Contents

1. Welcome to COPA-DATA help ........................................................................................................... 7
2. Project conversion ........................................................................................................................... 7
3. Recommended procedure for converting Runtime files ............................................................... 8
4. Conversion from version 2.20 to 3.04 ............................................................................................. 9
   4.1 Restructuring the database ......................................................................................................... 9
       4.1.1 Restructuring the database when the structures changed .................................................. 11
5. Converting from version 3.4, 3.50 to 3.52 .................................................................................... 11
   5.1 Operating system ....................................................................................................................... 11
   5.2 AML/CEL-Export ..................................................................................................................... 12
   5.3 AML / CEL, Archives ............................................................................................................... 12
   5.4 Network operation ..................................................................................................................... 12
   5.5 Archives ................................................................................................................................... 12
   5.6 Layer ...................................................................................................................................... 13
   5.7 Arches .................................................................................................................................... 13
   5.8 Downward compatibility ........................................................................................................... 13
   5.9 Database .................................................................................................................................. 13
   5.10 Backup documentation (QRF inquiries) .................................................................................. 13
   5.11 American time formats ......................................................................................................... 14
   5.12 Alarm printer .......................................................................................................................... 14
   5.13 Symbols .................................................................................................................................. 14
   5.14 Zoom function ......................................................................................................................... 14
   5.15 Project backup ......................................................................................................................... 14
   5.16 Filters for system windows ..................................................................................................... 15
   5.17 Export variable ....................................................................................................................... 16
   5.18 Element link text .................................................................................................................... 16
6. Converting from version 3.52 to 5.11 ............................................................................................ 17
   6.1 Things to be done in version 3.52 ............................................................................................. 17
       6.1.1 Preparatory works ................................................................................................................ 17
6.1.2 Rotated texts .................................................................................................................. 17
6.1.3 Screen names with special characters ............................................................................. 17
6.2 Things to be done in version 5.11 ...................................................................................... 18
6.2.1 Licensing ......................................................................................................................... 18

7. Converting version 3.52 to 5.x or 6.x ................................................................................. 19
7.1 Convert dynamic element switch ...................................................................................... 19

8. Converting from version 5.11 to 5.50 ................................................................................. 20
8.1 Things to be done in version 5.11 ...................................................................................... 20
8.2 Things to be done in version 5.50 ...................................................................................... 20

9. Converting from version 5.50 to 6.01 ................................................................................. 21
9.1 Things to be done in version 5.50 ...................................................................................... 21
  9.1.1 Function names ............................................................................................................... 21
  9.1.2 Projects ........................................................................................................................ 21
  9.1.3 Runtime changeable project data (users, recipes, etc.) .................................................... 22
  9.1.4 Data .............................................................................................................................. 22
  9.1.5 Profiles ......................................................................................................................... 22
  9.1.6 3S Arti driver (since SP2) .............................................................................................. 22
9.2 Things to be done in version 6.01 ...................................................................................... 23
  9.2.1 Licensing ....................................................................................................................... 23
  9.2.2 User administration / password system ......................................................................... 23
  9.2.3 Configuration settings .................................................................................................. 23
  9.2.4 the Simulator driver ...................................................................................................... 24
  9.2.5 Screen functions ........................................................................................................... 24

10. Converting from version 5.50 to S7 dBase Export ............................................................ 24

11. Conversion from version 6.01 to 6.20 .............................................................................. 25
  11.1 Evacuating archives to SQL database ............................................................................. 25
  11.2 Converting multi-user projects from 6.20 to 6.20 SP1 ..................................................... 26

12. Converting from version 5.50 to version > 6.22 SP1 .......................................................... 26

13. Converting from version x to 6.21 ..................................................................................... 27
  13.1 zenon web client CAB files no longer available .............................................................. 27

14. Converting from version x to 6.22 ..................................................................................... 27
14.1 Function authorizations for Acknowledging Alarms .......................................................... 27
14.2 Report Generator function fixed ......................................................................................... 28
14.3 VBA - Direct variable access via request is no longer possible ........................................ 28
14.4 RGM database changed .................................................................................................... 30
14.5 Frame - maximum name length ......................................................................................... 31

15. Converting from version X to version 6.50 ...................................................................... 31
   15.1 zenon Logic ......................................................................................................................... 31
   15.2 Extended graphical settings for AML and CEL ................................................................. 32
   15.3 Status bits - new short name ............................................................................................. 32
   15.4 Structures for UDFBs in zenon Logic .................................................................................. 45
   15.5 VSTA and VBA - naming of objects .................................................................................. 45

16. Converting from version x to 6.51 .................................................................................... 46
   16.1 Calculation column width ................................................................................................. 46
   16.2 Settings SQL database ...................................................................................................... 47
   16.3 Extended Trend xy axis .................................................................................................... 47
   16.4 GUID for project converting from version 5.50 ................................................................. 48
   16.5 Clickable buttons combined element .............................................................................. 49
   16.6 Context menus command ............................................................................................... 49
   16.7 Record shift times in PFS ............................................................................................... 50
   16.8 Convert symbol colors of the global symbol library from palette to absolute color ....... 50
   16.9 Wizards - remove VBA and VSTA properties ................................................................. 51
   16.10 Character # not allowed in object name ....................................................................... 51

17. Converting from version X to version 7.00 .................................................................... 51
   17.1 User administration with Active Directory ..................................................................... 52
   17.2 Diagnosis Server with new service ................................................................................ 52
   17.3 Dynamische Combo-/Listbox .......................................................................................... 53
   17.4 IPv6 .................................................................................................................................. 53
   17.5 Licensing .......................................................................................................................... 54
   17.6 Message Control ............................................................................................................... 54
   17.7 RGM - error behavior at screen switch ......................................................................... 56
   17.8 RGM read recipe - new conditions ................................................................................. 57
   17.9 Driver Allan Bradley RS-Linx .......................................................................................... 57
   17.10 Conversion SQL Server ................................................................................................ 58
Welcome to COPA-DATA help

GENERAL HELP

If you miss any information in this help chapter or have any suggestions for additions, please feel free to contact us via e-mail: documentation@copadata.com (mailto:documentation@copadata.com).

PROJECT SUPPORT

If you have concrete questions relating to your project, please feel free to contact the support team via e-mail: support@copadata.com (mailto:support@copadata.com)

LICENSES AND MODULES

If you realize that you need additional licenses or modules, please feel free to contact the sales team via e-mail: sales@copadata.com (mailto:sales@copadata.com)

2. Project conversion

When using new version of zenon projects which were created with earlier versions must be converted to the new version. If certain properties or changes must be considered at converting, they are described in the hints for converting in this manual.

License information

Part of the standard license of the Editor and Runtime.
CONVERTING AT UPDATE AND DOWNGRADE

If you want to update zenon to a higher version, projects are converted automatically to the higher version when opened in the new version. From this time you cannot edit the project with earlier versions of the Editor. However a project backup is created automatically of the converted project in the original version.

Converting a project to an earlier version which was created with a older version (downgrade) is not possible.

DOWNWARD COMPATIBILITY

As of version 6.21 projects are downward compatible for the Runtime. You can work in an Editor with a higher version number. This Runtime backwards-compatibility is particularly suited for use of mixed versions such as: A project which was engineered with version 6.50 can be used in a Runtime with version 6.22.

⚠️ Attention

If, in a project with a later version of the Editor, properties are shown that are not available in the earlier version, it can lead to undesired results in the Runtime.

3. Recommended procedure for converting Runtime files

At the project conversion take care that the Runtime changeable files are also converted correctly.

To convert the Runtime changeable files:

1. Import the files from the Runtime to the original version of the Editor.
2. Carry out the update to the new version.
3. Navigate to the General section in project properties.
4. Click on the RT changeable data property.
5. The dialog for the settings of the Runtime changeable files is opened.

6. Deactivate all check boxes in column **Do not generate and transfer**

7. Compile the project (**Create all Runtime files**) 

8. Change the check box in the **RT changeable data** property back to the status before the conversion

4. Conversion from version 2.20 to 3.04

4.1 Restructuring the database

1. Create a temporary directory and a subdirectory. Name of the subdirectory: XX. E.g.:  
   C:\TEMP\XX where C:\TEMP is the path of the original database and C:\TEMP\XX is the path for the restructured database. Do not forget to make a backup of your original database.

2. Copy the original database and REV.BAT and DATAMGR.RDL to C:\TEMP.

3. Copy the new DBD files (of the new database) and the file DBAREORG.EXE to the XX directory.

4. Set the paths to the directory, where DBREV.EXE and INITDB.EXE are, resp. copy these files to C:\TEMP and also to C:\TEMP\XX. Check if these two programs can be started in the DOS window without entering their path.

5. Make sure, that enough space (min. 500 K) is available in the DOS memory area.
6. Execute the batch file `REV.BAT` in the DOS window:

<table>
<thead>
<tr>
<th>Content</th>
<th>del *.taf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>del *.log</td>
</tr>
<tr>
<td></td>
<td>cd xx</td>
</tr>
<tr>
<td></td>
<td>del *.taf</td>
</tr>
<tr>
<td></td>
<td>del *.log</td>
</tr>
<tr>
<td></td>
<td>initdb datamgr</td>
</tr>
<tr>
<td></td>
<td>cd..</td>
</tr>
<tr>
<td></td>
<td>dbrev -r -v -q -s datamgr.rdl datamgr xx/datamgr</td>
</tr>
</tbody>
</table>

7. Start `DBAREORG.EXE` in the directory zenon directly from Windows (execute file).

8. Define the directory where the database is (XX) with CONVERT 2xx -> 3xx and PATH SETTINGS.

9. Start restructuring with CONVERT 2xx -> 3xx and CONVERT.

10. Restructuring is finished. The new database is in the XX path. If existing please delete the TAF files from the XX directory. The original database still is in the TEMP directory.

11. If restructuring is not successful on the first attempt, you have to restart with step 1. Otherwise the restructured database would be converted another time.

