zenon Documentation

Release Notes

v.7.00

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Contents

1. Introduction

This revision text contains the most important changes between version 7.00 SP0
from March 2012 and the previous version 6.51 SP0.
This summary is mainly supposed to give a quick overview over the new functional possibilities in the current version. More detailed information about the mentioned functions can be found in the documentation shipped with the product.

At the end of this document, you will find a list with all limitations of this version that were known at the moment of the release.

These release notes contain the changes for the following products:

▶ zenon Operator

▶ zenon Supervisor

▶ zenon Pharma Edition

▶ zenon Energy Edition

▶ zenon Science Package

▶ zenon Logic Runtime and drivers

The changes of the zenon Analyzer and the zenon Logic Workbench are not described here.

2. General

2.1 Serial and activation numbers (REQ 4310)

The serial numbers and activation numbers were changed in comparison to the versions of the 5 series (5.0, 5.1, 5.11...) and the 6 series (6.0, 6.01, 6.20, 6.21, 6.22, 6.50, 6.51). Existing serial numbers and activation numbers no longer work. Therefore an update makes a new license order necessary.

2.2 Editor compatibility with versions 6.20 SP4, 6.21 SP0, 6.21 SP1, 6.22 SP0, 6.22 SP1, 6.50 SP0 and 6.51 SP0 and 7.0

The Editor of version 7.0 can also create Runtime files for the versions 6.20 SP4, 6.21 SP0, 6.21 SP1, 6.22 SP0, 6.22 SP1,6.50 SP0 and 6.51 SP0 and 7.0. This makes it possible to operate different Runtime systems from one development environment. Functions not supported in older versions will not be available there. When creating projects for older versions, please make sure that you do not use any functions that are not supported by older versions.

With this new functionality, the user can choose whether he wants to update only his development environment to the newest version, or also his Runtime systems.

2.3 Runtime compatibility with versions 6.20 SP4, 6.21 SP0, 6.21 SP1, 6.22 SP0, 6.22 SP1, 6.50 SP0, 6.51 SP0 and 7.0

In the Runtime 6.51 SP0, it is possible to start projects from versions 6.20 SP4, 6.21 SP0, 6.21 SP1, 6.22 SP0, 6.22 SP1, 6.50 SP0, 6.51 SP0 and 7.0 without converting them first. Mixed operation is also possible. This means you can load projects from versions 6.20 SP4, 6.21, 6.22 and 6.50, 6.51 and 7.0 simultaneously in multi-project administration. This also works in network operation. For example, you can start projects from different versions with a WEB Client.

2.4 Converting projects

2.4.1 All versions – RT changeable files

Before you convert a project, please read back all Runtime changeable files (User Administration, Standard Recipes, Recipegroup Manager, Scheduler/PFS and Message Control) into the Editor. This ensures a complete data conversion and makes sure that none of the changes made in the Runtime are lost. After converting to the new version, create all Runtime files once including RT changeable data.

2.4.2 All versions - VBA: Direct variable access via request no longer possible

VBA gives our customers a powerful tool for project design. Practical experience has shown that access on variables via VBA often leads to mix-ups in the use of the methods "Advise" via an online container and "Request" with direct call. Too many requests can slow down communication significantly.

We have therefore decided to meet the demands of our customers by closing this error source. From now on, variables can only be addressed via "Advise" in VBA.

For existing projects, this leads to certain incompatibilities. You will be affected if you address variables via "Request" in VBA. In this case you will have to change these projects. After making these adjustments you will profit from an increased communication performance.

NEW:

Direct VBA read access on variables is only possible if the variable has been registered in the driver (advised) and if it has a value, i.e. if IsOnline() is true . Simple spontaneous queries (requests) are no longer possible.

The following functions of the "Variable" object return an error if this is not the case:

- ▶ Value

- ▶ StatusValue

- ▶ StatusExtValue

- ▶ StatusString

- ▶ LastUpdateTime

- ▶ LastUpdateTimeMilliSeconds

This means that existing projects will no longer run in the Runtime after the conversion, as the functions mentioned above will fail.

POSSIBLE SOLUTIONS:

Define an online container for all affected variable accesses.
Advantage: The variables will only be requested if you really need them.
Disadvantage: Increased programming effort.

Set the option "DDE active" in the group "Additional settings" of the variable properties for all affected variables.

Advantage: Easy to perform.

Disadvantage: The driver continuously requests all variables.

> ⚠ **Attention**
>
> *Limited compatibility!*
>
> *After a project conversion to the current version, please check whether there is direct access on variables in any Runtime VBA macro. If this is the case, you must perform the measures mentioned above!*

2.4.3   All versions - VBA: Properties removed

At filtering for screen switch functions to a screen of type Extended Trend, the following dynamic properties were removed:

"PictFilter[0].Curve["0 "].VarInfo.*Channel*" and "ArvName", "Titel", "Group" uad "Amplitude" of the same object

These properties did not have any function and were therefore removed. If you use these properties in a wizard, you must remove them.

2.4.4   All versions: Status short names were changed

`Attention!` Limited compatibility

Short names for status bits differ since version 6.20 in the different languages. With zenon version 6.50, common short names were introduced. To ensure compatibility with earlier versions, the short names can be changed to the previous ones in project.ini. You can find the corresponding manual in chapter `Conversion` of the documentation.

Unfortunately there has been an error at naming bit number 10. Therefore the bit was renamed from D_DIREC in 6.50 to PROGRESS as of 6.51.

In addition two new status bits were introduced with 6.51: CB_TRIP and CB_TR_I. See also „REQ 3873".

Bit no.	As of 6.51	Up to 6.50 German	Up to 6.50 English	Up to 6.50 French	Up to 6.50 Italian	Up to 6.50 Spanish	Up to 6.50 Russian

Bit no.	As of 6.51	Up to 6.50 German	Up to 6.50 English	Up to 6.50 French	Up to 6.50 Italian	Up to 6.50 Spanish	Up to 6.50 Russian
0	M1	ST_M1	ST_M1	ST_M1	ST_M1	ST_M1	ST_M1
1	M2	ST_M2	ST_M2	ST_M2	ST_M2	ST_M2	ST_M2
2	M3	ST_M3	ST_M3	ST_M3	ST_M3	ST_M3	ST_M3
3	M4	ST_M4	ST_M4	ST_M4	ST_M4	ST_M4	ST_M4
4	M5	ST_M5	ST_M5	ST_M5	ST_M5	ST_M5	ST_M5
5	M6	ST_M6	ST_M6	ST_M6	ST_M6	ST_M6	ST_M6
6	M7	ST_M7	ST_M7	ST_M7	ST_M7	ST_M7	ST_M7
7	M8	ST_M8	ST_M8	ST_M8	ST_M8	ST_M8	ST_M8
8	NET_SEL	SELEC	SELEC	SELEC	SELEC	SELEC	ВЫБОР
9	REVISION	REV	REV	REV	REV	REV	РЕВ
10	PROGRESS	LAUF	DIREC	DIREC	RUN	LAUF	ХОД
11	TIMEOUT	LZÜ	RTE	DRT	RTE	LZÜ	КВИ
12	MAN_VAL	HWERT	MVALUE	VAL_M	V_MAN	VWERT	МЗНАЧ
13	M14	ST_14	ST_14	ST_14	ST_14	ST_14	ST_14
14	M15	ST_15	ST_15	ST_15	ST_15	ST_15	ST_15
15	M16	ST_16	ST_16	ST_16	ST_16	ST_16	ST_16
16	GI	GA	GI	RG	IG	CG	ГО
17	SPONT	SPONT	SPONT	SPONT	SPONT	SPONT	SPONT
18	INVALID	I-BIT	I-BIT	I-BIT	NV-BIT	I-BIT	I-Bit
19	T_CHG_A	SO/WI	SU/WI	ET/HI	ES/IN	VE/IN	ЛТ/ЗМ
20	OFF	N_AKT	N_UPD	N_RAF	N_UPD	N_AKT	N_AKT
21	T_EXTERN	EZ_E	RT_E	HR_E	RT_E	EZ_E	EZ_E
22	T_INTERN	EZ_I	RT_I	HR_E	RT_I	EZ_E	EZ_E
23	N_SORTAB	NSORT	NSORT	NTRI	NORD	NSORT	НЕСОРТ
24	FM_TR	SM_TR	DM_TR	MD_TR	SM_TR	SM_TR	SM_TR
25	RM_TR	LM_TR	RM_TR	MM_TR	RM_TR	LM_TR	СИ_ТР
26	INFO	INFO	INFO	INFO	INFO	INFO	INFO
27	ALT_VAL	AVALUE	AVALUE	VALR	RVAL	AVALUE	ЕЗНАЧ
28	RES28	RES13	RES13	RES13	RES13	RES13	RES13
29	N_UPDATE	!AKTUAL	!AKTUAL	!AKTUAL	!ATTUALE	!ACTUAL	!АКТУАЛЬНО

