

WinCC Unified V17

Flere muligheder = større fleksibilitet

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Dagens værter

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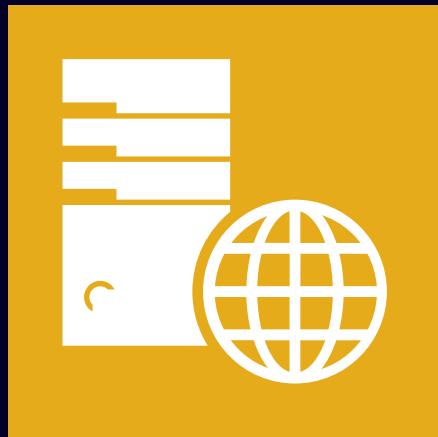


Agenda

- **WinCC Unified System..... Hvad er det nu, det er?**
- Udvalgte nyheder i TIA-portalen WinCC V17
- Faceplates - nu som library object
- View of things
- Nye Web-klienter til WinCC Unified-systemet
- Nyt om brugerstyring (UMC)
- Erfaringer med V16
- Outlook?

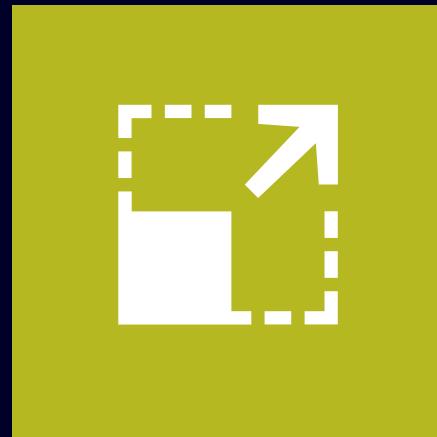
SIMATIC WinCC Unified System

The DNA for the future of visualization



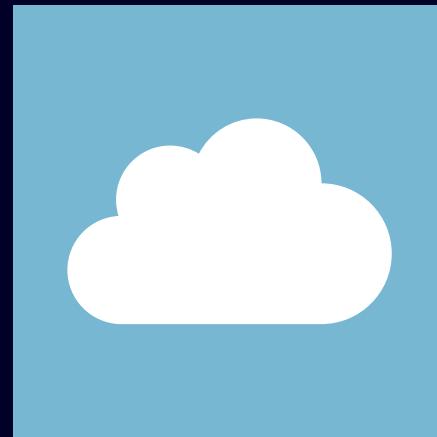
Technology

- Native Web Technology
HTML5, SVG, JavaScript
- Device independent
- Object oriented – HMI



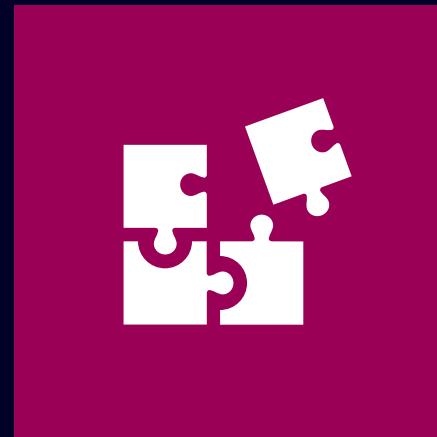
Scalability

- One Engineering
- Unified Comfort Panels
- WinCC Unified PC
- Collaboration



Everywhere

- On Premise
- Unified @Cloud
- Unified @Edge
- MindSphere Apps



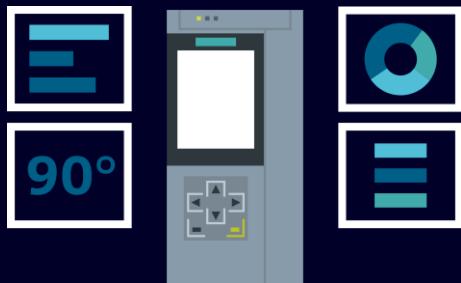
Integration

- Basis for Digitalization
- Plant Intelligence
- Integration Platform for everything north of the PLC
- Openness

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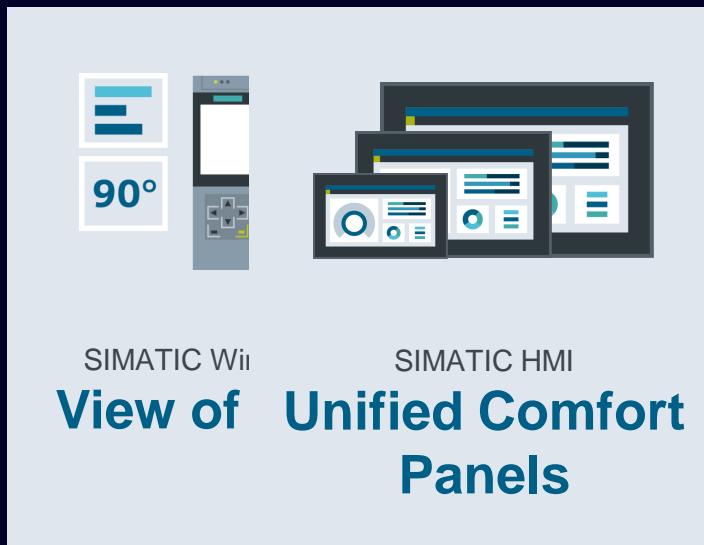
SIMATIC WinCC Unified System

Platforms



Web based visualization for basic use cases

- View of Things – Hosted on the S7-1500 without extra costs
- Graphical editor – no need for programming skills



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SIMATIC WinCC Unified System