<table>
<thead>
<tr>
<th>Result of restructuring</th>
<th>all screens are converted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all variables are converted</td>
</tr>
<tr>
<td></td>
<td>all functions are converted, but the functions have to be relinked. Exception: the “Switch to screen” function needs no relinking.</td>
</tr>
<tr>
<td></td>
<td>a log file (<code>DBAREORG.LOG</code>) is created in the directory from which <code>DBAREORG.EXE</code> has been started. There you can find information on the unlinked functions.</td>
</tr>
</tbody>
</table>
4.1.1  Restructuring the database when the structures changed

1. Create a temporary subdirectory. Name of the subdirectory: XX

2. Copy the new DBD files to the XX directory.

3. Execute the batch file REV.BAT:

<table>
<thead>
<tr>
<th>Contents</th>
<th>del *.taf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>del *.log</td>
</tr>
<tr>
<td></td>
<td>cd xx</td>
</tr>
<tr>
<td></td>
<td>del *.taf</td>
</tr>
<tr>
<td></td>
<td>del *.log</td>
</tr>
<tr>
<td></td>
<td>initdb datamgr</td>
</tr>
<tr>
<td></td>
<td>cd..</td>
</tr>
<tr>
<td></td>
<td>dbrev -r -v -q datamgr</td>
</tr>
<tr>
<td></td>
<td>xx/datamgr</td>
</tr>
</tbody>
</table>

5. Converting from version 3.4, 3.50 to 3.52

5.1  Operating system

Version 3.52 only runs under Windows NT 4.0 and WIN 95.
5.2 AML/CEL-Export

The export name of alarm and CEL entries has changed. Now Ayymmdd.TXT resp. Cyymmdd.TXT. For the export there is a new function, which can be executed e.g. with time control. The old settings are omitted.

5.3 AML / CEL, Archives

Now archives for alarm list and CEL are stored as a default. These day archives have no file limitations. For this reason you should engineer a delete function. With this you make sure that not the whole storage capacity of the hard-disk is filled with archives (see function file operations). The available memory for reading archives is limited with the following entry in the zenon6.ini.

[ARCHIV]
...
SPEICHER=1000   (default=1000, that is 1MB)

5.4 Network operation

The drivers have to be set to local. In the section [Befehlsgabe] of the zenon6.ini the entry Treiber= has to be deleted.

5.5 Archives

Archives now are stored in a subdirectory of the project path. On the first start existing ARV files are moved there.
5.6 Layer

In DXF import layers are no longer supported. Layers now are called symbols.

5.7 Arcs

Arcs have been replaced by segments of circles. Existing arcs retained until changes are made.

5.8 Downward compatibility

Version 3.52 is not downwards compatible. (Concerns e.g. zenOn.ini, symbols and functions administration)

5.9 Database

A new database structure file is delivered. (DATAMGR.DBD, 20.11.1996, 14.759 byte)

This file is needed for batch archives and has to be copied to the project directory.

Delete *.TAF and *.LOG files in the project directory.

5.10 Backup documentation (QRF inquiries)

In the QRF files the inquiries for TTA and LANGTEXT have been changed.

- field TTA = dwkanalNr translate using 1 display as left (30);
5.11 American time formats

As a time format AM/PM is not supported.

5.12 Alarm printer

If the alarm printer fails, the control system now automatically switches to the Windows standard printer. If no print out should happen, the alarm printer in the Editor has to be deleted.

5.13 Symbols

After rescaling symbols have to be resolved and relinked before storing them in the symbol library. Bitmaps in symbols have to be stored separately. Symbol files are saved in folder ../zenon.

5.14 Zoom function

The zoom function may be used to check or edit elements.

5.15 Project backup

A database now consists of the following files:
Converting from version 3.4, 3.50 to 3.52

<table>
<thead>
<tr>
<th>*.vbf</th>
</tr>
</thead>
<tbody>
<tr>
<td>*.idx</td>
</tr>
<tr>
<td>*.DAT</td>
</tr>
<tr>
<td>*.BIN</td>
</tr>
<tr>
<td>*.dbd</td>
</tr>
<tr>
<td>*.INI</td>
</tr>
<tr>
<td>*.mdb</td>
</tr>
<tr>
<td>*.MIB (for NWM III)</td>
</tr>
<tr>
<td>*.NWM (for NWM III)</td>
</tr>
<tr>
<td>*.EMS (for 230 EMS)</td>
</tr>
</tbody>
</table>

For saving the archives (*.ARV, *.CEL, *.AML) the according subdirectory has to be regarded.

⚠️ **Attention**

The file `ALARMBIN` in the archive directory saves the last contents of the alarm list when closing the Runtime and should not be saved.

5.16 Filters for system windows

We recommend checking the filters for the system screens with the new functionalities (e.g. scheduler, archives for AML/CEL).
5.17 Export variable

For using the export file under dBase, Foxpro the max. column width for variable name and identification (long text) has to be limited from 128 characters to max. 100 characters.

Therefore the following zenon6.ini entry is necessary:

```
[EXPORT]
MAX_LAENGE= e.g. 40
```

5.18 Element link text

In old projects texts are no longer centered but left aligned. This can be changed in the element parameters. If this leads to extensive changes in existing projects, please proceed in the following way:

1. enter [Editor] Konvert=1 in the zenon6.ini
2. Set the option old text elements in the Editor under Open screen; then open the according screen and save it. Repeat this procedure for each screen concerned.
3. delete [Editor] Konvert=1 in the zenon6.ini
6. Converting from version 3.52 to 5.11

6.1 Things to be done in version 3.52

6.1.1 Preparatory works

We recommend to create a backup of the project in the old version.

The project database should be checked with the provided tool DBCHECK in version 3.52. If any errors occur during the check, they can be fixed with the also provided tool DBFIX in version 3.52.

6.1.2 Rotated texts

Rotated texts behave differently in version 3.52 and version 5.50 – as far as positioning is concerned – and have to be edited.

In order to get a display compatible to version 3.52, the following entry in the project.ini has to be set:

```
[VERSION]
TEXT352=1
```

6.1.3 Screen names with special characters

Screen names must not contain special characters such as \ / : * ? " < > | Ä Ö Ù because the screens are saved as files. The Windows operating system does not allow such special characters.
If existing screen names contain such special characters, these screen names have to be changed in the old version e.g. 3.52, before the screens can be converted to version 5.x.

⚠️ Attention

Additionally all functions containing invalid screen names have to be changed.

If these changes are not done, the according screens are not converted and are not available in version 5.x.

⚠️ Attention

If in a 3.5x project there are missing frames resp. empty allocations, the following error message opens on starting the Runtime 5.11: It was tried to access a file behind the end of the file and the Runtime crashed.

So before conversion old 3.5x projects have to be checked on missing frames resp. empty allocations.

### 6.2 Things to be done in version 5.11

zenon version 5.11 must be installed.

#### 6.2.1 Licensing

The license numbers of version 5.x are not compatible with the license numbers of previous versions. For updates new license numbers have to be ordered and entered in the Editor. Licenses for all versions up to 3.52 stay untouched, as the new serial numbers are stored in new entries in the `zenon.ini`.

[DEFAULT]
SERIAL5=xxx

ACTIVATIONKEY5=xxx

The start ICONS no longer support parameters.

An existing Project has to be inserted into a new workspace.

The simulation driver now works with the same driver model as all other drivers. Under Driver/Configuration Hardware has to be selected.

After loading the 3.52 project and converting the screens the correct monitor profile has to be selected and the Editor has to be restarted.

In the zenon.ini there is an entry defining the size of the driver buffer. As a rule of thumb we recommend Number of variables * 10.

[RT]

DRIVER_QUE =50000

If the value is too small, this can result in update problems in the visualization.

We recommend to alarm an overflow. There is a system variable for this: Project info/Driver queue.

7. Converting version 3.52 to 5.x or 6.x

7.1 Convert dynamic element switch

Switches which were created in a project of version 3.52 must be converted via XML export when switching to a higher zenon version.

Procedure in the new zenon version:
1. Context menu screens -> XML export all

2. Export screens in new file

3. Context menu screens -> Import XML

4. select exported file and import it

8. Converting from version 5.11 to 5.50

8.1 Things to be done in version 5.11

We recommend to create a backup of the project before converting it. The Editor data and the Runtime changeable data have to be saved.

The project database should be checked and repaired if necessary. You will find more information on this on the installation CD under Software\TOOLS\DB_TOOLS\DB_DOKU.DOC.

8.2 Things to be done in version 5.50

zenon version 5.50 must be installed.

After starting the Editor the old workspace can be opened. The projects then are converted automatically.

After creating the Runtime files the Runtime can be started.
9. Converting from version 5.50 to 6.01

9.1 Things to be done in version 5.50

Before the converting can be carried out, the data must be read back to the engineering computer. After that the converting may be started.

In the properties window of the project under 'General' you can find the dialog 'RT changeable data'. Here you determine which data should be changed. For more information refer to chapter RT changeable data.

9.1.1 Function names

You have to care, that the functions names are unique. As no function names have to be defined in version 5.50, zenon does not check the uniqueness. This is not necessary for version 5.50. In version 6.x however the functions are identified by their names.

9.1.2 Projects

Before a 5.50 project can be opened in the Editor version 6, it has to be converted. (File - Insert project 5.50...). The old project stays unaffected and a copy of it is created in the database server. Please be aware, that some external files and directories are not automatically added to the new Editor and Runtime directory structure. These files/directories have to be adapted or inserted into the project manually (in the project tree / Files)
This applies for e.g.: user-defined subdirectories in the project directory, extended list directories, databases, export directories, etc.

9.1.3 Runtime changeable project data (users, recipes, etc.)

Have to be read back to the Editor before the conversion, so that no changes done in the Runtime get lost.

9.1.4 Data

The files created by the Runtime like e.g. alarm, CEL files, HD data, bin files are compatible. These have to be copied to the corresponding Runtime directories of version 6 by hand. 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.

9.1.5 Profiles

In version 5.50 the profiles for alarming, Extended Trend, etc. are saved in the file with the name of the project and the extension zrt. Example: For the project Project1 this file is named Project1.zrt. This file has to be renamed to project.zrt after having converted the project. Then the file has to be moved to the same directory in the RT path, where also the project.ini is saved.