Bit no.	As of 6.51	Up to 6.50 German	Up to 6.50 English	Up to 6.50 French	Up to 6.50 Italian	Up to 6.50 Spanish	Up to 6.50 Russian
30	T_STD	WINTER	WINTER	HIVER	INVERNO	INVIERNO	ЗИМА
31	RES31	RES16	RES16	RES16	RES16	RES16	RES16
32	COT0	UEK0	TCB0	CTB0	CTB0	TCB0	ТРУ0
33	COT1	UEK1	TCB1	CTB1	CTB1	TCB1	ТРУ1
34	COT2	UEK2	TCB2	CTB2	CTB2	TCB2	ТРУ2
35	COT3	UEK3	TCB3	CTB3	CTB3	TCB3	ТРУ3
36	COT4	UEK4	TCB4	CTB4	CTB4	TCB4	ТРУ4
37	COT5	UEK5	TCB5	CTB5	CTB5	TCB5	ТРУ5
38	N_CONF	PN_BIT	PN_BIT	PN_BIT	PN_BIT	PN_BIT	PN_BIT
39	TEST	T_BIT	T_BIT	T_BIT	T_BIT	T_BIT	T_BIT
40	WR_ACK	WR-ACK	WR-ACK	ECR-ACK	WR-ACK	WR-ACK	WR-ACK
41	WR_SUC	WR-SUC	WR-SUC	ECR-OK	WR-SUC	WR-SUC	WR-SUC
42	NORM	NORM	NORM	NORM	NORM	NORM	НОРМ
43	N_NORM	ABNORM	DEVNORM	DEVNORM	Fuori norma	DEVNORM	ОКРНОРМ
44	BL_870	BL_BIT	BL_BIT	BL_BIT	BL_BIT	BL_BIT	BL_BIT
45	SB_870	SB_BIT	SB_BIT	SB_BIT	SB_BIT	SB_BIT	SB_BIT
46	NT_870	NT_BIT	NT_BIT	NT_BIT	NT_BIT	NT_BIT	NT_BIT
47	OV_870	OV_BIT	OV_BIT	OV_BIT	OV_BIT	OV_BIT	OV_BIT
48	SE_870	SE_BIT	SE_BIT	SE_BIT	SE_BIT	SE_BIT	SE_BIT
49	T_INVAL	TIME_INVAL	TIME_INVAL	TIME_INVAL	TIME_INVAL	TIME_INVAL	TIME_INVAL
50	CB_TRIP	RES50	RES50	RES50	RES50	RES50	RES50
51	CB_TR_I	RES51	RES51	RES51	RES51	RES51	RES51
52	RES52	RES52	RES52	RES52	RES52	RES52	RES52
53	RES53	RES53	RES53	RES53	RES53	RES53	RES53
54	RES54	RES54	RES54	RES54	RES54	RES54	RES54
55	RES55	RES55	RES55	RES55	RES55	RES55	RES55
56	RES56	RES56	RES56	RES56	RES56	RES56	RES56
57	RES57	RES57	RES57	RES57	RES57	RES57	RES57
58	RES58	RES58	RES58	RES58	RES58	RES58	RES58

Bit no.	As of 6.51	Up to 6.50 German	Up to 6.50 English	Up to 6.50 French	Up to 6.50 Italian	Up to 6.50 Spanish	Up to 6.50 Russian
59	RES59	RES59	RES59	RES59	RES59	RES59	RES59
60	RES60	RES60	RES60	RES60	RES60	RES60	RES60
61	RES61	RES61	RES61	RES61	RES61	RES61	RES61
62	RES62	RES62	RES62	RES62	RES62	RES62	RES62
63	RES63	RES63	RES63	RES63	RES63	RES63	RES63

2.4.5 All versions: Extended graphical functions deactivated

The extended graphical functions are now always deactivated for converted projects. If needed you must activate them at the project properties.

2.4.6 All versions: Menus: System font is displayed differently

If the system font is changed for main menus and context menus, keep in mind that the font is now displayed narrower. As a result the menus can have another position on the monitor. When using user-defined fonts, the display does not change.

2.4.7 All versions: Recipegroup Manager

The data storage for the recipegroup manager changed. That is why you must read back the Runtime data - as described in topic All versions – RT changeable files - to the Editor before you convert any project.

2.4.8 All versions: Message Control

The Message Control was developed newly from scratch. Compatibility was observed as well as possible. However it can still occur that existing engineering must be adapted. Therefore please thoroughly check all functionalities concerning Message Control.

Scheduling is no longer available in the Message Control. Please use the scheduler, PFS, VBA/VSTA or external Tools.

2.4.1   All versions: IEC61850 Server of zenon Logic: Data type of the Enum attributes changed from INT to SINT

In earlier versions of the IEC61850 server the INT data type was used for the import of SCL data for data attributes of the Enum type. The driver for zenon Logic 7 now correctly imports enum types as data type SINT and the zenon Logic Runtime also verifies this. If the verification fails due to an incorrect data type, the following error message is displayed: "Data attribute xxx has wrong data type (should be SINT)..". and the Runtime does not start. You need to manually correct the data type with any Workbench, compile the project and download in the Runtime.

2.4.2   Version 5.50

Before you can open a 5.50 project in the Editor of version 6.xx, you must convert the project. (File - Insert project 5.50...). The old project stays unaffected and a copy of it is created in the database server. Please take into consideration that some external files and directories are **not** adopted to the new Editor and Runtime directory structure. You have to adjust these files/folders manually or copy them into the projects (in the project tree under Files).

This applies to, e.g.: user-defined subfolders in the project directory, extended list directories, databases, export directories, etc…

Please consider that scripts linked directly to screen start or screen end are not converted. (This functionality was only available in previous versions.) You have to change these scripts before you can convert them.

2.4.3   Versions 6.0 to 6.51 – new SQL Server

The database server was changed to SQL Server 2008 R2. The new database server is automatically installed by the setup. Existing versions and projects are not effected. They remain in the existing database servers. From 6.0 to 6.20 SP4 the MSDE (SQL Server 2000) was used, from 6.21 to 6.51 the SQL Server 2005 was used.

Your old projects will not be visible when you start the new version because they are not converted to the new database format automatically.

