WinCC Unified **V18**

Mange nye features…

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Dagens **værter**

Kim Meyer-Jacobsen
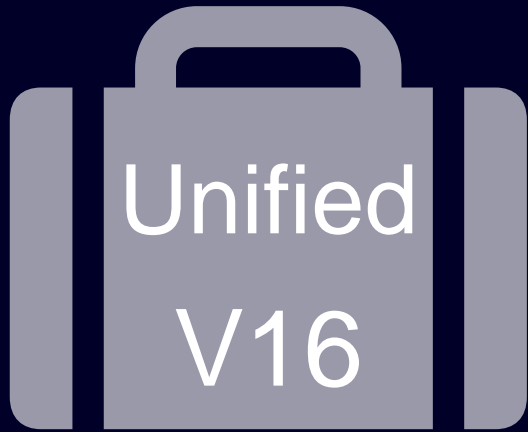Per Møller Hemmingsen

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Agenda

- WinCC Unified V18 x 310 nyheder

Et udpluk

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May 2020

Unified
V16

Based on Web Technologies

Access from everywhere

Edge enabled

**WinCC
Unified PC
(UPC)**

**Unified
Comfort Panel
(UCP)**

JS

HTML

SVG

5

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May 2021

Unified
V17
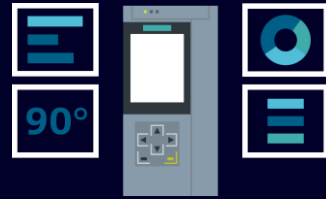
**View of Things
(VoT)**
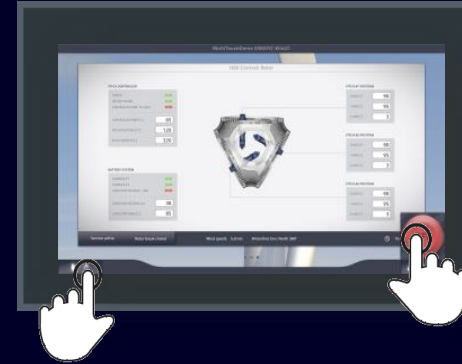
Web client (HTML5)

Multi-touch

Styles

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New features in Unified V18

Unified

V18
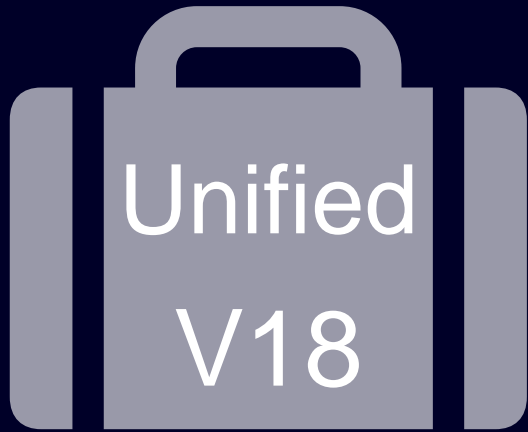
310

Hundreds of extensions and improvements to discover

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Installation
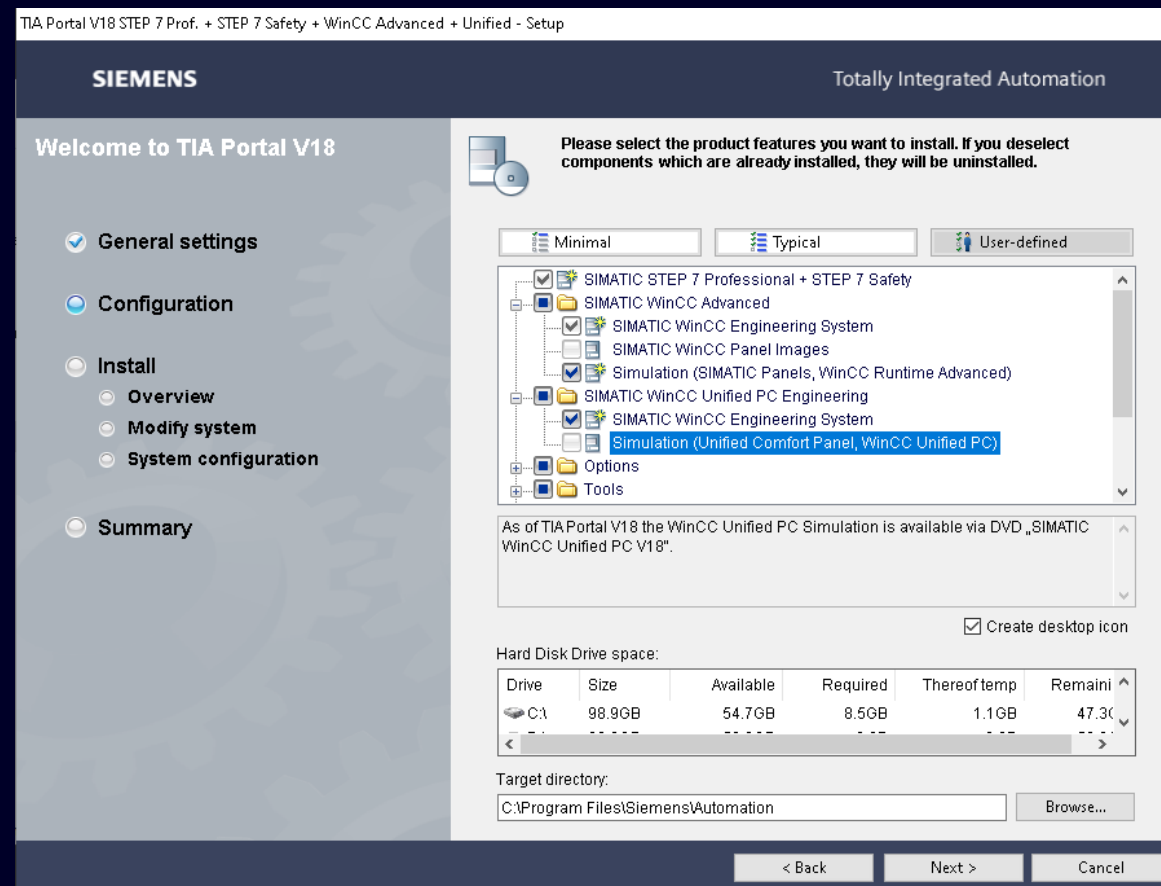
Simulation of Panel and PC projects

WinCC Unified Runtime

⚠ **Error retrieving the license in WinCC Unified Runtime**

Licenses are missing.
The software will run in demo mode.

