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MANUAL

Data2Unified

Manual for modernizing projects in the WinCC advanced environment to WinCC Unified with the help of the TIA Portal add-in Data2Unified.

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1. Introduction

1.1. Overview

With the introduction of the new SIMATIC WinCC Unified visualization system, Siemens is revising its existing environment and taking important steps towards future-proof automation. With this new introduction, existing projects need to be adapted.

With Data2Unified, Siemens offers an option that makes the transition to WinCC Unified easier for you. The add-in for the TIA Portal supports you in modernizing your projects and your SIMATIC HMI panels. This means that you do not have to completely recreate your existing projects and can build on your existing content.

1.2. Mode of operation

Data2Unified accesses internal project interfaces and thus reads out project-related data. The subsequent conversion process allows this data to be transferred to the new WinCC Unified project via Openness and WinCCML. The content of a source device is thus transferred to a suitable Unified target device.

NOTE

The TIA Portal add-in "Data2Unified" is continuously being developed, which means that further TIA Portal project elements are gradually being supported.

The latest version of the add-in is available for download from Siemens Industry Online Support (SIOS): Data2Unified - TIA Portal Add-in - ID: 109770510 - Industry Support Siemens

1.3. Components used

The application examples and corresponding screenshots in this manual were created using the following hardware and software components:

Component	Number	Article number	Note
WinCC Unified ES V21	1	6AV2151-....2-5	To be able to use all functions, it is recommended to use the latest update.
WinCC Unified PC RT V21	1	6AV2154-....2-5	To be able to use all functions, it is recommended to use the latest update.
SIMATIC HMI TP1500 Comfort		6AV2124-0QC02-0AX2	Every SIMATIC HMI Comfort or Basic Panel can be used.
SIMATIC HMI MTP1200 Unified Comfort		6AV2128-3MB06-0AX1	Every SIMATIC HMI Comfort or Basic Panel can be used.

You can obtain the listed components from the Siemens Industry Mall, for example.

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2. General

2.1. Requirements

To be able to use the "Data2Unified" add-in, the following requirements must be met:

- Depending on the add-in version used, at least SIMATIC WinCC Unified V16 must be installed.
- All software products used in the original project (incl. HSP and GSD) must be installed.
- The project must be upgraded to the corresponding version of the TIA Portal. An overview of the compatibility of the add-in version and TIA Portal can be found in chapter 2.3.
- The project must not contain any compilation errors.
- Project items or tag tables may not be secured by passwords.
- At least one supported source and target device must be configured in the project as well as their connections.
- Storage settings for logs must be adapted in the settings of the target device.



CAUTION

Avoid data loss

If elements are deleted from the TIA Prortal project, the project must be closed and reopened before the next conversion with Data2Unified. This is the only way to ensure that the elements are also deleted from the internal process memory.

Otherwise, import errors may occur.

NOTE

Detailed information on switching from Comfort Panels to Unified Comfort Panels can be found in the application example "*Guide for Migrating to WinCC Unified HMI Devices"*:

Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens

2.2. Supported devices

The following table shows you which devices are supported by Data2Unified in TIA Portal.

Device family	Supported by Data2Unified
Panel based	
Basic Panels, Comfort Panels, Comfort Panels PRO, Outdoor Panels, Mobile Panels	✓
PC based	
Runtime Advanced	✓
Runtime Professional	✗

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2.3. Supported TIA Portal versions

TIA Portal	V19	V20	V21
Data2Unified V4.x	✓	✗	✗
Data2Unified V5.x	✗	✓	✗
Data2Unified V6.x	✗	✗	✓

NOTE It is always recommended to use the latest version of the TIA Portal with the latest version of Data2Unified to achieve the best possible result.

2.4. New features with Data2Unified V6.4

With Data2Unified Version V6.4, we have focused on improving the overall quality. A big part of this has been the implementation of a new special character approach which allows the user to replace the special characters which are not valid in WinCCUnified by choice. Furthermore, graphic lists can now be converted in the project area and linked to the respective screen item.

- Adaptation of special character approach
- Conversion of graphic lists within the project area
- General bug fixes and quality improvements

NOTE To be able to use Data2Unified V6.4, it is mandatory to install SIMATIC WinCC Unified **V21**.

2.5. Overview of supported TI Portal project elements

The following contents are supported by the current version of the "Data2Unified" add-in for conversion to SIMATIC WinCC Unified.

2.5.1. Screen items

The following table shows which screen items, and their animations and events are supported.

Basic objects

Name	Conversion of screen item	Conversion of animation	Conversion of event
Ellipse	✓	✓	---
Graphic view	✓	✓	---
Circle	✓	✓	---
Line	✓	✓	---
Polygon	✓	✓	---
Polyline	✓	✓	---
Rectangle	✓	✓	---

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Name	Conversion of screen item	Conversion of animation	Conversion of event
Text field	✓	✓	---

Elements

Name	Conversion of screen item	Conversion of animation	Conversion of event
I/O field	✓	✓	✓
Bar	✓	✓	---
Date/Time field	✓ - Not available in Unified; will be converted to I/O field	✗	---
Switch	✓	✓	✓
Button	✓	✓	✓
Slider	✓	✓	✓
Symbol library	✓ - Not available in Unified; will be converted to a graphic view	✓	✗
Symbolic I/O field	✓	✓	✓
Graphic I/O field	✓ - Not available in Unified; will be converted to symbolic I/O field	✓	✓
Clock	✓	✓	---
Gauge	✓	✓	✓
Faceplate instance	✓	✗	---

Controls

Name	Conversion of screen item (size & position)	Conversion of animation	Conversion of event
Alarm control	✓	✗	✗
Camera view	✗ - Different approach in Unified		
Criteria analysis view	✓	✗	✗
Graph view	✓	✗	✗
F(x) trend view	✓	✗	✗
HTML view	✓	✗	✗
Media Player	✓	✗	✗
PDF view	✗ - Different approach in Unified		

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Name	Conversion of screen item (size & position)	Conversion of animation	Conversion of event
PLC code view	✓	✗	✗
ProDiag overview	✓	✗	✗
Recipe view	✓	✗	✗
Sm@rtClient view	✗ -Not available in Unified		
System diagnostic view	✓	✗	✗
Trend view	✓	✗	✗
User view	✗ - Different approach in Unified		
Watch table	✗ - Not available in Unified		

NOTE Screen objects that are bound to a style can only be converted correctly to a limited extent.

NOTE For the conversion of screen controls that have fundamentally changed in the Unified system, please have a look at the migration guideline provided in the Siemens Industry Online Support:
Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens

2.5.2. System functions

System functions are converted with Data2Unified using scripts. This means that corresponding events can be found in the script area of the respective item. As the scripting language has changed in WinCC Unified, the system functions are converted into a Java script.

In the following tables the system functions are listed which are or are not translated via script. You will find the RT Advance/Comfort system function in the first column and its WinCC Unified successor in the second column. This makes it easier for you to adapt the converted scripts to predefined system functions if needed.

NOTICE **Performance optimization**
By converting the system functions into scripts, the performance of your project may decrease slightly.
To make your project as performant as possible, use the Engineering Guide with its **Smart Advisor** tool after conversion with Data2Unified.
Here you can access the corresponding entry in Siemens Industry Online Support (SIOS):
Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens

NOTE Some system functions (e.g. importing data records) require manual adjustments after conversion. These are marked both in the report and in the corresponding script comments.

NOTE There are detailed explanations for system functions that are no longer implemented in WinCC Unified in the same way as with WinCC Comfort/Advanced.
The corresponding system functions and their new implementation with WinCC Unified can be found here: System Functions • WinCC Unified Modernization • Reader • TIA Portal Information System

Alarms

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ClearAlarmBuffer	n/a	✗
ClearAlarmBufferProTool	n/a	✗
SetAlarmReportMode	n/a	✗
ShowAlarmWindow	*Alternative approach in Unified*	✗
ShowSystemAlarm	CreateSystemAlarm	✓

Calculation script

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
DecreaseTag	DecreaseTag	✓
IncreaseTag	Increase Tag	✓
InverseLinearScaling	n/a – *alternative via script*	✗
LinearScaling	n/a – *alternative via script*	✗
SetTag	SetTagValue	✓

Edit bits

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
InvertBitInTag	InvertBitInTag	✓
InvertBit	InvertBitInTag	✓
ResetBit	ResetBitInTag	✓
ResetBitInTag	ResetBitInTag	✓
SetBit	SetBitInTag	✓
SetBitInTag	SetBitInTag	✓
SetBitWhileKeyPressed	SetBitWhileKeyPressed	✗
ShiftAndMask	SchiftAndMask	✓

Historical data

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ArchiveLogFile	ExportTagLog, ExportAuditLog, ExportAlarmLog	✓
ClearLog	ClearAlarmLog / ClearTagLog	✓
CloseAllLogs	n/a	✗

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RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
CopyLog	n/a	✗
LogTag	WriteManualValue	✓
NotifyUserAction	InsertElectronicRecord	✓
OpenAllLogs	n/a	✗
StartLogging	StartTagLog, StartAlarmLog, StartAuditLog	✓
StartNextLog	n/a	✗
StopLogging	StopTagLog, StopAlarmLog, StopAuditLog	✓

keyboard

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
OpenScreenKeyboard	*Different approach in Unified*	✗
SetBitWhileKeyPressed	SetBitWhileKeyPressed	✗
SetScreenKeyboardMode	*Different approach in Unified*	✗
ShowOperatorNotes	*Different approach in Unified*	✗

Other functions

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ControlSmartServer	GetSmartServerState, SetSmartServerState	✓
ControlWebServer	n/a	✗
Encode	n/a	✗
EncodeEx	n/a	✗
LookupText	LookupText	✓
OpenInternetExplorer	StartProgram	✓
SendEmail	SendEmail	✓
SetDaylightSavingTime	n/a	✗
ShowSoftwareVersion	ShowSoftwareVersion	✓
SimulateTag	n/a – *alternative via script*	✓
StartProgram	StartProgram	✓
StopRuntime	StopRuntime	✓
UpdateTag	UpdateTag	✓

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Print

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
PrintReport	ExecuteReport	✗
PrintScreen	CreateScreenshot	✗
SetAlarmReportMode	n/a	✗

Recipes

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ClearDataRecord	DeleteParameterSet	✓
ClearDataRecordMemory	n/a	✗
ExportDataRecords	ExportParameterSet	✓
ExportDataRecordsWithChecksum	ExportParameterSet	✓
GetDataRecordFromPLC	ReadAndSaveParameterSet	✓
GetDataRecordName	GetParameterSetTypeName	✓
GetDataRecordTagsFromPLC	ReadParameterSet	✓
ImportDataRecords	ImportParameterSet	✓
ImportDataRecordsWithChecksum	ImportParameterSet	✓
LoadDataRecord	LoadParameterSet	✓
SaveDataRecord	SaveParameterSet	✓
SetDataRecordTagsToPLC	WriteParameterSet	✓
SetDataRecordToPLC	LoadandWriteParameterSet	✓
SetRecipeTags	n/a	✗

Screens

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ActivatePreviousScreen	ChangeScreenPrevious	✓
ActivateScreen	ChangeScreen	✓
ActivateScreenByNumber[1]	ChangeScreenByNumber	✓
ShowPopupScreen	OpenPopupInScreen	✓
ShowPopupScreenSizeable	OpenPopupInScreen + *script*	✓
ShowSlideInScreen	n/a	✗

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Settings

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ChangeConnection	ChangeConnection	✓
ChangeConnectionEIP	ChangeConnection	✓
GetPLCMode	*Different approach in Unified with system tags*	✓
SetConnectionMode	SetConnectionMode	✓
SetDeviceMode	n/a	✗
SetScreenKeyboardMode	n/a	✗
SetPLCDateTime	SetPLCDateTime	✓
SetPLCMode	*Different approach in Unified with system tags*	✓
SetDisplayMode	n/a	✗
SetLanguage	SetLanguage	✓
SetWebAccess	*Different approach in Unified with Monitor Client*	✗

System

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ActivateCleanScreen	ActivateCleanScreen	✓
BackupRAMFileSystem	n/a	✗
CalibrateTouchScreen	n/a	✗
GetBrigthness	GetBrightness	✓
OpenCommandPrompt	StartProgram	✗
OpenControlPanel	ShowControlPanel	✓
OpenControlPanelDialog	ShowControlPanel	✓
OpenFileBrowser	n/a	✗
OpenTaskManager	StartProgram	✗
SafelyRemoveHardware	EjectStorageMedium	✓
SetAcousticSignal	n/a	✗
SetBrightness	SetBrightness	✓

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User administration

RT Advanced/Comfort	WinCC Unified	Supported by Data2Unified
ExportImportUserAdministration	ExportUserAdministration ImportUserAdministration	✕
GetGroupnumber	n/a	✕
GetUserName	*Different approach in Unified with system tags*	✕
Logoff	LogOff	✕
Logon	ChangeUser	✕
ShowLogonDialog	ShowLogonDialog	✕

2.5.3. Screens

The following elements are supported:

Category	Conversion of screens	Conversion of animation	Conversion of events
Screens	✓	✕ - different approach in Unified	✓

NOTE The approach for animations of screens differs between WinCC RTAdvanced and WinCC Unified. Thus, the animation “visibility” of a screen cannot be transferred to your Unified screen.