In order to use the existing projects, you have to create project backups in the old Editor first. You can then restore them in the current version with "File\Restore backup". The projects are automatically converted to the new database format.

2.4.4 Datastorage changed from 6.0 on

The files created by the Runtime such as AML files, CEL files, ARV files, HD data, bin files etc. are compatible. In 5.50 projects, you have to copy these files manually to the according Runtime directories of version 6.x. For 6.x projects, there are no changes regarding the file location.

> 💡 **Info**
>
> *Please be aware that these files are converted on the first start of the Runtime. This may take some time for large amounts of data.*

2.4.5 Archive evacuation to SQL database (projects up to 6.01)

The table structure has changed. You have to perform these changes either manually or with the Editor.

1. In the Editor, go to the property page "Save" of all concerned archives.

2. Open the connection string to the database and confirm the dialog.

3. After closing the dialog the according changes in the database are performed.

4. If you do not change the table structure, there will be no evacuation to the database.

2.4.6 Filter profile (for 5.50 projects)

In version 5.50, the filter profiles for Alarming, Extended Trend, etc. are saved in a file with the name of the project and the extension ".zrt". For example: For the project "Reading", the file is named "Reading.zrt". You have to rename this file to "project.zrt" after converting the project. After that, copy the file to the subdirectory "System" in the Runtime directory. For orientation purposes: This directory also contains the file "project.ini".

2.4.7 Simulation driver (for 5.50 projects)

The control information (mode, upper and lower limit, step width) of the simulation driver is saved in the zenon.ini. As the zenon.ini file is replaced by the zenon6.ini file, you have to copy these settings to the zenon6.ini file manually.

2.4.8 3S Arti driver (projects up to 6.01 SP1)

The name of the variable allocation file for the 3S Arti driver has changed. So the file has to be renamed, **before** new variables can be browsed from the PLC. You will find more information in the driver documentation.

2.4.9 Converting multi-user projects

Multi-user projects can only be converted if no elements are checked out. This means that all engineers have to check in their changes first.

If this is not possible for some reason, you have to create a project backup of the project on the project database server and then immediately restore it. This resets all the "Under construction" information. Attention: All changes in the local project versions are lost!

The conversion can only be done on the PC, on which the central project database resides. If there is no Editor on the PC (standalone database server – no longer supported), you must install the Editor first. Only after that can the conversion be done on this PC.

2.5 Parallel use of several versions

Generally you can use several versions on one computer parallely.

Exceptions:

▶ Version 6.0 must be uninstalled before the installation of version 6.01.

▶ For the versions of generation 6, service packs cannot be installed in parallel.

▶ Version 6.21 SP0 is not compatible with higher version because an important background service has been changed. It cannot be operated parallel to other versions.

> **Info**
>
> *In order to administrate several versions in parallel on one computer, you **must** use the Startup Tool. You can reach it directly via the link in the Windows Start menu. With this tool you can start both zenOn 5.x and zenOn 6.x versions. On starting all necessary services automatically are registered correctly.*

3. Editor

3.1 Remote Transport settings in toolbar (REQ 781)

The settings for the Remote Transport can be called up directly via the Remote Transport toolbar.

3.2 Move variable structure elements via drag&drop (REQ 1169)

Structure elements from structure data types can be moved via drag&drop.

3.3 Information about dialog displays licensed modules (REQ 1341)

The module list in the Information about dialog can now be scrolled so that the licensed module are better visible.

3.4 Remove linked reaction matrix (REQ 1384)

At the variables linked reaction matrices can be removed.

3.5 Restart remote computer (REQ 1429)

If the computer should be restarted, a confirmation message is displayed.

3.6 Replace links across projects (REQ 3361)

The replace link function now works across projects everywhere. If a target from a foreign project is selected, the target project is also saved.

> ⚠ **Attention**
>
> *Existing screen switch function may be adapted as without project reference the search is only carried out in the local project. In earlier versions the target was search in all loaded projects.*

3.7 Cancel XML import of symbols (REQ 3555)

At the import it is checked whether the symbol already exists. If this is the case, a warning is displayed and the import can be canceled.

3.8 Cancel XML import of screens (REQ 3618)

At the import it is checked whether the screen already exists. If this is the case, a warning is displayed and the import can be canceled.

3.9 Single editing mode can be deactivated in the context menu (REQ 3743)

Via the context menu and via the toolbar you can activate/deactivate the single editing mode.

3.10 Last opened screens no longer available (REQ 3748)

The list of the last opened screens in the Editor is no longer available as it did not support not multi-user projects.

3.11 XML import of changed structure data types (REQ 3830)

You can import structures over existing structures even if they are differ from the existing structures. Variables based on this are automatically adapted. The structure elements are identified via their name and for already existing structure elements the type is adapted. Non-existing elements are added and elements which do not longer exist in the new structure type are removed.

3.12   Filter- and sortable list for ALC alias dialog (REQ 3852)

The list of the available ALC elements in the dialog for selecting an alias name can be filtered and sorted.

3.13   Revised Language table (REQ 3956)

The aim was enhanced performance and the adapting the handling to the other lists in the Editor.

For reaching this aim changes of the treatment of the text files (import, export, copy & paste, rename) and of the access via programming interfaces (VBA, VSTA, ...) were necessary.

The text files of the language table can and may only be edited via the tables in the Editor or via the programming interface of the language table. For translation processes a CSV export/import was implemented.

3.14   Display screen save date in detail view (REQ 3985)

To enable a better traceability, the last save date of the screen is displayed in the detail view.

3.15   Replace ALC alias at linked symbols (REQ 3843)

The replacement rules at linked symbols and in screen switch functions also replace the ALC aliases which are used in elements in symbols. For ALC aliases the setting "compound names" is not used; i.e. they are always considered without the symbol prefix.

3.16   Cross-references in the Editor (REQ 4037)

At variables and functions you can start the variable use, the function use and the search for unused variables/functions in the detail view.

3.17   CSV variable import: Delete and rename (REQ 4067)

With columns CHANNEL_R and CHANNEL_D you can rename and delete existing variables.

3.18   Project backup: Entry in history of changes (FS 25456)

Project backups are saved in the history of changes with version, date, user and computer.

3.19   Versioning of project backups (REQ 4200)

Project backups can be versioned. Versions are identified and sorted according to their consecutive numbering and date/time of their settings.

4.   Screens/ screen elements

4.1   Combo/List Box element: Entries invisible, dynamic entries (REQ 1064)

In the element you can enter a visibility variable for each static entry. If the variable is set to invisible via the limit management, the entry in the element is also invisible.

DYNAMIC ENTRIES

Alternative to the static entries you can enter an string variable for the dynamic content. The values of the string variable are then displayed as entries. The single entries are separated by character ';' the value is separated from the identifier via character ',' - For example: 1,one;2,two;3,three;

4.2   Enhanced lasso function (REQ 4117)

For the selection of screen elements in the Runtime now only the setting "selectable with lasso" is used. If this property is selected, the element can be selected.

The selection is done either by a left click on a free screen area and then dragging the lasso over the screen elements while holding the left mouse button or by left-clicking a single element while pressing and holding the Ctrl-key to select/deselect it.

4.3 DirectX support implemented (REQ 4185)

With zenon 7.00 SP0 DirectX 11 (hardware and software) is supported for optimizing graphic quality. `Windows Basis` and `Windows Enhanced` are still available. For optimal display you need a DirectX 11 compatible graphics card. If no corresponding graphics card is available, it is automatic switched to software emulation. The emulation is very memory and CPU intensive. In this case we recommend that you do not use the new graphics functionality and to use setting `Windows Enhanced`.