9.1.6 3S Arti driver (since SP2)

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.
9.2 Things to be done in version 6.01

zenon version 6.01 must be installed.

9.2.1 Licensing

The license numbers of version 6.x are not compatible with the license numbers of previous versions. For updates new license numbers have to be ordered and entered in the Editor. Licenses for all versions up to 5.x stay untouched, as the new serial numbers are stored in new entries in the zenon6.ini instead of the zenon.ini.

9.2.2 User administration / password system

In the user administration of version 6.x there is the new property Administrator. Now only administrators are allowed to edit user data in the Runtime. As this property did not exist in older versions, as a default it is inactive for the existing users. If users still should be able to edit user data in the Runtime, this has to be defined accordingly in version 6.x.

9.2.3 Configuration settings

Additionally all properties of the projects as well as all settings under Options/Settings have to be checked.

As the zenon.ini has been replaced by the zenon6.ini, probable manual changes (e.g. the entry SPEICHER= for archiving) have to be copied from the zenon.ini to the zenon6.ini manually.
9.2.4 the Simulator driver

As also the current settings for the simulation driver are stored in the zenon.ini, they now are taken from the zenon6.ini. After the new installation there are the default settings. So after the installation they have to be edited according to the old zenon.ini.

After creating the Runtime files the Runtime can be started.

9.2.5 Screen functions

In version 5.50 and lower, only scripts (but not functions) could be linked to screens. These scripts which were executed automatically when a screen was closed or opened.

In version 6.01 and above, only functions can be linked screens, so all links to scripts are lost. The screens have to be relinked with the desired functions.

10. Converting from version 5.50 to S7 dBase Export

When converting a 5.50 project, a converting error may occur. Typical error message:
"Error driver 'SIMUL32 - SIMULATORDRIVER' variable 'Sub_VISU_E1_IGEF' type for primitive object '34' data type 8 not defined."

REASON:
The variables were

- created on a S7 driver
- exported as dBase
- and then imported on the simulator driver

SOLUTION

- Export variables with zenon 5.50 as dBase
Conversion from version 6.01 to 6.20

Projects of the version 6.01 have to be converted when loaded in the current Editor for the first time. A backup of the project is automatically created in the directory \SQL\Backup.

⚠️ Attention

_Not translated keywords in the language table are deleted during the conversion process._

11.1 Evacuating archives to SQL database

The database table `<Project name>_<shortcut>` gained two columns.

- **GUID**: Contains the project GUID of the variable from another project or is ZERO if in the own project.

- **STRVALUE**: varchar. Contains the archived string values. For numerical variables this field has the value ZERO.

  The length of the varchar datafield depends on the longest string variable to be archived. The length of the string variable is defined in the variable properties.

The database table `<project name>_VARIABLES` has one more column:

- **GUID**: Contains the project GUID of the variable from another project or is ZERO if in the own project.

These new columns either have to be added to the SQL database by hand, or they are added from the Editor. In the Editor you have to switch to the to the property page _save_ in all concerned archives. There you open the connection string to the database and confirm the dialog. On closing the dialog the changes in the database are done.
11.2 Converting multi-user projects from 6.20 to 6.20 SP1

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 any reason, first a project backup of the project on the project database server has to be done and to be restored immediately. Now all the Under construction information is reset.

Attention

If these changes are not done, no archive data will be evacuated to the SQL database.

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 no Editor (standalone database server) is installed on this PC, the 6.20 SP1 Editor first has to be installed there. Only after that can the conversion be done on this PC.

12. Converting from version 5.50 to version > 6.22 SP1

When converting a project of version 5.50 with active property Windows CE project to a version higher than 6.22SP1, recipe groups are not converted to the higher version.

Background: With active property Windows CE project the saving type is set to binary before the RGM database is converted. Thus no new recipe groups can be created in the new version.
Solution: Deactivate property Windows CE project before the conversion.

For this you can either:

- open the project in the Editor of version 5.50 and deactivate the property
  or
- change the respective entry in the INI file of the project. To do this:
  - open the `<projectname>.ini` of the project
  - go to area `[RT]`
  - set entry `WIN_CE=0`

13. Converting from version x to 6.21

13.1 zenon web client CAB files no longer available

The automatic installation of the zenon web clients via CAB file is no longer possible due to security restrictions by Windows VISTA/7.

14. Converting from version x to 6.22

14.1 Function authorizations for Acknowledging Alarms

Since zenon version 6.22, the existing function authorizations for acknowledging alarms in the project properties are replaced by three new authorizations. The old function authorization 'Acknowledge alarms' no longer exists.

When converting from existing projects, the new function authorizations are configured according to the old single authorization. For example, if the authorization group 15 used to be necessary for the function authorization 'Acknowledge alarms', it is now also necessary for the three new functions.
For downward compatibility it may be necessary to transfer the authorization group from the three new function authorizations to the old function. The highest authorization group will be used for that. This means, if the function 'Acknowledge alarm via alarm status line' has authorization group 5, 'Acknowledge alarm via screens' has authorization group 2 and 'Acknowledge alarm via function' has authorization group 12, the function 'Acknowledge alarm' of older versions will receive the authorization group 12.

Info

Notice regarding online compatibility in the Runtime: If you start a project older than zenon version 6.22 with the current version, the system will offer you the three new functions for configuration. However, only the highest authorization group will be used for processing, according to the mechanism described above. The old project will not be able to use the new functionality.

14.2 Report Generator function fixed

The fixed() function also has the argument no_seps in versions up to 5.50. The argument is optional and controls the display of thousand separators.

This argument has no longer an effect on the display as thousands separators are no longer used in zenon.

14.3 VBA - Direct variable access via request is 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 not 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.
14.4 RGM database changed

In 6.22 SP1 the format of the used databases for data storage was modified. This means that when converting a project in the Editor the database is modified automatically.

If you changed data of the RGM in the Runtime, you must carry out the following steps:

1. Start the Editor in the original version before you convert the project.

2. In the project properties RT changeable data make sure that the data of the RGM can be read back and decompiled.

3. If you use the Runtime on a remote system: Establish a connection to the remote system and read the Runtime files back. You can find this function in the Remote Transport toolbar.

4. Read the Runtime data back to the Editor. Use command Import Runtime Data in the toolbar Runtime files in order to do so.

5. Close the old Editor and open the new Editor. Now you can convert the project to the new version safely. All data are available in the new version.

**Attention**

Older RGM database from lower versions than 6.22 SP1 cannot be read in Runtime 6.22 SP1 or higher! If you do not convert the data as described using the Editor, you will lose all changes you made to recipes and recipe groups in the Runtime.
**WINDOWS CE**

If you convert a project with activated option *Windows CE project*, the data are saved automatically binary in zenon 6.22. This means that when opening the RGM it looks like all recipes are gone.

### 14.5 Frame - maximum name length

Frame names may have a maximum of 29 characters. In a previous version, it was possible to create names with 30 characters. Before converting a project, all frame names with 30 characters must be reduced to 29 characters.

### 15. Converting from version X to version 6.50

Projects from older versions are automatically converted when loaded into the current editor. A backup of the project is automatically created in the directory `\SQL\Backup`.

⚠️ **Attention**

*Before converting the editable data into Runtime editor, read it back into the old version. Otherwise it will be lost!*

#### 15.1 zenon Logic

When converting from zenon Logic projects, the following must be taken into account:

⚠️ **Attention**

The following applies for zenon Logic:

- All projects must be recompiled after conversion into Workbench, so that they work in zenon Logic Runtime.
- Projects from an older version which have not been converted to version
6.50 cannot be started with Runtime version 6.50.

15.2 Extended graphical settings for AML and CEL

As of version 6.50 property **Extended graphical settings** is available for control element alarm message list in screen Alarm Message List (AML) and control element event list for screen Chronological Event List (CEL).

It activates the use and the customization of the horizontal and vertical scroll bars, the header and the grid for the control element via the corresponding properties in group **Header and grid**.

If projects from earlier version are converted to version 6.5x, property **Extended graphical settings** is missing. To access the property, you must delete control element **Alarm Message List** or **Event List** from the screen and create it again.

15.3 Status bits - new short name

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. In this chapter, you will find:

1. List of new short names including comparison to previous short names
2. List of short names with long name
3. Instruction to reactivate the old short names in project.ini
1. NEW SHORT NAME STATUS