NOTE After you have converted the screens, you must manually create the screen hierarchy with screen windows in WinCC Unified.

Further information on how to convert templates and pop-up screens in WinCC Unified, for example, can be found in the application example "Guide for Migrating to WinCC Unified HMI Devices":

Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens

2.5.4. Layout of screens

With version V5.0 of Data2Unified screen items which are configured on a screen are converted to the respective layers within the Unified HMI. Due to the difference in systems, some adjustments must be made in order to have an optimal conversion.

- Groups of screen items which are located in a specific layer will be converted to the «layer 0».
- The properties « visibility » and « active layer » cannot yet be converted. All layers will be visible and the first layer will be set active.

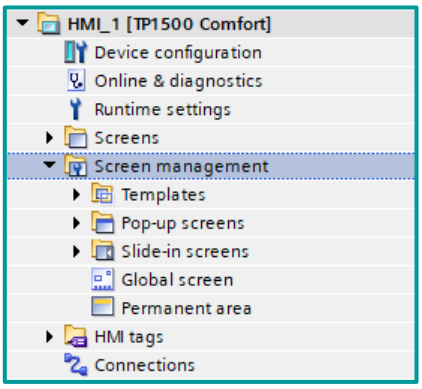
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2.5.5. Screen Management

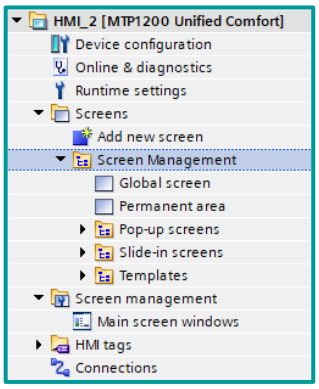
Screen management has changed fundamentally in the Unified System. Instead of working with slide-in screens, pop-up screens or templates, Unified introduced so-called "Main screen windows".

Due to this change, elements of screen management cannot be transferred directly to the Unified System. Screen management screens are therefore converted to the "screen" category as "normal" images.

WinCC Runtime Advanced



WinCC Unified



The following screen management elements are supported:

Category	Conversion of screens	Conversion of animation	Conversion of events
Templates	✓	✗ - different approach in Unified	---
Pop-up screens	✓	---	✓
Slide-in-screens [1)]	✓	---	---
Global screens	✓	---	---
Permanent area	✓	---	---

NOTE The approach for animations of templates differs between WinCC RTAdvanced and WinCC Unified. Thus, the animation “visibility” of a templates cannot be transferred to your Unified screen.

NOTE After you have converted the screens, you must manually create the screen hierarchy with screen windows in WinCC Unified.

Further information on how to convert templates and pop-up screens in WinCC Unified, for example, can be found in the application example "Guide for Migrating to WinCC Unified HMI Devices":

Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens

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2.5.6. HMI tags

The following elements are supported:

Elements	Supported by Data2Unified
Tag tables	✓
Tags	✓
User data types (UDTs)	✗

NOTE The conversion of HMI UDT structures is not supported by the current version and must be created manually under WinCC Unified. A detailed procedure can be found in chapter 3.5.1.

NOTE Tags of RT Advanced tag tables with a '@'-sign at the first position of the tag name will be compared with the system tags of WinCC Unified. If the name is the same as an Unified system tag, Data2Unified puts an additional '@' in front of the original tag name.

Example
WinCC Advanced tag name: @currentlanguage (same as Unified system tag '@currentlanguage')

→ Adaption of WinCC Unified tag name: @@currentlanguage

2.5.7. HMI alarms

The following elements are supported:

Elements	Supported by Data2Unified
Discrete alarms	✓
Analog alarms	✓
Controller alarms	✗ - Can be found in Unified in runtime settings
System events	✗
Alarm groups	✗ - Not available in Unified
Alarm classes	✓

2.5.8. Historical data/ Logs

The following elements are supported:

Elements	Supported by Data2Unified
Data logs incl. logging tags	✓
Alarm logs	✓

NOTE For archive variables, the archiving cycles and limit values that are configured as "HMI variables" are not supported and must be adapted manually in WinCC Unified.

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2.5.9. VB-scripts

The following elements are supported:

Category	Elements	Supported by Data2Unified
Script functions		
	Conversion of script functions	partly
	Conversion of VB scripts	partly
Script calls		
	Script calls on screens and pop-up screens	✕
	Script calls on screen objects	✕

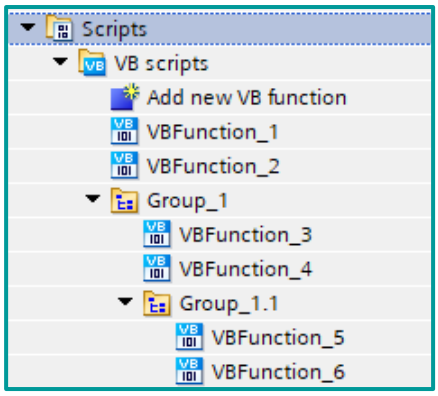
NOTE

Global scripts are automatically converted into a Java script in the Unified environment from version V5.0.

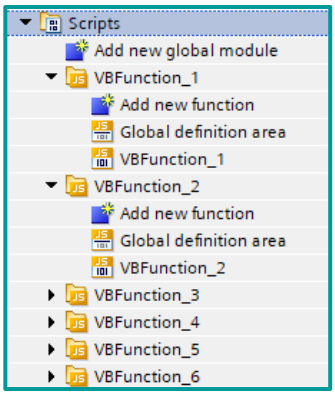
After using Data2Unified, please check the translated scripts for correctness and adjust them manually if necessary. A corresponding comment appears in the translated Java scripts so that you are also made aware of this in the TIA Portal.

Scripts can be created in groups in Runtime Advanced. This grouping function is not available in Unified. After conversion, VB scripts are placed in separate JS script modules. If necessary, the scripts must be manually divided into corresponding modules after modernization.

WinCC Runtime Advanced



WinCC Unified



2.5.10. Library

SIMATIC WinCC Unified V18 Update 2 or higher is required to be able to convert the library element “faceplate” with Data2Unified.

The following table shows which objects from the library are supported by Data2Unified.

Category	Library object	Detail	Supported by Data2Unified
Types			
	Faceplates		

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Category	Library object	Detail	Supported by Data2Unified
		screen items	✓
		Interface	✓
		Events	✓
		Scripts	Not available in Unified
		Text lists	Not available in Unified
		Graphic lists	Not available in Unified
		Texts	✓
	HMI user data type		✗
	HMI style		✗
	HMI style sheet		✗
Master copies			✗

Limitations

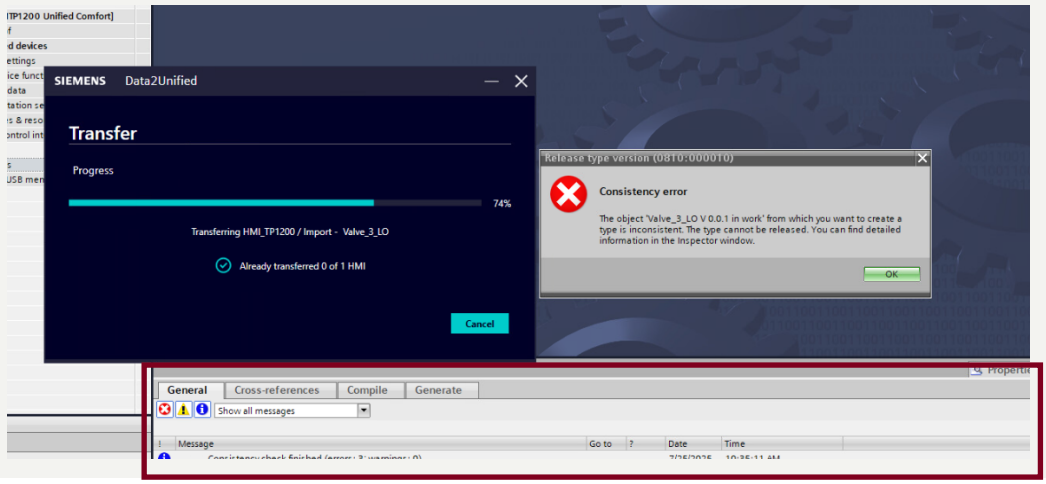
- Only the default version of the faceplate type is converted.
- Graphics, text lists and graphic lists must be stored manually in the project library so that they can be retrieved by Data2Unified

CAUTION

Consistency error when converting faceplates

If inconsistencies occur during the conversion of image modules, a corresponding dialog box may appear. Click OK to continue with the conversion.

The property that caused the consistency error is displayed in the lower section of the TIA Portal (framed in the screenshot).



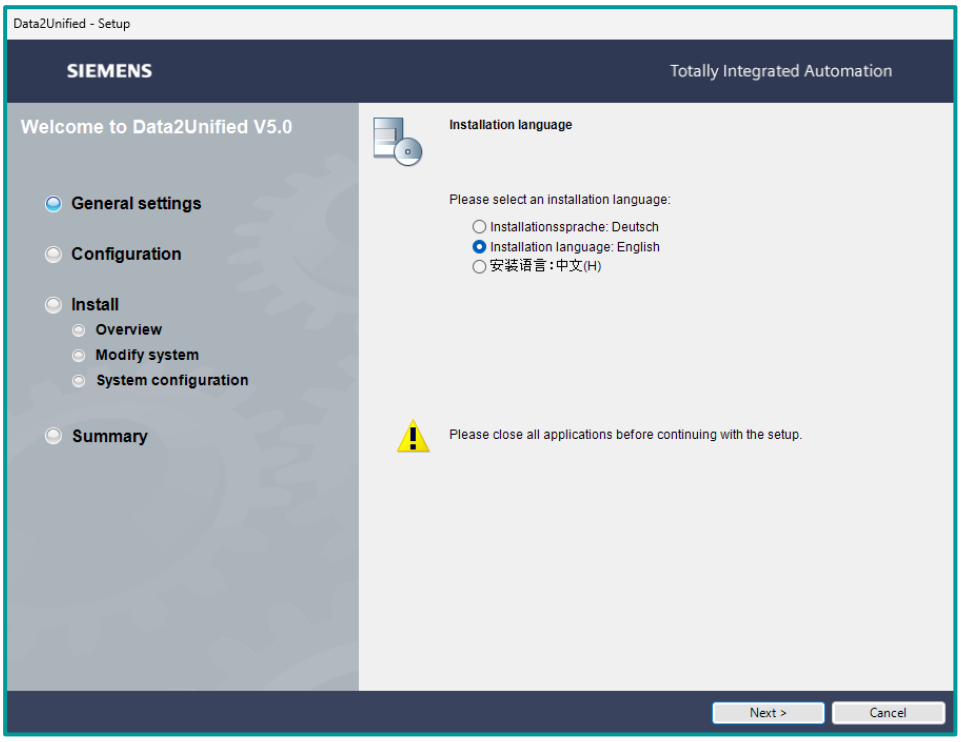
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3. Engineering

