

## Improvements and corrections in the V12.0.61.1 version

\*\*\*\*\* Improvements \*\*\*\*\*

### D2D-4845 CNF – Database test handling when changing name/password/DSN

If a name or password used for access to a database is changed while editing an object of the Database type, the user is notified when clicking the button “Test” or “Test tables” that before the test, it is necessary to save the object, so the changed name or password will be used while testing.

### D2D-4773 DBM – Work optimization with non-text variables

In the DbManager process, the work with non-text variables was optimized. For these variables, the memory, used by text variables, is not unnecessarily allocated.

### D2D-4846 DBM – Finishing tasks after configurational disabling of a database

DbManager, after configurational disabling of an object of the Database type (Off), ends service tasks of the given database within a few tens of second (if the tasks existed and they are not used anymore). Afterward, the value of the object of the Database type will drop to zero.

### D2D-4605 ESL – Extension of the HI\_GetPalRGB function

The %HI\_GetPalRGB function was extended by the possibility to define the object “Color palette” as another optional parameter. If the parameter is not defined, it will be read from the palette assigned to the scheme, which was the default behaviour. If HBJ of other palette is defined, the colours will be read from that palette.

### D2D-4807 GRED – Setting of chosen parameters of a scheme while creating it

When creating a new scheme, it is possible to set a part of the parameters.

### D2D-4822 GRED – Display information in the title of the scheme if it is a component

If the scheme is a component, it has the component icon in the left top corner.

D2D-4789 HI – Information window about the scheme is small

The information window is height-adjusted to the displayed text and it is resizable.

D2D-2912 HI - Tooltip for the Windows item of the Tree type element

A script function %HI\_SetToolTipText was added; it enables to assign tooltip for the Windows item of the element of Tree type.

D2D-4897 KOM – Correction of the writing in the OPC UA protocol

In the OPC UA protocol, in the supported versions, there was a filter implemented at the end of 2018. The filter prevents the situation when after writing more values (e.g. 1, 2, 3) quickly in succession (e.g. with millisecond time interval), the value of the I/O tag would not change in this order, for instance 1(Transient) -> 2(Transient) -> 3(Transient) -> 1(Transient) -> 2(Transient) -> 3. Repeating of values 1, 2, 3 is caused by asynchronous confirmation of writing from the OPC UA server side (if the I/O tag is configured as “write only”), or else by the following reading of the value (if the I/O tag is not “write only”).

This behaviour was corrected by filter implementation, so the values will change in the order 1(Transient) -> 2(Transient) -> 3(Transient) -> 3. The filter relied on value timestamps (if the confirmation from the OPC server side was older than current values, it did not change the value).

However, in the case of a particular OPC server (PLC B&R), the value read after the last writing happened to have older time stamp than the last written value and thus the I/O tag stayed in the Transient state. Today’s correction changed the filter functionality so that the time stamp of the read value from the last writing (if no other writing is underway) is not taken into account.

D2D-4918 KOM - Ethernet/IP: improvement of the support for Rockwell devices

In the Ethernet/IP protocol, the support for Rockwell devices was improved:

- using the station parameter “Route Path for Unconnected Send”, it is possible to wrap other messages into an “Unconnected Send” message (and address for example objects on a backplane or behind a router)
- using the station parameter “Use Multiple Service Packet Service”, it is possible to wrap other messages into the message “Multiple Service Packet Service”

D2D-4801 CNF, KOM - DLMS protocol: support of the Logical Name addressing

In the DLMS/COSEM protocol, a possibility to address objects using Logical Name (addressing by the 6-byte OBIS code) was added. So far, it was possible to address using Short Name (16-bit number).

Addressing using Short Name is supported usually by older and simpler electrometers; addressing using Logical Name is supported by newer electrometers.

At the same time, a support for setting time was implemented if the communication uses Logical Name addressing.

#### D2D-4866 EDA - EDA – Detailed logging of data changes

The possibility of detailed logging of value changes of periodical vectors was added into the EDA subsystem. Beside the time of a change, a part of the logs is also original and new values including status flags and the name of the user who performed the change.

#### D2D-4642 HI – Concealing the Windows frame on the scheme

The option to display/not to display the Windows frame on the scheme was added in the scheme configuration.

#### D2D-4601 HI – Change of Color palette in the whole HI

A new function %HI\_RemapColorPal(palette1, palette2) that redirects the request for colour from the palette1 to the palette2 was added. The change will be visible in the newly opened windows (schemes). In the already opened windows, it will be visible only after the next request for colour from the palette palette1.

#### D2D-4877 System - Check for D2000 updates

A possibility to perform automatic online check for existence of a patch package/ a new version of D2000 was implemented. The settings are available from the Application manager process (d2smc.exe).