Overview – TIA Portal V17

Platform



SIMATIC WinCC Unified
View of Things
S7-1500



SIMATIC HMI
**Unified Comfort
Panels**



SIMATIC WinCC Unified
PC

Engineering



**Engineering
(in TIA Portal)**

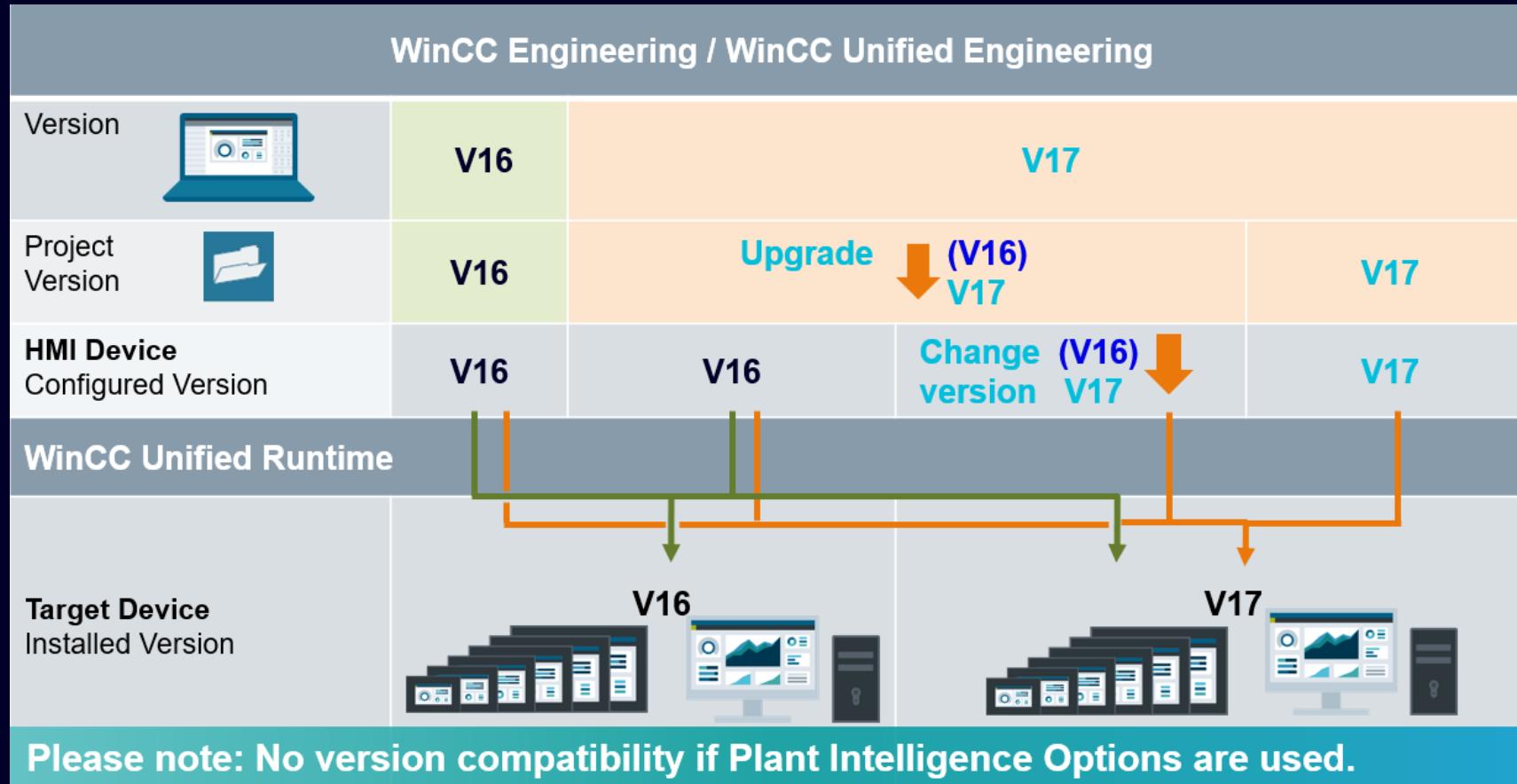
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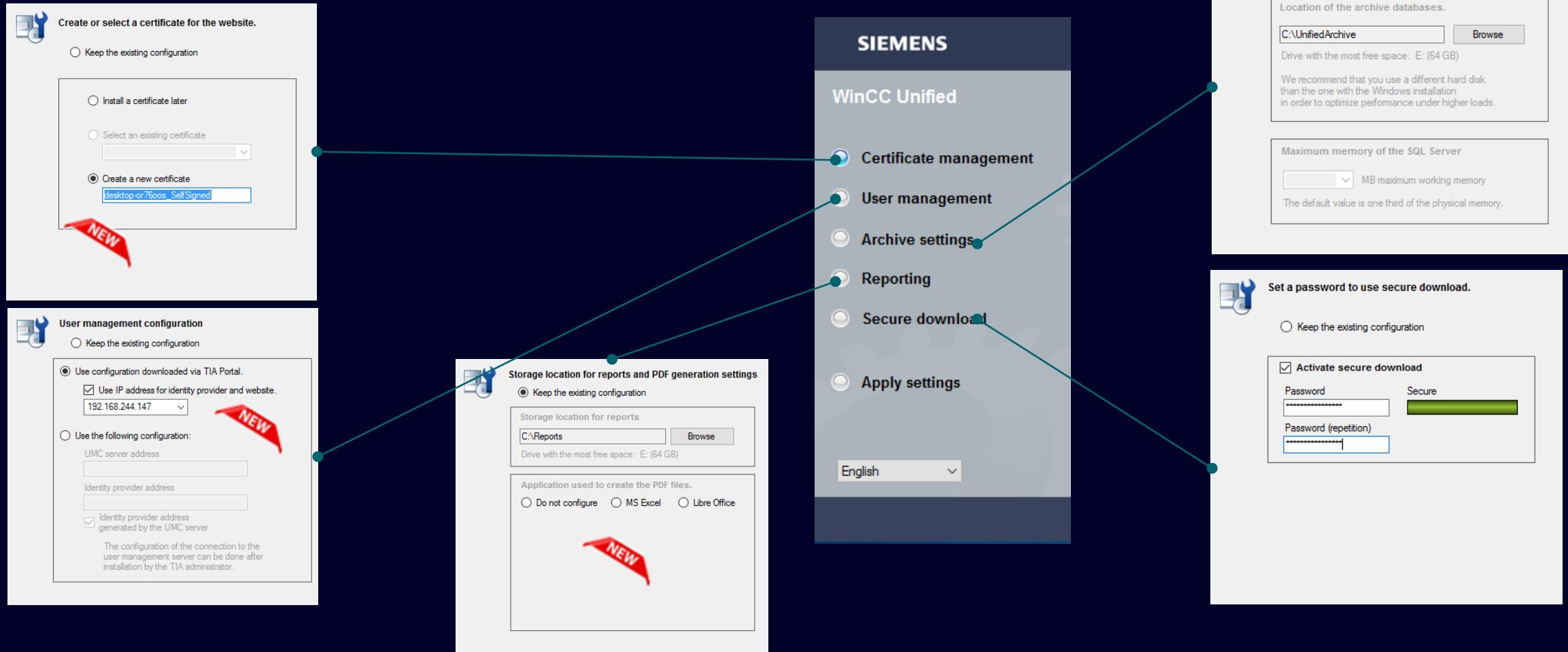
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SIMATIC WinCC Unified

Version compatibility



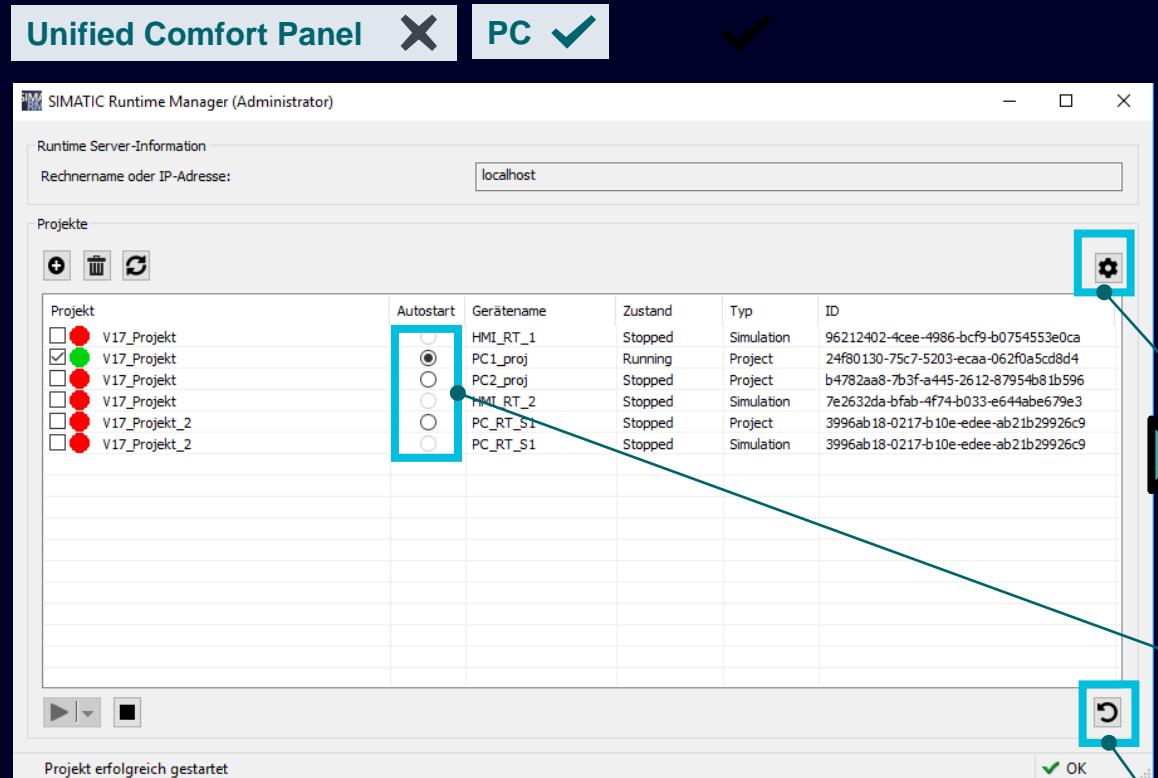
SIMATIC WinCC Unified – Tools Configuration Manager



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SIMATIC WinCC Unified – Tools

SIMATIC Runtime Manager



Several WinCC Unified projects can be downloaded to one PC station.

Manage WinCC Unified projects

- Run, stop or switch projects
Activate / Deactivate Debugging
- Manage 3rd party certificates (e.g. OPC UA Client)

Additional Properties NEW

- Additional settings for Runtime start with auto scale, reset options, settings (debug, certificates,...)

