HMI > Form controls Also in: 15.0.0
Animation not triggered (SPR #67697) When a symbol was part of a group, its animations were not correctly triggered on mouse-click.	Web Server Extensions > WebVue Also in: 15.0.0
Hidden control zone (SPR #68024) Control zone highlight was not properly hidden when the control zone itself was hidden because it belonged to a hidden group or symbol.	Web Server Extensions > WebVue
Trend viewer toggle button show/hide (SPR #67701) The toggle button to show/hide curves (in the legend) was not working properly when trends were dynamically set via SCADA Basic instruction <i>TREND</i> mode <i>SETVAR</i> .	Web Server Extensions > WebVue Also in: 15.0.0

2. Enhancements

Replication Manager - Purging previous steps before a new replication (SPR #65618) When an earlier replication failed to complete, remaining steps were still pending and stored in a dedicated table so that they can be processed later on. This feature had side effects in case one did not want the pending steps to be executed. It is now possible to purge this table of pending steps before executing a new replication, by using the Database Manager tool or by using the /P command line argument: • /P=1 to purge the table, • /P=0 to keep previous steps (default).	Add-ons and Tools Also in: 15.0.0
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16. Maintenance Release 12.0.17 (12.0.17900)

1. Fixes

Fatal error at startup (SPR #68005) Under some circumstances, a fatal error could occur at network startup on projects with a large number of BACnet devices among which some are disconnected.	Data Acquisition > BACnet Client Also in: 15.0.0
Impossible to restore communication despite time-out errors (SPR #67881) Under some circumstances, the communication with some TCP/IP devices could not be restored despite multiple time-out errors. The issue was due to the PLC not responding to requests while the underlying socket was still in an Ok state. From now on, after a period of 180 sec in time-out error, it is possible to force a close of the socket, which is then re-opened at the next retry. To activate this behavior, the following keys must be added in the file C\EqtConf.ini: [TCPIP] EnableCloseOnConsecutiveTimeOut = 1 MaxConsecutiveTimeOutInSec = 180	Data Acquisition > Other built-in drivers Also in: 15.0.0
Web component not correctly deployed on older operating systems (SPR #67994) The Web components were not correctly deployed by the WDC on operating systems using IIS 7.5 or lower, which include Windows 7, Windows Server 2008 and Windows Server 2008 R2. This was due to the use of the <i>applicationInitialization</i> element in the IIS configuration (only supported from IIS 8.0 onward).	Deployment tools > Web Deployment Console Also in: 15.0.0
Function Keys configuration lost (SPR #68051) Since version 12.0.16, <i>Functions Keys</i> configuration was lost after restarting a project.	General
Associated actions and context mimic not accessible (SPR #67797) Under some circumstances, associated actions and context mimic were not accessible from a log or alarm viewer. The issue only occurred when the mimic was opened via a SCADA Basic script executed at startup.	HMI Also in: 15.0.0
Fatal error on symbol edition (SPR #67832) Under some circumstances, a fatal error could occur when modifying symbol sub-objects via the Graphic Explorer.	HMI Also in: 15.0.0
Opening a mimic containing the Grid Control (SPR #67930) When using the Grid Control with the Variable Tracking mode activated, the height of each row was unnecessarily stored in the mimic (or symbol) file. It was leading to an unusual long time to open the mimic, and could lead to a fatal error in some cases (due to timeout errors).	HMI > Grid control Also in: 15.0.0
VBA event KeyPressed not triggered (SPR #68045) The VBA event <i>KeyPressed</i> of the Grid Control was not triggered when pressing an arrow key if the key was associated to a <i>Function Key</i> action.	HMI > Grid control Also in: 15.0.0
Trends not displayed upon request to the archives (SPR #66731) Under some circumstances, trends could disappear and no longer be displayed when requesting historical data. The issue occurred when a real time value (for one of the displayed variables) was received while processing the historical data.	HMI > Trend viewer Also in: 15.0.0
Instruction KEY mode ADDPROG and ADDPROGS - Failure with key code greater than 26 The SCADA Basic instruction KEY with modes ADDPROG and ADDPROGS failed when the key code was greater than 26.	Scripting > SCADA Basic Also in: 15.0.0
Memory leak when changing a threshold on a passive server (SPR #68034) Under some circumstances, a memory leak could occur when executing the instruction VARIABLE mode THRESHOLD_SETVALUE on a passive server.	Scripting > SCADA Basic Also in: 15.0.0

Could not filter alarms with level 0 only (SPR #67821)

It was not possible to filter real time alarms with level 0 only (*minLevel=0* and *maxLevel=0*). With such requests, the *maxLevel* parameter was automatically set to 29. This issue only affected web components with alarm filtering capabilities (WebVue, Web Services Toolkit and TouchVue).

Web Server Extensions

Also in: 15.0.0

Fatal error on browse request by a web client (SPR #67983)

Under some circumstances, a fatal error could occur when the configuration of a variable was modified while a browse request was being processed for a web client.

Web Server Extensions

Also in: 15.0.0

Fatal error when closing a web session

Under some circumstances, a fatal error could occur when closing a web client session. The issue could be reproduced if an *Alarm Syntheses* was configured with the option *Take the applied Population into account*, and if the value of an extended attribute was changed while closing the web session.

Web Server Extensions

Also in: 15.0.0

2. Enhancements

Support for double spontaneous transmissions (SPR #68078)

Support for double transmission of information objects with cause of transmission spontaneous. It can be configured in the advanced properties of IEC 104 points.

Communication interfaces > IEC 60870-5-104 Outstation

Also in: 15.0.0

Support of signed float 32 bits format (SPR #68105)

New format *Signed float 32 bits (swapped word)* is now available for built-in drivers.

Data Acquisition > Other built-in drivers

Also in: 15.0.0

Support for extended function keys

The list of fixes & enhancements includes:

- Support of F13 to F16 function keys, Back Space and Tab keys,
- Support of the Alt key as a modifier,
- Error and Log messages reworked.

General

Also in: 15.0.0

Instruction TRACE mode FILE - Message max length (SPR #67950)

The instruction TRACE mode FILE can now handle a message of up to 2047 characters (was 80).

Scripting > SCADA Basic

Also in: 15.0.0

3. Installation

Documentation update

The product documentation has been updated:

- Online help in Chinese - Now at the level of version 12,
- Online help in Russian - Now at the level of version 11.2.

General >

Documentation

4. Security

Vulnerabilities in the Web back end modules

The following vulnerabilities are fixed. They affect the interface between the Web & Mobile back end and the web services hosted in Microsoft IIS:

- CVE-2020-26867 - A Remote Code Execution vulnerability due to the unsafe deserialization of messages received on the interface - Affects all versions since 8.10.
- CVE-2020-26868 - A Denial Of Service vulnerability due to the ability for a non-authorized user to modify information used to validate messages sent by legitimate web clients - Only affects version 12.0.
- CVE-2020-26869 - An information exposure vulnerability allowing a non-authorized user to access session data of legitimate users - Only affects version 12.0.

See our [Security alert page](#) and [Security Bulletin 2020-1](#) for more information.

Web Server Extensions

Also in: 15.0.0

5. Other fixes & enhancements

SPR #67223, 67986

Also in: 15.0.0

17. Maintenance Release 12.0.16 (12.0.16900)

1. Fixes

Incorrect value and boundaries for System.Localhost.Session.Type (SPR #67957) The variable <i>System.Localhost.Session.Type</i> had an incorrect low boundary, 0 instead of -1, and was wrongly set to -1 where the value should have been 104 when a client was connected using the Web Services Toolkit. The same fix applies to the values returned by the SCADA Basic instruction SESSION mode GETTYPE.	Audit Also in: 15.0.0
SNMP trap not sent (SPR #67679) When configuring multiple traps with the same generic format, only the last trap was sent.	Communication interfaces > SNMP Agent Also in: 15.0.0
Support for OID and Value in Generic Trap (SPR #67126) Generic traps were not supporting OID and Value parameters properly. They now behaves as described in the online help.	Communication interfaces > SNMP Agent Also in: 15.0.0
Import failed due to expressions (SPR #67558, 67545, 67276, 66885) When importing expressions via a Smart Generator or the Application Architect, expressions configured with a result variable that was not produced locally were only partly loaded and did not behave as expected at runtime.	Configuration Environments Also in: 15.0.0
Upgrade Alarm synthesis default property value (SPR #67799, 66701) The default value of the property <i>Take the applied population into account</i> of Alarm Syntheses items is False since version 11.2 Release. This new default value was mistakenly not applied to Alarm syntheses created with the Application Architect. It is now applied. This change may introduce a behavior change in the way alarm syntheses are calculated in some projects. Please refer to the Known issues section for more information.	Configuration Environments > Application Architect Also in: 15.0.0
Fatal error when editing a property defined by expression (SPR #67450) Under some circumstances, a fatal error could occur when opening the expression editor for defining a property. The issue occurred when the operating system was set for the Hebrew character set. Other non-English languages were potentially impacted also (reproduced with French charset).	Configuration Environments > Application Architect Also in: 15.0.0
Fatal error upon copy of a variable or trend (SPR #66986) Under some circumstances, a fatal error could occur when copying a variable or a trend.	Configuration Environments > Application Explorer Also in: 15.0.0
Buffered AI and AO values not recorded (SPR #66941, 66834, 66297) The buffered values for AI and AO objects of a DNP3 device were not correctly recorded in the archives when they were associated to trends. These values are read when connecting to the device at startup or upon reconnection.	Data Acquisition > DNP3 Client Also in: 15.0.0
Driver IpOpenWebNet - Support for extension modules (SPR #67702) The SCS extension modules were incorrectly updated when a new measurement was received for a single Lighting Point.	Data Acquisition > Other built-in drivers Also in: 15.0.0
Fatal error when exporting with limited amount of exported records (SPR #67739) A fatal error could occur when performing an export having the advanced property " <i>Statistics output.Limit exported records</i> " activated, even if the actual number of records was lower than this limit.	Data Export

Fatal error at project startup (SPR #67652) Under some circumstances, a fatal error could occur at project startup due a conflict in accessing pending event logs (event logs waiting to be recorded).	Historical data Also in: 15.0.0
<i>Upgrade</i> Potential memory leak in Networking with mixed PcVue versions (SPR #67867) Under some circumstances, while migrating a project, a memory leak occurred on a data acquisition server if it ran a version greater than or equal to 11.2.6086 and communicating with a client station running with version 12.0.15 or lower. The leak occurred at each restart of a client station, and its size was proportional to the number of variable subscriptions sent by the client station to the server station (250 bytes per subscription - typically a leak of 2.5 MB for 10 000 variables at each restart of a client station).	Networking
Instruction KEY modes ADDPROG, ADDCLK and ADDSTD - Existing key not replaced (SPR #67955) When creating a new function key action with the SCADA Basic instruction KEY modes ADDPROG, ADDCLK or ADDSTD, an existing definition of the key combination was not replaced by the new one, leading to the execution of both actions when triggered. As described in the help, any existing definition of a temporary key is now replaced, and the instruction returns an error if the existing key is permanent (configured) and cannot be replaced by script at runtime.	Scripting > SCADA Basic Also in: 15.0.0
Improper disconnection Without a user action causing a request to the web server, the user was forcibly disconnected after the session time-out (default 1 mn). It could happen when configuring multiple schedules before saving them at once. A keep-alive request is now sent every 10 sec to make sure the connection is maintained.	WebScheduler Also in: 15.0.0

2. Critical fixes

Several fixes in the IEC 61850 client driver (SPR #67463) Fixes are related to the handling of communication object stop/start and includes: - Fix of a fatal error that occurred when changing the configuration of several variables linked to IEC 61850 report or dataset. The issue could be reproduced when doing an Application Architect synchronization with IEC 61850 devices connected and communicating actively. - Variable updates could be frozen for 1 minute upon redundant data acquisition server switch from active to passive. - Failure to reconnect to URCB or BRCB upon redundant data acquisition server switch from active to passive.	Data Acquisition > IEC 61850 Client Also in: 15.0.0
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3. Enhancements

Sampling period greater than the export period (SPR #67469) It is now possible to have a sampling period equal or greater than the export period. This change allows using the export feature to generate a single sampled value snapshot.	Data Export Also in: 15.0.0
Positioning of markers (SPR #67820, 67757, 67756) It is now possible to select at design time how markers of type Symbol shall be anchored on the map: - Centered, - Anchor point, - Top-left corner, - Top-right corner, - Bottom-left corner, - Bottom-right corner.	HMI > Map control Also in: 15.0.0
New method to log messages (SPR #67826) A new method <i>LogInformation</i> is available in VBA on the <i>Project</i> object. It can be used to send log messages to the Event Viewer. <code>ThisProject.LogInformation LogLevel, LogMsg</code> Where <i>LogLevel</i> can take value 1, 2 or 3, and <i>LogMsg</i> is the message to be logged (string) 1 = Information, 2 = Warning, 3 = Error.	Scripting > VBA Also in: 15.0.0

Show/hide columns

It is now possible to hide the columns *Is Standard Week Empty* and *Is Exception Period Active*.
By doing so, the time to load the list of timetables is greatly reduced.
The setting to add to the WebScheduler web.config file is the following:

```
<setting name="HideSpecialColumns"
serializeAs="String">
  <value>True</value>
</setting>
```

WebScheduler

Also in: 15.0.0

4. Performance

Image caching (SPR #66155)

Images loaded in mimics and symbols were not cached by the web browser, thus they were loaded every time the mimic was opened.
The setting to add to the GraphicalData web.config file is the following - Value in seconds, default to 0 (expiration controlled by the web browser) :

```
<setting name="CacheMaxAge"
serializeAs="String">
  <value>0</value>
</setting>
```

There is no need for customization to take advantage of the default value.

Web Server Extensions

> **WebVue**

Also in: 15.0.0

5. Other fixes & enhancements

SPR #67486

Also in: 15.0.0

18. Maintenance Release 12.0.15 (12.0.15900)

1. Fixes

Driver SAIA - Equipment not correctly initialized (SPR #67443) At startup, some devices were not correctly initialized and connection could not be established. Startup of devices is now serialized to enforce a proper initialization.	Data Acquisition > Other built-in drivers Also in: 15.0.0
Fatal error on frame modification (SPR #66627) A fatal error could occur when modifying a frame while the communication was starting.	Data Acquisition > Other built-in drivers Also in: 15.0.0
Fatal error with redundant servers (SPR #67440) Under some circumstances, a fatal error could occur due to trap handling in redundant server set-up.	Data Acquisition > SNMP Manager Also in: 15.0.0
Populations not correctly applied to HDS log lists (SPR #66699) Under some circumstances, populations were not correctly applied to HDS log lists in Log Viewer, leading to an empty display. The issue occurred when multiple criteria were applied to the same attribute.	Historical data Also in: 15.0.0
Context mimic with variables attributes (SPR #67261) Since version 12.0, it was possible to open a context mimic from a graphic object animated with a variable attribute such as #_Q, #_T or TATTx#. Such mimics only support a context based on a variable value.	HMI Also in: 15.0.0
Fatal error when opening mimics in binary format (SPR #66783) Under some circumstances, a fatal error could occur when opening a mimic due to some objects being loaded twice.	HMI Also in: 15.0.0
Graphical interface frozen (SPR #67045) Under some circumstances, the graphical interface could freeze due to the use of AVI or GIF objects in mimics. The loading and display of these objects is now optimized to avoid an overconsumption of CPU resources.	HMI Also in: 15.0.0
Residual objects displayed with large preview (SPR #67062) Some residual objects were displayed in images and symbols selectors when using large preview.	HMI Also in: 15.0.0
Error message displayed when opening a map (SPR #66956) Under some circumstances, an error message could be raised when displaying a map at project startup, due to execution synchronization issues.	HMI > Map control Also in: 15.0.0
Incorrect position of a symbol in design mode (SPR #67570) In design mode, a symbol at an absolute position was incorrectly anchored in the Map Control.	HMI > Map control Also in: 15.0.0
Instruction SQL_COMMAND mode READBUFFERCELL - Empty cells were ignored (SPR #67266) String cells having a NULL value were ignored and skipped when using the instruction SQL_COMMAND with the mode READBUFFERCELL. They are now interpreted as empty strings.	Scripting > SCADA Basic Also in: 15.0.0
Several fixes & enhancements to TouchVue (SPR #67297, 66946, 66697, 66640, 65853, 65370) The list of fixes & enhancements includes: • Under some circumstances, mimics could freeze, • Under some circumstances, users could not logout nor login, • Some variable commands were not correctly triggered when embedded in object groups, symbols or mimic tab, • Incorrect error messages were displayed after unsubscribing a variable.	TouchVue Also in: 15.0.0

Instruction TREND mode SETVAR - Variable description not updated (SPR #66637)

In a WebVue context, the variable description was not updated in the legend when the curve was modified with the SCADA Basic instruction TREND mode SETVAR.

Web Server Extensions
> WebVue

Also in: 15.0.0

2. Critical fixes

Unable to restart serial communication (SPR #67037)

Since version 12, it was no longer possible to restart a serial communication after stopping it. The application had to be restarted to correctly reinitialize the COM port.

Data Acquisition >
Other built-in drivers

Also in: 15.0.0

3. Performance

GDI object leak (SPR #67251)

A memory leak occurred when opening a mimic containing Form controls (Combo-box, List-box, Option-list, Tree view). One GDI object was lost for each control using a custom font.

HMI > Form controls

Also in: 15.0.0

Degraded response time (SPR #67120)

Since version 12.0 Initial Release, general performances when requesting Web Services were degraded up to 50 folds (100 read requests within 50 seconds instead of 1 seconds). This fix restores performances to a level similar to version 11.2.

Web Server Extensions
> Web Services Toolkit

Also in: 15.0.0

4. Security

Access to another web session (SPR #66644)

Under some circumstances, a web client was able to access the session of another web client, leading to potential information disclosure and privilege elevation. This was due to the reuse of a previously closed session Id, but with an access token not yet expired.

Web Server Extensions

Also in: 15.0.0

19. Maintenance Release 12.0.14 (12.0.14900)

1. Fixes

Invalid OPC variables after switchover (SPR #66837, 66655) Under some circumstances, variables mapped to OPC items could remain invalid after a data acquisition server switchover if errors occurred during the switchover. The issue affected: - Versions 11.2.06781 to 11.2.06793, - All releases of 12.0 up to 12.0.14.	Data Acquisition > OPC Client Also in: 15.0.0
License for version 15 not recognized by PcVue version 12 Some licenses shipped during Q2 2021 for version 15 were not recognized by PcVue version 12. It was a known issue since 12.0.7 (Initial Release).	General > Licensing
File & Folder filter for Project version not correctly saved (SPR #68848, 66794) Under some circumstances, the file selection configured in the central project management was not correctly saved. The issue could occur in particular when selecting the <i>All files in project directory</i> checkbox at the project root level.	General > Version management Also in: 15.0.0
Incorrect filtered list of alarms in Alarm viewer (SPR #67009) Under some circumstances, the alarms displayed in an Alarm viewer did not match the expected filter. It could occur if a filter was applied using VBA while quickly opening and closing mimics.	HMI > Alarm viewer Also in: 15.0.0
Fatal error with a variable name used in a tooltip (SPR #67020) A fatal error occurred when a variable with a name longer than 80 characters was used in a tooltip.	HMI > Animations Also in: 15.0.0
Fatal error when opening a web client (SPR #67012) Under some circumstances, a fatal error of the web back end station could occur when running a WebVue client. This issue was due a synchronization issue with the server.	Web Server Extensions > WebVue Also in: 15.0.0

2. Enhancements

New substitution characters for timestamp formatting - 12-hour clock (SPR #67015) New substitution characters are available in the Alarm viewer, the Log viewer and the Trend viewer for timestamp formatting based on 12-hour clock representation: #H: Hours from 1 through 12 (as opposed to #h for 00 through 23), #p: AM/PM designator. In additional, only for the Alarm viewer, #H and #p support the suffix <i>AlaOn</i> , <i>AlaAck</i> and <i>AlaOff</i> .	HMI Also in: 15.0.0
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20. Maintenance Release 12.0.13 (12.0.13900)

1. Fixes

IEC 104 variables not refreshed (SPR #66723) Under some circumstances, some IEC 104 variables could not be refreshed at startup or on server switchover.	Data Acquisition > IEC 60870-5 Client
ActiveX controls based on .Net loaded twice (SPR #66858) ActiveX controls based on .Net components were loaded twice.	HMI Also in: 15.0.0
Fatal error with symbol containing a Trend viewer (SPR #66968) A fatal error occurred when manipulating a symbol containing a Trend viewer with the option <i>Save runtime properties</i> activated.	HMI Also in: 15.0.0
Unable to edit symbol from the Graphic Explorer (SPR #66665) Under some circumstances, it was not possible to edit a symbol directly from the Graphic Explorer. The issue occurred when the anchor point of a symbol was invalid.	HMI Also in: 15.0.0
Images not stretched (SPR #66947, 65941) The option <i>Stretch image</i> was not taken into account when rendering images used in <i>Images</i> animations (e.g.: <i>Image on Bit</i>).	Web Server Extensions > WebVue Also in: 15.0.0
Incorrect colors in Trend viewer (SPR #66754) Under some circumstances, color of traces were incorrect in a Trend viewer. The issue occurred when a trend historical request was executed while another one was still in progress.	Web Server Extensions > WebVue Also in: 15.0.0

2. Critical fixes

Emergency purge not executed (SPR #67005) Since version 12.0, the emergency purge was no longer executed properly. In addition, if no scheduled purge was configured, the issue could lead to potential storage issues and changes no longer recorded.	Historical data Also in: 15.0.0
Empty result when Population applied to an HDS log list (SPR #66699) Since version 12.0 release, when a population was applied to an HDS log list, no result was returned nor displayed.	Historical data

3. Enhancements

Default mode of On text animations (SPR #66983) On text animations now use the <i>Variable mode</i> by default (was using <i>Value mode</i>).	HMI > Animations Also in: 15.0.0
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4. Security

Access to the online help and potential security policy infringement (SPR #66776, 65910) Under some circumstances, access to the online help was possible before completion of project startup. It could occur in particular by pressing the F1 key from one of the message box opened to indicate that network access issues prevent access to the version management central folder. Access to the file system was therefore possible before user authentication, which could be against the security policy on some systems.	General Also in: 15.0.0
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21. Maintenance Release 12.0.12 (12.0.12900)

1. Fixes

Code page displayed in string values (SPR #66842) When the code page was different from UTF-8, string values were prefixed with the applied code page (UCS-2, DBCS...).	Data Acquisition > BACnet Client Also in: 15.0.0
Time-out on variable initialization (SPR #66803) Under some circumstances, a time-out could occur when initializing DNP3 variables.	Data Acquisition > DNP3 Client Also in: 15.0.0
Fatal error when exiting the VCR mode (SPR #66773) Under some circumstances, a fatal error could occur when exiting PcVue if running in VCR mode and while playing records.	Historical data > VCR Also in: 15.0.0
Fatal error when loading the content file of a tree view (SPR #66779) A fatal error occurred when updating the content of a tree-view control by loading a content file defined by a variable link. The initial loading worked properly, the issue occurred when loading another file including items with animations.	HMI > Form controls Also in: 15.0.0
Trend viewer runtime configuration lost (SPR #66736) The runtime configuration of Trend viewer was not correctly saved with branched mimics.	HMI > Trend viewer Also in: 15.0.0
Trend viewer runtime properties lost (SPR #66648) The runtime properties of Trend viewer was lost when a curve's label contained a comma.	HMI > Trend viewer Also in: 15.0.0
Instruction CIMWAY mode READFRAME - Fatal error when read request failed (SPR #66607) A fatal error could occur when a read request triggered by the instruction CIMWAY mode READFRAME failed.	Scripting > SCADA Basic Also in: 15.0.0
Alarm viewer with first column empty (SPR #66855, 59115) A fatal error of the web back end occurred when displaying a mimic in WebVue if it contained an alarm viewer with the first column configured to be empty.	Web Server Extensions > WebVue Also in: 15.0.0
Blinking colors not working in animation (SPR #66679) Blinking colors were not correctly supported in an animation when changing from blinking to fixed color.	Web Server Extensions > WebVue Also in: 15.0.0
Blinking colors with indexed colors (SPR #66091) Blinking colors were not properly displayed on text objects when using indexed colors.	Web Server Extensions > WebVue Also in: 15.0.0
Fatal error with included mimics (SPR #66854) A fatal error occurred when an included mimic was opened with a Link open animation when the parent mimic was named explicitly (instead of using the * character).	Web Server Extensions > WebVue Also in: 15.0.0
Object flickering with translation animation (SPR #66725) In WebVue, graphic objects were flickering when configured with a translation animation and rendered partly outside of the visible window.	Web Server Extensions > WebVue Also in: 15.0.0
SCADA Basic script not executed on mimic opening (SPR #66785, 66340) SCADA Basic script on mimic opening were not executed in WebVue when the mimic was containing an empty Trend viewer.	Web Server Extensions > WebVue Also in: 15.0.0

Send and Link animations not available on transparent graphic objects

(SPR #66577, 66327)

Send and Link animations were not executed when configured on an object with invisible border and background. The control zone was not active nor displayed.

Web Server Extensions

> WebVue

Also in: 15.0.0

Translation animation with improper control zone (SPR #66230)

Graphic objects configured with a translation animation were always highlighted with a control zone even if the cursor mode was not activated on the animation.

Web Server Extensions

> WebVue

Also in: 15.0.0

Trends not set with SCADA Basic instruction (SPR #66340)

Opening a mimic and defining trends with the SCADA Basic instruction SETVAR in the same script was not working properly.

Web Server Extensions

> WebVue

Also in: 15.0.0

2. Critical fixes

Polling stopped after 25 days (SPR #66766)

The cyclic polling mechanisms used by the IEC 61850 data acquisition driver stopped working properly after a period of 25 days. It was necessary to restart the application to recover a correct behavior.

The affected mechanisms were the following:

- Polling of Datagroup (all versions affected),
- Polling of DataSet (all versions affected),
- Polling of watchdog (all versions affected),
- Cyclic attempt to reconnect a disconnected device (all versions affected),
- Cyclic re-synch GI for reports (affected since version 11.2),
- Cyclic attempt to reconnect disconnected reports (affected since version 11.2).

Data Acquisition > IEC

61850 Client

Also in: 15.0.0

3. Enhancements

OPC-XML - Support for arrays (SPR #66898)

When using OPC-XML, it was not possible to map a variable on a specific index of an array of items (string, boolean, I4, UI4...). This feature was already available with the OPC-DA client.

Data Acquisition > OPC

Client

Also in: 15.0.0

4. Performance

Filtering based on populations (SPR #66703, 66695)

Since version 12 Initial Release, runtime performances related to population filters were degraded due to a regression.

Applying a population filter could take several minutes to be fully performed. It is now almost instantaneous.

Real time data

Also in: 15.0.0

5. Security

Automatic logout not effective in WebVue (SPR #66653)

The automatic logout was not completely effective in WebVue.

After the inactivity timeout elapsed, it was indicated that the session ended but refreshing the page (with F5 or Refresh button) was opening it again without entering credentials.

Web Server Extensions

> WebVue

Also in: 15.0.0

6. Other fixes & enhancements

SPR #66811, 66857

Also in: 15.0.0

22. Maintenance Release 12.0.11 (12.0.11900)

1. New features

Support for included mimics and popups (SPR #66242, 66024) Included mimics and popups are now supported in WebVue. It was a known issue since 12.0.7 (Initial Release).	Web Server Extensions > WebVue Also in: 15.0.0
Support of iPad OS 13 WebVue now supports the Safari web browser shipped with iPad OS 13.	Web Server Extensions > WebVue Also in: 15.0.0

2. Fixes

Fatal error when displaying libraries of mimics or symbols thumbnails (SPR #66499, 66480) A fatal error of the Library Explorer, the Application Explorer or the Application Architect occurred when changing the displayed library of mimics and/or symbols if in thumbnails display mode.	Configuration Environments Also in: 15.0.0
Fatal error when creating a variable (SPR #66630) Under some circumstances, a fatal error could occur when creating a variable. The issue occurred when a branch segment of the variable was used in another branch previously deleted (e.g. B1.B2 and B2.B3).	Configuration Environments > Application Explorer Also in: 15.0.0
Fatal error upon modification of Equipment configuration (SPR #66627) Under some circumstances, a fatal error could occur when modifying the configuration of an Equipment or a Frame while Communication was starting.	Data Acquisition > Other built-in drivers
#x substitution with free archive units The substitution #x (timestamp quality) did not work properly when used to record logged events on free archive units.	Historical data Also in: 15.0.0
Associated labels not correctly displayed with mismatching label type (SPR #66371) Under some circumstances, the displayed associated label was incorrect. The issue occurred when the compatibility setting <i>Allow use of mismatched associated label type</i> was enabled, with a variable of type alarm configured with a <i>Bit Associated Label</i> .	HMI > Animations Also in: 15.0.0
Background image position (SPR #66458) Background image settings were not correctly interpreted in the Chart Control, leading to an incorrect positioning of the image.	HMI > Chart control Also in: 15.0.0
Font not properly initialized (SPR #66411) Under some circumstances, when using the ASCII format, text fonts were not properly initialized. Consequently, the text graphic item failed to load and display.	HMI > Graphics Also in: 15.0.0
Send Bit animation - Mode Handled and Pulse reworked (SPR #66459, 66439, 66334) The <i>Send Bit</i> animation has been reworked, in particular the modes <i>Handled</i> and <i>Pulse</i> : - With <i>Handled</i> mode, the bit value was not reverted when the mimic lost focus, <i>Pulse</i> mode was executed only when the HMI option <i>Mimic Animations.Send bit.Handled & Pulse execution</i> was set to <i>Standard</i>.	Web Server Extensions > WebVue Also in: 15.0.0
Time filter wrongly disabled in the Log viewer (SPR #66606) The Time filter in the Log viewer was incorrectly disabled if the access to filtering options was disabled.	Web Server Extensions > WebVue Also in: 15.0.0

3. Critical fixes

Session context not taken into account in RealTimeData service (SPR #66609, 66410) Session context was not correctly managed in the <i>RealTimeData</i> service of the WST. As an example, the <i>USER</i> variable was returning the name of the user logged on the back end hosting the services (if any) instead of the name of the user authenticated as part of the WST session.	Web Server Extensions > Web Services Toolkit Also in: 15.0.0
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4. Enhancements

Allow write commands when equipment is in error (SPR #66436) Prior to this modification, write commands were not sent when the equipment was seen in error. In particular, they were not executed on valid write-only frames when another frame had a status error. Now, writes commands are sent based on the frame status instead of the device status.	Data Acquisition > Other built-in drivers Also in: 15.0.0
Ability to disable file opening after data export (SPR #65359) From now on, when the user does not have the desktop rights, the Data Export Wizard of the Trend Viewer and the Grid Control no longer asks the user if he/she wants to open the generated file, a simple information is displayed, thus preventing the access to the file system.	Data Export Also in: 15.0.0
Small font size in Send Text animation (SPR #66342, 66038) When a Send Text animation was configured with direct input, the font size for displaying and typing the text were different.	Web Server Extensions > WebVue Also in: 15.0.0
Support of SCADA Basic modes INSERT and REMOVE for CHECKLIST, COMBOBOX, LISTBOX and OPTIONLIST instructions (SPR #66028) The SCADA Basic modes <i>INSERT</i> and <i>REMOVE</i> of the instructions <i>CHECKLIST</i> , <i>COMBOBOX</i> , <i>LISTBOX</i> and <i>OPTIONLIST</i> are now supported in WebVue.	Web Server Extensions > WebVue Also in: 15.0.0
BACnet exception handling (SPR #66582) Handling of Exception Schedule has been reworked to improve interop with devices that do not clear obsolete exception entries themselves.	WebScheduler Also in: 15.0.0

5. Other fixes & enhancements

SPR #66192	Also in: 15.0.0
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23. Maintenance Release 12.0.10 (12.0.10900)

1. Fixes

Missing warning if PcVue is not running (SPR #66092) No warning was displayed when launching a configuration tool (including the Application Explorer, Application Architect and Smart Generators) while the PcVue main process (Sv32.exe) was not running. It was a regression affecting version 12.0 Initial and Maintenance Releases.	Configuration Environments Also in: 15.0.0
Smart Generator for Wago - Incorrect mapping (SPR #66348, 65717) The last variable of a frame was incorrectly mapped if the last available index in the frame did not fit the size of the data point to map. The issue occurred in particular when the last data point to map was of type REAL.	Configuration Environments > Smart Generators Also in: 15.0.0
Issue when changing the binding (SPR #65998, 65964) When changing the binding of a web site, the Registry service endpoint was not properly re-configured, preventing the web site from being operational. The workaround was to delete and recreate the web site or to modify the WDC configuration file manually. It was a known issue since 12.0.7 (Initial Release).	Deployment tools > Web Deployment Console Also in: 15.0.0
Failed to import multiple events (SPR #66361, 66158) Importing multiple events on variable at once failed if the last part of their name was identical. The issue could be reproduced when generating multiple instances of a template comprising an event with the Application Architect.	Development kits > XML Generic Import Toolkit Also in: 15.0.0
Could not load or generate log reports (SPR #66341, 62750) It was not possible to load or generate log reports from a station using a server license. This change also fixes an issue related to user rights for log reports (as defined in the Window tab of a user profile).	Historical data Also in: 15.0.0
Instruction WINDOW mode IS_OPEN - Handling of the '*' (SPR #66337) Using the value '*' for the branch argument when calling the instruction WINDOW mode IS_OPEN no longer worked. This issue was a regression introduced in version 11.2.06048.	Scripting > SCADA Basic Also in: 15.0.0
Issue with long string literals (SPR #66255) Using a string literal with a size longer than 80 characters generated a memory overrun that could lead to a PcVue fatal error.	Scripting > SCADA Basic Also in: 15.0.0
Calendar dialog box not modal (SPR #66099) The calendar dialog box of the Trend viewer could be improperly hidden behind the mimic. It is now managed correctly as a modal dialog.	Web Server Extensions > WebVue Also in: 15.0.0
Incorrect behavior of the send register animation (SPR #66236) If a user double-clicked on a send register animation (instead of a single click), WebVue improperly opened an empty confirmation dialog box that the user could not close.	Web Server Extensions > WebVue Also in: 15.0.0
Lost control zones (SPR #66209) Control zones were lost on polygons after executing them once.	Web Server Extensions > WebVue Also in: 15.0.0

2. Critical fixes

Fix an issue with Windows updates causing a fatal error at startup

This change fixes an issue introduced by a series of Windows Updates rolled out by Microsoft in August 2019 that caused a fatal error at startup of PcVue and FrontVue.