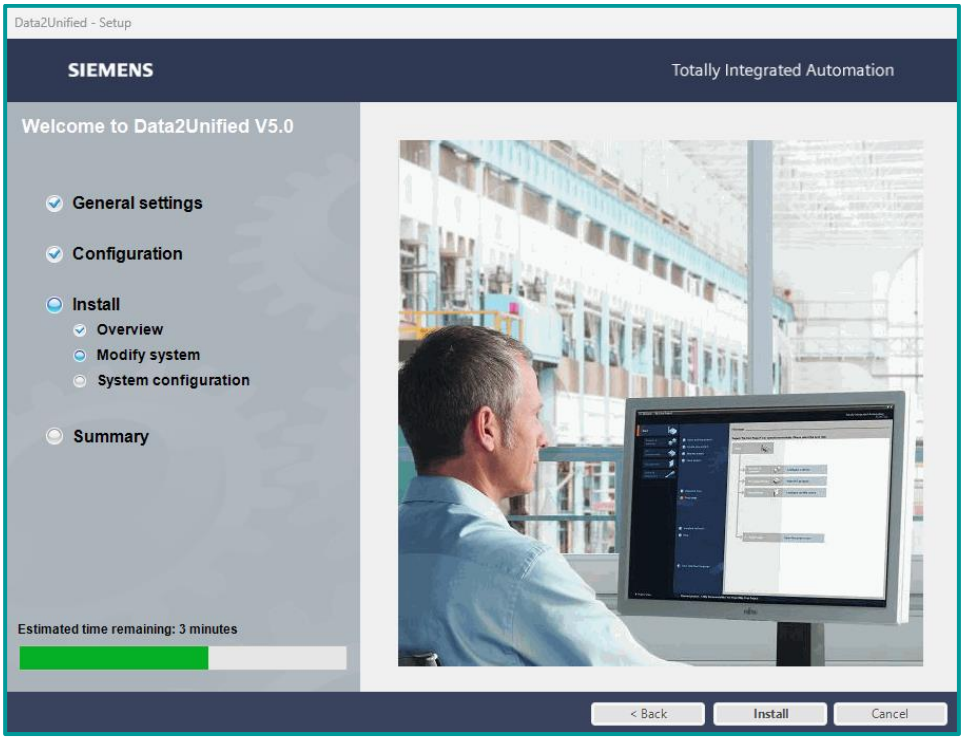
3.1. Installation of Data2Unified

To install Data2Unified, you must conduct the following steps.

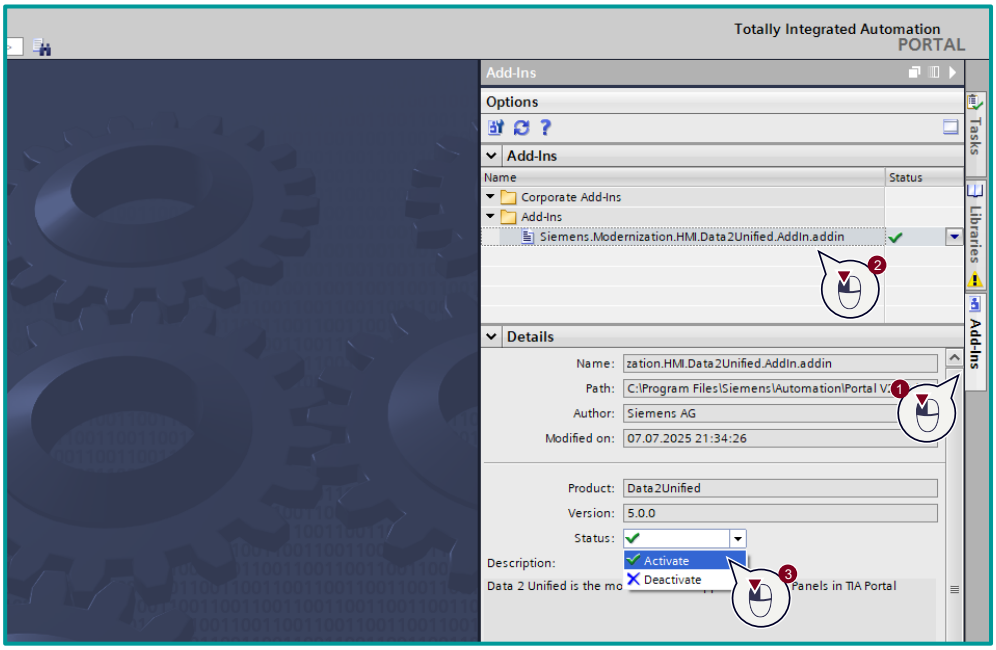
1. Download the installer file via the Siemens Industry Online Support entry of Data2Unified (Data2Unified - TIA Portal Add-in - ID: 109770510 - Industry Support Siemens)
2. Save the Data2Unified file in a chose directory and extract its files.
3. Subsequently, execute the installer file (Start.exe).



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4. Activate Data2Unified in the TIA Portal



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3.2. Manual adaptations before the conversion

This chapter describes the manual adjustments that need to be made in order to use Data2Unified effectively.

NOTE Thanks to the continuous further development of Data2Unified, the manual effort has already been significantly reduced. Further adaptations are planned.

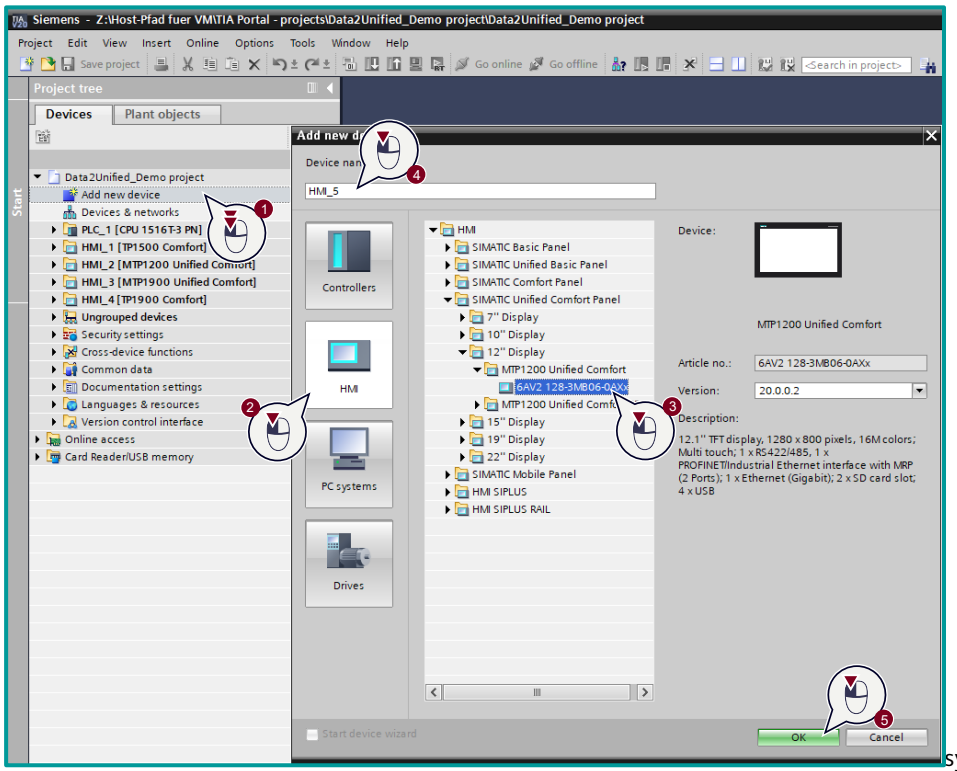
NOTICE **Possible failure of the conversion**

If the opened project is renamed and saved during the preparations for the Data2Unified conversion, it may lead to a failure of the conversion.

The user must close the project and reopen it with the adapted name in order for Data2Unified work correctly.

3.2.1. Add a WinCC Unified operator device

Add a SIMATIC HMI Unified Comfort Panel in the appropriate size via "Add new device".



sy

NOTE If you are using a PC station with WinCC Runtime Advanced, add a PC station with WinCC Unified Runtime as the target device.

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Selection of the correct WinCC Unified operating device for changed resolutions

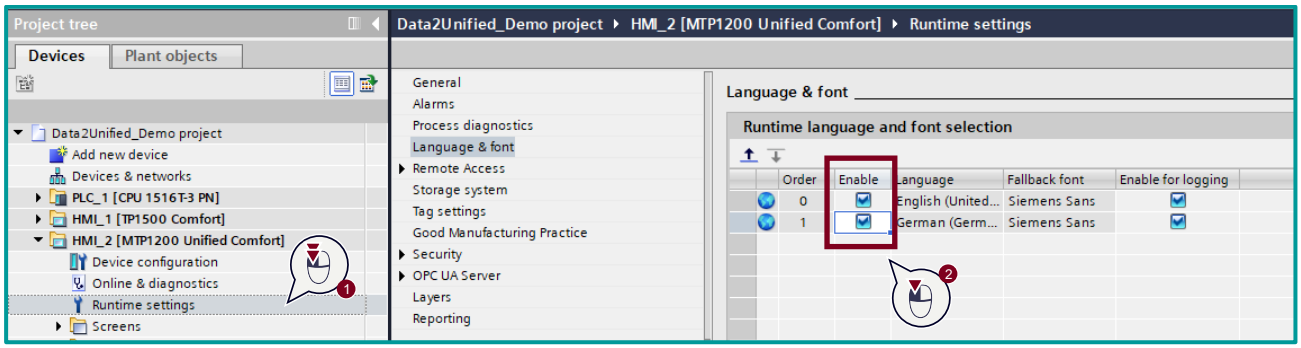
When converting from a SIMATIC HMI Panel to a SIMATIC HMI Unified Panel, the display resolutions may be different (e.g. TP1500 Comfort to MTP1500 Unified Comfort). For an optimal conversion result of the screens, please first change the device to the desired target resolution (e.g. change TP1500 to TP1900) before starting Data2Unified.

Basic Panel		Unified Basic Panel	
Device name	**Display resolution**	**Display resolution**	**Device name**
KTP400 Basic	480 x 272	800 x 480	MTP400 Unified Basic
KTP700 Basic	800 x 480		MTP700 Unified Basic
KTP900 Basic	800 x 480	1280 x 800	MTP1000 Unified Basic
KTP1200 Basic	1280 x 800		MTP1200 Unified Basic

Comfort Panel		Unified Comfort Panel	
Device name	**Display resolution**	**Display resolution**	**Device name**
KTP400 Comfort	480 x 272	-	-
TP700 Comfort	800 x 480		MTP700 Unified Comfort
TP900 Comfort	800 x 480	1280 x 800	MTP1000 Unified Comfort
TP1200 Comfort	1280 x 800		MTP1200 Unified Comfort
TP1500 Comfort	1280 x 800	1366 x 768	MTP1500 Unified Comfort
TP1900 Comfort	1366 x 768	1920 x 1080	MTP1900 Unified Comfort
TP2200 Comfort	1920 x 1080		MTP2200 Unified Comfort

3.2.2. Setting runtime language

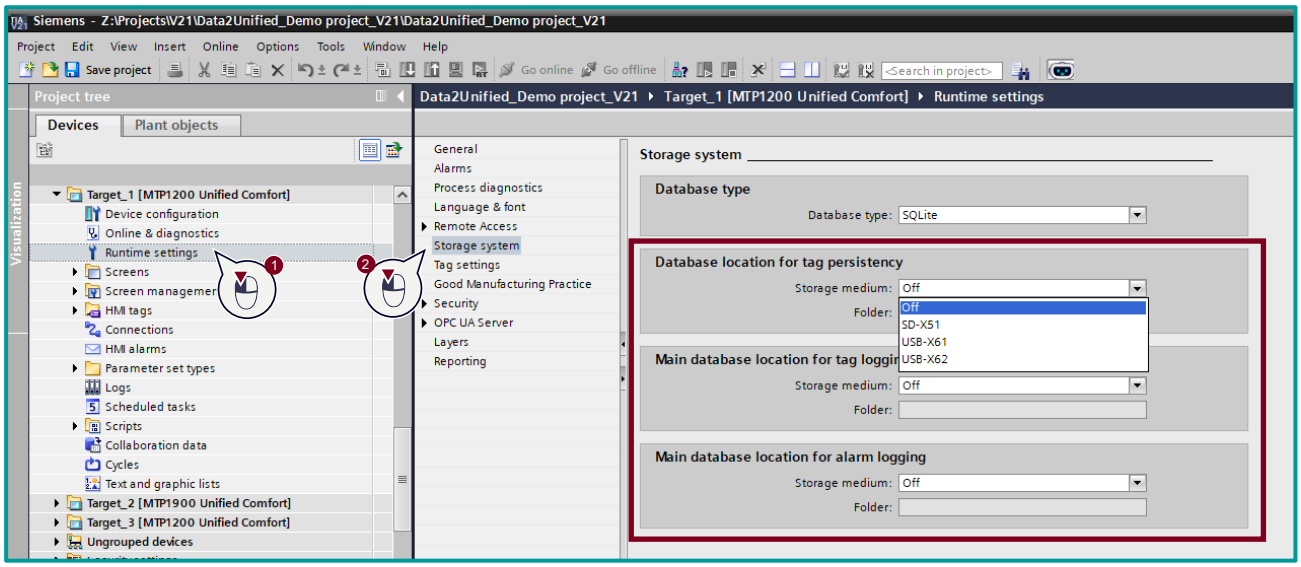
Open the "Runtime settings" of the newly added SIMATIC HMI Unified Comfort Panel and activate the same languages as in your SIMATIC HMI Comfort Panel under "Language & font".