∧ Hide details

WinCC Unified PC (150) RT - V18.0

Check the Automation License Manager for more information about the licenses.

Close

Starting the Runtime Unified without licenses this pop up will immediately appear

You can close this message box the first time for 1 hour

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TIA Portal V18 Grace Period Offer

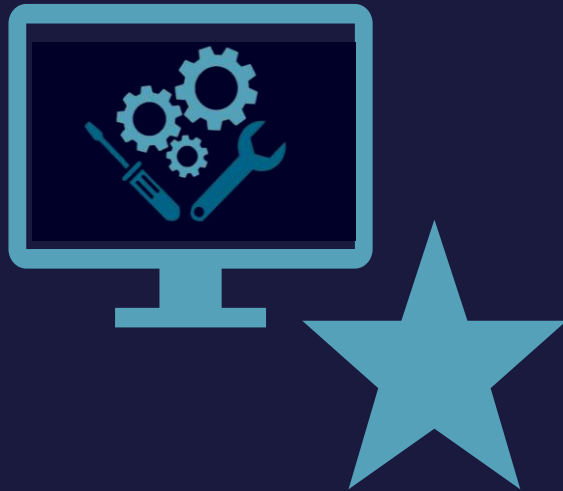SUS <u>Download</u> grace period offer – valid until February 28, 2023

We want to make it as easy as possible for you to switch from TIA Portal V1x to V18.

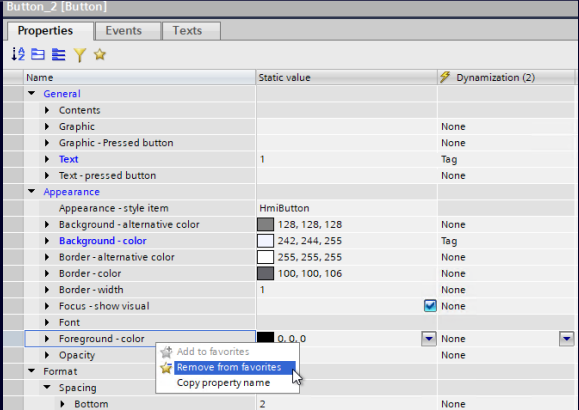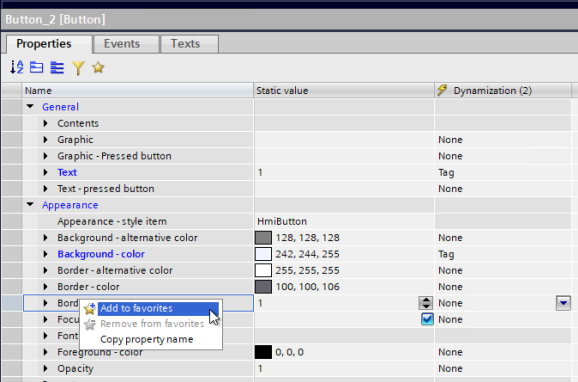Keep YOUR engineering and runtime software up-to-date.

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Efficient Engineering

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A lot of properties !

Favorites for properties

Favorites for screen / screen object properties

- Predefined set of favorites

- Add to / remove from favorites

- Favorite settings editor

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Order of properties and renaming layers

< V18

Size and position
▶ Height
▶ Pivot point
▶ Rotation
▶ Width
▶ X pivot point
▶ X position
▶ Y pivot point
▶ Y position

V18

| Size and position |
| --- |
| ▶ Position - left |
| ▶ Position - top |
| ▶ Rotation - angle |
| ▶ Rotation - pivot point |
| ▶ Rotation - pivot point X |
| ▶ Rotation - pivot point Y |
| ▶ Size - height |
| ▶ Size - width |

New order of properties

- ➤ Changed translation of properties
- ➤ Better grouping of related properties

Rename layers on device level

- ➤ Change default layer names in runtime settings
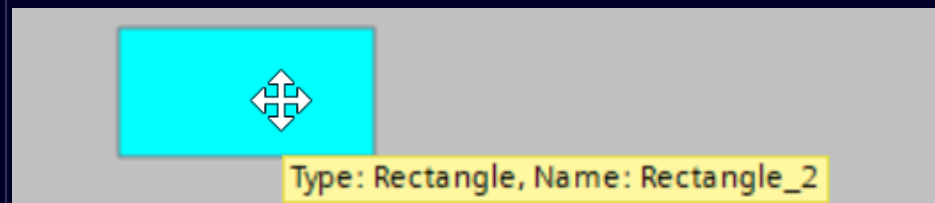- ➤ Each screen will initially use the default layer names