At the time of writing, the list of suspected Windows Updates is the following:

Windows update	Release date	Applies to
KB4512508 (OS Build 18362.295)	August 13th, 2019	Windows 10 version 1903
KB4511553 (OS Build 17763.678)	August 13th, 2019	Windows 10 version 1809, and Windows Server 2019
KB4512534 (OS Build 17763.720)	August 17th, 2019	Windows 10 version 1809, and Windows Server 2019
KB4512501 (OS Build 17134.950)	August 13th, 2019	Windows 10 version 1803
KB4512509 (OS Build 17134.984)	August 19th, 2019	Windows 10 version 1803
KB4512516 (OS Build 16299.1331)	August 13th, 2019	Windows 10 version 1709
KB4512494 (OS Build 16299.1365)	August 16th, 2019	Windows 10 version 1709
KB4512507 (OS Build 15063.1988)	August 13th, 2019	Windows 10 version 1703
KB4512474 (OS Build 15063.2021)	August 17th, 2019	Windows 10 version 1703
KB4512517 (OS Build 14393.3144)	August 13th, 2019	Windows 10 version 1607, and Windows Server 2016
KB4512495 (OS Build 14393.3181)	August 17th, 2019	Windows 10 version 1607, and Windows Server 2016
KB4512497 (OS Build 10240.18305) (RTM)	August 13th, 2019	Windows 10 version 1507
KB4517276 (OS Build 10240.18308) (RTM)	August 17th, 2019	Windows 10 version 1507
KB4512488 (Monthly Rollup) Server 2012 R2	August 13th, 2019	Windows 8.1, and Windows Server 2012 R2
KB4512478 (Preview of Monthly Rollup) Server 2012 R2	August 17th, 2019	Windows 8.1, and Windows Server 2012 R2
KB4512518 (Monthly Rollup)	August 13th, 2019	Windows Server 2012
KB4512512 (Preview of Monthly Rollup)	August 17th, 2019	Windows Server 2012
KB4512506 (Monthly Rollup) Windows Server 2008 R2 SP1	August 13th, 2019	Windows 7 SP1, and Windows Server 2008 R2 SP1
KB4512514 (Preview of Monthly Rollup) Windows Server 2008 R2 SP1	August 17th, 2019	Windows 7 SP1, and Windows Server 2008 R2 SP1
KB4512476 (Monthly Rollup)	August 13th, 2019	Windows Server 2008 SP2
KB4512499 (Preview of Monthly Rollup)	August 17th, 2019	Windows Server 2008 SP2

The issue affected versions 10.0, 11.0, 11.1, 11.2 and 12.0.

Earlier releases of these PcVue and FrontVue versions cannot be used if any of these Windows Updates is installed.

General

Also in: 10.0SP2_Update

3. Other fixes & enhancements

SPR #66009, 66150

Also in: 15.0.0

24. Maintenance Release 12.0.9 (12.0.09900)

1. Fixes

BACnet helpers frozen Under some circumstances, BACnet helpers and the Application Explorer could freeze after having selected a BACnet variable which object-type is defined by its numeric Id.	Configuration Environments > Application Explorer Also in: 15.0.0
Memory leak with Trend Logs (SPR #66205) A significant memory leak occurred when retrieving Trend Logs.	Data Acquisition > BACnet Client Also in: 15.0.0
Fatal error with image and symbol selectors (SPR #66005) It was possible to try to insert an image or a symbol using the corresponding selector even if no mimic was open, causing a fatal error.	HMI Also in: 15.0.0
Mimic incorrectly resized and positioned when switching to Design mode (SPR #66196) Under some circumstances, when switching a mimic from runtime to design mode, its size and position were incorrectly recalculated due to screen resolution adaptation.	HMI Also in: 15.0.0
Instruction LOGDISPLAY mode FILTER - Fatal error with multiple INC clauses (SPR #66217) A fatal error occurred when using a filter having multiple INC clauses and using the % wildcard. e.g.: <code>=(#A1 INC %Domain%) && (#A2 INC %Nature%)</code>	Scripting > SCADA Basic Also in: 15.0.0
Misleading message displayed (SPR #66068) When a web back end endpoint was configured but the corresponding feature was not installed, a misleading message was displayed at startup: <i>"No configuration found for the backend. Use web deployment console to deploy"</i> instead of indicating that the feature was not installed.	Web Server Extensions Also in: 15.0.0
Incorrect blinking color on alarms (SPR #66111) Under some circumstances, the blinking color of graphical items remained even after a status change of the alarm, typically after its acknowledgment.	Web Server Extensions > WebVue Also in: 15.0.0
Web client frozen after closing foreground mimic (SPR #66179) Under some circumstances, the web client could freeze after closing a foreground mimic when another foreground or modal mimic was opened.	Web Server Extensions > WebVue Also in: 15.0.0
Web client frozen with modal mimic in background (SPR #66037) Under some circumstances, after opening a mimic from a modal mimic, the web client could freeze due to the modal mimic being moved to background and no longer being accessible.	Web Server Extensions > WebVue Also in: 15.0.0
Zoom actions not working in the Trend Viewer (SPR #66048) Under some circumstances, the zoom actions of the Trend Viewer were not working properly.	Web Server Extensions > WebVue Also in: 15.0.0

2. Critical fixes

<i>Upgrade</i> Upgrade of HDS table schema (SPR #66166)	Historical data
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With version 12, the length of Log list names can be up to 100 characters long (was 12). This change affects the schema of HDS log tables (column *LogList*). The change in table schema is done automatically at startup if the size of the database is less than 10 Gb. If the size is higher, the traces ask you to run the migration script. The issue is that the migration script, as supplied with the installation package 12.0.7 and 12.0.8, was wrongly altering the column *EvtTitle* instead of the column *LogList*, causing the archiving to no longer be effective after project startup. If you have upgraded your HDS log tables with version 12.0.7 or 12.0.8, it is advised to apply the following changes manually:

- Alter the *LogList* column of Log tables to type it varchar(100),
- Alter the *EvtTitle* column of Log tables to type it varchar(255),
- Make sure the value of *DBVersion* is set to 4.

If you are upgrading your HDS log tables with version 12.0.9 or later, no specific action is required apart from running the migration script.

3. Other fixes & enhancements

SPR #66219, 66269	Also in: 15.0.0
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25. Maintenance Release 12.0.8 (12.0.08901)

1. Fixes

Incorrect OPC values returned (SPR #66161) Under some circumstances, OPC items could not be read correctly by OPC clients, in particular when requesting a group containing invalid or unknown items.	Communication interfaces > OPC Server Also in: 15.0.0, 11.2.06083
Reports not processed in case of large datasets (SPR #66118) Reports were not handled properly when associated to a dataset with more than 150 members. The fix is validated with up to 1000 dataset members associated to a Report Control Block.	Data Acquisition > IEC 61850 Client Also in: 15.0.0
VBA form issue with the map control (SPR #65854) Under some circumstances, when a VBA form was open on top of a map control, it could happen that mouse events were trapped by the map control, thus preventing correct user interaction in the VBA form.	HMI > Map control Also in: 15.0.0, 11.2.06082
Fatal error when importing variables (SPR #64677) Under some circumstances, when the auto-number internal identifiers (variable tagname) setting was not activated, a fatal error could occur when importing variables with the SCADA Basic instruction VARIABLE modes IMPORTFILE or IMPORTBUFFER.	Scripting > SCADA Basic Also in: 15.0.0, 11.2.06081

26. Initial Release 12.0.7 (12.0.07900)

1. New features

MultiTech LoRa Gateway interface A data acquisition driver for MultiTech LoRa Gateways is now available.	Add-ons and Tools
New data acquisition driver - EtherNet/IP (SPR #64622, 63343) A data acquisition driver for EtherNet/IP™ controllers is now available. It supports controllers in the CompactLogix, ControlLogix, DriveLogix and FlexLogix series.	Add-ons and Tools
Management of Generic Traps (SPR #64853) The SNMP Agent Add-on now supports generic traps.	Communication interfaces > SNMP Agent Also in: 11.2.06071
Application data files modeling If your application requires application data files, you can now model Xml and text-delimited files thanks to templates and instances. Examples of use include cases where a script requires a data file containing a list of mimics, a list of branches, a list of trended variables, a hierarchy of mimics for custom mimic navigation... Such files can now be generated as part of your application modelling. This new feature supports the modeling of data files required to populate the built-in form controls.	Configuration Environments > Application Architect
Modelling of IEC 61850 communication items It is now possible to define IEC 61850 Devices, Datasets, Report groups and Polling groups in templates and instances.	Configuration Environments > Application Architect
Modelling of BACnet automation objects It is now possible to define BACnet automation objects in templates, including objects of type Device, Notification-Class, Calendar, Schedule, Event Log and Trend Log.	Configuration Environments > Application Architect
Access MS Excel files from within expressions - File reference and Excel I/O lists A set of new functions is available. They can be used in expressions to get data from 3rd party Microsoft Excel files, including <i>TextJoin</i> , <i>Lookup</i> and <i>Match</i> . With the Application Architect, using such expressions to predefine variables addresses in templates, you can use your regular Excel I/O list as an input for mapping variables automatically without error. These MS Excel file handling functions come with the ability to pre-configure accessible files using the Application Explorer to define file references. In addition to security concerns, file references allow you to pre-define how and when external files are loaded and unloaded to prevent excessive resource consumption.	Configuration Environments > Application Architect
Modelling of Archive Units and Log List It is now possible to define archive units and log list in templates and instances.	Configuration Environments > Application Architect
Modelling of IEC 104 Outstation datapoints It is now possible to define IEC 104 Outstation datapoints in templates and instances.	Configuration Environments > Application Architect

Making multiple copies of a configuration item

It is now possible to paste multiple copies of an item using the Multiple paste command. The Multiple paste command is available from the context menu when a supported item is being copied.

Items supported by the Multiple Paste command:

- Template instance,
- Topology element,
- All configuration objects,
- Mimic,
- Symbol,
- Embedded template,
- All configuration sub-objects except those that can only be configured once.

Configuration
Environments >
Application Architect

Modelling of LNS communication items

It is now possible to define LNS Networks and Nodes in templates and instances.

Configuration
Environments >
Application Architect

New expression items for numbering and offset calculation

A series of new expression items is available to make it easier to establish numbering or offsetting rules for the value of instances' properties. This includes a counter of the number of child instances, number of embedded instances, number of variables...

Configuration
Environments >
Application Architect

New features in the Application Explorer

The following elements are now be available in the Application Explorer:

- Monitoring of active sessions,
- Web & Mobile back ends configuration,
- SQL Connections configuration,
- File references configuration.

Enhancements to the BACnet engineering process, including the automatic detection of fields in vendor-specific EDE files, as well as support for a variety of encoding.

Configuration
Environments >
Application Explorer

Upgrade Configuration of function keys (SPR #48178)

Function keys can now be configured using the Application Explorer.

As part of the configuration management, a change has been introduced to simplify project design. What used to be called 'standard' or 'default' function keys are no longer re-created automatically at startup if they have been deleted from the function key configuration. As part of the migration, the project designer shall make sure to delete the function keys that are not necessary. In addition, the SCADA Basic script designed to delete all function keys and re-create only the useful ones can now be safely removed. Please refer to the SCADA Basic online help for more information (see the topic related to the KEY instruction).

A specific task is available in the Application Explorer to re-create all default function keys' configuration.

Configuration
Environments >
Application Explorer

Configuration of populations

Populations can now be configured using the Application Explorer.

As part of this feature, a population filter can be configured using an SQL query-like editor. In addition, population filters can now include filter elements based on extended attributes 5 to 16.

Configuration
Environments >
Application Explorer

Configuration of line printers

Line printers can now be configured using the Application Explorer.

Configuration
Environments >
Application Explorer

New Smart Generator - SG for TIA Portal

A Smart Generator for TIA Portal is now available to automate configuration of data acquisition & variables based on a TIA Portal project for Siemens PLC.

Configuration
Environments > Smart
Generators

New Smart Generator - SG for OPC (SPR #65207, 64830, 64494)

A Smart Generator for OPC is now available to automate configuration of variables based on browsing of OPC servers.

Configuration
Environments > Smart
Generators

New Smart Generator - SG for MOXA® ioLogik

A Smart Generator for MOXA® ioLogik is now available. Based on network scanning and online device discovery, it allows you to automate configuration of data acquisition and variables with support for the ioLogik E1200 & E2500 series.

**Configuration
Environments > Smart
Generators**

New data acquisition driver for Moxa® ioLogik controllers

A data acquisition driver for Moxa ioLogik controllers is now available - It supports controllers in the E1200 & E2500 series.

Data Acquisition

Support for the OPC UA Gateway

PcVue now supports the OPC UA Gateway with built-in licensing. It includes:

- The OPC UA client gateway for data acquisition,
- The OPC UA server gateway for exposing PcVue variables to 3rd party UA clients.

See the Installation section of this Release Notes for more information.

Data Acquisition
Also in: 11.2.06055,
11.1.06102, 11.0.06094

Support for File Transfer services

The standard File Transfer services are now supported. This new feature includes:

- A file transfer Helper on IEC 61850 devices nodes in the Application Explorer,
- The Helper allows browsing files available in devices connected to the network, as well as file Download, Upload and Deletion,
- A new SCADA Basic instruction named FILETRANSFER so that the File Transfer services can be scripted,
- Background retrieval and synchronization of files.

It permits handling files generated and/or stored in field devices, in particular disturbance recording, files containing device settings or configuration.

**Data Acquisition > IEC
61850 Client**

Append mode

It is now possible to append new data to an existing export file (Excel and CSV), to seamlessly aggregate data over successive exports.

Data Export

Web Deployment Console

A new tool is introduced to support WebVue server & web services deployment needs. The Web Deployment Console (WDC) is designed to support a comprehensive list of scenarios for web server deployment. It can be used side-by-side with IT admin tools:

- For system administrators, it does not require any knowledge of the Web apps & web services being deployed,
- For automation engineers, it opens the door to web server deployments with limited knowledge of the underlying IT technologies.

Using the Web Deployment Console, you will be able to:

- Install the Microsoft IIS web server components,
- Set-up the connection to the underlying web back end,
- Deploy the services you need to support Web & Mobile apps including WebVue, TouchVue, the WebScheduler and the Web Services Toolkit.

The WDC also includes support for troubleshooting, as well as a re-deploy feature that turns an update of the web server into a 1-click action.

**Deployment tools >
Web Deployment
Console**

Handling SQL Connections with the SV Manager SDK

A connection and request handler taking advantage of the pre-defined SQL Connections can be used in Add-ons developed based on the SV Manager Toolkit SDK.

**Development kits > SV
Manager Toolkit**

SQL Connections

General

Acting as a SQL bridge, SQL connections facilitate the connection of the Supervisor to 3rd party systems. In particular, SQL connections are useful to exchange data with Enterprise systems such as a MES, CMMS, ERP and Weather data providers.

SQL connections and the underlying SQL request handler can be used as a universal data connector to any external data source provided that a compatible ADO.NET provider is available. The module behind SQL connection handling helps you connect seamlessly to SQL data sources. It includes:

- Request routing inside the Supervisor's multi-station,
- Support for single active server associations for redundancy,
- Asynchronous command handling,
- Centralized connection strings at the project configuration level.

This SQL bridge supports a large variety of database commands including:

- Select, Insert, Update and Delete queries,
- Scalar, tabular and non-query requests,
- Requests on tables, views, stored procedure execution,
- ...

Requests can be scripted in SCADA Basic by using the instructions SQL_COMMAND and SQL_CONNECTION, and the underlying request handler can be used in Add-ons developed based on the SV Manager Toolkit SDK.

Labels associated to timestamp quality (SPR #61549)

General

From now on, it is possible to configure the labels corresponding to the timestamp quality. Such labels can be displayed in the Log Viewer, the Alarm Viewer and Animations by using the substitution character #x.

User sessions & scope

General > User management

A comprehensive user session handling is now available. It includes session monitoring & audit, and with the concept of scope, the ability to isolate a variable's value and associated behaviors (events, thresholds, expressions...) within a user session.

System variables and a new SCADA Basic instruction named SESSION are also available so that sessions can be scripted.

HMI variables

HMI

HMI variables are a new kind of variables designed to be less resource-intensive than internal variables. Managed locally on each station, they can be used to handle user inputs and navigation activities, including WebVue. HMI variables are a complement to I/O and internal variables that can be distributed across multi-station systems based on server and client lists. HMI variables supersede the legacy percent variables and temporary variables.

HMI variables can be used in scripts, including SCADA Basic and VBA. They can be created and deleted via SCADA Basic scripts by using the instruction VARIABLE (modes ADD_HMIBIT, ADD_HMIREG, ADD_HMITXT and DEL_HMIVAR), making it easy to migrate applications taking advantage of temporary variables.

New animations - Image on bit/register/text

HMI > Animations

A series of new animations is available to switch images according to a bit, register or text value.

New animations on text value

HMI > Animations

New animations are available to animate graphic elements according to a text value: Symbol on Text, Colors on Text, Images on Text and Visibility on Texts.

Pie, Doughnut and Pyramid chart

HMI > Chart control

A new chart control is available to represent data under the form of Pie, Doughnut and Pyramid charts.

Textbox form control

HMI > Form controls

A new form control for Textbox is available.
The new control supports scripting via SCADA Basic and VBA.

Grid control printing (SPR #63235)

HMI > Grid control
Also in: 11.2.06058

It is now possible to print a mimic containing a Grid control. Prior to this fix, Grid control could not be printed out.

Predefined station lists Several pre-defined station lists are now available when configuring variables: • System.AllStations, a client list containing all individual stations, • System.<StationName>, a server list containing only the indicated station.	Networking
New SCADA Basic instructions New SCADA Basic instructions are available to support scripting of new features: • File transfer handling: FILETRANSFER, • Pie, doughnut and pyramid chart control: PIE, • Session handling: SESSION, • Textbox form control: TEXTBOX. Several new modes on existing instructions are also added, including enhancements to scripting for form controls, the WEBVUE instruction...	Scripting > SCADA Basic
New instructions for handling of SQL Connections The instructions SQL_COMMAND and SQL_CONNECTION are now available for scripting SQL Connections. As of version 12.0, the use of pre-configured Sql connections along with the SQL_CONNECTION and SQL_COMMAND is preferred to using the verb SVSQL (based on ODBC).	Scripting > SCADA Basic
Call-backs on mimic events The SCADA Basic function to call when a mimic is open can now be configured in mimic properties. In addition, a SCADA Basic function can be called when a mimic is closed.	Scripting > SCADA Basic
New event on Mimic size change (SPR #63877) A new VBA event is available on Mimic objects. It is triggered when the size or zoom level of a mimic is modified: <pre>Private Sub Mimic_WindowSize(ByVal Height As Long, ByVal Width As Long, ByVal ZoomRatio As Long)</pre>	Scripting > VBA Also in: 11.2.06062
TouchVue new features and enhancements The TouchVue mobile app now supports simultaneous connection to multiple servers and is able to display graphic mimics and symbols. A re-designed interface makes it for a great user experience and better performances.	TouchVue
Web back end station To allow for a better network segmentation, the Web back end station can now be deployed on a different server than the Web server (IIS). This permits deploying Web Server extensions in a network infrastructure taking advantage of a DMZ.	Web Server Extensions
SCADA Basic support (SPR #65697, 65588, 65432, 65373, 65147, 64658, 64642, 64636, 64635, 64634, 64633) As part of the WebVue client re-design, several enhancements are brought to SCADA Basic support when scripts are executed in the context of a WebVue session. In addition, support for SCADA Basic instructions and modes when executed in the context of a WebVue session is now detailed in the SCADA Basic section of the online help, instruction per instruction. This includes specific indications such as: • Supported: The instruction or mode is supported if executed in the context of a WebVue session, • Not-supported: The instruction or mode is not supported if executed in the context of a WebVue session, • Partially supported: The instruction or mode is supported if executed in the context of a WebVue session, but have a specific behavior worth being noticed compared to its execution in the context of the desktop client. In some cases, the specific behavior is a known limitation that may be cleared in the future, and in most cases, it is a desired specific behavior due to the nature of the web client. • Not applicable: The instruction or mode is not applicable to WebVue (and therefore not supported).	Web Server Extensions

Upgrade Re-designed WebVue client

The web client, which was originally designed as a Java applet introduced to the market in the late 90's, now takes full advantage of the latest web technologies. WebVue provides a graphic interface to monitor and control your process from a web browser on any device. WebVue combines user experience, security and ease of deployment.

New features and enhancements include:

- No installation required on the web client side,
- Cross-browser support, including desktop and mobile web browsers,
- Secured communication over HTTPS,
- Support for network segmentation,
- Multi-tab support with a single license.

The technology stack includes HTML5, SVG and REST/JSON web services over web sockets and OAuth.

The SCADA Basic instruction named WEBVUE have been reworked to fit the new web client design.

WebVue deployment now requires the configuration of a Web & Mobile back end (using the Application Explorer), and the use of the Web Deployment Console on the Web Server. Some configuration settings are deprecated and no longer used. As part of the migration process, we recommend you to check settings related to the Web Server Extensions to make sure they fit your needs.

Web Server Extensions

> WebVue

Also in: 15.0.0

2. Fixes

svmgrHisTrendPeriod - Out of bounds values incorrectly archived When a variable value was out of bounds, the quality of the variable recorded was <i>NS</i> instead of <i>NS L></i> or <i>NS L<</i> .	Add-ons and Tools Also in: 11.2.06064, 11.1.06112
Various fixes - svmgrHisTrendPeriod (SPR #63442, 63441) Two new properties have been added to modify the behavior of the add-on: - UseLocalTimestampForTrigger: To determine if the timestamp to set on trigger is expressed in UTC time (1) or in Local time (0, default); - NotifyHistoricalOnly: To send VTQs to the archives only and bypass the runtime control such as dead banding (1) or to execute the runtime control (0, default).	Add-ons and Tools Also in: 11.2.06061, 11.1.06110
DB Import - Fatal error on import (SPR #63701) Under some circumstances, a fatal error could occur when importing data containing Null values, or having the same character used as the decimal and field delimiter.	Add-ons and Tools Also in: 11.2.06059, 11.1.06106, 11.0.06094
DBImport - Could not import exponential values (SPR #62356) The DBImport failed to import exponential values (e.g. -3.4E+2).	Add-ons and Tools Also in: 11.2.06001, 11.1.06068, 11.0.06086
DBImport - Incorrect truncations (SPR #62297) When importing data with the DBImport, some fields were truncated to incorrect sizes. Such truncations are now matching the constraints corresponding to the targeted HDS database schema version.	Add-ons and Tools Also in: 11.2.06001, 11.1.06066, 11.0.06085, 10.0SP2_Update
Could not create Alarm synthesis (SPR #65667, 65666) It was not possible to create Alarm Synthesis from a station that did not belong to the alarm synthesis server list.	Alarms Also in: 11.2.06079
Several fixes & enhancements related to alarm synthesis (SPR #65035, 65022, 65021, 65020, 64887) The list of fixes & enhancements includes: - Improved handling of the @ character, - Prevent creation of 2 alarm synthesis with the same result variable and different branches, - Enhanced input validation to prevent forbidden characters in the variable name.	Alarms Also in: 11.2.06073
Alarms with empty Domain/Nature not filtered by Population (SPR #64998) Alarms with an empty Domain and/or Nature were still displayed after applying a population that contained filter on Domain and/or Nature. Text Attributes 03 to 16 were also impacted.	Alarms
Alarm masked by expression instead of masked by variable (SPR #64822) When an alarm was masked by a variable, it was incorrectly indicated as masked by an expression.	Alarms Also in: 11.2.06071
Unmasked alarms remained NS (SPR #64268) Under some circumstances, alarms were not unmasked when their previous status was masked by dependence. The issue occurred when the masking dependence had a transition from invalid to valid.	Alarms Also in: 11.2.06071
NS alarm counters not correctly initialized The initial values were incorrect for NS alarm counters.	Alarms Also in: 11.2.06068
Masking of alarms resulting from an expression (SPR #63223) User masking (via the Alarm Viewer or SCADA Basic instruction) of alarms that are the result of an expression was not effective. The issue was not affecting masking by dependence (expression or variable).	Alarms Also in: 11.2.06056, 11.1.06102

Audit counter not correctly updated (SPR #64877) After several days, the audit counter <i>Target manager good response UI counter not released</i> was not correctly updated. It was leading to the unnecessary activation of flow control, in particular for OPC.	Audit Also in: 11.2.06076, 11.1.06116
Client connections rejected (SPR #62859, 62858) Under some circumstances, client connections were rejected by the server. In particular with redundant PcVue servers or on computers having multiple network interfaces.	Communication interfaces > IEC 60870-5-104 Outstation Also in: 11.2.06034
Configuration not saved dynamically (SPR #62858) The configuration of IEC 104 Outstation was only saved on project shutdown, and not on the <i>Save</i> action of the configuration environment.	Communication interfaces > IEC 60870-5-104 Outstation Also in: 11.2.06034
Could not create IEC 104 Outstation in Chinese (SPR #62787) The dialog box to create an IEC 104 outstation never opened due to a translation issue. The issue only occurred when running PcVue in Chinese.	Communication interfaces > IEC 60870-5-104 Outstation Also in: 11.2.06030
Robustness when exposing a large number of items (SPR #62379) A freeze of Sv32.exe could occur at startup if the number of items exposed was large (approximately over 2000). It was due to the subscription of the configured items. Now the subscription is done at once upon sector start, and unsubscription at sector stop.	Communication interfaces > IEC 60870-5-104 Outstation Also in: 11.2.06001
Fatal error on new client connection to the OPC Server Under some circumstances, a fatal error was occurring when several OPC clients were trying to connect to the OPC Server at the same time.	Communication interfaces > OPC Server Also in: 11.2.06076
Fatal error upon OPC group disposal (SPR #64256) Under some circumstances, a fatal error could occur when an OPC Group was incorrectly disposed of by an OPC Client.	Communication interfaces > OPC Server Also in: 11.2.06071, 11.1.06115
Fatal error when adding an item (SPR #62771) A fatal error occurred when an OPC client was trying to add an item with the <i>ItemId</i> set to NULL.	Communication interfaces > OPC Server Also in: 11.2.06031, 11.1.06091
Fatal error upon alarm deletion (SPR #64152) Under some circumstances, a fatal error could occur when deleting an alarm configured with associated actions. The issue occurred particularly when synchronizing a configuration with the Application Architect.	Configuration Environments Also in: 11.2.06076
Changing variable type (SPR #65004, 64020, 61529) Changing the type of a variable through Smart Generators or Application Architect was not working properly. The initial type of the variable was kept.	Configuration Environments
Fatal error on frame modification (SPR #64748, 60724) Under some circumstances, a fatal error could occur when modifying a frame.	Configuration Environments Also in: 11.2.06073

Size limit of IEC 61850 configuration properties (SPR #63761, 63760, 63759) The max size and range of several properties of IEC 61850 devices were not correctly checked in the Application Explorer and Application Architect: • Password (80 characters) • Local AP IP (19 characters) • Remote AP IP (19 characters) • Local AE Qualifier (range [0..65000])	Configuration Environments
Fatal error when trying to insert a variable in a SCADA Basic program (SPR #63971) A fatal error could occur when opening the variable selector from the SCADA Basic Editor.	Configuration Environments Also in: 11.2.06063
Duplicated objects (SPR #62097, 16924, 15998) Under some circumstances, some configuration items were displayed twice in the Application Explorer after creating, importing or editing them. Re-opening the Application Explorer was solving the issue.	Configuration Environments Also in: 11.2.06058
Max period for cyclics (SPR #61676) The allowed range for a cyclic period was not defined. From now on, the range is enforced from 1 to 359 999 sec (99h 59min 59sec).	Configuration Environments Also in: 11.2.06035
Incorrect pre-selection in selectors (SPR #58906) Symbol, mimic, mimic template and program selectors have been improved to display and pre-select the correct library and the correct item when being re-open. The issue was affecting all configuration tools, in particular: • The Application Architect when changing a symbol or a mimic template already defined/used in a template, • The Application Explorer when modifying a mimic action associated to an alarm, • Smart Generators such as the SG-CAD...	Configuration Environments Also in: 11.2.06025
Fatal error on SNMP variable generation (SPR #65293) A fatal error occurred when generating SNMP variables after the end of the trial period.	Configuration Environments > Application Architect Also in: 11.2.06076
Mimic modifications lost upon synchronization (SPR #65016) When synchronizing a project, modifications in mimics were lost. Mimics were re-created instead of being updated.	Configuration Environments > Application Architect Also in: 11.2.06073
Properties not displayed Some properties of variable items were not displayed when the source was substituted (ScaledValue, DeviceMinimumValue, DeviceMaximumValue, DeadbandValue, DeadbandType).	Configuration Environments > Application Architect Also in: 11.2.06073
Mimic generated in the wrong library When a mimic was generated in a library, the friendly name of the library was used instead of its directory path.	Configuration Environments > Application Architect
Could not create Associated Labels (SPR #64224) It was not possible to create Associated Labels that were defined by expressions.	Configuration Environments > Application Architect Also in: 11.2.06064