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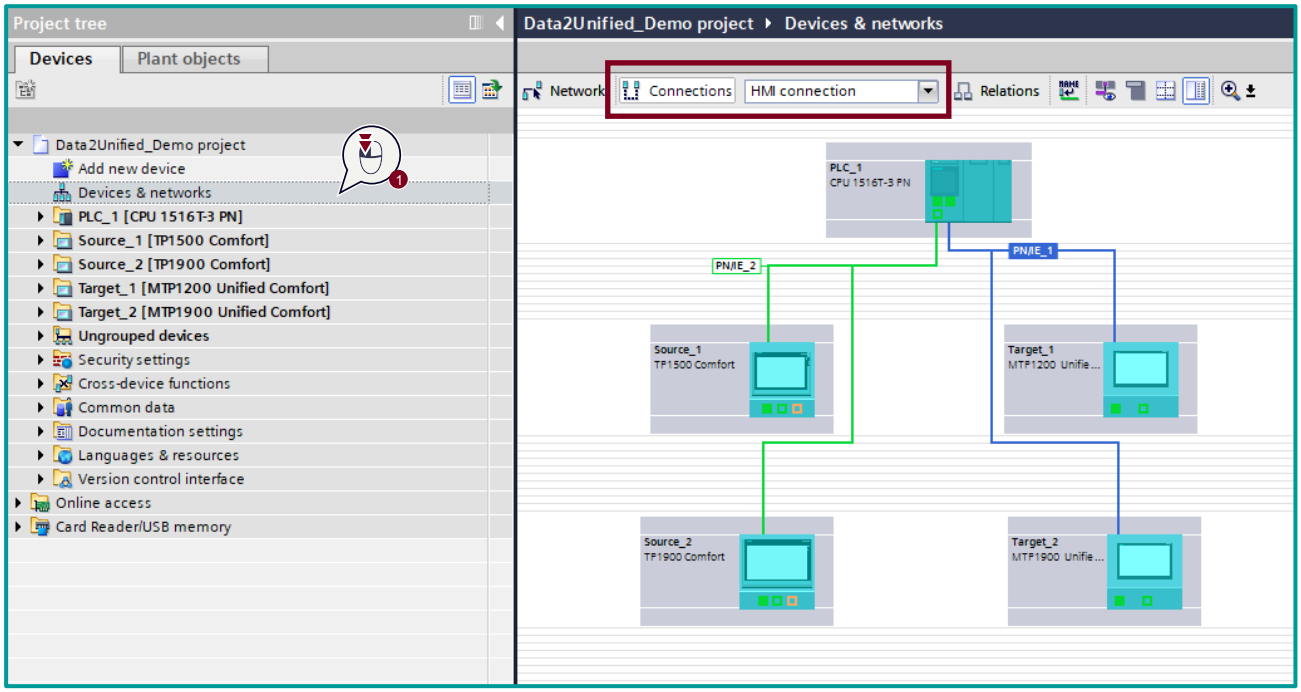
3.2.3. Setting runtime storage system

If you use data or alarm logs within the historical data category in WinCC RT Advanced (called “logs” in WinCC Unified), it is necessary to adapt the storage system settings within the runtime settings of the SIMATIC Unified Panel. Please add a “storage medium” as well as the respective “folder” for each category “tag persistency”, “tag logging” and “alarm logging”.



3.2.4. Projecting connections

If you have configured variables with a control connection, open the "Devices & networks" editor and add an HMI connection. In comparison to prior versions, it is now possible to name the new connection individually.

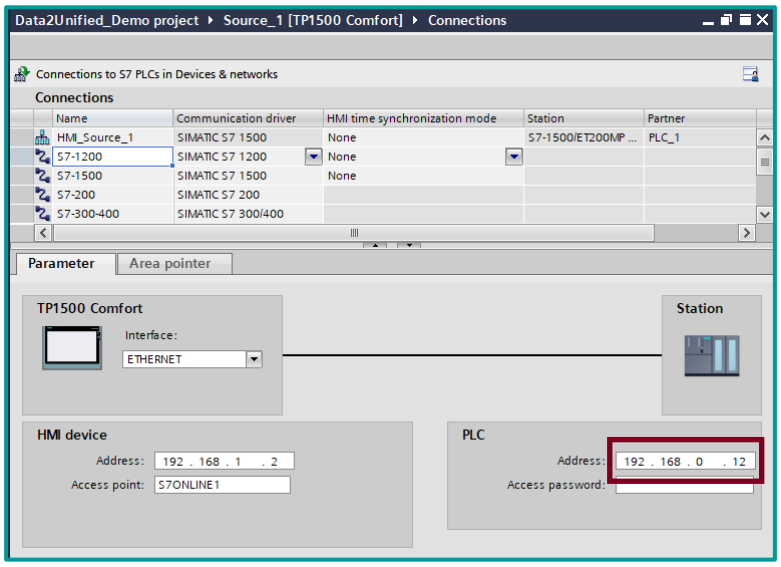


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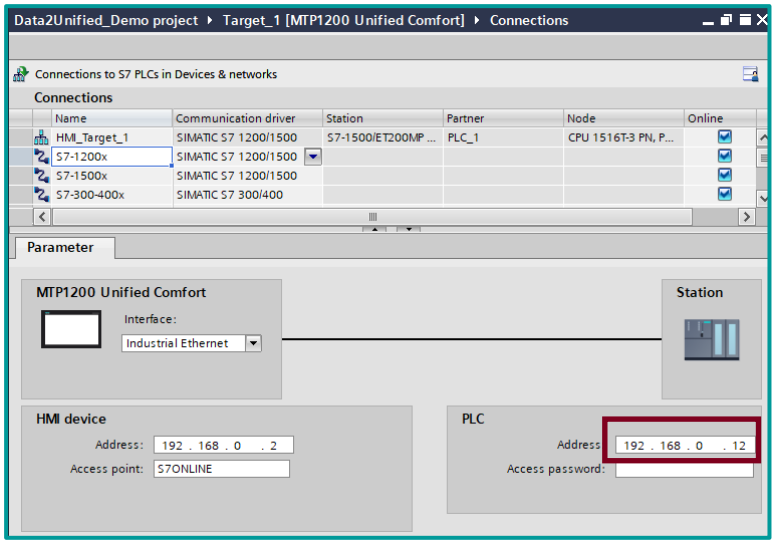
Non-HMI-Connections

Connections that are not HMI connections will be converted using the IP-address as main indicator. Therefore, the connection of the Unified panel has to have the same IP-address configuration as the source device in RT Advanced.

WinCC RT Advanced



WinCC Unified

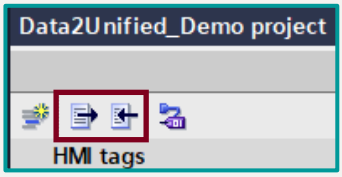


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NOTE Connections with communication drivers that cannot be identified via an IP-address can currently not be converted.

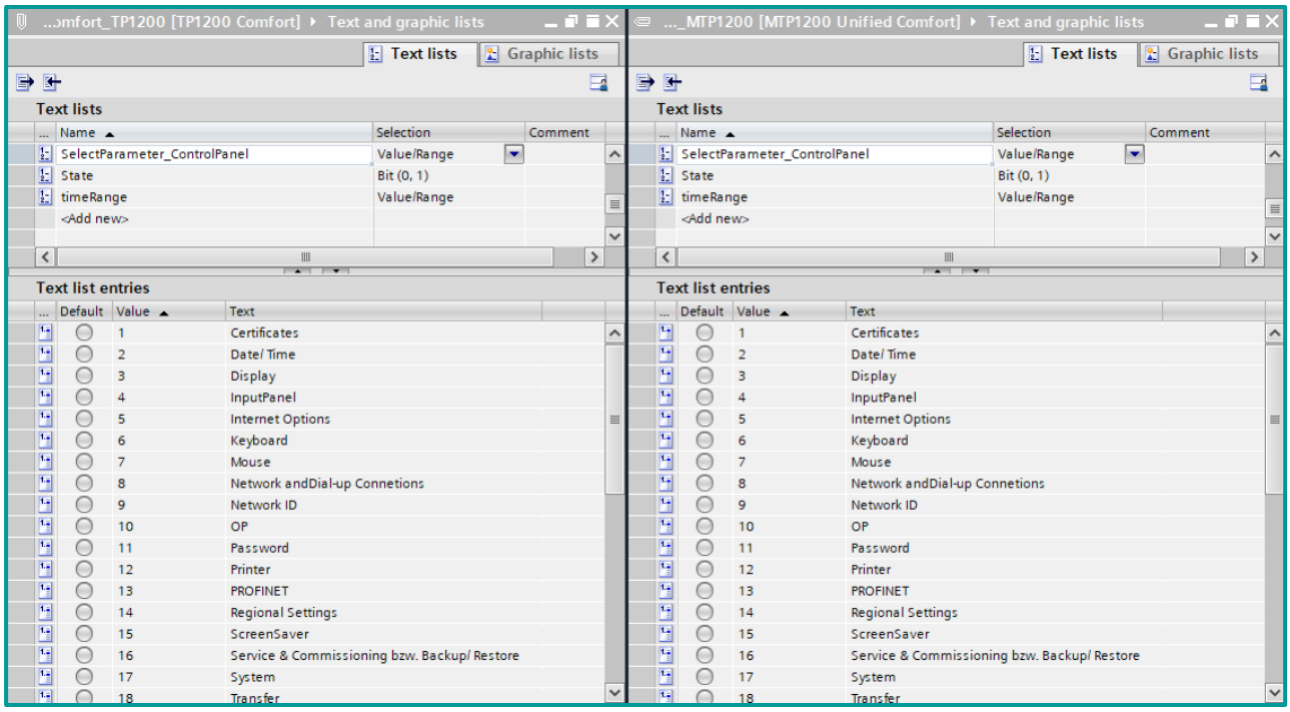
In those cases, the data type might get lost and manual effort is necessary to adapt the data types correctly.

If many tags have this kind of connection the export/import function of the TIA Portal may be beneficial.



3.2.5. Create text lists with formatted text

If you use text lists **with** formatted text in your configuration, please transfer these manually to the configuration of your SIMATIC HMI Unified Panel. You can use the multiple selection function of the TIA Portal and transfer them using copy & paste.



NOTE Make sure that the spelling of the respective elements is identical.

3.2.6. Cycles

If you use cycles that are not available in the SIMATIC HMI Unified Panel, please create them manually. The following table shows you which cycles are already preconfigured as standard in both systems.

Predefined cycles	HMI Panel	HMI Unified Panel
100 ms	✓	✓
250 ms	✓	✓

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Predefined cycles	HMI Panel	HMI Unified Panel
500 ms	✓	✓
1 s	✓	✓
2 s	✓	✓
5 s	✓	✓
10 s	✓	✓
1 min	✓	---
5 min	✓	---
10 min	✓	---
1 h	✓	---

NOTE Please ensure that the format of the manually added cycles corresponds to that of the preconfigured unified cycles. This means that the name of the corresponding cycle must begin with "T."

T2s	2000	milliseconds
T5s	5000	milliseconds
T10s	10000	milliseconds
T1min	1	minutes
T5min	5	minutes
T10min	10	minutes
T1h	1	hours

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3.3. Starting and using the add-in

The Data2Unified data conversion is divided into two parts. The conversion of the library elements (currently faceplates) and the conversion of the HMI project data.