Start a dedicated project (auto start) NEW

- Auto start settings keep marked even if other projects are started, full or delta downloaded

Restore or delete database segments NEW

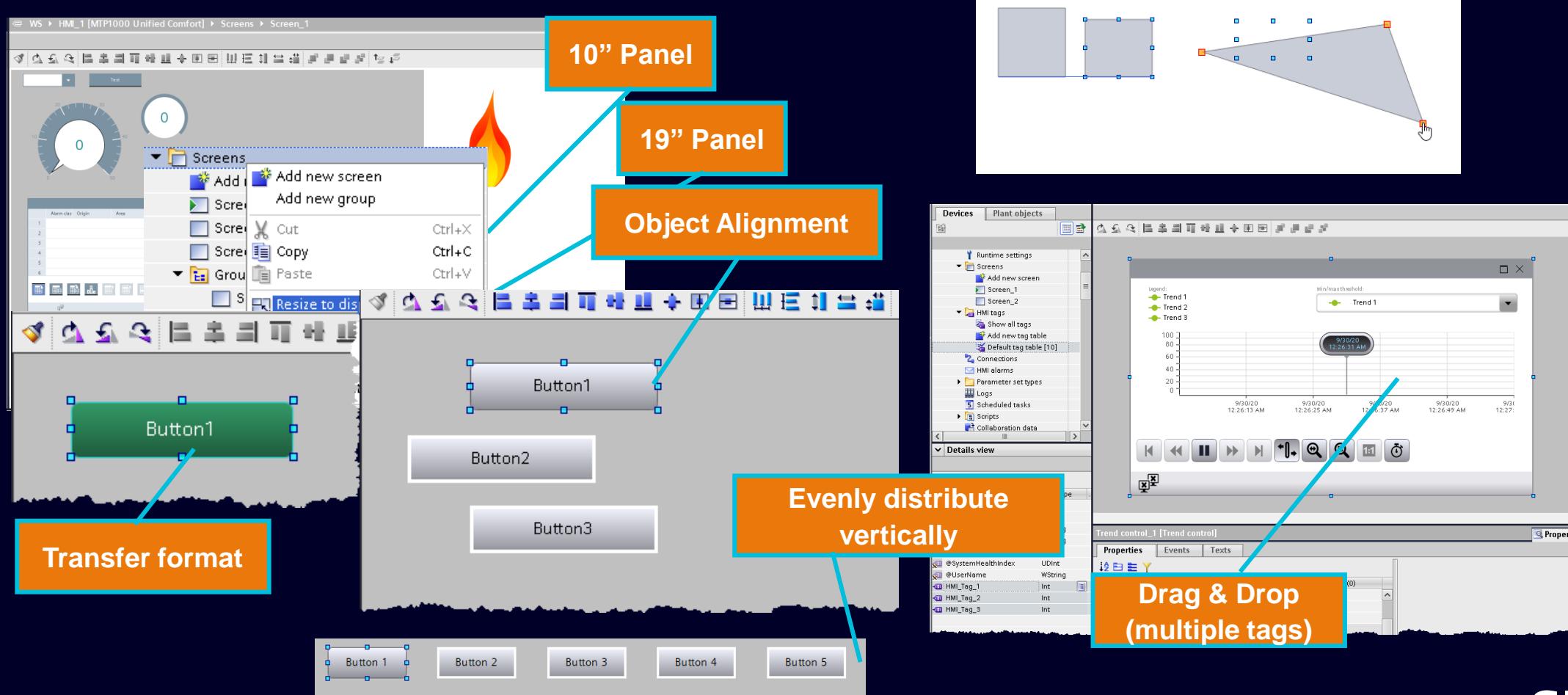
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WinCC Unified V17 – User Interface

Engineering efficiency

Unified Comfort Panel ✓ PC ✓



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WinCC Unified V17 - Engineering efficiency

Extended Animation dialog

The screenshot shows two instances of the WinCC Unified V17 Extended Animation dialog.

Top Dialog:

- Process:** Tag: MyTag, PLC tag: , Address: Int
- Settings:** Use indirect addressing (unchecked), Read-only (checked)
- Type:** Single bit (radio button selected), Value: 4
- Table:** Shows two rows of animation conditions.

Type	Condition	Background color	Flashing	Alternate value	Frequency
0	0	255, 0, 0	Yes	255, 255, 0	Medium
1	1	0, 255, 0	No	255, 0, 0	Medium

A blue callout box labeled "enable flashing if needed" points to the "Flashing" column of the table.

Bottom Dialog:

- Process:** Tag: HMI_Tag_1, PLC tag: , Address: Int
- Settings:** Use indirect addressing (unchecked), Read-only (checked)
- Type:** Range (radio button selected), Value: 0
- Table:** Shows three rows of animation conditions.

Type	Condition	Background color	Flashing	Alternate value	Frequency
Range	0 - 2	153, 204, 0	No	255, 0, 0	Medium
Range	3 - 5	255, 204, 0	No	255, 0, 0	Medium
Range	6 - 10	255, 0, 0	No	255, 0, 0	Medium

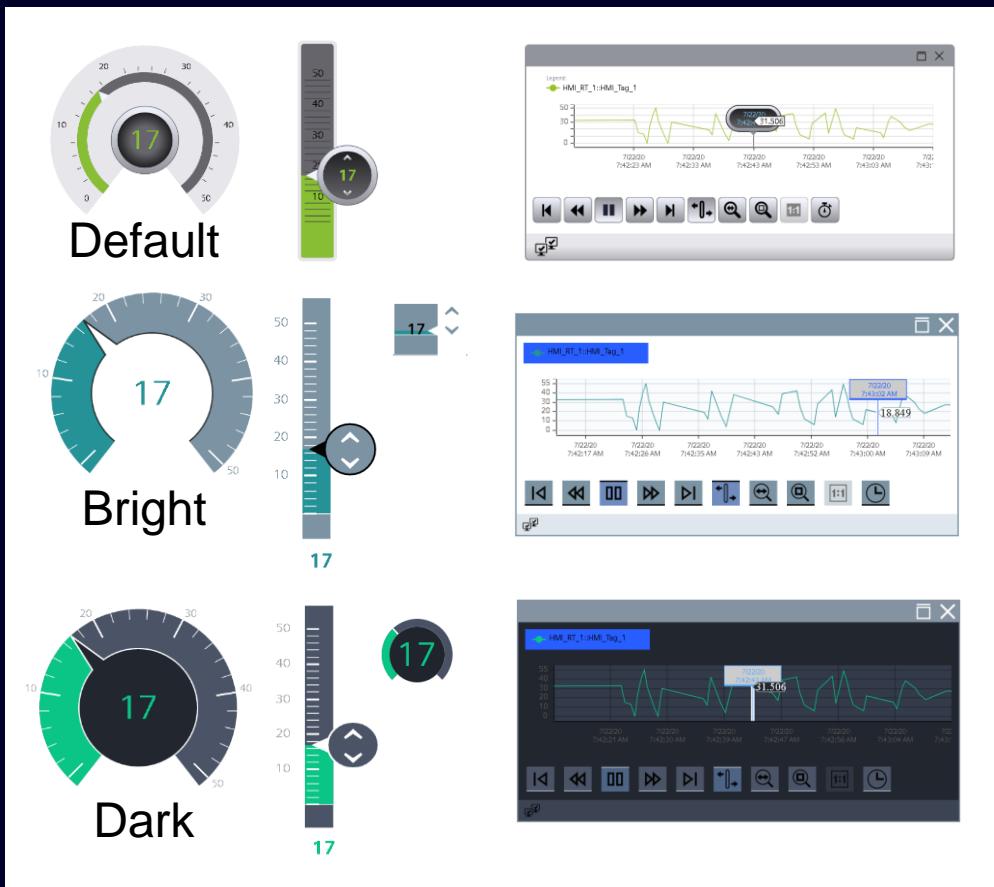
A blue callout box labeled "select a bit" points to the "Value" field in the Type section of the bottom dialog.

Copy & Paste conditions of animation dialog for further screen objects

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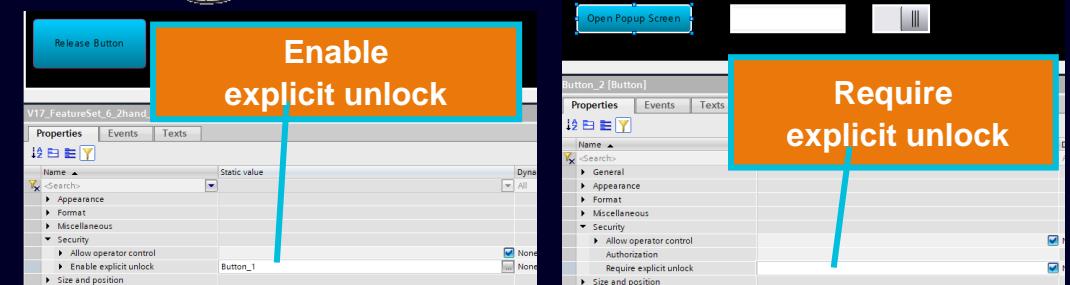
WinCC Unified V17 - User Interface