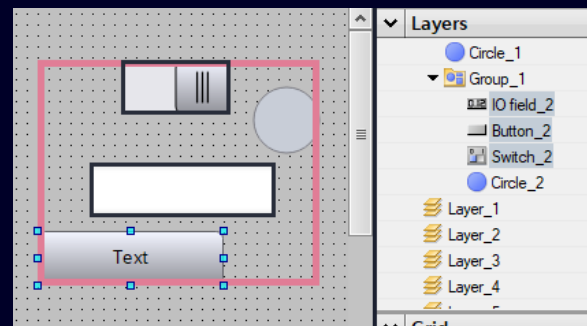**SIEMENS**
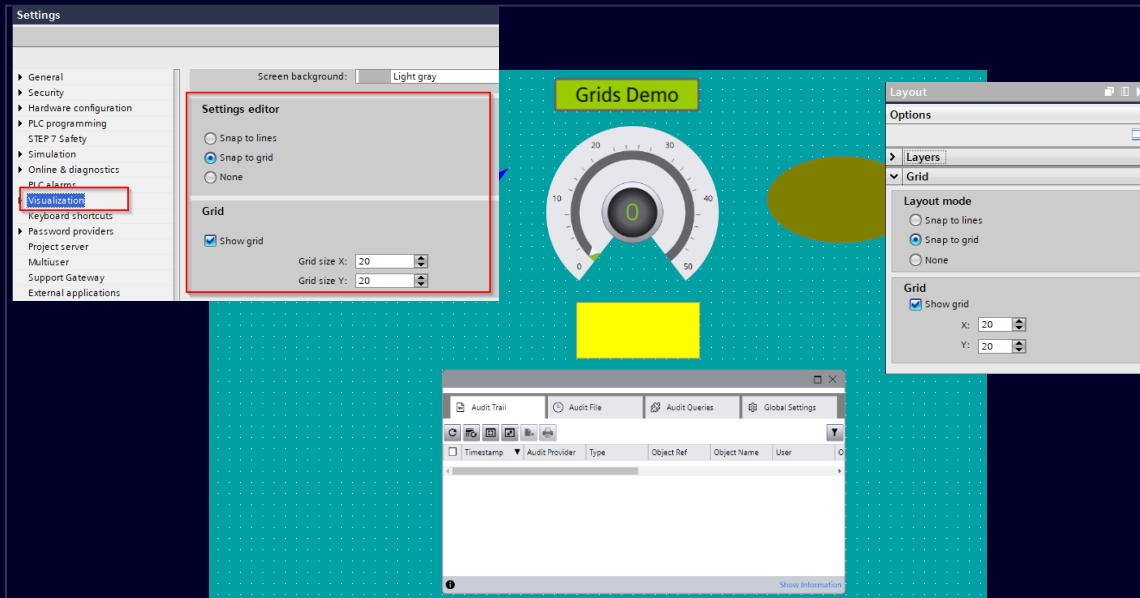
Grid in screen

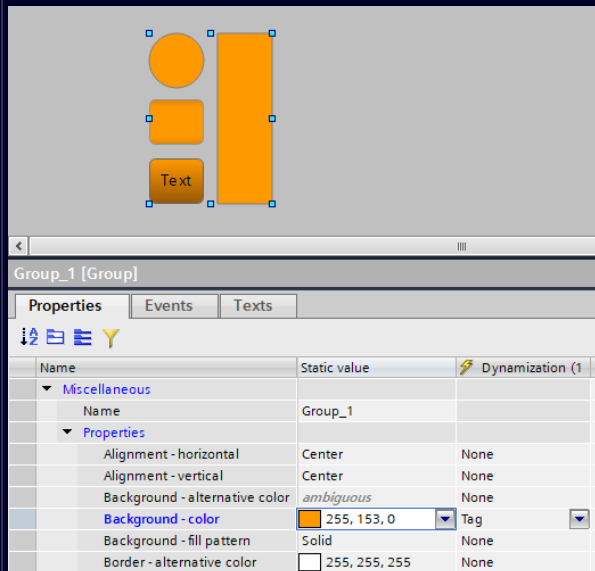
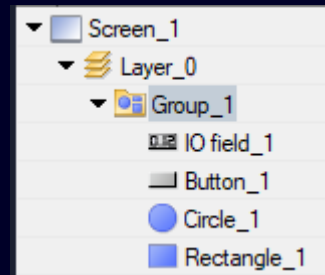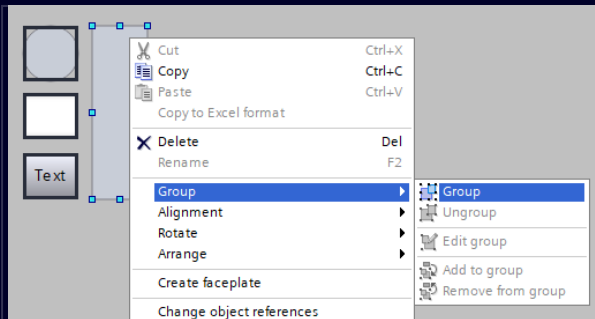## Grid in screen editor

➢ Snap to grid functionality

➢ Show / hide grid

➢ Settings available in
  ➢ Options / Settings / Visualization
  ➢ Layout tab (for easy access)

Tooltip

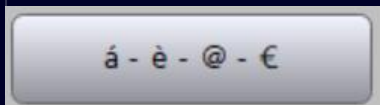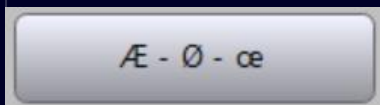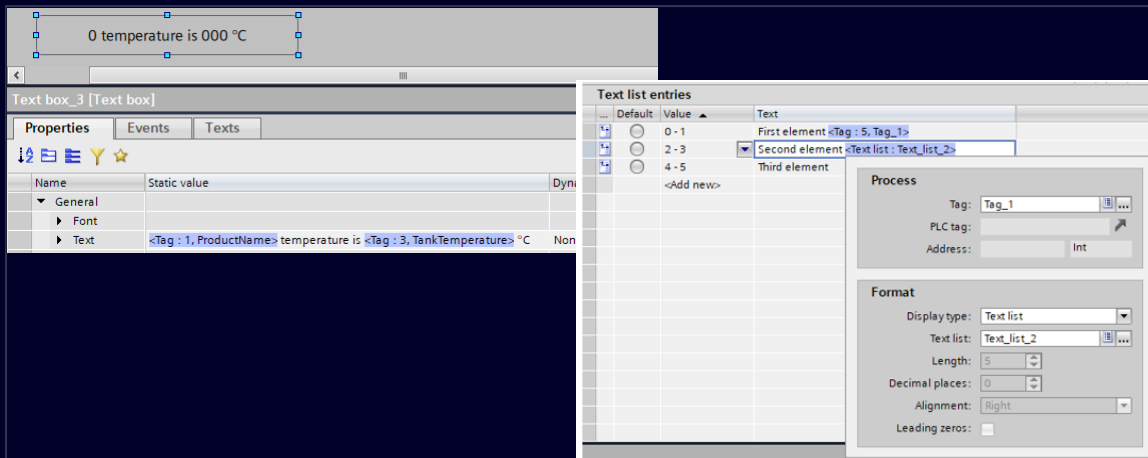➢ Show type and name of screen object