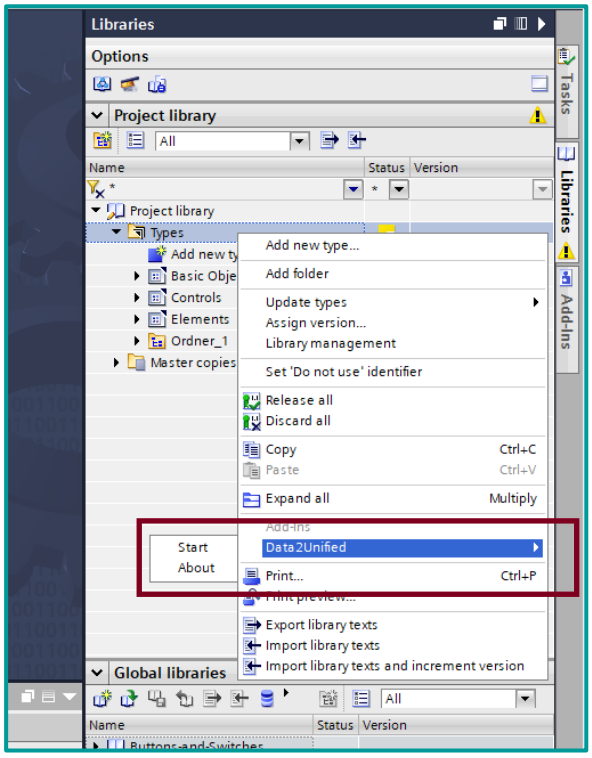
NOTE For an optimal conversion result it is necessary to convert the library elements, respectively faceplates, at first before converting the HMI project data. This leads to the correct assignment of converted library elements to the elements used in the HMI project data.

3.3.1. Starting of the user interface

For faceplates

To modernize the faceplates of your library, right-click on the “types” or the corresponding faceplate in the project navigation. Then select "Data2Unified" from the context menu and click on "Start".

Subsequently, a special user interface is loaded for library elements only.



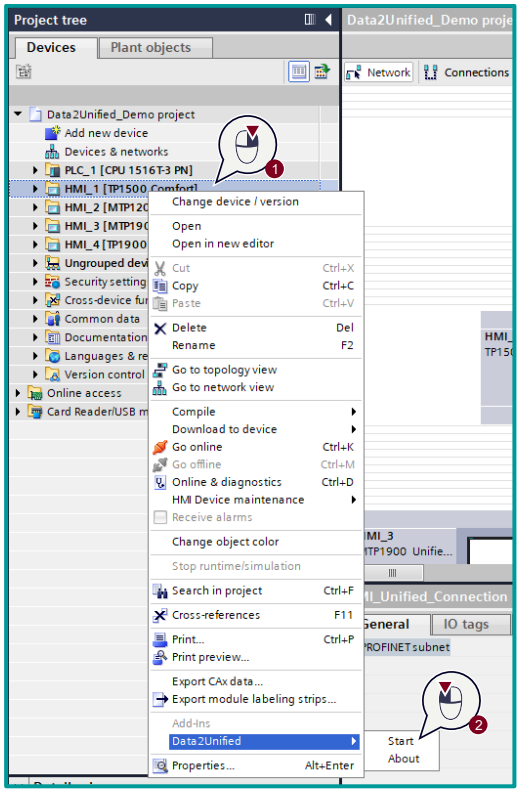
NOTE With version V5.0, only faceplates can be modernized. Further library elements are being worked on and will be made available in future versions.

For HMI devices

To modernize the project content of your HMI device, right-click on the project or corresponding HMI panel in the project navigation. Then select "Data2Unified" from the context menu and click on "start".

Following, the user interface is loaded, and the selected source device is preassigned.

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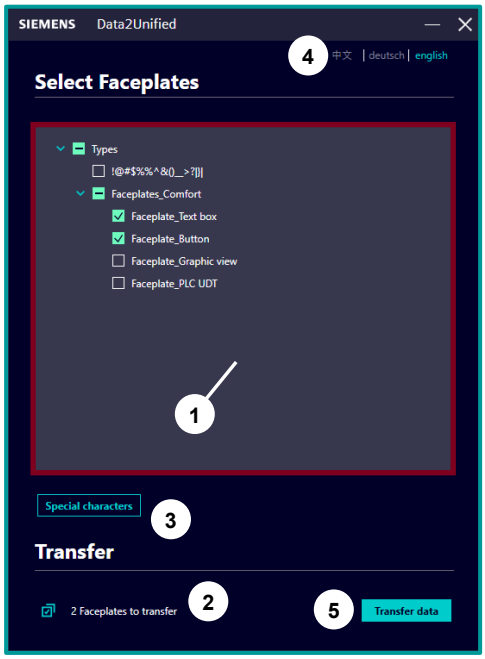


NOTE From version 5.0 of Data2Unified, you can display additional information about the add-in. To do so, click on "About" in the context menu under "Data2Unified".

3.3.2. The user interface

For faceplates

A new user interface has also been designed for the modernization of the library elements.



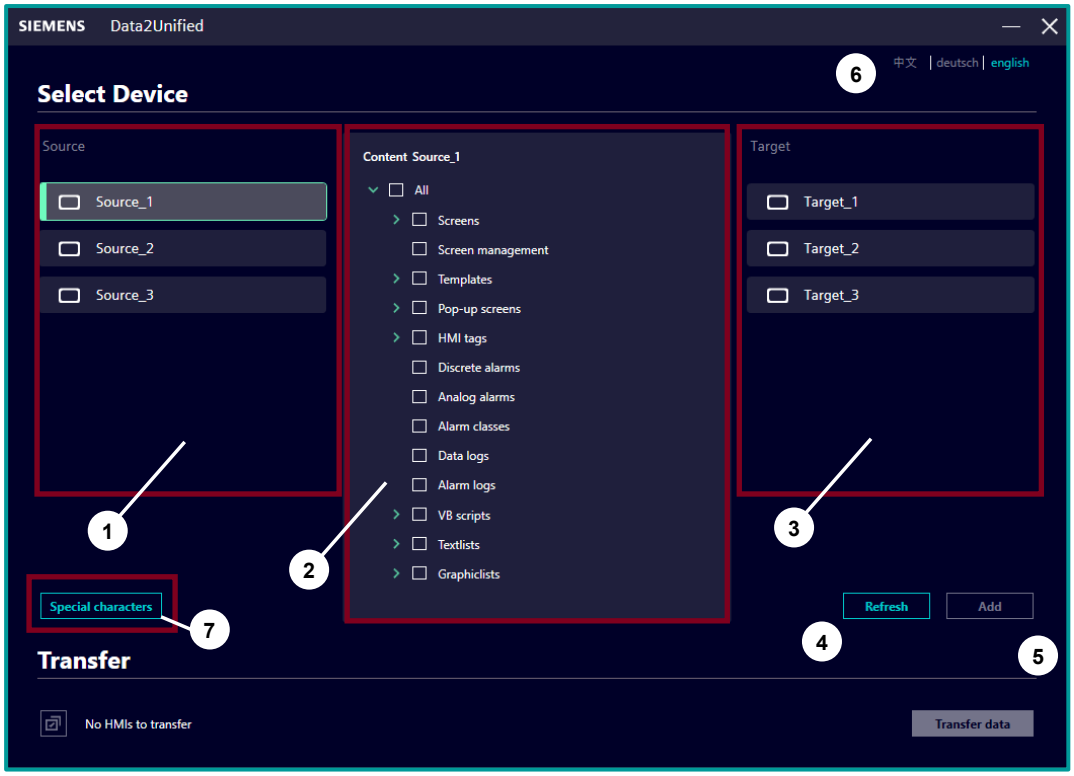
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1. Selection area of the library elements. Here you can select the screen elements that you want to modernize.
2. Beneath the heading "Transfer" you can see how many faceplates are currently selected for data transfer. The more you select, the more will be displayed.
3. This button leads to replacement possibilities for special characters. For more details see section “Special Character Replacement” within this chapter.
4. In area 4, you can switch the language of the user interface between German, English and Chinese.
5. Start the modernization with the “Transfer data”-button

For HMI devices

With version 5.0, Data2Unified has been given a new user interface. Among other things, it is now possible to connect several source devices to corresponding target devices.

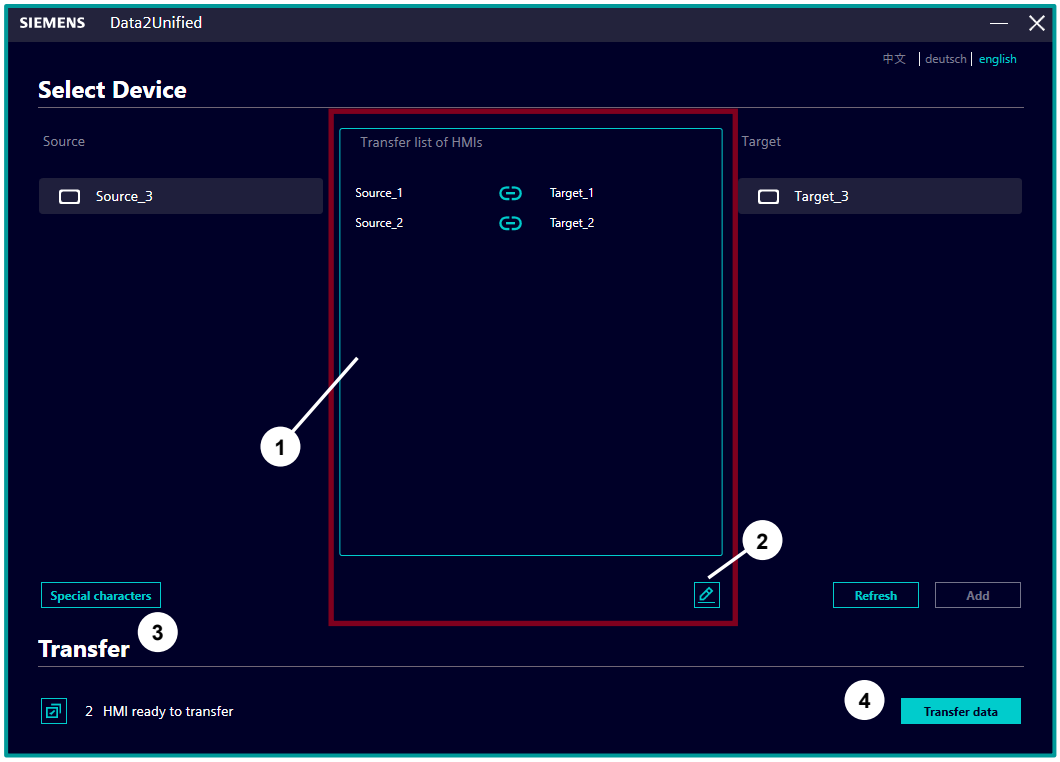
The individual areas of the user interface are explained in the following sections.



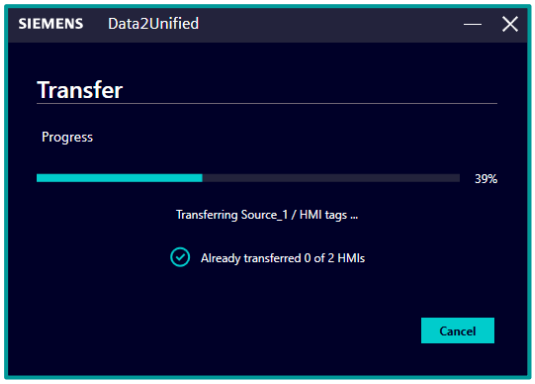
1. Selection of the output devices in area 1. Here you can select the device that you want to modernize. If you have opened Data2Unified via a specific device in the project navigation, this device is automatically preselected.
2. The content of the selected device is displayed in area 2. Here you can select individual project parts for modernization. Expand the corresponding branches to make a detailed selection at a lower level.
3. In area 3, you can select the target device to which the data is to be converted.
4. Use the "Add" button to link the two selected devices together.
5. If you change something in your project while the Data2Unified user interface is open, you can update the content with the "Reload" button.
6. In area 6, you can switch the language of the user interface between German, English and Chinese.
7. This button leads to replacement possibilities for special characters. For more details see section “Special character Replacement” within this chapter.

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NOTE If you have selected a PC station with Runtime Advanced as the source device, you must select a PC station with WinCC Unified Runtime as the target device.



1. After you have linked the devices, they appear in the center of the user interface – area 1.
2. You can remove the existing links again using button 2.
3. Under the heading "Transfer", you can see how many devices are currently available for data transfer. The more links there are, the more are displayed.
4. Click on button 4 "Transfer data" to start the modernization process with Data2Unified.