Could not insert global parameters in expressions (SPR #63387) Global parameters were not displayed and therefore could not be inserted when defining a property by an expression. Inserting them manually was working properly.	Configuration Environments > Application Architect Also in: 11.2.06057
Alarm Synthesis Server List not inherited by global parameter (SPR #62988) Global parameters affecting the <i>Server List</i> property were not applied properly to <i>Alarm Synthesis</i> objects.	Configuration Environments > Application Architect Also in: 11.2.06038
Incorrect symbol insertion with missing parameter value When inserting a symbol which position is calculated with a parameter and the parameter value is not given (either by input or by default value), the symbol position is by default set to upper-left. A warning message is still displayed in the generation window ("missing parameter").	Configuration Environments > Application Architect Also in: 11.2.06033
Global parameters not working with unmanaged SNMP devices Global parameters were not working properly with unmanaged SNMP devices.	Configuration Environments > Application Architect Also in: 11.2.06033, 11.1.06092
Could not create multiple instances at once (SPR #62831) Multiple instantiation of inherited templates was not possible.	Configuration Environments > Application Architect Also in: 11.2.06031, 11.1.06091
Fatal error when resetting Initial Value A fatal error was occurring when resetting the <i>Initial Value property</i> of a <i>Register</i> variable item.	Configuration Environments > Application Architect Also in: 11.2.06026
Global parameter Client List applied to Cyclic and Event objects When configuring a global parameter for the <i>Client List</i> property with targeted object type set to <i>Any</i> , <i>Cyclic</i> and <i>Event</i> items were affected even if they should not. This was leading to a failure of the generation.	Configuration Environments > Application Architect Also in: 11.2.06026, 11.1.06085
Impossible to paste alarm behavior on threshold items (SPR #62664) It was not possible to paste an alarm behavior on a variable's threshold.	Configuration Environments > Application Architect Also in: 11.2.06025
Setting Associated Labels on instances (SPR #62644) A fatal error was occurring when trying to set the Associated Labels of a variable at the instances level.	Configuration Environments > Application Architect Also in: 11.2.06025
Could not set inhibiting bit of trends (SPR #62532) An error was raised when generating after having changed the <i>Inhibiting bit</i> property of a <i>trend</i> item in the Application Architect.	Configuration Environments > Application Architect Also in: 11.2.06023, 11.1.06079

Naming rule evaluation The naming rule was not always correctly evaluated on mimic items.	Configuration Environments > Application Architect Also in: 11.2.06022
Unused parameters (SPR #62493) Under some circumstances, a parameter removed from a template could remain visible in the instance panel.	Configuration Environments > Application Architect Also in: 11.2.06022
Incorrect generation of mimics and symbols (SPR #62440) Symbols and mimics were not properly generated when parameters were used to define some of their properties.	Configuration Environments > Application Architect Also in: 11.2.06022, 11.1.06076, 11.0.06087
Creation of alarm synthesis with branch and expression (SPR #62351) It was not possible to create an alarm synthesis using both a branch and an expression. Such a configuration was working properly when using the Application Explorer.	Configuration Environments > Application Architect Also in: 11.2.06010, 11.1.06073
Message Encoding property not editable (SPR #62349) The <i>Message Encoding</i> property of events of type e-mail was not editable.	Configuration Environments > Application Architect Also in: 11.2.06001
Missing panels (SPR #62639) Under some circumstances, some panels were hidden due to an incorrect saving of the splitter positions.	Configuration Environments > Application Architect Also in: 11.1.06089
Selection lost in combo box (SPR #65578) Entering and leaving the edit mode in a combo box caused the selected value to be reset when the combo box was in a tree view such as in settings dialog boxes or in the advanced property tab of most configuration items. In addition to improving the user experience, this fix also avoid losing configuration values in cases the configuration element was not actually changed.	Configuration Environments > Application Explorer
Incomplete OPC Mapping (SPR #65100) Some links between OPC items and variables were missing in the Mapping dialog box, despite having the link correctly configured within the variable configuration dialog box. This was due to a case sensitiveness issue.	Configuration Environments > Application Explorer
Fatal error when browsing an OPC Server (SPR #64988) Under some circumstances, a fatal error could occur in the Application Explorer when browsing an OPC DA3.0 Server with a multiple of 1000 items within the browsed branch.	Configuration Environments > Application Explorer
Thresholds behavior not refreshed (SPR #64809, 64036, 60434, 59018, 59017, 58623, 48177) Thresholds behaviors were not correctly refreshed in the Application Explorer when adding, modifying or deleting them.	Configuration Environments > Application Explorer
Fatal error with quick connections & disconnections (SPR #62805) A fatal error could occur in the Application Explorer when IEC 104 devices were quickly connecting and disconnecting (due to network issues for example).	Configuration Environments > Application Explorer

Trends items after archive unit deletion (SPR #63573) Trends were not correctly removed when their associated archive unit was deleted.	Configuration Environments > Application Explorer
Unable to add Threshold on Alarm Counter (SPR #64482) It was not possible to add Threshold behavior on System Alarm Counter such as <i>System.NoAckOn.All.Domain_*</i> .	Configuration Environments > Application Explorer
Fatal error on Log list creation (SPR #64564) A fatal error could occur when creating a Log list when no default Database or Log table is defined.	Configuration Environments > Application Explorer
Copying/Pasting user profile When copying and pasting a user profile, the associated user are no longer copied.	Configuration Environments > Application Explorer
Loss of custom format for Register variables (SPR #64153) Custom format of register variables could be lost due to an improper initialization of the corresponding property when re-opening the variable's configuration dialog box.	Configuration Environments > Application Explorer Also in: 11.2.06068
Exception on pasting an item (SPR #64083) Under some circumstances, an exception was raised when pasting an item that had been deleted after being copied.	Configuration Environments > Application Explorer
Auto-completion in expression (SPR #63968) The auto-completion was not working properly when editing an expression.	Configuration Environments > Application Explorer Also in: 11.2.06064, 11.1.06113
Fatal error when editing a population having more filter elements than authorized (SPR #63496) A fatal error occurred when trying to edit a population having more filter elements than the authorized limit (50). This could happen when a population is created using the SCADA Basic instruction or by editing the configuration file. Now, the number of filter elements is enforced correctly when creating a population via SCADA Basic and at loading time.	Configuration Environments > Application Explorer Also in: 11.2.06058
Fatal error on branch deletion (SPR #62189) Under some circumstances, a fatal error could occur when deleting a branch containing a large amount of sub-branches and variables.	Configuration Environments > Application Explorer
Variable modification not taken into account (SPR #63186, 63185, 63076) Some variable configuration modifications were not taken into account when several variable configuration dialog boxes were opened at the same time.	Configuration Environments > Application Explorer Also in: 11.2.06056
Variable browser not correctly resized (SPR #62881) Under some circumstances, the variable browser was not correctly resized after opening its context menu.	Configuration Environments > Application Explorer Also in: 11.2.06038

Trends behavior not removed after deletion (SPR #62536) Application Explorer was not correctly refreshed after deleting a HDS trend when the archive unit was set for read-only or when the connection to the database was in error.	Configuration Environments > Application Explorer Also in: 11.2.06034, 11.1.06093, 11.0.06093, 10.0SP2_Update
Upgrade Linking Bit Associated Label to alarm variable and vice-versa (SPR #62606) Prior to version 11.2, it was possible to link a <i>Bit Associated Label</i> to an alarm variable and an <i>Alarm Associated Label</i> to a bit variable, which was no longer possible since 11.2.05001. A new Compatibility setting is available to enable such a configuration. It is activated by default when upgrading a project and deactivated with new projects.	Configuration Environments > Application Explorer Also in: 11.2.06026
Missing icons added (SPR #62513) Several missing icons added in Labels configuration.	Configuration Environments > Application Explorer Also in: 11.2.06026
Clipboard support for Associated Labels (SPR #62514) It is now possible to Copy/Cut/Paste Associated Labels configuration items.	Configuration Environments > Application Explorer Also in: 11.2.06025
Improved indications upon configuration saving (SPR #58667) The indications related to the configuration saving process have been improved. This includes a specific message if a configuration file cannot be saved because it is open in another application (such as Microsoft Excel or a text editor).	Configuration Environments > Application Explorer Also in: 11.2.06022
Inhibiting bit on events (SPR #60551) Removing the inhibiting bit behavior of an event was only deleting the bit variable. It now also reset the inhibiting bit property of the event.	Configuration Environments > Application Explorer Also in: 11.2.06022
Additional child nodes in navigation tree (SPR #62340, 62334) Some child nodes were wrongly displayed in the navigation tree of the SNMP Manager and BACnet.	Configuration Environments > Application Explorer Also in: 11.2.06001
Default filter on variable selector for trends (SPR #61378) The default filter on variable type was incorrect when the variable selector was used in the context of trend configuration. Under some circumstances, text variables were displayed instead of register variables.	Configuration Environments > Application Explorer Also in: 11.2.06001
Fatal error of the Application Explorer (SPR #62182, 62181) A fatal error occurred when handling items having several contextual tasks in the Application Explorer (tasks in the left panel). The issue was due to a leak of <i>User</i> system objects and could happen after several thousand clicks.	Configuration Environments > Application Explorer Also in: 11.2.06001
Upgrade Log list transitions inverted (SPR #62312) After applying a modification on a database log list, the transitions " <i>Change to 1</i> " and " <i>Change to 0</i> " were inverted. Prior to this fix, the recorded events were the ones displayed at the opening of the configuration window. The Generic Import had the same issue. This issue had no side effect in the many cases when both transitions " <i>Change to 1</i> " and " <i>Change to 0</i> " were recorded in the same log list.	Configuration Environments > Application Explorer Also in: 11.2.06001, 11.1.06066, 11.0.06086

XML Generic Import - Synchronization by drag & drop (SPR #64770) When dragging and dropping a file in the XML Generic Import smart generator dialog box, a fatal error occurred if the file had already been imported once. Now it runs a synchronization.	Configuration Environments > Smart Generators
Fatal error when closing SG imports A fatal error could occur when closing the Smart Generator imports list if a file was referred to several times in the import references.	Configuration Environments > Smart Generators
Size of the Generation dialog increasing (SPR #64477) The size of <i>Configuration Generation</i> dialog was increasing after several generations, in particular when generating from the Application Architect.	Configuration Environments > Smart Generators
Fatal error on DDE configuration import (SPR #64553) A fatal error could occur when importing an incomplete configuration of DDE Client.	Configuration Environments > Smart Generators
Duplicated items after import (SPR #64077, 64076, 64075) Under some circumstances, existing items were duplicated due to case sensitiveness issues.	Configuration Environments > Smart Generators
SG-BACnet - Missing variable after synchronization (SPR #63801) Under some circumstances, when synchronizing a project based on an EDE file, the first variable declared was deleted. This was due to an incorrect formatting of the header line in the EDE	Configuration Environments > Smart Generators
SG-CAD - Image cropping (SPR #63126) Free cropping has been reworked and now correctly generates background images for mimics.	Configuration Environments > Smart Generators
Fatal error when importing variables (SPR #63680) Under some circumstances, a fatal error could occur after importing new variables when the project was configured with the option <i>Permanent scan for mimics</i> activated.	Configuration Environments > Smart Generators Also in: 11.2.06059
Generic Import - Compatibility of OnVariableExpressions items (SPR #63111) Since version 11.2, it was no longer possible to use the result variable name as the id of <i>OnVariableExpressions</i> items.	Configuration Environments > Smart Generators Also in: 11.2.06055
Generic Import - Trailing spaces removed in extended attributes (SPR #63100) Trailing space characters in extended attributes' values were removed when importing configuration with the Generic Import. This regression appeared in the following versions: 11.0.06074 11.1.06033 11.2.05001	Configuration Environments > Smart Generators Also in: 11.2.06047
SG-Step7 - Fatal error when importing a large amount of variables (SPR #61543) Under some circumstances, a fatal error could occur when importing a Step7 configuration with a large amount of variables (over 100 000). It was also linked to the computer's performances.	Configuration Environments > Smart Generators Also in: 11.2.06038
SG-Unity - Fail to create new import (SPR #62292) A fatal error occurred when trying to create a new Unity import after the creation of an OPC XML-DA server.	Configuration Environments > Smart Generators Also in: 11.2.06036, 11.1.06094

Generic Import - Events not synchronized (SPR #62824) When using the Generic import, events were not correctly synchronized due to automatic naming mechanism.	Configuration Environments > Smart Generators Also in: 11.2.06035
SG-TwinCAT - Could not import undefined type arrays (SPR #62940) A fatal error occurred when importing a .tpy file containing an array with undefined type. From now on, in such condition, the array is ignored during the import.	Configuration Environments > Smart Generators Also in: 11.2.06035
Fatal error on property value update (SPR #65801) A fatal error could occur when a property value was updated on a client station from the BACnet helper.	Data Acquisition > BACnet Client Also in: 11.2.06080
Fatal error when watchdog property not defined Since version 11.2, a fatal error could occur when the watchdog property of BACnet device was not defined.	Data Acquisition > BACnet Client Also in: 11.2.06080
Fatal error when retrieving Trend Log with on-demand reads (SPR #65515) Under some circumstances, a fatal error could occur when retrieving Trend Log or Notifications with the on-demand read mechanism, in particular with configuration having many Trend Log objects configured (>1000).	Data Acquisition > BACnet Client Also in: 11.2.06078
Fatal error when stopping BACnet communication (SPR #65438) Under some circumstances, a fatal error could occur at shutdown if the project took advantage of BACnet Alarms.	Data Acquisition > BACnet Client Also in: 11.2.06076
Column notification-class in EDE file (SPR #65083) The column <i>notification-class</i> as specified in the EDE v2.3 spreadsheet is now supported.	Data Acquisition > BACnet Client
Fatal error when loading large EDE file (SPR #65013) Under some circumstances, a fatal error could occur when loading large EDE files. From now on, only the first 10000 lines of the file are loaded and a warning message will be displayed in the Event Viewer if this limit is reached.	Data Acquisition > BACnet Client
Fatal error upon acknowledgment notification (SPR #65187) Under some circumstances, a fatal error occurred due to a notification of type acknowledgment event (ACK-NOTIFICATION).	Data Acquisition > BACnet Client Also in: 11.2.06075
Fatal error after multiple connections & disconnections (SPR #65176) A fatal error due to a deadlock could occur after multiple connections & disconnections.	Data Acquisition > BACnet Client Also in: 11.2.06073
Time-out message with Trend Logs (SPR #64891) A time-out message was displayed at startup for all trended variables linked to a BACnet Trend Log.	Data Acquisition > BACnet Client Also in: 11.2.06072
Fatal error upon alarm acknowledgement (SPR #64600) Under some circumstances, a fatal error could occur when processing alarm acknowledgement in Notification-Class objects.	Data Acquisition > BACnet Client Also in: 11.2.06072
Trend Log not correctly retrieved after a switchover (SPR #64824) Under some circumstances, Trend Logs could be retrieved several times after a switchover in case of data acquisition redundancy.	Data Acquisition > BACnet Client Also in: 11.2.06072

Empty object-type and var-type lists (SPR #62962) The lists of object-type and var-type were empty when the associated device was disconnected.	Data Acquisition > BACnet Client
Truncated value sent for writing (SPR #63995) Under some circumstances, the value sent when writing a floating point number was truncated (e.g.: 10.3 was sent as 10)	Data Acquisition > BACnet Client Also in: 11.2.06071
Parsing vendor-specific columns (SPR #64479) Fix of a fatal error occurring when parsing EDE files if a vendor-specific columns is located before standard columns.	Data Acquisition > BACnet Client Also in: 11.2.06067
Fatal error on writing time-out (SPR #63276) Under some circumstances, fatal errors could occur in case of time-out after sending writes command.	Data Acquisition > BACnet Client Also in: 11.2.06059, 11.1.06106
Device incorrectly considered as offline Under some circumstances, devices were incorrectly displayed as offline. The issue occurred with devices containing a large number of notification-class objects if their initialization was taking longer than the configured time-out.	Data Acquisition > BACnet Client Also in: 11.2.06057
Fatal error at the end of the trial period Under some circumstances, a fatal error could occur at the end of the trial period.	Data Acquisition > BACnet Client
Fatal error after stopping BACnet communication Under some circumstance, a fatal error could occur when stopping the BACnet communication, in particular when notification-class were operating.	Data Acquisition > BACnet Client Also in: 11.2.06056
Datatype Egress-Time not recognized Properties of type <i>Egress-Time</i> were not correctly detected when browsing devices.	Data Acquisition > BACnet Client Also in: 11.2.06055
Unable to write to enumerated proprietary property It was not possible to write a proprietary property if its BACnet datatype was "enumerated".	Data Acquisition > BACnet Client Also in: 11.2.06055
Unable to write XML data to SetPoint-Reference & Accumulator-Record It was not possible to write XML value in <i>SetPoint-Reference</i> and <i>Accumulator-Record</i> datatypes properties.	Data Acquisition > BACnet Client Also in: 11.2.06055
Incorrect value retrieved for the Accumulator object (SPR #63021) The retrieved value after calculation kept the same datatype as the present-value property (unsigned integer) leading to rounded values (e.g. value "3.0" was retrieved instead of "3.4" for example).	Data Acquisition > BACnet Client Also in: 11.2.06039
ADPU size limitation (SPR #63022) The max ADPU size in advanced settings of device is now limited to 1476 (as defined in the standard), except in mode "Display Advanced Features" where it can be adjusted up to 100 000. In addition, it is no longer required to restart the device to apply ADPU length modifications.	Data Acquisition > BACnet Client Also in: 11.2.06038
Failed to write Boolean properties (SPR #62950, 62937) It was not possible to write Bit variables linked to a BACnet property of type Boolean (such as out-of-service).	Data Acquisition > BACnet Client Also in: 11.2.06035
Associated labels not refreshed (SPR #61820) After a configuration modification, associated labels linked to Schedule objects were not correctly refreshed in the Application Explorer.	Data Acquisition > BACnet Client Also in: 11.2.06034

Could not read UCS_2 character type (SPR #62833) A fatal error was occurring when reading properties encoded with UCS_2 character type.	Data Acquisition > BACnet Client Also in: 11.2.06034
Handling of duplicated DeviceId (SPR #62904, 62709, 62221) A fatal error could occur when stopping a network in case of duplicate <i>DeviceId</i> on the network.	Data Acquisition > BACnet Client Also in: 11.2.06034
Using reserved and proprietary properties (SPR #62926, 62734) It is now possible to view and map variables on properties whose identifier is in the reserved but undefined range (as per the BACnet standard). Proprietary properties are also displayed in the mapping editor and variables can be map on them. In such cases, values will be handled correctly at runtime if the property type is standard and supported (as per the PICS).	Data Acquisition > BACnet Client Also in: 11.2.06034
Improved robustness of Trend Log property reading (SPR #62785) A fatal error of Sv32.exe could occur when receiving an incorrect response to a request for reading some properties of Trend Log and Trend Log Multiple objects. The issue could occur at initialization time, or when using the Trend Log Helper.	Data Acquisition > BACnet Client Also in: 11.2.06030
Incorrect day in Schedule helpers In the Helper for Schedule objects, "Monday" was written in front of each days of <i>BACnetDailySchedule</i> arrays.	Data Acquisition > BACnet Client Also in: 11.2.06026
Invalid variables for some object types (SPR #61072) When a variable was mapped at the object level on an object of type Calendar, Group, Averaging or Command, it was never initialized properly and its status was always NS_COM.	Data Acquisition > BACnet Client Also in: 11.2.06026
Fatal error on reinit message Under some circumstances, a fatal error could occur, when sending a re-initialization message to a device protected by a password.	Data Acquisition > BACnet Client Also in: 11.2.06025
Several fixes & enhancements (SPR #62581, 62576) The list of fixes & enhancements includes: • New traces and audit counters for COV subscription and unsubscription, • General enhancement of COV subscriptions handling, • COV unsubscriptions were not always sent, in particular in case of communication failure or manual stop of the network, • The minimum COV subscription lifetime is now 10 mn, • A fatal error was occurring in the Application Explorer when applying reset property from EDE mapping, • Incorrect look-up of Trend Log & Trend Log Multiple in case a variable was mapped on a BACnet object and its Present Value was trend logged at the device level. The consequence was that the Trend Log buffer was never retrieved. The look-up was correct when the variable was mapped on the trended BACnet object property.	Data Acquisition > BACnet Client Also in: 11.2.06023

Several fixes & enhancements related to BACnet (SPR #62580, 62574, 62573, 62561, 62554, 62552, 62551, 62252, 62244)

The list of fixes & enhancements includes:

- Fixed dialog box resizing issues in the Helpers,
- Improved persistency of the Mapping Editor dialog box sizes,
- When a variable is mapped on a BACnet object, its status is now set to NS if the *status-flag* is "bad" (was set to NS-COM),
- Fix of regression - The Scale property was not taken into account properly when calculating the value of *Accumulator* objects,
- Trend Log buffer retrieval from the Helpers is now working properly when used from a PcVue client station (remote BACnet data acquisition server),
- Improved fallback in case a read of a Trend Log buffer returns a "value-out-of-range" error.
This error is returned if PcVue is trying to read buffer sequence-number that are no longer available in the device. In such a situation, the buffer read is retried by requesting data based on the timestamp of the older record available in the Trend Log buffer.
In particular, Trend Log buffers are retrieved by sequence-number at start-up (if available),
- A new setting is available to indicate whether Trend Log buffer reads via the Helpers have to be stored in the archives or not. This setting defaults to False,
- Improved tracing of Trend Log record storage in the archives,
- In the Helpers, the selection of a Trend Log object was causing a useless read of its buffer,
- At startup or upon reconnection, a first record was stored in the archives based on real time values,
- Under some circumstances, a fatal error could occur when shutting down PcVue while a BACnet network was already in the stop phase,
- Writing of one bit within a bitstring based on field extraction (as defined at the time of mapping) was not working properly.

Data Acquisition > BACnet Client

Also in: 11.2.06022

Failure on Read requests (SPR #62437)

Under some circumstances, read requests could fail due to a time-out when the device did not support segmentation. It occurred in particular when reading properties returning large result sets such as the object-list (Device object) or recipient-list (Notification Class object). This issue happened in many circumstances when using the SCADA Engine simulator. To avoid such a situation, a new setting can be edited in the file *C:\VarConf.dat* to set the time-out of read requests. Its default value is now 60 s (was 30 s).

Data Acquisition > BACnet Client

Also in: 11.2.06010

Trend Log records retrieval (SPR #62387, 62370)

Trend Log records were not all retrieved and displayed in the Helper when several ReadRange requests were necessary to process the request. It was a known issue since version 11.2.05001.

Data Acquisition > BACnet Client

Also in: 11.2.06010

EDE mapping (SPR #62229)

Several fixes have been implemented for the EDE mapping. In particular, proprietary objects and alarm configuration are now properly supported.

Data Acquisition > BACnet Client

Also in: 11.2.06001

Fatal error on network stop (SPR #62229)

A fatal error was occurring when stopping a Network with a disconnected Device.

Data Acquisition > BACnet Client

Also in: 11.2.06001

Truncated description (SPR #62193)

Some texts comprising double-quote characters were truncated, in particular in the object-description properties.

Data Acquisition > BACnet Client

Also in: 11.2.06001

Values not always refreshed in the BACnet mapping editor (SPR #62197)

The value of properties displayed in the BACnet mapping editor was not always refreshed when opening the dialog box. It was a known issue since version 11.2.05001.

Data Acquisition > BACnet Client

Also in: 11.2.06001

Fatal error with complex-event-type notifications (SPR #62861)

A fatal error occurred upon reception of a notification of type *complex-event-type* with no parameter.

Data Acquisition > BACnet Client

Also in: 11.2.05001

Fatal error with multiple connection/disconnection (SPR #64497) A fatal error was occurring in the Application Explorer in case of multiple fast connection/disconnection.	Data Acquisition > DNP3 Client Also in: 11.2.06068
Fatal error when sending freeze commands A fatal error occurred when sending a freeze command to a disconnected device.	Data Acquisition > DNP3 Client Also in: 11.2.06064
Incorrect device status on passive servers In an association of type single active server, the device status displayed on passive servers was incorrect. The status as seen by the active server was displayed.	Data Acquisition > DNP3 Client Also in: 11.2.06064
Fatal error with offline devices (SPR #63750) Under some circumstances, a fatal error could occur when the DNP3 driver was trying to check the IIN bits of an offline device. The issue could happen when the communication was lost while checking the IIN.	Data Acquisition > DNP3 Client Also in: 11.2.06060
Historical buffer not retrieved at startup (SPR #62803) At startup, only the last change was read and not the full buffer.	Data Acquisition > DNP3 Client Also in: 11.2.06037
Fatal error with periodic clock synch (SPR #63227) A fatal error could occur at start-up when a sector was configured to use UTC timestamps while also configured to periodically send clock synchronization commands. The issue was a regression introduced recently in PcVue 11.2.0.06054.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06055
Fatal error with multiple write commands (SPR #62402) Under some circumstances, a fatal error could occur when several write commands were processed at the same time.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06055, 11.1.06102
Various fixes & enhancements to the IEC 104 driver (SPR #63189, 62402) The list of fixes & enhancements includes: - Under some circumstances, the use of commands such as Reset, Clock synch and Test from the Application Explorer could cause the PcVue main process to shut down due to watchdog detection, - The Reset, Clock synch and Test commands can now be executed from a PcVue client station or a passive data acquisition server. Until this enhancement, it could be successfully executed only from the active data acquisition server, - Fix of a fatal error occurring at network startup. The issue only occurred with configurations comprising a large amount of sectors.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06054, 11.1.06099
Abnormal long execution time for SBO with Single Point (SPR #62854) It could take up to 10 sec to execute a Select Before Operate action when using the corresponding SCADA Basic instruction with a Single Point. It did not occur with other data types.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06038
Fatal error on network start (SPR #62402) Under some circumstances, a fatal error could occur when starting an IEC 104 network. The issue could be reproduced when a large number of sectors was configured.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06024, 11.1.06080
GI, CI and ClockSync sent only once The GI, CI and ClockSync commands were sent only once.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06024, 11.1.06080

Inconsistent timestamp and quality after switchover Timestamp source and quality were lost after a switchover in a single active association.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06001, 11.1.06070
Handling of invalid timestamp Invalid timestamps received from IEC 104 devices were interpreted as valid. Prior to this fix, only the unsync qualifier was taken into account to update the timestamp quality.	Data Acquisition > IEC 60870-5 Client Also in: 11.2.06001, 11.1.06069
Could not write bitstring (SPR #65771) Under some circumstances, it was not possible to write data attributes of type bitstring, when its size was modified in the device. The same issue occurred with data attributes of type octetstring.	Data Acquisition > IEC 61850 Client Also in: 11.2.06080
Command property not enabled when variable created from the Mapping dialog box (SPR #65111) When creating a variable from the mapping dialog box (map on a new variable), the variable was not flagged 'Commandable' even if the Common Data Class type required a commandable variable.	Data Acquisition > IEC 61850 Client
Double-Point On and Off value identical (SPR #63762) It was possible to configure the same ON and OFF values for double-point. Now when setting ON to [10], OFF is automatically set to [01] and vice-versa.	Data Acquisition > IEC 61850 Client
Command locked if control model is SBOw or DEw Commands with control models SBOw and DEw were locked when they the controlled value was not of type boolean.	Data Acquisition > IEC 61850 Client Also in: 11.2.06068
Incorrect connection state for Data Report groups Under some circumstances, the connection state of Data Report group was not accurate. This issue mainly occurs with slow connection.	Data Acquisition > IEC 61850 Client
Duplicate declaration of BRCB & URCB (SPR #61065) It was possible to configure several URCB/BRCB referring to the same physical one.	Data Acquisition > IEC 61850 Client
Password with special characters (SPR #64065) It was not possible to define a password with special characters such as !,?,* or \$.	Data Acquisition > IEC 61850 Client
Fatal error with Write command on SPC (SPR #64111) Under some circumstances, a fatal error could occur after sending a Write command on an SPC data object.	Data Acquisition > IEC 61850 Client Also in: 11.2.06064
Fatal error on SBOw and SBO command (SPR #63265) Since version 11.2.06040, some random fatal errors could occur when sending SBOw and SBO commands.	Data Acquisition > IEC 61850 Client Also in: 11.2.06055
SBO and DE could not be executed from client stations (SPR #61175, 59161) The SBO and DE commands can now be executed from client stations, even if using the SCADA Basic instruction <i>M61850</i> .	Data Acquisition > IEC 61850 Client Also in: 11.2.06040
Timestamp incorrectly updated (SPR #62731, 62688) When processing a change of a data object with a bad timestamp, the local acquisition timestamp was wrongly used in case the value did not change. From now on, in such situation, the timestamp is updated only if the value has changed.	Data Acquisition > IEC 61850 Client Also in: 11.2.06035, 11.1.06093

Robustness in handling EntryId Under some circumstances, a fatal error could occur due to concurrent access to internal resources used to handle the EntryId of BRCB.	Data Acquisition > IEC 61850 Client Also in: 11.2.06034, 11.1.06093, 10.0SP2
Incorrect value retrieved for t data attribute (SPR #62851) The displayed value was incorrect when a text variable was mapped on a t data attribute (timestamp).	Data Acquisition > IEC 61850 Client Also in: 11.2.06031, 11.1.06091, 11.0.06093
Could not read data attribute Under some circumstances, it was not possible to read a data attribute. The issue could occur when the attribute to read belonged to an object that was part of an array (or one of its parent object).	Data Acquisition > IEC 61850 Client Also in: 11.2.06026, 11.1.06084
IEC 61850 & IEC 61400-25 catalogs updated (SPR #62592, 62501) The IEC 61850 catalog has been updated to fix a series of issues and enabling mapping of complex CDCs from the mapping dialog box (61400-25's SPV and alike). These changes also fix some issues when specializing or extending the catalog in a project's specific catalog file.	Data Acquisition > IEC 61850 Client Also in: 11.2.06026, 11.1.06082
Enumala did not work with IEC 61850 (SPR #62659) The Enumala feature was not working properly with variables mapped on IEC 61850 data.	Data Acquisition > IEC 61850 Client Also in: 11.2.06025, 11.1.06081
Connection failure (SPR #62500) Connection to a device was failing and leading to a critical error on the network when there was no DataSet configured on the device on the PcVue side.	Data Acquisition > IEC 61850 Client Also in: 11.2.06022, 11.1.06074
Connection failure with the IEDScout Connection to the IEDScout (OMICRON) was failing when using Edition 2 behavior.	Data Acquisition > IEC 61850 Client Also in: 11.2.06010, 11.1.06073
Data acquisition redundancy (SPR #65719) The redundancy was not correctly handled. Despite becoming passive after a switchover, the formerly active server was still processing read and write commands.	Data Acquisition > KNX Also in: 11.2.06080
Values could remain NS COM (SPR #64505) When, at driver startup, the initial read request of a variable failed due to network issues, the variable's status was remaining NS COM until the next value change was received. Now the initial read is retried until the gateway respond.	Data Acquisition > KNX Also in: 11.2.06067
KNX unsolicited traffic not received (SPR #62508) When configuring a KNX interface with only unsolicited data (e.g. without polled data), it was deactivated after a time-period of 2 minutes without traffic.	Data Acquisition > KNX Also in: 11.2.06022, 11.1.06074
Variables remained NS COM (SPR #62889, 62835, 62722) Due to missing information when reading the LonWorks' types catalog, some references were not resolved and the variable remained NS COM (such as variables mapped to SCPTsetPnts data).	Data Acquisition > LNS Also in: 11.2.06033, 11.1.06090, 11.0.06093
Could not read variables value (SPR #62722) Since versions 11.0.06081, 11.1.06048 and 11.2.05001, some enumerated variables types were remaining invalid (NS COM).	Data Acquisition > LNS Also in: 11.2.06026, 11.1.06087, 11.0.06092

