



**zenon**  
by COPA-DATA

# zenon manual

## Report Engine 10

### Release Notes

v.10



**COPA-DATA**

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# 1 Welcome to COPA-DATA help

## ZENON VIDEO TUTORIALS

You can find practical examples for project configuration with zenon in our YouTube channel ([https://www.copadata.com/tutorial\\_menu](https://www.copadata.com/tutorial_menu)). The tutorials are grouped according to topics and give an initial insight into working with different zenon modules. All tutorials are available in English.

## GENERAL HELP

If you cannot find any information you require in this help chapter or can think of anything that you would like added, please send an email to [documentation@copadata.com](mailto:documentation@copadata.com).

## PROJECT SUPPORT

You can receive support for any real project you may have from our customer service team, which you can contact via email at [support@copadata.com](mailto:support@copadata.com).

## LICENSES AND MODULES

If you find that you need other modules or licenses, our staff will be happy to help you. Email [sales@copadata.com](mailto:sales@copadata.com).

## 2 Report Engine

In this document, you are provided with information about technical requirements, as well as innovations and changes for Report Engine 10.

## 3 General

### 3.1 Renaming to zenon software platform

With version 10, the previously separate products zenon Supervisor, zenon Analyzer, zenon Logic and zenon Service Grid have been combined and renamed to form the zenon Software Platform.

#### Renaming to zenon Software Platform:

Until the end of 2020	As of version 10 (short)	As of version 10 (long)
zenon Editor	Engineering Studio	Engineering Studio
zenon Logic Workbench	Logic Studio	Engineering Studio – Logic
zenon Analyzer	Report Engine	Report Engine
zenon Analyzer Management Studio	Reporting Studio	Engineering Studio – Reporting
ZAMS	Reporting Studio	Engineering Studio – Reporting
zenon Runtime	Service Engine	Service Engine
zenon Logic Runtime	Logic Service	Logic Service
Report Launcher	Report Launcher	Report Launcher
Service Grid	Service Grid	Service Grid
zenon Web Server	Smart Server	Smart Server
zenon Web Client	Smart Client	Smart Client

**Note:** Key texts also change with the renaming. They must be amended with project conversions.

## 3.2 New Software Platform setup (F 206426 - 230303 - 225464 )

The zenon setup now combines all components of the zenon Software Platform:

- ▶ zenon with all **Engineering Studios, Service Engines** and **Services**
- ▶ Report Engine
- ▶ Service Grid

## 3.3 OpenSSL version 1.1.1.i (F 224713)

The OpenSSL version has been updated. All components of the zenon product family now use **OpenSSL** in version *1.1.1.i*.

## 3.4 Supported operating systems (F 225464)

The zenon Software Platform supports the following operating systems:

- ▶ Desktop:
  - ▶ Windows 10: fully supported from TH1 1507
  - ▶ Windows 8/8.1: Engineering Studio, Report Engine and Reporting Studio are not supported.
- ▶ Server:
  - ▶ From Windows 2016 - fully supported
  - ▶ Windows Server 2012 and Windows Server 2012 R2: Engineering Studio, Report Engine and Reporting Studio are not supported.
  - ▶ Windows Server 2008: Engineering Studio, Report Engine and Reporting Studio are not supported.

Support for the following operating systems has been stopped:

- ▶ Windows 7 (all versions)

# 4 Metadata Synchronizer

## 4.1 Language files and language-dependent key words (F 206432)

The **Metadata Synchronizer** now also transfers language files and language-dependent key words.

All languages without a hyphen are supported.

That means: The language code **de** is supported. The language code **de-AT** is ignored.

Exception: For Chinese, **zh-CHS** (simplified Chinese) is available.

The following is applicable for synchronization:

- ▶ Languages are never deleted or changed.
- ▶ Missing languages are added.
- ▶ Key words and translations are synchronized for the global project and for each standard project.
- ▶ Translatable project content is synchronized for both translatable and untranslatable reports.
- ▶ If the same code is used for more than one language, these languages are ignored by the **Metadata Synchronizer**.

The automatic assignment of language codes via the dialog is only possible when a language file is newly created. Language codes can also be assigned subsequently. Assignment must be manual for pre-existing languages.

## 4.2 New API interface: **IMetadataSynchronizer** in the **MetadataSynchronizer** namespace (F 217118)

The **Metadata Synchronizer** can be triggered by means of the API. To do this, the **IMetadataSynchronizer** is newly created in the **MetadataSynchronizer** namespace.

## 5 Migration Tool amended for version 10 (F 206447)

The **Migration Tool** has been amended for Report Engine 10. It enables migration from version 2.00 to 10.

The following can be migrated:

- ▶ Server with the same software version
- ▶ Servers from one software version to a later version

## 6 New SQL Server version and new naming of instance (F 206447)

SQL Server 2019 is used for Report Engine 10. This is no longer tied to the main version. Switching to the main version can now take place without the version of SQL Server being amended.