<table>
<thead>
<tr>
<th>Bit no.</th>
<th>From 6.50 All</th>
<th>Up to 6.50 German</th>
<th>Up to 6.50 English</th>
<th>Up to 6.50 French</th>
<th>Up to 6.50 Italian</th>
<th>Up to 6.50 Spanish</th>
<th>Up to 6.50 Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>M1</td>
<td>ST_M1</td>
<td>ST_M1</td>
<td>ST_M1</td>
<td>ST_M1</td>
<td>ST_M1</td>
<td>ST_M1</td>
</tr>
<tr>
<td>1</td>
<td>M2</td>
<td>ST_M2</td>
<td>ST_M2</td>
<td>ST_M2</td>
<td>ST_M2</td>
<td>ST_M2</td>
<td>ST_M2</td>
</tr>
<tr>
<td>2</td>
<td>M3</td>
<td>ST_M3</td>
<td>ST_M3</td>
<td>ST_M3</td>
<td>ST_M3</td>
<td>ST_M3</td>
<td>ST_M3</td>
</tr>
<tr>
<td>3</td>
<td>M4</td>
<td>ST_M4</td>
<td>ST_M4</td>
<td>ST_M4</td>
<td>ST_M4</td>
<td>ST_M4</td>
<td>ST_M4</td>
</tr>
<tr>
<td>4</td>
<td>M5</td>
<td>ST_M5</td>
<td>ST_M5</td>
<td>ST_M5</td>
<td>ST_M5</td>
<td>ST_M5</td>
<td>ST_M5</td>
</tr>
<tr>
<td>5</td>
<td>M6</td>
<td>ST_M6</td>
<td>ST_M6</td>
<td>ST_M6</td>
<td>ST_M6</td>
<td>ST_M6</td>
<td>ST_M6</td>
</tr>
<tr>
<td>6</td>
<td>M7</td>
<td>ST_M7</td>
<td>ST_M7</td>
<td>ST_M7</td>
<td>ST_M7</td>
<td>ST_M7</td>
<td>ST_M7</td>
</tr>
<tr>
<td>7</td>
<td>M8</td>
<td>ST_M8</td>
<td>ST_M8</td>
<td>ST_M8</td>
<td>ST_M8</td>
<td>ST_M8</td>
<td>ST_M8</td>
</tr>
<tr>
<td>8</td>
<td>NET_SEL</td>
<td>SELEC</td>
<td>SELEC</td>
<td>SELEC</td>
<td>SELEC</td>
<td>SELEC</td>
<td>Выбор</td>
</tr>
<tr>
<td>9</td>
<td>REVISION</td>
<td>REV</td>
<td>REV</td>
<td>REV</td>
<td>REV</td>
<td>REV</td>
<td>ПЕВ</td>
</tr>
<tr>
<td>10*</td>
<td>PROGRESS</td>
<td>LAUF</td>
<td>DIREC</td>
<td>DIREC</td>
<td>RUN</td>
<td>LAUF</td>
<td>ХОД</td>
</tr>
<tr>
<td>11</td>
<td>TIMEOUT</td>
<td>LZÜ</td>
<td>RTE</td>
<td>RTE</td>
<td>RTE</td>
<td>LZÜ</td>
<td>КВИ</td>
</tr>
<tr>
<td>12</td>
<td>MAN_VAL</td>
<td>HWERT</td>
<td>MVALUE</td>
<td>VAL_M</td>
<td>V_MAN</td>
<td>VWERT</td>
<td>МЗНАЧ</td>
</tr>
<tr>
<td>13</td>
<td>M14</td>
<td>ST_14</td>
<td>ST_14</td>
<td>ST_14</td>
<td>ST_14</td>
<td>ST_14</td>
<td>ST_14</td>
</tr>
<tr>
<td>14</td>
<td>M15</td>
<td>ST_15</td>
<td>ST_15</td>
<td>ST_15</td>
<td>ST_15</td>
<td>ST_15</td>
<td>ST_15</td>
</tr>
<tr>
<td>15</td>
<td>M16</td>
<td>ST_16</td>
<td>ST_16</td>
<td>ST_16</td>
<td>ST_16</td>
<td>ST_16</td>
<td>ST_16</td>
</tr>
<tr>
<td>16</td>
<td>GI</td>
<td>GA</td>
<td>GI</td>
<td>RG</td>
<td>IG</td>
<td>CG</td>
<td>ГО</td>
</tr>
<tr>
<td>17</td>
<td>SPONT</td>
<td>SPONT</td>
<td>SPONT</td>
<td>SPONT</td>
<td>SPONT</td>
<td>SPONT</td>
<td>SPONT</td>
</tr>
<tr>
<td>18</td>
<td>INVALID</td>
<td>I-BIT</td>
<td>I-BIT</td>
<td>I-BIT</td>
<td>NV-BIT</td>
<td>I-BIT</td>
<td>I-Bit</td>
</tr>
<tr>
<td>19</td>
<td>T_CHG_A</td>
<td>SO/WI</td>
<td>SU/WI</td>
<td>ET/HI</td>
<td>ES/IN</td>
<td>VE/IN</td>
<td>ЛТ/3М</td>
</tr>
<tr>
<td>20</td>
<td>OFF</td>
<td>N_AKT</td>
<td>N_UPD</td>
<td>N_RAF</td>
<td>N_UPD</td>
<td>N_AKT</td>
<td>N_AKT</td>
</tr>
<tr>
<td>21</td>
<td>T_EXTERN</td>
<td>EZ_E</td>
<td>RT_E</td>
<td>HR_E</td>
<td>RT_E</td>
<td>EZ_E</td>
<td>EZ_E</td>
</tr>
<tr>
<td>22</td>
<td>T_INTERN</td>
<td>EZ_I</td>
<td>RT_I</td>
<td>HR_E</td>
<td>RT_I</td>
<td>EZ_E</td>
<td>EZ_E</td>
</tr>
<tr>
<td>23</td>
<td>N_SORTA</td>
<td>NSORT</td>
<td>NSORT</td>
<td>NTRI</td>
<td>NORD</td>
<td>NSORT</td>
<td>НЕСОРТ</td>
</tr>
</tbody>
</table>

Convert from version X to version 6.50
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>FM_TR</td>
<td>SM_TR</td>
<td>DM_TR</td>
<td>MD_TR</td>
<td>SM_TR</td>
</tr>
<tr>
<td>25</td>
<td>RM_TR</td>
<td>LM_TR</td>
<td>RM_TR</td>
<td>MM_TR</td>
<td>RM_TR</td>
</tr>
<tr>
<td>26</td>
<td>INFO</td>
<td>INFO</td>
<td>INFO</td>
<td>INFO</td>
<td>INFO</td>
</tr>
<tr>
<td>27</td>
<td>ALT_VAL</td>
<td>EWERT</td>
<td>AVALUE</td>
<td>VALR</td>
<td>RVAL</td>
</tr>
<tr>
<td>28</td>
<td>RES28</td>
<td>RES13</td>
<td>RES13</td>
<td>RES13</td>
<td>RES13</td>
</tr>
<tr>
<td>29</td>
<td>N_UPDATE</td>
<td>IAKTUAL</td>
<td>IAKTUAL</td>
<td>IAKTUAL</td>
<td>IAKTUALE</td>
</tr>
<tr>
<td>30</td>
<td>T_STD</td>
<td>WINTER</td>
<td>WINTER</td>
<td>HIVER</td>
<td>INVERNO</td>
</tr>
<tr>
<td>31</td>
<td>RES31</td>
<td>RES16</td>
<td>RES16</td>
<td>RES16</td>
<td>RES16</td>
</tr>
<tr>
<td>32</td>
<td>COT0</td>
<td>UEK0</td>
<td>TCB0</td>
<td>CTB0</td>
<td>TCB0</td>
</tr>
<tr>
<td>33</td>
<td>COT1</td>
<td>UEK1</td>
<td>TCB1</td>
<td>CTB1</td>
<td>TCB1</td>
</tr>
<tr>
<td>34</td>
<td>COT2</td>
<td>UEK2</td>
<td>TCB2</td>
<td>CTB2</td>
<td>TCB2</td>
</tr>
<tr>
<td>35</td>
<td>COT3</td>
<td>UEK3</td>
<td>TCB3</td>
<td>CTB3</td>
<td>TCB3</td>
</tr>
<tr>
<td>36</td>
<td>COT4</td>
<td>UEK4</td>
<td>TCB4</td>
<td>CTB4</td>
<td>TCB4</td>
</tr>
<tr>
<td>37</td>
<td>COT5</td>
<td>UEK5</td>
<td>TCB5</td>
<td>CTB5</td>
<td>TCB5</td>
</tr>
<tr>
<td>38</td>
<td>N_CONF</td>
<td>PN_BIT</td>
<td>PN_BIT</td>
<td>PN_BIT</td>
<td>PN_BIT</td>
</tr>
<tr>
<td>39</td>
<td>TEST</td>
<td>T_BIT</td>
<td>T_BIT</td>
<td>T_BIT</td>
<td>T_BIT</td>
</tr>
<tr>
<td>40</td>
<td>WR_ACK</td>
<td>WR-ACK</td>
<td>WR-ACK</td>
<td>WR-ACK</td>
<td>WR-ACK</td>
</tr>
<tr>
<td>41</td>
<td>WR_SUC</td>
<td>WR-SUC</td>
<td>WR-SUC</td>
<td>WR-SUC</td>
<td>WR-SUC</td>
</tr>
<tr>
<td>42</td>
<td>NORM</td>
<td>NORM</td>
<td>NORM</td>
<td>NORM</td>
<td>NORM</td>
</tr>
<tr>
<td>43</td>
<td>N_NORM</td>
<td>ABNORM</td>
<td>DEVNORM</td>
<td>DEVNORM</td>
<td>Fuori norma</td>
</tr>
<tr>
<td>44</td>
<td>BL_870</td>
<td>BL_BIT</td>
<td>BL_BIT</td>
<td>BL_BIT</td>
<td>BL_BIT</td>
</tr>
<tr>
<td>45</td>
<td>SB_870</td>
<td>SB_BIT</td>
<td>SB_BIT</td>
<td>SB_BIT</td>
<td>SB_BIT</td>
</tr>
<tr>
<td>46</td>
<td>NT_870</td>
<td>NT_BIT</td>
<td>NT_BIT</td>
<td>NT_BIT</td>
<td>NT_BIT</td>
</tr>
<tr>
<td>47</td>
<td>OV_870</td>
<td>OV_BIT</td>
<td>OV_BIT</td>
<td>OV_BIT</td>
<td>OV_BIT</td>
</tr>
<tr>
<td>48</td>
<td>SE_870</td>
<td>SE_BIT</td>
<td>SE_BIT</td>
<td>SE_BIT</td>
<td>SE_BIT</td>
</tr>
</tbody>
</table>
Converting from version X to version 6.50