4.4 Glow effect possible (REQ 4279)

Graphical elements can be provided with a glow effect. This option needs DirectX

4.5 Highlight frame - "blur effect" (REQ 4312)

A screen can be highlighted with the "blur effect" in order to focus the attention on this screen. For this the frame, on which the screen is based, is highlighted by coloring the remaining area of the Runtime. For this a color and a transparency are defined for the surrounding of the frame of the screen which covers the screen lying below. You must not call up more than one screen with this property at any time. This option needs DirectX

4.6 Templates for special screen types (REQ 4368/4256)

For special screen types and also for standard screen you can use templates for automatic inserting and positioning elements. Templates can be created from every screen by yourself. For special screen types pre-defined templates are shipped in all Editor languages.

The templates can be enhanced by any own templates.

4.7   WPF: Collective file possible (REQ 4262)

For using WPF you can now create collective files. Valid files are in format *.cdwpf. This files contain the XAML file, the appropriate .NET assembly and a preview graphics.

4.8   WPF: New elements (REQ 4215)

New WPF elements were created:

- ▶ Round display
- ▶ Progress bar
- ▶ Vertical bar graph
- ▶ Temperature control
- ▶ Analog clock
- ▶ Universal slider

These new WPF elements are only available via the partner program.

5. Runtime

5.1   Filter profiles can be exported/imported (REQ 818)

Filter profile in the Runtime can now be exported in XML format and imported to another computer or to another project.

5.2   Message box at insufficient rights (REQ 3925)

You can define whether an error message will be displayed in the Runtime at insufficient rights.

5.3 Do not adapt individual screens to the monitor resolution (REQ 3999)

If this property is activated for a screen, the elements of this screen are displayed in their original, engineered size and position in the Runtime.

5.4 Cancel load data if system resources are insufficient (REQ 4038):

If insufficient memory is available at the server, data request are canceled by the Client.

5.5 Encryption of the network traffic (REQ 4111)

The Runtime network communication can be encrypted. The setting of the encryption is carried out in the Startup Tool.

5.6 Specific RT files comparison for terminal server (REQ 4116)

At the terminal server you can optionally deactivate the Runtime files comparison so that not every Client must carry out the same comparison.

5.7 Window style "Title with min. and max. buttons" available again (FS 24202)

The window style "Title with min. and max. buttons" is available again.

6. Functions

7. Modules

7.1 RGM: Filter- and sortable recipe lists (REQ 410)

In screen type Recipegroup Manager there is a complete list which can be filtered and sorted available as alternative to the existing recipe selection via drag and drop. The columns and filters can be defined flexibly in the Editor and in the Runtime. The list can be engineered very flexible in the Editor so that is is suitable for mouse and for touch operation and has a modern look and feel.

7.2 RGM: Min./Max. values from recipes from variables (REQ 3455)

The min. and max. values for recipes can now also be taken from the min. and max. set values from the variables as an alternative.

7.3 RGM: Status variable for each recipe group (REQ 4042)

For each recipe group you can link status variables in the Editor. For this all information which was available only globally via the system driver, can now be retrieved group-specific.

7.4 RGM: System driver variables for selected recipe in the screen (REQ 4043)

New system driver variable displays information about the selected recipe in the RGM screen.

7.5 RGM: Recipe versioning and recipe status (REQ 4044)

Each recipe can receive a version number and a freely definable status.

7.6 RGM: Recipe export and import in XML format (REQ 4054)

The export to XML format was enhanced, the import from XML format was added.

7.7 RGM: Filter after status and version (REQ 4332)

In the Recipegroup Manager you can filter recipes after status and version.

7.8 RGM: Status change (REQ 4297)

The status of a recipe in the Recipegroup Manager can be changed and saved via a function.

7.9 RGM: XML export/import (RQ 4331)

At the export you can define whether existing files are overwritten or not at the export of the respective RGM data.

At the import you can define whether already existing recipes are overwritten or not. At the import of individual recipes you can take over the recipe group name from the XML import file if the recipes in the import file do not belong to any group.

7.10 Historian: Own hysteresis (REQ 913)

At the variables you can define an own hysteresis for the Historian. Only if the values change is larger than the engineered hysteresis, the value is entered in a on-change archive.

7.11   Extended Trend: Gantt curves with label (REQ 1558)

For the Gantt curves you can display both the limit and the limit text. With this dynamic labels are possible.

7.12   Extended Trend: Optimized curve dialog (REQ 3905)

For the display of the Gantt curve the curve dialog was optimized so that unused options can be deactivated. In addition the curve name can be used as label.

7.13   Extended Trend: Unit for y axis can be deactivated (REQ 3959)

The unit can be hidden for each curve.

7.14   Extended Trend Starter Edition: Zooming and scrolling is possible (FS 25647)

In the Starter Edition zooming and scrolling is now possible.

7.15   Extended Trend: Enhanced curve list (REQ 4322)

For the screen of type "Extended Trend" a new control for displaying the activated trend curve was implemented. This enablas:

- ▶ to filter according to name, title, color, Y-axis and activation
- ▶ To edit curve names
- ▶ To edit titles
- ▶ To edit colors
- ▶ To activate or deactivate the Y-axis
- ▶ To activate/deactivate curves

The control is available in the Runtime on the PC and for the web client but not for Windows CE.

7.16   World view: Direct naviagtion and Multitouch (REQ 3490)

Zooming via Ctrl+mouse wheel, moving via space bar and mouse drag, moving with held right and middle mouse button, scrolling via mouse wheel or shift+mouse wheel are now directly possible in the worldview without having to engineer a worldview overview screen.

Multitouch can be activated via a property.

For programming via VBA/VSTA there is a new method in the Object Model: SetZoomAndPos

7.17   S7 graph: Language switchability (REQ 3676)

To use the language switch, you must create an entry in the language table for each translatable text. In the Runtime each text is then translated automatically as it is not possible to create key words (with prefixed @ character) in the SIMATIC manager. All elements of the screen are considers ("Information: Name of the active function chart, "Information: Name of the active step", all texts from "Graphical display: Active step", all texts from "Graphical display: Whole function chart" and all texts from "Information: Symbol table").

7.18   S7 Graph several function chart (REQ 4104)

The S7 Graph window can display all function charts which are contained in a FB.

7.19   S7 graph: Available for Windows CE (REQ 4290)

S7 Graph is available for Windows CE with full functionality.

7.20   S7 graph: Remove import alarm variable (REQ 4198)

Possibility of the import to remove the Alarm-S variable from the S7 Graph import.

7.21   AML: Comment mandatory (REQ 3737)

At limits and at reaction matrices you can define as an option that comments are mandatory. If no comment is entered, you can no longer acknowledge. You can filter for comment-mandatory alarms.

7.22   AML/CEL: Incremental SQL Export (4113)

As an option only new and changed data are exported which have been created or changed since the last export (time cleared or acknowledged/comment).

7.23   AML/CEL: Printer configuration in the Runtime (FS 25152)

In the AML and CEL button "Properties" in the dialog for printing is available for the printer configuration.

7.24   AML/CEL: Enhanced time filter (FS 25385)

The time filter can now be selected up to year 2037 in the Editor and in the Runtime.

7.25   New Message Control (REQ 3766)

ALARMS ADMINISTRATION:

The text for the sending message is now compiled during the sending of the message. This makes sure that the data in the text are consistent.

USER ADMINISTRATION

As user administration for the Message Control the standard user administration is used. All Message Control specific settings are made there.

At converting it is tried to merge the existing Message Control users with the standard users. If this is not possible, new standard users are created.