Group screen objects

Group screen items

- Group selected items

- Group in group

- Change static properties together

- Double click a group item to edit

- Group faceplate instances with other items

Formatted texts

Formatted texts

- ➢ Insert parameter fields into text properties via tags

- ➢ Insert text lists as field info text properties
    - ➢ Screen object text
    - ➢ Text list entry

Direct text input

- ➢ Support of
    - ➢ Chinese
    - ➢ Unicode characters (e.g. Alt 0198)
    - ➢ Key combinations (e.g. „´ a")

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Dynamization of screen objects

Dynamization of graphic of screen objects

➢ Graphic properties of screen objects can be dynamized
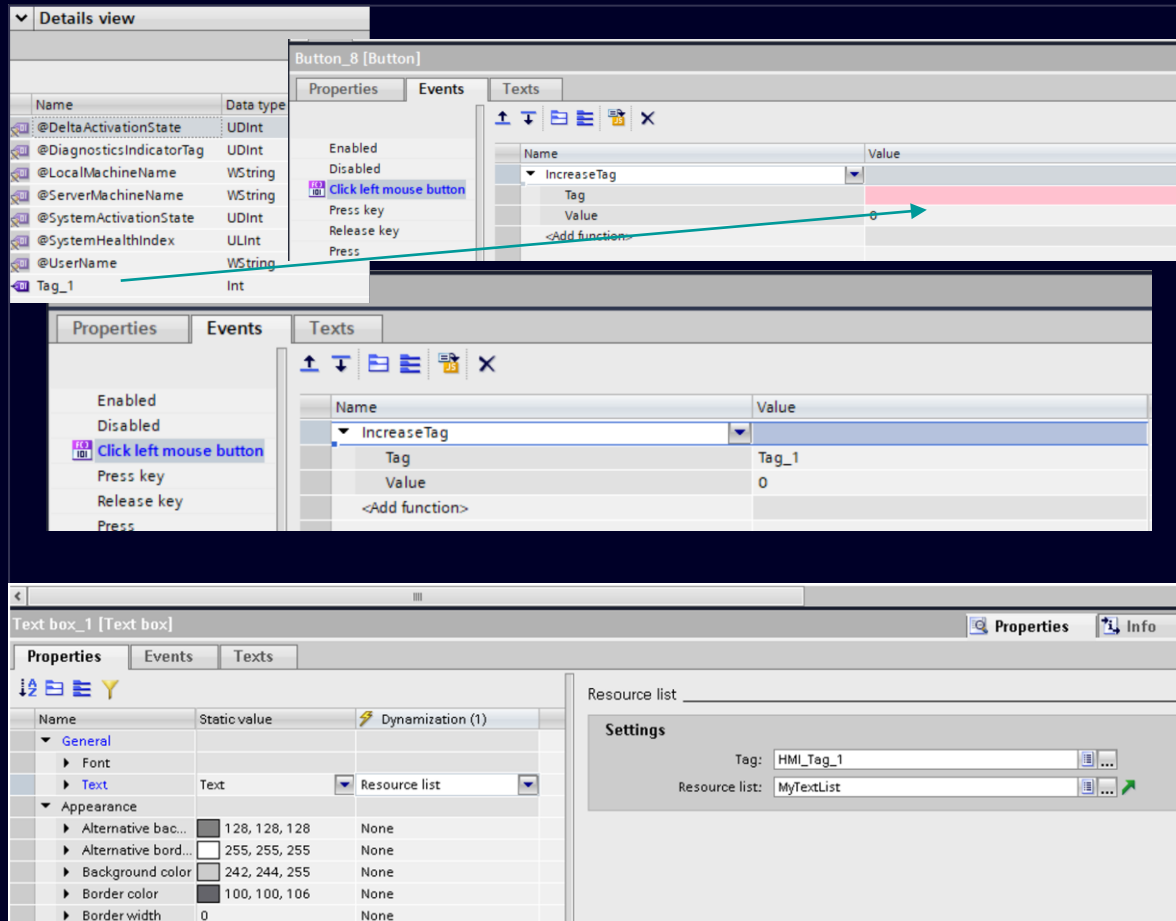   ➢ Tag
   ➢ Script

Range overlapping

➢ Warning for range overlapping
   ➢ Editor warning
   ➢ Compiler warning

Bit mask dynamization

➢ Use bit mask to assign a property value
   to each bit of a tag for dynamization

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Handling of function and resource lists