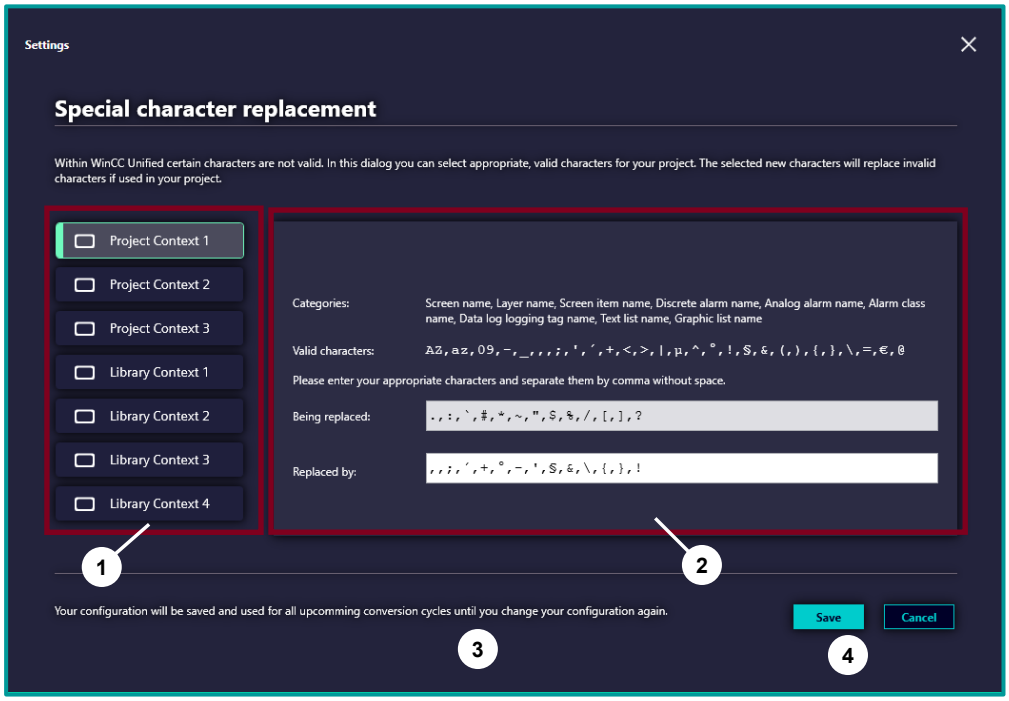


After starting the modernization, a progress window appears. Here you can extract the following information:

- Display of overall progress of modernization
- Display of currently transferred project parts
- Information about the number of devices to be transferred
- Possibility of cancelling the modernization process

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Special Character Replacement



This window gives the possibility to replace the special characters which are valid in WinCC RTAdvanced but invalid in WinCC Unified.

1. This area shows the different categories within one project where special character restrictions occur. There are three categories related to the project (Project Context 1-3) and four categories related to the project library (Library Context 1-4)
2. This area displays different information:
   a. Categories to which the special character replacement is referred to.
   b. Display of characters which are valid in WinCC Unified.
   c. Information about which characters are being replaced.
   d. Selection field to choose the characters with wich the invalid characters shall be replaced with. This field can be individually adapted. The following conditions apply:
      i. An individual character cannot be used twice within one context.
      ii. Each character has to be mapped to exact one valid character.
      iii. Invalid characters will be replaced by a character that is at the same position of the selection field.
      iv. Characters need to be separated by comma and may not have spaces.
3. Information: The configuration will be saved and used for all upcoming conversion cycles until it is changed again.
4. Button to save the individual configuration.

Default settings

Project context 1

Categories	Screen name, layer name, screen item name, discrete alarm name, analog alarm name, alarm class name, data log logging tag name, text list name, graphic list name
Non valid characters:	. , : , ` , # , * , ~ , " , $, % , / , [,] , ?

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Project context 1

Default replacement:	, , ; , ´ , + , ° , - , ' , § , & , 1 , { , } , !

Project context 2

Categories	Data log name, alarm log name
Non valid characters:	` , # , ~ , $, [,]
Default replacement:	´ , + , - , § , { , }

Project context 3

Categories	HMI tag name
Non valid characters:	. , : , ' , ` , # , * , ~ , " , $, % , / , [,] , ?
Default replacement:	, , ; , | , ´ , + , ° , - , ^ , § , & , \ , { , } , !



CAUTION

Do not use a backslash "\" as replacement

Please change the replacement of the backslash "\" with a different valid character. This is a limitation and falsely used as replacement. This will be handed with the next update.

Library context 1

Categories	Faceplate name
Non valid characters:	. , : , ` , # , * , ~ , " , $, % , / , [,] , ?
Default replacement:	, , ; , ´ , + , ° , - , ' , § , & , \ , { , } , !

Library context 2

Categories	Tag interface, event interface
Non valid characters:	- , . , ; , ´ , ` , ~ , | , ° , § , (,) , [,] , = , €
Default replacement:	m , d , s , x , y , t , l , c , p , a , b , g , k , e , j

Library context 3

Categories	Property interface
Non valid characters:	- , . , ; , ´ , ` , ~ , | , µ , ° , § , (,) , [,] , = , €
Default replacement:	m , d , s , x , y , t , l , c , o , p , a , b , g , k , e , j

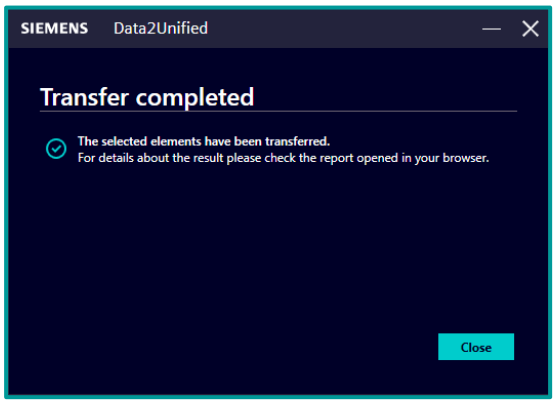
© Siemens 2026 |

Library context 4

Categories	Local tag
Non valid characters:	. , , ; , : , ` , # , * , + , ~ , < , > , ^ , ! , $, % , & , / , { , } , [,] , \ , ? , @
Default replacement:	d , c , s , _ , ´ , - , ° , p , = , x , y , z , | , § , µ , a , b , (,) , g , k , l , q , €

3.4. Analyzing modernization results

Once the conversion has been completed, a dialog box is displayed.



After closing this window, an http report opens automatically in your browser showing the analysis of the modernization.

The report is divided into two parts and is created in English. While the upper part shows an overview of the modernization and various indicators, the lower section provides a detailed overview of the conversion result of the individual elements.

Overview



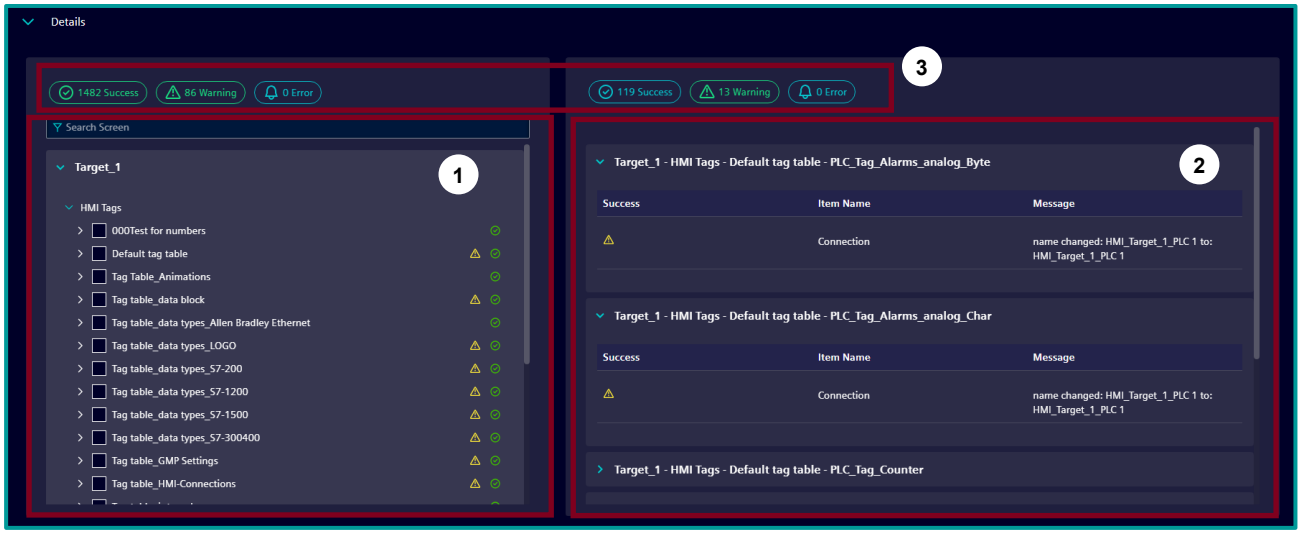
The first section is divided into three parts.

1. Name of the converted project
2. Summary of various indicators
   a. Creation time of the modernization
   b. Duration of modernization
   c. Display of amount of successful converted elements, errors and warnings

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3. Graphical display of transferred elements categorized in „successful“, „warning“ and „error“.
4. Display of the conversion results per converted HMI

Details



The detailed view is also divided into three parts.

1. Display of the modernized HMIs with a list of the transferred elements. The individual elements can be selected for a more detailed analysis. An Icon next to category name displays the status of the modernization.
2. Field 2 is a more detailed display of the elements selected in field 1. All selected elements can be shown or hidden using the accordion function. The specific transfer results of the individual elements are displayed with name and explanation.
3. A filter option to display specific results can be found in field 3.

Navigation

In the navigation section you can find additional options

1. Download the report to a directory on your device
2. General information about Data2Unified

3.5. Manual adaptations after the conversion

Due to various factors, Data2Unified cannot transfer all areas of an HMI project to the WinCC Unified environment. We are working on reducing the existing limitations of the add-in and expanding the scope of Data2Unified from version to version.

Currently, the following areas cannot be transferred and require manual reworking by the user:

- HMI user data types (HMI-UDTs)
- Recipes
- Scheduled tasks
- Screen items: Controls

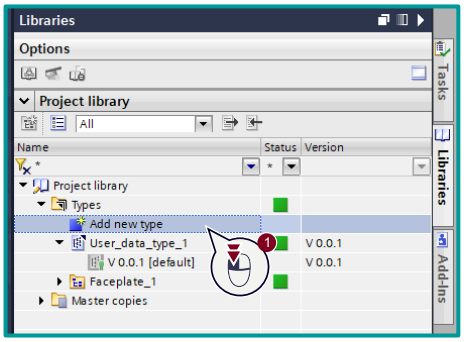
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3.5.1. HMI user data types (HMI-UDTs)

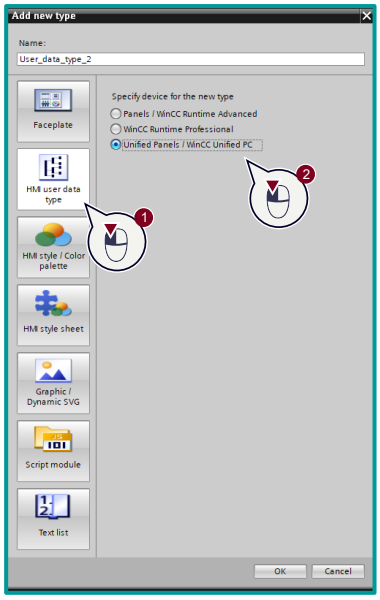
HMI user data types (HMI UDTs) currently cannot be transferred to the Unified system. In order to transfer the HMI tags in the best possible way, Data2Unified converts HMI UDTs with their properties as data type "Int". A comment in the comment field indicates the originally connected HMI user data type.

Unified HMI user data types currently must be created manually and then reconnected to the corresponding tags.