Fatal error on LNS startup (SPR #62459) While reading the LNS catalog, a format error exception was not properly handled, leading to a fatal error.	Data Acquisition > LNS Also in: 11.2.06023, 11.1.06079, 11.0.06089
Values remained NS after end of simulation (SPR #63949) When variables were set to simulated mode and back again to real-time, they remained with quality NS until the next data change. This issue only occurred with OPC variables in particular scenarios when the simulated mode was changed while the OPC server was disconnected.	Data Acquisition > OPC Client Also in: 11.2.06073
Incorrect timestamp after reconnection (SPR #62622) After a disconnection/reconnection to an OPC server, timestamp of variables which value had not changed in the meantime were set with the timestamp of the reconnection instead of the timestamp of the previous known valid change.	Data Acquisition > OPC Client Also in: 11.2.06026
Incomplete items list in the mapping dialog box (SPR #62553) When browsing an OPC server, only the first 1000 items were retrieved and displayed. The issue only occurred with OPC Servers supporting the OPC DA 3.0 browsing interface.	Data Acquisition > OPC Client Also in: 11.2.06026, 11.1.06101
Fatal error when sending a recipe (SPR #62661) A fatal error was occurring when sending a recipe containing exclusively OPC variables mapped on a deleted OPC Group or OPC Server. This could happen when manually editing the configuration of the OPC Server.	Data Acquisition > OPC Client Also in: 11.2.06025, 11.1.06081, 11.0.06090
Support for special characters in OPC ItemId (SPR #64811, 64594) The configuration of OPC Items containing some special characters was incorrectly saved. The characters ", ' , & , < and > are now escaped to be correctly saved and interpreted.	Data Acquisition > OPC UA Gateway Client Also in: 11.2.06072
Driver XBUS-IP-SLAVE - Fatal error when stopping communication (SPR #65320) A fatal error occurred when stopping communication using the Xbus IP-Slave driver.	Data Acquisition > Other built-in drivers Also in: 11.2.06076
Driver Ferromatik - Fatal error with several networks A fatal error was occurring when more than 20 networks were configured with this driver.	Data Acquisition > Other built-in drivers Also in: 11.2.06068
Fatal error when starting communication (SPR #63288) Under some circumstances, a fatal error could occur when the file C:\Comm.dat was malformed and the file CTEMP\Comm.dat was read-only.	Data Acquisition > Other built-in drivers
Driver XBUS-IP-MASTER - Error 108 (SPR #63930) The error 108 occurred when the equipment was sending more data than requested. Now such frames are accepted, but only the requested data length is processed, and only if the first receive packet has a correct transaction Id.	Data Acquisition > Other built-in drivers Also in: 11.2.06062
Variable not NS after Equipment stopped (SPR #62816) Under some circumstances, some variables could remain with quality Good instead of being NS after their associated Equipment was stopped.	Data Acquisition > Other built-in drivers
Driver XBUS-IP-MASTER - Fatal error upon connection close (SPR #63177) A fatal error could occur when a device was configured with the property <i>Close connection on passive station</i> activated. Such configuration is used when the data acquisition architecture includes serial to IP converters with a limited max number of simultaneous TCP connections.	Data Acquisition > Other built-in drivers Also in: 11.2.06054, 11.1.06099, 11.0.06093
Driver XBUS-IP-MASTER - Fatal error using verb CIMWAY mode CFG (SPR #63085) A fatal error could occur when using the SCADA Basic verb <i>CIMWAY mode CFG</i> if the param string exceeded 65 characters.	Data Acquisition > Other built-in drivers Also in: 11.2.06046

Fatal error when stopping CimWay (SPR #63009) A fatal error was occurring when stopping a CimWay driver while having pending write commands. From now on, the stop request is suspended until all queued write commands are completed.	Data Acquisition > Other built-in drivers Also in: 11.2.06039
Thread leak when stopping communication (SPR #63018) A thread leak of 1 thread per device was occurring when stopping CimWay communication using the SCADA Basic instruction <i>CIMWAY("OFF")</i> .	Data Acquisition > Other built-in drivers Also in: 11.2.06038
Driver XBUS-IP-MASTER - Message time-out (SPR #62948) The <i>Message time-out</i> management has been improved for better performances: - No longer played at start-up, which speeds up the start-up process, - Only played when the previous request is valid and within the <i>Message time-out</i> period, no longer all the time, - Only played once and not at every <i>SendReceive</i> period.	Data Acquisition > Other built-in drivers Also in: 11.2.06036, 11.1.06094, 11.0.06093
System status variables of frame always invalid (SPR #62793) The System variables for the status of frames were always set to NS even when frames were started and working properly.	Data Acquisition > Other built-in drivers Also in: 11.2.06033, 11.1.06092, 11.0.06093
Driver XBUS-IP-SLAVE - Fatal error on Modbus function code 3 (SPR #62439) Under some circumstances, a fatal error could occur when responding to a request for registers with the Modbus function code 3.	Data Acquisition > Other built-in drivers Also in: 11.2.06024, 11.1.06080
Driver TwinCat - Error when writing a float value (SPR #62375) A fatal error occurred when trying to write a float value with a frame size larger than 350 floats.	Data Acquisition > Other built-in drivers Also in: 11.2.06001, 11.1.06068
Fatal error when editing ICMP variable (SPR #65424) A fatal error occurred when editing an ICMP variable configured without polling group.	Data Acquisition > SNMP Manager
Automatic conversion of numeric values (SPR #63529) String values can now be automatically converted to register values even when including decimal and/or thousand separators. Examples: 12,000.45 = 12000.45 12.000.45 = 12000.45 12,00045 = 12,00045 12.00045 = 12.00045	Data Acquisition > SNMP Manager Also in: 11.2.06059
Unable to stop project (SPR #63672) Under some circumstances, project did not stop when more than 64 devices were configured with ping activated for status handling.	Data Acquisition > SNMP Manager Also in: 11.2.06059
Fatal error on SNMP Manager startup (SPR #63215) A fatal error could occur if the file <i>mib_index</i> was malformed, in particular if it contained a Null character.	Data Acquisition > SNMP Manager Also in: 11.2.06054, 11.1.06100
Fatal error at startup (SPR #63199) Under some circumstances, a fatal error could occur at startup. It was due to the automatic creation of a folder used by the SNMP Manager at the root of the system partition instead of within the <i>PER</i> folder. When not run with administrative privileges, the system prevented the folder creation, leading to the fatal error.	Data Acquisition > SNMP Manager Also in: 11.2.06054, 11.1.06099

Invalid started device counter (SPR #62579) The system variable and audit counters indicating the number of started devices was incorrect in case of dynamic host resolution.	Data Acquisition > SNMP Manager Also in: 11.2.06026, 11.1.06078
SNMP devices without variables indicated as connected (SPR #62577) Devices using SNMP v3 without any variable mapped were always indicated as connected.	Data Acquisition > SNMP Manager Also in: 11.2.06026, 11.1.06078
Device defined with hostname not reachable (SPR #62483) When a device was defined using its hostname, it was not refreshed if the hostname could not be resolved at startup (DNS not available). A restart of the project was necessary in such a situation. Two options have been added to the properties of a device: • A resolution period for the hostname to cyclically check the IP address, • An option to resolve the hostname after a disconnection. If not activated, the initial resolved IP address is used at reconnection time.	Data Acquisition > SNMP Manager Also in: 11.2.06022, 11.1.06074
Variable value not refreshed (SPR #62481) When a device using SNMP v3 returns an <i>engineTime</i> equals to 0 at the first frame request, variables configured as <i>Trap with Ad'hoc sync</i> were not correctly refreshed.	Data Acquisition > SNMP Manager Also in: 11.2.06022, 11.1.06074
Statistical data when using "Log only alarm on/off changes in log lists" (SPR #64469, 63324, 62949, 62815) Log pages statistics configuration and export were not correctly handled when the project setting <i>Archives.Log only alarm on/off changes in log lists</i> was activated.	Data Export Also in: 11.2.06066, 11.1.06103
Fatal error upon generation of an export (SPR #65841, 65036) A fatal error could occur when generating an export with a time-period greater than the authorized limit. It is no longer possible to set the time period value out of bounds.	Data Export Also in: 11.2.06080
Columns not properly removed (SPR #64986, 64826) Removing columns from a Log page was not working properly. After having applied the removal, the columns were still present and moved at the end of the list.	Data Export Also in: 11.2.06073
Incorrect Occurrence and Duration statistics (SPR #63324, 62949) Under some circumstances, Occurrence and Duration statistics were incorrect when the archive setting <i>Log only alarm on/off</i> was activated,	Data Export
Multiple Log lists in a Log page (SPR #64579) Under some circumstances, it was possible to configure multiple Log lists in a Log page. Now, when associating a Log list to a Log page, the previous one is correctly removed.	Data Export
Incorrect aggregated statistics (SPR #64864, 64737, 64124) When calculating aggregated statistics, the initial value was not taken into account when not synchronized with statistic period start time, and NS values were not correctly managed. With low frequency value changes, it was leading to erroneous calculation.	Data Export
Fatal error when generating an export with a log page (SPR #64848) Under some circumstances, a fatal error could occur when generating an export with a log page.	Data Export Also in: 11.2.06071, 11.1.06116, 11.0.06097
Editing Trends and Log lists from Data Export (SPR #63888) It is no longer possible to modify Trends and Log lists directly from the Data Export configuration. The properties of the associated items are still displayed, but they can no longer be changed.	Data Export
Data export trace mask overridden (SPR #64399) Trace levels were not properly saved. Saving a trend page trace mask was causing an override of the parent data export trace mask.	Data Export Also in: 11.2.06066

Variable name in Trend pages was always exported (SPR #63256) In Trend pages configuration, the property "Show variable name" was not correctly loaded and always active. As a consequence, variables names were always exported.	Data Export Also in: 11.2.06064
Export disappear after creation (SPR #63937) Exports configured were disappearing right after their creation, when they were configured with a sever list to which the station did not belong.	Data Export Also in: 11.2.06063
Incorrect aggregated statistics in export (SPR #63863) Under some circumstances, when exporting a Trend Page with aggregated statistics, the last values were incorrect. The issue could occur with HDS archive units when the exported trend had no valid value at the end of the period. In such conditions, the last valid aggregated data was wrongly duplicated until the end of the period.	Data Export Also in: 11.2.06061, 11.1.06110, 11.0.06095
Unsupported characters (SPR #63858, 63696) Some characters such as # (hash), / (slash), "(quote) or , (comma) were not correctly interpreted in data export configuration when used in various properties (File Name, Sheet Name...) or in expressions. The issue was for example obvious when reloading a data export item where one of the property was defined by an expression including at least 2 parameters separated by a comma - The expression was truncated after the first comma.	Data Export Also in: 11.2.06061, 11.1.06106, 11.0.06095
Incorrect export dates (SPR #63695) The following expression elements were not processed properly and were returning an incorrect date: • Export.StartDate.Year • Export.StartDate.Hours • Export.StartDate.Minutes • Export.EndDate.Year • Export.EndDate.Hours • Export.EndDate.Minutes	Data Export Also in: 11.2.06059
Incorrect duration calculation (SPR #63041) The duration stat for logged events could be wrong due to an incorrect calculation of the initial state in the calculated period.	Data Export Also in: 11.2.06056, 11.1.06103, 11.0.06094
Cancelling an export (SPR #48217) The Cancel action when an export was in progress was not properly handled.	Data Export
Trends not pasted when pasting a Trend page (SPR #62696) When copying and pasting a Trend page, the associated Trends were not copied properly.	Data Export Also in: 11.2.06039
Next and Finish buttons remained enabled after an export was cancelled (SPR #62958) When canceling an export operation in the wizard, the <i>Next</i> and <i>Finish</i> buttons were not disabled. Clicking on the <i>Next</i> button was leading to a fatal error.	Data Export Also in: 11.2.06036
First point in aggregated values (SPR #62366) When exporting aggregated values, the first value was incorrect because the previous value was not correctly taken into account. For instance, with a 1 min sampling period between 10h00 and 10h10, the first row will contain all values between 10h00 to 10h00.59.999 plus the previous value of the point if it exists. In addition, the last row will contain values between 10h09 and 10h09.59.999.	Data Export Also in: 11.2.06035
Memory leak Fix of a memory leak when exporting aggregated values.	Data Export Also in: 11.2.06035, 11.1.06093, 11.0.06093
Incorrect samples with weekly period (SPR #62896) Some incorrect samples were generated when exporting trends with the sampling period set to Week.	Data Export Also in: 11.2.06034, 11.1.06093, 11.0.06093
Matrix formula lost (SPR #62795) Matrix formula were lost when exporting data.	Data Export Also in: 11.2.06031

Empty export for logs Since versions 11.1.06087 and 11.2.06026, exporting logs was no longer working and always returned an empty export.	Data Export Also in: 11.2.06030, 11.1.06089
Folder creation upon generation (SPR #61877) When generating a csv export, any necessary folder is created correctly as part of the generation. Until this fix, the csv file export could be aborted due to the failure of the folder creation. It was a known issue since version 11.2.05001.	Data Export Also in: 11.2.06010
Maximum number of points reached (SPR #62184) The message indicating that the maximum number of points is reached was not always prompted by the wizard.	Data Export Also in: 11.2.05001
Incorrect aggregated values and statistics (SPR #62274, 62149) Under some circumstances, some aggregated values and statistics were wrong in the export, in particular the duration of alarms and number of occurrences. This was due to different Time Zones between the station generating the exports and the station hosting the archive unit. This issue was a regression due to changes done on July 2014, and also affected version 11.0 and 11.1.	Data Export Also in: 11.2.05001, 11.1.06065, 11.0.06085
Memory leak with function SetDataSet (SPR #64852) Updating a Text variable with the method SetDataSet caused a small memory leak.	Development kits > SV Manager Toolkit Also in: 11.2.06082
Fatal error on project shutdown On project shutdown, a fatal error could occur in particular cases when a variable subscription response was being received while shutting down.	Development kits > SV Manager Toolkit Also in: 11.2.06063
<i>Upgrade</i> Incorrect value for inhibition bit of log lists (SPR #62332) The <i>InhibitingCondition</i> property of <i>LogFilter</i> in Free, ODBC and Proprietary units was wrongly interpreted during import. Prior to this fix the following values had to be used: • 0 to activate the inhibition bit • -1 to deactivate the inhibition bit The default value was correct.	Development kits > XML Generic Import Toolkit Also in: 11.2.06001
Modal warning message in service mode (SPR #64976) When running the Supervisor as a Windows service, some messages typically displayed in interactive user sessions were not disabled, leading to a fatal error. These messages were warnings related to: • The number of GDI objects • The number of User objects • The percentage of used memory • The number of opened mimics	General Also in: 11.2.06072
Freeze during startup - Alarm Manager (SPR #64576) Under some circumstances, PcVue could freeze during project startup when loading the Alarm manager.	General Also in: 11.2.06068
Could not insert variable in a Recipe (SPR #64296) An improper message was displayed when trying to insert a variable defined by another variable in a recipe. It was only occurring when both variable had a minimum value different from 0.	General Also in: 11.2.06064
SMS and Email events - Various fixes and enhancements (SPR #63697, 63527, 63093) The list of fixes & enhancements includes: • An incorrect error message was displayed in the Event Viewer when trying to send a message to an unknown user or with an unknown SMS/Email profile; • Checking the existence of users and profiles have been improved before sending messages; • Messages queuing reworked in case of sending error/failure; • Customization of modem configuration is now possible through several new settings: XON/XOFF, CTS handshaking, DSR handshaking, DSR sensitivity, DTR circuit, RTS circuit and Set RTS signal.	General Also in: 11.2.06060, 11.1.06102

Incorrect language in window's title At startup and on language change, the title of the PcVue main window and the event viewer were not correctly updated according to the display language.	General Also in: 11.2.06057, 11.1.06105
Fatal error few minutes after a configuration modification (SPR #63152) Under some circumstances, a fatal error could occur few minutes after a configuration modification. It could happen in case of a networking application having flow regulation activated during the modification. The fatal error occurred when the regulation stopped, if a modified object was still in the regulation queue.	General Also in: 11.2.06048, 11.1.06098
Consecutive emails not sent (SPR #63086) Some emails were lost when sending several of them almost simultaneously via event actions or SCADA Basic. It was only possible to send one email per event and per millisecond.	General Also in: 11.2.06047
SMS sent continuously (SPR #63075) When sending SMS to multiple recipients, including an incorrect one, first recipients defined before it were receiving continuously the SMS, while recipients defined after the incorrect one were never receiving the SMS.	General Also in: 11.2.06045, 11.1.06098
Unable to run as a service Under some circumstances, when an unhandled exception occurred in the services <i>svCoreDaemon</i> or <i>svCoreSessionHost</i> , the process hosting them was no longer responding. The Service Control Manager was then terminating the process after the usual 30-second time-out and logged the following error message: <i>"Error 1053: The service did not respond to the start or control request in a timely fashion".</i> Additional diagnostics messages have been added to traces in such a situation.	General Also in: 11.2.06039
Email template values field options (SPR #63000) Email template values field options were not correctly handled as described in the help: - Not defined by the template - The template does not provide information for that field. This is the default setting. - Imposed by the template - The text that you enter will be used in any message where the template is used and cannot be changed there. - Suggested by the template. The text that you enter will be used in any message where the template is used but can be edited there.	General Also in: 11.2.06038
Fatal error caused by large email messages (SPR #62965) Sending an email message longer than 10240 characters was causing a fatal error. From now on, such messages are truncated.	General Also in: 11.2.06038
Incorrect email address format (SPR #62999) Under some circumstances, a fatal error could occur when sending emails to an invalid email address used in one of the following fields: sender, reply-to, to, cc, bcc. The dialog boxes now prevent typing in such addresses, it can happens when manually editing configuration files, using a project developed with an earlier version or using substitution characters.	General Also in: 11.2.06038
"Open context mimic" setting not saved (SPR #62978) The HMI option <i>Open context mimic</i> was not correctly reloaded when a mimic was open via SCADA Basic at project startup.	General Also in: 11.2.06038, 11.1.06095
Libraries' modification rights (SPR #62957) From now on, new libraries are created with modification rights given to all users. Previously, they were dependent on the profile.	General Also in: 11.2.06038, 11.1.06095
Missing system variables STATUS and STATUSCOMP (SPR #62626, 62394) The system variables STATUS and STATUSCOMP are now always created automatically. The associated setting to create them has been removed. Automatic creation of these variables for an existing project can be done by saving variables.	General Also in: 11.2.06035
Email testing with profile (SPR #62755) It was not possible to send a test email with a specific account profile. It was working fine when indicating directly an email address.	General Also in: 11.2.06027, 11.1.06088

Upgrade Support for secured connections to email servers (SPR #62558, 59910) To cope with the wider deployment of secured email servers, more choices are now offered to support secure connections when configuring an <i>E-mail account</i> to: • No secure connection, • Explicit TLS (STARTTLS), • Implicit TLS (SSL/TLS). Please note that since version 10.0, changes occurred leading to support for only Implicit TLS in some versions, and only Explicit TLS in some other versions. You should verify your configuration in case of migration.	General Also in: 11.2.06023, 11.1.06079
SNMP Agent option not active (SPR #62490) The license option allowing the use of the SNMP Agent was not correctly detected.	General > Licensing Also in: 11.2.06022
Automatic logoff warning message displayed too briefly (SPR #65210, 65129) The warning message before automatic logoff was not properly handled. The configured duration was ignored and the warning was displayed only one second before disappearing.	General > User management Also in: 11.2.06073
Priority wrongly given to Active Directory users (SPR #64637) Since version 11.2.06063, when a built-in user had the same login name as a user from the Active Directory, the priority was given to the Active Directory user instead of the built-in user.	General > User management Also in: 11.2.06071
Station-dependent profile no longer working with Active Directory users (SPR #64377) When an Active Directory user is applied different profiles according to the PcVue station it connects to, the correct profile is now applied. Until this fix, the first profile was always enforced.	General > User management Also in: 11.2.06071
Station dependent User profiles not applied with Active Directory (SPR #64637, 64377, 62981) The association of specific User profiles for different stations was not correctly applied when using Active Directory groups. The first found profile was applied on every stations.	General > User management Also in: 11.2.06042
Windows User group containing a "." (SPR #63814, 16655) It was not possible to associate a Windows User Group containing a '.' (dot) character to a user profile.	General > User management Also in: 11.2.06060
Failed to edit DEFUSER details (SPR #63440) It was not possible to edit the DEFUSER details (First Name, Last Name...). An improper validation rule required to set a password, which was wrong for the default user.	General > User management Also in: 11.2.06058
Unable to open Variable properties dialog box (SPR #63069) Since version 11.2.05001, users having the DEFPROFILE were not able to open the variable properties dialog box when accessed from an animation, even if granted developments privileges.	General > User management Also in: 11.2.06055
Unexpected automatic user logoff (SPR #61964, 60807, 60795) User activity is now tracked at the Windows session level to avoid automatic logoff when a user is using the configuration tools. Until this fix, only the activity in mimics was tracked, leading to situations where the user could be automatically logged out of the Application Explorer (or Application Architect).	General > User management Also in: 11.2.06033, 11.1.06092, 11.0.06092
Password change requested at startup (SPR #62708) Since version 11.2.06023, a dialog box requesting to change user's password was displayed at project startup. It was occurring when user was automatically logged in with SCADA Basic instruction and when strong password option was activated. The issue occurred in particular when launching the <i>QuickStart</i> sample project.	General > User management Also in: 11.2.06026

Excessive CPU consumption (SPR #62596) When the <i>user.dat</i> file was encrypted, it was reloaded every second even if no change occurred.	General > User management Also in: 11.2.06023, 11.1.06078, 11.0.06089
Defaults items for Databases, Tables and Trend groups (SPR #65306) Fix of the handling of the <i>Set as default</i> property for <i>Databases</i> , <i>Tables</i> and <i>Trend groups</i> to ensure there is a default item in all situations.	Historical data
ODBC - Could not store deferred attributes (SPR #65190) Deferred attributes can now be archived in ODBC archive units.	Historical data Also in: 11.2.06080
Deadband ignored if value out of range (SPR #65308) Deadband configured on a register variable was not taken into account when the variable was out of range (NS L> or NS L<). It was leading to unnecessary archive records.	Historical data Also in: 11.2.06076, 11.1.06117
Fatal error when reading recent proprietary archives (SPR #65103, 64663) Under some circumstances, a fatal error could occur when requesting log or trend data recorded recently in a proprietary archive unit.	Historical data Also in: 11.2.06073
Free Archive Unit created on consumer stations (SPR #64411) When exiting a project, Free Archive Unit files were generated on consumer stations instead of only on producer stations.	Historical data Also in: 11.2.06071
File histo.sav not flushed upon exit (SPR #64037) Under some circumstances, the file <i>histo.sav</i> may not be correctly flushed on project exit. The issue occurred only when the Archive folder had been modified and if trends were configured on the archive unit.	Historical data Also in: 11.2.06068
Unable to read comma character (SPR #64291, 64136, 61173) The comma character was not correctly interpreted in the Log Viewer when used in some events/fields such as " <i>failed log attempt</i> " or variable description.	Historical data Also in: 11.2.06067
Checkstructure parameter not taken into account (SPR #64258) The <i>Checkstructure</i> setting that can only be directly edited in the <i>\\C\\HDSConf.dat</i> file, was not correctly taken into account. It can be set to 0 to disable schema verification when loading the HDS, and thus enabling a given version of the product to archive data in a database created with a more recent version. Note that it may lead to incompatibility format issues and data loss.	Historical data Also in: 11.2.06064
Fatal error of the HDS in case of overflow (SPR #65968) Under some circumstances, a fatal error of the HDS could occur when it was both in an overflow situation due to Insert requests and heavily solicited with Select requests by PcVue. The fix consists in a better control over the switchover to another PcVue archive producer station, i.e. set the availability rate to 0 when the HDS does not respond to PcVue requests in a timely fashion.	Historical data Also in: 11.2.06081
Unable to read old archive files (SPR #63967) Since version 11.0, it was no longer possible to read old proprietary archives files (format with extension <i>.idx</i>) if the option " <i>without attribute</i> " was activated on the archive unit. This option is no longer editable in the configuration dialog boxes and is deactivated by default in new projects since version 11.0.	Historical data Also in: 11.2.06063, 11.1.06112, 11.0.06097
Handling of the trend invalid point on communication loss (SPR #63742) Prior to this fix, on a communication failure, an invalid point was always recorded in the archives for each trend upon communication loss. When communication was restored, an attempt to record the retrieved value was done. In the particular case of HDS, it was leading to primary key violation when the VTQ did not changed during the communication loss. From now on, the invalid point is recorded only when the communication is restored, and if the variable's VTQ is different.	Historical data Also in: 11.2.06060, 11.1.06109
HDS stopped recording (SPR #16941) Under some circumstances, the HDS was no longer recording data when the temporary file <i>.hds</i> was over 2 Go. Now, when the file reaches such a size, an error message is displayed in the event viewer and the file is no longer processed, meaning it has to be manually imported in the database.	Historical data

Filtering with multiple Populations (SPR #63137) Requesting historical data from a Database archive unit with a filter while more than one populations were applied was not returning the correct set of records.	Historical data Also in: 11.2.06055, 11.1.06101
Failed to start project (SPR #63210) Under some circumstances, it was no longer possible to start a project, due to an infinite loop in the loading of the archive manager. This issue was a regression and only occurred with existing proprietary archive unit when a trended variable did not have any record stored in the archives.	Historical data Also in: 11.2.06054
Use of negative filter in Log Viewer (SPR #62497) When archiving logs in a HDS archive unit, it was not possible to apply a filter for retrieving empty fields or negative filter such as #A3="" or #A1!=Domain1.	Historical data Also in: 11.2.06039, 11.1.06097
Field ValueTriggeringThreshold in HDS databases (SPR #62614) An additional field named <i>ValueTriggeringThreshold</i> is now available when selecting the property <i>Threshold</i> in Trend and Log tables.	Historical data Also in: 11.2.06038, 11.1.06096
HDS Databases update (SPR #62324) As documented, from now on, when upgrading a project to version 11.2, if a HDS database is larger than 10 Gb, the HDS loading is aborted and an error message is traced. As part of the migration process, databases' schema has to be updated using the T-SQL scripts provided in the file <i>bin\UpgradeDatabase.sql</i> before starting PcVue and the HDS. It was a known issue since version 11.2.05001 - The T-SQL scripts were not up to date for upgrading to 11.2. [Edit 11.2.060030] - The scripts in earlier updates were still incorrect.	Historical data Also in: 11.2.06030
Could not filter logs by both domain and nature (SPR #62702, 62497) Since versions 11.1.06029 and 11.2.05001, when using HDS archive units, it was no longer possible to apply a filter with a combination of both a domain and a nature.	Historical data Also in: 11.2.06026, 11.1.06087
Incorrect register value recorded with threshold events (SPR #62614) The register value recorded alongside a threshold event (bit or alarm) was incorrect. The trigger value was registered instead of the current value of the register when the threshold was triggered. The issue only affected HDS archive units.	Historical data Also in: 11.2.06026, 11.1.06082
Trends remained invalid after project startup (SPR #62165) When using HDS archives units, invalid points were recorded at project exit (quality=64). Under some circumstances, no valid point were recorded at project startup, in particular with timestamped data or when archive and data acquisition servers are on separate machines, due to a primary key violation (identical VTQ). Thus, trends were wrongly displayed as invalid in the Trend Viewer. This behavior was also occurring in case of networking failure (quality = 24). From now on, the invalid points are recorded at project startup, only if the data has changed in the meantime.	Historical data Also in: 11.2.06023, 11.1.06072
Filtering extended attributes with space characters did not work (SPR #61117, 61112) It was not possible to apply a filter to retrieve historical data (for example with SCADA Basic instructions <i>SVLOG</i> or <i>LOGVIEWER</i>) when conditions on extended attributes contained space characters. Now it works correctly if enclosed in quotation marks. e.g.: <code>=(#A5=="x y z")</code>	Historical data Also in: 11.2.05001, 11.1.06029
Error messages no longer prompted in preview mode (SPR #65133) Error messages such as missing mimic template are no longer prompted when a mimic is loaded to be displayed in preview mode. Such message prompts could occur when loading mimics in the following contexts: File.Open dialog box, mimic selector, Application Explorer...	HMI
GDI object leak (SPR #65069) Fix of a GDI object leak. Up to 4 GDI objects were leaked when closing a mimic.	HMI Also in: 11.2.06073
Toolbars and menus could not be clicked (SPR #63884) Under some circumstances, toolbars and menus could not be clicked when positioned over a Map Control.	HMI