Drag and Drop of objects into function list
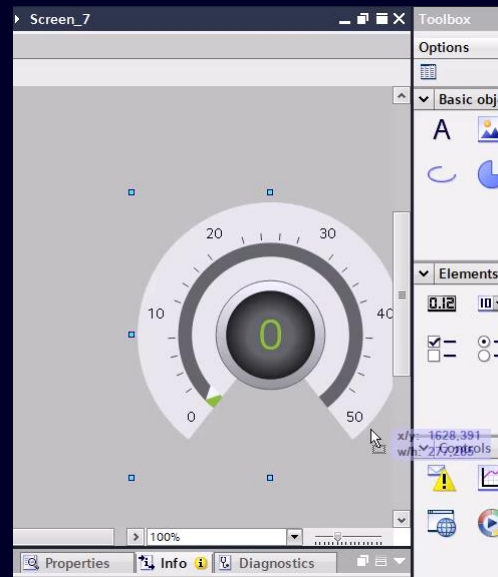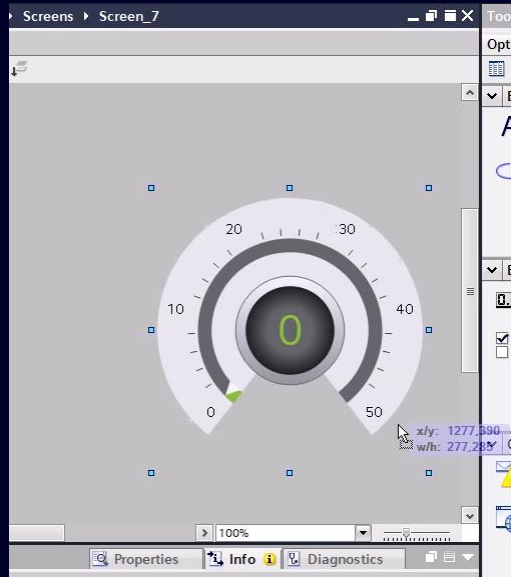
➢ Drag & drop objects from detail view

➢ Tags, screens, text/graphic lists
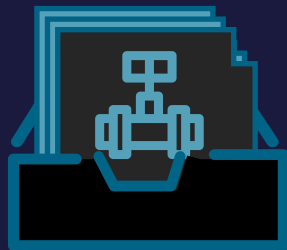
Jump to resource list

➢ Jump directly to the referenced resource list
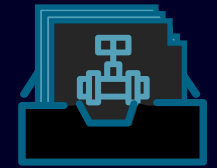
➢ Text list / Graphic list

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Screen editor auto scrolling

Auto scrolling

➢ Horizontal and Vertical auto scrolling in screen editor via mouse and keyboard arrow keys

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Standardization

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Faceplate in Faceplate

PLC UDT Structure "TANK"

Faceplate "TANK" with embedded Faceplates

Single Faceplates

Hierarchical Faceplates

➤ Engineering of Faceplate in Faceplates

➤ Automatically connected Sub UDTs

➤ Central change handling via library with dependency handling

➤ Use case successor for „Screen in Screen"

Design nested Unified Faceplates to realize a hierarchical visualization utilizing a Data-Binding to your PLC with just a few clicks.

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Faceplate in Faceplate
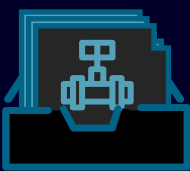
Faceplate "TANK" with embedded Faceplates

PLC UDT Structure "TANK"

Single Faceplates

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Events and internal Tags for Faceplates

Event driven interaction

➤ Define Events for Faceplate types
➤ Use Events in Faceplates for Screen Item Events or in Scripts
➤ React on Events at Faceplate instances (e.g. change screen)
➤ Use parameters to transfer information with the events

Faceplate internal tags

➤ Faceplate instance specific tags
➤ Save data or calculations for a faceplate instance
➤ Use internal faceplate tags for dynamizations

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Integrate complex controls
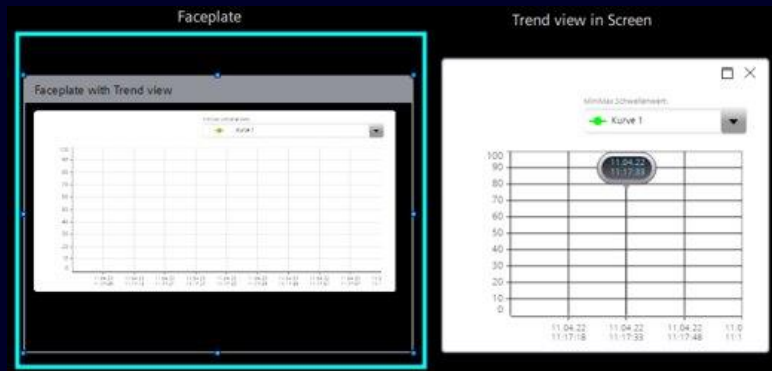
Trend view

- Show specific Online trends in Faceplates

- Show specific historical trends in Faceplates

Alarm view

- Show specific alarms in Faceplates

- Use „configuration string properties to define an „Alarm Filter" for Faceplate instances

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Parameter Control

The Control in V16 / V17

Parameter Control

Customized recipe screen upon user workflow

Create recipe screen with basic screen objects (sliders, IO fields, buttons,..)

➢ Get Parameter Sets and Parameter Set Types via scripting

➢ Scripting support of Parameter Control functionality (CreateParameterSet, SaveParameterSet, LoadParameterSet, DeleteParameterSet, RenameParameterSet, ReadParameterSet, WriteParameterSet)

➢ Parameter set synchronization synchronize parameter set between Parameter control

