

# WinCC V7.5 SP2 Architectures

[siemens.de/wincc-v7](https://www.siemens.de/wincc-v7)

## WinCC V7.5 SP2 Architectures Change Log

WinCC V7.5 SP2 Architectures slides cover the overall functionality of the WinCC V7.5 SP2 system.

Please note the WinCC V7.5 SP2 slides that show typical configurations and use cases in detail !

-slide 32: TLS protocol via the SIMATIC S7-1200/S7-1500 channel

-slide 30: **If the server is also used as operator station, then the number for this server is reduced to four clients.**

## In addition to the standard WinCC V7.5 SP2 packages in European/ASIA version, will be available at following WinCC V7.5 SP2 Options

### released, respectively are compatible

- WinCC/Server V7.5 SP2
- WinCC/Redundancy V7.5 SP2
- WinCC/Archive V7.5 SP2
- WinCC/UserArchives V7.5 SP2
- WinCC/WebNavigator V7.5 SP2
- WinCC/DataMonitor V7.5 SP2
- WinCC/Connectivity Pack V7.5 SP2
- WinCC/Connectivity Station V7.5 SP2
- WinCC/WebUX V7.5 SP2
- WinCC/ODK V7.5 SP2
- WinCC/IndustrialDataBridge V7.5 SP2
- WinCC/Audit V7.5 SP2
- WinCC/SES (Sequence Execution System) V7.5 SP2
- WinCC/Calendar Scheduler V7.5 SP2
- WinCC/Event Notifier V7.5 SP2
- WinCC/Performance Monitor V7.5 SP2
- WinCC/ProAgent V7.5 SP2



### Compatibility test with the following products is given

- SIMATIC Net V16
- SIMATIC InformationServer 2014 SP3 Upd4 / Upd5
- SIMATIC ProcessHistorian 2014 SP3 Upd4 / Upd5
- Energy Manager V7.2 update 4

### About the delivery or compatibility test of the following options will be informed separately

- SIMATIC TeleControl

With the compatibility tool

<http://www.siemens.com/kompatool>

you could check the compatibility of the products.



**SIEMENS**

# WinCC V7.5 SP2

## Overview

### Standardfeatures

WinCC V7.5 SP2 – Basic package

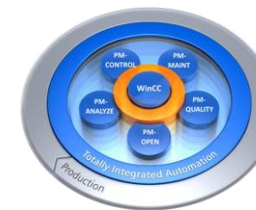
WinCC Server	WinCC Redundancy	WinCC WebNavigator/ WebUX	WinCC Userarchiv	WinCC TagLogging	WinCC Alarm Logging
Client/Server- solution	redundancy	work with Web-Clients	User data management	Archiv- tags	messages- tags

### Options/PM Add-on

Process Historian 2014 SP3 Upd4 / Upd5 or PM- ANALYZE	Information Server 2014 SP3 Upd4 / Upd5 or PM- ANALYZE
Centralized data archiving	Reporting System

# SIMATIC WinCC V7.5 SP2 / WinCC RT Professional

## WinCC Premium Add-ons for Process Management

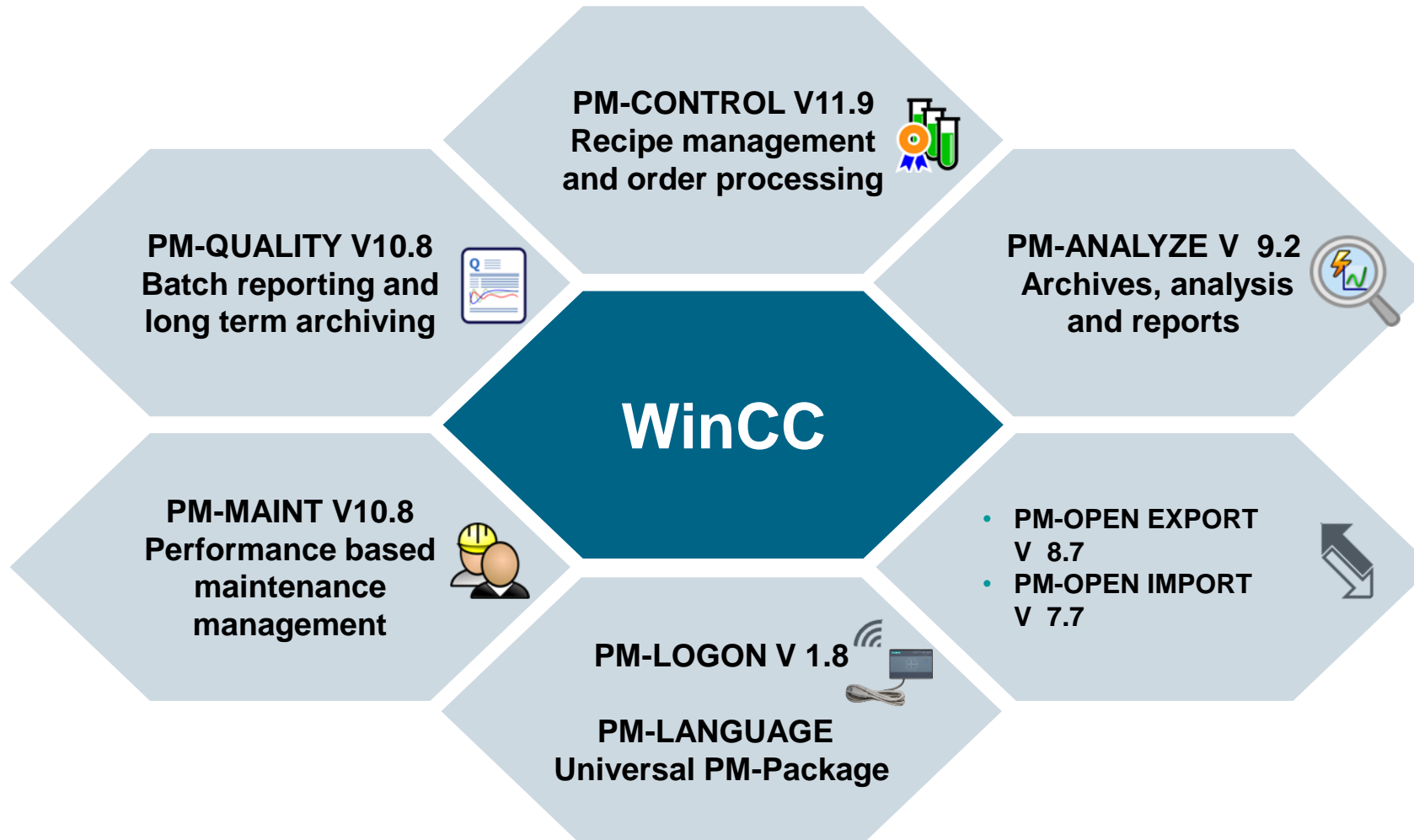


Efficient data management	Data consistency over the entire production process
PM-CONTROL	Flexible parameter management and job control
PM-QUALITY	Batch-based archiving and reporting
PM-MES Interface	Bi-directional communication interface between PM-CONTROL, PM-QUALITY and MES Systems
PM-OPEN HOST/S	PM-OPEN HOST/S offers a flexible communication solution to connect the SCADA an HMI level to SAP® ERP.
Diagnostic management	Higher availability of machines and production plants
PM-MAINT	Intelligent maintenance management system
PM-ANALYZE	Efficient identification of weak points in the process + <b>reporting</b>
PM-OPEN MINDCONNECT	Distribution and display of reports from PM-QUALITY and PM-ANALYZE via Mindsphere
Open-mindedness	Consolidation of automation and IT world
PM-OPEN-EXPORT	Automatic export of process data
PM-OPEN-IMPORT	Automatic import of messages and archive values
PM-LOGON / PM-LOGON Mobiles Logon	Automatic registration, e.g.: via RFID /The app scans a QR code



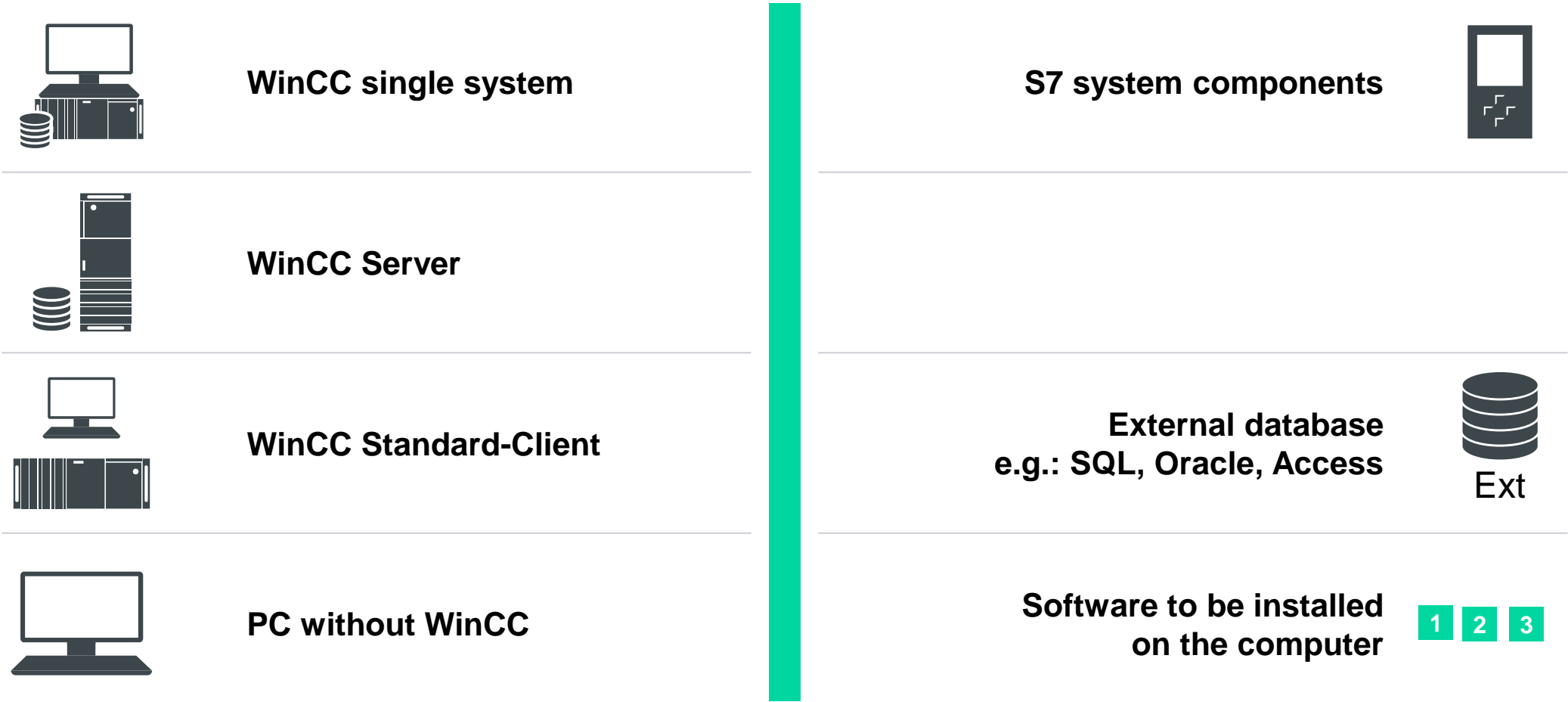
# WinCC Premium Add-ons for Process Management

Released for WinCC 7.5 SP2 and VMWare ESXi 7.0



# WinCC V7.5 SP2

## Symbol explanations



**WinCC V7.5 SP2**  
**Product name abbreviations**

**WinCC Runtime Professional V17**

**SIMATIC InformationServer 2014 SP3**  
**SIMATIC ProcessHistorian 2014 SP3**

**WinCC RT Professional V17**

**InformationServer**  
**ProcessHistorian**



# WinCC 7.5 SP2 news

## Basic information

- Notes on installation
- Microsoft .NET Framework

Before installing WinCC, make sure the .NET Framework is enabled



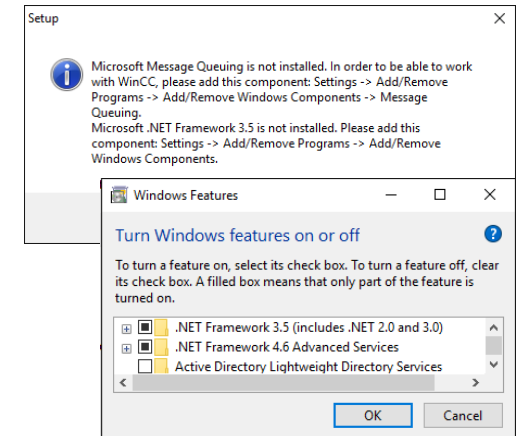
- Installations-Medium from WinCC in the Delivery information
  - WinCC V7.5 SP2 SP2 – “Installation”



- WinCC V7.5 SP2 SP2 – “Additional Content” – SQL Server Management Studio
- The SQL Server Management Studio is no longer part of the SQL Server installation and can be found on the enclosed “Additional Content” medium



- SIMATIC Net PC Software V16



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## Only for SCADA SSP

\\ad001.siemens.net\dfs001\File\DE\promotoren\_vm\VM\_WARE\_WORLD\_WITHOUT\_UCL\Inst\_SW\2021\_01\_Install\_WinCCV7\_5SP2  
\\ad001.siemens.net\dfs001\File\DE\promotoren\_vm\VM\_WARE\_WORLD\_WITHOUT\_UCL\Inst\_SW\2021\_01\_Install\_WinCCV7\_5SP2\_Options

# WinCC V7.5 SP2

## Compatibility and General

### WinCC Server / Single station / Clients / Web Clients

- Windows
  - 10 64-Bit (Professional/Enterprise) 2004/20H2
  - 10 64-Bit LTSC (LTSC) 2016
  - 10 64-Bit LTSC 2019
- Windows Server
  - 2012 R2 64-Bit (Standard/Datacenter)
  - 2016 64-Bit (Standard/Datacenter)
  - 2019 64-Bit (Standard/Datacenter)



**Includes more powerful  
SQL Server 2016 SP2 64-Bit**

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### Release Notes: Support von Microsoft Office

Microsoft Office 365 Professional Plus 32 and 64-Bit 1908



Detailed and always up-to-date information is provided in the [compatibility tool](#)

### Delivery Release SIMATIC WinCC V7.5 SP2

<https://support.industry.siemens.com/cs/ww/de/view/109783852>

## About installations on IPC

### About Windows 10 64-bit LTSC 2019 installations on IPC

- Which browser version is installed together Windows 10 LTSC 2019 on an IPC?  
currently Microsoft Internet Explorer is installed. In the latest version : IE V11
- Therefore, you should download Edge browser (Chromium) from Microsoft for 2019 LTSC and install it on Windows 10 2019 LTSC.