\*\*\*\*\* Corrections \*\*\*\*\*

#### D2D-4828 ARC – Correction of the %ARC\_GetValue function

An error in the archive that was affecting the calculated archives using the %ARC\_GetValue function was fixed. The error was caused by the correction D2D-4658 from October 18<sup>th</sup>, 2018.

The error manifested itself only in running calculations; interval recalculation (RECALC action) fixed the error.

#### D2D-4915 ARC – Correction of calculated change-based archives

The error in the calculation of the calculated change-based archive object was fixed. If the object had never had value and the result of calculation was an invalid value (Invalid), this value was filtered out and was not written into the archive database.

Filter implementation was adjusted, so the filter would not be active if the first value is in question.

#### D2D-4812 ARC, HI – Correction of data resampling in reading from the archive into table displaying historical values in HI

An error when data incoming to the table displaying historical values in HI (opened by Ctrl+H) could contain newer data than the newest objects value (for periodic archives – primary, calculated or statistical) unlike the data incoming to graphs was fixed. This data had the Invalid flag (---).

After the correction, only data not newer than the newest value of the archive object are read.

The archive will send back the Invalid data for times in the future, only when reading from the script (ESL/Java).

Note: this correction can be considered as finishing the correction D2D-3601, which corrected behavior for graphs.

#### D2D-4819 ARCSynchro – Correction of the final status of holes after patching

In the arcsynchro utility, there was an error concerning the setting of the status of the hole after patching.

If only the hole in the archive is patched first, the status of the hole changed correctly to 20 (hole patched in the archive). If only the hole in depositories is patched next, the status did not change to 25 (patched hole in the archive + depositories) but to 15 (hole patched in depositories). After this correction, the status is changed correctly to 25.

Similarly, when depositories were patched first, the status of the hole was 15 and after patching the hole in the archive, the status was not 25 but 20.

This error did not practically manifest itself since standardly after configuration of depositories, it is customary to change the configuration of arcsynchro too and add parameters for depositories synchronization.

D2D-4873 DBM – Correction of the work with DECIMAL/NUMERIC columns on the MsSql platform

An Error of DbManager when working with data of the DECIMAL and NUMERIC type (e.g. DECIMAL(20,4)) on the MsSql platform was fixed.

The error manifested by insert/update operations returning the error (HY104)[Microsoft][ODBC SQL Server Driver]Invalid precision value

D2D-4874 DBM – Correction of inserting more rows at once (MsSql, maybe also other platforms)

An error was fixed in the DbManager process, which could cause failure while inserting or updating two or more rows at once (DB(S)\_INSERT / DB(S)\_UPDATE). The error reported would be (24000) Invalid cursor state could fail. This error occurred if insert/update generated extra data, which DbManager must read (or skip) before processing another row.

The error could happen for example if a table had an insert/update trigger.

D2D-4875 DBM – Correction of DbManager crash when using the action ON DB\_CHANGE

An error of the DbManager process crash, or else its ending by the D2000 Server process, was fixed. The error emerged when using the action ON DB\_CHANGE because of the change in the implementation of internal transactions in the D2000 system.

D2D-4883 ESL, HI – A problem with a spin button

The entry OnLostFocus instead of OnSpin was sent when Windows component of the Text entry type preceded the spin button. The OnSpin is sent always now.

D2D-4562 GRED – Change of window size - max

When changing the size of the scheme with the mouse, adjusting of maximal size did not happen if the size of the scheme exceeded its maximal size.

D2D-4852 GRED – Flipping of an object in the scheme in the gr editor

Flipping of an object according to the horizontal and vertical axis of the chosen objects are allowed also for a single object. This feature is convenient for example for the polygons.

D2D-4869 GRED – The scheme does not react to the entry from the keyboard

The scheme did not react to the entry from a keyboard after clicking on object parameters and then clicking on the scheme title. The situation was fixed only after clicking back into the scheme.

D2D-4842 GRED – Crash of a graphic editor in bitmap palettes

Functioning and crash in bitmap palettes when setting the switching bitmaps was fixed.

D2D-4914 GRED – Crash of D2000 GR when copying components in the scheme using CTRL+C / CTRL+V

A crash of Graphic Editor when inserting an object with the use of CTRL+V and the clipboard was corrected.

D2D-4772 GRED, HI - Windows control text entry of the RichEdit type

Parameters of design as well as for an edge for the text entry of the RichEdit type were implemented.

D2D-4818 GRED, HI – Crash of the gr.editor when opening the list of schemes

A crash of HI and GR when opening the list of schemes in applications that have more than 1,000 schemes and when the list is opened with a mask that gives a list smaller than 1,000 schemes was corrected.