NEW SCREEN TYPE

In the new screen type you can display a Message Queue in which all active messages can be controlled and influenced. The queue is filter- and sortable and the look can customized individually.

SMTP SENDING

E-mails can now be sent and received via Outlook and via standard SMPT (POP3).

UNIQUENESS OF THE MESSAGE

Each message receives a GUID so that it can be assigned unambiguously. This GUID is visible at sending SMS and e-mail.

NEW/CHANGED FUNCTIONS

▸ `Save current queue`: Saves the sending queue so that in case of a Runtime error the queue is available again.

▸ `Suppress groups/classes/areas/equipment`: With this you can suppress messages which lie on this groups/classes/areas.

▸ `Send a message`: With this you can configure the sending type, the recipients, the message and the confirmation in a flexible way. The possibilities to compose the message individually via placeholders was increased significantly.

GLOBAL SETTINGS

Computer-specific settings which are saved in file zenon6.ini are no available as properties of the workspace. They effect all projects.

COMPONENTS WHICH ARE NO LONGER AVAILABLE

Shifts and calendar functions, paging sending type, function "Display recipient database"

CONVERSION

It is tried to convert as much as possible. However you must check all Message Control functions after the conversion.

OBJECT MODEL

The Object Model was enhanced by several new methods and events.

7.26 ALC: Changed display of multiple supply and secured supply (REQ 4018)

The display and the priority can be engineered as well as the coloring and the dash length at dashed display.

7.27 ALC: Disconnector under load - algorithm changed (REQ 4021)

The topological interlocking disconnector under load is not active for grounded lines and if all switches set to OFF on one side of the disconnector.

7.28 ALC: New elements (REQ 4108)

Valve: Does not cause an invalid transmission at intermediate position but lets the source color pass as it were closed.
Busbar end: Closes a line end so that no ALC error message because of open line ends occur.

7.29 ALC: New algorithm for multiple supply (REQ 4144)

System sources count as real sources at multiple supply; i.e. they color lines with two colors if it was engineered that way. The determination of the secured supply was changed in such a way that a line is displayed as supplied securely if it is supplied by two switches with a not system source (=real source).

7.30 ALC: New algorithm for undefined coloring (RQ 4293)

Coloring in the network can be implemented in two modes with the UNDEFINED status:

> **Default:**: colors each node with the source color and the switches whose variables have status INVALID, "is disturbed" or "is in intermediate position", as UNDEFINED

> ➢ **Input takes priority**: only colors lines as UNDEFINED which are potentially supplied by at least one source but no explicitly by one source

7.31   Command input: Exception topological interlocking (FS 24700)

The topological interlocking is not executed if the variable of a switch has status „Revision" or the variable was manually set to "Alternate value" and with this is set to the same variable value as the initial value. So if the switch is on OFF and is then manually set to OFF or is replaced or if it is on ON and then manually set to ON or replaced.

7.32   Report Viewer: Tool for RDL files (REQ 4234)

The Report Viewer can be used to display RDL reports of archive data, AML data, and CEL data as well as online values in the Runtime. Two historical time ranges can also be compared using two configurable time ranges.

RDL files that display the report template for Runtime are created and edited in the Editor. There are already 7 pre-defined datasets available. Additional data sets can be created freely.

8.   zenon Logic (previously straton)

8.1   Behavior for saving the retain variable adjustable (REQ 3584)

As an alternative the retain variable can be saved via variable names. This enables you to add or remove variables at a later stage.

The cyclic saving can be deactivated. Then the saving is only carried out when the Runtime is ended.

8.2   IEC 60870 Slave driver extended (REQ 3789)

The driver now conforms to the functionality of the IEC870 Slave Process Gateway.

8.3 straton NG driver for integrated solution (REQ 3826)

For the integrated solution you can use the straton NG driver as an alternative.

8.4 IEC 61850 Server driver enhanced by TimeQuality (REQ 3879)

The IEC 61850 Server now supports the possibility to use the TimeQuality byte as defined in the standard.

8.5 IEC 61850 Server driver enhanced by arrays (REQ 3879)

The IEC 61850 Server now supports IEC61850 data type ARRAY OF.

8.6 IEC 61850 Server driver adapted to KEMA-certified version (REQ 4141)

The enhancement which was implemented for the KEMA certification to the test version of the driver was also done officially in the Server for zenon Logic.

8.7 IEC 61850 Server - GOOSE: Adapted repetition rate (REQ 4241)

At activated GOOSE you can change the repetition rate of the GOOSE message via additional Mintime and Maxtime properties in the SCL file.

8.8 New driver: IEEE C37.118 driver (REQ 4063)

Driver for the Synchrophasor communication with PMUs and PDCs.

8.9 Firmware for Lego Mindstorms NX2 (REQ 4065)

For the Lego Mindstorm controller there is an own firmware available. For the optimal use you can order the Science Package. It contains the firmware, manual, USB driver and licenses.

8.10 New driver for Siemens mEC controller (REQ 4066)

Bus driver for connecting the backplane bus, the Run/Stop switches and the LEDs of the SIMATIC S7 mEC controller.

8.11 Integrated solution multi-user project (REQ 4097)

The integrated solution now also works with multi-user projects.

8.12 OPC-UA Server availabel (FS 22757)

New OPC-UA Server driver for zenon Logic.

8.13 New driver IEC 60870-5-101/104 Master (REQ 4156

The driver is available. It is based on the zenon IEC870 driver.

8.14 straton Runtime: Adaption to the Science Package (REQ 4267)

The straton Runtime (in this case not zenon Logic Runtime) was adapted to the use of HiTechniSensors with Lego Mindstorm 2.0 in the zenon Science Package.

9. Programming interface

9.1 AML/CEL: Event at comment (REQ 4127)

If a comment is entered/changed, event zAlarm_AlarmUsertextChanged is fired.

9.2 Add values to empty archive (FS 24205)

New values can be entered in an archive even if there are no values in the archive.

9.3 Change Message Control phone number in the Runtime (FS 23380)

Phone numbers of recipients can be changed in the Runtime via VBA.

9.4 New VBA events (FS 23772)

New VBA events for moving and changing the size of screens and for clicking elements were implemented:

- ▸ DynPictures.**Open**
- ▸ DynPictures.**Close**
- ▸ DynPictures.**WindowPosChanged**
- ▸ DynPictures.**ElementMouseOver**(IElement* obElement, VARIANT vPosX, VARIANT vPosY, long lButton);
- ▸ DynPictures.**ElementRightButtonDblClk**(IElement* obElement);
- ▸ DynPictures.**ElementRightButtonDown**(IElement* obElement);
- ▸ DynPictures.**ElementRightButtonUp**(IElement* obElement);
- ▸ DynPictures.**ElementLeftButtonDblClick**(IElement* obElement);

▸ DynPictures.**ElementLeftButtonDown**(IElement* obElement);

9.5 Time filter also in UTC format (FS 23772)

Time filter for AML, CEL, Historian, screen switch, etc. are available in UTC format via the programming interface.

9.6 Screens without borders: New Z-Order (REQ 4304)

The API object DynPicture has a new method BringToTop() which moves the screen to the foreground. The call moves a screen without "always in the foreground" to the highest Z-Order of all screens without "always in the foreground" and a screen with "always in the foreground" to the highest Z-Order of all screens with "always in the foreground". Screens without "always in the foreground" therefore never cover screens with "always in the foreground".

9.7 Properties of Mathematics driver and Internal driver (REQ 4271)

In the Runtime reading access to properties "MathInfo" for the mathematics variables and "Local", "Remanence" and "Intitial_value" for Internal variables is possible.