The name of the server instance from this version is: *ZA2019*.

SQL Server reporting services still only support one instance on a computer. Exceptions are versions 2.XX and 3.XX.

This means, for version 10 or higher:

- ▶ Concurrent installations of Report Engine are not possible if they use the same SQL Server version.
- ▶ Concurrent installation with a version 3.40 or earlier is possible.
- ▶ Different versions of Reporting Studio and metadata database editors can be used at the same time.

## 7 Start Report Engine via Startup Tool (F 199133)

The COPA-DATA **Startup Tool** has been enhanced. Previously, only zenon applications could be administered with it.

It now also enables the start of Report Engine applications:

- ▶ Reporting Studio
- ▶ **Manual Data Editor**
- ▶ **Metadata Editor**
- ▶ **Migration Tool**
- ▶ **Prediction Model Manager**

## 8 Requirements

The following prerequisites are applicable for work with Report Engine:

### REPORT ENGINE HARDWARE AND SOFTWARE

#### HARDWARE

Report Engine:

Parameters	Recommended	Minimum
CPU	Quad-Core Server CPU (maximum 24 cores/4 sockets)	Quad-core
RAM	Up to 128 GB	12 GB

Parameters	Recommended	Minimum
Free memory	200 GB	10 GB

**Engineering computer:**

Parameters	Recommended	Minimum
CPU	Dual Core	Pentium IV
RAM	4 GB	1 GB
Free memory	200GB	2 GB
Monitor (pixels)	1920 x 1080	1024 x 768

**SOFTWARE**

Report Engine:

A 64-bit operating system is required for the database server. The following are supported:

- ▶ Windows Server 2019 Standard
- ▶ Windows Server 2019 Essentials
- ▶ Windows Server 2019 Datacenter
- ▶ Windows Server 2016 Standard
- ▶ Windows Server 2016 Essentials
- ▶ Windows Server 2016 Datacenter
- ▶ Windows 10 Home 64-Bit
- ▶ Windows 10 Professional 64-Bit
- ▶ Windows 10 Enterprise 64-Bit

**Engineering computer:**

The following are supported for Reporting Studio, the manual data editor, metadata editor and migration tool:

- ▶ Windows Server 2019
- ▶ Windows Server 2016
- ▶ Windows 10 Home 64-Bit
- ▶ Windows 10 Professional 64-Bit
- ▶ Windows 10 Enterprise 64-Bit

**Web browser:**

- ▶ Internet Explorer 11 (normal view only)
- ▶ Internet Explorer 10 (normal view only)
- ▶ Chrome
- ▶ Firefox

**Note:** Zoom in the report is only possible with Chrome.

### Recommended HMI/SCADA system:

- ▶ zenon 10

### .NET Framework 4.6.2:

- ▶ .NET Framework 4.6.2 has to be already run capable on the target computer in order to end the installation successfully.

## CONNECTORS

The following is applicable for the Service Engine connector:

- ▶ Timeout: is independent of the report timeout.  
Default: 5 minutes (can be configured)
- ▶ Variables: Only variables that are listed in metadata are requested
- ▶ String variable: maximum of 4000 characters

The performance of a connector depends on the:

- ▶ Performance of Report Engine
- ▶ Performance of the Service Engine server
- ▶ Service Engine server load (connector runs with lower priority)
- ▶ Network performance and network load

## PROJECTS AND FILTERS

Reports can generally be created throughout several projects.

### **Attention**

Only archive data with variables from its own project can be evaluated.

This means: For example, in an integration project, if a variable from a subproject is archived in an archive, then Report Engine cannot access this variable.

## SCHEDULES

- ▶ **Calendar days in months** are limited to 1 - 28 (corresponds to February in non-leap years)
- ▶ The "*Month end*" event is not available



### Information

Do not use zenon color palettes for dynamic limit values for zenon projects whose data is to be exported for Report Engine. Limit values cannot be dynamically amended in Report Engine. Information from color palettes can therefore not be evaluated. This can lead to illegible graphics.

## 8.1 Connection to IP address and port (F 8960)

All Report Engine modules use the stipulated ports and IP addresses for licensing. These can be amended in the **Startup Tool**. If a network adapter is set, the adapter name is resolved for the IP address.

The connector container now uses the stipulated ports and IP addresses to open the listening socket. These can be amended in the **Startup Tool**.

## 8.2 SQL Server 2019: Installation with Report Engine

Note, before installing Report Engine, existing installations of SQL Server Management Studio (SSMS):

**SQL Server 2019** cannot be installed if version 18.3 or earlier of SQL Server Management Studio (SSMS) has already been installed.