**How do you install .NET Framework 3.5 on SIMATIC IPCs (for WinCC TIA Portal, STEP 7 TIA Portal or WinCC V7, for example)?**

<https://support.industry.siemens.com/cs/ww/en/view/109745988>

# WinCC V7.5 SP2

## Compatibility and General

### For WinCC WebNavigator and WinCC DataMonitor clients are also release

#### Windows

- 7 SP1 Professional/Enterprise/Ultimate 32-Bit/64-Bit (but use if is possible Windows 10<sup>1</sup>)
- 8.1 Pro/Enterprise 32-Bit/64-Bit (but use if is possible Windows 10<sup>1</sup>)
- 10 Pro/Enterprise 64-Bit
- 10 Enterprise LTSC 64-Bit

#### Windows Server

- 2012 R2 Standard/Datacenter 64-Bit
- 2016 Standard/Datacenter 64-Bit
- 2019 Standard/Datacenter 64-Bit

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## Release Notes

DataMonitor Excel Workbook Wizard only supports Office 32-bit installations

<sup>1</sup> End of Support from windows 7 (14.01.2020) / windows 8.1 (10.01.2023)

# WinCC 7.5 SP2 news

## Basic information

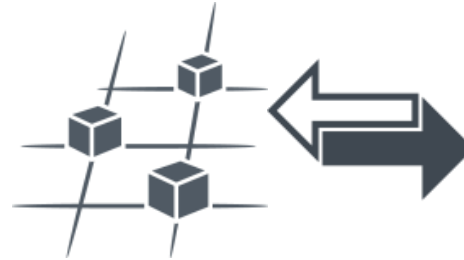
### General compatibility

For integrated operation in the SIMATIC Manager on an engineering station compatible with

- STEP 7 V5.6 HFx/SP2

For industrial communication in combination with

- SIMATIC Net V16



**SIMATIC NET**  
PC Software

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### Notes on installation Compatible tested virus scanner

- McAfee
  - Endpoint Protection Suite **V10.5**
  - VirusScan Enterprise **V8.8**
- Trend MICRO
  - OfficeScan **V12.0 SP1**
  - OfficeScan Client-Server Suite **V12.0 SP1**
- Symantec Endpoint Protection **V14.3**
- Kaspersky Endpoint Security for Windows **2018**



# WinCC 7.5 SP2 news

## Basic information

### Run on virtualization server

- Microsoft Hyper-V 2012 R2/2016/2019
- VMware ESXi 6.5/6.7/7.0



The system requirements vary depending on the type of the selected WinCC installation and used Operating system. Support for all current IBM/AT PC platforms. WinCC always relies on current operating systems and high security requirements



<https://support.industry.siemens.com/cs/ww/en/view/109745988>

## How do you use WinCC/WebNavigator and WinCC/DataMonitor with Microsoft Edge?



In the future, Microsoft will replace the Internet Explorer with the browser "Microsoft Edge". This is why as of WinCC V7.5 SP2 Update 1, the Microsoft Edge browser is released for the WinCC options WinCC/WebNavigator V7.5 SP2 Update 1 and WinCC/DataMonitor V7.5 SP2 Update 1. Please perform the settings described in the SIOS article

SIOS:

<https://support.industry.siemens.com/cs/de/en/view/109792981>

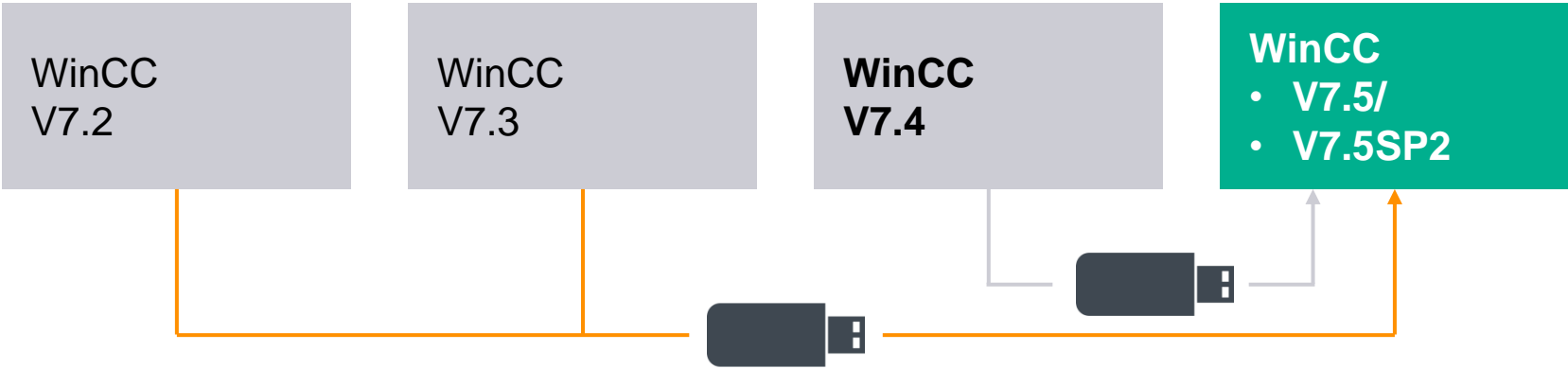
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**In order to call the online help of WinCC, it requires Microsoft Internet Explorer**

- Internet Explorer from V11.0 32-Bit
- **Microsoft Edge** (for possible WebNavigator usage)

# WinCC V7.5 SP2

## Upgrading WinCC licenses



More favorable conditions if the customer already has the recent WinCC V7 Version

Link to OSD

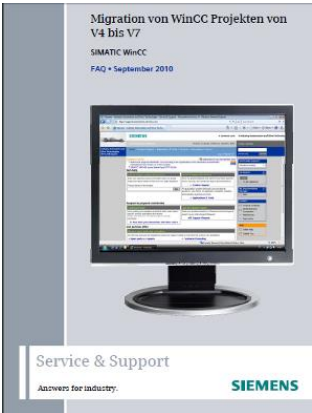
Link to the compatibility tool

Online Software Delivery

<https://support.industry.siemens.com/cs/sc/2055/compatibilityTool>

WinCC V7 upgrade		Order number (DVD)	Order number (download)
Upgrade RT-Version,	V7.2/7.3 → V7.5 SP2	6AV6381-2AA07-5AX3	6AV6381-2AA07-5AK3
<b>Upgrade RT-Version,</b>	<b>V7.4 → V7.5 SP2</b>	<b>6AV6381-2AA07-5AX4</b>	<b>6AV6381-2AA07-5AK4</b>
Upgrade Client RT-Version,	V7.2/7.3 → V7.5 SP2	6AV6381-2CA07-5AX3	6AV6381-2CA07-5AK3
Upgrade Client RT-Version,	V7.4 → V7.5 SP2	6AV6381-2CA07-5AX4	6AV6381-2CA07-5AK4
Upgrade RC-Version,	V7.2/7.3 → V7.5 SP2	6AV6381-2AB07-5AX3	6AV6381-2AB07-5AK3
<b>Upgrade RC-Version,</b>	<b>V7.4 → V7.5 SP2</b>	<b>6AV6381-2AB07-5AX4</b>	<b>6AV6381-2AB07-5AK4</b>
Upgrade Client RC-Version,	V7.2/7.3 → V7.5 SP2	6AV6381-2CB07-5AX3	6AV6381-2CB07-5AK3
Upgrade Client RC-Version,	V7.4 → V7.5 SP2	6AV6381-2CB07-5AX4	6AV6381-2CB07-5AK4

Cheaper in comparison with the DVD version





# SIMATIC WinCC RT Upgrade

## [6AV6381-2AA07-0AX4](#)

SIMATIC WinCC RT Upgrade V7.0,  
from **V6.0 auf V7.0 SP3** for SIMATIC WinCC Runtime (RT) incl. Drivers, Server,  
Redundanz, User Archive, Archive, Connectivity Pack

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## [6AV6381-2AA07-4AK3](#)

SIMATIC WinCC RT Upgrade  
from **V7.X to V7.4 SP1** for SIMATIC WinCC Runtime (RT) incl. Options Redundanz,  
Server, User Archive, Web Navigator, Web NAV Load-Balancing, Web Diagnose  
Client/Server, Data Monitor, Connectivity Pack, Connectivity Station, Runtime/  
Configuration-Software, Single license, SW and License Key **Download**

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## [6AV6381-2CA07-5AK4](#)

SIMATIC WinCC RT Client Upgrade  
from **V7.4 to V7.5 SP2** for WinCC RT Clients O. RT 128, Runtime-Software, Single license,  
SW und License Key **Download**

## [6AV6381-2AA07-3AK3](#)

SIMATIC WinCC RT Upgrade  
from **V7.2 to V7.3** for SIMATIC WinCC Runtime (RT) inkl. Optionen Redundanz, Server, User  
Archive, Web Navigator, Web NAV Load-Balancing, Web Diagnose Client/Server, Data Monitor,  
Connectivity Pack, Connectivity Station Runtime/Configuration-Software Single license, SW und  
License Key **Download**

## [6AV6381-2AA07-5AK3](#)

SIMATIC WinCC RT SW Upgrade  
from **V7.2/7.3 to V7.5 SP2** for SIMATIC WinCC Runtime (RT)  
incl. Optionen Redundanz, Server, User Archive, Web Navigator, Web NAV Load-Balancing,  
Web Diagnose Client/Server, Data Monitor, Connectivity Pack, Connectivity Station,  
Runtime/Configuration-Software, Single license,  
SW und License Key **Download**

# WinCC V7.5 SP2

## Compatibility and General (continued)

### In Side-by-side-Installation with other SIMATIC-Products

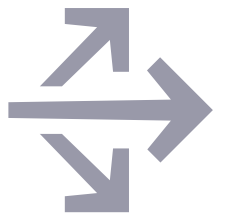
Compatible with STEP 7 V5.4/V5.5/V5.6, V10.5/V11/V12,V13,14,14SP2,V15,15.1,V16,V17

WinCC flexible (from 2008)

WinCC V7.5 SP2 **can't be** installed together with **WinCC RT Professional, WinCC Unified und WinCC V6/V7.x.**









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- **Remote-Software** (→ [Link](#))
- **Remote Desktop Connection (RDP)** in console mode (for WinCC clients release)  
(If WinCC Server is running in service mode)
- “RealVNC” Enterprise Edition V5.1.0







# WinCC V7.5 SP2

## Compatible operating systems

	Server	Single system	Client without Project	Client with Project
Windows 10	Max. 3 Clients without redundancy 			
Windows Server <ul style="list-style-type: none"><li>• 2012 R2</li><li>• 2016</li><li>• 2019</li></ul>				

# WinCC V7.5 SP2

## Recommended/Compatible Operating Systems for Web Solutions

	WebNavigator-Client	DataMonitor Client
<b>Windows</b> <ul style="list-style-type: none"><li>• 7<sup>1</sup></li><li>• 8.1<sup>1</sup></li><li>• 10</li></ul>		
<b>Windows Server</b> <ul style="list-style-type: none"><li>• 2012 R2</li><li>• 2016</li><li>• 2019</li></ul>		

<sup>1</sup> End of Support from **Windows 7 (14.01.2020)** /windows 8.1 (10.01.2023)

# WinCC V7.5 SP2 licenses

## RT- and RC- licenses

WinCC differentiates between RT licenses (Runtime) and RC licenses (Runtime and Configuration) as well as the number of variables (tags).

### **RT licenses entitle you to unlimited use of WinCC in runtime.**

The use of the editors is only possible in demo mode with a time limit.

### **RC licenses authorize the use of WinCC in runtime and during project engineering for an unlimited period of time.**

RC licenses can be used locally or remotely. If an RC license is on a different computer, use is only permitted for the configuration. If you want to use Runtime, the RC license must be available locally or you also need an RT license.

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**How many external variables and archive tags are allowed for the configuration is shown by the number in the parenthesis**, for example: E.g., “WinCC RC (65536)”. With this license, you can use up to 64 \*1,024 external tags and up to 512 archive tags in runtime.

If you activate a project in which the number of external variables or archive variables exceeds the number of permitted variables, the demo mode is activated. The system then behaves as if the licenses were completely missing.

# WinCC V7.5 SP2 Basic station

Order number for SIMATIC WinCC V7.5 SP2 ...