10. Wizards

10.1 Wizard for creating response variables (REQ 4004)

Available only for Energy Edition:

The wizard creates an own *zenon Logic* program for each driver in the zenon project for which a>driver simulation project is created. This *p*rogram simulates for all variable pairs of the driver, for which a substitution rule applies, a direct allocation from command variable to response variable.

10.2 Wizard "New project" starts automatically (FS 25446)

If a new project is created, the wizard for configuring a new project starts automatically.

10.3 Renewed project wizard (REQ 4367)

The wizard for creating a new project was renewed. With the wizard based on VSTA you can create basic objects for new projects. You can configure:

➢ Information about the project

➢ Drivers also with driver variables

➢ Graphics settings

➢ Basic screens with symbols, WPF element, AML, CEL, system information and an overview of the simulation variables

➢ Navigation

Settings changed in the wizard are saved in the user profile of the operating system and loaded at the next opening by the same user.

10.4 New wizard for project comparison (REQ 4307)

The new backup comparison wizard compares project backups on their differences. At this it is analyzed which objects and elements were deleted, added and/or changed. The result can be saved and displayed as XML or HTML file.

10.5 New wizard for pharmaceutical industry (REQ 4201)

The pharmaceutical wizard enables the management of validated projects for the pharmaceutical industry. It summarizes the relevant settings necessary for a Good Manufacturing Process (GMP) project. These settings can be managed and changed in the wizard. The settings are loaded into the wizard either via an existing project or via a configuration files.

The following settings are managed:

▸ General project settings

- ▶ User administration

- ▶ User groups

- ▶ Settings for the Chronologic Event List

- ▶ Settings for the Alarm Message List

- ▶ XML template

Engineered settings in the wizard can be:

- ▶ written back to the active project

- ▶ saved in a new project

- ▶ saved to a special configuration file

These configuration files created in the wizard can be used over and over again and can be enhanced. However they can be only read and edited with the wizard.

11. Process Gateway

11.1   OPC UA Server: Certificates (REQ 4024)

The server now supports the check of Client certificates.

11.2   OPC UA Server: Encrypted connection and user authentication (REQ 4087)

As an option several encrypted connections are accepted and a user authentication via zenon user is also available as an option.

Per default all variables of the Runtime are available. The variable selection can also be done manually so that only selective access is possible.

11.3   Delegate DNP3 Trip/Close (FS 24481)

Command Control Code from the PLC is written to USINT variables as an 8-bit value via Process Gateway.

11.4   IEC870 Slave (FS 23795)

If values for normalized values deceed or exceed the norm area (*-1* to *1-2*$^{-15}$), the OV_870 bit is set even if the variable does not have the status bit in zenon.

11.5   The SNMP driver Weihenstephan driver: Enhanced implementation (REQ 4329)

The Weihenstephan driver for zenon Logic was enhanced.

12. Miscellaneous

12.1   Separated Transport Server and Diagnosis Server (REQ 1567)

Now the Diagnosis Server is an independent service (zenLogSrv.exe) which is started together with the operating system. The Transport Server (zenSysSrv.exe) is only responsible for the Remote Transport.

12.2   SQL Server 2008 R2 (REQ 3798)

As database server for the Editor the SQL Server 2008 R2 Express Edition including Business Intelligence Development Studio is used and automatically installed by the setup.

12.3   Web server supports Codemeter (REQ 3802)

The web server supports soft licenses, Wibukey dongles and Codemeter dongles.

12.4   Web server supports http tunneling (REQ 3995)

So that firewalls can be bypassed the web server and the web client support the http tunneling protocol.

12.5   Web client plug-in for Firefox, Safari and Chrome (REQ 4059)

In addition to the ActiveX Control for the Internet Explorer, plug-ins for alternative browsers are now available.

12.6   Setup adapted (REQ 4124)

The setup supports the selection of different Editors. The CE setup was integrated in the PC setup. The setup was simplified so that fewer steps are necessary.

12.7   Replaces indexes also for functions (FS 24199)

At screen switchings action "Replace indexes" also considers functions.

12.8   Lists in the Runtime: Column width in characters instead of pixels (FS 25348)

Column width in lists are now defined and measured in characters instead of pixels.

12.9 New product family zenon Operator and zenon Supervisor (REQ 4289/REQ 4294)

zenon CE was replaced by zenon Operator. zenon Operator is available for CE and PC platforms. See manual "zenon Operator" for the restrictions of the zenon Operator. zenon Standard was changes to zenon Supervisor.

12.10 Pharma Edition: Own objects (REQ 4316 and 4315)

The zenon Pharma Edition contains own special symbols, screens, reports, data types, palettes, reaction matrices and frames for the use in the pharmaceutical industry.

12.11 Network: Support for IPv6 (REQ 4313)

IPv6 can be used with zenon. All TCP connections are only established via IPv6. Dual operation is not possible. This option can be changed in the Startup Tool. Then all running zenon processes must be restarted. This concerns zenAdminSrv, zenSysSrv, zenLogSrv and zenDBSrv in particular.

By this setting the following components are converted to IPv6:

- ▶ VNC Server and VNC Viewer

- ▶ zenon DB Server and zenon DB Client

- ▶ Admin service and the Client part which is implemented in the used modules.

- ▶ Diagnosis Server and Diagnosis Client

- ▶ Remote Transport Server (Sys Server) and Remote Transport Client in the Editor

- ▶ zenon network including web server

The following components are not affected by the setting:

- ▶ Driver communication with the PLCs

- ▶ Protocol communication in the Process Gateway plug-ins

▶ Workbench and Runtime communication in zenon Logic

12.12 Network: Serious encryption (REQ 4181)

Serious encryption of the communication in the zenon network works from zenon version 7.0 SP0 on for all supported operating systems (exception Windows XP SP2) and for the web client.

12.13 Web server Pro Light available (REQ 4285)

With zenon 7.00 SP0 an additional version of the web server is available - the zenon web server Pro Light. It makes active operation actions possible with zenon Operator and zenon Supervisor. Differences to the zenon web server pro:

▶ The Runtime server that the zenon web clients connect to must be the same computer on which zenon web server Pro Light is running.

▶ The computer name is used for chekcing; domains are not taken into account

▶ At projects with redundancy, the zenon web server Pro Light must also be executed redundantly.

▶ Maximum 3 clients.

▶ No support for encrypted network traffic.

▶ HTTP tunneling is not supported.

12.14 zenon redundancy: Management tool (REQ 4253)

The Redundancy Management Tool monitors the network adapter and its connection to the network. If the device loses the connection to the network, the Redundancy Management tool stops the Runtime in order to prevent faulty data. This process can be canceled by the operator within a configurable period of time. If the connection to the network is reestablished, the Redundancy Management tool restarts the Runtime.

13. Drivers

13.1   S7 TCP/IP driver: Alternative TSAP for redundant PLC (REQ 1159)

For Siemens S7 H controls you can define an alternative TSAP. If the first CPU fails, it is automatically switched to the second CPU.

13.2   Mathematics driver: Removes unused settings (REQ 1267)

Button "Variable list" at the counter was removed.

13.3   Modbus RTU and Modbus Energy: LREAL data type (REQ 3712)

Both Modbus drivers now support LREAL data types.

13.4   IEC870-104 connection redundancy (REQ 3964)

The IEC870 driver was enhanced with the connection redundancy in accordance with IEC 60870 Edition 2.0.

13.5   IEC870 Timing parameter adjustable (REQ 3965)

The IEC 60870-104 Timing Parameter T1-T3, k, w can be defined in the driver.