Optimized usability using Styles



Unified Comfort Panel ✓ PC ✓

Multitouch - 2 Hand Operation



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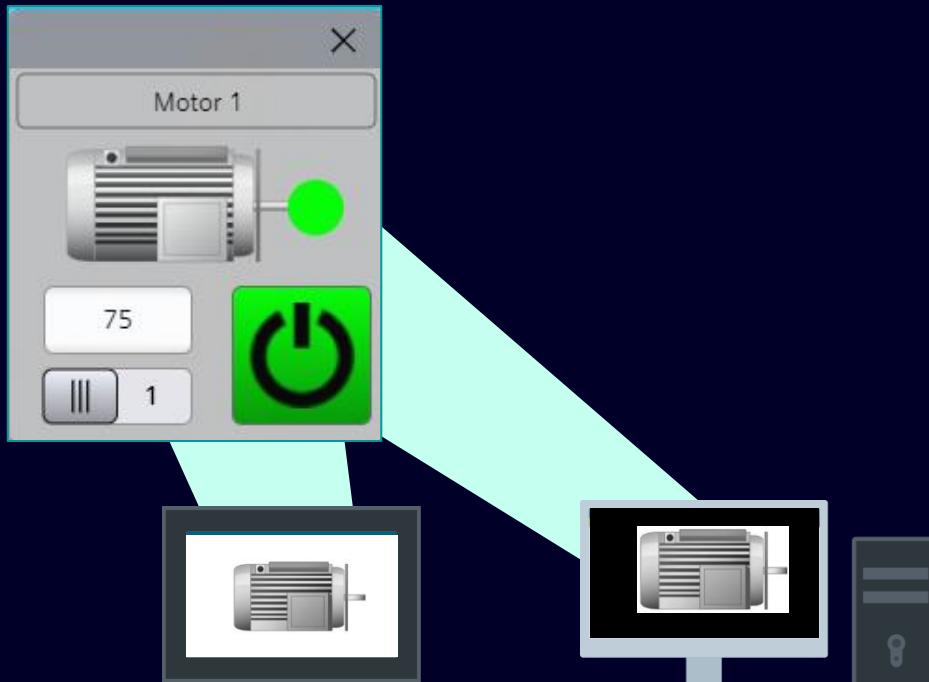
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WinCC Unified V17 – User Interface

Unified Faceplates as enclosed graphical objects

Unified Comfort Panel ✓ PC ✓



Create individual library templates (master copies) with dynamic process connection

Use the same faceplates

for panel and PC systems using a faceplate container control

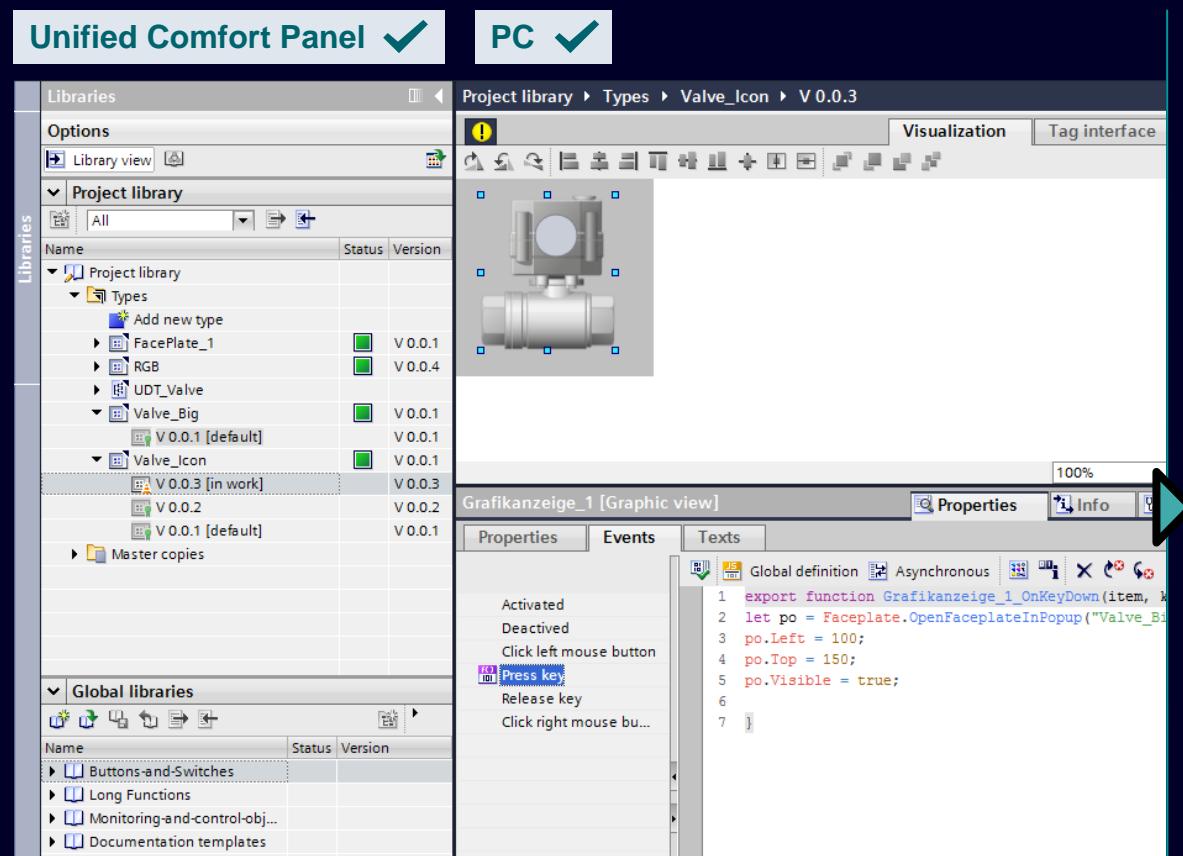
Standardized operation elements for flexible reuse in all Unified devices and projects

Efficient operation window (popup)
for assets e.g., motor, pump

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WinCC Unified V17 - Faceplates

Engineering in TIA Portal Library



Conversion from Common Data: Unified V16 Faceplates will be moved and converted to TIA Portal Library automatically. Add PLC UDTs as type to the library in V16 to reuse them on the interface,

Types in TIA Portal Library

- Faceplate Types to use as instances or popups
- Instances and popups get a reference to a type and specific version of the type
- Graphics Types to use in Faceplates or Screens

Versioning

- Unified Faceplates are handled like simple type versions
- Instanced can be rewired to a higher or lower version as well as to other types
- Different versions of one type can be used in parallel
- Definition of a „default version“ to be used

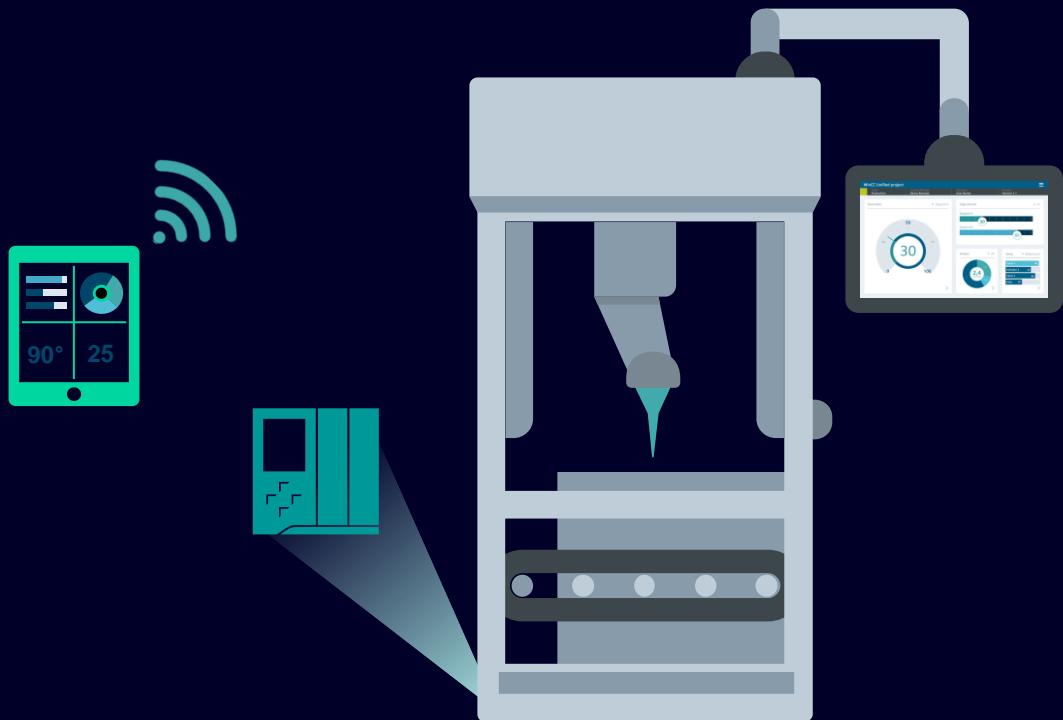
| New V17 Faceplate functions:

- Versioning in the library is now supported
- Graphic list now works in Faceplates
- UDT in UDT now works in Faceplates
- Close the Faceplate instance from the "inside" of the Faceplate type
- Rotation of faceplates and Rotation + Rotation Point can be dynamized via Tag or Script

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Basic visualization for maintenance and service without the need for programming