## WinCC V7.5 SP2 (RC = RT and Engineering (n tags) incl. 512 archiv tags)

Description	Order number EU		Order number
	DVD	Online Software Download	DVD
WinCC RC 128	<a href="#">6AV6381-2BM07-5AX0</a>	<a href="#">6AV6381-2BM07-5AH0</a>	<a href="#">6AV6381-2BM07-5AV0</a>
WinCC RC 512	<a href="#">6AV6381-2BN07-5AX0</a>	<a href="#">6AV6381-2BN07-5AH0</a>	<a href="#">6AV6381-2BN07-5AV0</a>
WinCC RC 2048	<a href="#">6AV6381-2BP07-5AX0</a>	<a href="#">6AV6381-2BP07-5AH0</a>	<a href="#">6AV6381-2BP07-5AV0</a>
WinCC RC 8192	<a href="#">6AV6381-2BS07-5AX0</a>	<a href="#">6AV6381-2BS07-5AH0</a>	<a href="#">6AV6381-2BS07-5AV0</a>
WinCC RC 65536	<a href="#">6AV6381-2BQ07-5AX0</a>	<a href="#">6AV6381-2BQ07-5AH0</a>	<a href="#">6AV6381-2BQ07-5AV0</a>
WinCC RC 102400	<a href="#">6AV6381-2BT07-5AX0</a>	<a href="#">6AV6381-2BT07-5AH0</a>	<a href="#">6AV6381-2BT07-5AV0</a>
WinCC RC 153600	<a href="#">6AV6381-2BU07-5AX0</a>	<a href="#">6AV6381-2BU07-5AH0</a>	<a href="#">6AV6381-2BU07-5AV0</a>
WinCC RC 262144	<a href="#">6AV6381-2BV07-5AX0</a>	<a href="#">6AV6381-2BV07-5AH0</a>	<a href="#">6AV6381-2BV07-5AV0</a>
WinCC RC Client	<a href="#">6AV6381-2CB07-5AX0</a>	<a href="#">6AV6381-2CB07-5AH0</a>	<a href="#">6AV6381-2CB07-5AV0</a>

## WinCC V7.5 SP2 Runtime (RT inkl. 512 archiv tags)

Description	Order number EU		Order number ASIA
	DVD	Online Software Download	DVD
WinCC RT 128	<a href="#">6AV6381-2BC07-5AX0</a>	<a href="#">6AV6381-2BC07-5AH0</a>	<a href="#">6AV6381-2BC07-5AV0</a>
WinCC RT 512	<a href="#">6AV6381-2BD07-5AX0</a>	<a href="#">6AV6381-2BD07-5AH0</a>	<a href="#">6AV6381-2BD07-5AV0</a>
WinCC RT 2048	<a href="#">6AV6381-2BE07-5AX0</a>	<a href="#">6AV6381-2BE07-5AH0</a>	<a href="#">6AV6381-2BE07-5AV0</a>
WinCC RT 8192	<a href="#">6AV6381-2BH07-5AX0</a>	<a href="#">6AV6381-2BH07-5AH0</a>	<a href="#">6AV6381-2BH07-5AV0</a>
WinCC RT 65536	<a href="#">6AV6381-2BF07-5AX0</a>	<a href="#">6AV6381-2BF07-5AH0</a>	<a href="#">6AV6381-2BF07-5AV0</a>
WinCC RT 102400	<a href="#">6AV6381-2BJ07-5AX0</a>	<a href="#">6AV6381-2BJ07-5AH0</a>	<a href="#">6AV6381-2BJ07-5AV0</a>
WinCC RT 153600	<a href="#">6AV6381-2BK07-5AX0</a>	<a href="#">6AV6381-2BK07-5AH0</a>	<a href="#">6AV6381-2BK07-5AV0</a>
WinCC RT 262144	<a href="#">6AV6381-2BL07-5AX0</a>	<a href="#">6AV6381-2BL07-5AH0</a>	<a href="#">6AV6381-2BL07-5AV0</a>
WinCC RT Client	<a href="#">6AV6381-2CA07-5AX0</a>	<a href="#">6AV6381-2CA07-5AH0</a>	<a href="#">6AV6381-2CA07-5AV0</a>

# WinCC WebNavigator and DataMonitor V7.5 SP2

## Order number

### WinCC WebNavigator (countable)

Description	Order number DVD – EU	Online Software Download – EU	Order number DVD – ASIA
WinCC WebNavigator – 1 Client	<a href="#">6AV6362-1AB00-0BB0</a>	<a href="#">6AV6362-1AB00-0AH0</a>	<a href="#">6AV6362-1AB00-0BB0</a>
WinCC WebNavigator – 3 Clients	<a href="#">6AV6362-1AD00-0BB0</a>	<a href="#">6AV6362-1AD00-0AH0</a>	<a href="#">6AV6362-1AD00-0BB0</a>
WinCC WebNavigator – 10 Clients	<a href="#">6AV6362-1AF00-0BB0</a>	<a href="#">6AV6362-1AF00-0AH0</a>	<a href="#">6AV6362-1AF00-0BB0</a>
WinCC WebNavigator – 30 Clients	<a href="#">6AV6362-1AJ00-0BB0</a>	<a href="#">6AV6362-1AJ00-0AH0</a>	<a href="#">6AV6362-1AJ00-0BB0</a>
WinCC WebNavigator – 100 Clients	<a href="#">6AV6362-1AM00-0BB0</a>	<a href="#">6AV6362-1AM00-0AH0</a>	<a href="#">6AV6362-1AM00-0BB0</a>
WinCC WebNavigator Load Balancing	<a href="#">6AV6362-1FA00-0BB0</a>	<a href="#">6AV6362-1FA00-0AH0</a>	<a href="#">6AV6362-1FA00-0BB0</a>
WinCC WebNavigator Load Balancing Step Up	<a href="#">6AV6362-1GA00-0BB0</a>	<a href="#">6AV6362-1GA00-0AH0</a>	<a href="#">6AV6362-1GA00-0BB0</a>
WinCC WebNavigator Diagnostic Client	<a href="#">6AV6362-1BA00-0BB0</a>	<a href="#">6AV6362-1BA00-0AH0</a>	<a href="#">6AV6362-1BA00-0BB0</a>

### WinCC DataMonitor (countable)

Description	Order number DVD – EU	Online Software Download – EU	Order number DVD – ASIA
WinCC WebNavigator – 1 Client	<a href="#">6AV6362-3AB00-0BB0</a>	<a href="#">6AV6362-3AB00-0BB0</a>	<a href="#">6AV6362-3AB00-0BB0</a>
WinCC WebNavigator – 3 Clients	<a href="#">6AV6362-3AD00-0BB0</a>	<a href="#">6AV6362-3AD00-0BB0</a>	<a href="#">6AV6362-3AD00-0BB0</a>
WinCC WebNavigator – 10 Clients	<a href="#">6AV6362-3AF00-0BB0</a>	<a href="#">6AV6362-3AF00-0BB0</a>	<a href="#">6AV6362-3AF00-0BB0</a>
WinCC WebNavigator – 30 Clients	<a href="#">6AV6362-3AJ00-0BB0</a>	<a href="#">6AV6362-3AJ00-0BB0</a>	<a href="#">6AV6362-3AJ00-0BB0</a>

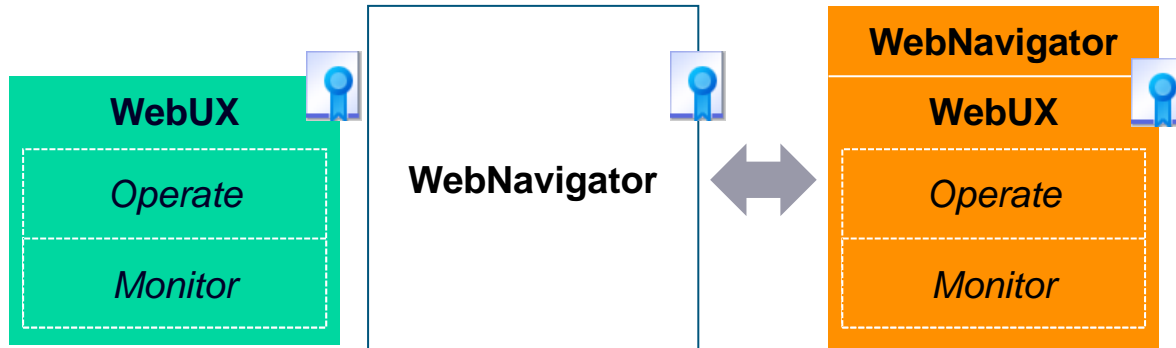
# Integrated licensing concept

NEW as of WinCC V7.4 / WinCC RT Professional V14

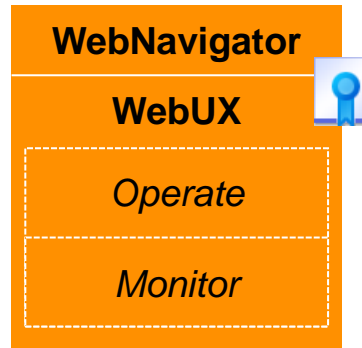
## Web solutions with WebNavigator and WebUX

In the future, these SCADA options will have **standardized MLFBs as of V7.4 or V14** and therefore there will no longer be any in-house MLFBs for **WinCC V7.5 SP2** and **WinCC RT Professional V17**

### Separate Web licenses



### Combined Web licenses



## Scalable web access

### Switching between two license models:

Separate or combined Web-licenses

- WebUX Monitor Client (read only)
- WebUX Operate Client (read-write)
- Web Navigator Client (read-write)

### Web-Licenses are additive:

all Web-Clients = sum of the individual licenses (**countable**)

- (1, 3, 10, 30, 100 clients)
- Reserving licenses for users
- No update costs, because version-independent licenses (existing licenses remain valid after upgrade)

**1x WinCC WebUX Monitor Client FREE!**

Note: WebNavigator/DataMonitor licenses as of V7.4 can no longer be used for WinCC V7.3 WebNavigator/DataMonitor or older



# WinCC WebUX

## Order number

### WinCC WebUX (Monitor: Countable)

Description	Order number EU DVD	Online Software Download EU Download	Order number ASIA DVD
WinCC WebUX Monitor – 1 Client	<a href="#">6AV6362-2AB00-0BB0</a>	<a href="#">6AV6362-2AB00-0AH0</a>	<a href="#">6AV6362-2AB00-0BB0</a>
WinCC WebUX Monitor – 3 Clients	<a href="#">6AV6362-2AD00-0BB0</a>	<a href="#">6AV6362-2AD00-0AH0</a>	<a href="#">6AV6362-2AD00-0BB0</a>
WinCC WebUX Monitor – 10 Clients	<a href="#">6AV6362-2AF00-0BB0</a>	<a href="#">6AV6362-2AF00-0AH0</a>	<a href="#">6AV6362-2AF00-0BB0</a>
WinCC WebUX Monitor – 30 Clients	<a href="#">6AV6362-2AJ00-0BB0</a>	<a href="#">6AV6362-2AJ00-0AH0</a>	<a href="#">6AV6362-2AJ00-0BB0</a>
WinCC WebUX Monitor – 100 Clients	<a href="#">6AV6362-2AM00-0BB0</a>	<a href="#">6AV6362-2AM00-0AH0</a>	<a href="#">6AV6362-2AM00-0BB0</a>

### WinCC WebUX (Monitor and Operate: Countable)

Description	Order number EU DVD	Online Software Download EU Download	Order number ASIA DVD
WinCC WebUX Operate – 1 Client	<a href="#">6AV6362-2BB00-0BB0</a>	<a href="#">6AV6362-2BB00-0AH0</a>	<a href="#">6AV6362-2BB00-0BB0</a>
WinCC WebUX Operate – 3 Clients	<a href="#">6AV6362-2BD00-0BB0</a>	<a href="#">6AV6362-2BD00-0AH0</a>	<a href="#">6AV6362-2BD00-0BB0</a>
WinCC WebUX Operate – 10 Clients	<a href="#">6AV6362-2BF00-0BB0</a>	<a href="#">6AV6362-2BF00-0AH0</a>	<a href="#">6AV6362-2BF00-0BB0</a>
WinCC WebUX Operate – 30 Clients	<a href="#">6AV6362-2BJ00-0BB0</a>	<a href="#">6AV6362-2BJ00-0AH0</a>	<a href="#">6AV6362-2BJ00-0BB0</a>
WinCC WebUX Operate – 100 Clients	<a href="#">6AV6362-2BM00-0BB0</a>	<a href="#">6AV6362-2BM00-0AH0</a>	<a href="#">6AV6362-2BM00-0BB0</a>

**Please note:** The limited number of connections for Windows desktop operating systems

# WinCC V7.5 SP2

## In which use case V7 or WinCC RT Professional V17?

### Quantity structure

---

**18 Servers** each with 64 Clients **or 50 Multi-Clients**

### WinCC RT Professional V17 does not extend the range of functions

---

- No multi-client available
- Extended archiving (database, size, etc. ...)
- **Dynamic** properties in SVG graphics missing
- WebUX (Faceplate)
- Telecontrol Option missing
- Enhanced functionality for WinCC Audit
- WinCC V7 becomes the standard gateway for smart data in cloud solutions Integrated communication with the cloud through the standardized MQTT protocol



### Distributed system architecture

---

- With Multi-Clients
- WebNavigator Load balancing

### Standard monitoring function

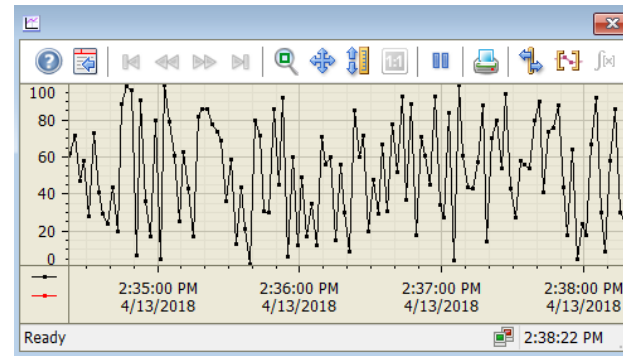
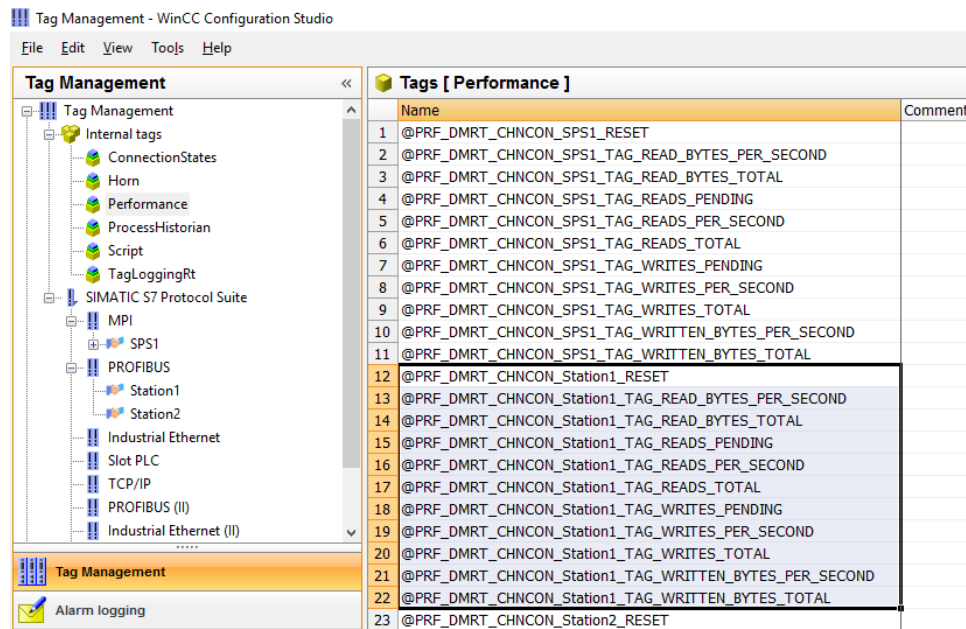
---

- **System Tags for Performance Monitoring**
  - Real-time information for archiving and communication connections
- Efficient Engineering:
- **New Tag Simulator** with significantly extended functionality
  - Support of MindSphere on “Alibaba Cloud”
  - Support of the S7-1500 R/H
  - Simulation of external Tags
  - The **REST interface** allows you to exchange data with a cloud or external applications using secure communication via flexible authentication mechanisms