To install **SQL Server 2019**:

1. Uninstall SQL Server Management Studio (SSMS).
2. Uninstall Microsoft SQL Server 2012 Native Client.  
This is also installed with SSMS

## 8.3 Browser selection (F 216803)

The selection of the browser that is used in Report Launcher can be pre-defined in Reporting Studio. The following are available:

- ▶ Internet Explorer
- ▶ Default browser of the system

**The following are supported as a default browser:**

- ▶ Internet Explorer 11 (normal view only)
- ▶ Internet Explorer 10 (normal view only)
- ▶ Chrome
- ▶ Firefox

## 9 Reporting Studio

### 9.1 Automatic layout: Size limit (F 212162)

The maximum permitted height and width for the automatic creation of layouts via **Report/Design/Generate Layout** can now be defined. Configuration is carried out in the settings in the **Layout Generation** tab.

These values can also be overwritten manually. If the defined limit values are exceeded or gone below as a result of manual configuration, then:

- ▶ The values in the dialog are set to the permitted maximum
- ▶ The default value is applied for the diagram

### 9.2 Deployment: Default settings changed (F 220135)

The default settings for the deployment of reports have been changed in the **Settings/Deployment** dialog.

Option	Up to version 3.40	Version 10 and higher
<b>Save report definitions before deployment</b>	<i>Prompt</i>	<i>Yes</i>
<b>Overwrite reports on Report Engine</b>	<i>Prompt</i>	<i>Yes</i>

### 9.3 Update deployment with structure: Retain individual content (F 214278)

During deployment, it is now possible to select whether individual content is retained or removed for the updating of the structure. Selection is made by means of entries in the drop-down list for the action. Individually-added content is, for example, user-defined datasets, columns or parameters.

## 9.4 Configuration of user rights (F 196837)

When configuring users for Report Engine applications, two dialogs now notify you of special circumstances:

- ▶ **Inheritance of rights:**  
If your configuration leads to a user having no access to rights because they have not been inherited, a dialog notifies you of this. Decide whether the user shall also receive the rights that are not granted from inheritance from higher-level objects.
- ▶ **Effects on Report Launcher:** If a user is deleted in Reporting Studio, they are also deleted from Report Launcher. A dialog notifies you when a user is deleted. Confirm this dialog with **Yes** and the user is removed from all applications. Close the dialog with **No** and the user is neither deleted in Reporting Studio nor in Report Launcher.

## 9.5 Report styles: Color gradients (F 212152)

The types of color gradient that can be selected in Reporting Studio have been increased. The following new features are available:

- ▶ *Diagonal right*
- ▶ *Horizontal center*

Previously, these styles could only be applied manually via MS Report Builder.

## 9.6 Language tables are now saved in the database (F 206432)

The language table has been changed from file based to database based. When converting databases from versions before version 10, these entries are carried over.

# 10 Report templates

## 10.1 Box plot diagram: Table labeling (F 212160)

Three tables are automatically created when a box plot diagram is created. They are now also labeled automatically.

## 10.2 Grouped tables: Configuration of display collapsed/expanded (F 213718)

For grouped tables, it is now possible to preset whether these are displayed as collapsed or expanded.

Configuration is carried out using the new **Collapsed** property:

- ▶ *Active*: Grouping is shown as collapsed.
- ▶ *Inactive*: Grouping is shown as expanded.

Default: *active*

## 10.3 Report templates with online language selection (F 206432)

Some report templates that are supplied can now also be used with online language switching. With this configuration, the user decides the language in which the report is displayed when the report is called up. When configuring the report template, a language can also be stipulated with a direct value.

### Attention

Report templates with different language settings cannot be mixed. If a report template with online language switching is selected, it can only be supplemented with templates that also offer online language switching.

## AVAILABLE REPORT TEMPLATES AND SETTINGS

Report templates with online language selection contain the same properties and settings as report templates without online language selection. Datasets and properties are marked with the suffix **\_Translated** however.

The following are available for online language selection:

- ▶ Alarm and event analysis group:
  - ▶ Alarm list with online language selection
  - ▶ N last alarms with online language selection
  - ▶ Top N alarms with online language selection
  - ▶ Top N alarms grouped with online language selection
  - ▶ Alarm aggregation with online language selection

- ▶ Event analysis with online language selection
- ▶ Top N events with online language selection
- ▶ Top N events grouped with online language selection
- ▶ Archive analysis group:
  - ▶ Archive trend with online language selection
  - ▶ Archive aggregation trend with online variable selection
  - ▶ Archive aggregation with online language selection
  - ▶ Archive distribution with online language selection

## 10.4 Text boxes and lines (F 213707)

Text boxes can now allow the entry of text in the design area. This text can be a key word from the language table or freely entered as a static text. Free static text is not translated.

Lines enable individual drawing elements in report templates to be deployed. For example, a line for the signature in a print-out.

**Note:** Not every browser displays vertical or horizontal lines correctly. Diagonal lines cannot be displayed in Report Launcher. They are displayed correctly in the PDF however.

# 11 Report Engine

## 11.1 Reports translatable: Adjusting the tables (F 145904, 206432)

For online translatability of reports, the necessary tables have been enhanced or created for this.