<table>
<thead>
<tr>
<th>Status Nr.</th>
<th>Short Name</th>
<th>Long Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>T_INVAL</td>
<td>TIME_INVAL</td>
</tr>
<tr>
<td>50</td>
<td>RES50</td>
<td>RES50</td>
</tr>
<tr>
<td>51</td>
<td>RES51</td>
<td>RES51</td>
</tr>
<tr>
<td>52</td>
<td>RES52</td>
<td>RES52</td>
</tr>
<tr>
<td>53</td>
<td>RES53</td>
<td>RES53</td>
</tr>
<tr>
<td>54</td>
<td>RES54</td>
<td>RES54</td>
</tr>
<tr>
<td>55</td>
<td>RES55</td>
<td>RES55</td>
</tr>
<tr>
<td>56</td>
<td>RES56</td>
<td>RES56</td>
</tr>
<tr>
<td>57</td>
<td>RES57</td>
<td>RES57</td>
</tr>
<tr>
<td>58</td>
<td>RES58</td>
<td>RES58</td>
</tr>
<tr>
<td>59</td>
<td>RES59</td>
<td>RES59</td>
</tr>
<tr>
<td>60</td>
<td>RES60</td>
<td>RES60</td>
</tr>
<tr>
<td>61</td>
<td>RES61</td>
<td>RES61</td>
</tr>
<tr>
<td>62</td>
<td>RES62</td>
<td>RES62</td>
</tr>
<tr>
<td>63</td>
<td>RES63</td>
<td>RES63</td>
</tr>
</tbody>
</table>

*Note: Status Nr. 10 was renamed to D_DIREC in version 6.50 and to PROGRESS as of version 6.51.*

2. SHORT NAME - LONG NAME

The short names are the same in all languages from version 6.50. The long names remain language-dependent:
<table>
<thead>
<tr>
<th>Bit number</th>
<th>Short term</th>
<th>Long name</th>
<th>zenon Logic label</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>M1</td>
<td>User defined status 1</td>
<td>_VSB_ST_M1</td>
</tr>
<tr>
<td>1</td>
<td>M2</td>
<td>User defined status 2</td>
<td>_VSB_ST_M2</td>
</tr>
<tr>
<td>2</td>
<td>M3</td>
<td>User defined status 3</td>
<td>_VSB_ST_M3</td>
</tr>
<tr>
<td>3</td>
<td>M4</td>
<td>User defined status 4</td>
<td>_VSB_ST_M4</td>
</tr>
<tr>
<td>4</td>
<td>M5</td>
<td>User defined status 5</td>
<td>_VSB_ST_M5</td>
</tr>
<tr>
<td>5</td>
<td>M6</td>
<td>User defined status 6</td>
<td>_VSB_ST_M6</td>
</tr>
<tr>
<td>6</td>
<td>M7</td>
<td>User defined status 7</td>
<td>_VSB_ST_M7</td>
</tr>
<tr>
<td>7</td>
<td>M8</td>
<td>User defined status 8</td>
<td>_VSB_ST_M8</td>
</tr>
<tr>
<td>8</td>
<td>NET_SEL</td>
<td>Select in the network</td>
<td>_VSB_SEL</td>
</tr>
<tr>
<td>9</td>
<td>REVISION</td>
<td>Revision</td>
<td>_VSB_REV</td>
</tr>
<tr>
<td>10</td>
<td>PROGRESS</td>
<td>In operation</td>
<td>_VSB_DIR</td>
</tr>
<tr>
<td>11</td>
<td>TIMEOUT</td>
<td>Timeout exceeded</td>
<td>_VSB_RTE</td>
</tr>
<tr>
<td>12</td>
<td>MAN_VAL</td>
<td>Hand value</td>
<td>_VSB_MVALUE</td>
</tr>
<tr>
<td>13</td>
<td>M14</td>
<td>User defined status 14</td>
<td>_VSB_ST_14</td>
</tr>
<tr>
<td>14</td>
<td>M15</td>
<td>User defined status 15</td>
<td>_VSB_ST_15</td>
</tr>
<tr>
<td>15</td>
<td>M16</td>
<td>User defined status 16</td>
<td>_VSB_ST_16</td>
</tr>
<tr>
<td>16</td>
<td>GI</td>
<td>General interrogation</td>
<td>_VSB_GR</td>
</tr>
<tr>
<td>17</td>
<td>SPONT</td>
<td>Spontaneous</td>
<td>_VSB_SPONT</td>
</tr>
<tr>
<td>18</td>
<td>INVALID</td>
<td>Invalid</td>
<td>_VSB_I__BIT</td>
</tr>
<tr>
<td>19</td>
<td>T_CHG_A</td>
<td>Time change announcement</td>
<td>_VSB_SUWI</td>
</tr>
<tr>
<td>20</td>
<td>OFF</td>
<td>Switched off</td>
<td>_VSB_N_UPD</td>
</tr>
<tr>
<td>21</td>
<td>T_EXTERN</td>
<td>Real time external</td>
<td>_VSB_RT_E</td>
</tr>
<tr>
<td>22</td>
<td>T_INTERN</td>
<td>Real time internal</td>
<td>_VSB_RT_I</td>
</tr>
<tr>
<td>23</td>
<td>N_SORTAB</td>
<td>Not sortable</td>
<td>_VSB_NSORT</td>
</tr>
<tr>
<td>24</td>
<td>FM_TR</td>
<td>Fault message transformer value</td>
<td>_VSB_DM_TR</td>
</tr>
<tr>
<td>25</td>
<td>RM_TR</td>
<td>Run message transformer value</td>
<td>_VSB_RM_TR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>26</td>
<td>INFO</td>
<td>Information for the variable</td>
<td>_VSB_INFO</td>
</tr>
<tr>
<td>27</td>
<td>ALT_VAL</td>
<td>Alternative value</td>
<td>_VSB_AVALUE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If no value was transferred, the defined alternate value is used otherwise the last valid value is used.</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>RES28</td>
<td>Reserved for internal use (alarm flashing)</td>
<td>_VSB_RES28</td>
</tr>
<tr>
<td>29</td>
<td>N_UPDATE</td>
<td>Not updated</td>
<td>_VSB_ACTUAL</td>
</tr>
<tr>
<td>30</td>
<td>T_STD</td>
<td>Standard time</td>
<td>_VSB_WINTER</td>
</tr>
<tr>
<td>31</td>
<td>RES31</td>
<td>Reserved for internal use (alarm flashing)</td>
<td>_VSB_RES31</td>
</tr>
<tr>
<td>32</td>
<td>COT0</td>
<td>Cause of transmission bit 1</td>
<td>_VSB_TCB0</td>
</tr>
<tr>
<td>33</td>
<td>COT1</td>
<td>Cause of transmission bit 2</td>
<td>_VSB_TCB1</td>
</tr>
<tr>
<td>34</td>
<td>COT2</td>
<td>Cause of transmission bit 3</td>
<td>_VSB_TCB2</td>
</tr>
<tr>
<td>35</td>
<td>COT3</td>
<td>Cause of transmission bit 4</td>
<td>_VSB_TCB3</td>
</tr>
<tr>
<td>36</td>
<td>COT4</td>
<td>Cause of transmission bit 5</td>
<td>_VSB_TCB4</td>
</tr>
<tr>
<td>37</td>
<td>COT5</td>
<td>Cause of transmission bit 6</td>
<td>_VSB_TCB5</td>
</tr>
<tr>
<td>38</td>
<td>N_CONF</td>
<td>Negative acceptance of Select by device (IEC60870 [P/N])</td>
<td>_VSB_PN_BIT</td>
</tr>
<tr>
<td>39</td>
<td>TEST</td>
<td>Test bit (IEC 60870 [T])</td>
<td>_VSB_T_BIT</td>
</tr>
<tr>
<td>40</td>
<td>WR_ACK</td>
<td>Writing acknowledged</td>
<td>_VSB_WR_ACK</td>
</tr>
<tr>
<td>41</td>
<td>WR_SUC</td>
<td>Writing successful</td>
<td>_VSB_WR_SUC</td>
</tr>
<tr>
<td>42</td>
<td>NORM</td>
<td>Normal status</td>
<td>_VSB_NORM</td>
</tr>
<tr>
<td>43</td>
<td>N_NORM</td>
<td>Deviation from normal status</td>
<td>_VSB_ABNORM</td>
</tr>
<tr>
<td>44</td>
<td>BL_870</td>
<td>IEC 60870 Status: blocked</td>
<td>_VSB_BL_BIT</td>
</tr>
<tr>
<td>45</td>
<td>SB_870</td>
<td>IEC 60870 Status: substituted</td>
<td>_VSB_SP_BIT</td>
</tr>
<tr>
<td>46</td>
<td>NT_870</td>
<td>IEC 60870 Status: not topical</td>
<td>_VSB_NT_BIT</td>
</tr>
<tr>
<td>47</td>
<td>OV_870</td>
<td>IEC 60870 Status: overflow</td>
<td>_VSB_OV_BIT</td>
</tr>
</tbody>
</table>

37
Converting from version X to version 6.50

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>SE_870</td>
<td>IEC 60870 Status: select</td>
<td>_VSB_SE_BIT</td>
</tr>
<tr>
<td>49</td>
<td>T_INVAL</td>
<td>Time invalid</td>
<td>not defined</td>
</tr>
<tr>
<td>50</td>
<td>CB_TRIP</td>
<td>Breaker tripping detected</td>
<td>not defined</td>
</tr>
<tr>
<td>51</td>
<td>CB_TR_I</td>
<td>Breaker tripping detection inactive</td>
<td>not defined</td>
</tr>
<tr>
<td>52</td>
<td>RES52</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>53</td>
<td>RES53</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>54</td>
<td>RES54</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>55</td>
<td>RES55</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>56</td>
<td>RES56</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>57</td>
<td>RES57</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>58</td>
<td>RES58</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>59</td>
<td>RES59</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>60</td>
<td>RES60</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>61</td>
<td>RES61</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>62</td>
<td>RES62</td>
<td>reserved</td>
<td>not defined</td>
</tr>
<tr>
<td>63</td>
<td>RES63</td>
<td>reserved</td>
<td>not defined</td>
</tr>
</tbody>
</table>

Info

In formulas all status bits are available. For other use the availability can be reduced.

3. ACTIVATION OF OLD SHORT NAMES

If you wish to use the language-dependent short names as in versions before 6.50, you can enable this with an entry in project.ini. The first short names apply for:

- VBA
- Recipegroup Manager
- Combined element dialog
 Reaction matrix dialog

THIS IS HOW YOU OPEN PROJECT.INI

1. select the project in Project Manager
2. press shortcut Ctrl+Alt+E
3. the SQL folder of zenon opens in the Windows Explorer
4. C:\ProgramData\COPA-DATA\[SQL folder]\[UID]\FILES
5. navigate to \zenon\system\
6. 
7. open the file project.ini with a text editor.