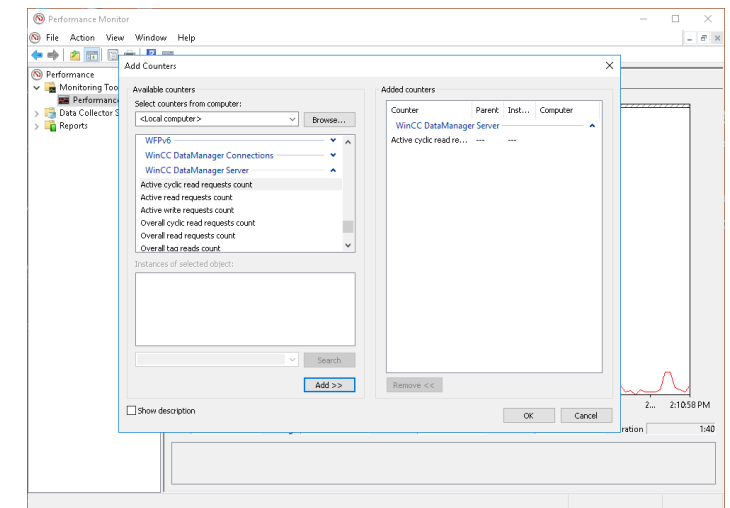
# WinCC V7.5 SP2

## New: System diagnostics with performance tags

- To analyze the WinCC project, WinCC provides the system variables “@PRF \_...”.
- This allows you to evaluate the time behavior of the server
- The WinCC Tag Management creates the system tags when creating a WinCC project. As soon as you create a new connection under a communication driver, additional performance variables are created for this connection



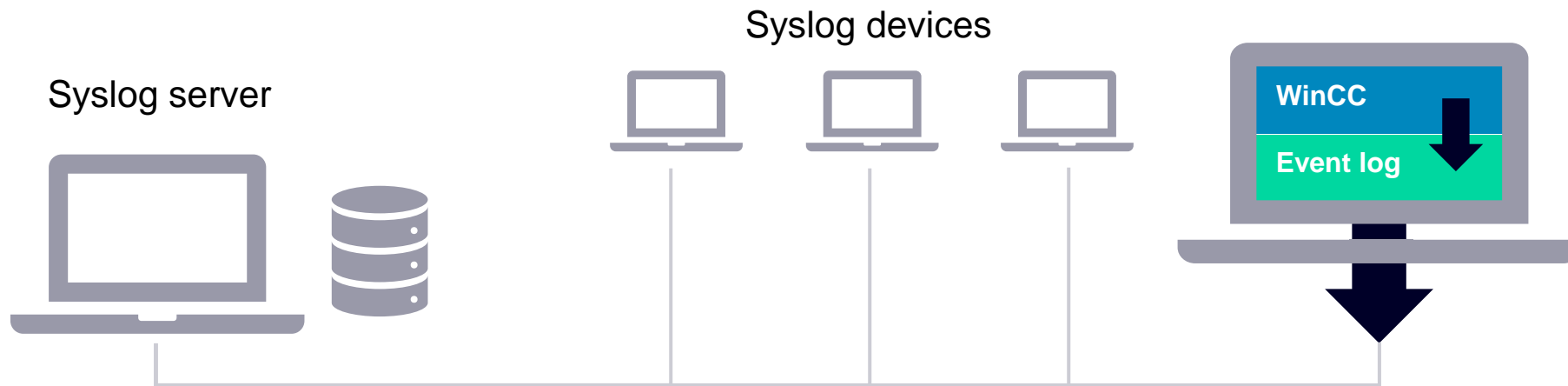
## Windows Performance Monitor



# Integrate WinCC via Audit and Windows event log in Syslog system

## What is Syslog?

The syslog protocol is a standardized way to transport messages from network devices to a logging server, typically known as a syslog server. Content can come from the operating system as well as from several applications on the devices.



**WinCC Audit** generates the **WinCC related content** and transfers the entries to **Windows event log**. The Windows event log can be integrated and serve a **Syslog system**.

# WinCC V7.5 SP2 Scalability

## Configuration principle and function tasks

**Summery quantity structure** – Following configurations were tested as typical scenarios

	Quantity	Comment
<b>WinCC Server-Server communication</b>	<b>18 Servers</b>	Connection to a multi-user system with MULIT-Clients has not been approved <ul style="list-style-type: none"><li>• One server can access the data from up to 17 other servers or redundant pairs of servers</li><li>• The server accessing the data behaves as a client in respect of the configuration and operation, except that a standard server cannot be configured</li></ul>
<b>WinCC Server or redundant Server pairs</b>	<b>18 Servers</b>	Access to a maximum of <b>18 WinCC servers</b> or redundant server pairs from WinCC MULTI-Clients
<b>WinCC UNI-Clients</b> (without their own project)	<b>64 Clients</b>	<b>Maximum of 64 WinCC UNI-Clients</b> interconnect to one Server. Redundant server pairs are possible
<b>WinCC MULTI-Clients</b> (with their own project)	<b>50 Clients</b>	<b>Maximum of 50 WinCC MULTI-Clients</b> in the WinCC distributed system. A maximum of 36 servers in the form of 18 redundant server pairs is possible
<b>WinCC WebN.-Clients</b>	<b>150 Clients</b>	
<b>WinCC WebUX-Clients</b>	<b>100 Clients</b>	As a typical scenario, we tested the simultaneous access of <b>100 WebUX-clients</b> to one WebUX server <ul style="list-style-type: none"><li>• 100 clients are not a “hard” system limit – it is technically possible to connect more than 100 clients simultaneously</li><li>• The performance depends on the employed hardware and the volume of process data</li></ul>

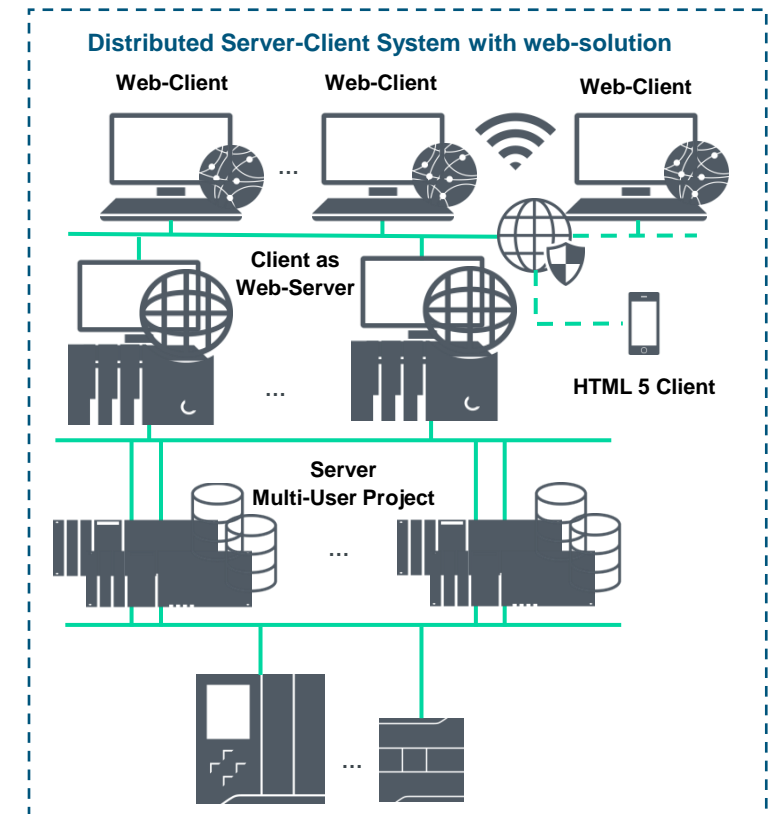
# WinCC V7.5 SP2 Scalability

## Configuration principle and function tasks

### Configuration of mixed systems (means minimum one UNI- and one MULTI-Client exist in the system)

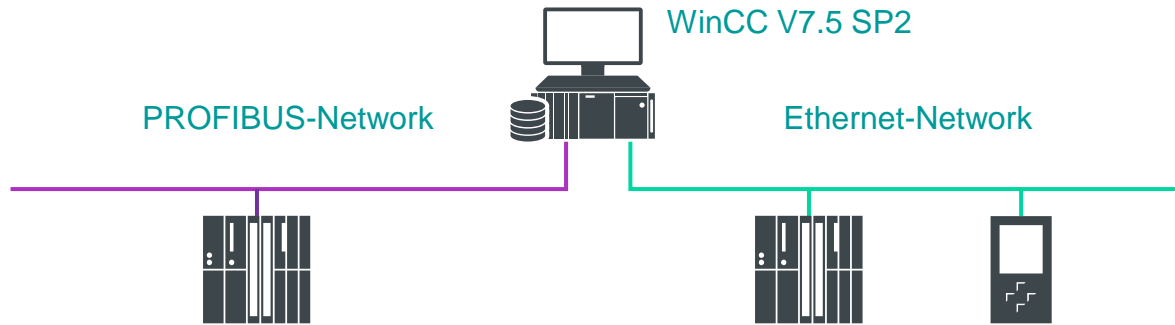
- Different quantity structures can be realized according to the type and number of client types used
- Mixed systems are possible, meaning the parallel use of clients with and without Web-Clients within one client/server system.
- When configuring a mixed system, the following rule of thumb should be observed to achieve the maximum quantity structures:
- Each client type has one value:
  - WebNavigator-Client/Thin-Client = 1
  - WebUX-Client/MULIT & UNI-Client = 2
  - UNI-Client with the “Configure remote” function = 4
- The total of all values of all clients should not exceed 120 per server in the case of WinCC servers without operating function
- In the case of servers with operating function, the total value should not exceed 32 <sup>1)</sup>

1) If the server is also used as operator station, then the number for this server is reduced to four clients.



# WinCC V7.5 SP2

## Process communication



### CP 5621 PCIe Softnet Grid size

Protocol operating distance Multi Point  
Interface/PROFIBUS included in WinCC

### CP 5613 A2 PCIe Hardnet Grid size

Protocol operating distance Multi Point  
Interface/PROFIBUS a license is required

E.g., for more than 8 Ethernet connections:

#### Ethernet-Card from PC:

- SOFTNET-IE S7 V16
  - **6GK1704-1CW16-0AA0**

#### with CP

- CP 1623 PCIe: 6GK1162-3AA00
- HARDNET-IE S7 V16 :  
**6GK1716-1CB16-0AA0**

### PC Ethernet Board

- Protocols 1200/1500, S7 TCP/IP, Ind. Eth
- licenses: Softnet S7 Lean/Basis included in WinCC 8 connections max.
  - **128 x S7-1500** connections max.
  - **64 x S7-1200** connections max.
  - **64 x S7-300/400** connections max.
- IF > 8 connections → Softnet-IE S7 license required or
- **CP 1623/1628 PCIe + licenses for Hardnet-IE S7**
- (S7 1613) required

# WinCC V7.5 SP2

## Process communication

### The included communication drivers do not require an additional license:

- Allen Bradley – Ethernet IP
- Mitsubishi Ethernet/iQF PLC
- Modbus TCP/IP
- OPC
- OPC UA
- PROFIBUS DP
- SIMATIC 505 TCP/IP



- SIMATIC
  - S5 Ethernet Layer 4
  - S5 Profibus FDL
  - S5 Programmers Port AS511
  - S5 Serial 3964R



- SIMATIC
  - S7 Protocol Suite
  - S7-1200, S7-1500
  - TI Ethernet Layer 4
  - TI Serial
- SIMOTION
- System Info



#### Additional information:

Notes regarding secure communication through the **TLS protocol via the SIMATIC S7-1200/S7-1500 channel** using WinCC V7.5 SP2 Update 4

[SIOS Link](#)



# WinCC V7.5 SP2

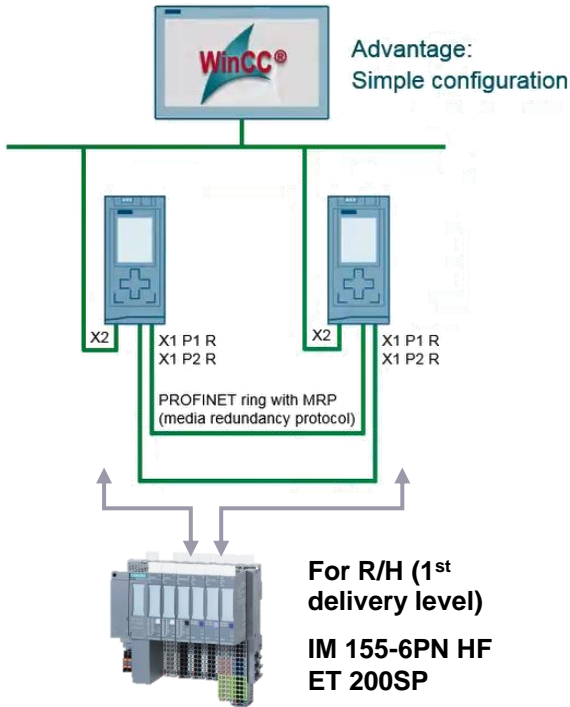
## Extended support of the S7-1500 R/H

### Increased availability and reliability through redundant automation systems with S7-1500R/H controllers



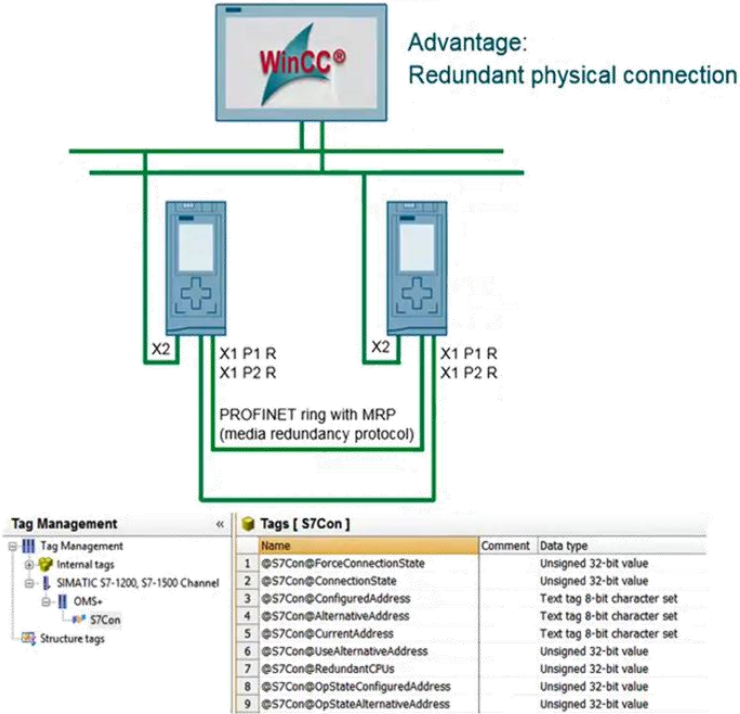
Communication with R/H Systems by using the “System IP Address”