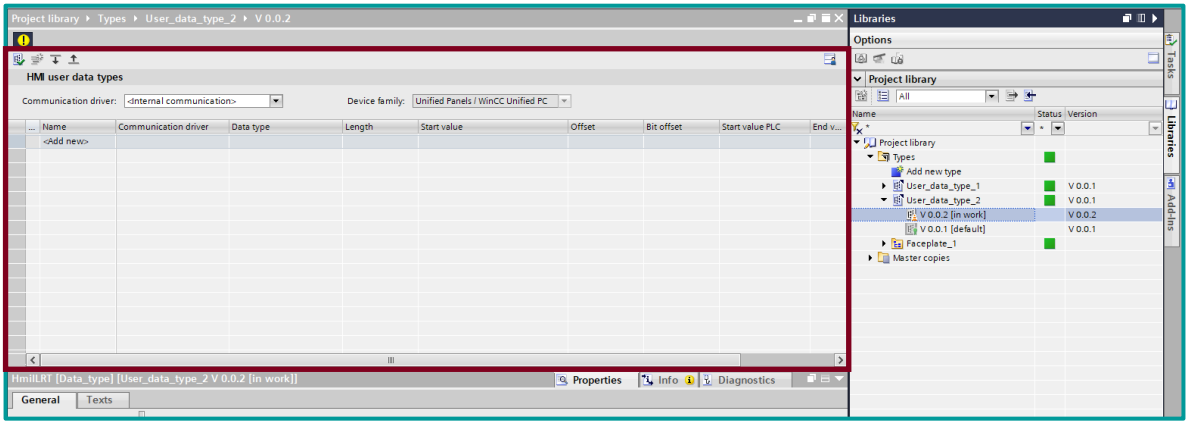
1. Create a Unified HMI user data type by navigating to the project library and double-clicking on "add new type".



2. Select the device type "Unified Panels / WinCC Unified PC" under the category "HMI user data type" in the window that opens.

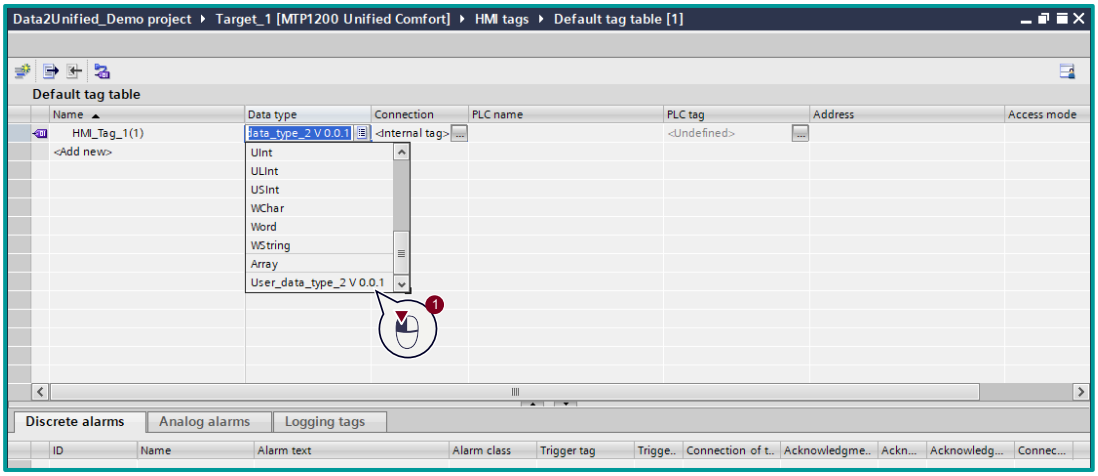


3. Now edit the HMI user data type like in your previous project.



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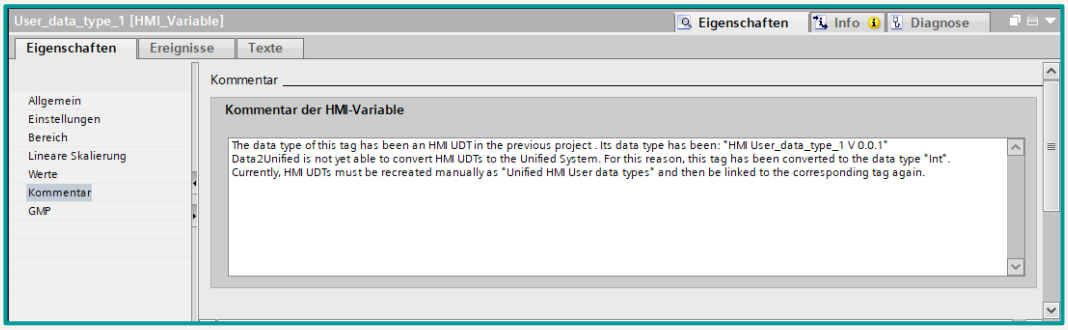
4. Now link the converted HMI variable to the newly created HMI user data type.



NOTE

To make it easier to assign the data types, the comment in the comment field explains the procedure once again and shows the original data type (here: User_data_type_1 V 0.01).

Unified HMI user data types must currently be created manually and reconnected to the original HMI variables.



3.6. Limitations and error handling

3.6.1. Faceplates

Within the broad field of library elements there are some limitations of the Data2Unified conversion.

- The elements of the interfaces of an WinCC RTAdvanced faceplate instance can currently not be converted to the faceplate container in WinCC Unified.

3.6.2. Script conversion

From version V5.0 on, scripts can be converted from VB scripts to Java scripts. As the programming languages have, among other, structural differences these cannot be translated consistently.

You should be aware of the following limitations in order to be able to react if they occur

- Built-in Visual Basic functions cannot be converted.
- The initiation and use of multidimensional areas cannot be converted.
- File operations cannot be converted.
- Select case statements cannot be converted.

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- Error correction and typing instructions cannot be converted.
- Semicolons cannot be inserted in translated scripts.
- If parameters are missing in the system functions of the VB script, the corresponding functions in the Java script must be configured manually with these missing parameters.

NOTICE **Incorrect conversion of scripts possible.**

After using Data2Unified, please check the translated scripts for correctness and adapt them if necessary.

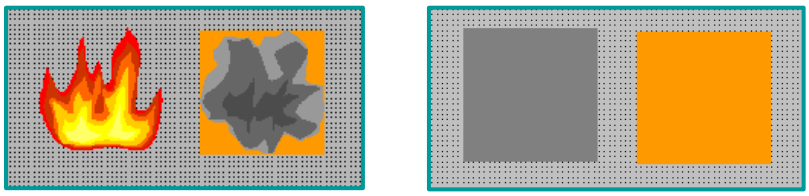
A corresponding comment appears in the translated Java scripts so that you are also made aware of this in the TIA portal.

3.6.3. Screen object: symbol library

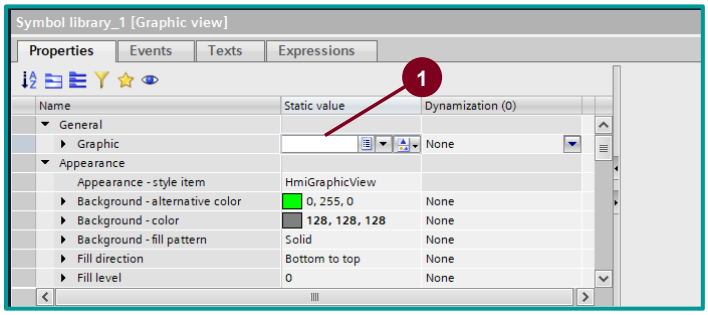
From version Data2Unified V5.0, the "Symbol library" screen element can also be modernized. As the "symbol library" screen object is no longer available in WinCC Unified, the following aspects must be taken into account.

- The "Symbol library" screen objects are converted to a "Graphic view" screen object.
- The properties of the former "Symbol library" screen object are adopted.
- The graphic of the "Symbol library" image object cannot be adopted. Instead, the background of the graphic is colored grey in the case of an existing transparent background. This makes it possible to recognize at first glance where the image element has been transferred to.

WinCC Advanced **WinCC Unified**



- Manual reworking is necessary, in which the user selects the desired graphic in the properties of the graphic view (see graphic, marker 1).



- Events from the former "Symbol Library" image object cannot yet be transferred to the newly added "Graphical View" image object. This requires manual intervention.

3.6.4. System function: ChangeScreen

After some conversions the “ChangeScreen” system function did not link the correct screen to the converted system function script.

Workaround

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Please convert the screens with the incomplete system functions for a second time. After the second conversion the links are made correctly.

3.6.5. Trigger tags with discrete and analog alarms

The readable data type of trigger tags has changed between the two systems, RTAdvanced and WinCC Unified. The trigger tags are converted but may display error messages due to the changes.

This overview shows the different data types:

Description	WinCC Comfort	WinCC Unified
Data types for trigger tags within discrete alarms	Counter, (U) Int, Word, Array [..] of (U) Int	Bool, Byte, Word, DWord, LWord
Data types for trigger tags within analog alarms	Byte, Char, Counter, (L)Real, (U)SInt, (U)Int, (U)DInt, (U)LInt, (D) Word	(L)Real, (U)SInt, (U)Int, (U)DInt, (U)LInt

If a discrete alarm in Comfort uses an array tag, the array **tag** itself must be assigned, and the bit number specifies the bit position within the array tag itself.

If a discrete alarm in Unified uses an array tag, an array **element** must be assigned, and the bit number specifies the bit position within the array element (e.g. for the Word data type, bit index can be 0-15).

Therefore, we convert the bit number from Comfort to an element index with new bit position within the element for Unified.

NOTE The trigger variables must be adjusted manually after conversion by Data2Unified.

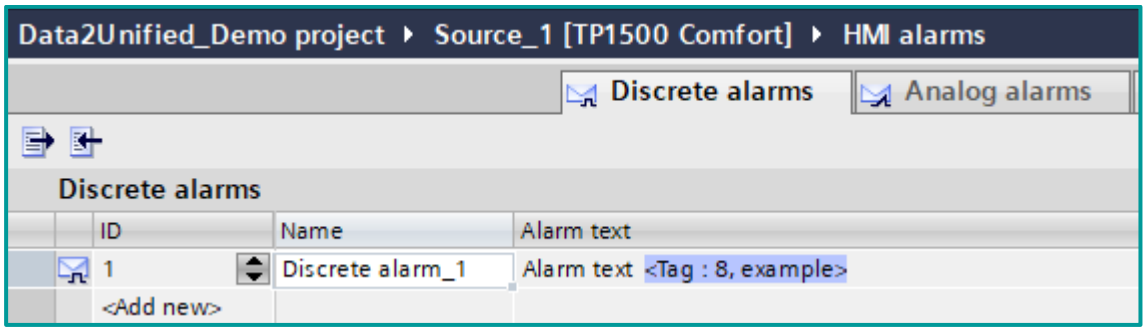
3.6.6. Formatted texts within Alarms, Text lists or Text fields

Formatted parts of the names of alarms or text lists currently cannot be replaced. The alarm or text list will get converted, but instead of the formatted text a blank space will appear.

The respective dynamic values must be added after the conversion manually.

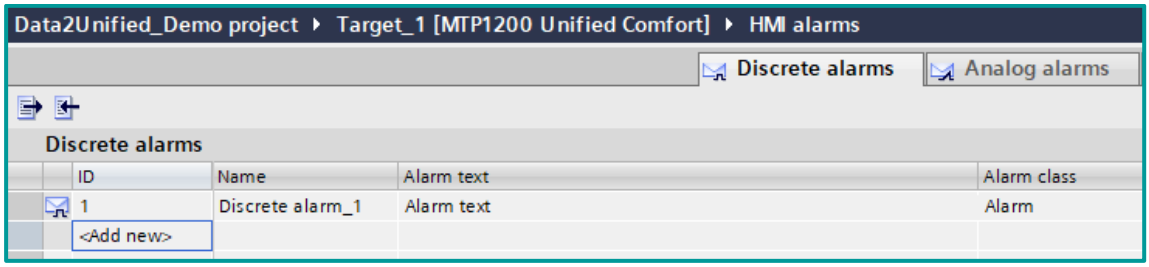
Example:

WinCC RTAdvanced



WinCC Unified

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4. Data2Unified check list

This check list helps you to convert your project Data2Unified at one sight.

Preparation

☐ Open your project in TIA Portal

☐ Add a SIMATIC Unified target device

- Keep an eye on the right resolution of the target device (see chapter Add a WinCC Unified operator device)

☐ Adapt the respective languages in the runtime settings of the target device (see chapter Setting runtime language)

☐ Add the storage system information in the runtime settings of the target device (see chapter Setting runtime storage system)

☐ Create the connections within the target device (see chapter Projecting connections)

- Pay attention that the same IP-addresses of device and partner are set, if non-HMI-connections are used

☐ Please replace all backslashes "\" from tag names. Backslashes "\" may lead to a non-conversion of the respective tag table. (see chapter The user interface)

☐ If library elements are used, please add HMI-UDTs, graphics, text lists and graphic lists manually as new Unified library elements.