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User Management
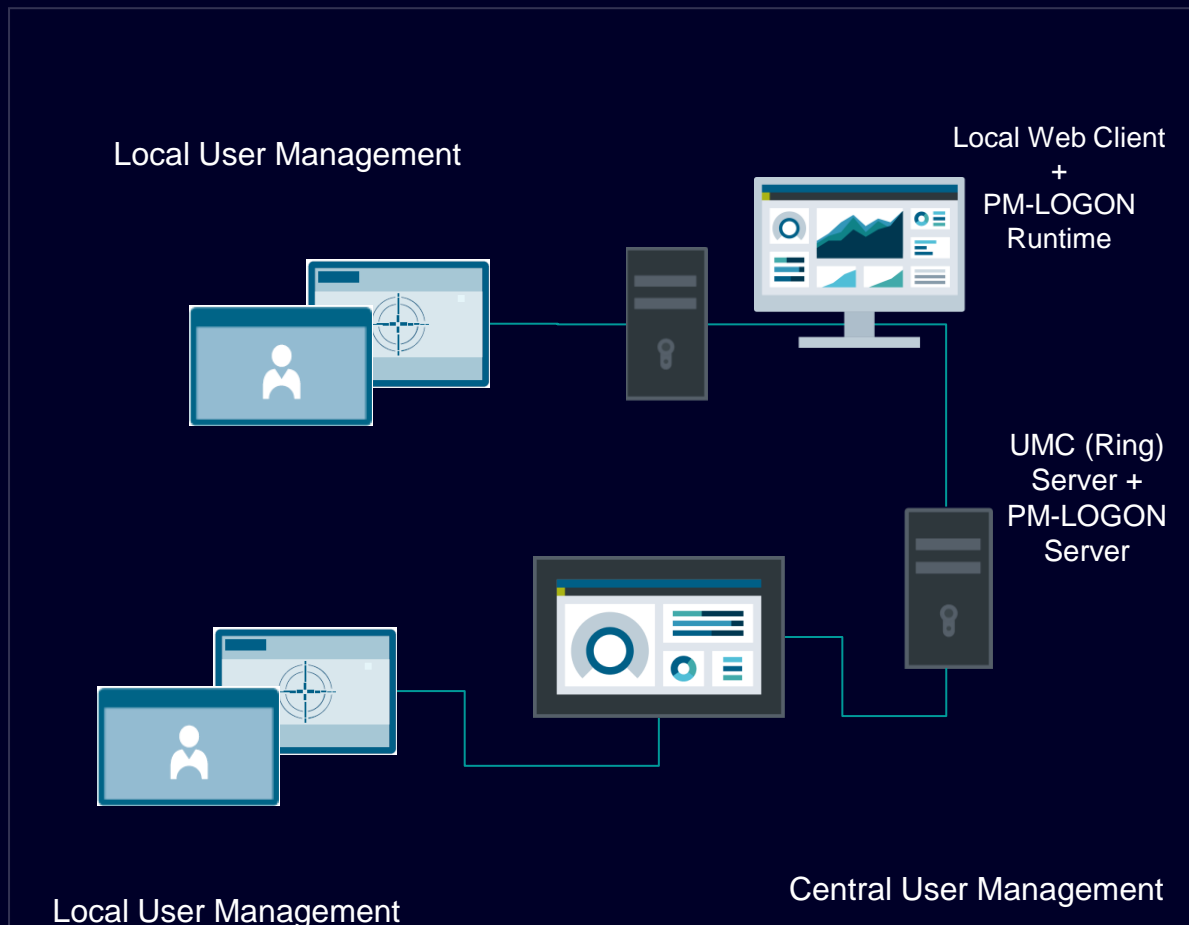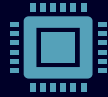
local RFID Authentication for HMI Unified PC Runtime

- ➤ **Connect RFID Reader** to HMI Unified PC: All PM-LOGON supported RFID Readers
- ➤ **Assign cards** with PM-LOGON Configurator
- ➤ **Authenticate**: State full & state less according to configuration, push card to reader, Login w/wo additional PIN

Local RFID Authentication for HMI Unified Comfort Panel

- ➤ **Connect RFID Readers to HMI Unified Comfort Panel:** Siemens RF1040R, RF1060R, RF1070R
- ➤ **Global (PM-LOGON license required):**
  - ▪ Install and configure PM-LOGON Server & Assign cards with PM-LOGON Configurator
  - ▪ State full & state less according to configuration and reader type, Login w/wo additional PIN

Local User Management

Local Web Client + PM-LOGON Runtime

UMC (Ring) Server + PM-LOGON Server

Central User Management

Local User Management

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Audit & Reporting
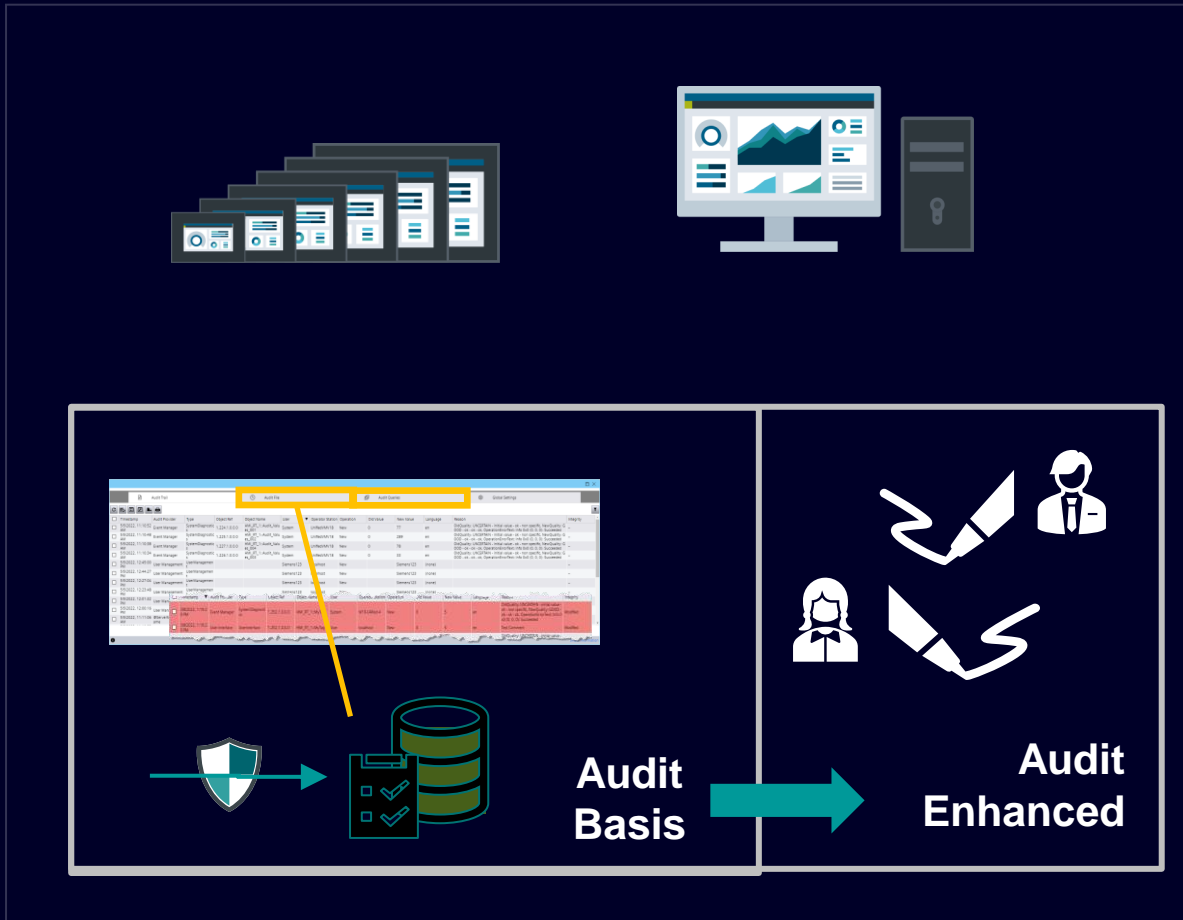
Trace process operations and GMP compliance