ASSIGNMENT OF NEW LANGUAGE DEPENDENT SHORT NAMES

Copy the entry of the desired language from [STATUS] up to and including STATUS6=RES63 and paste this into project.ini.

<table>
<thead>
<tr>
<th>German</th>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>[STATUS]</td>
<td>[STATUS]</td>
<td>[STATUS]</td>
</tr>
<tr>
<td>STATUS0=ST_M1</td>
<td>STATUS0=ST_M1</td>
<td>STATUS0=ST_M1</td>
</tr>
<tr>
<td>STATUS1=ST_M2</td>
<td>STATUS1=ST_M2</td>
<td>STATUS1=ST_M2</td>
</tr>
<tr>
<td>STATUS2=ST_M3</td>
<td>STATUS2=ST_M3</td>
<td>STATUS2=ST_M3</td>
</tr>
<tr>
<td>STATUS3=ST_M4</td>
<td>STATUS3=ST_M4</td>
<td>STATUS3=ST_M4</td>
</tr>
<tr>
<td>STATUS4=ST_M5</td>
<td>STATUS4=ST_M5</td>
<td>STATUS4=ST_M5</td>
</tr>
<tr>
<td>STATUS5=ST_M6</td>
<td>STATUS5=ST_M6</td>
<td>STATUS5=ST_M6</td>
</tr>
<tr>
<td>STATUS6=ST_M7</td>
<td>STATUS6=ST_M7</td>
<td>STATUS6=ST_M7</td>
</tr>
<tr>
<td>STATUS7=ST_M8</td>
<td>STATUS7=ST_M8</td>
<td>STATUS7=ST_M8</td>
</tr>
<tr>
<td>STATUS8=SELEC</td>
<td>STATUS8=SELEC</td>
<td>STATUS8=SELEC</td>
</tr>
<tr>
<td>STATUS9</td>
<td>STATUS10</td>
<td>STATUS11</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>REV</td>
<td>LAUF</td>
<td>LZÜ</td>
</tr>
<tr>
<td>REV</td>
<td>DIREC</td>
<td>RTE</td>
</tr>
<tr>
<td>REV</td>
<td>DIREC</td>
<td>DRT</td>
</tr>
<tr>
<td>STATUS33=UEK1</td>
<td>STATUS33=TCB1</td>
<td>STATUS33=CTB1</td>
</tr>
<tr>
<td>STATUS34=UEK2</td>
<td>STATUS34=TCB2</td>
<td>STATUS34=CTB2</td>
</tr>
<tr>
<td>STATUS35=UEK3</td>
<td>STATUS35=TCB3</td>
<td>STATUS35=CTB3</td>
</tr>
<tr>
<td>STATUS36=UEK4</td>
<td>STATUS36=TCB4</td>
<td>STATUS36=CTB4</td>
</tr>
<tr>
<td>STATUS37=UEK5</td>
<td>STATUS37=TCB5</td>
<td>STATUS37=CTB5</td>
</tr>
<tr>
<td>STATUS38=PN_BIT</td>
<td>STATUS38=PN_BIT</td>
<td>STATUS38=PN_BIT</td>
</tr>
<tr>
<td>STATUS39=T_BIT</td>
<td>STATUS39=T_BIT</td>
<td>STATUS39=T_BIT</td>
</tr>
<tr>
<td>STATUS40=WR-ACK</td>
<td>STATUS40=WR-ACK</td>
<td>STATUS40=ECR-ACK</td>
</tr>
<tr>
<td>STATUS41=WR-SUC</td>
<td>STATUS41=WR-SUC</td>
<td>STATUS41=ECR-OK</td>
</tr>
<tr>
<td>STATUS42=NORM</td>
<td>STATUS42=NORM</td>
<td>STATUS42=NORM</td>
</tr>
<tr>
<td>STATUS43=ABNORM</td>
<td>STATUS43=DEVNORM</td>
<td>STATUS43=DEVNORM</td>
</tr>
<tr>
<td>STATUS44=BL_BIT</td>
<td>STATUS44=BL_BIT</td>
<td>STATUS44=BL_BIT</td>
</tr>
<tr>
<td>STATUS45=SB_BIT</td>
<td>STATUS45=SB_BIT</td>
<td>STATUS45=SB_BIT</td>
</tr>
<tr>
<td>STATUS46=NT_BIT</td>
<td>STATUS46=NT_BIT</td>
<td>STATUS46=NT_BIT</td>
</tr>
<tr>
<td>STATUS47=OV_BIT</td>
<td>STATUS47=OV_BIT</td>
<td>STATUS47=OV_BIT</td>
</tr>
<tr>
<td>STATUS48=SE_BIT</td>
<td>STATUS48=SE_BIT</td>
<td>STATUS48=SE_BIT</td>
</tr>
<tr>
<td>STATUS49=TIME_INVAL</td>
<td>STATUS49=TIME_INVAL</td>
<td>STATUS49=TIME_INVAL</td>
</tr>
<tr>
<td>STATUS50=RESS0</td>
<td>STATUS50=RESS0</td>
<td>STATUS50=RESS0</td>
</tr>
<tr>
<td>STATUS51=RESS1</td>
<td>STATUS51=RESS1</td>
<td>STATUS51=RESS1</td>
</tr>
<tr>
<td>STATUS52=RESS2</td>
<td>STATUS52=RESS2</td>
<td>STATUS52=RESS2</td>
</tr>
<tr>
<td>STATUS53=RESS3</td>
<td>STATUS53=RESS3</td>
<td>STATUS53=RESS3</td>
</tr>
<tr>
<td>STATUS54=RESS4</td>
<td>STATUS54=RESS4</td>
<td>STATUS54=RESS4</td>
</tr>
<tr>
<td>STATUS55=RESS5</td>
<td>STATUS55=RESS5</td>
<td>STATUS55=RESS5</td>
</tr>
<tr>
<td>STATUS56=RESS6</td>
<td>STATUS56=RESS6</td>
<td>STATUS56=RESS6</td>
</tr>
</tbody>
</table>
### Converting from version X to version 6.50

<table>
<thead>
<tr>
<th>STATUS0</th>
<th>STATUS1</th>
<th>STATUS2</th>
<th>STATUS3</th>
<th>STATUS4</th>
<th>STATUS5</th>
<th>STATUS6</th>
<th>STATUS7</th>
<th>STATUS8</th>
<th>STATUS9</th>
<th>STATUS10</th>
<th>STATUS11</th>
<th>STATUS12</th>
<th>STATUS13</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST_M1</td>
<td>ST_M2</td>
<td>ST_M3</td>
<td>ST_M4</td>
<td>ST_M5</td>
<td>ST_M6</td>
<td>ST_M7</td>
<td>ST_M8</td>
<td>SELEC</td>
<td>REV</td>
<td>RUN</td>
<td>RTE</td>
<td>V_MAN</td>
<td>ST_14</td>
</tr>
</tbody>
</table>

### Italian
- [STATUS]

### Spanish
- [STATUS]

### Russian
- [STATUS]

<table>
<thead>
<tr>
<th>STATUS0</th>
<th>STATUS1</th>
<th>STATUS2</th>
<th>STATUS3</th>
<th>STATUS4</th>
<th>STATUS5</th>
<th>STATUS6</th>
<th>STATUS7</th>
<th>STATUS8</th>
<th>STATUS9</th>
<th>STATUS10</th>
<th>STATUS11</th>
<th>STATUS12</th>
<th>STATUS13</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST_M1</td>
<td>ST_M2</td>
<td>ST_M3</td>
<td>ST_M4</td>
<td>ST_M5</td>
<td>ST_M6</td>
<td>ST_M7</td>
<td>ST_M8</td>
<td>SELEC</td>
<td>REV</td>
<td>RUN</td>
<td>RTE</td>
<td>V_MAN</td>
<td>ST_14</td>
</tr>
</tbody>
</table>