13.6   IEC870_103: Parameter for RS 485 can be defined manually (FS 24392)

The parameters for RS 485 can now be defined manually. All timeout and polling parameter are now configured in an own dialog.

13.7   IEC870_103: Response timeout configurable (FS 23909)

The response timeout for general interrogation can be configured in the driver.

13.8   Internal driver: Allocation transfers status to variable (FS 24198)

An allocation transfers value, state and time stamp of the source variable to the target variable.

States Real time external (T_EXTERN), Real time internal (T_INTERN), Daylight saving time/standard time announcement (T_CHG_A) are not transferred. They are defined by the time stamp.

The transfer of the value occurs on a value change.

13.9   Logix32: Communication with firmware V18 of the Control Logix PLC (FS 22501)

Now the driver also supports version 18 of the firmware of the Control Logix PLC.

13.10   DNP3: TCP/IP port adjustable (REQ 3941)

The TCP/IP port can be freely configured.

13.11   ControlLogix driver: Offline import (REQ 4025)

The Logix32 and the Logix ODVA driver supports the offline import of ControlLogix programs.

13.12   Driver general: Redundancy for drivers with only one communication connection (FS 25491)

Drivers which allow only one communication connection, obtained option "Stop at Standby Server" on tab "General" in the driver configuration. For this the driver is stopped at the Standby Server and only started at the upgrade. In contrast to stopping via driver command, the variable does not receive status

"switched off" but an empty value. This prevents that at the upgrade to the Server irrelevant values are created in the AML, CEL and Historian.

Attention: If this option is active, the gapless archiving is no longer guaranteed.

13.13 BACNetNG: Adapted buffer for requests (FS 26353)

The default value for setting "Max. concurrent requests" was increased to 50. If a device sends more requests than defined, new buffers are allocated as long as the theoretical maximum of 256 is reached. Due to performance reasons setting "Max. concurrent requests" should be set to the maximum of the attached device. Only if the device also communicates with other devices, you may set a lower value.

13.14 BACNetNG: Support of ISO 8859-1 font (FS 25692)

Now the driver supports font ISO 8859-1.

13.15 BACNetNG: Reading identification and unit at the import (FS 23358)

The driver supports the reading of identification and unit during import.

13.16 BURPVI: Block reading of structure (FS 25444)

Now structure can be read block by block.

13.17 DCA_MW32: Variable import via CSV file (FS 24709)

Now the driver support the import of variables from a CSV file.

13.18 DNP3: Trip/Close available (FS 23630)

The driver supports Trip, Close and NUL.

13.19 DNP3: Pulse duration can be configured for each connection (FS 23780)

The driver supports the configuration of the pulse duration for Trip, Close and NUL for each connection.

13.20 EibV2: KNXnet/IP support (FS 23563)

Now the driver supports the use of the Falcon Connection Managers. With this the use of every current and future bus interface protocol, which supported by the installed Falcon version, is possible.

13.21 EibV2: Online import of variable (FS 23826)

The driver supports the online import of the variables.

13.22 Hydrometer: Sorting the counter (FS 25808)

The sorting of the counter/receiver is done in accordance with the secondary address and not with the net address.

13.23 Hydrometer: Support of OMS (FS 24662)

The driver supports OMS Data and Real Data for M-Bus Receiver 868 OMS.

13.24 IEC850: KEMA certified (FS 23524)

The IEC61850 Client driver fulfills the requirements for the KEMA certification and received the KEMA certification.

13.25 IEC850: Support of authentication (FS 24250)

The driver supports the authentication in accordance with ISO 8650-1. The connection between Client and Server can be protected with a password.

13.26 IEC850: Alternative IP address (FS 24313)

An alternative IP address can be configured. If the connection attempt to the first IP-address fails, it is switched to the alternative IP address after the net error waiting period. The alternative address will be kept until the driver is restarted or until the connection fails. Then, the first IP address will be used again.

13.27 IEC61850 Client and Server in zenon Logic: Only IEC1131 conform characters allowed (FS 23857)

For variables only characters which are in accordance with IEC1131 are allowed.

13.28 S7TCP32: Alternative IP address at CPU stop (FS 24394)

A new option in the configuration makes it possible to change to an alternative IP address if the connected CPU stops.

13.29 SNMP: Support for v2 traps (FS 23212)

Now the driver supports V1 and V2 SNMP Traps.

13.30 VDMALaeutus: Support of Audir Trail messages (FS 23611)

Messages are displayed in variables as XML. The Audit Trail message is a string variable. A string with the following syntax is created if a message is received: Text.Entry, Variable.Name, Variable.Value.Old, Variable.Value.New

13.31 VDMALaeutus: Offline import (FS 23206)

With this driver the offline import of variables is now possible. For this the Laetus XML interface (2.6.0 E2) and file VDMALaetus_Laetus.xml must be available.

13.32   ALLENBNT: Support for unsolicited messages (REQ 4353)

Now the driver uses a configuration text file to save the configuration for unsolicited messages.

Attention: With the support of unsolicited messages the configuration settings in the driver change. In existing projects the driver configuration must be adapted.

13.33   BuRPVI: Block reading of arrays (REQ 4255)

Now the driver also reads arrays in a block.

13.34   BuRPVI: Block reading of structure (REQ 4323)

In addition to arrays the driver also reads structure in a block. For the use PVI Runtime V3.0.0.3119 is needed at least.

13.35   OPC UA Client: "Monitored Item" and "Subscription Item" (REQ 4319)

Interval time from "Monitored Item" and "Subscription Item" can be configured.

13.36   IEC 61850: Set trigger options individually (REQ 4305)

In the configuration dialog for the IEC850 driver you can define the trigger options for the Server individually.

13.37   IEC 61850: orCat definable (REQ 4248)

Origin Category can be configured in the driver configuration for each IEC850 driver individually.

13.38   MELSECA optimized (REQ 4248)

MELSECA now supports 3E binary frames in TCP mode, driver object types "File register" (R/ZR) and "Data special register" (D) and data type REAL.

13.39   MODBUS Energy and MODRTU32: Support for string variables (REQ 4170)

Both drivers now support string variables.

13.40   SNMP: Trap lists can be received (REQ 4237)

The SNMP driver was enhanced with features "Translate OID variables to descriptive text" and "List of all content of a trap".

13.41   straton32 and stratonNG: ULINT is supported (REQ 4206)

straton32 and stratonNG supports ULINT - in zenon Logic the complete value area is supported, in zenon ULINT and LINT are only supported in a restricted values area. ULINT and LINT are only restrictedly supported under CE.

13.42   New drivers

Drivers	PLC type	Comment
Hydrometer32	IZAR Center of Hydrometer GmbH	The hydrometer driver serves to connect to the IZAR Center of Hydrometer GmbH. Either M-bus devices or hydrometer radio receivers can be connected to the IZAR Center. Devices in radio range can be read using the radio receiver (M-bus receiver 868).
Fraport	FRAPORT interconnected baggage system	The FRAPORT driver makes it possible to display all messages and displays in the zenon interconnected baggage system (IBS) and to be able to control the system.
LS_XGT32	LS Industrial Systems XGT series	Ethernet communication driver; polling; for controls of series XGT from LS Industrial Systems; via their dedicated protocol. For input and output, symbolic and direct variables. Supports numeric data types from 1 bit to 8 bytes.

14. Important information

14.1   Supported operating systems

VERSION 7.00 RUNS UNDER THE FOLLOWING PC OPERATING SYSTEMS:

▶   Windows XP Professional (only x86 Version) - at least Service Pack 3 required.