WinCC Unified Audit Basis (GMP compliance)

Audit Trail records for Tags, Audit Trail logs &
Detection of manipulation,
Audit Confirmation and Audit Trail report

➢ Restore Database segments, **User** management operation (Login/Logout)

➢ View and Analyze Audit trail (query, filter,..)

➢ Electronic Signature[1]

WinCC Unified Audit Enhanced
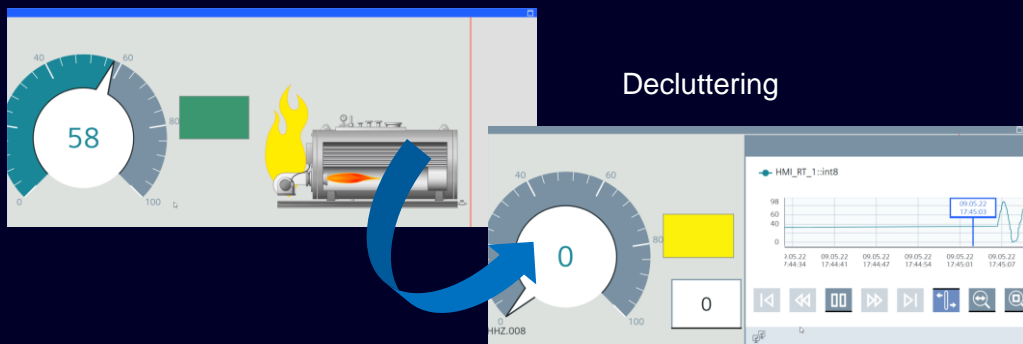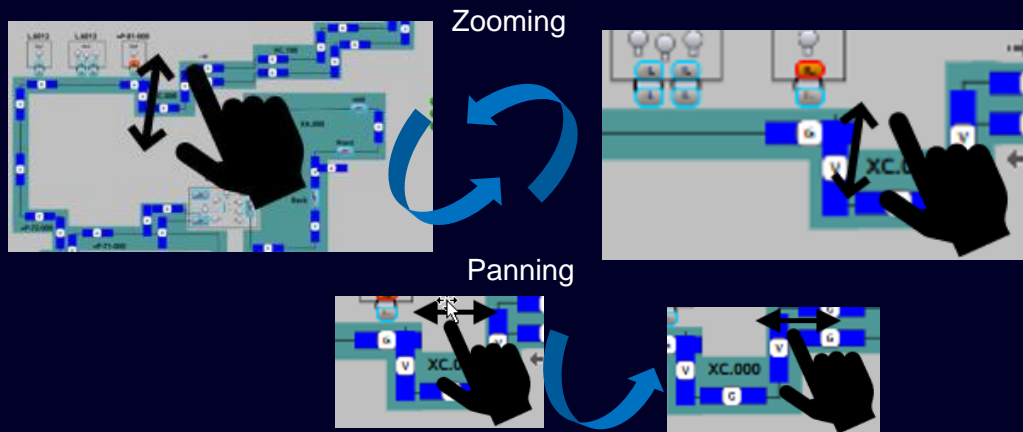
➢ Double Electronic Signature[1]

Audit Basis

Audit Enhanced

(1) **Electroni**c Signature is planned within V18 context

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How did we do it ?

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Zoom and Panning

Zooming

Panning

Decluttering

**Gestures enable new usage concepts to improve user experience**

Improved user experience using gestures

➤ **Zoom in / out at selected screens, in trend control,..**
Effects screen windows (each screen windows separately)

➤ **Panning**
move zoomed area within entire screen (finger / mouse wheel)

Decluttering enables new usage concepts to improve user experience

➤ **Show / Hide screen layers,**
e.g. depending on process value or on zoom level all content / elements of that layer will be affected