#### Communication via Symbol-IP-Address



For R/H (1<sup>st</sup> delivery level)  
IM 155-6PN HF  
ET 200SP

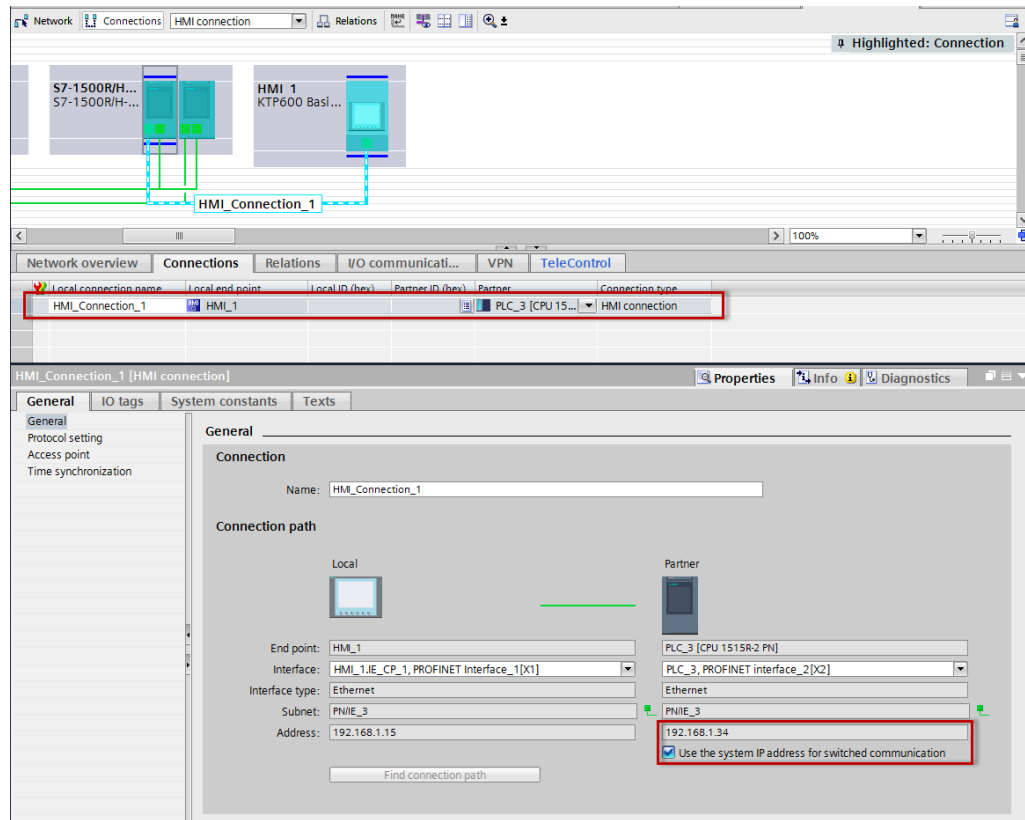
#### “Software redundancy” Communication via Device-IP-Address



# WinCC V7.5 SP2 Communication

## S7-1500 H/R – With the System-IP

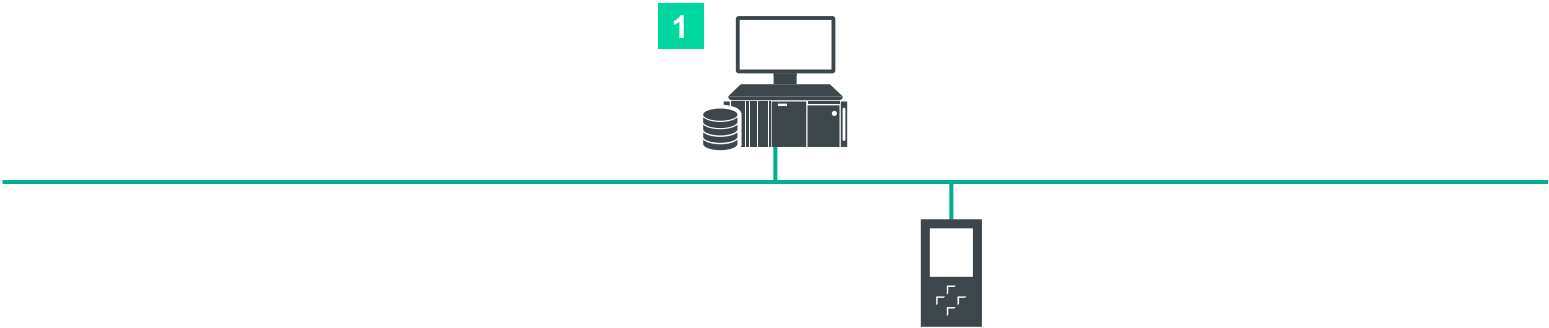
The System-IP has to be configured. The HMI-Connection will be configured with the IP-Address



# Single-user station

## Monitoring/Operating from a single PC

Single-user station  
WinCC V7.5 SP2 engineering Station + RT



### Additional Information

**Quantity:** Process Variables: Up to 262,144 (depending on the license selected)  
Archiving variables: **Max. 80,000** (based on the WinCC Tag Logging option)  
(Reminder: The WinCC V7.5 SP2 base includes 512 archiving variables)

### WinCC V7.5 SP2

#### WinCC V7.5 SP2 RC/RT n

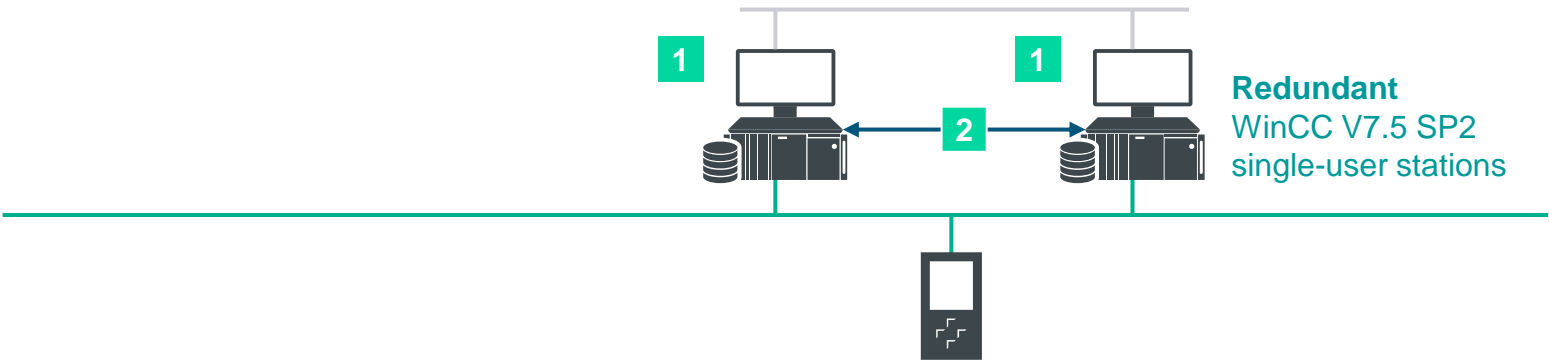
E.g.

WinCC V7.5 SP2	128
WinCC V7.5 SP2	512
WinCC V7.5 SP2	2,048
WinCC V7.5 SP2	8,192
WinCC V7.5 SP2	65,536
WinCC V7.5 SP2	102,400
WinCC V7.5 SP2	153,600
WinCC V7.5 SP2	262,144

#### SIMATIC Net V16

# Redundant Single-user stations

2 monitoring/operating stations with high availability



## WinCC V7.5 SP2

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC Redundancy

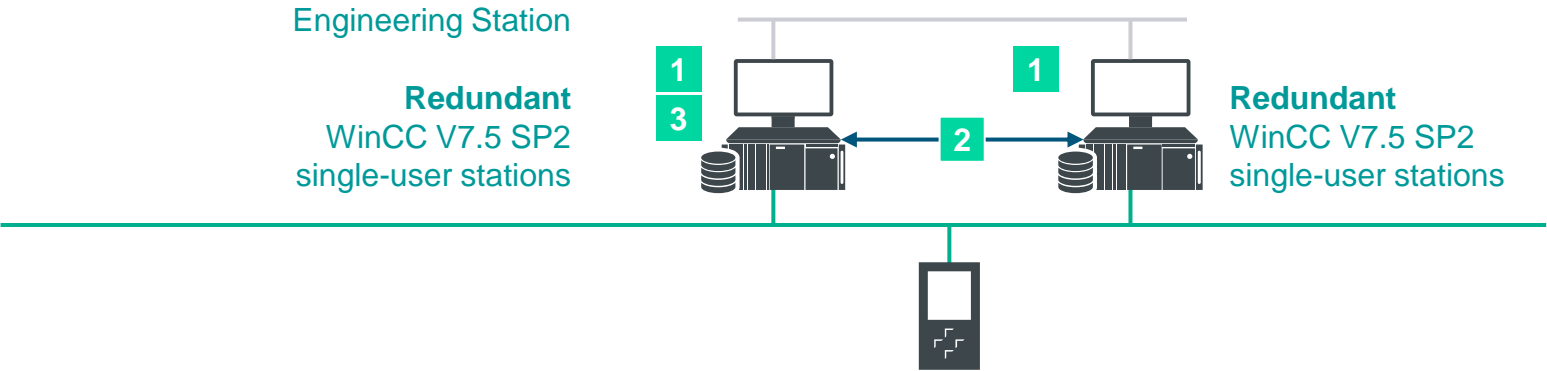
MLFB: 6AV6371-1CF07-5AX0

2

### Additional Information

Both stations work in parallel (both are connected to the process). In case of a breakdown of one of the 2 WinCC stations, the other takes over the archiving of messages, process Data and user archive data (Recipe). Automatic synchronization of all archives after resumption of normal operation.

# Redundant engineering single-user stations



## Please note

WinCC V7.5 SP2 RC license has to be installed at one station to implement modifications (longer than 1 h) to the WinCC project.

## WinCC V7.5 SP2

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC Redundancy

MLFB: 6AV6371-1CF07-5AX0

2

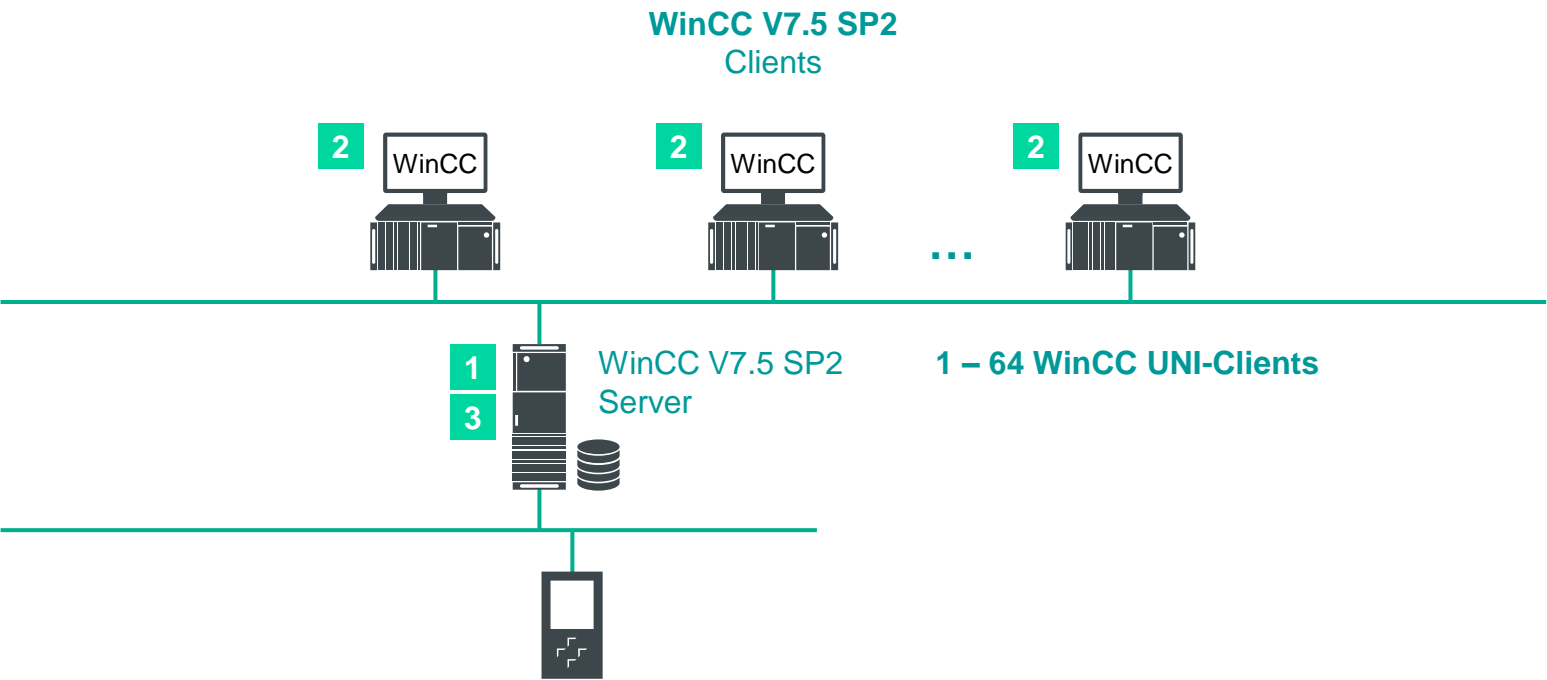
## WinCC Engineering

WinCC V7.5 SP2 RC n

3

# Multi-user stations

Central server with monitoring/operation stations – Standard-client (UNI-Client)



## Please note

A Standard-Client has no WinCC project and is connected to a very specific server from which he retrieves data and views.