HMI Panel

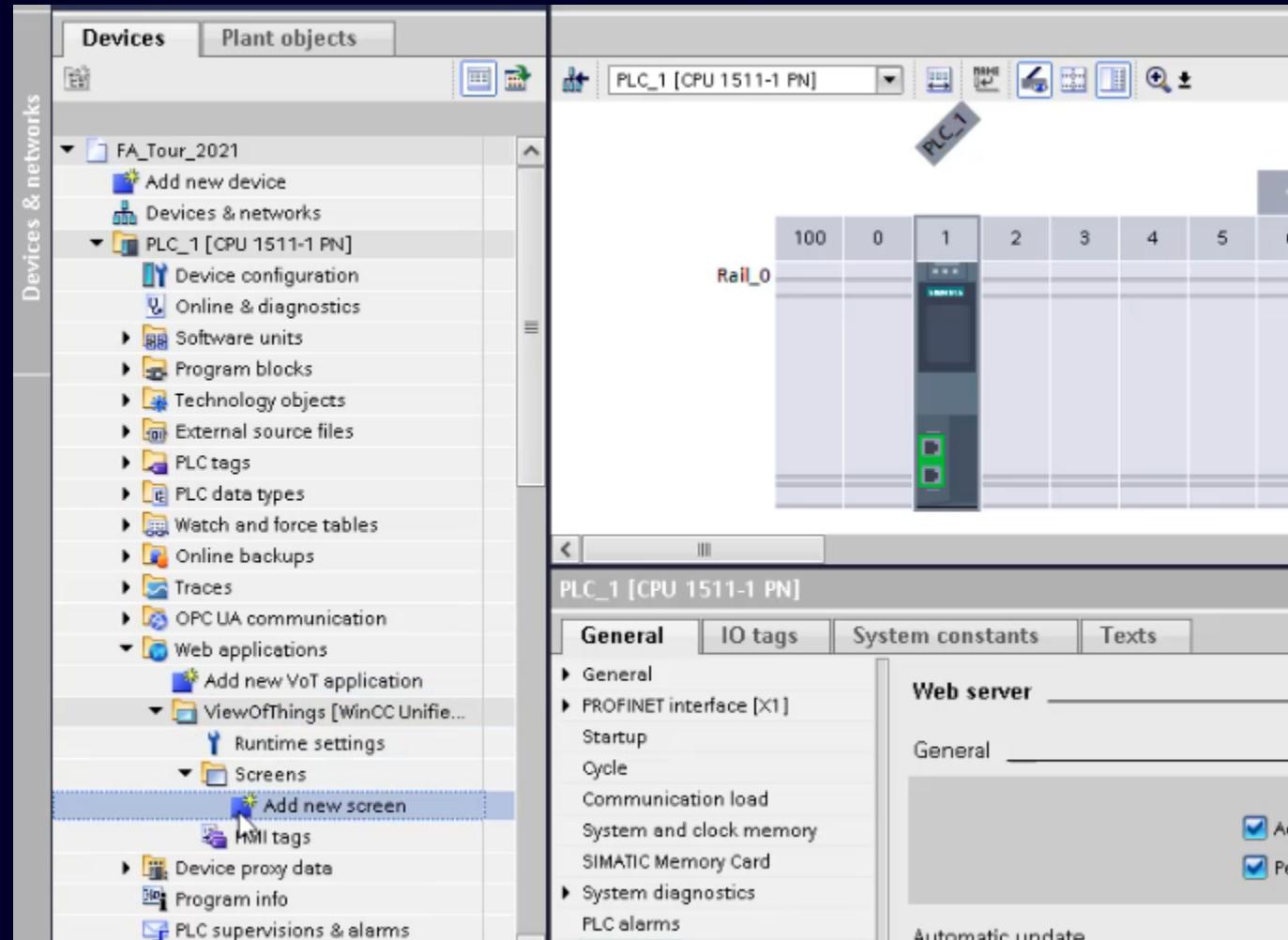
Regular visualization for the operation of the machine by the end user. Includes everything that is required for 24/7 operation (e.g. Alarming and Archiving).

View of Things (VoT)

Allows to implement a basic visualization (e.g. for maintenance and service use cases) that is completely separated from the end user visualization.

WinCC Unified View of Things – V17

Functional overview



Basic objects & Elements
(e.g. I/O field, button, gauge)

Graphics (incl. Dynamic SVG) as well as Screen Windows to build screen architecture

Basic Scripting functionality with JavaScript in screens

User Management with the S7-1500 Webserver

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SIMATIC WinCC Unified View of Things (VoT) Summary

View of Things follows configuration approach –
no need for programming skills

Comfortable editor with drag & drop functionality for visual
configuration of your screens

View of Things is based on WinCC Unified Technology –
Screens can also be used for Panel & PC visualization

View of Things only requires an Engineering license for
WinCC (TIA Portal)



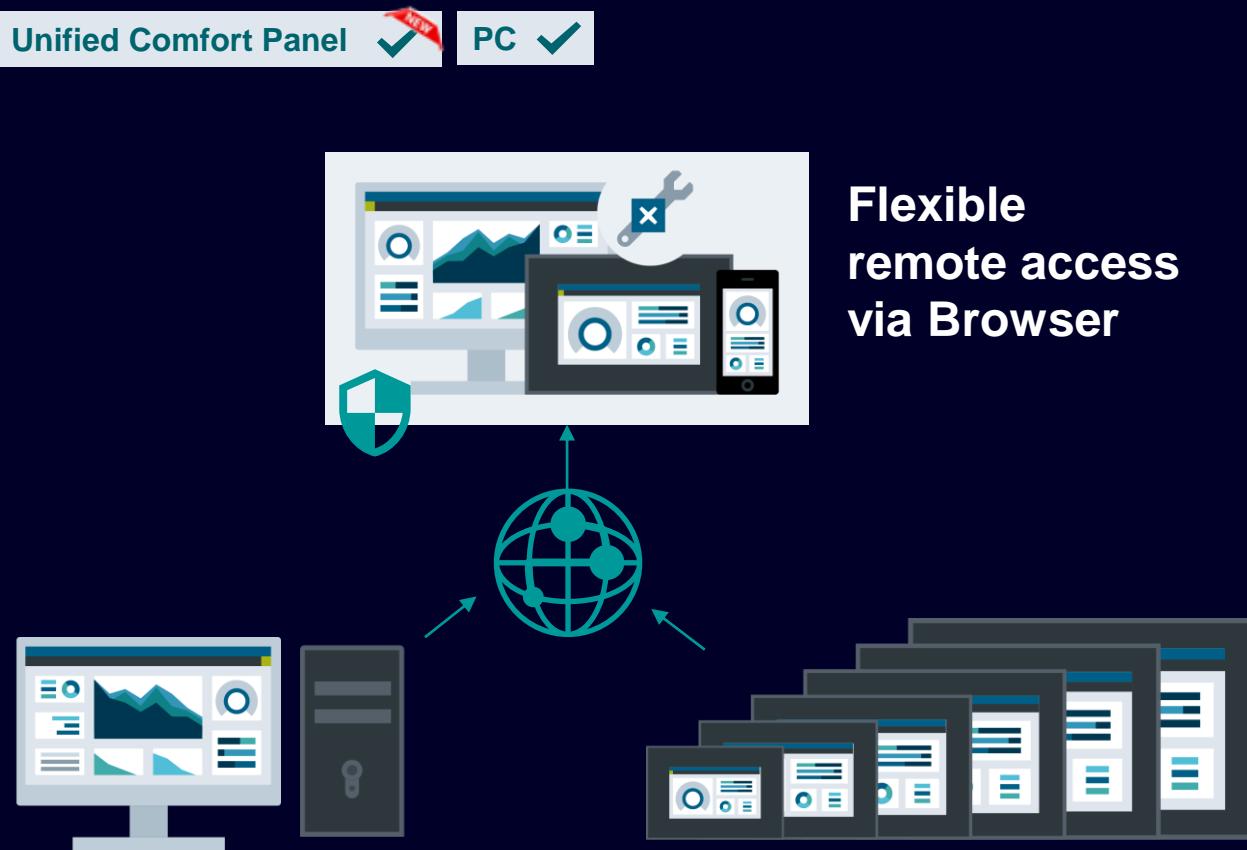
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WinCC Unified V17 – Clients