➤ **Decluttering**:
show more screen details depending

➤ on zoom factor

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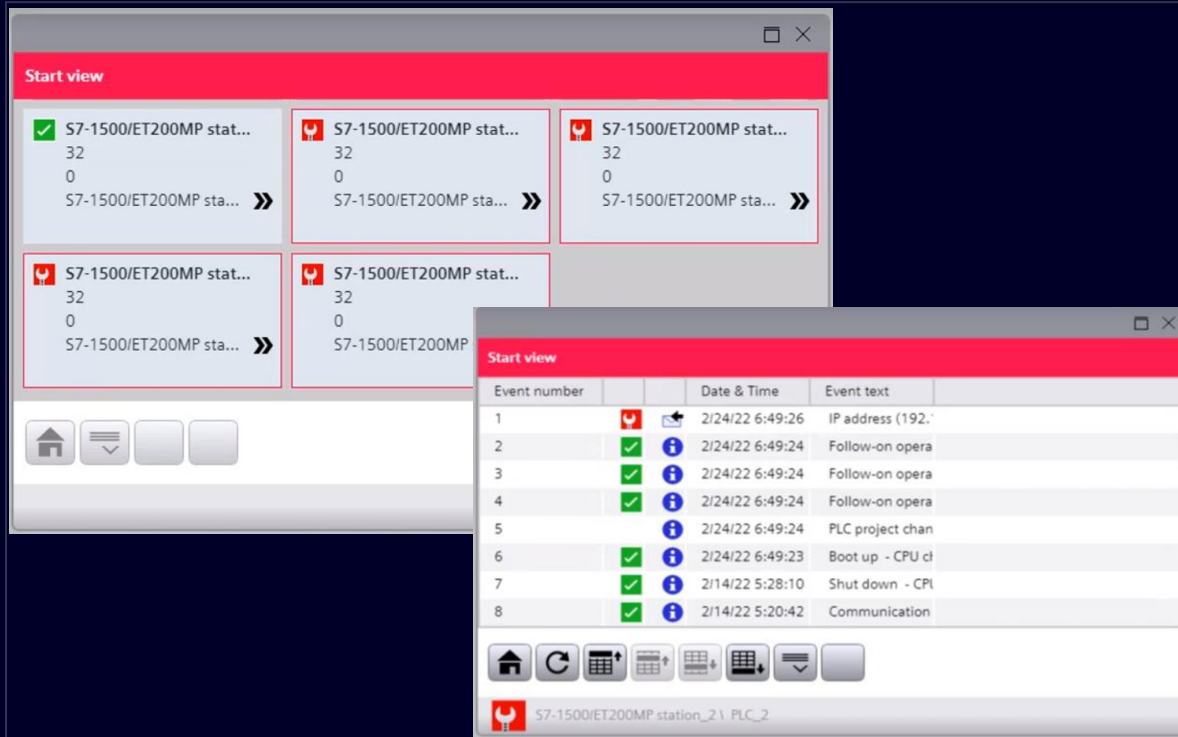# Efficient Engineering – Screen resolution and resize to display
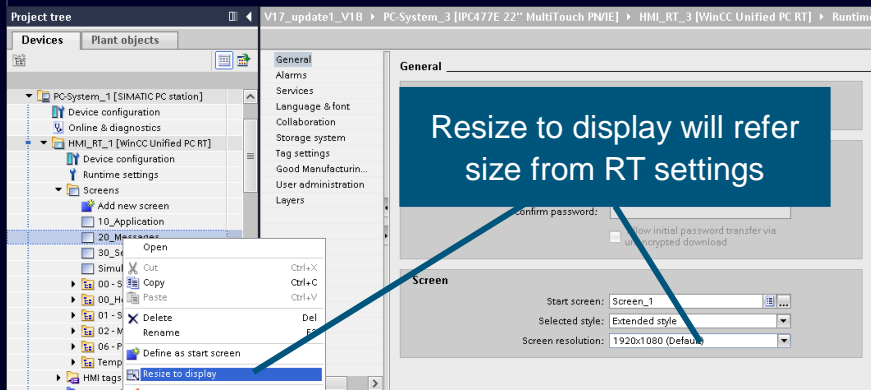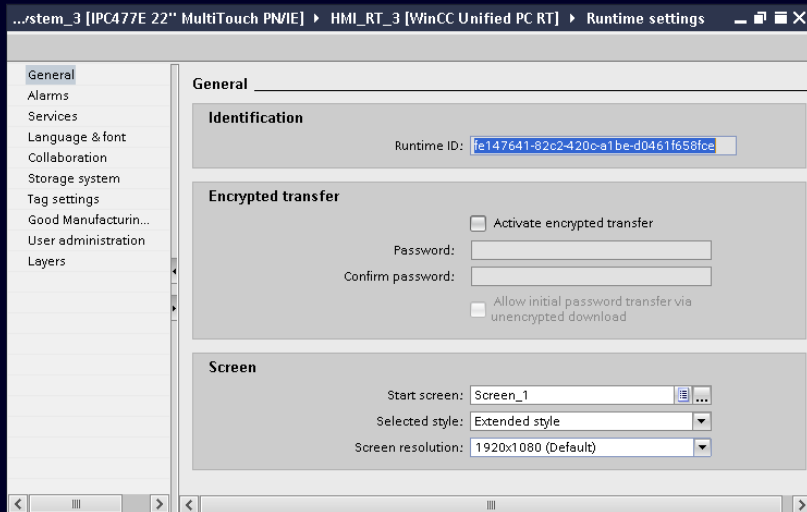
Screen resolution

➢ Change default screen resolution in runtime settings

➢ Screen resolution be applicable only for newly created screens

Resize to Display

➢ Configure screen resolution from runtime settings

➢ Resize to display will refer size from RT settings

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Diagnostic

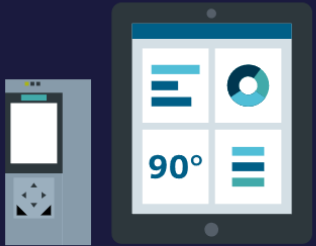## System Diagnostics
Smart and easy monitoring of the shopfloor level

➢ Generic and automatic configured control

➢ Detailed information of
- Field bus
- I/O stations
- I/O channels
- PLC diagnostic buffer

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The Family

WinCC Unified
View of Things

Unified
Comfort Panel

WinCC
Unified PC

Industrial
Edge

90°

Clients
1 Operator
Included

Clients
1 Monitor
1 Operator
Included

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