**WinCC V7.5 SP2**  
WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

**WinCC Client**  
MLFB: 6AV6381-2CA07-5AX0

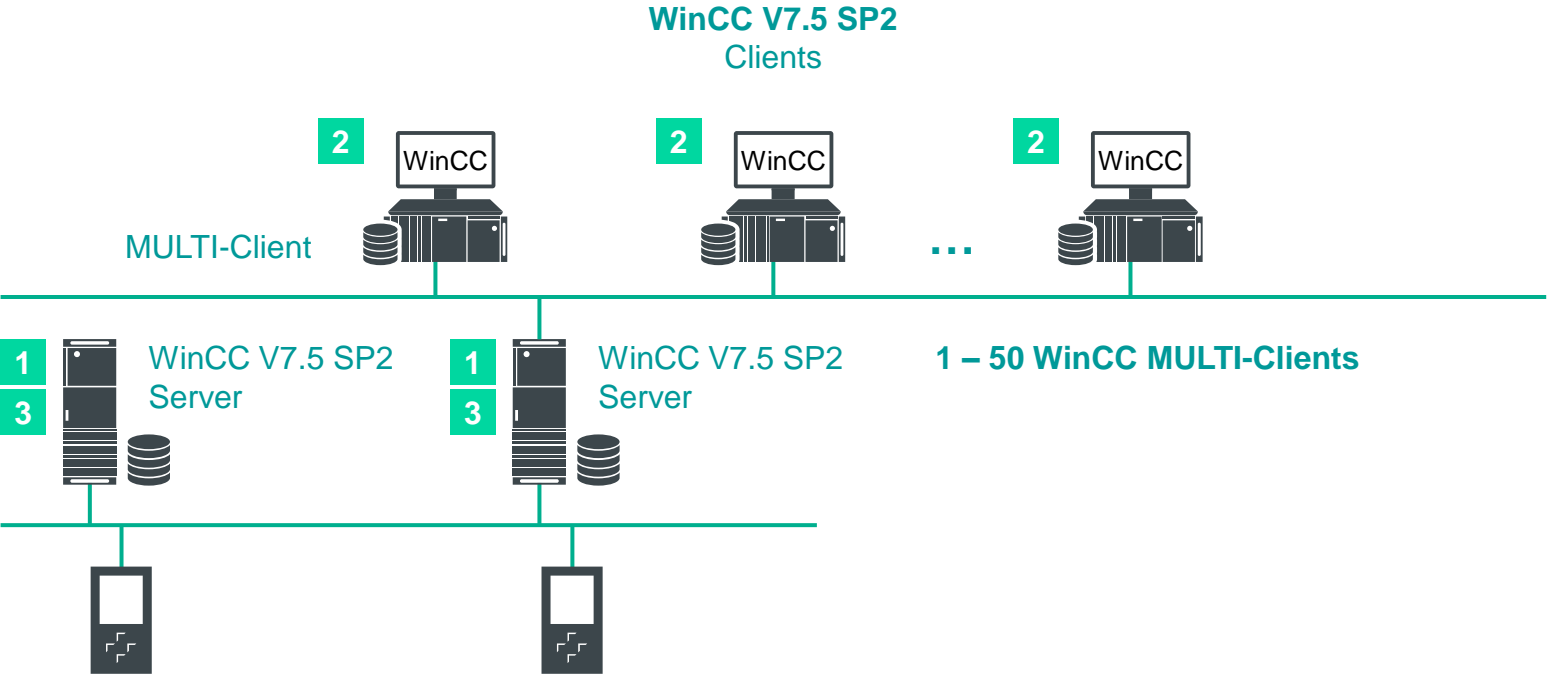
2

**WinCC Server**  
MLFB: 6AV6371-1CA07-5AX0

3

# Multi-user stations

## Central server with monitoring/operation station – MULTI-Clients



### Please note

A MULTI-Client with their own WinCC project and is connected to a very specific server from which he retrieves data and views.

### WinCC V7.5 SP2

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

### WinCC Client

MLFB: 6AV6381-2CA07-5AX0

2

### WinCC Server

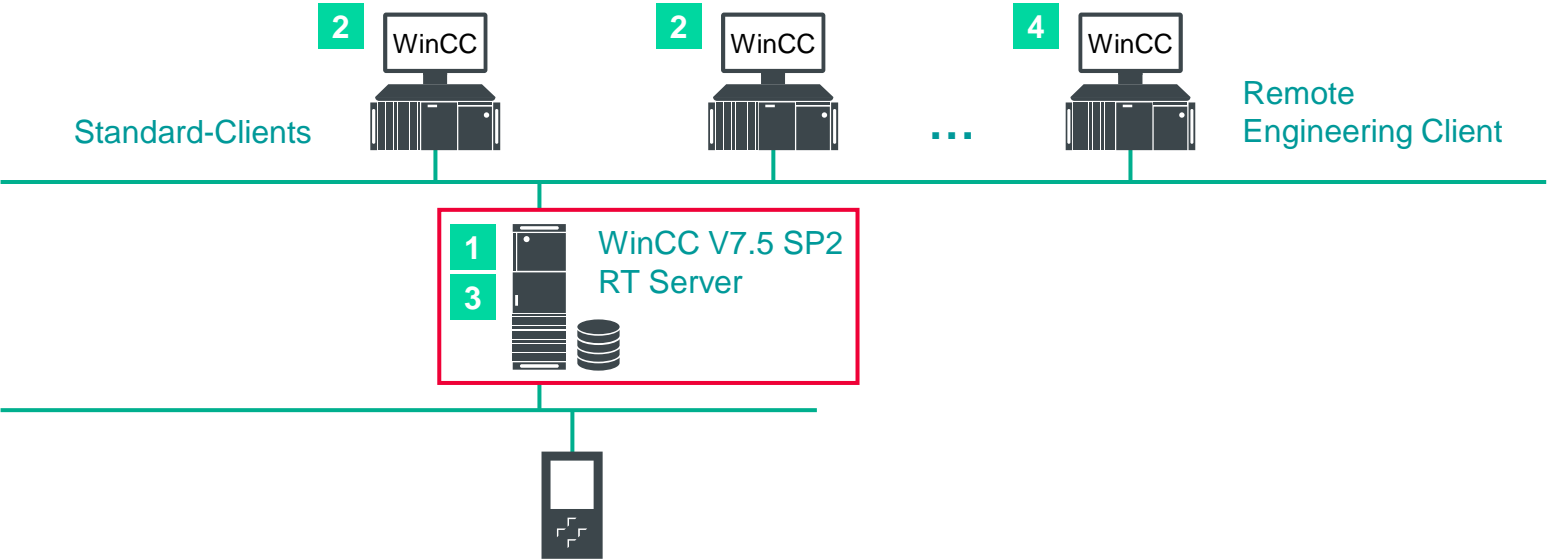
MLFB: 6AV6371-1CA07-5AX0

3

# Multi-user stations with multi-clients

## Engineering – Deployment on the server

**Case 1:** The Engineering license is on the server. You can work directly on the project located on the server to make changes



### Please note: Differences relative to the preceding case

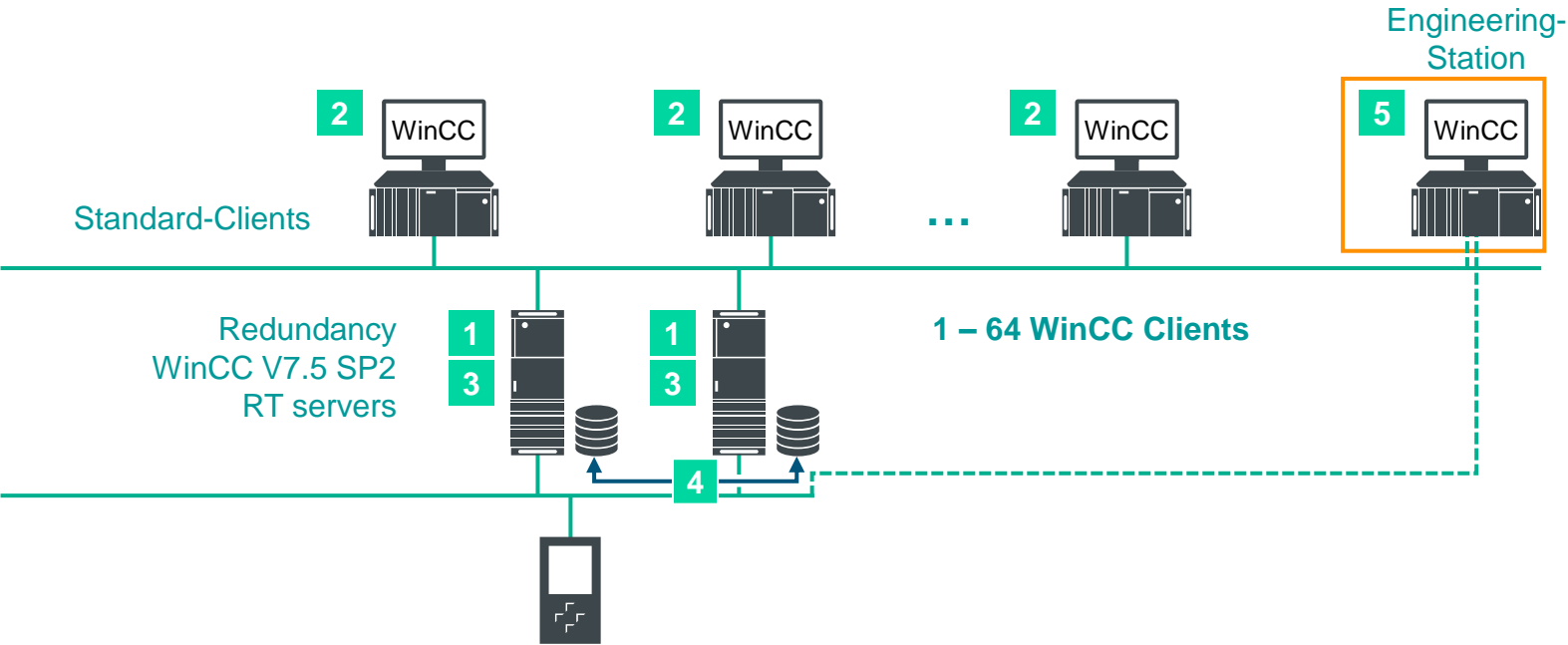
The Engineering license (RC) must be added on the server.  
In case of changes, some changes may require shutting down the server.  
Furthermore, any inadvertent error may cause the server to crash!

<b>WinCC V7.5 SP2</b> WinCC V7.5 SP2 RT n	1
<b>WinCC Client</b> MLFB: 6AV6381-2CA07-5AX0	2
<b>WinCC Server</b> MLFB: 6AV6371-1CA07-5AX0	3
<b>WinCC Engineering</b> RC Client: MLFB: 6AV6381-2CB07-5AX0	4



# Multi-Client stations/Server with Redundancy

## High availability



### Please note

Due to the redundancy of the servers, the Clients can continue to work in case of a server crash. The data are synchronized across the servers and the database is entirely replicated when operations return to normal.

### WinCC V7.5 SP2

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

### WinCC Client

MLFB: 6AV6381-2CA07-5AX0

2

### WinCC Server

MLFB: 6AV6371-1CA07-5AX0

3

### WinCC Redundancy

MLFB: 6AV6371-1CF07-5AX0

4

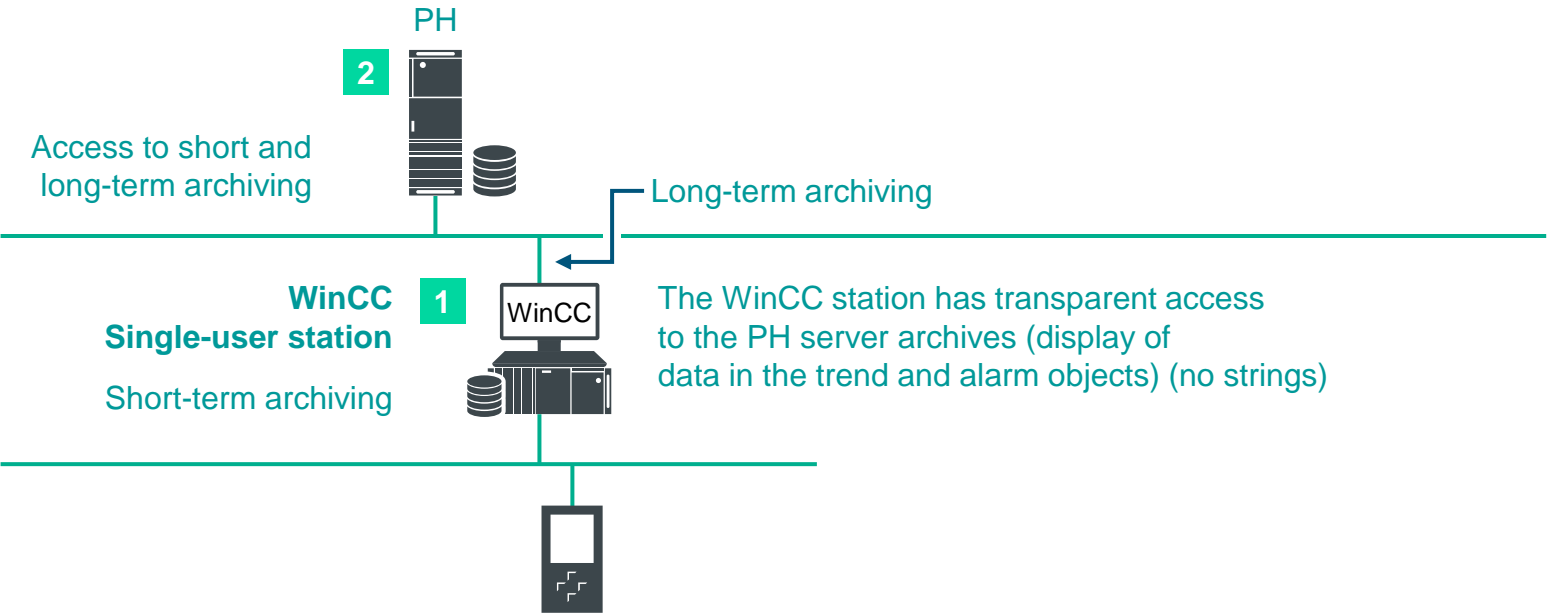
### WinCC Engineering

WinCC V7.5 SP2 RC n

5

# Dedicated archives server (SIMATIC ProcessHistorian 2014)

## Data archiving



### Additional Information

Process Historian is installed only on one OS Server <sup>1)</sup>. WinCC is not required (and must not be installed) on a PH server. The Alarm Logging and Tag Logging archives are transferred to the PH server in realtime with a secure connection. If the communication is interrupted, the data is buffered on the WinCC computer (Store and Forward Cache)