D2D-4895 GRED, HI – Crash of HI when trying to print the scheme

A crash of HI when finding out a default printer was corrected.

D2D-4896 GRED, HI – Strange status of the process during unsuccessful login of a user

The error was following: when a user was logged in a HI and subsequently a different user tried to log in unsuccessfully, the HI process was acting as if the previous user was still logged in, but some operations were not permitted because of insufficient access, as the user was already logged off from the point of the D2000 Server.

D2D-4778 HI – Error in zooming schemes

A problem with the functioning of a mouse wheel when zooming out the scheme with specified minimal size was corrected.

D2D-4810 HI – Freezing of HI after disabling TreeView

An error when the HI process could completely freeze after disabling TreeView control was corrected.

D2D-4792 HI – Wrong redrawing of the HI process menu when changing the language

Wrong display of the HI process menu after changing the language was corrected. The error happened only in testing applications which have red window title.

D2D-4592 HI – Display palette with temporary effect (hover) on an object in the DISABLE state

Temporary effect (hover) showed also on an object in the DISABLE state. This behavior was forbidden.

D2D-4860 HI – Wrong display of item value of the Object type in HI if the item refers to a structured variable

A wrong display of item value of the Object type in HI if the item refers to an item of structured variable was corrected.

D2D-4854 HI – Wrong framing of a graphic object of the bitmap type

An extra frame of the bitmap shown in certain ways of its drawing was removed.

D2D-4867 HI – Action CALL ... ASYNC ON ALL did not call the RPC procedure of the instance scheme

Calling of CALL ... ASYNC ON ALL was delivered only to schemes that were not open in an instance mode. The correction enables the calling of RPC to schemes opened in an instance or non-instance mode.

D2D-4880 HI – Wrong layout of a group if a ratio position is on

An error in “ratio position” layout for object groups was corrected.

D2D-4857 HI – Wrong processing of login into HI via the RFID card

Correction of unsuccessful login of a user after unsuccessful login via RFID was made.

A crash was corrected after login via RFID card when a change of password was required after the login of a user.

D2D-4868 HI – Crash of HI when opening the scheme

A HI crash in the initialisation part of the script was corrected.

D2D-4910 HI – Wrong drawing of thick lines ends ending with arrows

An error causing the ends of thick lines ending with an arrow being wrongly drawn was corrected.

D2D-4887 HI - ToolTip is not displayed above an object

ToolTip was not displayed above the respective graphic object after moving scheme section in the window by a mouse.

D2D-4886 HI – Error of setting the zoom via the %HI\_SetZoom function

An error in displayed zoom which was set from the script in big schemes was corrected.

D2D-4890 JAVA – Reading values of the D2000 object (such as user variable) of the TEXT type from Java through .getVal() or .getValDef() could occasionally wrongly return empty String instead of true value if other events/schemes were opened at that time on the same process

Corrected error – reading values of the D2000 object (such as user variable) of the TEXT type from Java through .getVal() or .getValDef()() could occasionally wrongly return empty String instead of true value if other events/schemes were opened at that time on the same process.

D2D-4797 KNL - Linux kernel cannot read HWinfo and thus cannot decode the license

Linux: an error preventing D2000 server from reading the license from the license file after OS restart was corrected.

D2D-4893 KNL - D2SMC enables to enter duplicate name of PC in the Named Devices list

Duplication was possible by renaming an existing item to a name of another existing item.

D2D-4863 KOM – Correction of the behavior of the instance KOM process when switching redundancy

In the KOM process, message handling concerning instance status if the KOM process runs as an instance was corrected. The first message after the KOM process start-up is not supposed to generate a request for sending of all children. Wrong sending of this request (before the CAnsConnect is received) caused the kernel to send the CAllChildValueDone message to all processes and that caused problems in the case of active OPC communication.

#### D2D-4829 KOM – Correction of work in the KOM archive mode

The ability of the KOM process to work autonomously after the loss of connection with the kernel (the KOM archive mode) was corrected. The correction achieved that attempts to re-establish connection will not cause outages of the communication because of a locked semaphore.

In the KOM archive mode, the start of the KOM process was accelerated, as there is now no waiting for the first connection to the kernel (which in case of network problems can take upto 50 seconds) and after 5 seconds it continues with the start-up of communication so the restart of the KOM process during network problems will cause a smaller data outage than before.

#### D2D-4774 HI - D2D-4676 – The HI crash when opening the list of schemes

The crash after switching redundancy (server change) and opening of some previously opened list (e.g. of schemes) was corrected.