Template mimic size not retrieved The property <i>Keep the mimic template size</i> was not working when the mimic template size was higher than the initial mimic size.	HMI
Loss of the color palette (SPR #64107) Under some circumstances, the color palette was not correctly initialized, leading to the replacement of indexed colors by fixed colors.	HMI Also in: 11.2.06064, 11.1.06113
Editing symbol with the Graphic Explorer (SPR #63857) Under some circumstances, a fatal error could occur when editing nested symbols using the Graphic Explorer.	HMI Also in: 11.2.06064
Fatal error at startup (SPR #63747) Under some circumstances, a fatal error could occur when at startup a mimic was opened via SCADA Basic. The issue only occurred if the mimic had both the Navigator activated and SCADA Basic function executed on the Before open callback. The fatal error appeared only after switching the mimic to the design mode.	HMI Also in: 11.2.06064
Fatal error when loading a mimic (SPR #63956) Under some circumstances, a fatal error occurred when loading a mimic containing an ActiveX. The issue occurred when the ActiveX was not installed properly on the computer and configured with the property <i>Save properties as text</i> activated.	HMI Also in: 11.2.06063
Removed unnecessary Save prompt (SPR #63823) When a mimic containing ActiveX controls was switch to design mode, and then back to runtime mode, a prompt asking for saving the mimic was displayed even if no change was to be saved. From now on, built-in ActiveX and controls no longer cause this prompt. The message will still be raised if the mimic contains a third-party ActiveX for which there is no guarantee that configuration change is correctly transmitted to the ActiveX container.	HMI Also in: 11.2.06063
Check box list and Option button list not selectable (SPR #63057) Under some circumstances, the selectable items (check box or radio button) could disappear when changing the font of the control.	HMI Also in: 11.2.06062
Function keys not effective (SPR #61582) Under some circumstances, function keys (F2...) were not effective. The issue could occur when the graphic item having the focus was a component such as a Trend Viewer or a Combo box.	HMI Also in: 11.2.06034, 11.1.06092
Virtual keypad not opened in the correct region (SPR #62585) The Virtual keypad was not always opened in the correct region, in particular with a 4-screen configuration.	HMI Also in: 11.2.06031, 11.1.06089
Mouse wheel behavior reversed (SPR #62647) The mouse wheel behavior when zooming was reversed compared to usual implementations.	HMI Also in: 11.2.06025, 11.1.06081
Inadequate suggested name for "Save as" actions (SPR #61890) Suggested names for mimics and symbols when using "Save as" were inadequate and could lead to overwriting existing objects.	HMI Also in: 11.2.06022, 11.1.06074
Warning icon not always displayed (SPR #62421) Under some circumstances, the warning icon was not displayed on objects having missing or non-existing variables in animations.	HMI Also in: 11.2.06022, 11.1.06074
Alarms not displayed Under some circumstances, new alarms were not displayed in the Alarm viewer after an alarm was removed from the list. In particular, the issue occurred when the list of potential alarms to display was greater than the buffer size.	HMI > Alarm viewer Also in: 11.2.06074
Maintenance filter button in toolbar not saved The "Maintenance filter" toolbar button was lost when saving mimics in ASCII mode.	HMI > Alarm viewer Also in: 11.2.06038, 11.1.06095

Missing alarms after zooming or scrolling (SPR #62764) Under some circumstances, when scrolling or zooming with the mouse wheel in an Alarm Viewer, some lines were disappearing.	HMI > Alarm viewer Also in: 11.2.06031, 11.1.06088
Could not select lines (SPR #62506) Since versions 11.1.06048 and 11.2.05000, it was no longer possible to select a line in the Alarm Viewer when the viewer was configured to display context mimics and context mimic was left undefined.	HMI > Alarm viewer Also in: 11.2.06022, 11.1.06075
Unable to remove animation Visibility on Variable presence and Visibility on Text (SPR #65505) It was not possible to remove animations of type <i>Visibility on Variable Presence</i> and <i>Visibility on Text</i> from graphic objects.	HMI > Animations Also in: 11.2.06078
Incorrect value sent with Send Register animation (SPR #63471) Incorrect values were sent with the Send Register animation. The issue occurred when the animation was configured with both "direct send" and "variable copy", and only if the source variable was in an invalid state.	HMI > Animations
Max size of comments for tooltips (SPR #63245) The maximum size of the comment in the animation is now 255 characters (was 80). When several animations are configured on the same object, their concatenated total length is now limited to 2500 characters (was 80).	HMI > Animations Also in: 11.2.06061
'Send bit' animation on 3D object not working well (SPR #63053) Animations <i>Send bit</i> created for graphic objects of a 3D model did not work. Only the last one in the model's hierarchy was working properly.	HMI > Animations Also in: 11.2.06054
Mouse wheel in combo box leads to fatal error (SPR #60767) Under some circumstances, a fatal error could occur when using the mouse wheel to scroll a combo box control for several seconds.	HMI > Animations Also in: 11.2.06038, 11.1.06094
Fatal error when selecting new item in a Tree view Control (SPR #62832) Under some circumstances, a fatal error was occurring when rapidly changing the index value in the Tree view Control (e.g. by clicking on different items).	HMI > Animations Also in: 11.2.06036, 11.1.06094
Instruction WINDOW, mode OPEN - partly working with animation Run macro (SPR #61939) Animations <i>Run macro</i> executing the instruction WINDOW mode OPEN in a mimic saved in ASCII format failed if the mimic name passed as argument included a simple quotes.	HMI > Animations Also in: 11.2.06025, 11.1.06081
Incorrect error message on interlock condition (SPR #62372) The error message prompted when the interlock condition was defined by an expression was incorrect.	HMI > Animations Also in: 11.2.06022, 11.1.06072
Axes properties not saved (SPR #64045) When using the ASCII format, the axes properties of Chart control were not correctly saved.	HMI > Chart control Also in: 11.2.06064, 11.1.06113
OnSelect event not triggered (SPR #64932) The <i>OnSelect</i> event of listbox controls was not triggered after loading items with the SCADA Basic instruction <i>LISTBOX</i> , mode <i>LOAD</i> .	HMI > Form controls
Fatal error with incorrect file (SPR #64026, 16215) A fatal error could occur when a Form Control was configured to load a file with an incorrect format.	HMI > Form controls
Unselect all items in listbox (SPR #64491, 64490) It was not possible to unselect all the items in a listbox Form control.	HMI > Form controls

Relative path not properly handled (SPR #64132) Relative paths other than \TP were not correctly handled in Form controls (Combo-box, List-box, Check-box list, Option-button list and Tree-view). Only absolute paths were recognized. As of now, relative paths to any of the project sub-folder can be handled correctly in a relative way, and folders outside the project are handled as absolute.	HMI > Form controls Also in: 11.2.06070
Default font not restored (SPR #63978) Unchecking the custom font in Form Controls was not restoring the default font.	HMI > Form controls
Animations misconfigured after reordering tree view nodes When reordering nodes in a Tree view control, the animations were wrongly reassigned.	HMI > Form controls
File full path not displayed In the content tab of the Form controls, only the file name was displayed (instead of its full path) when not located in the TP directory of the project.	HMI > Form controls
Selection not triggered for OptionList and CheckList (SPR #63318) The linked variables (User Data, Index and State) were not updated when selecting an item without changing its state. The variables were only updated when the state (checked/not checked) of an item was changed.	HMI > Form controls
Tree View - Selection notification when switching to runtime mode (SPR #63313) A selection notification was triggered when switching from edit to runtime mode, even if the selection did not change in the meantime.	HMI > Form controls
Moving items in a tree view control (SPR #63497, 59554) It was not possible to reorganize root items in a tree view control. In addition, animations were lost when moving items.	HMI > Form controls Also in: 11.2.06058
User data not updated after loading a file (SPR #61351) The <i>UserData</i> was not updated when the content of a List box was reloaded from a file defined by a variable.	HMI > Form controls Also in: 11.2.06058
Tree View selection not changed upon UserData update (SPR #63230) Updating the variable linked to UserData of a tree view was not updating the selected item of the tree view.	HMI > Form controls
Data and Index not initialized in form controls (SPR #63211) In the form controls - Check box list, List box, Option button list and Tree view - the Index and User Data values were not set according to the default selection at initialization stage.	HMI > Form controls Also in: 11.2.06055
Fatal error when changing Z-order (SPR #62393) Under some circumstances, a fatal error could occur when changing the Z-order of graphic items in a mimic having a symbol with VBA code inside.	HMI > Graphics Also in: 11.2.06037, 11.1.06094
Rotation angle (SPR #62482) The rotation angle is now saved in the mimics. Previously, when applying a rotation, the graphic items were rotated directly, and the rotation angle was reset to 0. After successive rotations, the graphic items could be distorted due to rounding calculation.	HMI > Graphics Also in: 11.2.06024, 11.1.06080
Invisible border for Tree view (SPR #62527) It was not possible to make borders invisible for the Tree View control.	HMI > Graphics Also in: 11.2.06022, 11.1.06076
Value formatting in historical mode (SPR #63356, 63207) It is now possible to configure the formatting of register values when using the Historical mode. In particular, the number of digits and heading/trailing zeros.	HMI > Grid control Also in: 11.2.06056
Incorrect export in demo mode Exporting data from the Grid control while in demo mode was generating a file with only one correct line out of two.	HMI > Grid control Also in: 11.2.06035, 11.1.06094

Fatal error when no trend is configured (SPR #62564) A fatal error was occurring when opening the Data Export Wizard from the Grid Control configured in Historical mode with no trend configured.	HMI > Grid control Also in: 11.2.06022, 11.1.06077
Manual configuration of thresholds Unchecking the automatic mode was not effective, preventing from entering specific values for thresholds. Even if the automatic mode was unchecked, the fields for entering threshold values remained greyed.	HMI > Grid control Also in: 11.2.06022, 11.1.06073
Thresholds in branched mimics When using the Grid control in historical mode in a branched mimic, thresholds were not correctly retrieved, causing an incorrect coloring of the cells.	HMI > Grid control Also in: 11.2.06022, 11.1.06072
Fatal error with mouse wheel (SPR #64914) Under some circumstances, a fatal error could occur when scrolling quickly using the mouse wheel in a Log Viewer.	HMI > Log viewer Also in: 11.2.06072, 11.1.06118
Fatal error with Free log lists (SPR #64108) A fatal error was occurring when a Log viewer was configured with a log list defined in a Free archive unit. As Free archive units are write only, they cannot be used in log viewers. Such a configuration now returns an empty Log viewer.	HMI > Log viewer Also in: 11.2.06064
Login/Logoff filter always active (SPR #63048) In the Log Viewer filter configuration, the "Login/Logoff" filter option was not correctly saved and always restored as selected.	HMI > Log viewer Also in: 11.2.06041, 11.1.06097
Filtering of Login, Logoff and Login failure events in Log Viewer lost (SPR #62404) The Login, Logoff and Login failure events filters were lost when navigating in the list of logged events. These filters can only be applied by SCADA Basic or VBA.	HMI > Log viewer Also in: 11.2.06023, 11.1.06079
Markers not displayed (SPR #65085) Markers were hidden after using the instruction <i>MAPDISPLAY</i> mode <i>LOADMARKERS</i> . They were refreshed after moving, zooming or clicking in the map.	HMI > Map control Also in: 11.2.06081
Map markers editor - Inserting a marker in a dynamic layer (SPR #63954) In the Map markers editor, toolbar buttons to insert makers were not disabled when a dynamic layer was selected.	HMI > Map control
Map markers Editor - Zoom level modified upon marker insertion (SPR #64011) In the Map markers editor, when an invisible layer was selected, the zoom level was automatically set to the layers' max level, every time a marked was inserted.	HMI > Map control
Missing symbol not indicated (SPR #61510) As of now, a warning is displayed at design time if a symbol used for a marker is missing.	HMI > Map control
Unable to validate Map positioning animation (SPR #61930) It was not possible to select <i>No change</i> in the <i>Zoom level</i> property of the animation <i>Map positioning</i> .	HMI > Map control
VBA code embedded in symbol not executed (SPR #61897) VBA code embedded in a symbol was not correctly loaded and executed when used as a marker.	HMI > Map control
Map markers editor - Automatic zoom on layer double-click (SPR #64015) In the Map markers editor, the zoom level was not correctly set when double-clicking on a layer to adapt the display to show all the markers.	HMI > Map control
Map markers editor - Duplicated layers after copy/paste (SPR #64014) An additional layer was inserted after a copy/paste action of a non-default layer.	HMI > Map control

Symbols displayed incorrectly (SPR #64263) Symbols were not correctly displayed when crossing the Map control border. It was only occurring with symbols including rectangle with dotted border.	HMI > Map control
Fatal error when resizing a Map control (SPR #64558) Under some circumstances, a fatal error could occur when resizing a Map control at design time.	HMI > Map control Also in: 11.2.06097
Dotted border around symbols (SPR #64263) A dotted border was incorrectly displayed around symbols.	HMI > Map control Also in: 11.2.06081
Markers not displayed after provider change (SPR #64521) Under some circumstances, when changing the map provider at runtime (for example with SCADA Basic instruction), some markers could disappear. The issue occurred when the layer levels of markers did not include the minimal zoom level of the map. Markers' were properly refreshed and displayed after moving the map or updating the zoom level.	HMI > Map control Also in: 11.2.06068
Marker position modified when switching from runtime to design mode (SPR #63804) Under some circumstances, the position of symbol markers in the Map Control was wrongly modified when switching from runtime to design mode.	HMI > Map control Also in: 11.2.06062
Improper default zoom limits (SPR #62683) When creating a new .gpx file (markers) or a new layer, the zoom limits of the default layer are now applied by default. Until this fix, it was possible to introduce zoom limits discrepancies, because the zoom range [1..20] was used by default.	HMI > Map control Also in: 11.2.06060
Incorrect markers position in Remote Desktop sessions (SPR #63378) Under some circumstances, when running in a Remote Desktop Session, markers were wrongly positioned top-left in the map control. The issue only occurred after disconnecting and reconnecting to a session. Re-opening the associated mimic was repositioning markers correctly.	HMI > Map control Also in: 11.2.06058
Map not correctly displayed with local cache Under some circumstances, local map tiles were not correctly displayed after loading and/or using the Map position animation. In particular, the issue could occur when the map was loaded with a zoom level that was not selected at the time the map had been locally cached.	HMI > Map control Also in: 11.2.06056, 11.1.06103
Markers position and visibility not refreshed properly (SPR #63203, 62727) Visibility of markers of type Symbol was not always correctly maintained with regards to layer visibility, position changes and zoom modification. Performance of marker rendering is also improved.	HMI > Map control Also in: 11.2.06056
OpenStreetMap cached map Following a previous fix to disable OpenStreetMap maps due to license restrictions, a fatal error was occurring when using such a map stored in the local cache.	HMI > Map control Also in: 11.2.06034
Access to OpenStreetMap tiles blocked OpenStreetMap has blocked online access to their tile servers from 3rd party applications. The OpenStreetMap provider was therefore no longer usable and has been removed from the list of available map providers.	HMI > Map control Also in: 11.2.06027
Fatal error after a marker disappeared (SPR #62724) Under some circumstances, a fatal error could occur after a marker disappeared from the visible area (due to zooming or map scrolling), in case it had an opened popup linked to it.	HMI > Map control Also in: 11.2.06027
Impossible to save GPX file The Save button was always disabled when editing an existing GPX file with the Map Marker Editor.	HMI > Map control Also in: 11.2.06027
Several fixes & enhancements of the Marker editor (SPR #62681) The list of fixes & enhancements includes: - Under some circumstances, the preview was not working for Symbols markers, - Upon selection of a marker on the map, the marker properties were not displayed if the marker was not in an expanded part of the tree view in the right-side panel, - Under some circumstances, the Save button could stay greyed after changing a user data or a property.	HMI > Map control Also in: 11.2.06026

Truncated value in semi-log mode (SPR #65347) Values displayed at the cursor in semi-log mode could be truncated.	HMI > Trend viewer Also in: 11.2.06076
Scientific notation in scales (SPR #64696) Scales were not using the scientific notation with large values.	HMI > Trend viewer Also in: 11.2.06072
Incorrect trend displayed after modification (SPR #64766) When changing the displayed trend at runtime, it could happen that the curve and the cursor values were not updated. The issue occurred when the newly selected trend was not associated to an archive unit.	HMI > Trend viewer Also in: 11.2.06071, 11.1.06115
Minimal value displayed From now on, the minimal value the Trend Viewer can display is 10e-30 (was 10e-15). Values lower than this limit are rounded to 0.	HMI > Trend viewer Also in: 11.2.06071, 11.1.06115
Value lower than e10-6 not displayed Value lower than e10-6 were displayed as 0.	HMI > Trend viewer
Truncated value in scale (SPR #64657) Under some circumstances, value displayed in scale were truncated when using scientific notation.	HMI > Trend viewer Also in: 11.2.06070, 11.1.06114
Label field not updated in the legend (SPR #64577) When changing the displayed variable in the Trend Viewer, the associated Label field in the legend was not updated when it was configured to use the variable's description (Label left empty at design-time).	HMI > Trend viewer Also in: 11.2.06068
Value with e-10 not correctly displayed When using the scientific notation, the particular case of <i>e-10</i> was not correctly displayed. The trailing zero was removed and the value wrongly displayed as <i>e-1</i> .	HMI > Trend viewer Also in: 11.2.06064, 11.1.06113
Small values not correctly displayed in the legend (SPR #63856, 63670) Small values, lower than 0.001 where displayed as 0 in the legend. They are now displayed using scientific notation.	HMI > Trend viewer Also in: 11.2.06061, 11.1.06110
Curve color not updated (SPR #62998) Curve were not immediately updated when modifying curve color with the SCADA Basic instruction <i>TREND</i> , mode <i>SETCOLOR</i> .	HMI > Trend viewer Also in: 11.2.06038, 11.1.06095
Invalid point displayed with Points curve type When curve type was set to " <i>points</i> ", both valid and invalid values were displayed and could be wrongly interpreted. From now on, only valid points are displayed.	HMI > Trend viewer Also in: 11.2.06031, 11.1.06091
Language for variable descriptions in the legend (SPR #62311) Variable descriptions were not dynamically changed when switching the project language.	HMI > Trend viewer Also in: 11.2.06001, 11.1.06066
Trends not well displayed (SPR #62319) Trends were not correctly displayed when scales were larger than the display area of the trends.	HMI > Trend viewer Also in: 11.2.06001, 11.1.06066, 11.0.06085
Online printing not working (SPR #60929, 27775) Online printing was not working when no Proprietary archive unit was configured.	Miscellaneous
Fatal error when editing expression (SPR #63694) Under some circumstances, a fatal error could occur after several modifications of an existing expression, when some of the modifications were incorrect. All kind of expressions were affected: Expression on variable, template expression and expression in animations.	Miscellaneous

System variables for printers remained invalid (SPR #62839) Since version 10.0, system variables for printers were no longer initialized at startup and remained invalid (NS).	Miscellaneous Also in: 11.2.06031
Incorrect error message in three-level architectures (SPR #65191) In a three-level architecture, some incorrect messages were displayed at the gateway level regarding the archiving. Despite the error messages, logs were correctly routed.	Networking Also in: 11.2.06076
Fatal error on network message processing (SPR #65030) Under some circumstances, a fatal error could occur when a network message containing data changes larger than 32 Kb was being processed.	Networking Also in: 11.2.06072, 11.1.06116
Incorrect project version in RDS session (SPR #63655, 62583) Under some circumstances, projects started in a Remote Desktop Session were loaded with an incorrect version. The issue could occur due to incorrect user permissions on the project folder. From now on, a warning is displayed when the user has improper permissions and project startup is aborted.	Networking Also in: 11.2.06060, 11.1.06109, 11.0.06094
Unable to modify the activation trigger of an alarm (SPR #63724) It was no longer possible to modify the activation trigger of an alarm (positive or negative) from the Application Explorer or by import (Smart Generator, Generic Import, Application Architect) if the station belonged to a single-active association. It can now be done on the active station of the association.	Networking Also in: 11.2.06059
Status NS L> and NS L< not correctly distributed to client stations (SPR #63592) Under some circumstances, the status <i>NS L></i> and <i>NS L<</i> were not correctly transmitted to client stations and were simply interpreted as <i>NS</i> . As a consequence, the associated value was not displayed on client stations.	Networking Also in: 11.2.06059, 11.1.06106
Erroneous messages removed (SPR #62955) Under some circumstances, false error messages were displayed when a HDS trend variable was produced by a station and archived by another station. The issue could be reproduced when a variable was timestamped at the source level, with the Trend group period set to 0 sec. The following messages were displayed: <pre>5,W,,5582,,2,Send ask refresh for OPC.Bit01 variable 5,W,,5586,,2,Station number=4 retry number=1 Time Out=20s 5,W,,5582,,2,Send ask refresh for OPC.Bit01 variable 5,W,,5586,,2,Station number=4 retry number=2 Time Out=20s</pre> These messages had no impact on the system behavior.	Networking Also in: 11.2.06036, 11.1.06094
Variables indicated as NS in mimics Under some circumstances, some variable values could be displayed as NS in animations and as valid values in the Application Explorer. The issue could only occur in a specific scenario after a time-out on a variable subscription and the fact that flow regulation was active when the first subsequent subscription response was received.	Networking Also in: 11.2.06027, 11.1.06088, 11.0.06092, 10.0SP2_Update, 9.0SP3
Alarm synthesis not updated (SPR #64619, 64483) Under some circumstances, alarm syntheses were not updated due to multiple use of the result variable. It was possible to configure several alarm syntheses having the same result variable. In such a situation, only the last created or loaded was executed. The error handling is also improved to better warn user when creating an Alarm Synthesis from the Application Explorer, Application Architect or Generic Import.	Real time data Also in: 11.2.06072
Template Expression using a variable several times (SPR #64525) Under some circumstance, a fatal error could occur when modifying an <i>Expression template</i> . The issue occurred only when the calculated expression contained a reference to a given variable more than once.	Real time data Also in: 11.2.06067
Unknown variable in expression Under some circumstances, a fatal error could occur when an unknown variable was used in an expression.	Real time data Also in: 11.2.06066

Consecutive writes not all sent Under some circumstances, when the option <i>Write only if the value is different</i> was activated, consecutive write instructions done in SCADA Basic were not correctly managed if the initial value was used in the sequence. For instance, with an initial value set to 1 and the following sequence: Variable = 2; Variable = 1; Variable = 3; Variable = 1; Only values 2 and 3 were sent.	Real time data
NS COM status not correctly refreshed (SPR #63869) Under some circumstances, the status of a variable was wrongly set to <i>NS</i> instead of <i>NS COM</i> after a communication loss. The issue occurred if the variable was previously in status Out of range (<i>NS L></i> or <i>NS L<</i>).	Real time data Also in: 11.2.06061, 11.1.06110
DNP3 and IEC104 system variables remained invalid (SPR #60107) System variables linked to IEC104 and DNP3 data acquisition drivers could remain invalid at startup when the option <i>Activate at start-up</i> was not checked.	Real time data Also in: 11.2.06038, 11.1.06095
Handling of corrupted persistent data (SPR #62906, 62757) Improved handling of the files <i>VariablesSaved.dat</i> and <i>AlarmSaved.dat</i> if they are corrupted. From now on, backup copies are used in replacement.	Real time data Also in: 11.2.06034
Fatal error upon variable deletion Under some circumstances, a fatal error could occur upon variable deletion. The issue occurred if a variable mapped on an equipment data acquisition driver was deleted after a command was sent and before the command acknowledgement was processed.	Real time data Also in: 11.2.06031, 11.1.06091
Timestamp discrepancy after a communication restart (SPR #62733) In case of a single active server association, when restarting the communication on the active server, the timestamp type and value could differ on the active server compared to client stations. It was occurring with saved variables when the setting <i>Use the local timestamp upon device reconnection</i> was enabled. In such condition the timestamp type and value was set to the local SV timestamp on the active server instead of the last known PLC timestamp, as it is on client stations.	Real time data Also in: 11.2.06031, 11.1.06088
Alarm synthesis not loaded When several synthesis had the same criteria (same extended attributes value for example) and the only difference was the branch, only the first one was correctly loaded, others were ignored.	Real time data Also in: 11.2.06024, 11.1.06080
Truncated associated labels (SPR #58811) Following the modification of the maximum length of associated labels to 255 characters, such labels were wrongly truncated: - When using the #E substitution in the alarm and log viewers, - When used as part of a log list filter on proprietary log lists.	Real time data Also in: 11.2.06023
Incorrect expression result after a server switchover (SPR #62566) Under some circumstances, in a single active server association, expressions could be incorrect after a switch from passive to active.	Real time data Also in: 11.2.06023, 11.1.06078
'\$' character not recognized in expressions (SPR #62505) The '\$' character was not recognized as a part of a variable name. Thus expressions using synthesis such as @System.NoAckOn.ALL.Domain_\$ were not considered valid.	Real time data Also in: 11.2.06022, 11.1.06075
Filtering on numerical values for Text attributes (SPR #62594) Since version 11.2.05001, filters applied to Alarm and Log Viewers comprising numerical values for text attributes were no longer working (if executed in SCADA Basic or in VBA).	Scripting Also in: 11.2.06023
Instruction WINDOW mode ZOOM - Mimic back in the foreground A mimic was brought to the foreground after setting its zoom level from a value lower to 100 to a value greater than 100 with the instruction WINDOW with the mode ZOOM.	Scripting > SCADA Basic

Instruction WINDOW modes CURRENTNAME and CURRENTBRANCH - Returned an invalid value (SPR #65817) The SCADA Basic instruction WINDOW with the modes CURRENTMIMIC and CURRENTBRANCH generated an "incompatible type" error when no mimic was opened.	Scripting > SCADA Basic
Instruction WINDOW mode SELECTTAB - Incorrect return value on error The mode SELECTTAB of the instruction WINDOW returned 1 instead of 0 when the index of the tab was out of range.	Scripting > SCADA Basic
Fatal error with instruction VARIABLE mode IMPORTBUFFER Under some circumstances, a fatal error could occur when using the instruction VARIABLE mode IMPORTBUFFER.	Scripting > SCADA Basic Also in: 11.2.06079
Instructions LOGDISPLAY & ALARMDISPLAY modes GETLINES & GETSELECTEDLINES - Did not work (SPR #65392) The modes GETLINES and GETSELECTEDLINES of instructions LOGDISPLAY and ALARMDISPLAY did not work properly. The parameter <i>LineStart</i> was ignored and always considered equal to 1. As a consequence, the first line was always returned.	Scripting > SCADA Basic Also in: 11.2.06076
Incorrect Intellisense for instruction BACNET mode LOG_RETRIEVAL The Intellisense for the instruction BACNET mode LOG_RETRIEVAL of was incorrect.	Scripting > SCADA Basic
BRANCHE is a reserved word (SPR #65039) It is no longer possible to use BRANCHE as a function or a variable name.	Scripting > SCADA Basic
Instruction MAPCONTROL - Incorrect return type (SPR #65057) The return type for the SCADA Basic instruction MAPCONTROL was inconsistent. In case of error, some return types were not the one expected. For instance, the success return type of the mode GETZOOM is <i>double</i> , and in case of error, the instruction was returning an <i>integer</i> .	Scripting > SCADA Basic
Intellisense of instruction TRACE (SPR #64804) The instruction TRACE was not correctly highlighted in the SCADA Basic Editor.	Scripting > SCADA Basic
Line numbering not correctly refreshed (SPR #64805, 63774, 63773) Under some circumstances, the line numbering in the SCADA Basic Editor was not correctly refreshed, in particular once activated or with numbers only comprised between 1 and 11.	Scripting > SCADA Basic
<i>Upgrade</i> Instruction BACNET mode LOG_RETRIEVAL - Incorrect timestamp type (SPR #63604) Timestamps used with the instruction BACNET mode LOG_RETRIEVAL were UTC instead of local.	Scripting > SCADA Basic
Instruction KEY - Various fixes & enhancements (SPR #63962, 63722, 63690, 63684, 63683, 63682, 63428, 63426) It includes: • Intellisense for modes DELSTD and DELCLK were inverted, • Intellisense for modes ADDCLK and ADDSTD were incorrect, • Success return value of all modes was 0 instead of 1, • Incorrect return values were not all handled properly, • New argument <i>DelAllMode</i> for modes DEL and DELALL, • Fixed a compatibility issue with project version control.	Scripting > SCADA Basic
Instructions ALARMDISPLAY and LOGDISPLAY mode ISLINEVISIBLE - Incorrect return value (SPR #64693) The mode ISLINEVISIBLE of instructions ALARMDISPLAY and LOGDISPLAY returned -1 instead of 0 when the line to retrieve was not visible. The issue occurred when the viewer was configured with a buffer size larger than the number of lines it could display.	Scripting > SCADA Basic
Instruction CHART mode LINE_CLEAR - Always returned 0 (SPR #64723) The mode LINE_CLEAR of the instruction CHART always returned 0 even when executed successfully.	Scripting > SCADA Basic

Instruction CHART mode RANGE_REMOVEPOINT - Did not work (SPR #64721) The mode RANGE_REMOVEPOINT of the instruction CHART was adding points instead of deleting them.	Scripting > SCADA Basic
Instruction CHART mode SETENDTIMEPERIOD - Did not work (SPR #64726) The mode SETENDTIMEPERIOD of the instruction CHART was not recognized as valid nor executed.	Scripting > SCADA Basic
Instruction TOC - Support for type LONGLONG (SPR #64639) The TOC instruction returned an empty string when the input argument was of type LONGLONG.	Scripting > SCADA Basic
Instruction EVENT mode DEL - Did not work (SPR #63999) The SCADA Basic instruction EVENT mode DEL did not work properly.	Scripting > SCADA Basic Also in: 11.2.06068
LOGDISPLAY filtering modes not waiting EXECUTE (SPR #64548) Under some circumstances, the SCADA Basic instructions to modify the filter applied to a Log Viewer could be executed immediately instead of waiting for the EXECUTE command. This issue was occurring when the Log Viewer was configured with the auto-refresh mode.	Scripting > SCADA Basic Also in: 11.2.06068, 11.1.06114
Intellisense for instruction OPC (SPR #64373) The Intellisense for the instruction OPC modes SETTRACE, RESETTRACE, PUTMASKTRACE and SAVEMASKTRACE was incorrect.	Scripting > SCADA Basic
Instruction WINDOW mode GETSUBWINDOW - Did not work with #U and #I (SPR #64005, 63017) Incorrect results were returned when using the instructions WINDOW mode GETSUBWINDOW with submodes #U and #I.	Scripting > SCADA Basic
Instruction HISTORY - Failed to import (SPR #64158, 64157) Since version 11.2, trend values were not properly imported when using the instruction HISTORY with the mode IMPORTTREND and the <i>VarFlag</i> parameter set to 1.	Scripting > SCADA Basic Also in: 11.2.06064
Instruction SELECTOR - Returned negative color values (SPR #63744) The modes GETCELLBACKCOLOR and GETCELLTEXTCOLOR of the instruction SELECTOR were returning negative values for some colors (greater than the hex value 0x7FFF).	Scripting > SCADA Basic
Instruction STATION_FILTER mode APPLY - Incorrect population name (SPR #64024) No error was returned when using the instruction STATION_FILTER mode APPLY with an unknown population.	Scripting > SCADA Basic
Error management related to Form Controls (SPR #63727, 63411, 63381, 63380, 63372, 63369, 63368, 63367) Several SCADA Basic instructions and modes related to Form Controls were not handling errors correctly: - CHECKLIST, modes LOAD, INSERT and SETSTATE, - COMBOBOX, modes LOAD, INSERT and SETSELECTED, - LISTBOX, modes LOAD and INSERT, - OPTIONLIST, modes LOAD, INSERT and SETSTATE, - TREEVIEW, modes LOAD, INSERT, SETSELECTED, EXPANDNODE, COLLAPSENODE and REMOVE NODE.	Scripting > SCADA Basic
Instruction BUFTOEXCEL mode MERGE - Did not work (SPR #63520) The mode MERGE of the instruction BUFTOEXCEL did not work correctly and generated a corrupted file.	Scripting > SCADA Basic