▶   Windows XP Embedded SP3 (if all necessary operating system components exist) - only Runtime

▶   Windows Embedded Standard 2009 (if all necessary operating system components exist) - only Runtime

▶   Windows Embedded Standard 7 (if all necessary operating system components exist) - only Runtime

▶   Windows Vista (Business, Enterprise and Ultimate version, x86 and x64 versions) - at least Service Pack 1 required

▶ Windows 7 (Professional, Ultimate, Enterprise version, x86 and x64 versions)

▶ Windows Server 2003 at least Service Pack 1(All editions, 32 bit and 64 bit versions)

▶ Windows Server 2008 (All editions)

▶ Windows Server 2008 R2 (All editions)

▶ Itanium processors are not supported for any operating system.

AND UNDER THE FOLLOWING WINDOWS CE OPERATING SYSTEMS:

▶ Windows CE 5.0

▶ Windows CE 6.0

For all Windows CE platforms the Runtime and the drivers which are available for CE for x86 and ARM processors are available and for CE.

14.2   Restrictions on 64-bit operating systems

The following functions are not available under 64-bit operating systems:

▶ straton real-time Runtime is not available.

14.3   Integration of VBA wizards and VSTA wizards

All VBA wizards are saved in the file "zenWorkspace.vba" by the Editor of the control system. All VSTA wizards are saved in workspace AddIn.

When performing a new installation, these files will only be copied to your computer if they do not already exist in the installation directory. Existing VBA/VSTA files are not overwritten, because all your changes would be deleted in this case. If you want to use our new wizards or modified ones, you can import them manually via the menu "File – Update Wizards" in the Editor. At this you can decide yourself which wizards you want to overwrite.

14.4   Overwriting Runtime files

When creating Runtime files in the Editor it can happen, that files changed in online operation are overwritten. This occurs with the following modules:

- ▶ Recipegroup Manager

- ▶ Production & Facility Scheduler or Scheduler

- ▶ User administration

- ▶ Standard recipes

In order to guarantee that data created in online operation (Recipes, Schedules etc.) is not lost when creating Runtime files, there is a new property page in the project configuration: 'RT changeable data'. For the modules mentioned above you can define here whether the concerned files should be overwritten when Runtime files are created. If the click boxes are **not** active, the files are **overwritten**!

This behavior is also true for the Remote Transport, when the Runtime files are to be transferred to another computer. So these check boxes also apply here. If you want to transport all files to the remote system, deactivate all check boxes. Otherwise the corresponding data will not be transported.

When creating Runtime files and when using Remote Transport, a message appears in the output window indicating that the concerned files were not overwritten.

The standard setting is: **Runtime Files are not overwritten**!

14.5   Converting existing data

If a project is started in Runtime version 7.x for the first time, the Runtime files of the concerned modules are converted. This guarantees that data changed in online operation is not lost. Please also refer to the topic Converting in the chapter General.

> ⚠ **Attention**
>
> *All files have to be created in the Editor for the new version; otherwise the project cannot be started!*

14.6   straton Intellisense is slow

For large programs the Intellisense function of the straton Workbench can cause the project to open very slowly. In this case you should deactivate the Intellisense function in the straton Workbench.

14.7   Process Desk – killing tasks

The Process Desk of the control system now allows you to kill tasks that got stuck. Please only use this option in case of emergency, when you are really sure, that the task will not close on its own. Some drivers need a certain follow-up time, because they write a process image on closing. Premature closing can result in data loss!

14.8   Page preview and printing in the Report Generator

In order to use the page preview and the printing of the Report Generator, a printer must be configured.

14.9   Saving reports of the Report Generator in the Runtime

Please be aware that on saving reports in the Runtime, all functions are replaced by the current contents of the cells (numbers). The functions in these reports (.xrs files) are no longer available. Additionally, these reports can no longer be edited in the Editor. So please use the MDI function "Save as" so that the original reports from the Editor are not overwritten. Moreover, we recommend to define the original reports as read-only.

14.10   Reload of projects with Simulator driver variables

Simulator driver variables, not projected as HD variables, are reset to the value 0 with the function "Reload". Only HD simulator driver variables keep their value after reloading.

14.11   Complex vector graphics

When using many and/or complex vector graphics, loading screens in the Runtime can take a long time. Please keep that in mind when engineering process screens.

14.12   The control system in the Startup folder with dongle licensing

If the control system is started from the Startup folder, it may happen that it starts before the Wibu Key or Codemeter driver. Consequently, no dongle will be found and the control system will start in demo mode.

You can change this behavior by configuring a delayed start of the Runtime. For this, you need to make the following entry in the zenon6.ini file:

[DEFAULT]
```
STARTDELAY=                    (delay of the Runtime start in ms)
```

14.13   Wibu Key error message „WK1128"

If you receive the error message WK1128 when starting the Editor or Runtime, please install the current version of the Wibu Key software from the installation CD.

14.14   Network access - Firewalls

Different components of the control system try to access the network and can cause an alarm by firewalls or personal firewalls. If you want to use the network or the Remote Transport, you have to unlock the according TCP/IP ports.

The following components of the control system cause network access:

▶   The Editor (zenone32.exe)

▶   The administration service (zenAdminSrv.exe)

▶   The Diagnosis Server (zenLogSrv.exe)

▶   The database server (zendbsrv.exe)

▶   The network server (zennetsrv.exe)

▶   The transport service (zensyssrv.exe)

▶   The WEB Server (zenWEBsrv.exe)

▶   The OPC Server (zenOPCsrv.exe)

▶ The Process Gateway (zenProcGateway.exe)

▶ The straton Workbench and the straton Runtime

▶ The Remote Desktop (zenVncSrv.exe and zenVncCli.exe)

▶ All drivers with TCP/IP connections

14.15 ActiveX Controls

If special ActiveX controls are developed, the following has to be considered:

If the DISPATCH – passed in the zenonInit event of zenon – is saved in the ActiveX control, an AddRef has to be done because this DISPATCH is only valid within the event zenonInit. If "AddRef" is not called, a crash of the entire Runtime will be the result. Additionally, a release has to be performed in the "zenonExit" event.

14.16 MS-ActiveX element DBGrid32.ocx does not work

There a several problems known in context with the use of Microsoft ActiveX element DBGrid32.ocx in the Runtime. Therefore please use other ActiveX elements such as MSDATGRD.ocx.

14.17 Erroneous line display if extended graphics mode deactivated

In the extended graphics mode, dashed lines with a line width > 1 can be drawn. If you deactivate the extended graphics mode and zoom onto the line, the line will be displayed as solid.

14.18 The database server service must be entered correctly in the Startup Tool

Beside the versions you can also change the data base server with the Startup Tool. If you use this function, please note:

Between version 6.21 SP0 and 6.22 SP0 the **SQL Service** was entered incorrectly in the zendb.ini by the setup. This was no problem because the zenDBSrv did not consider the value. As of 6.22 SP1 this is the case again.

If you read the values using function**Read from zenDB.ini**, the values are stored wrongly in the Startup Tool. You must check existing entries and change them if necessary.

14.19   String arrays with straton32 driver

Several string arrays with the same sice can be read out correctly with the straton32 driver only as of version 6.22 SP1 and straton Workbench SR7-3. If projects of older versions are converted, the string length must be changed for every string array in order for the communication to work.

14.20   Transport service is not started automatically

The transport service (zensyssrv.exe) is normally started automatically by the operating system when a user logs in. If the transport service is not started, the computer cannot be reached via the Remote Transport.
At a new installation it is restarted after the computer has rebooted.
If you accidentally delete the entry for the automatic start from the registry, you can restore it with the help of command `Register` in the Startup Tool. At this the transport service is also automatically restarted.