Flexible web-based, remote Monitoring and Operation



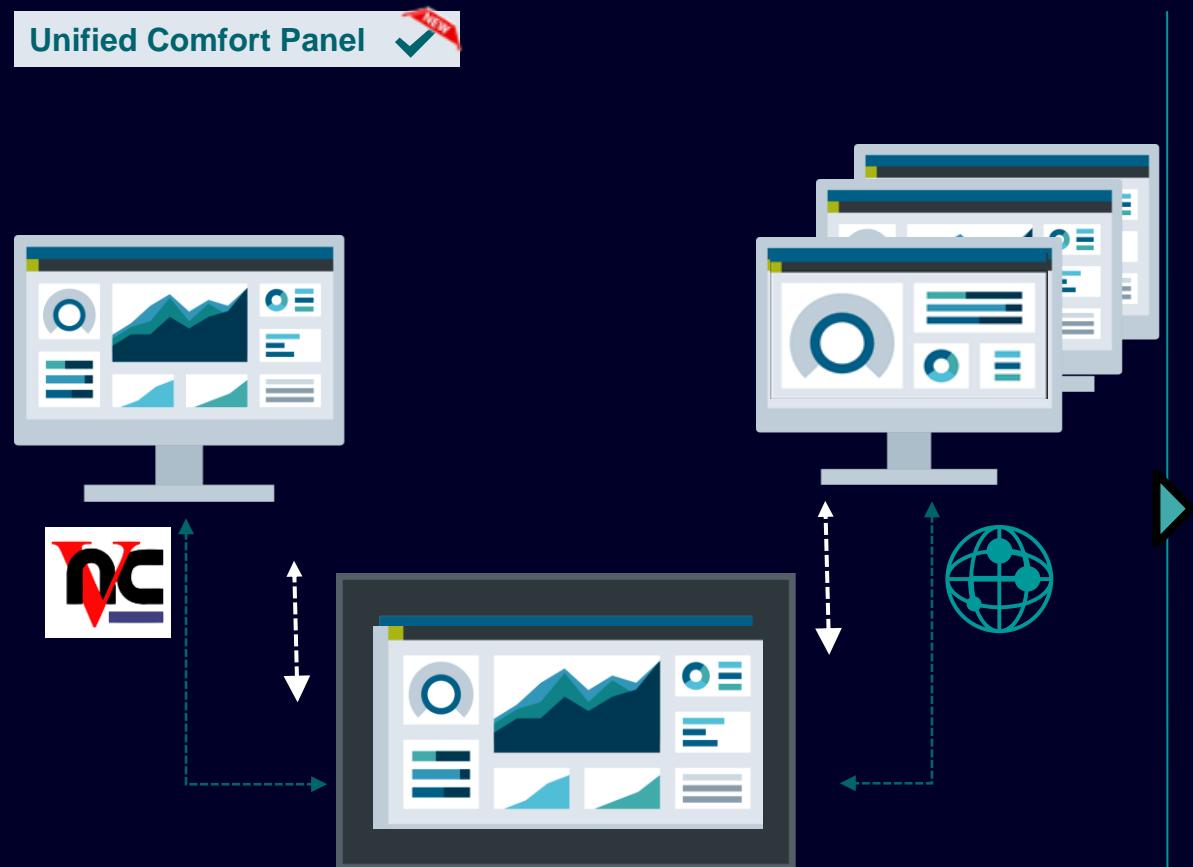
Flexible
remote access
via Browser

Clients for flexible remote access

- Simultaneous remote access offers parallel operation of many users
- Use **state-of-the-art web** to access the visualization
- **“Zero Installation” Clients** via state-of-the-art web browsers – **no need to install separate apps or plug-ins**
- **Configurable access control** via user management
- **Secure communication using web standards** ([https](https://), SSL, certificates,...)

HMI Unified Comfort Panels

Remote Control



Asynchronous access of up to 3 clients
for independent operation
(simultaneous access is licensed)

Remote access via Web Browser

- One Client “Operate” included

Synchronous access via app (VNC)
For parallel operation
(all users see the same screen)

SIMATIC HMI Unified Comfort Panels

Remote control

Synchronous Access
via app (VNC)



Remote
control



Asynchronous Access
via browser (web-client)



WinCC Unified V17 – Unified PC systems

Remote Control

PC ✓



Client "Operate"

enables remote operation according to assigned user role

Clients "Monitor" NEW

enables remote operation in view-only mode

Asynchronous access of numerous users
(simultaneous access is licensed)

Windows 10 Server is mandatory
for more than 5 Clients !

Every WinCC Unified PC Runtime system includes:

- The local visualization Client (installed or via browser)
- **ONE “Operate” Client**
- **ONE “Monitor” Client**

The maximum number of clients can be extended (optional).

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WinCC Unified V17 – User Administration

Integrated user management and access control

Unified Comfort Panel ✓ PC ✓



Local user management and access control (UMAC) using functional rights and definition of users and password policies during engineering

Protection against unauthorized access of single objects or entire production units

Define user roles and rights to your demand for privacy and integrity in terms of authentication and authorization

Add, remove users, assign roles and change passwords during runtime

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WinCC Unified V17 User Defined Function Rights

V16

Roles				
Name	Description	Maximum sess...	Comment	U...
HMI Administrator	System-defined role "HMI Adminis...	30	Min	
HMI Operator	System-defined role "HMI Operat...	30	Min	
HMI Monitor	System-defined role "HMI Monitor"	30	Min	
NET Remote Access	System-defined role "NET Remote..	30	Min	
NET Administrator Radius	System-defined role "NET Adminis...	30	Min	
NET Radius	System-defined role "NET Radius"	30	Min	
Role	User-defined role	30	Min	
Role_1	User-defined role	30	Min	
<Add new role>				

Function rights ...

Function rights	
R	Runtime rights
W	WinCC Unified Co...
<input type="checkbox"/>	Control panel access
<input type="checkbox"/>	Remote access
<input type="checkbox"/>	Monitor
<input type="checkbox"/>	Operate
<input checked="" type="checkbox"/>	Right01
<input checked="" type="checkbox"/>	Right02
<input type="checkbox"/>	Right03

default rights in V16

V17

Roles				
Name	Description	Maximum sess...	Comment	U...
HMI Administrator	System-defined role "HMI Adminis...	30	Min	User Adm...
HMI Operator	System-defined role "HMI Operat...	30	Min	Web Acc...
HMI Monitor	System-defined role "HMI Monitor"	30	Min	Web Acc...
HMI Monitor Client	System-defined role "HMI Monitor ...	30	Min	Unified C...
Role	User-defined role	30	Min	
Role_1	User-defined role	30	Min	
NET Radius	User-defined role	30	Min	The user...
<Add new role>				

Engineering rights Runtime rights

Function rights c...	
Function rights	
R	Runtime rights
W	WinCC Unified Co...
<input type="checkbox"/>	Operate
<input type="checkbox"/>	User administration
<input type="checkbox"/>	Remote access - Monitoring only
<input type="checkbox"/>	Openness Runtime - read and wri...
<input type="checkbox"/>	OPC-UA - read and write access
<input type="checkbox"/>	Reset UMC password
<input type="checkbox"/>	Import and export users
<input checked="" type="checkbox"/>	Function_right_01
<input checked="" type="checkbox"/>	Function_right_02
<input type="checkbox"/>	Function_right_03
<input type="checkbox"/>	Function_right_04

Only the used default rights from V16 are transfer to V17

WinCC Unified V17

User Defined Function Rights

The screenshot shows the WinCC Unified V17 software interface for managing roles and function rights.

1. Define your own user rights: An orange callout points to the "User-defined role" row in the "Roles" table, which has been selected. The "Comment" column for this row contains the placeholder "Unified Client - Monitor only, Licen...".

2. Add a new Role: An orange callout points to the "Role" entry in the "Name" column of the "User-defined role" row. Below this, the "User-specific runtime rights" tab is selected in the navigation bar.

3. Select your own right: An orange callout points to the "MyRight" entry in the "Name" column of the "Function rights" table, which has been selected. The "Comment" column for this row contains the text "This is my right".

Roles Table Data:

	Name	Description	Maximum sess...	Comment
1	HMI Administrator	System-defined role "HMI Adminis...	30 Min	User Administration, Remote Acc...
2	HMI Operator	System-defined role "HMI Operat...	30 Min	Web Access, operator
3	HMI Monitor	System-defined role "HMI Monitor"	30 Min	Web Access, monitor
4	HMI Monitor Client	System-defined role "HMI Monitor ...	30 Min	Unified Client - Monitor only, Licen...
5	Role	User-defined role	30 Min	