Variable substitution not working (SPR #63793) Under some circumstances, variables substitutions were not working in SCADA Basic programs, in particular with multiple substitutions in the same function.	Scripting > SCADA Basic Also in: 11.2.06062
Instruction TREND mode SETPERIOD - New argument (SPR #63582) A new argument named <i>ForceHistoricalRequest</i> has been added to the SCADA Basic instruction TREND, mode SETPERIOD. When set to 1, a request to the archives is executed to refresh the buffer for the newly set time-period, otherwise, the buffer is not modified. TREND("SETPERIOD", Window, Branch, Identity, Duration[, ForceHistoricalRequest]) Executing this instruction without setting this argument could lead to partially rendered curves because the buffer may not contain data for the new period.	Scripting > SCADA Basic Also in: 11.2.06060, 11.1.06108
Instruction RECIPE mode NETWORKBROADCAST (SPR #63124) When using the instruction RECIPE mode NETWORKBROADCAST, the status variable allowing controlling the correct execution was never refreshed. It was always in status NS.	Scripting > SCADA Basic Also in: 11.2.06054
Intellisense for instruction M104 The Intellisense for the instruction M104 mode STPV_COMMAND was incorrect. The online help was correct.	Scripting > SCADA Basic Also in: 11.2.06046
Instruction CIMWAY mode CFG / EQT_ADDRESS - no longer working with Modbus devices (SPR #62913) The instruction CIMWAY mode CFG sub-mode EQT_ADDRESS was no longer working with XBUS-IP-MASTER driver. This regression was introduced in the following versions: • 11.2.06026 • 11.1.06086 • 11.0.06092	Scripting > SCADA Basic Also in: 11.2.06046, 11.1.06093, 11.0.06093
Instructions HEX and CONVERT - Support for 64-bit values (SPR #62671, 17452) Instructions HEX and CONVERT (modes BINTOA, OCTOTOA, HEXTOA and BCDTOA) were not correctly processing 64-bit values (>= 2147483648).	Scripting > SCADA Basic Also in: 11.2.06043, 11.1.06097, 11.0.06093
Instruction TREND mode THRESHOLD_GETMODE - Wrong return code (SPR #62879) When a curve was configured in threshold auto mode but without associated threshold to the variable, then the function was returning -1 instead of 0.	Scripting > SCADA Basic Also in: 11.2.06036, 11.1.06094
SCADA Basic Editor - Line numbers moving (SPR #62697, 61932, 60539, 59463) Under some circumstances, the lines numbers were moving. The issue occurred when the file was starting with several carriage returns.	Scripting > SCADA Basic Also in: 11.2.06035
Instruction M61850 modes SBOW_SELECT and SBO_SELECT - Incorrect return type (SPR #62903) The type of the Value argument for the instruction M61850 modes SBOW_SELECT and SBO_SELECT was incorrect. It is now of type Integer for consistency with the equivalent instructions for IEC 104 and DNP (was String). For compatibility with existing projects, support for the Value argument of type String remains.	Scripting > SCADA Basic Also in: 11.2.06034
Instructions FOPEN and FCLOSE - Could not open/close files (SPR #62914) Since version 11.2.05000, the instructions FOPEN and FCLOSE were no longer working properly.	Scripting > SCADA Basic Also in: 11.2.06034
Instruction ASCIIFIELD was limited to 256 fields (SPR #62670) The SCADA Basic instruction ASCIIFIELD was limited to 256 fields and could cause a heap corruption if handling a larger buffer. From now on, the instruction is no longer limited in number of fields.	Scripting > SCADA Basic Also in: 11.2.06034, 11.1.06093

Instruction SVSQL with a SQL Server database (SPR #62899) A fatal error could occur when using the instruction SVSQL to query a SQL Server database. It only happened when the "SQL Server" ODBC driver was used. It did not happen with the "SQL Server Native Client" ODBC driver.	Scripting > SCADA Basic Also in: 11.2.06034, 11.1.06092, 11.0.06093
Instruction CIMWAY - Fail to handle frames (SPR #62716) Since version 11.2.05001, modes of the instruction CIMWAY applying to a frame were no longer working properly, including: • STOP • START • READFRAME • SCANMDF • READAFTERWRITE	Scripting > SCADA Basic Also in: 11.2.06030, 11.1.06089, 11.0.06092
Instruction SVTREND mode GETTREND - Incorrect extraction (SPR #62700) Under some circumstances, when retrieving sampled values, some data were incorrectly extracted. This instruction is deprecated and its usage is discouraged. Use EXPORT_TREND mode GETSAMPLE instead.	Scripting > SCADA Basic Also in: 11.2.06026, 11.1.06087, 11.0.06092, 10.0SP2_Update
Instruction M61850 modes START_DATAGROUP & STOP_DATAGROUP (SPR #62725) The modes START_DATAGROUP and STOP_DATAGROUP are now operational as indicated in the help. They replace the previous modes START_GROUP and STOP_GROUP those are now deprecated and kept for compatibility only.	Scripting > SCADA Basic Also in: 11.2.06026, 11.1.06086
Opening a program from a missing library (SPR #62417) When trying to open/edit a SCADA Basic program from a missing library, the legacy SCADA Basic Editor was opened instead of raising a warning. From now on, an error message is displayed in the event viewer.	Scripting > SCADA Basic Also in: 11.2.06023
Instruction TREEVIEW mode GETROOT - Did not work (SPR #62542) The SCADA Basic instruction TREEVIEW mode GETROOT did not work properly.	Scripting > SCADA Basic Also in: 11.2.06022, 11.1.06076
Instruction VARIABLE mode SETLONGLABEL - Missing Intellisense (SPR #62429) The auto-completion was missing for the SCADA Basic instruction VARIABLE mode SETLONGLABEL.	Scripting > SCADA Basic Also in: 11.2.06022, 11.1.06072
Instruction SVTREND - Robustness (SPR #62293) Since version 11.1, a fatal error occurred when using the instruction SVTREND if the Begin or End datetime was earlier than the first record of the database. A similar issue occurred when the returned buffer was empty.	Scripting > SCADA Basic Also in: 11.2.06001, 11.1.06066, 11.0.06086
Embedded VBA scripts on event not executed (SPR #62631, 62604) When a symbol embedding VBA script was inserted several times, the events subscribed within (on variables or graphical items) were fired only for the first instance.	Scripting > VBA Also in: 11.2.06024, 11.1.06080
Embedded object renaming upon insertion of symbol (SPR #60947) When inserting a symbol several times in a mimic, its embedded objects were renamed (numbered copy). From now on, embedded objects are no longer renamed.	Scripting > VBA Also in: 11.2.06022, 11.1.06076
Robustness of VBA method Execute Calling the VBA method <i>Execute</i> on a Log viewer object now returns an error if such a call is already being processed.	Scripting > VBA Also in: 11.2.06022, 11.1.06073

Exception returned when requesting RealTimeData services (SPR #63144) The RealTimeData Browsing, Read and GetProperties services were returning an exception when trying to retrieve information about a variable having an xml reserved character in its description (for example: <, >, &, ', "..."). Characters are now escaped properly.	Web Server Extensions > Web Services Toolkit Also in: 11.2.06054, 11.1.06098
Wrong deferred attributes returned (SPR #62963) It was not possible to read deferred attributes of several variables at once. The first retrieved value was wrongly duplicated for all the other variables.	Web Server Extensions > Web Services Toolkit Also in: 11.2.06038, 11.1.06095
Branches and variables browsing (SPR #62726, 62444, 62443, 62380) When requesting branches and variables having a specific branch, all branches and variables containing the specified text were returned. For example, with these variables: • @Test.B1 • @Test.B2 • @Test1.B1 • @Test1.B2 When requesting with the branch "Test", only the first 2 ones are now returned. Until the fix, the 4 variables were returned. In addition, when the description of a variable was empty, the full variable's name was displayed instead of only the leaf as described in the help. Both issues had consequences on installation browsing and variable view in TouchVue and the Web Services Toolkit.	Web Server Extensions > Web Services Toolkit Also in: 11.2.06030, 11.1.06090, 11.0.06092
Popup mimic not correctly positioned (SPR #65963, 65962) Popup mimics were not correctly positioned when the opening button was at the edge of the parent mimic.	Web Server Extensions > WebVue
Handle leak with Trend viewer Two handles were lost every time a WebVue mimic containing a Trend viewer was closed.	Web Server Extensions > WebVue Also in: 11.2.06066
Alarms and logs incorrectly returned (SPR #62814) Alarms and Logs were incorrectly returned when some text properties (associated label, description...) contained a comma.	Web Server Extensions > WebVue Also in: 11.2.06031, 11.1.06091
Could not filter log list by Domain or Nature (SPR #62550) Requests to HDS log lists were not correctly processed when filtering on Domain or Nature.	Web Server Extensions > WebVue Also in: 11.2.06023, 11.1.06078
Texts in mimics not correctly displayed (SPR #62569) Texts in mimics generated with the Smart Generator for FactoryLink® were not correctly displayed.	Web Server Extensions > WebVue Also in: 11.2.06023, 11.1.06078
Could not filter Domain and Nature having the same name (SPR #62374) Filtering in the Alarm and Log Viewers in WebVue was not working properly if the configuration included the same name for both a Domain and a Nature. When applying such a filter on a nature, it was wrongly filtered against the domain criteria.	Web Server Extensions > WebVue Also in: 11.2.06010, 11.1.06072
Inconsistent cursor position and date & time (SPR #61757) In the Trend Viewer, the date & time in <i>Cursor</i> mode was incorrect when some configured scales were hidden.	Web Server Extensions > WebVue Also in: 11.2.06001

Fatal error when executing the SCADA Basic instruction WINDOW mode CURRENTNAME A fatal error occurred when executing the SCADA Basic instruction <i>WINDOW</i> mode <i>CURRENTNAME</i> in a WebVue context.	Web Server Extensions > WebVue Also in: 11.2.06001, 11.1.06065
Unable to save exception interval (SPR #63364, 63335) Under some circumstances, it was not possible to save exception intervals. The issue occurred with BACnet schedules after deleting an existing exception based on the <i>AnyMonth</i> wildcard.	WebScheduler Also in: 11.2.06056
Could not read BACnet Schedule without standard week or exception period (SPR #62842) A fatal error was occurring when, in a Schedule object, the weekly-schedule or the exception-period property was missing. According to the BACnet standard, both properties are optional but at least one of the two must be present.	WebScheduler Also in: 11.2.06037
Improved robustness (SPR #62557) Improved handling to make sure all pending Http requests are closed when navigating away from the start page.	WebScheduler Also in: 11.2.06026, 11.1.06086
Access rights enforcement (SPR #62407) When navigating and editing schedules in multiview, an issue related to user rights enforcement was preventing from saving modifications even if the user was granted such authorizations. In addition, access to the standard week, special days behavior, effective period and properties pages was checked against the CalendarRead right instead of the StandardWeekRead right.	WebScheduler Also in: 11.2.06010
Edition of recurring intervals (SPR #62435, 61793, 61792, 61766, 61765) The edition of recurring intervals for BACnet Calendar objects was not correctly handled. Depending on the recurrence pattern, it could lead to one or more of the following consequences: • Additional occurrences displayed, • Additional occurrences inserted in the Calendar object, • Incorrect datetime of the last occurrence, • Next intervals only displayed in edition mode.	WebScheduler Also in: 11.2.06010
Wrong default label for intervals on Cron schedules (SPR #62384) The default mode was always 1 (=Active). From now on, the default mode depends on the send-mode of the schedule. It is 0 (=Inactive) for Bit Cmd to 1 and 1 (=Active) for Bit Cmd to 0. It was a regression in version 11.2 that did not affect earlier versions.	WebScheduler Also in: 11.2.06001

3. Critical fixes

Alarm behaviors not saved (SPR #63263) Since version 11.2.05001, behaviors associated to alarm variables were not automatically saved when leaving the project.	Communication interfaces Also in: 11.2.06055
Event actions not saved upon shutdown (SPR #63960, 63789) Under some circumstances, modification to Event actions were not saved when shutting down the project.	Configuration Environments > Application Explorer Also in: 11.2.06064
Failed fast synchronization was not rolled back (SPR #61684) After a failed fast synchronization, the reference file was not rolled back leading to a discrepancy with the actual configuration. Subsequent fast synchronizations were then considered as successful. It was then necessary to execute a full synchronization to regenerate this reference file. This was affecting all of the Smart Generators able to execute fast synchronization and the Application Architect.	Configuration Environments > Smart Generators Also in: 11.2.06066
Improper redundancy switchovers (SPR #65321) When a server station belonged to more than one associations, a switchover of one association to which it belonged could cause the other associations to also switchover. This could have severe side effects, in particular if associations were used for data acquisition, in particular: • IEC 61850: Communication with devices could be halted, • BACnet: Communication for Notification class, Schedule, Calendar and Log objects could be halted, • SNMP: Values already processed by an active server could be replayed on a passive server.	Data Acquisition Also in: 11.2.06075
Trend-Log buffer lost at startup (SPR #63268) At startup, the first retrieval of <i>Trend-Log</i> buffer could be performed before the subscription to the HDS, leading to the loss of the retrieved values.	Data Acquisition > BACnet Client Also in: 11.2.06055
Data exchanges frozen (SPR #62581) Under some circumstances, data exchanges could freeze, leading to situations where values were no longer updated. In addition, browsing and helpers did not work properly in such cases. The issue could occur on projects with a large number of BACnet variables and significant network traffic. It was related to computer clock & timer resolution.	Data Acquisition > BACnet Client Also in: 11.2.06054
Wrong BBMD started (SPR #63174) Under some circumstances, a wrong BBMD list could be started when an application comprised more than 1 BACnet network.	Data Acquisition > BACnet Client Also in: 11.2.06054
COV re-subscription issue Under some circumstances, COV re-subscription messages were not sent, leading to situations where one or more BACnet device stopped sending value changes while PcVue was expecting them (and failed to detect the abnormal situation). The symptom was that values were no longer refreshed for one or more device, but remained valid. Stopping and starting PcVue was required to recover up-to-date values, stopping and starting BACnet communication objects was not enough.	Data Acquisition > BACnet Client Also in: 11.2.06048
Fatal error when using Schedule and Trend Log objects (SPR #62800) In networked architectures, a network overload could occur due to undesired messages being sent back and forth between PcVue clients and PcVue data acquisition server when handling schedule or trend log configuration items. At some point, a fatal error occurred on the PcVue server side. The issue occurred in a scenario when at least one PcVue client was already running at the moment a data acquisition server was started. The same could occur when re-connecting or re-starting a BACnet network (or BACnet device) when at least one PcVue client was already running.	Data Acquisition > BACnet Client Also in: 11.2.06030

Alarm/event initialization (SPR #62740, 62738)

The alarm/event initialization was not working properly for some event types. A series of fixes & enhancements have been done to the BACnet alarming handling including:

- Some event types were not taken into account at initialization: ChangeOfBitstring, ChangeOfCharacterstring, ChangeOfLifeSafety, ChangeOfState and ChangeOfStatusFlags,
- At the time of mapping a variable to a BACnet alarm/event, the device level timestamp was not retrieved,
- Using the Mapping Editor in online mode, it is now possible to map alarms directly on event-enrollment objects. The same could already be achieved from the variable dialog box,
- It is also possible when using the Mapping Editor in offline mode, except that all event-types are displayed and it is up to the application designer to pick up the correct one (EDE files do not include enough information about events).

Data Acquisition >

BACnet Client

Also in: 11.2.06026

BRCB buffer purged on reconnection (SPR #62804)

Upon reconnection after a communication failure, the buffer of BRCB was purged, leading to a data loss.

Data Acquisition > IEC

61850 Client

Also in: 11.2.06030,
11.1.06090

Buffer overflow loop on reporting (SPR #62704)

Fix of an interop issue related to the buffer overflow handling.

The behavior was not correct with devices indicating buffer overflow after a purge of the buffer and was dependent on the level of implementation of tissues #278, #329 and #453 by device vendors.

The handling has been changed to avoid an infinite loop in the following scenario: (1) reception of a buffer overflow indication, (2) disable report, (3) purge buffer, (4) enable report, (5) reception of the buffer overflow indication.

Data Acquisition > IEC

61850 Client

Also in: 11.2.06026,
11.1.06085

Driver XBUS-IP-MASTER - Fatal error when using shared connections (SPR #63085)

A fatal error could occur when stopping and restarting devices if they were configured to share the same connection.

Data Acquisition >

Other built-in drivers

Also in: 11.2.06046

Driver XBUS-IP-MASTER - Value discrepancies (SPR #62791)

Since versions 11.0.06087, 11.1.06084 and 11.2.06026, discrepancies could occur on received data due to multiple requests being sent if the delay of the response from the PLC is greater than 1 sec and the time-out configured on the node is greater than 1 sec.

In this context, the acquired values may be wrongly interpreted on the PcVue side. As a consequence, monitored values may be wrong, thresholds or alarms may not trigger or trigger false positive.

Data Acquisition >

Other built-in drivers

Also in: 11.2.06030,
11.1.06090, 11.0.06092

Partial log data export (SPR #65933, 65905)

Exported log data was improperly limited to 150 lines per log page.

Data Export

Also in: 11.2.06081

Multiple clicks on the Save Button (SPR #63194, 62768)

A fatal error could occur when the saving process was called several times and already in progress.

General

Also in: 11.2.06033

Unknown user in User.dat file (SPR #65312, 65235)

When the Advanced security strategy was activated, an attempt to login in with an invalid user account was causing the creation of a dummy user in the built-in user directory.

General > User management

Also in: 11.2.06074

Cannot login when domain server is not reachable (SPR #63309)

Despite having activated the setting "cache the credentials", it was not possible to login with a Microsoft Windows User when the domain server was not reachable.

General > User management

Also in: 11.2.06060

Could not login after strong password setting activation (SPR #16676)

After activation of the setting *Impose strong password*, users with "simple" password were no longer able to login. From now on, when this setting is activated, users with a "simple" password are requested to change it at next login.

General > User management

Also in: 11.2.06023

Incorrect optional columns configuration saved (SPR #61950)

Under some circumstances, columns configured in the HDS were not correctly saved.

Historical data

Fatal error on HDS switchover (SPR #64016) Under some circumstances, a fatal error could occur after a switchover of HDS servers. The issue could be reproduced with a single-active HDS server association with a large amount of data to record at the time of the switchover.	Historical data Also in: 11.2.06071
Histo.sav file incorrectly loaded (SPR #64074) When the histo.sav was read at startup, trend values with quality 192 were incorrectly interpreted as if their value was 52428 leading to incorrect records in the archives. This issue only affected proprietary archives units.	Historical data Also in: 11.2.06071
Administrative privileges no longer required (SPR #61058) Since changes brought in with Microsoft SQL Server 2008 R2, administrative privileges on the SQL Server instance were required to connect to a SQL database using the HDS. The issue resided in evolutions of the Microsoft SQL-DMO library. The HDS implementation has been changed to take advantage of the more recent Microsoft SQL-SMO library that does not require such high privileges on the SQL Server instance. The Database Manager and the Replication Manager have also been changed accordingly.	Historical data Also in: 11.2.06060
Backup files lost (SPR #61941) It was possible to configure several proprietary archives unit configured with the same backup directory. In such a configuration, some backup files were lost due to file being overridden. Now the Application Explorer prevents such configuration, and an error message is displayed at project startup if need be.	Historical data
Prevent wrong backup folder configuration (SPR #61941) This fix prevent from using the same backup folder for several proprietary archive units. Using the same backup folder for different archive units causes backup files of one unit to be overridden by files from other units, leading to unrecoverable data losses.	Historical data
Early events at startup not recorded in log lists (SPR #62646) When the compatibility setting enabling the recording of events from all stations was activated, some early events during the startup could fail to be recorded by a remote archive server because they occurred before the connection to the source station was established. The issue could be reproduced with Login events in case the Windows user auto-logon was enabled.	Historical data Also in: 11.2.06026, 11.1.06084
HDS redundancy regression (SPR #62649) Since versions 11.1.06072 and 11.2.06010, in an architecture with a single active historical server association, when a server switched from passive to active, it failed to record data to the database. As a consequence, no new record were stored by the HDS. It was mandatory to restart all the servers of the association to resume recording.	Historical data Also in: 11.2.06024, 11.1.06081
Contingent shrink for databases (SPR #62710) The contingent shrink mechanism was not working efficiently with large databases (over 10 Gb). It has been redesigned to fasten its execution and hence minimize the time window during which blocking database operations are performed. Note that the contingent shrink should be executed only as a last resort to free disk space. While being executed, the data recording is not guaranteed. The usage of Maintenance Plan to delete smaller amounts of records on a regular basis is recommended to free space without taking the risk of blocking database recording.	Historical data Also in: 11.2.05001, 11.1.06090, 11.0.06093
Email and SMS sent multiple times (SPR #65316, 65072, 65002) Under some circumstances, Email and SMS were sent multiple times.	Miscellaneous Also in: 11.2.06076
<i>Upgrade</i> Fully qualified domain names not recognized (SPR #63160) Since versions 11.1.06077 and 11.2.06020, fully qualified domain names were no longer recognized as valid station names in the networking configuration. Only IP addresses could be used.	Networking Also in: 11.2.06054, 11.1.06099
Regression on network messaging between servers Since version 11.0.06044 and 11.1.05000, when a distributed attribute was modified at least twice in less than 200 ms, new values were sent back and forth between the active and passive servers of the producing association.	Networking Also in: 11.2.06001, 11.1.06071, 11.0.06086
Inconsistent configuration on servers A fatal error of a data acquisition server was occurring in case of an inconsistent configuration between servers, when a bit variable was configured as a temporized alarm on a server and as a simple bit on another server.	Networking Also in: 11.2.06001, 11.1.06070, 11.0.06086

Support for double back-slash in expressions

Expressions including a double back-slash to display it on multiple lines in the expression editor failed to load, and the result variable was never updated at runtime.
The issue was a regression following modifications in the expression engine in version 11.1.

Real time data

Also in: 11.2.06001,
11.1.06075

Multimode timetables - Various fixes and enhancements (SPR #64289)

The list of fixes & enhancements includes:

- Critical: Under some circumstances, multimode timetables were displayed with the wrong mode when not all modes were used in at least one interval;
- When deleting more than one exception interval at once, the operation failed and a misleading error message was displayed;
- The button to navigate backward in time in the Calendar view could be disabled, preventing from coming back to the current week. The button to go to 'Today' was working properly in these circumstances.

WebScheduler

Also in: 11.2.06066

4. Enhancements

License Utility - Display .lic file content (SPR #64048) The License Utility is now able to display the content of .lic files prior to updating/upgrading a license.	Add-ons and Tools Also in: 11.2.06064
User privileges to access audits Users can now access the Audit information in the Application Explorer if they are granted Diagnostics permissions in their profile. Until this change, audits were only accessible to users having development permissions.	Audit
Time Sync request handling (SPR #65668) It is now possible to acknowledge positively a Time Sync request even if the service is not supported. This change improves interoperability with IEC 104 clients that do not handle negative ack properly. In all cases, the computer clock is not changed.	Communication interfaces > IEC 60870-5-104 Outstation Also in: 11.2.06079
Invalid timestamp quality It is now possible to set the timestamp quality of the items exposed by the IEC 104 Outstation when using the SCADA Basic instruction <i>SYSTEM</i> with the mode <i>SETSYNCHRONIZEDCLOCK</i> . This instruction is global and is applied to all the items exposed by the IEC 104 Outstation.	Communication interfaces > IEC 60870-5-104 Outstation Also in: 11.2.06001
SnapshotPeriod range modified The range for the <i>SnapshotPeriod</i> setting is now limited to [50 ms, 10 min].	Communication interfaces > SNMP Agent Also in: 11.2.06071
Status bar (SPR #62890) Additional information is displayed in the status bar at the bottom of the Application Explorer and Application Architect: • Current user, • Current station name, • Total number of I/O variables configured, • Max number of I/O variables.	Configuration Environments
Sorting of the Tpl_Instances file The elements in the file <i>Templates\Tpl_Instances.xml</i> are now sorted, which enables easier file comparison between multiple versions of a project.	Configuration Environments > Application Architect
Local branch for symbols (SPR #63193) It is now possible to configure a local branch for symbols.	Configuration Environments > Application Architect
Generate mimics in libraries (SPR #62862) It is now possible to indicate if a mimic has to be generated in the local, common or shared library.	Configuration Environments > Application Architect
Reorganization of the intermediate file The intermediate file generated by the Application Architect has been reorganized to group and sort elements in a more efficient way regarding the import performances.	Configuration Environments > Application Architect
New function support in expressions - StrLen It is now possible to use the function <i>StrLen</i> in expressions to get the length of a string. Syntax: <code>Int = StrLen(String)</code>	Configuration Environments > Application Architect Also in: 11.2.06034

SNMP Manager mapping editor (SPR #62368) The mapping editor for the SNMP Manager now supports array objects.	Configuration Environments > Application Architect Also in: 11.2.06010
OPC items list (SPR #58687) The OPC items are now sorted alphabetically in the Mapping dialog box.	Configuration Environments > Application Explorer
Custom Expression property of OPC variables (SPR #17042) It is now possible to edit the property <i>Custom Expression</i> of OPC variables in the <i>Advanced</i> tab of the variables properties dialog. This property was already available by editing the <i>C\Varexp.dat</i> file.	Configuration Environments > Application Explorer
Configurable default associated labels Some labels that used to be hard-coded are now fully configurable to allow for a greater customization. This includes labels associated to user actions (login, logout...), timestamp quality...	Configuration Environments > Application Explorer
Initialization Bit of Chronometer (SPR #16517) The Initialization bit variable of a Chronometer behavior is now optional	Configuration Environments > Application Explorer
LonWorks items list LonWorks items (Networks and Nodes) are now sorted alphabetically in the Application Explorer.	Configuration Environments > Application Explorer
Station without node (SPR #62063) When creating a new station in the Networking configuration, canceling the node creation was not cancelling the station creation leading to a station configured without a node.	Configuration Environments > Application Explorer
Paste items from context menus (SPR #61660, 16515) It is now possible to paste branches and variables from context menus.	Configuration Environments > Application Explorer Also in: 11.2.06026
HMI for settings related to Event and Cyclic actions Following the addition of settings allowing executing event and cyclic actions on all servers or only the active servers of an association, these settings can now be changed via the Application Explorer HMI.	Configuration Environments > Application Explorer Also in: 11.2.06001
Imports list (SPR #63082) The list of imports is now sorted alphabetically.	Configuration Environments > Smart Generators Also in: 11.2.06055
Several fixes & enhancements of the BACnet Smart Generator (SPR #63820, 63817, 63807, 63803, 63800, 63799, 63797, 63792) The list of fixes and enhancements includes: - Select variables dialog box reworked to reduce flickering in list views, - Fixed several issues with the selection persistency for devices and automation objects, - Fixed an issue when replacing characters in automation object names, - Fixed a validation issue of BACnet Device Id for IIEJ import. Values outside of the range [0..4194303] are no longer allowed, - Improved progress notification upon parsing of input file.	Configuration Environments > Smart Generators

Selecting Smart Generators to display (SPR #62834) It is now possible to select which Smart Generators are available in the right-side menu <i>Import references</i> of the Smart Generators main window.	Configuration Environments > Smart Generators
Handling of time tagged data It is now possible to set how to handle the timestamp upon reconnection to OPC servers: - Use of the local station timestamp, - Use of the last known timestamp. The new setting named <i>Use Local Timestamp Upon Reconnection</i> is available as part of the OPC Client settings. It is set to true for existing project, and defaults to false for new projects. Similar settings already existed for the IEC 104 client and DNP3 drivers.	Data Acquisition Also in: 11.2.06001, 11.1.06067
Support for UTF-8 and OEM encoding for EDE files (SPR #65095, 64376) It is now possible to load EDE files with ANSI, UTF-8 or OEM encoding. Previously, only ANSI encoding was supported.	Data Acquisition > BACnet Client
Property selected by default in Helper (SPR #62936) When creating a <i>List of property reference</i> in the BACnet Helper, the property selected by default is now <i>present-value</i> instead of the first in alphabetical order.	Data Acquisition > BACnet Client
EDE mapping coloration In the EDE mapping dialog box, properties are now displayed in red when read request failed.	Data Acquisition > BACnet Client
Configurable column mapping for EDE files (SPR #63340) From now on, it is possible to select how the loading of each EDE file is handled, either with the automatic detection mode, or with a customized mode by selecting: - The column delimiter; - The column header's names.	Data Acquisition > BACnet Client Also in: 11.2.06066
Support for the time-delay-normal property The BACnet driver now supports the property <i>time-delay-normal</i> (id 356).	Data Acquisition > BACnet Client
Execute Read request after Write request From now on, it is possible to execute a synchronization read request on a BACnet object or property that has been updated by a write request. Such behavior can be configured at device level with the advanced property <i>Writing.Synchronize values after writing</i> (enabled by default). It has been designed to ensure user awareness in cases where the command is successfully executed end-to-end, but, because there is already a higher priority command, the command issued from PcVue is not reflected in the object value.	Data Acquisition > BACnet Client Also in: 11.2.06041
Prevent mapping of unknown objects It is no longer possible to map variables on BACnet objects that are of an unknown type (e.g. object type Id in the range of Proprietary or Reserved object types for example).	Data Acquisition > BACnet Client Also in: 11.2.06037
Reading specific index of a BACnetArray (SPR #62817) From now on, it is possible to map a variable onto a specific index of a property of type BACnetArray (such as priority-array or weekly-schedule properties) by specifying <i>BACnetArray(x)</i> in the advanced property <i>Field</i> of the variable, where x corresponds to the 1-based index in the array. If the specified index is higher than the array size or if the value cannot be converted (according to the variable type), the quality of the variable will be set to NS_FMT. Index 0 can be used to get the size of array. This syntax only applicable to BACnetArray, it is not applicable to properties of type BACnetList.	Data Acquisition > BACnet Client Also in: 11.2.06035
Incorrect list of properties when browsing When the service <i>ReadPropertyMultiple</i> with a property reference set to <i>ALL</i> is not supported by the requested device, the property list defined in the built-in XML catalog is used instead of the default one.	Data Acquisition > BACnet Client Also in: 11.2.06031
Max segments accepted increased to 64 The max number of segments accepted has been increased to 64 (was 16) to improve the interoperability with some devices that were not considering this capability element correctly.	Data Acquisition > BACnet Client Also in: 11.2.06026

Clear Restart IIN and Refresh Attributes (SPR #64640)

It is now possible to configure if a request to clear IIN1.7 (Restart IIN) and Refresh Attributes need to be sent when a connection to a device is established.

Data Acquisition >

DNP3 Client

Also in: 11.2.06071

Time zone overridden

Under some circumstances, it happens that the time zone sent by the device is incorrect (i.e.: misconfiguration). To avoid erroneous data reading and recording, a new advanced property is available at variable level to enable overriding the time zone sent by the device.

Data Acquisition >

DNP3 Client

Also in: 11.2.06064

DNP3 time synchronization

A new advanced property named *Synchronization type* is available on DNP3 devices. It allows defining whether time synch messages sent by PcVue should be formatted as defined by the DNP3 LAN or DNP3 Serial standards (defaults to LAN). This new option allows support for devices that only support DNP3 Serial time synch messages over TCP.

Data Acquisition >

DNP3 Client

Also in: 11.2.06055

DNP3 device redundancy support

In addition to data acquisition server redundancy, the DNP3 client driver now also supports device redundancy.

Data Acquisition >

DNP3 Client

Also in: 11.2.06043,
11.1.06097

Support for the ONLINE flag

The flag ONLINE of DNP3 objects was not taken into account in the status of variables. It is now taken into account in addition to the COMM_LOST flag.

Data Acquisition >

DNP3 Client

Also in: 11.2.06022,
11.1.06075

Improved connection management

In order to avoid multiple connections/disconnections, the communication is stopped after 3 connections and disconnections in less than a second, and restarted after 30 seconds. Such a behavior could be generated by an erroneous configuration in the project and could cause network traffic overload.