### WinCC V7.5 SP2 basic package

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

### SIMATIC ProcessHistorian 2014 SP3 Upd4 / Upd5

MLFB: 6AV6361-1AA01-4AA0

#### <sup>1)</sup>Operating system

- Windows Server 2008 R2 SP1 64 Bit
- Windows Server 2012 R2 64 Bit
- Windows Server 2016 64-Bit

Microsoft SQL Server 2014 SP2 64 Bit

2

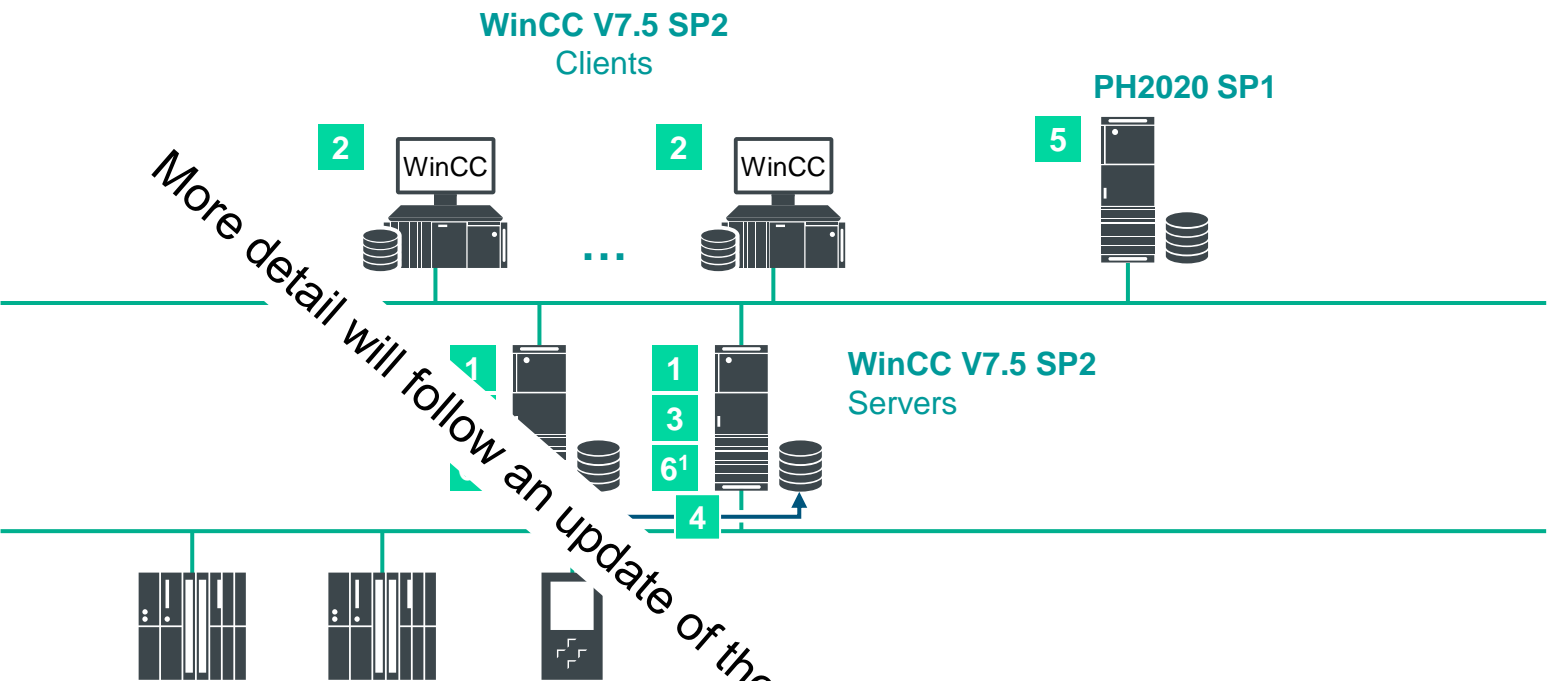
## Important information to Process Historian / Information Server 2020

SIMATIC Process Historian 2020 SP1 planned for Q4/2021

More detail will follow an update of these slides 09/2021

# Archive server (SIMATIC ProcessHistorian 2020 SP1)

Centralized data archiving *only for new Projects*



## Additional Information

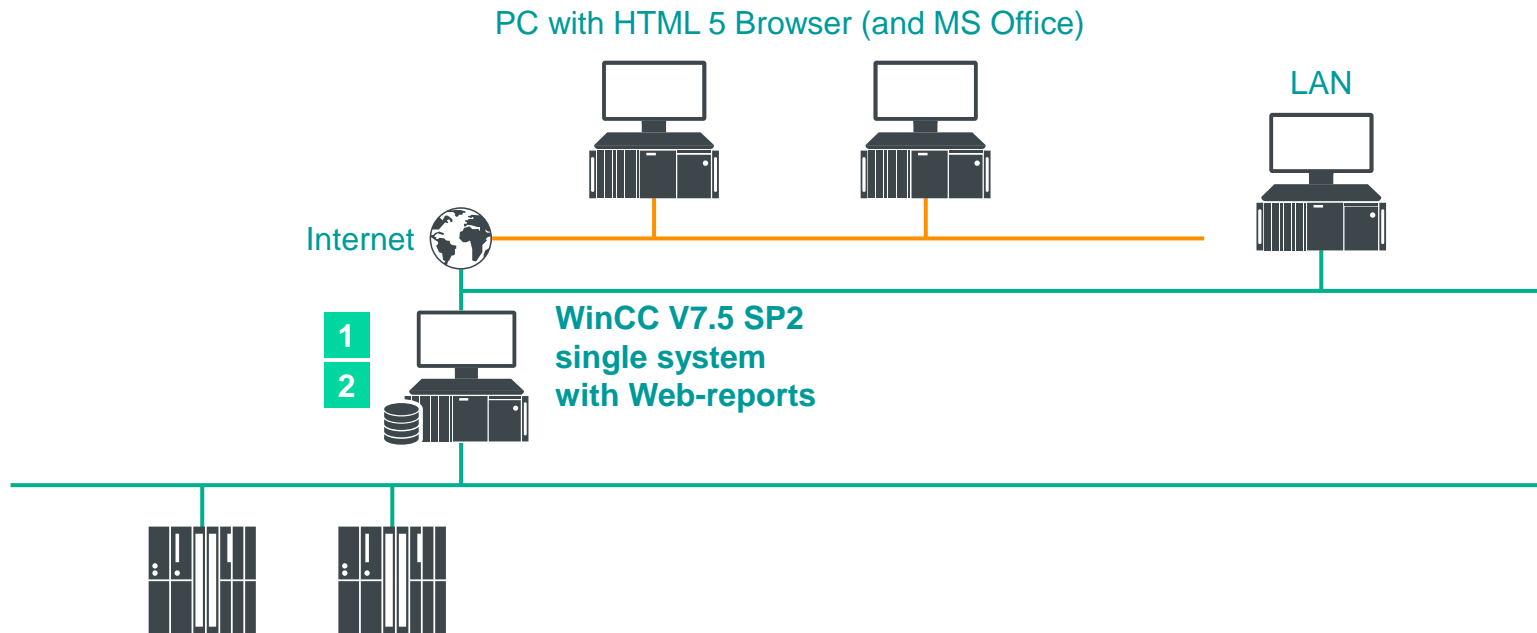
All archive tags and the messages of all servers are stored centrally on the PH server. The administration and configuration of the data is still carried out in WinCC, so a configuration in the PH is not necessary again. The clients transparently access the data on the servers and the PH server.

1 There is no archive license on the PH server. If required, the archive licenses are located on the selected servers and/or single-user computers.

WinCC V7.5 SP2 basic package WinCC V7.5 SP2 RT n SIMATIC Net V16	1
WinCC Client MLFB: 6AV6381-2CA07-5AX0	2
WinCC Server MLFB: 6AV6371-1CA07-5AX0	3
WinCC Redundancy MLFB: 6AV6371-1CF07-5AX0	4
ProcessHistorian 2020 SP1 Basic Package MLFB: ???	5
WinCC Tag Logging – Optionally with > 512 archives E.g., for 5,000 archive tags MLFB: 6AV6371-1DQ17-5BX0	6

# SIMATIC Information Server 2014 SP3

## Web Reporting System



## Additional Information

**IS and DataMonitor can be installed and used on the same computer.**

## Standard- and user-specific reports (with report builder of MS SQL reporting services)

Transparent accesses on WinCC Archive with Office add-ins for Microsoft Excel, PowerPoint and Word, for the following 32-bit Office versions (professional): 2007 SP3, 2010 SP1, 2013, 2016.

# WinCC V7.5 SP2 Basic

**WinCC V7.5 SP2 RT n**  
**SIMATIC Net V16**

1

# SIMATIC Information Server 2014 SP3 Upd4 / Upd5 Basic package

MLFB: [6AV6361-2AA01-5AH0](#)

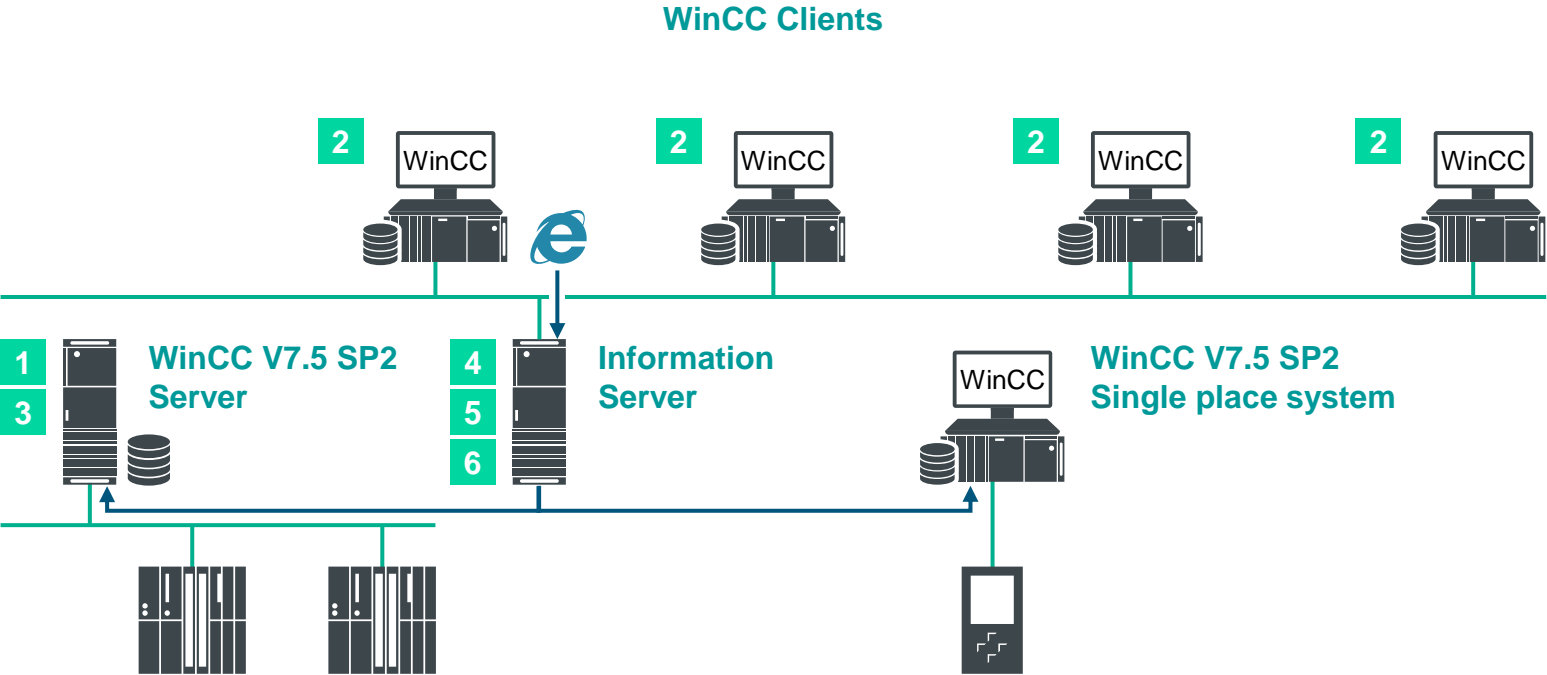
**The basic package includes:**

- 1x data source access  
(connection with a WinCC-database)
- 3x client access  
(three client-accesses at the same time)

2

# SIMATIC Information Server

## Web Reporting System



### Additional Information

The client access- and data source access-licenses are required parallel.  
In our example there are max. four clients simultaneously and two WinCC-data sources.