### Italian
- [STATUS]

### Spanish
- [STATUS]

### Russian
- [STATUS]

<table>
<thead>
<tr>
<th>STATUS0</th>
<th>STATUS1</th>
<th>STATUS2</th>
<th>STATUS3</th>
<th>STATUS4</th>
<th>STATUS5</th>
<th>STATUS6</th>
<th>STATUS7</th>
<th>STATUS8</th>
<th>STATUS9</th>
<th>STATUS10</th>
<th>STATUS11</th>
<th>STATUS12</th>
<th>STATUS13</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST_M1</td>
<td>ST_M2</td>
<td>ST_M3</td>
<td>ST_M4</td>
<td>ST_M5</td>
<td>ST_M6</td>
<td>ST_M7</td>
<td>ST_M8</td>
<td>ВЫБОР</td>
<td>ПЕВ</td>
<td>ХОД</td>
<td>КВИ</td>
<td>МЗНАЧ</td>
<td>ST_14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATUS0</th>
<th>STATUS1</th>
<th>STATUS2</th>
<th>STATUS3</th>
<th>STATUS4</th>
<th>STATUS5</th>
<th>STATUS6</th>
<th>STATUS7</th>
<th>STATUS8</th>
<th>STATUS9</th>
<th>STATUS10</th>
<th>STATUS11</th>
<th>STATUS12</th>
<th>STATUS13</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST_M1</td>
<td>ST_M2</td>
<td>ST_M3</td>
<td>ST_M4</td>
<td>ST_M5</td>
<td>ST_M6</td>
<td>ST_M7</td>
<td>ST_M8</td>
<td>ВЫБОР</td>
<td>ПЕВ</td>
<td>ХОД</td>
<td>КВИ</td>
<td>МЗНАЧ</td>
<td>ST_14</td>
</tr>
<tr>
<td>STATUS14=ST_15</td>
<td>STATUS14=ST_15</td>
<td>STATUS14=ST_15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS15=ST_16</td>
<td>STATUS15=ST_16</td>
<td>STATUS15=ST_16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS16=CG</td>
<td>STATUS16=CG</td>
<td>STATUS16=GO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS17=SPONT</td>
<td>STATUS17=SPONT</td>
<td>STATUS17=SPONT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS18=NV-BIT</td>
<td>STATUS18=NV-BIT</td>
<td>STATUS18=I-Bit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS19=ES/IN</td>
<td>STATUS19=ES/IN</td>
<td>STATUS19=LI/3M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS20=N_UPD</td>
<td>STATUS20=N_UPD</td>
<td>STATUS20=N_UPD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS21=RT_E</td>
<td>STATUS21=RT_E</td>
<td>STATUS21=RT_E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS22=RT_I</td>
<td>STATUS22=RT_I</td>
<td>STATUS22=RT_I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS23=NORD</td>
<td>STATUS23=NORD</td>
<td>STATUS23=NORD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS24=SM_TR</td>
<td>STATUS24=SM_TR</td>
<td>STATUS24=SM_TR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS25=RM_TR</td>
<td>STATUS25=RM_TR</td>
<td>STATUS25=RM_TR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS26=INFO</td>
<td>STATUS26=INFO</td>
<td>STATUS26=INFO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS27=RVAL</td>
<td>STATUS27=RVAL</td>
<td>STATUS27=RVAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS28=RES13</td>
<td>STATUS28=RES13</td>
<td>STATUS28=RES13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS29=!ATTUALE</td>
<td>STATUS29=!ATTUALE</td>
<td>STATUS29=!ATTUALE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS30=INVERNO</td>
<td>STATUS30=INVERNO</td>
<td>STATUS30=INVERNO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS31=RES16</td>
<td>STATUS31=RES16</td>
<td>STATUS31=RES16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS32=CTB0</td>
<td>STATUS32=CTB0</td>
<td>STATUS32=CTB0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS33=CTB1</td>
<td>STATUS33=CTB1</td>
<td>STATUS33=CTB1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS34=CTB2</td>
<td>STATUS34=CTB2</td>
<td>STATUS34=CTB2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS35=CTB3</td>
<td>STATUS35=CTB3</td>
<td>STATUS35=CTB3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS36=CTB4</td>
<td>STATUS36=CTB4</td>
<td>STATUS36=CTB4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS37=CTB5</td>
<td>STATUS37=CTB5</td>
<td>STATUS37=CTB5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS38</td>
<td>STATUS39</td>
<td>STATUS40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN_BIT</td>
<td>T_BIT</td>
<td>WR-ACK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS41</td>
<td>WR-SUC</td>
<td>NORM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS42</td>
<td>Fuori norma</td>
<td>DEVNORM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS43</td>
<td>BL_BIT</td>
<td>SB_BIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS44</td>
<td>NT_BIT</td>
<td>OV_BIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS45</td>
<td>SE_BIT</td>
<td>TIME_INVAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS46</td>
<td>RES50</td>
<td>RES51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS47</td>
<td>RES52</td>
<td>RES53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS48</td>
<td>RES54</td>
<td>RES55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS49</td>
<td>RES56</td>
<td>RES57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS50</td>
<td>RES58</td>
<td>RES59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS51</td>
<td>RES60</td>
<td>RES61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATUS52</td>
<td>RES62</td>
<td>RES63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The table above lists various status codes and their corresponding values for converting from version X to version 6.50.
15.4 Structures for UDFBs in zenon Logic

As of version 6.50 in zenon the zenon Logic UDFB data types are no longer available. To preserve the compatibility with version 6.22, you can create them in zenon with a project prefix: "PROJEKTNAME/UDFBName". For this to work you must add an entry in file K5DBXS.ini:

1. open file K5DBXS.ini
2. go to area [XS]
3. create entry UseUDFBPrefix=1

When you have questions concerning the adaption of invisible UDFBs please contact support@copadata.com or the hotline mentioned in your support contract.

15.5 VSTA and VBA - naming of objects

Some changes to the object model have been made due to limitations in naming VSTA objects. These changes have an effect on VBA code because this continues to access the old name and therefore no longer work.

The following changes have been implemented:

- IDriver
  - Name -> Identification:
    The Name property does not receive the name returned, but the driver identification. It was renamed in Identification.
  - Driver -> Name:
    Driver is incompatible with VSTA, because this property returns the name of the driver. It is renamed in Name.
16. Converting from version x to 6.51

Projects from older versions are automatically converted when loaded into the current editor. A backup of the project is automatically created in the directory `\SQL\Backup`.

**Attention**

*Check the VBA code for changed names and adapt it to the new model accordingly.*

16.1 Calculation column width

As of version 6.51 the average character width of the selected font is used to calculate the column width (e.g. Alarm Message List or CEL). Before that a default value was used. This may cause columns to be displayed in other widths than expected after the conversion.
16.2 Settings SQL database

As of version 6.51 the SQL instance can be defined and the password is saved in an encrypted form in the Startup Tool.

For this the Dialog for setting database properties was changed. New entries have a higher priority than existing entries. The display of the dialog is automatically adopted to the selected version (previous 6.51, as of 6.51).

NEW ENTRIES

zenondb.ini contains new entries as of version 6.51:

```ini
[CONNECTION_SQL2005]
USER=zenOnSrv
PW=0x9C 0x94 0xC6 0x50 0x15 0x80 0x79 0x06 0x32 0xED 0xE1 0xDD 0x7C 0x90
SQLINSTANCE=COMPUTERNAME\ZENON_DEV
```

These entries replace entry:

```ini
[CONFIG]
PROVIDER_SQL2005
```

If the new entries are not available or empty, this entry is still used.

COMPATIBILITY

As long as no property is changed, the existing entries remain valid. If you change an entry for version 6.51 or higher, the new entries are valid. Older versions must be maintained separately. You can find the settings for version previous to 6.51 in chapter Database previous version 6.51.

Attention: As the encrypting of the user password is now taking place in the new dialog in the Startup Tool, as of version 6.51 all settings must be made via the Startup Tool.

16.3 Extended Trend xy axis

Due to performance reasons archive data for the X axis are no longer loaded automatically in the Extended Trend diagram as of version 6.51. To display the X-axis in the diagram anyway:
Add the variable selected for the variable for X-axis as well as the curve in the diagram.

Deactivate the display for this curve.

16.4 GUID for project converting from version 5.50

At the conversion of projects of version 5.50 take care that when converting several projects an individual GUID is created for each project.

REASON

In the project.ini of version 5.50 there is the entry GUID which contains a project GUID. If you convert a project to version 6.x, this GUID is used.

In zenon 5.50 it was possible to copy folders on file level, then open the project in the Editor and rename it. This project copy still contained the original GUID in the INI file which was no problem for 5.50.

If you convert two such projects in version 6.x, the conversion for the second project is canceled with the note that the GUID already exists.

SOLUTION

For converting several copied projects from 5.50 there are three possibilities:

1. **Save as**
   - Convert project A
   - execute "Save project as" in version 6.x
   - a new GUID is created
   - delete original project
   - convert project B

   **Attention:** This method is not suitable for global projects.

2. **Project backup**
   - Convert project A
   - create project backup in version 6.x
• delete original project
• Restore backup via "Restore project backup" and at that activate property "Create new project".

Note: This method is also suitable for global projects.

3. editing project.ini
• open project.ini of version 5.50 In this version "project.ini" is called projectname.ini
• delete the entry with the GUID
• convert
• a new GUID is created

Note: If this project is opened again with version 5.50, a new GUID is also created and entered in the INI file.

16.5 Clickable buttons combined element

As of version 6.51 you can create clickable buttons in the combined element for option Symbol from library in any from.

For projects for earlier versions, the property Symbol form defines the click area (node: Display) is treated as inactive.

16.6 Context menus command

Previous to version 6.51 text at automatic menu items was ignored. At converting projects which were created with earlier versions than 6.51 Macros $ALL$$NOTE$ are automatically inserted before the engineered text. Therefore the menu items behave as before.
16.7 Record shift times in PFS

At recording shift times in the Production and Facility Scheduler the table name for the recording was fixed to PFSSHIFTHISTORY in version 6.50.

As of version 6.51 it is created after the following pattern: ProjectGUID_SHIFT_GUID of the equipment group
For example: 292af0ac-d33d-4123-8484-e359cd0a6ae3_SHIFT_989ef705-d6a6-4b81-9eb5-f76483ecaac1.

16.8 Convert symbol colors of the global symbol library from palette to absolute color

When using palettes, only the palette index is saved. The actual color is assigned in the Runtime.

PROBLEM

If you define colors for symbols of the global symbol library via palettes (similar to function as palette as of 6.51) in versions earlier than zenon 6.51 and the colors of a symbol are changed in version 6.51, all user-defined colors of the symbols are adapted to the change when the Editor is restarted. This action is correct from compatibility's point of view. However absolute colors can be necessary.

SOLUTION

If the symbol library is saved again in zenon 6.51, the palette indices are saved as absolute colors.

Procedure:

1. Activate and open the project with the correct palette in zenon 6.51.
2. Add a new symbol to the global symbol library.
3. Save the global symbol library. It is saved in the new format.
4. Close the Editor and restart it.
5. Rename the newly created symbol and save it.
6. In the global symbol library the palette colors are replaced by the absolute colors.

16.9 Wizards - remove VBA and VSTA properties

At filtering for screen switch functions to a screen of type Extended Trend, the following dynamic properties were removed as they no longer have a function:

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

If you use these properties in a wizard, you must remove them.

16.10 Character # not allowed in object name

As of version 6.51 character # is no longer valid for object names such as variables or functions. The character cannot be entered when giving the name via the user interface.

**Background**: A # in the name may for example cause problems during the import.

17. Converting from version X to version 7.00

Projects from older versions are automatically converted when loaded into the current editor. A backup of the project is automatically created in the directory `\SQL\Backup`. The automatically-generated backups have, from version 7.00 onwards, the SQL server used in the filenames, for example: `before converted to 7.00 SP0 (sql server 2008 r2).zip`

**Attention**

*Measures to carry out before conversion:*

Before converting the editable data into Runtime editor, read it back into the old version. Otherwise it will be lost!
17.1 User administration with Active Directory

From version 7.00 SP0 on Active Directory is only available for the user administration in the zenon Runtime. This means for the zenon Editor:

- AD users are not used for the Editor.
- AD users are no longer validated in the Editor.
- Via AD log in to the Editor is not possible.