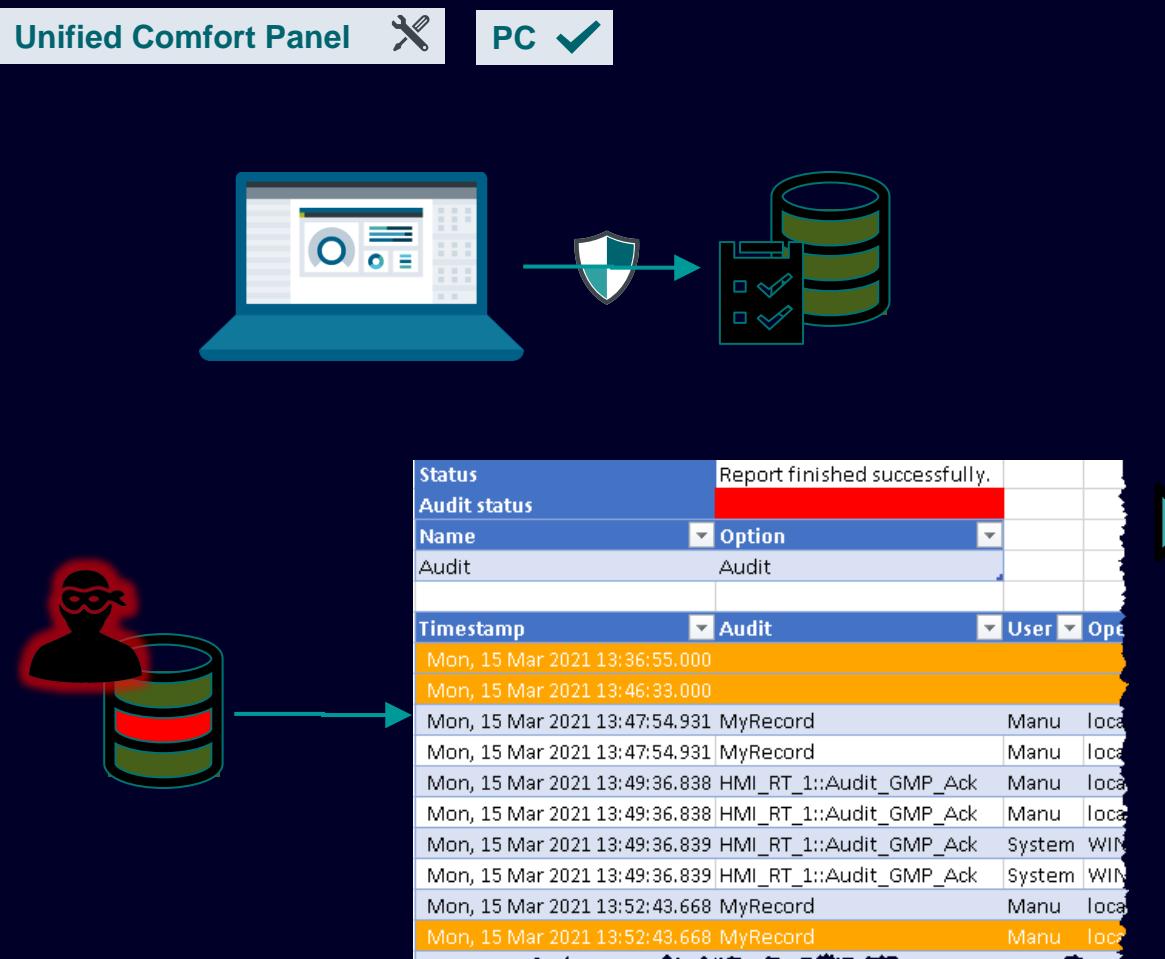
Function rights Table Data:

	Name	Group	Comment
1	*	*	*
2	MyRight	User-specific runtime rights	This is my right

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WinCC Unified V17 – Audit Basis

Detect manipulations of Audit Trails



Secured Communication

- Certificates are used for secured audit entries
- If the certificate expires an Alarm Message is shown. Data will be checked further on (not signed as invalid)

Detect manipulation per default

- Detection manipulation is set per default and cannot be deactivated !
- Added, removed, & manipulated Audit Record (single or bulk data)

Detected manipulation is shown

in WinCC Unified Audit Report



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| Erfaringer

Manglende userbility

HMI Template suite

Sammenlign vejeprojekt UX design

Fra Comfort til Unified Comfort



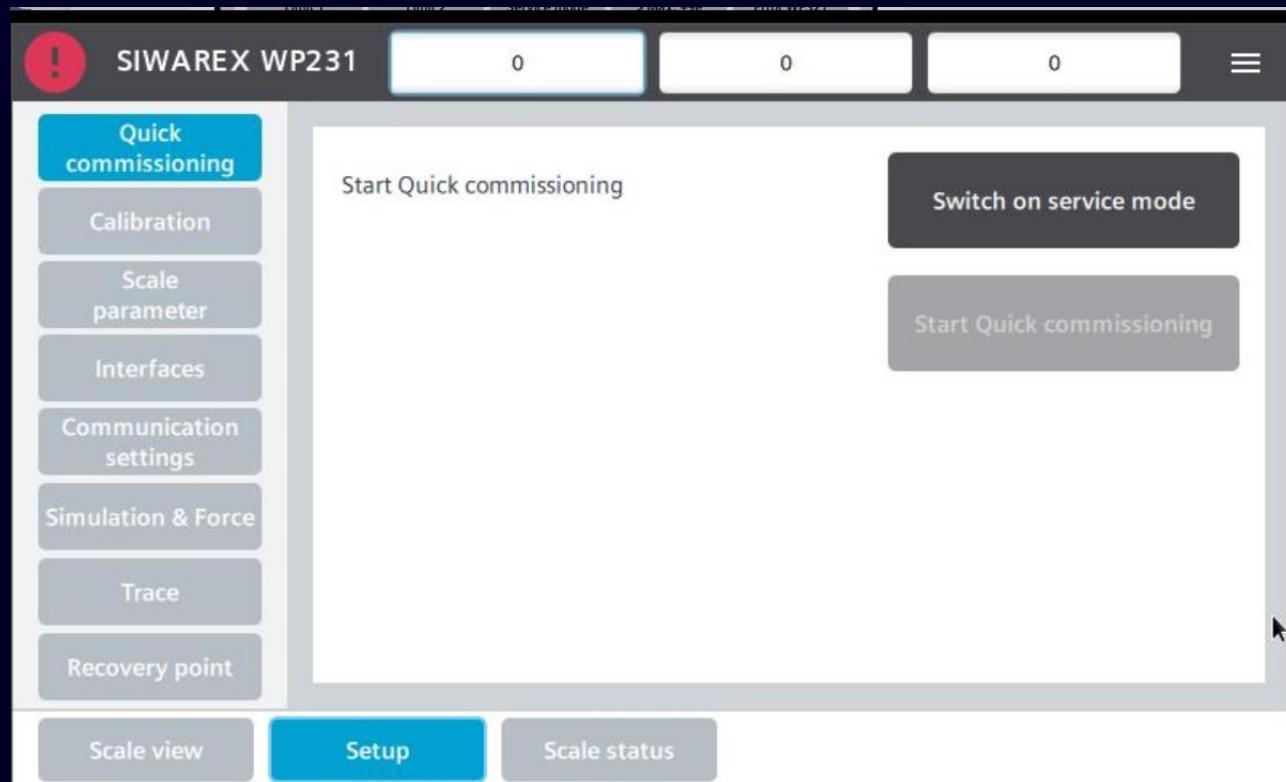
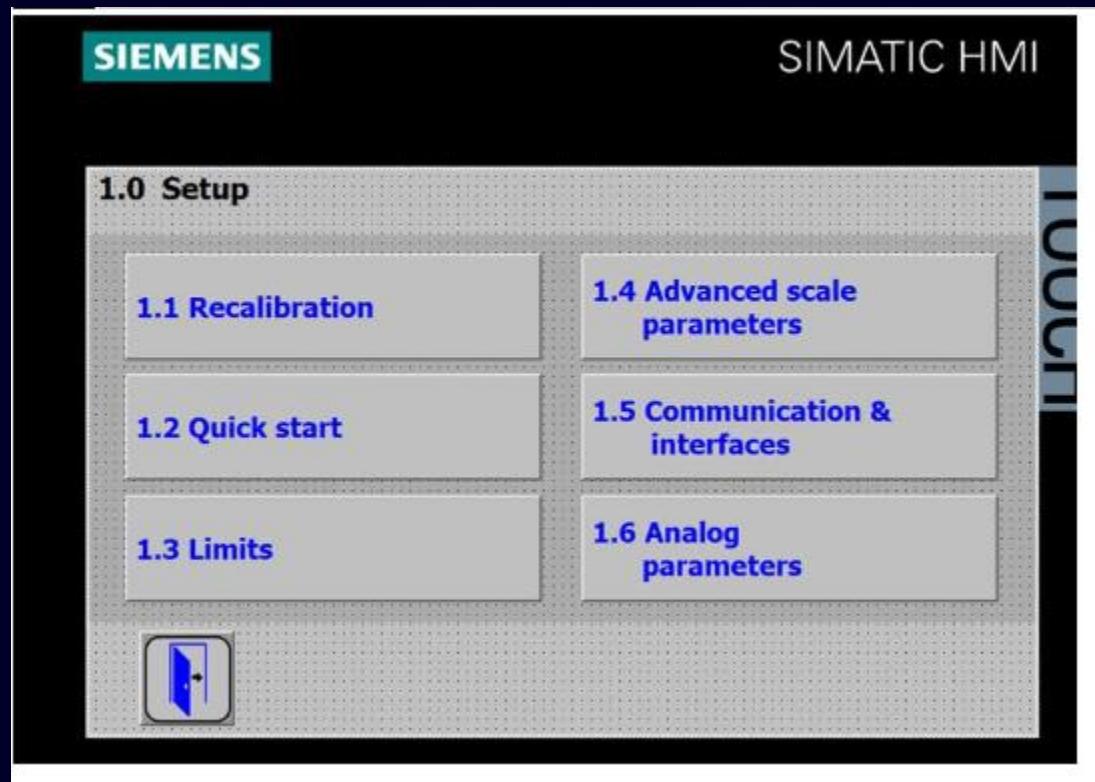
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Startsiden, farver og forklaring