Data Acquisition > IEC

60870-5 Client

Also in: 11.2.06038,
11.1.06095

New time zone property (SPR #62568)

It is now possible to configure the time zone (Local or UTC) used by a Sector for timestamped data. It can be set in the advanced properties of Sectors.

Data Acquisition > IEC

60870-5 Client

Also in: 11.2.06023,
11.1.06079

Support for Report Control Block reservation (SPR #61065, 60875)

Control Block Reservation is now supported for URCB and BRCB, including RCB reservation in redundant data acquisition architectures.

Data Acquisition > IEC

61850 Client

SCADA Basic instructions to change global settings (SPR #58835)

New modes are available for the SCADA Basic instruction M61850 to modify the IEC 61850 global settings by script:

M61850("SET_GLOBAL_ORCAT", <Value>)

where <Value> can be "not-supported", "bay-control", "station-control", "remote-control", "automatic-bay", "automatic-station", "automatic-remote", "maintenance" or "process".

Defines the value used for the OrCat parameter when sending Controls

M61850("SET_GLOBAL_ORIDENT", <Value>)

where <Value> can be "00", "01", "10" or "11".

Defines the value used for the OrIdent parameter when sending Controls.

M61850("SET_GLOBAL_TEST", <Value>)

where <Value> can be 0 or 1.

When set to 1, all controls sent will be by default flagged as "Test".

M61850("SET_GLOBAL_CHECK", <SynchroCheck_Value>, <InterlockCheck_Value>)

where <SynchroCheck_Value> and <InterlockCheck_Value> can be 0 or 1.

When <SynchroCheck_Value> is set to 1, all controls sent will be by default flagged for synchro-check.

When <InterlockCheck_Value> is set to 1, all controls sent will be by default flagged for interlock-check.

M61850("SET_GLOBAL_CHECK", <Value>)

where <Value> can be "00", "01", "10" or "11".

Similar to the previous mode with the following value definitions:

"00" SynchroCheck_Value = 0 and InterlockCheck_Value = 0

"01" SynchroCheck_Value = 0 and InterlockCheck_Value = 1

"10" SynchroCheck_Value = 1 and InterlockCheck_Value = 0

"11" SynchroCheck_Value = 1 and InterlockCheck_Value = 1

Data Acquisition > IEC

61850 Client

Double-point configuration at device level (SPR #62993) It is now possible to configure at device level how double-points should be interpreted ([01]/[10] or [10]/[01] for true/false). This setting overrides the one which was already available in the global IEC 61850 settings.	Data Acquisition > IEC 61850 Client Also in: 11.2.06055
Port configuration (SPR #61675) It is now possible to customize the TCP port for connecting to IEC 61850 devices. The new property is available in the device's advanced properties.	Data Acquisition > IEC 61850 Client Also in: 11.2.06046
Support for 3V16, 4V16, 3F16 and 4F16 data formats (SPR #65791) The KNX add-on now supports the 3V16, 4V16, 3F16 and 4F16 data formats.	Data Acquisition > KNX Also in: 11.2.06080
New setting for initial read at startup (SPR #64505) A new setting named <i>InitialReadItemsNumber</i> is available in the KNX configuration file. It specifies the maximum number of items refreshed at once on project start-up. The driver refreshes all the items flagged as R at the rate of <i>TimeOutInSec*30s</i> until all the items are read. Default value is 200.	Data Acquisition > KNX Also in: 11.2.06068
Non-compliant OPC group name (SPR #63246, 63147) A new advanced property named <i>OPC group name imposed by the server</i> is now available. It is designed to solve interop issues when an OPC server imposes a group name that cannot be the name of a configuration item in PcVue (due to special characters or name length). As an example, taking advantage of timestamping at the PLC level with Schneider Electric OFS requires using an OPC group named <i>##TSEventsGroup##</i> .	Data Acquisition > OPC Client Also in: 11.2.06055
IP Mewtocol - Several enhancements (SPR #65393, 65277) The list of enhancements includes: • Data range is increased from 999 to 65535, • New equipment supported : FP2SH-LAN (no IP header), • Support for the bridge feature up to 3 levels for FPX-LAN, • Size of frames is increased from 30 to 500 words.	Data Acquisition > Other built-in drivers
Mitsubishi TCP/IP - Maximum address range for R and D data (SPR #63996) The maximum address range of D and R data for Mitsubishi Q series PLC is now 65535 (was 12287).	Data Acquisition > Other built-in drivers Also in: 11.2.06064
UTF-8 and MSDOS PC-8 support for text variables (SPR #61431) Support for UTF-8 and MS DOS PC-8 encoding for text variables mapped on CimWay frames. The encoding can be set in the advanced properties of the corresponding variables. In case of UTF-8, it is possible to indicate a byte size (from the source) that may differ from the text variable size.	Data Acquisition > Other built-in drivers Also in: 11.2.06026

Driver XBUS-IP-MASTER - Several enhancements (SPR #62301)

Several enhancements of the XBUS-IP-MASTER driver to better support IP to modem converters, including:

- Improved handling of the connection time-out and retry,
- Information frame enhanced with timeout and retry values:
 - INFO 0004: max Timeout value,
 - INFO 0005: current Timeout value,
 - INFO 0006: max number of retries,
 - INFO 0007: current number of retries,
- Improved management of the serialization of several devices using the same connection channel,
- New option at device level to indicate if it is a *Fixed timeout* or *Standard* device:
 - When *Standard* is selected, the time-out is not played if the corresponding socket is not opened on the device (default value),
 - When *Fixed timeout* is selected, the timeout is forced even if the socket is not opened.

In addition, new submodes are available for the SCADA Basic instruction CIMWAY, mode SENDMSG:

- To enable the usage of a specific connection channel to a device:
CIMWAY ("SENDMSG", NetworkName, "EnableConnection;EqtName;CnxNb")
- To disable the usage of a specific connection channel to a device:
CIMWAY ("SENDMSG", NetworkName, "DisableConnection;EqtName;CnxNb")
- To activate CWAudit traces on the selected communication object:
CIMWAY ("SENDMSG", ObjectName, "TraceOn")
- To deactivate CWAudit traces of the selected communication object:
CIMWAY ("SENDMSG", ObjectName, "TraceOff")

Data Acquisition >

Other built-in drivers

Also in: 11.2.06026,
11.1.06086, 11.0.06092

Driver XBUS-IP-MASTER - Default slave Id (SPR #62357)

In order to follow official recommendations, the default slave Id is now 255 (was 1). While discouraged, it is now also possible to configure a slave Id equal to 0.

Data Acquisition >

Other built-in drivers

Also in: 11.2.06001,
11.1.06068

New extraction string

A new extraction string *NOTENUM(x\$y\$z)* is available for bit variables. It enables setting a bit variable to 1 when the source item value is not contained in the given enumeration (here x or y or z).

Data Acquisition >

SNMP Manager

Configuring alarm on Trap of type text (SPR #63262)

It is now possible to configure an alarm on a trap of type text. In such case, the *Field* property has to be set to *StrCmpare(<string>)*, where *<string>* matches the text that will trigger the alarm.

Data Acquisition >

SNMP Manager

Also in: 11.2.06058

Max size of authentication and encryption keys (SPR #62918)

From now on, the maximum size of authentication and encryption keys is 255 characters (was 30).

Data Acquisition >

SNMP Manager

Also in: 11.2.06034,
11.1.06093

Enhanced Command reception

The handling of command reception has been improved to enhance performances. Until this change, all the configured devices were processed. From now on, only the devices having pending commands are.

In addition, a device was not able to receive traps while waiting for a command reception. Both actions are now dealt with separately to avoid any delay in traps handling.

Data Acquisition >

SNMP Manager

Also in: 11.2.06026,
11.1.06079

Starting position of exported data

It is now possible to indicate for each export page the starting position of the data in the page.

Data Export

Out of memory fatal error when exporting (SPR #63447, 61990)

Under some circumstances, when exporting a large amount of trends or on a long period with short sampling, an Out of memory exception could be raised. To prevent such a situation, new settings have been added to Exports.

Data Export

Exporting previous point (SPR #64448) When exporting trends in raw mode, it is now possible to include the last point prior to the export period.	Data Export
Support for special characters in settings (SPR #63475) Characters '#' and '/' are now supported as part of the replacement strings for unknown and non-significant data. This enhancement allows the use of the replacement string '#N/A' (without quotes) which is by default interpreted by Microsoft Excel as a non-significant value (including formula...).	Data Export Also in: 11.2.06064
Filtering logs (SPR #63382) In addition to filtering event types, it is now possible to apply an additional filter based on extended attributes to a Log list when exporting it.	Data Export
Improved filtering of logged data export (SPR #63382) When using data export for logged events, it is now possible to filter according to all usual variable attributes including Domain, Nature and Extended Attributes. A new tab named <i>Attributes</i> is available on Log Filter items to configure the expression filter to be applied to the associated log page.	Data Export Also in: 11.2.06061
Date and time format It is now possible to configure date and time: • Date only, • Time only, • Date and Time. A new argument has been added to the SCADA Basic instruction EXPORT_TREND.	Data Export
Export of interval start and end timestamps It is now possible to export both the start and end date and time of each interval in aggregated statistics.	Data Export
Start date and End date on the same line Start date and end date are now displayed on the same line for aggregated statistics.	Data Export
Data Export limits (SPR #62613) In order to ensure nominal performances, the number of items that can be configured for the Data Export is now limited to: • 100 exports • 10 pages per export • 100 trends per page These limits can be modified in the file \C\svConf.dat. Warning messages are displayed in the Event Viewer when these limits are reached. Performances may degrade when exceeding default limits.	Data Export Also in: 11.2.06026, 11.1.06085
Number of GDI & USER objects, Desktop heap It is now possible to use the SV Core Management Console to change the size of the desktop heap and to set the maximum number of GDI and User objects that can be created per-process. Changing these Windows system-level settings is sometimes necessary to handle more mimics when a PcVue web back end runs as a Windows service. Changing these settings is sensitive; in particular, setting the desktop heap to a value too high can put the system in a no-boot situation due to the Windows kernel not being able to allocate memory properly to even get Session 0 set up.	General Also in: 11.2.06073
Improved mechanism for detecting running Sv32 instances The detection mechanism of running instances of the Sv32.exe process has been improved. It is mainly useful with RDS-based architecture. In addition, new diagnostic messages related to this mechanism have been added.	General Also in: 11.2.06026, 11.1.06087, 11.0.06092
Change for dev licenses Development licenses now offer up to 4 hours of continuous data acquisition.	General > Licensing
User password length (SPR #64047) The maximum password length is now 127 characters (was 16)	General > User management Also in: 11.2.06064

Filtering Active Directory User Groups (SPR #62674) When associating a User profile to an Active Directory User Group, it is now possible to filter the AD User Groups. This feature is particularly interesting when there is plenty of User Groups.	General > User management Also in: 11.2.06026, 11.1.06082, 11.0.06090
Excluding files by extension (SPR #63198) When managing project versions, it is now possible to exclude files depending on their extensions. For instance, to exclude all xml files of the C directory, use the following syntax: <code>fl=C*.xml</code>	General > Version management
Unable to load project from Central folder (SPR #62583) When the Windows user does not have the correct permission on the USR folder, loading a project from the Central folder could fail. Now a warning message box is displayed in such a situation.	General > Version management
Decreasing station priority on HDS failure The availability rate is now automatically set to 0 when the HDS is not answering requests. As a consequence, requests are automatically redirected to a server having a higher availability rate.	Historical data
Log on/off alarm changes setting (SPR #63324, 61669, 61564, 17211) The archive global setting <i>Log only on/off alarm changes in log lists</i> is now read-only when an archive unit with a log list is configured. Changing this setting while having already archived alarms leads to misinterpretation of archived data.	Historical data
ODBC archives - Compatibility with MySQL and MariaDB (SPR #63386) It is now possible to set a specific column delimiter to be used in the handling of ODBC databases. In particular, it enables the usage of MySQL and MariaDB database engines.	Historical data Also in: 11.2.06059, 11.1.06106
Max length of names for archive configuration items increased Max length for names of archive configuration items are now: - Archive unit name is now up to 80 characters (was 12), except for ODBC, - HDS Database name is now up to 100 characters (was 32), - HDS Table name is now up to 45 characters (was 32), - HDS Trend group name is now up to 100 characters (was 32), - Log list name is 100 characters is now up to (was 12), except for ODBC.	Historical data
Invalid points for trends after communication failure (SPR #62964) From now on, invalid points are no longer recorded for trends in case of communication failure, in particular with networking architecture having separated servers for data acquisition and archiving. When communication is recovered, if the VTQ has changed, then an invalid point with the timestamp of the start of the communication failure and the new VTQ is recorded.	Historical data Also in: 11.2.06038, 11.1.06096
Filtering by username (#N) (SPR #62427) From now on, it is possible to filter archived HDS and proprietary log lists by User name (#N). A new column and a new attribute have been added to their respective configuration.	Historical data Also in: 11.2.06037
Deletion of referenced Log table (SPR #62910) From now on, it is no longer possible to delete a Log table when it is referenced by a Log list. Allowing such deletion was leading to configuration inconsistency and logs were no longer recorded without notice.	Historical data Also in: 11.2.06035, 11.1.06093
Low resource warning system for GDI and USER objects Rework on the low resource warning system for both GDI and USER objects: - Changed the GDI and USER object monitoring configuration to use a percentage of the resource limit rather than an absolute value, - Changed the message displayed in the warning dialog box when the application exceeds the maximum resources allocated to it, - Added monitoring of USER objects by default for new projects.	HMI Also in: 11.2.06073
Default export folder (SPR #64190, 61952) The default export folder when exporting data from the wizard of the Trend viewer or the Grid Control is now configurable with the setting <i>Data Export Wizard.Working folder</i> . It defaults to the Documents folder of the currently logged Windows user (C:\Users\<UserName>\Documents).	HMI

Empty comments in exported translations (SPR #64154) When exporting mimic and symbol resources for translations, empty comments are no longer exported.	HMI
List of available SCADA Basic functions (SPR #63269) The list of available functions in a program is now displayed when configuring: • A <i>Run Program</i> animation, • Form Controls, • <i>OnOpen</i> and <i>OnClose</i> functions in mimic properties.	HMI
Default filter of image selector By default, the image selector now displays all files (was only displaying .bmp files).	HMI
Image picker and file types The image picker now displays all files by default, instead of only *.bmp files.	HMI Also in: 11.2.06054, 11.1.06099
Dialog boxes' position reset (SPR #62719) The position of dialog boxes is now reset automatically when they are detected in a non-visible part of the desktop workspace. Such issues occur when changing operating system display setting, for example when switching from 2 screens to 1.	HMI Also in: 11.2.06038
Configurable Navigator's border color and thickness (SPR #62306) It is now possible to configure the border color and thickness of the Navigator from the menu <i>Preference/Colors</i> .	HMI Also in: 11.2.06022, 11.1.06072
Variable substitution dialog box (SPR #62304) The dialog box to configure variable substitutions on a symbol has been enhanced. It is now a sizable window and supports column resizing for a better display.	HMI Also in: 11.2.06001, 11.1.06071
Default value for property "Original size" of symbols (SPR #62304) A new HMI option named <i>Mimics.Symbols."Original size" selected when inserting symbol</i> is available to indicate whether the <i>Original size</i> property shall be ticked or not when inserting a symbol in a mimic.	HMI Also in: 11.2.06001, 11.1.06067
Disabling right-click in the workspace (SPR #62022) A new HMI option named <i>Mimics.Context menus.Disable workspace right click popup menu</i> is available. When activated, the context menu will not be displayed on right-click on the workspace.	HMI Also in: 11.2.06001, 11.1.06061
Replacement text for AlaOn, AlaOff & AlaAck substitution characters (SPR #61869) A new HMI option named <i>Mimics.Animations.Replacement symbol if alarm timestamp does not exist</i> is available to customize the replacement text for the substitution characters of type #xxxAlaOn, #xxxAlaOff and #xxxAlaAck, when the corresponding timestamp does not exist.	HMI > Alarm viewer Also in: 11.2.06001, 11.1.06067
Enhanced text animations Enhancements include the ability to use pre-defined labels associated to an enumeration.	HMI > Animations
Case sensitive comparison in text animations A new HMI global option allows using case sensitive comparison in animations based on text value (defaults to Non-sensitive case comparison). The option is named <i>Enable case sensitivity for animations that compare text strings</i> and is available in the <i>Animation</i> category.	HMI > Animations
Keyboard shortcut for Run Program and Run Macro (SPR #63103) It is now possible to configure keyboard shortcut accelerators for the animations <i>Run Program</i> and <i>Run Macro</i> .	HMI > Animations
Enumeration associated labels in Text animations (SPR #63878) It is now possible to use the <i>Enumeration Associated Labels</i> in text animations. Prior to this enhancement, they were only usable in the WebScheduler.	HMI > Animations Also in: 11.2.06062

Tooltips for wrapped labels in Form controls (SPR #62586) Wrapped labels are now fully displayed as tooltips in Form controls.	HMI > Form controls Also in: 11.2.06064
Branch selection for symbol in branched-mimic (SPR #64130) Now, the selection of the local branch of a symbol takes into account the context branch of the mimic if any.	HMI > Graphics
Selected layers of pasted graphical object (SPR #61084) From now on, when copying and pasting a graphical object, layers configured in the original object are also copied. Previously, layers were set according to the displayed ones at the moment of the pasting.	HMI > Graphics
New sorting option in historical mode It is now possible to sort data according to their timestamp. It defaults to <i>newest data on top of the list</i> .	HMI > Grid control
Ability to display statistical data The Grid control Historical mode is now able to display sampled trend and statistical data, in addition to raw data. Used in conjunction with the Data Export wizard, users can now export any trend data in their preferred format.	HMI > Grid control
Disabling command sending (SPR #63424) It is now possible to disable the possibility for the user to send commands in <i>Variable tracking</i> mode.	HMI > Grid control Also in: 11.2.06058, 11.1.06105
Enumeration labels in the Log viewer It is now possible to display enumeration labels configured for Register and Text variables in the Log viewer.	HMI > Log viewer
Automatic refresh period (SPR #62995) The minimum value of the <i>Automatic refresh period</i> property is now 1 sec (was 5).	HMI > Log viewer Also in: 11.2.06038, 11.1.06095
Initial position of the map (SPR #64012) When inserting a Map control or modifying the provider, the initial position and zoom level are now identical to the ones used when the map was cached with the Map Cache Creator.	HMI > Map control
Markers visibility It is now possible to link the visibility of a marker to a variable.	HMI > Map control
Support for external GPX files (SPR #63249) It is now possible to configure dynamic layers linked to external GPX files. A <i>URI</i> property can be defined at the layer level in the Map Markers Editor to indicate its source.	HMI > Map control
Centering symbol markers on anchor (SPR #64254) It is now possible to configure whether symbol markers shall be positioned according to their anchor or to their center.	HMI > Map control Also in: 11.2.06068
Embedding Markers and Local Map into the project folder It is now possible to store the configuration of markers and map cache into the local <i>GIS</i> folder of a project (could only be stored in the Common folder until this change). As for other graphical objects, the local folder is referenced by a starting '/' in the file name.	HMI > Map control Also in: 11.2.06058
Trend Viewer - Support for 16 curves The trend viewer now supports up to 16 curves simultaneously. As part of this evolution, colors for the trend viewer can be pre-configured using the color preferences.	HMI > Trend viewer
Max length for description (SPR #65149) The maximum length of trend description is now 255 characters (was 60).	HMI > Trend viewer Also in: 11.2.06074
Scientific notation (SPR #64657) Scientific notation was always used in the legend and scale areas when value was greater than 100 000. It is now possible to configure if this formatting has to be used or not.	HMI > Trend viewer Also in: 11.2.06070

Time-axis limits (SPR #63088) From now on, it is possible to configure the horizontal axis period and time capacity buffer from 1 to 14400 for each time unit: Seconds, minutes, hours, days (was 3600).	HMI > Trend viewer Also in: 11.2.06055, 11.1.06101
Max number of points The maximum number of points that can be retrieved to draw a trend curve is now up to 48000 (was 12000).	HMI > Trend viewer Also in: 11.2.06039
Upgrade Backup/restore of the file Settings.ini In order to ensure proper update of the product at installation time, the file \Bin\Settings.ini is now explicitly deleted upon uninstallation. Because this file potentially stores important settings such as the configuration of Thread pools and Web thread pools, it is important that you back up this file prior to uninstallation and make sure you restore those settings that are key to your project set-up after installation.	Installation
New system variables (SPR #65265) The list of new system variables includes: • @System.Localhost.Environment.RunningAsService: Indicates if PcVue is running as a Windows service, • @System.Localhost.Environment.RunningInRemoteDesktopSession: Indicates if PcVue is running in a remote desktop session, • For compatibility, the variable @System.WTS is kept updated if it exists, but it is no longer created and shall no longer be used.	Miscellaneous
Accuracy of timer for cyclic functions Improved accuracy of the timer used for cyclic functions.	Miscellaneous Also in: 11.2.06073
Syntax control (SPR #64583, 64413, 16442) The syntax control has been reinforced for new projects. While it was only executed at design time in earlier versions, syntax control can now also be executed when loading a project. For compatibility purpose, the new setting is only activated for new projects. It is recommended to activate it on projects developed with earlier versions. The setting is named <i>Syntax check</i> and is available in the section <i>Advanced.Compatibility.Syntax</i> .	Miscellaneous
Description property limited to 255 characters (SPR #61530) The description property of various items are now limited to 255 characters (was 80). It includes: • Archives Units and associated objects, • Alarm synthesis, • Alarm Associated actions, • Messages items (profile, templates, SMS and Email), • Function keys, • Cyclic, • Events, • Expressions (template and on variable), • ...	Miscellaneous
Enhanced robustness upon archive server switchover The robustness of the switchover mechanism has been improved for archive server association when configured as single active. In addition, traces have been added to better monitor switchover.	Networking Also in: 11.2.06010, 11.1.06072, 11.0.06087
Expression without a variable (SPR #60832, 60831) From now on, expressions defined without a variable are evaluated and no longer remain NS. It applies to expressions on variable and expressions in animations.	Real time data
Chrono now limited to 1h (SPR #48048) Period of a Chrono variable is now limited to 1h (was 655 sec).	Real time data

Notification of timestamp change

It is now possible to configure whether the Alarm Manager and the User Interface shall be notified when only the timestamp changes.

The new settings are located in the file C:\VarConf.dat:

```
[DeviceTimestampChangeNotification]
ToAlarmManager=1
```

```
ToUserInterfaceManager=1
```

For both settings, the value 1 indicates that the corresponding manager is notified, their default value is 1.

This permits updating real time data and alarms on value change or on timestamp change.

Real time data

Also in: 11.2.06001,
11.1.06069

Instruction TREND - New mode SHOW_LEGEND (SPR #63254)

A new mode SHOW_LEGEND is available for the instruction TRENVIEWER. It enables showing and hiding the legend of a given Trend viewer.

Scripting > SCADA Basic

Instruction TREND - New modes related to thresholds (SPR #62758)

New modes have been added to the SCADA Basic instruction TREND:

- `TREND("THRESHOLD_GETMODE", Window, Branch, Identity, Trace);`
Returns the current mode of the selected trace:
-1: no threshold,
0: automatic,
1: ppphigh/pphigh/phigh/high,
2: ppphigh/phigh/high/low,
3: phigh/high/low/plow,
4: high/low/plow/pplow,
5: low/plow/pplow/ppplow.
- `TREND("THRESHOLD_ISCHECKED", Window, Branch, Identity, Trace, ThresholdNumber);`
Returns the current mode of a given threshold (0: not activated; 1: activated).
- `TREND("THRESHOLD_GETVALUE", Window, Branch, Identity, Trace, ThresholdNumber);`
Returns the value of a given threshold.
- `TREND("THRESHOLD_ISDRAWLINE", Window, Branch, Identity, Trace, ThresholdNumber);`
Indicates if the limit line of a given threshold is displayed or hidden (0: hidden, 1: displayed).
- `TREND("THRESHOLD_GETCOLOR", Window, Branch, Identity, Trace, ThresholdNumber);`
Returns the line color of a given threshold (RGB code in double format).
- `TREND("THRESHOLD_GETSTYLE", Window, Branch, Identity, Trace, ThresholdNumber);`
Returns the style of the line of a given threshold:
0: solid,
1: dash,
2: dot,
3: dashdot,
4: dashdotdot.

Scripting > SCADA Basic

Also in: 11.2.06034,
11.1.06092

Go to the definition of a function (SPR #61506)

It is now possible to go to the definition of a function in a SCADA Basic program by using the corresponding entry of the context menu displayed when right clicking on a function name.

Scripting > SCADA Basic

Upgrade Instruction LOGDISPLAY - Context parameter reworked

The argument *Context* of the instruction LOGDISPLAY, which enables delaying the application of the filter until the mode EXECUTE is called, has been reworked as following:

- It is renamed *DelayExecution*,
- When set to 0, the instruction is immediately executed,
- When different from 0, its execution is delayed until the mode EXECUTE is called,
- It is optional for all applicable modes and defaults to 0.

This argument can be used with the modes DOMAIN, EVENTMASK, EVENTMASKEX, FILTER, LOGLIST, NATURE, MINMAX and SETDATETIME.

When upgrading a project from an earlier version, a particular attention must be given to the mode SETDATETIME that was working differently (instruction delayed only when the argument was omitted).

Scripting > SCADA Basic

Upgrade Instruction M61850 - return code reworked

The return codes of the instruction M61850 has been reworked for the modes:

- START_NETWORK
- STOP_NETWORK
- START_PHYSICALDEVICE
- STOP_PHYSICALDEVICE
- START_DATAGROUP
- STOP_DATAGROUP
- START_DATASETGROUP
- STOP_DATASETGROUP
- START_REPORTGROUP
- STOP_REPORTGROUP

The new return values are the following:

- -1, Command in progress
- 0, Command successfully executed
- 1, Not implemented
- 2, Object not found
- 3, Not enabled
- 4, Already enabled
- 5, Already disabled
- 6, Not produced by local station
- 7, Message lost and nack
- 8, Stopped
- 9, Already stopped
- 10, The owner is not started
- 11, Already connected
- 12, CommObj already connecting
- 13, Connection lost
- 14, Already disconnected
- 15, CommObj already disconnecting
- 16, The owner is in bad state
- 17, Object undefined
- 1001, Stack issue
- 1002, Remote access error
- 1003, No datareport associated
- 1004, Report is already used
- 1005, Bad configuration for scope request
- 1006, No dataset associated
- 1007, Error during browsing

**Scripting > SCADA
Basic**

Instruction OPC - Group identifier separator

The instruction OPC now supports both '.' and '/' as separator for group identifier.

**Scripting > SCADA
Basic**

Upgrade Instruction SYSTEM mode CHANGEPASSWORD - New return value (SPR #63047)

New return values are available for the instruction SYSTEM, mode CHANGEPASSWORD:

- 0: Syntax error,
- 1: Success,
- 2: User name or old password error,
- 3: New password is empty,
- 4: New password length is less than 6 characters, for the advanced security option only,
- 5: New password has already been used, for the advanced security option only,
- 6: New password does not meet the strong password criteria, for the strong password option only,
- 7: New password is the same as the old one.

**Scripting > SCADA
Basic**

Instruction CYCLIC, mode DELALL - New argument A new argument <i>DelAllMode</i> is available for the instruction <i>CYCLIC</i> mode <i>DELLALL</i> . It can have the following values: 1: Delete all temporary items by program (default value), 2: Delete all permanent items by program, 3: Delete all temporary and permanent items by program.	Scripting > SCADA Basic
Instruction EVENT mode DELALL - New argument A new argument <i>DelAllMode</i> is available for the instruction <i>EVENT</i> with the mode <i>DELLALL</i> . It can have the following values: 1: Delete all temporary items by program (default value), 2: Delete all permanent items by program, 3: Delete all temporary and permanent items by program.	Scripting > SCADA Basic
Instruction WINDOW - New mode GETCOLLECTION (SPR #63129) A new mode <i>GETCOLLECTION</i> is available for the instruction <i>WINDOW</i> . It enables retrieving an XML fragment with the list of opened mimics.	Scripting > SCADA Basic
Instruction XMLPATH - New mode COUNT A new mode <i>COUNT</i> has been added to the instruction <i>XMLPATH</i> . It returns the number of nodes in the Xml fragment.	Scripting > SCADA Basic
Instruction CRONTAB - New modes EXECUTE_TABLE & EXECUTE_ALLTABLES (SPR #63444) Two new modes <i>EXECUTE_TABLE</i> and <i>EXECUTE_ALLTABLES</i> have been added to the instruction <i>CRONTAB</i> to execute the standard timetable or active exceptions: <i>CRONTAB ("EXECUTE_TABLE", TableName)</i> returns 0 if the <i>TableName</i> does not exists returns 1 otherwise <i>CRONTAB ("EXECUTE_ALLTABLES")</i> always returns 1	Scripting > SCADA Basic Also in: 11.2.06062, 11.1.06111, 11.0.06096
Instruction ASSOCLABEL - New modes (SPR #16728) New modes are available for the instruction <i>ASSOCLABEL</i> to set a specific associated labels type: <i>SETBITLABEL</i> <i>SETALARMLABEL</i>	Scripting > SCADA Basic
Instruction GETARG - New modes Several modes dedicated to event actions have been added to the instruction <i>GETARG</i> : <i>TS_VALUE</i>: Get the timestamp of the triggering variable, <i>TS_TYPE</i>: Get the timestamp source of the triggering variable, <i>VARVALUE_BIT</i>: Get the triggering variable value as an integer, <i>VARVALUE_TEXT</i>: Get the triggering variable value as a string, <i>VARVALUE_REGISTER</i>: Get the triggering variable value as a double, <i>VARVALUE_ALARM</i>: Get the triggering variable alarm status.	Scripting > SCADA Basic
Instruction TREEVIEW - New modes Several new modes have been added to the instruction <i>TREEVIEW</i> : <i>CLEAR</i>, <i>INSERTNODE</i>, <i>REMOVENODE</i>, <i>SORT</i>.	Scripting > SCADA Basic
Instruction WINDOW mode IS_OPEN - Branch now optional (SPR #62748) From now on, the branch is an optional parameter when using the SCADA Basic instruction <i>WINDOW</i> mode <i>IS_OPEN</i> . It enables to check if a mimic is opened whatever the branch is.	Scripting > SCADA Basic Also in: 11.2.06031, 11.1.06088
Instruction LOGDISPLAY- New mode GET_NAME_FROM_LINE A new mode is available for the SCADA Basic instruction <i>LOGDISPLAY</i> : <i>GET_NAME_FROM_LINE</i>: Returns the variable name associated to a given line number.	Scripting > SCADA Basic Also in: 11.2.06022, 11.1.06075

Instruction CRONTAB - New modes ADDPROG_EX and DELPROG_EX (SPR #15208)

Two new modes are available for the instruction CRONTAB:

- ADDPROG_EX (15) to add a program schedule by CronType/Frequency/Program/Branch/Function and its function arguments & active bit.

```
CRONTAB("ADDPROG_EX", CRONTYPE, Date, Time, Program, Branch, Function [, Arguments [, ActiveBit]]);
```
- DELPROG_EX (16) to delete program schedules with different arguments & active bit.

```
CRONTAB("DELPROG_EX", CRONTYPE, Date, Time, Program, Branch, Function [, Arguments[, ActiveBit]]);
```

The modes ADDPROG and DELPROG are now obsolete.