**Attention:** If you implemented the log in to the zenon Editor via Active Directory in a project, you must create a zenon user with all necessary rights before you convert the project.

17.2 Diagnosis Server with new service

With zenon 7.00 SP0 the diagnosis system adapted. From this version on all logging tasks are carried out by service `zenLogSrv`. The service `zenSysServ` is now only responsible for Remote Transport activities. The maximum number of modules per Diagnosis Client was increased from 32 to 64.

That means:

- Diagnosis systems up to version 6.51 and from version 7.00 are each compatible among themselves.
- The diagnosis mechanism of zenon 6.51 SP0 and zenon 7.00 SP0 are not compatible.

<table>
<thead>
<tr>
<th>Compatibility</th>
<th>Diagnosis Server 6.51 SP0 and earlier</th>
<th>Diagnosis Server 7.00 SP0 and higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis Client 6.51 SP0 and earlier</td>
<td>compatible</td>
<td>incompatible</td>
</tr>
<tr>
<td>Diagnosis Viewer 6.51 SP0 and earlier</td>
<td>compatible</td>
<td>incompatible</td>
</tr>
<tr>
<td>Diagnosis Client 7.00 SP0 and higher</td>
<td>incompatible</td>
<td>compatible</td>
</tr>
<tr>
<td>Diagnosis Viewer 7.00 SP0 and higher</td>
<td>incompatible</td>
<td>compatible</td>
</tr>
</tbody>
</table>

With the Diagnosis Viewer version 7.00 SP0 and higher you can open log files which were created by Diagnosis Server version 6.51 SP0 (or earlier). It does not work the other way round.
17.3 Dynamische Combo-/Listbox

As of version 7 combo/listboxes can also be created dynamically. Via property Entries from string variable you define whether the entries in the box are created in the Editor or via a linked string variable.

At converting projects from a version older than zenon 7, the new properties are assigned with valid values:

- static combo/listbox (property Entries from string variable inactive)
- no visibility variable (property Variable empty)

If files for an older version are created or saved, the properties for the dynamic comb/listbox are not loaded in order to ensure downward compatibility.

17.4 IPv6

As of zenon version 7 you can use IPv6 in the network.

The zenon network allows the choice of using IPv6 or IPv4. Dual operation is not possible. The setting is made via:

- Network configuration in the Startup Tool
- or
- in zenon6.ini

Attention: IPv6 only works with version 7 onwards. No versions prior to version 7 can be started if this is active. This concerns zenAdminSrv, zenSysSrv, zenLogSrv and zenDBSrv in particular.

The following components are not affected by the setting; they always use IPv4:

- Driver communication with the PLCs
- Protocol communication in the Process Gateway plug-ins
- Workbench and Runtime communication in zenon Logic
DIAGNOSIS VIEWER

The Diagnosis Server also works with Diagnosis Clients which addresses via IPv6 addresses. For this the format of the log file has been adapted. The Diagnosis Viewer only reads the new format of the log files. If files from older zenon versions are opened (or vice versa), the IP address of the Diagnosis Client is not displayed correctly.

17.5 Licensing

With version 7.00 licensing is adapted. To adapt existing zenon version to version 7.00, you must purchase a license for version 7.00 and enter the new activation number. The serial number remains the same.

The entries in zenon6.ini are now:

[DEFAULT]

SERIAL7=

ACTIVATIONKEY7=

17.6 Message Control

As of version zenon 7.00 SP0 module Message Control differs basically from earlier versions in terms of technology and configuration.

Important technical changes:

- COM Server is no longer used
- the additional component of company DerDack is no longer used
- the ZenMsgQueue is replaced by an own screen of type Message Control
- the configuration is carried out in property Message Control of the workspace (sending) and properties Project-specific settings for module Message Control in the project (project-specific)
- there is no detail view anymore
Convert from version X to version 7.00

- The shift model and the calendar functionality has been removed
- There are no Runtime changeable files anymore
- Sending e-mails is possible via Outlook or a SMTP Server whereas SMTP allows the sending of attachments
- The configuration of the sending type is no longer saved in file message32.ini but in file zenon6.ini
- Evaluating the limit texts: Up to now the evaluation of compound texts in module Message Control differed from the evaluation of standard limit texts. From version 7.00 on both are evaluated in the same way. \$StringTabelle+\%var1

You can find details about the configuration in chapter Configure Message Control.

⚠️ Attention

Only projects from version 5.50 SP7 on can be converted to version 7.

CONVERSION

Due to the profound changes a 100% compatibility cannot be guaranteed for the conversion. This is also true for compiling RT files for older versions. At converting especially take care for:

- **User:**
  - Users with the same name (first name, last name) existing: User is used and information is added.
  - No according user available: A new user is created. The link to the replacement and to the user group is resolved. The user is added to the existing or at the conversion to the created group.

- **User groups:**
  - User group with same name exists: User group is used and information is added.
  - No according user group available: A new user group is created.

- **Functions:**

  Function `Show recipient-database` was removed.
  This function can no longer be created with the Editor. At the conversion it is not deleted however. Its call up in the Runtime has no effect and creates a log entry.
- **Paging:**
  Paging is no longer available as sending type. Existing functions with sending type Paging are changed to sending type GSM at the conversion. A message in the output window indicates this. After the conversion you must check the settings of the function.

- **RT changeable data:**
  As the user administration was changed, RT changeable files are no longer used for Message Control. There is no possibility in version 7 to read back old Runtime data. If the Runtime files of a project prior to version 7 are needed, you must read them back in an Editor prior to zenon 7 and then converted (on page 8).

- **Shifts and calendars:**
  The functionality for shifts and calendars was removed. Existing functions with target type Shift are changed to target type Group at the conversion. However no group is linked. A message in the output window indicates this. After the conversion you must check the settings of the function.

- **SMS gateway:**
  As the simple interface does not offer a technical possibility to assign messages distinctly, from version 7 on only the enhanced interface is supported. At conversion you must make sure that the SMS Server from company Dialogs is configured correspondingly. Otherwise the sending fails.

### 17.7 RGM - error behavior at screen switch

If for the screen switch of the RGM a recipe is selected faulty by:

- recipe not available in the Runtime
- no selection made
- recipe not included in the filter

then the behavior of the drop-down list recipe changes in the Runtime:

- up to version 6.51 SP0 the first recipe in the list is offered
- as of version 7.00 SP0 the selection remains empty.
17.8   RGM read recipe - new conditions

As of version 7.00 SP0 at reading in variable values to recipes (teaching) it is checked:

- whether the values of the properties \textit{min. value} and \textit{max. value} have been adhered to.
- which status the variable has.

If the values are gone below or exceeded, or the variable has the status INVALID, the values are no longer written to the recipe and no longer saved.

Additional system variables (sysdrv.chm::/25964.htm) are analyzed. As of version 7.00 possible variable values:

- 0: Set before the reading and only changes when the reading process is done.
- 1: Finished reading successfully.
- 2: During reading an error not defined in greater detail has occurred.
- 3: During reading at least one variable hat status INVALID (main.chm::/24148.htm).
- 4: At least an value is not within the min-max limits.
- 5: During reading a timeout (30000 + 100*VarCount in [ms]) occurred.

17.9   Driver Allan Bradley RS-Linx

From version 7.00 SP0 the driver supports \textit{Unsolicited Messages}. With this the configuration of the driver changes. It is now done on the tab.

- **General**: Unchanged
  
  \textit{Note}: If you use Unsolicited Messages, you should deactivate Update time global.

- **Configuration allanbnt.chm::://11111.htm**: The previous KT number is replaced by the label of the RS-LINX driver.

- **Unsolicited Messages configuration allanbnt.chm::/33547.htm**: New. Setting for Unsolicited Messages.
17.10 Conversion SQL Server

With zenon 7.00 SP0, the Microsoft SQL Server 2008 R2 Express is installed and used for zenon projects. The zenon Editor only connects to SQL Server 2008 R2 by default from version 7.00 onwards. Projects that have their databases in a different SQL server instance (such as ZENON_DEV with SQL Server 2005), cannot be opened.

The SQL Server instance that zenDBSrv connects to can be changed using the startup tool. The startup tool sets, in zenDB.ini, the corresponding entries for the respective zenon Version:

- before 6.00: No database
- 6.00 to 6.20: Entries for SQL Server 2000 (MSDE)
- 6.21 to 6.51: Entries for SQL Server 2005 Express Edition
  The password is stored in encrypted form with 6.51
- Version 7.00 and later: Entries for the SQL Server 2008 R2 Express Edition with encrypted password

Dual operation of SQL Server 2005 instance "ZENON_DEV" and SQL Server 2008 R2 instance "ZENON_2008R2" is not possible.

Attention
In existing projects the driver configuration must be adapted.

Projects from previous versions of zenon must be imported in the original version an then restored in zenon 7.00.

Hint: If no export has been made and the applicable version is no longer available, the transfer can be made manually:

- Copy the complete folder, including the GUID, to a new location
- Establish the database connection manually
PROJECT CONVERSION

The following procedure is recommended for the conversion of projects from versions prior to version 7.00:

1. Create project backups in the version from which they are to be converted.
2. Export project backups to the hard drive.
3. zenon Editor 7.00 Editor.
4. Create new workspace.
5. Read the project backups into the new workspace.

The project backups can also be read back into the same workspace in the 7.00 Editor. Because the GUID remains the same when a project backup is read back, the workspace in zenon 7.00 and in versions between 6.21 and 6.51 can be opened.

Info

Although the projects have the same name and the same GUID, projects from zenon 7.00 are independent from projects from zenon 6.21 to 6.51 due to the different SQL server instance. Backups in zenon 7.00 do not appear in versions 6.21 to 6.51 of the Editor. It is therefore recommended that these are stored in a new workspace.