- Currently only faceplates can be converted by Data2Unified.

☐ Add cycles, recipes and scheduled tasks if used in your RTAdvanced HMI (see chapter Manual adaptations before the conversion)

Start Data2Unified

First: Faceplates

☐ Convert your faceplates with Data2Unified

☐ Check that there are no consistency errors and all faceplates are released

Second: Project

☐ Open Data2Unified User-Interface

☐ Check whether your TIA Portal language matches with the Data2Unified Interface language

☐ Click on the special character button and check your replacement settings for invalid characters

- Attention: Please do not use the character "\" as a replacement in the **project context 3**

☐ Select the source device, project categories, target device and transfer the data

After conversion

☐ Check the conversion results with the report that will open after the conversion is closed.

☐ Check the results within the project especially in regards to current limitations of Data2Unified (see chapter Limitations and error handling)

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5. Additional helpers for modernization

5.1. Modernization Checker

The "WinCC Unified modernization checker" allows you to verify if the scope of your existing SIMATIC Comfort Panel application can be mirrored in SIMATIC WinCC Unified.

Based on your application the tool provides you a report, that contains information in the following structure:

Introduction

Your result is categorized in 3 sections.

- **Available with new concept** - You can re-engineer your functionality in SIMATIC WinCC Unified. Modernization/Conversion is possible.
- **Available with workaround** - Some approaches of SIMATIC WinCC Comfort/Advanced differs to the new concept of SIMATIC WinCC Unified. Modernization/Conversion is possible by applicative solution.
- **Not available yet** - SIMATIC WinCC Unified currently does not support the functionality.

Manual check
Some functions cannot be analyzed automatically by the tool. Additional manual checks are necessary for comprehensive modernization decisions.

Result of analysis
Your result is categorized into the three sections and points out critical functions which must be considered while switching to Unified.

Overview & Details
The overview reports the number of categorized functions found in your TIA Portal project.
The sub detailed functions are each considered individually and explained in more detail. You will also find information on where the functions are located in your project.

Modernization flow chart
You will be accompanied throughout the entire modernization process. A flowchart helps you to keep to the correct sequence of the project sections to be modernized and only highlights the steps that are relevant to you. As there are dependencies between the individual sections, it is recommended that you adhere to the specified sequence.

Detailed modernization steps and solutions
This section deals with the conceptual differences between WinCC Comfort and WinCC Unified. Practical HowTo videos will help you to implement the technical solutions.

The modernization check is based on a documentation file (PDF export file) of your SIMATIC Comfort Panel in your TIA Portal project.

If you want to evaluate whether your Comfort Panel application is ready to be modernized to WinCC Unified Comfort Panel, please follow the link below:
https://www.siemens.com/modernization-check

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5.2. Smart Advisor

The Smart Advisor Add-in is a modular tool developed by Siemens to extend the functionality of the TIA Portal (V20) using the TIA Openness interface. The Add-in is designed to support the analysis and optimization of a WinCC Unified project.

The Smart Advisor provides a step-by-step workflow to support engineers in identifying inefficiencies, improving performance, and simplifying maintenance.

Key features:

- Seamless TIA Portal Integration via TIA Openness interface
- Modular 4-step approach:
  1. Content Collection
  2. Analysis
  3. Optimization
  4. Removal
- Works on entire HMI projects or individual screens
- Generates detailed reports (.csv, .js) for traceability
- Supports script cleanup, UI element replacement, and system limit checks

Installation Requirements:

- TIA Portal V20
- Install Node.js and JSCodeshift for script optimization
- Add the Windows user to the Siemens TIA Openness group.
- Place the .addin file into the AddIns folder of the TIA Portal installation.

Limitations

- Faceplate contents are not optimized.
- Grouped objects may lose their position after optimization.
- Optimized objects are always added to the first layer (Layer_0).
- Some system functions are replaced with equivalent scripts.
- Only certain fonts are supported (Arial, TimesNewRoman, Simsun, SiemensSans).

Benefits:

- Saves time by automating routine checks and code improvements
- Improves performance and maintainability of HMI projects
- Provides transparent documentation of project quality
- Reduces risk of system overload by flagging limit violations
- Enables safe refactoring with optional rollback to original state

The Smart Advisor can be downloaded via Siemens Industry Online Support (SIOS): Smart Advisor - TIA Opennesss Add-in - ID: 109988595 - Industry Support Siemens

5.3. Guide for Migrating to WinCC Unified HMI Devices

Learn about the differences between 2nd Gen Basic Panel/Comfort Panel/Runtime Advanced and Unified Basic Panel/Unified Comfort Panel/Unified PC Runtime. In addition, you will learn to what extent and how you can implement existing configuration in WinCC Unified.

WinCC Unified PC Runtime succeeds WinCC Runtime Advanced. Unified Comfort Panels follow previous Comfort Panels and Unified Basic Panels follow previous second-generation Basic Panels. In addition to the new hardware, there are also numerous innovations in the area of engineering.

This application example presents and describes essential points in order to provide a precise overview of the similarities and differences between the two generations of Operator Panel.

Among other things, the document was divided into four individual documents.

1. General information about WinCC Unified and the migration
2. Comparison between Basic Panels (2nd Gen.) and Unified Basic Panels
3. Comparison between Comfort Panels and Unified Comfort Panels
4. Detailed step-by-step description of the migration to a WinCC Unified Panel

The migration guide can be downloaded from Siemens Industry Online Support (SIOS): Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens

5.4. Engineering guideline for WinCC Unified

Unified Panel and PC-RT devices offer the latest technologies such as HTML5, JavaScript and scalable vector graphics (SVGs). In order to use them efficiently, you should follow some engineering recommendations.

The presented implementations can be helpful if you start a new project but also if you have an existing project already there.

- **Creating a new project:** When creating a new project, it is recommended to first work through the engineering guideline. It will provide the knowledge to use the resources of the devices the most efficient way.
- **Existing Unified HMI project:** But also, if there is already an existing Unified HMI project, this guideline contributes to further improve the implementation. There is also an explicit section on how to analyze a project to find the areas that can be improved easily.

You can download the Engineering Guideline from Siemens Industry Online Support (SIOS): Engineering guideline for WinCC Unified - ID: 109827603 - Industry Support Siemens

NOTE For an even easier way to optimize your project, use the **Smart Advisor**. This is a semi-automated application of the Engineering Guidelines and reduces your optimization effort.

6. Appendix

6.1. Service and Support

SiePortal

The integrated platform for product selection, purchasing and support - and connection of Industry Mall and Online Support. The new start page replaces the previous start pages of the Industry Mall and the Online Support Portal (SIOS) and combines them.

- Products & Services
  Under Products & Services you will find all our offers that were previously available in the Mall catalog.
- Support
  In the Support section you will find all the information you need to solve technical problems with our products.
- mySiePortal
  mySiePortal is your personal area that displays functions such as shopping cart management or the order overview. You will only see the full range of functions here once you have logged in.

You can access the SiePortal via this address:
sieportal.siemens.com

Technical Support

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers
– ranging from basic support to individual support contracts. Please send queries to Technical Support via Web form:
www.siemens.com/industry/supportrequest

SITRAIN – Digital Industry Academy

We support you with our globally available training courses for industry with practical experience, innovative learning methods and a concept thats tailored to the customers specific needs.

For more information on our offered trainings and courses, as well as their locations and dates, refer to our web page:
www.siemens.com/sitrain

Industry Online Support App

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app.

The app is available for iOS and Android:





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6.2. Links and literature

Nr.	Thema
\1\	Siemens website for modernization - Modernize now SIMATIC WinCC Unified: Getting Started - Siemens Global
\2\	WinCC Unified Modernization Checker WinCC Unified modernization checker - ID: 109820536 - Industry Support Siemens
\3\	Smart Advisor Smart Advisor - TIA Opennesss Add-in - ID: 109988595 - Industry Support Siemens
\4\	Guide for Migrating to WinCC Unified HMI Devices Guide for Migrating to WinCC Unified HMI Devices - ID: 109768002 - Industry Support Siemens
\5\	Engineering guideline for WinCC Unified Engineering guideline for WinCC Unified - ID: 109827603 - Industry Support Siemens

6.3. Change documentation

Version	Date	Modification
V1.0.0.0	02/2020	First edition
V1.1.0.0	07/2020	• Description adapted to Data2Unified version V1.1.0.0 • Support of further TIA project elements • Bug fixes based on the feedback
V1.2.0.0	12/2020	• Description adapted to Data2Unified version V1.2.0.0 • Image objects "Elements" are supported • Animations on "base objects" and "elements" are supported • Validity of the certificate has been updated
V1.3.0.0	06/2021	• Description adapted to Data2Unified version V1.3.0.0 • TIA Portal V16 and V17 is supported • Filter for log area available in add-in user interface • Minor UI improvements • Minor bug fixes based on feedback
V2.0.0.0	12/2021	• Description adapted to Data2Unified version V2.0.0.0 • "Archives" are supported • Selected system functions are supported • Minor bug fixes (e.g. conversion of variable limits) based on feedback
V2.1.0.0	07/2022	• Description adapted to Data2Unified version V2.1.0.0 • Support for 28 additional system functions • Minor bug fixes based on feedback • Minor UI improvements

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Version	Date	Modification
V2.2.0.0	12/2022	• Description adapted to Data2Unified version V2.2.0.0 • Support of system functions on images and popup images • Support of global script calls on images and image objects • Support of text lists and parameter fields in image objects • Support of additional system functions "ShowLoginDialog" • Chapter on VB scripts and manual customizations added • Minor bug fixes based on feedback
V3.0.0.0	04/2023	• Description adapted to Data2Unified Version V3.0.0.0 • Conversion of symbolic and graphical EA fields incl. configured animations and events • Conversion of grouped image objects (to individual objects) • Changed the conversion of animations in the WinCC Unified system dialogs instead of JavaScript • Conversion of system and user-specific folders in the project navigation (e.g. folders of variable tables or images) • Conversion of the "ActivatePictureWithNumber" system functions • Minor bug fixes based on feedback
V3.1.0.0	10/2023	• Description adapted to Data2Unified version V3.1.0.0 • Chapter on library elements, resolutions, user roles and cycles added • Conversion of screen module types and their screen objects • Conversion of screen module instances • Conversion of system functions with regard to recipes • Dialog for replacing special characters • Minor bug fixes based on feedback
V3.2.0.0	11/2023	• Description adapted to Data2Unified Version V3.2.0.0 • Implementation and conversion of Basic Panels to Unified Basic Panels • Conversion of additional system functions - ActivateCleanScreen & ShowLogonDialog • Minor bug fixes based on feedback
V4.0.0.0	04/2024	• Description adapted to Data2Unified version V4.0 • Conversion of the "Properties" screen module interface • Conversion of text lists (without formatted text) • Conversion of additional system functions - ShowPopupScreenSizable & ExecuteToolbarButton • Minor bug fixes based on feedback • Adjustments to the user interface

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Version	Date	Modification
V4.1.0.0	09/2024	• Conversion of individual image modules with 2 clicks • Improved speed and performance of the add-in • Categorization of the log file according to the relevance of the entries • Improving the quality of the add-in by solving various bugs
V5.0	08/2025	• Revision of the documentation in a new layout • Description of the new user interface and report • Description of the new features and options • Adaption of the handling of special characters
V5.1	11/2025	• Revision of system function approach • Adding chapter about PLC-UDT linkage and limitation • General bug fixing and improvement of quality
V6.3	02/2026	• Information about adapting Data2Unified compatibility to TIA Portal V21 • Conversion of system functions “GetPLCMode” & “SetPLCMode” with system tags in WinCC Unified • Information about limitation with system function “ChangeScreen” • Deleting limitations of conversion of polylines & polygons • Adapting chapter about connections: No naming restrictions anymore • Adaption of chapter regarding trigger tags in alarms • Adding download function to HTML-Report
V6.4	04/2026	• New special character approach in user interface • Deleting necessity to manually adapt graphic lists • Adapting system function information • Add Data2Unified checklist

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