Scripting > SCADA Basic

Also in: 11.2.06001, 11.1.06066

SetImage method with absolute path (SPR #63487)

The VBA method *SetImage* now support absolute path, thus allowing loading images that are not stored within a project or library folder.

Scripting > VBA

Also in: 11.2.06058

New events on the Grid Control (SPR #63425)

Two new VBA events have been added to the *Grid Control* to indicate when it starts and completes the update of the variables. These events are useful when the Grid control is in variable tracking mode:

- OnBeginUpdatingVariables()
- OnEndpdatingVariables()

Scripting > VBA

Also in: 11.2.06058, 11.1.06105

Change a picture dynamically in a mimic (SPR #62685)

A new VBA method *SetImage* is available for the *Bitmap* objects. It enables to dynamically change a picture in a mimic. Only pictures stored in the libraries (Common, Shared or Project) can be used.

```
myObject.SetImage "/myLib/newImage.png"
```

It returns:

- -1 if the image does not exist,
- 0 if the format is invalid,
- 1 when successful.

Scripting > VBA

Also in: 11.2.06026

Alarm value in VBA (SPR #60978)

A new HMI option named *Scripting.Variable Value returns alarm value if variable is an alarm* is available.

When activated, the VBA property *Value* of *Variable* items is an Alarm value (see below), otherwise it is a Bit value (0 or 1). It is not activated for new projects and activated for existing projects.

In addition, a new VBA property *AlarmValue* is available on *Variable* items. If a variable item corresponds to an alarm, it returns the alarm value as follows:

- 0: Off
- 1: On, Not Acknowledged
- 2: On, Acknowledged
- 3: Off, Not Acknowledged
- 4: Masked operator
- 5: Masked program
- 6: Masked variable
- 7: Masked expression

Scripting > VBA

Also in: 11.2.06001, 11.1.06065

Web Extensions - WebScheduler (SPR #65627, 65436, 65354, 64408, 64389, 63072)

In order to simplify deployment, the WebScheduler now accesses the built-in timetable configuration directly via an API.

The configuration of the path to the *Cron.dat* file is no longer necessary and ignored if present.

Web Server Extensions

Support for Alarm maintenance mode (SPR #63951)

WebVue, TouchVue and the associated Web Services now support the maintenance mode of alarms.

Web Server Extensions

Upgrade Week numbering (SPR #63363)

Week numbering in the WebScheduler is no longer based on the *CalendarWeekRule* setting from the *web.config* file, but on the culture associated to the language selected at login time (or the culture settings of the web browser, if the Default language is selected upon login). This change makes it easier to adapt to a variety of users operating in areas with different standards for week numbering, but may affect existing users if their browser configuration or language selection do not correspond to how the *CalendarWeekRule* setting was configured on the WebScheduler server.

WebScheduler

Also in: 11.2.06056,
11.1.06103

Configuration of associated labels on Schedules (SPR #62625, 61819)

It is now possible to configure associated labels at the schedule level instead of only within the properties of referenced outputs. This new property has a higher priority than properties of reference outputs. It offers the possibility to have suitable labels in the WebScheduler even if schedule outputs are not configured at the PcVue level.

WebScheduler

Also in: 11.2.06038

Default number of schedules displayed (SPR #62557)

A new setting *GridViewPageSize* is available in the *web.config* file of the WebScheduler. It enables to set the number of schedules to be displayed in the schedule page. Defaults to 20.

WebScheduler

Also in: 11.2.06030,
11.1.06089

5. Performance

Alarm counters Performance enhancements in the handling of alarm counter system variables.	Alarms Also in: 11.2.06066
Alarm syntheses loading time improved Loading time of Alarm Syntheses has been significantly improved with a better handling of filter defined without branches. As an example, the loading of 7300 Alarm Syntheses now takes only 7 mn instead of 37 mn.	Alarms Also in: 11.2.06066
Saving of the file HDSTrend.dat The file C:\HDSTrend.dat is now saved on demand, and only when trends have been added, modified or removed. Prior to this fix, it was saved each time a trend was modified leading to strong performances issues when importing configuration with a Smart Generator or the Application Architect.	Configuration Environments
HDS Trends configuration saving (SPR #62905, 62900) From now on, the configuration file containing HDS Trends is only saved in the following cases: - Completion of an import (Generic Import, Smart Generators, Application Architect), - Application Explorer Save action, - Project exit. This file was previously saved upon all single modification of a HDS Trend, causing imports to perform poorly.	Configuration Environments Also in: 11.2.06039
Improved performances of the variable selector (SPR #62849, 62838, 62571) Improvement of the variable browsing implementation. As a consequence, the variable selector is much more responsive.	Configuration Environments Also in: 11.2.06035
Slow display of templates with Global parameters The time to display templates and instances having global parameters has been greatly improved. On large number of instances, the time to display is reduced from 15 sec to 3 sec.	Configuration Environments > Application Architect Also in: 11.2.06081
New settings for performance improvements Two new settings have been added to improve general performances when displaying object composition: <i>Skip reference calculations for generation</i> - This setting affects the generation of properties requiring access to an Excel function. The properties are not generated in the output from the Application Architect. The affected properties do not exist - they are not just empty. This is to ensure the correct synch when de-selecting the option. <i>Do not display detail of included templates for instances</i> - This setting affects the instances tab. If not selected when you click on a template instance, the inputs, input parameters and expressions appear in the lower part of the screen for both the selected instance and any child objects particularly those from included templates. If set, inputs, input parameters and expressions for the included templates are not displayed. This is used to improve the display of the Application Architect's HMI, particularly for templates including other templates that have many parameters to evaluate.	Configuration Environments > Application Architect
Rendering performance on template/category creation Rendering performances when adding a new template or category to a library has been improved.	Configuration Environments > Application Architect
Synchronization time reduced The time to synchronize with the Application Architect has been improved, in particular when the configuration contains alarm synthesis, expression on variables, cyclic and HDS trend items.	Configuration Environments > Application Architect Also in: 11.2.06026, 11.1.06088

Excessive time to import Associated Actions (SPR #61908)

Importing alarm Associated Actions was taking an abnormal long time to perform due to multiple file accesses.
Prior to the fix, importing 6000 Associated Actions took around 12mn. The import time has been decreased to less than a minute.

**Configuration
Environments > Smart
Generators**

Also in: 11.2.06026,
11.1.06085

Improved responsiveness (SPR #62638, 62455, 62230, 61749)

On-demand reads are heavily used by the mapping editor and Helpers for device objects discovery, introspection of property lists, and value retrievals.
This series of enhancements increases performances by reducing both the network traffic and improving the user experience. When using the mapping editor and Helpers, the time to display or refresh information is reduced, making use of these tools much more comfortable for users.
The improvement is significant when connected to devices with limited support for segmentation, small max APDU size, or having large sets of objects and properties (object-list, arrays...).

**Data Acquisition >
BACnet Client**

Also in: 11.2.06038

Resources usage (SPR #65770)

Improvements to CPU and resources usage for the IEC 61850 driver, leading to more responsive data exchanges. CPU consumption has been reduced by 40%.

**Data Acquisition > IEC
61850 Client**

Also in: 11.2.06080

Excessive time to stop a network (SPR #62605)

In case of dynamic host name resolution, stopping a network could take a long time. Now the name resolution is stopped when a device is stopped.

**Data Acquisition >
SNMP Manager**

Also in: 11.2.06031,
11.1.06078

Several performance improvements

Several performance improvements, including:

- Faster start-up, reduced generation and synchronization time with the Application Architect and XML generic import,
- Improvements to CPU and resources utilization for the IEC 61850 driver, leading to more responsive data exchanges,
- Improvements to on-demand reads with the BACnet driver, leading to more responsive configuration and diagnostic tools,
- Improvements to the variable browsing to improve the user experience with the variable selector,

General

Improvements to the WebScheduler responsiveness when displaying BACnet Schedules and Calendars.

Max framerate

The framerate is now limited to 33 fps to avoid CPU overloading.

HMI > Map control

Also in: 11.2.06045,
11.1.06098

Loading time of the Trend Viewer (SPR #62336)

The time to load historical data points in the Trend Viewer has been reduced.

**Web Server Extensions
> WebVue**

Also in: 11.2.06001,
11.1.06068

Asynchronous loading of schedules (SPR #62557)

The loading time of schedules has been improved by using asynchronous calls. In addition, selecting a schedule before the end of loading interrupts it to enable a faster display of the selected schedule.

WebScheduler

Also in: 11.2.06045

BACnet Calendar loading time (SPR #62435)

When displaying a BACnet Calendar, multiple reads were done, slowing down the loading time of the calendar page.

WebScheduler

Also in: 11.2.06010

6. Audit & diagnostic

Archives audit (SPR #62846) Audit counters for archives items have been enhanced. The following counters are now available: • Trends linked to Free Archive Units, • Trends linked to HDS Archive Units, • Trends linked to ODBC Archive Units, • Trends linked to Proprietary Archive Units, • Trends linked to other outputs (printer), • Trends without output, • Log lists linked to Free Archive Units, • Log lists linked to HDS Archive Units, • Log lists linked to ODBC Archive Units, • Log lists linked to Proprietary Archive Units, • Log lists linked to other outputs (printer), • Log lists without output.	Audit
New audit counters for IEC 104 Outstation (SPR #64587) New audit counters are available for IEC 104 Outstation.	Audit
Pending export (SPR #64508) A new system variable is available to indicate the amount of pending exports per station: <code>System.<Station>.DataAnalysis.DataExport.PendingExports</code>	Audit
Additional messages in FORM.ERR (SPR #64265, 64264) New messages are recorded in the FORM.ERR file when incorrect properties are defined in the Varexp.dat file, in particular: • Range of alarm acknowledgment level between -1 and 29, • Range of alarm masking level between -2 and 29, • Range of alarm maintenance level between -2 and 29. Value -1 means that the corresponding property uses the <i>Alarm Priority</i> level. Value -2 means that the corresponding property uses the <i>Alarm Acknowledgment</i> level.	Audit
Additional traces and messages for Email and SMS (SPR #63746) Additional traces and messages can be activated for diagnosis purpose for Messages (Email and SMS).	Audit
CwAudit startup enhancement (SPR #63029) CwAudit was able to connect to PcVue only one time after startup. Now it can be started, stopped and restarted on the fly while PcVue is running.	Audit Also in: 11.2.06038
CwAudit - Max number of equipments (SPR #63019) The maximum number of equipments CwAudit can managed is now 2018 (was 256).	Audit Also in: 11.2.06038, 11.1.06096, 11.0.06093
New traces for the SNMP Agent driver (SPR #62378) New traces are added to the SNMP Agent driver, for a better diagnosis of incorrect loading of the configuration file.	Communication interfaces > SNMP Agent Also in: 11.2.06001
Additional report in case of fatal error (SPR #65060) In addition to dump file, plain text files are now created in case of a fatal error of the Application Explorer or Smart Generators.	Configuration Environments
New dump files (SPR #16703) From now on, dump files are generated upon fatal error of the Application Explorer, the Application Architect and Smart Generators.	Configuration Environments Also in: 11.2.06035

Application Architect tracing Logs and traces generated by the Application Architect have been improved for better diagnosis and tracking of the sources of configuration errors.	Configuration Environments > Application Architect
New traces for the KNX driver (SPR #62378) New traces are added to the KNX driver, for a better diagnosis of incorrect loading of the configuration file.	Data Acquisition > KNX Also in: 11.2.06001
Enhanced robustness of the Event Viewer (SPR #62901, 62763) Under some circumstances, a fatal error could occurred when too many traces were sent to the <i>Event Viewer</i> . Now the <i>Event Viewer</i> updates the displayed traces 3 times per seconds instead of on every new trace.	General Also in: 11.2.06067
Warning message when no reference project/library (SPR #65102) A warning message is now displayed in the event viewer when the project is started using the command line option -r or -r_delta if no reference version is defined.	General > Version management

7. Add-ons & tools

BACnet server Add-on (SPR #63008)

A BACnet server interface is now available as an Add-on. It supports BACnet/IP with the profile B-ASC.
The Add-on is licensed.

**Communication
interfaces**

Also in: 11.2.06057

8. Installation

Dream Report version 5.0 The newer installation package for Dream Report is available in the Add-ons & Tools section of the DVD.	Add-ons and Tools
New Add-on - OPC UA Gateway PcVue now supports the OPC UA Gateway with built-in licensing. It includes: • The OPC UA client gateway for data acquisition, • The OPC UA server gateway for exposing PcVue variables to 3rd party UA clients. The OPC UA Gateway is available in the Add-ons & tools section of the DVD.	Add-ons and Tools Also in: 11.2.06063
New and updated libraries New and updated libraries: • Railway: A new library including a set of images and symbols for Urban & Main lines signaling systems and station assets such as ticketing machines and security gates, • Navigation: Updated mimic templates with new styles in dark and light themes.	General
Documentation update The product documentation has been updated: • Online help in Chinese - Now at the level of version 11.2 update.	General > Documentation

9. Security

Weak password set by the administrator (SPR #64326) When resetting a user's password, the administrator was able to set a weak password even if a strong password policy was enforced.	General > User management
OpenSSL library updated The OpenSSL library has been updated to version 1.0.2q (20 Nov 2018).	Security
Latency when starting the application (SPR #63384) Under some circumstances, a huge latency (up to 1 min) could be noticed when starting an application (project selector, Application Explorer...). The issue was due to the validation of the code-signing certificate regarding the certificate revocation list (CRL).	Security Also in: 11.2.06060
FIPS enforcement deactivated FIPS has been deactivated at the application level for all the provided executables that are based on the .NET Framework and are likely to use cryptographic algorithms that are not FIPS compliant.	Security Also in: 11.2.06058, 11.1.06106

10. Other fixes & enhancements

SPR #14068, 60149, 61490, 61879, 61935, 61967, 61968, 61978, 62014, 62792, 63301, 63897, 63922, 64068, 64514, 64567, 64645, 64675, 64695, 64794, 64815, 64816, 64817, 65180, 65225, 65245, 65307, 65470, 65703, 65768, 65796, 65920	
SPR #65931	Also in: 11.2.06082
SPR #65840, 65958	Also in: 11.2.06081
SPR #65617, 65701, 65720, 65725	Also in: 11.2.06080
SPR #65496, 65513	Also in: 11.2.06079
SPR #65491	Also in: 11.2.06078
SPR #65463	Also in: 11.2.06076
SPR #65313	Also in: 11.2.06074
SPR #65074, 65090	Also in: 11.2.06073
SPR #64555	Also in: 11.2.06069
SPR #63949, 64596	Also in: 11.2.06068
SPR #63532, 63893, 64315, 64503, 64531	Also in: 11.2.06067
SPR #64316	Also in: 11.2.06067, 11.1.06115
SPR #64463	Also in: 11.2.06067, 11.1.06114
SPR #61718, 61858, 63749, 63974, 63988, 64018, 64125	Also in: 11.2.06064
SPR #64042	Also in: 11.2.06064, 11.1.06113
SPR #63338	Also in: 11.2.06064, 11.1.06112
SPR #63815, 63889, 63923	Also in: 11.2.06062
SPR #63723	Also in: 11.2.06062, 11.1.06112
SPR #63894	Also in: 11.2.06062, 11.1.06111
SPR #63873	Also in: 11.2.06061
SPR #60690, 63095	Also in: 11.2.06061, 11.1.06110, 11.0.06095
SPR #63730	Also in: 11.2.06060

SPR #63668	Also in: 11.2.06059
SPR #63334, 63355, 63383, 63438, 63493, 63580, 63607	Also in: 11.2.06058
SPR #63486	Also in: 11.2.06058, 11.1.06105
SPR #62167, 63277	Also in: 11.2.06057
SPR #63403	Also in: 11.2.06057, 11.1.06105
SPR #62762, 63375	Also in: 11.2.06056
SPR #63164	Also in: 11.2.06056, 11.1.06102, 11.0.06094
SPR #63046, 63119, 63226, 63229	Also in: 11.2.06055
SPR #63255	Also in: 11.2.06055, 11.1.06102, 11.0.06094
SPR #63163, 63174, 63183, 63208	Also in: 11.2.06054
SPR #63164	Also in: 11.2.06054, 11.1.06099, 11.0.06093
SPR #63152	Also in: 11.2.06048, 11.1.06098
SPR #62845	Also in: 11.2.06047, 11.1.06098
SPR #62734	Also in: 11.2.06045
SPR #63030	Also in: 11.2.06038
SPR #62251, 62881, 63764	Also in: 11.2.06035
SPR #62811, 62912	Also in: 11.2.06034
SPR #62806, 62875	Also in: 11.2.06033
SPR #62874	Also in: 11.2.06033, 11.1.06092
SPR #61080, 62496, 62749, 62786	Also in: 11.2.06031
SPR #62741	Also in: 11.2.06031, 11.1.06088
SPR #62672	Also in: 11.2.06026
SPR #16300	Also in: 11.2.06025
SPR #62585, 62668	Also in: 11.2.06025, 11.1.06081

SPR #62535	Also in: 11.2.06023, 11.1.06086
SPR #62409	Also in: 11.2.06023, 11.1.06079
SPR #62414	Also in: 11.2.06022
SPR #62541	Also in: 11.2.06022, 11.1.06076, 11.0.06087
SPR #62538	Also in: 11.2.06022, 11.1.06076, 11.0.06087, 10.0SP2, 9.0SP3
SPR #62451	Also in: 11.2.06022, 11.1.06073
SPR #62034	Also in: 11.2.06001, 11.1.06071
SPR #61039	Also in: 11.2.06001, 11.1.06069, 11.0.06086
SPR #62290	Also in: 11.2.06001, 11.1.06068

27. Known Issues

[Fixed] Alarm synthesis timestamp changed on server switchover (SPR #71548) On a server switch from passive to active, an alarm synthesis is recalculated, including its value and timestamp. If the alarm synthesis has not changed, the value is not set. But, since a regression introduced in Maintenance Release 12.0.20 the timestamp is updated, causing event triggering if any. [Edit: Fixed in 15.2.4 and 12.0.28].	Alarms 12.0.20 Also in: 15.2.0, 15.1.0, 15.0.0
Audit counter mean values are inaccurate (SPR #65251, PCV-2801) Calculation of mean values is wrong for audit counters (error every 27 hours).	Audit 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0
Lost instances (SPR #67013) Under some circumstances, all instances are lost. Investigations indicate that this may be caused by the deletion of the root node. While the investigations continue to uncover and fix the source of the issue, changes have been made to mitigate and prevent the root node deletion. Specific diagnostic traces have been added to indicate that an attempt to delete the root node occurs. In addition, a specific backup (in addition to the rolling backup files) is now performed to ensure that instances configuration will not be lost. These changes are in effect starting with the Maintenance Release 12.0.13. If you run an earlier release of version 12 and notice that the instances root node is not displayed in the Instances tab of the Application Architect, you have probably run into the issue and the instances are lost. In such situation, stop PcVue and recover a valid instances configuration from the rolling backup files located the <i>C:\Templates\Back</i> folder. Do not restart PcVue multiple times before you recover your configuration as it exposes you to losing the useful rolling backup.	Configuration Environments > Application Architect 12.0.13 Also in: 15.2.0, 15.1.0, 15.0.0
Upgrade Potential behavior change for alarm syntheses (SPR #67799, 66701, 60594) Starting with version 11.2 Release, by default, new alarm synthesis items created with the Application Explorer or the XML Generic Import do not take the population filter into account. This change was not introduced for alarm syntheses created with the Application Architect, leading to the following potential issues if your project includes populations and alarm syntheses created based on templates and instances with the Application Architect: • If you have migrated or are migrating a project from version 11.1 or earlier to version 11.2 or later, you should check with the Application Explorer that alarm syntheses are configured to fit your requirements (take into account or ignore population). If configuration does not fit, reverse the value of the 'Take population filter into account' using the Application Architect and proceed with a full synchronization. • Do the same verification and configuration changes if your project was once migrated to 11.2 (earlier than 11.2.06094), and is now being migrated to 11.2.06094 or later. • Do the same verification and configuration changes if your project was once migrated to 12 (earlier than 12.0.16), and is now being migrated to 12.0.16 or later. • In all cases, pay particular attention to alarm syntheses created with version 11.2 and 12, as it is likely that the population filter property is not applied as it used to be with earlier versions. You are not impacted by this issue if you do not use population filtering in your project, or if alarm syntheses are not created based on application modeling with the Application Architect.	Configuration Environments > Application Architect 12.0.16 Also in: 15.2.0, 15.1.0, 15.0.0
Supported operating systems for the KNX Add-on (PCV-2801) The KNX add-on is only supported on the following operating systems, with the exclusion of any virtual environment: • Windows 7 SP1 (x64), • Windows Server 2008 R2 SP1 (x64).	Data Acquisition > KNX 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0, 11.2.05001

Supported operating systems for the LNS data acquisition driver The LNS data acquisition driver is only supported on the following operating systems: • Windows 7 SP1 (x64), • Windows 8.1 (x64), • Windows Server 2008 R2 SP1 (x64), • Windows Server 2012 (x64). Starting with version 15, the LNS data acquisition driver is validated with IzoT Net Server 4.5 (also known as OpenLNS) and supports recent operating systems.	Data Acquisition > LNS 12.0.7 Also in: 11.2.05001
Xbus-IP-Master - Handling of connection termination (SPR #66310) Some devices require connection termination using the TCP FIN_ACK flag instead of the usual RST_ACK. In the case, receiving the TCP RST_ACK caused the device to reboot. In order to improve interop with such devices, a change was implemented to make it possible to configure if a connection shall be terminated using the TCP RST_ACK or FIN_ACK flag. [Changed in versions 11.2.06085, 12.0.19 and 15.0].	Data Acquisition > Other built-in drivers 12.0.7
[Fixed] Issue when changing the binding (SPR #65998, 65964) When changing the binding of a web site (from hostname to IP or IP to FQDN for example) and re-deploying, the Registry service end-point is not properly re-configured, preventing the web site from being operational. The workaround is to delete and recreate the web site or to modify the WDC configuration file manually. [Fixed in 12.0.10]	Deployment tools > Web Deployment Console 12.0.7
[Fixed] WDC will not start after changing the computer name (SPR #66066, 66017) Because the WDC checks that the IIS configuration it holds matches the computer where it is run, if the computer name of an IIS Web server is changed after a deployment with the WDC, then the WDC will fail to start again. [Edit: Fixed in 12.0.10]	Deployment tools > Web Deployment Console 12.0.7
License for version 15 not recognized by PcVue version 12 Some licenses shipped during Q2 2021 for version 15 are not recognized by PcVue version 12. If you encounter the issue, update to Maintenance Release 12.0.14 or a later Maintenance Release of version 12, or contact our sales representative. [Fixed in 12.0.14]	General > Licensing 12.0.13
<i>Upgrade</i> [Fixed] Upgrade of HDS table schema With version 12, the length of Log list names can be up to 100 characters long (was 12). This change affects the schema of HDS log tables (column <i>LogList</i>). The change in table schema is done automatically at startup if the size of the database is less than 10 Gb. If the size is higher, the traces ask you to run the migration script. The issue is that the migration script, as supplied with the installation package 12.0.7 and 12.0.8, was wrongly altering the column <i>EvtTitle</i> instead of the column <i>LogList</i>, causing the archiving to no longer be effective after project startup. If you have upgraded your HDS log tables with version 12.0.7 or 12.0.8, it is advised to apply the following changes manually: • Alter the <i>LogList</i> column of Log tables to type it varchar(100), • Alter the <i>EvtTitle</i> column of Log tables to type it varchar(255), • Make sure the value of <i>DBVersion</i> is set to 4. [Edit: Fixed in 12.0.9] If you are upgrading your HDS log tables with version 12.0.9 or later, no specific action is required apart from running the migration script.	Historical data 12.0.7
SQL filtering on HMI variables (SPR #65903, PCV-2801) When using the Grid control in variable tracking mode, the Sql syntax cannot be used to filter HMI variables.	HMI > Grid control 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0

[fixed] Client/Server networking instability if recent hardening is enabled (SPR #76197, 76112, 75016) If the security fix described in security bulletin SB2025-4 is enabled, networking packets can be falsely detected as malformed, causing a server station to force a disconnection. This issue leads to a situation where a client station may not be able to stay connected to a server station in a stable way. Recommendation for 16.3.1, 16.3.2, 15.2.12 and 12.0.31: The issue does not manifest itself if the recent hardened connection mechanism is disabled. To disable this mechanism, the security alteration setting named 'Networking.Allow security altering configuration options' must be checked and the property 'Allow stations with altered security' on Nodes must be set to Yes. Fixed in 17.0.0, 16.3.3, 15.2.13 and 12.0.32. The security bulletin SB2025-4 is updated (Rev B).	Networking 12.0.31 Also in: 16.3.1, 15.2.12
[Fixed] Potential memory leak in Networking with mixed PcVue versions (SPR #67867) Under some circumstances, while migrating a project, a memory leak occurs on a data acquisition server if it runs a version greater than or equal to 11.2.6086 and communicates with a client station running with version 12.0.15 or lower. The leak occurs at each restart of a client station, and its size is proportional to the number of variable subscriptions sent by the client station to the server station (250 bytes per subscription - typically a leak of 2.5 MB for 10 000 variables at each restart of a client station). [Edit: Fixed in 11.2.06094 - The leak is fixed whatever version 12 build is running on the client station] [Edit: Fixed in 12.0.16 - The leak is fixed whatever version 11.2 build is running on the server station]	Networking 12.0.16
BeforeClose script not triggered (SPR #68418, PCV-2801) Since version 12.0.7, the SCADA Basic function called upon closing a mimic was not correctly triggered when the mimic was closed via SCADA Basic. [Edit: Fixed in 12.0.20 and 15.0.0 for PcVue desktop] A fix for WebVue is planned for a later release.	Scripting > SCADA Basic 12.0.20 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0
[Fixed] Control animations not executed (SPR #70070, 69124) In Maintenance Release 12.0.24, control animations in mimics are not executed if rendered in Web & Mobile clients. We recommend users of WebVue and TouchVue not to use the Maintenance Release 12.0.24. [Edit: Fixed in 12.0.25]	Web Server Extensions 12.0.24
Issue with host name resolution on Android (SPR #65724) Android versions earlier than 5.1 are known to be affected by a bug related to host name resolution. When using DHCP, the issue prevents from using a host name other than a Fully Qualified Domain Name even if the host name is properly registered in a local DNS and the DNS server automatically updates itself to reflect DHCP leases. The issue is that Android devices do not use the DNS search path provided by DHCP. Please refer to the Google Issue Tracker for more information: https://issuetracker.google.com/issues/36916949	Web Server Extensions 12.0.7 Also in: 15.2.0, 15.1.0, 15.0.0
[Fixed by Apple] Issue in the Trend viewer with the Safari browser (SPR #65731) With the Safari Web browser, the hexadecimal code of colors is displayed instead of the actual colors in the Trend viewer's legend. The fix is available in Safari 12.1 shipped with iOS 12.2 and macOS 10.14.4. It is also available for macOS 10.13.6 and 10.12.6. (Added support for <input type="color">)	Web Server Extensions > WebVue 12.0.7
[Fixed] Limited support for included mimics and popups Support for included mimics and popups in WebVue is still limited compared to the behavior of the desktop client. [Edit: Fixed in 12.0.11]	Web Server Extensions > WebVue 12.0.7
Drag handling with Firefox (SPR #70455, PCV-2801) If a position animation with <i>Cursor mode</i> enabled is used on an image, the user needs to click twice in Firefox to perform the action.	Web Server Extensions > WebVue 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0

Known limitation related to hiding control zone highlighting (SPR #69621, 69606, 68375, PCV-2801) At the time of writing, hiding the control zone highlighting (according to the HMI option) is only implemented for rectangle shapes.	Web Server Extensions > WebVue 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0
Known limitation related to the animation Send register in Step mode (SPR #66012, PCV-2801) The '+' and '-' buttons are not rendered in WebVue when using the <i>Send register</i> animation with the <i>Step mode</i> enabled.	Web Server Extensions > WebVue 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0
Restrictions related to web browsers Each web browser can come with its own restrictions, in particular when security is at stake. Below is a list of known behaviors, specific to one or the other web browser available on the market at the time of writing. These restrictions may be cleared and others appear depending on web browser updates and their publisher's strategy. • Safari on iOS - When the Safari web browser is closed without logging out from WebVue, WebVue is re-open by default the next time the user opens Safari, but the user will not be able to successfully login, and will be stuck on the WebVue loading page. This is due to the Safari snapshot of the last visited page where Safari displays the web page without actually requesting the web server. The solution is to go to the address bar and click the Go button, or ask Safari to reload the page. • Google Chrome - The password manager of Chrome does not store credentials if the connection to the web server is insecure. As a consequence, if you do not have a proper certificate on the web server, users will not be able to use the Chrome password manager to store their credentials. • Microsoft Edge - Edge in versions prior to 79 (Jan 2020) does not store the session cookie when using the local computer as a web server with a binding on the hostname at the IIS level. As a consequence, you cannot successfully log in, and can see a warning message indicating that the version of the client is not compatible with the server. The solution is to add .local to the computer host name when setting up the web site binding with the Web Deployment Console (for example, https://mycomputername.local instead of https://mycomputername).	Web Server Extensions > WebVue 12.0.7 Also in: 15.2.0, 15.1.0, 15.0.0
SCADA Basic scripting of form controls (SPR #65938, PCV-2801) When scripting form controls in SCADA Basic in a WebVue context, the GET modes such as GETSELECTEDINDEX, GETTEXT... do not return the correct value if the currently selected item was selected either via the keyboard or another script (with a mode such as SETSELECTEDINDEX). These GET modes work properly if the selection was done via mouse-click or a tap (on a touch device).	Web Server Extensions > WebVue 12.0.7 Also in: 17.0.0, 16.3.0, 15.2.0, 15.1.0, 15.0.0
Support for WebFont requires manual installation on Windows 7 SP1 (IIS 7.5) (SPR #65847) If the Web Server runs IIS 7.5 - a Windows 7 desktop or Windows 2008 R2 server computer - the default font (Times New Roman) is used instead of the Roboto Web Font for texts inside pre-defined WebVue pages and mimic titles. Texts used in animations within mimics and symbols are not affected. This issue is due to the lack of pre-configured support for WebFont in IIS 7.5. The solution is to install the MIME type handler for .woff files manually using the IIS manager. This issue may be fixed in a later version of the Web Deployment Console.	Web Server Extensions > WebVue 12.0.7 Also in: 15.2.0, 15.1.0, 15.0.0
Upgrade WebScheduler migration issue In order to fit with Microsoft Windows default privileges for the IIS_IUSRS group, the configuration files of the ScheduleData service are now stored in the folder ScheduleData\AppData on the IIS Web server. These files, namely ScheduleDataAccess.xml and SchedulesAccess.dat, used to be stored in the folder ScheduleData\config. Upon migrating a project to PcVue 12.0, it is advised to move the files manually to avoid losing customization of any piece of configuration. The manual copy shall take place after installation and deployment of the WebScheduler (using the WDC).	WebScheduler 12.0.7 Also in: 15.2.0, 15.1.0, 15.0.0



PCVUE 12 RELEASE NOTES

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