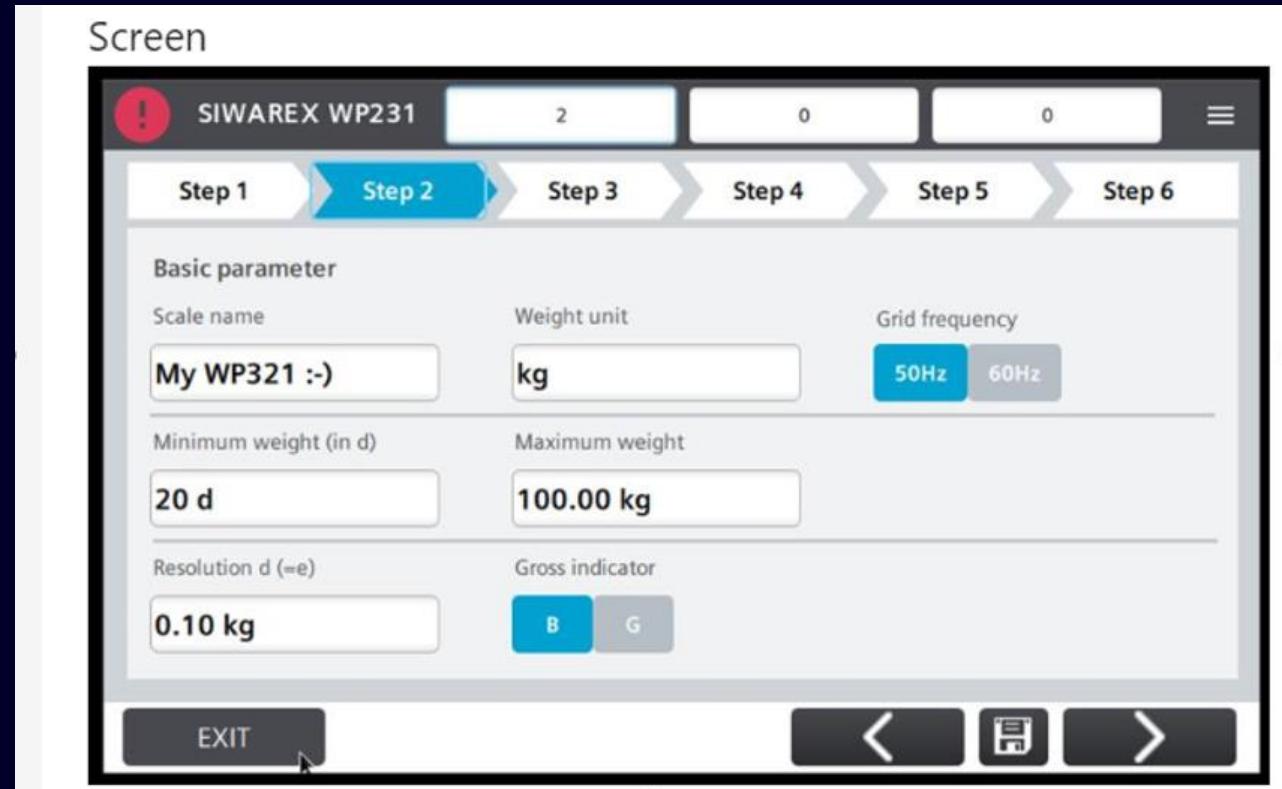
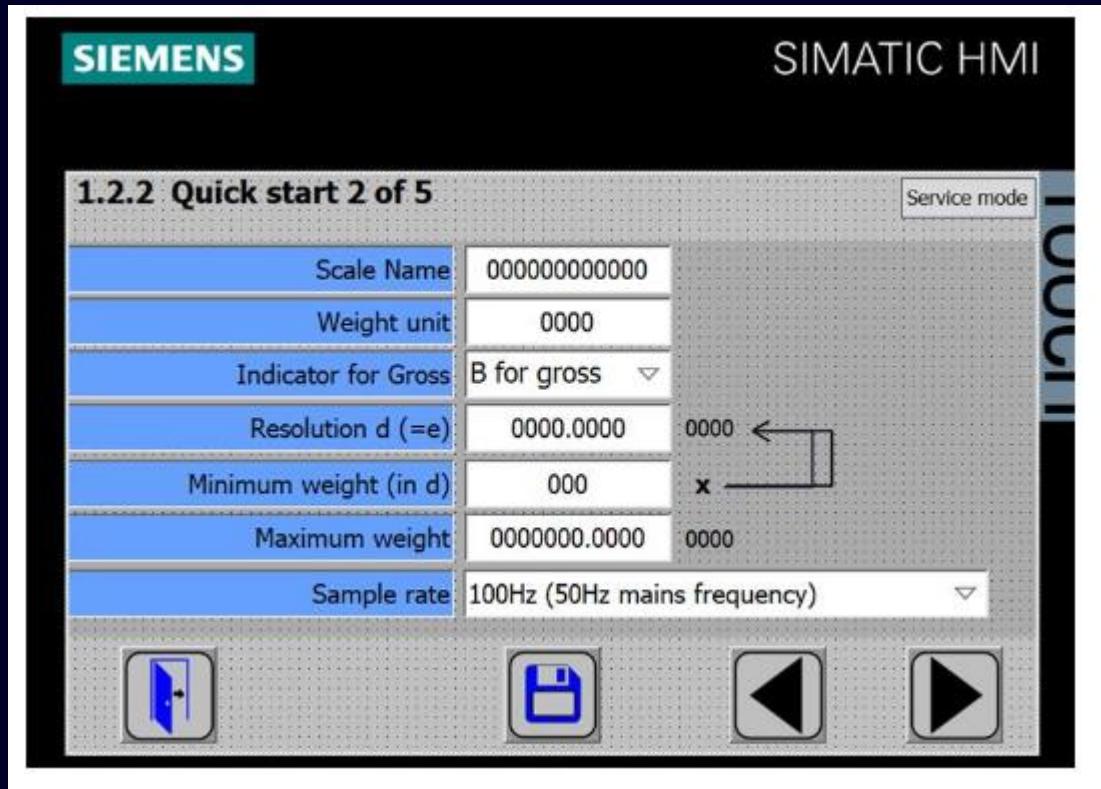
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Menu med mere struktur



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Mere guide i det nye



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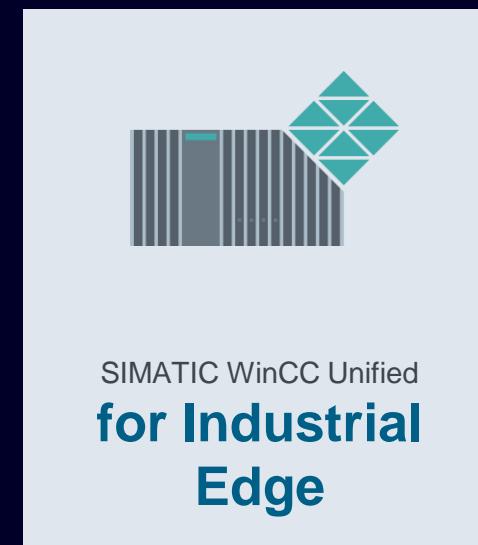
Nye Web clienter til WinCC Unified Comfort Systemet

Nyt om brugerstyring (UMC)

Erfaringer med V16

Outlook ?

SIMATIC WinCC Unified System Platforms



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| Kontakt

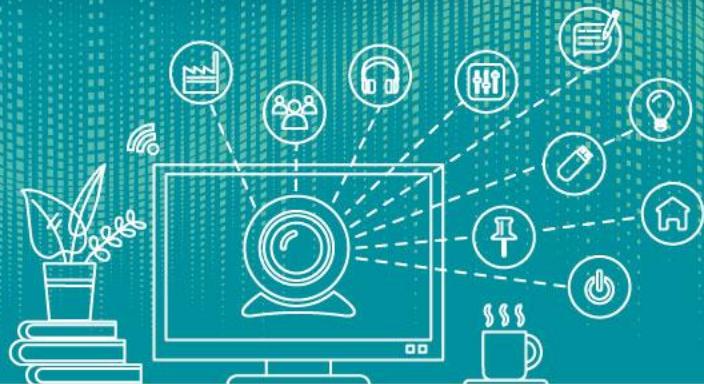
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A photograph of a man and a woman standing in front of a large digital screen. The screen displays various industrial and technological icons, including a 5G signal, a brain, a factory, and other abstract symbols. The man is gesturing with his hands while speaking.

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