#### WinCC V7.5 SP2 RT basic package

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

#### WinCC Client

MLFB: 6AV6381-2CA07-5AX0

2

#### WinCC Server

MLFB: 6AV6371-1CA07-5AX0

3

#### WinCC IS 2014 SP3 Upd4 / Upd5 basic package (contains 3 client access licenses)

MLFB: [6AV6361-2AA01-4AH0](#)

4

#### WinCC IS Client Access (1)

MLFB: [6AV6361-2BD00-0AJ0](#)

5

#### WinCC IS Datasource Access (2)

MLFB: 2 x [6AV6361-2CD00-0AJ0](#)

6

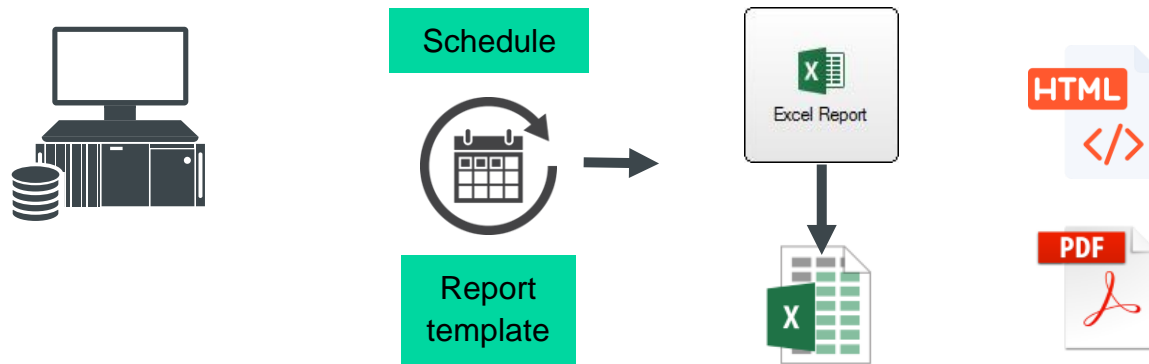
# WinCC Premium Add-ons

## Analysis + Reporting with PM-ANALYZE

**Archiving, Display and analysis of alarms from several different systems in chronological order**

- SIMATIC WinCC V7
- PCS7
- WinCC
  - Comfort/RT Professional
  - Advanced
  - Flexible
- Event log of the operating system

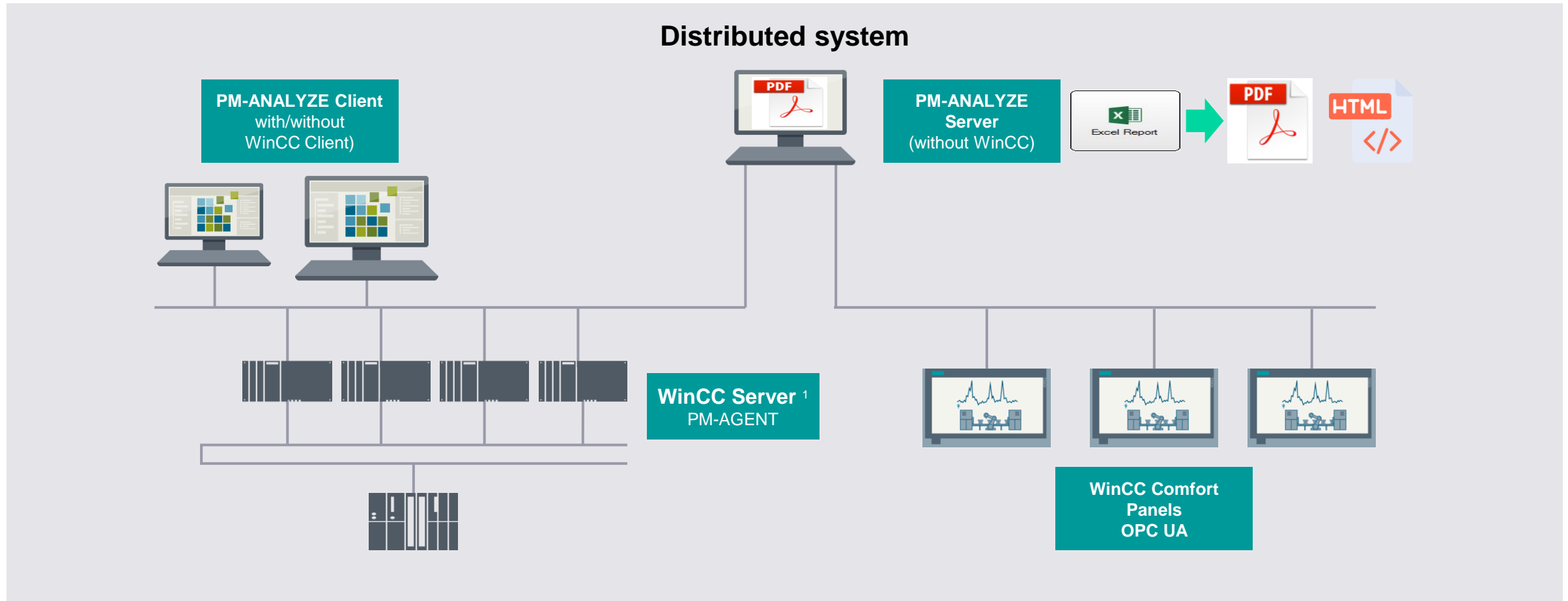
- Database and archiving
- Manual input values
- Reporting with Microsoft Excel
- Automatic report generation
- Add-in for Microsoft Excel 2013, 2016, 2019
  - Access to all process value and summarization archives
  - Access to calculated values and key figures
  - Access to messages and operating actions



# WinCC Premium Add-ons

## Analysis + Reporting with PM-ANALYZE

### Installation variants

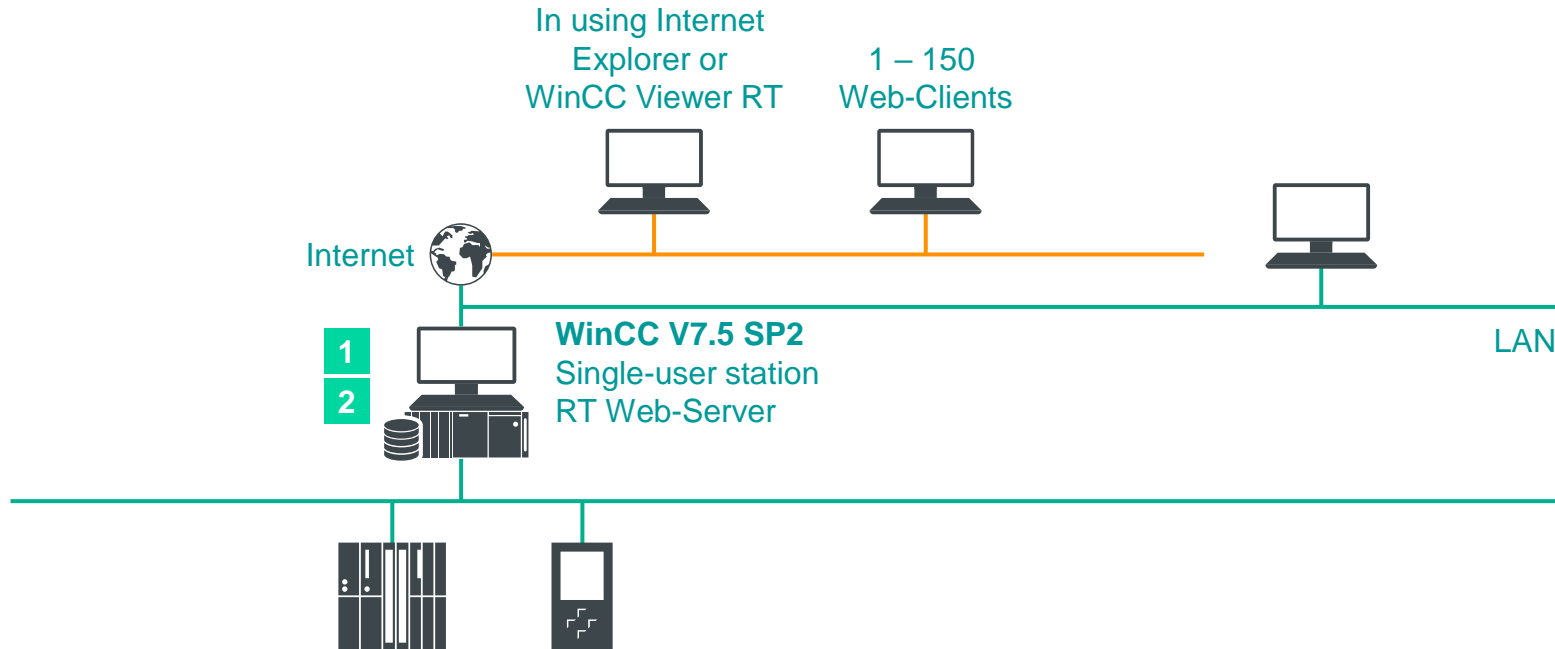


<sup>1</sup> The installation on a separate server requires a Microsoft SQL Server 2008, 2014, 2016 (32/64)



# Single-user station Web-server

Remote monitoring/operation stations and display and analysis for Web-client



## Additional Information

**WinCC/WebNavigator** allows remote PC-stations to behave as **monitoring/operating stations** via a local Intranet or via the Internet.

**WinCC/DataMonitor** serves to evaluate the real-time data, archives or alarms of the process and to Distribute them via an Intranet or Internet in **Display mode only!**

In all cases, a Web license for n Clients allows n clients to log in at the same time to the WinCC Web-server.

## WinCC V7.5 SP2 Basic

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC WebNavigator

E.g., for 3 Clients  
MLFB: 6AV6362-1AD00-0BB0

and/or

2

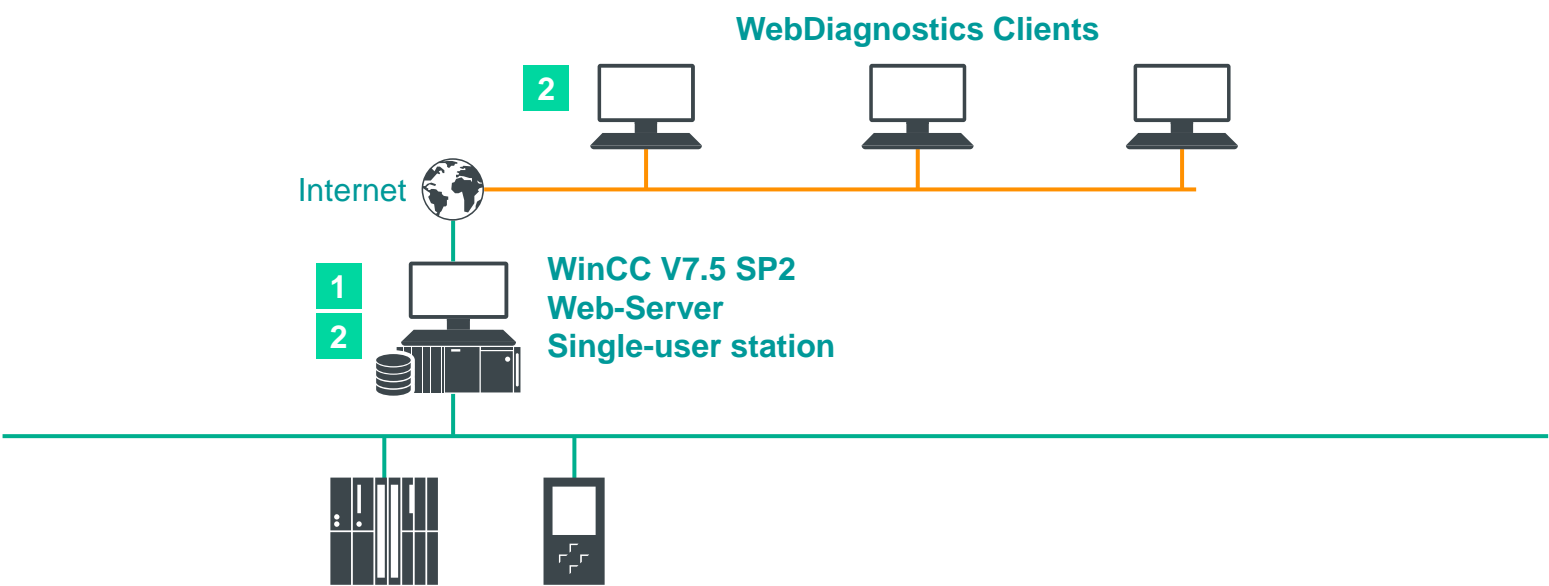
## WinCC DataMonitor

E.g., for 1 Clients  
MLFB: 6AV6362-3AD00-0BB0

2

# Single-user station Web-server

A particular case for 1 Web connection (WebNavigator diagnostics)



## Additional Information

In contrast to the preceding case, a token is assigned to a Web-client station and only that station will be able to connect to the Web-server (always via Intranet or Internet).

An additional diagnostic server license on the WebNavigator server is no longer necessary.

## WinCC V7.5 SP2 Basic

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

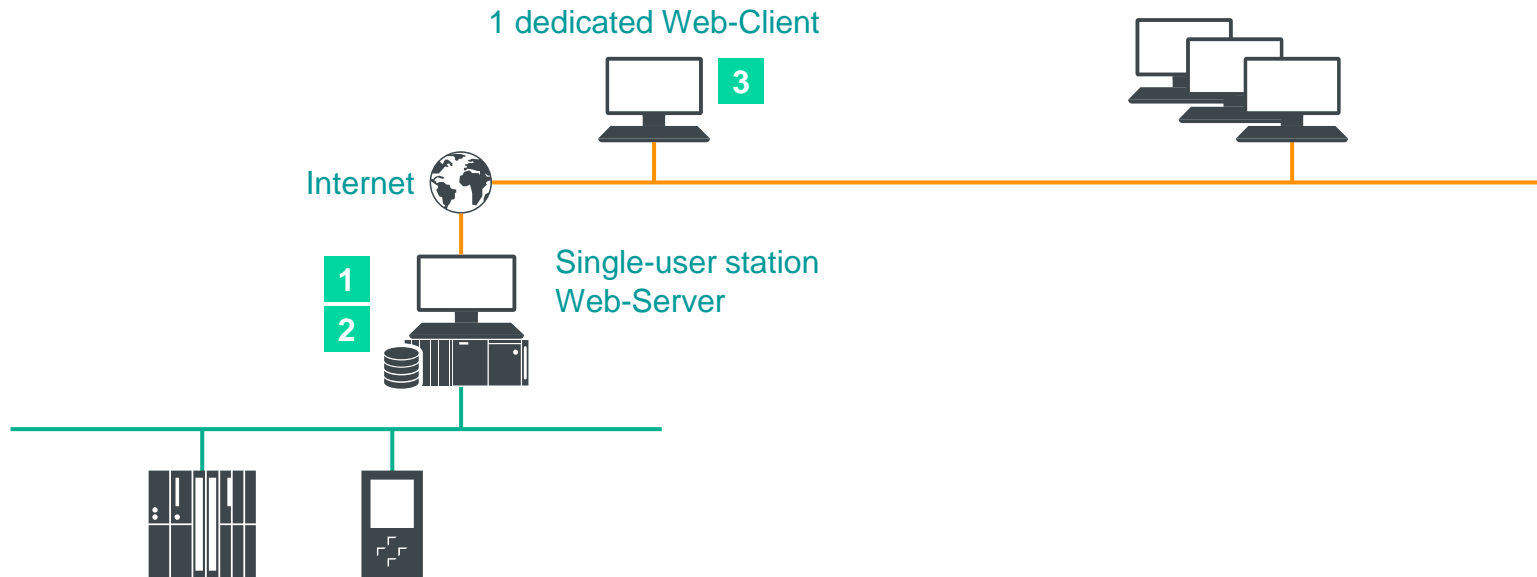
## WinCC WebDiagnostics Client

MLFB: 6AV6362-1BA00-0BB0

2

# Single-user station Web-server

## Combination of WebNavigator and Diagnostic Client licenses



### Additional Information

**In the case of 4 connections:** It is possible to use a 3-connections package that allows for the connection of 3 standard-clients with the addition of a 4<sup>th</sup> dedicated client with this Diagnostics license.

### WinCC V7.5 SP2 RT Basic

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

### WinCC WebNavigator

E.g., for 3 Clients  
MLFB: 6AV6362-1AD00-0BB0

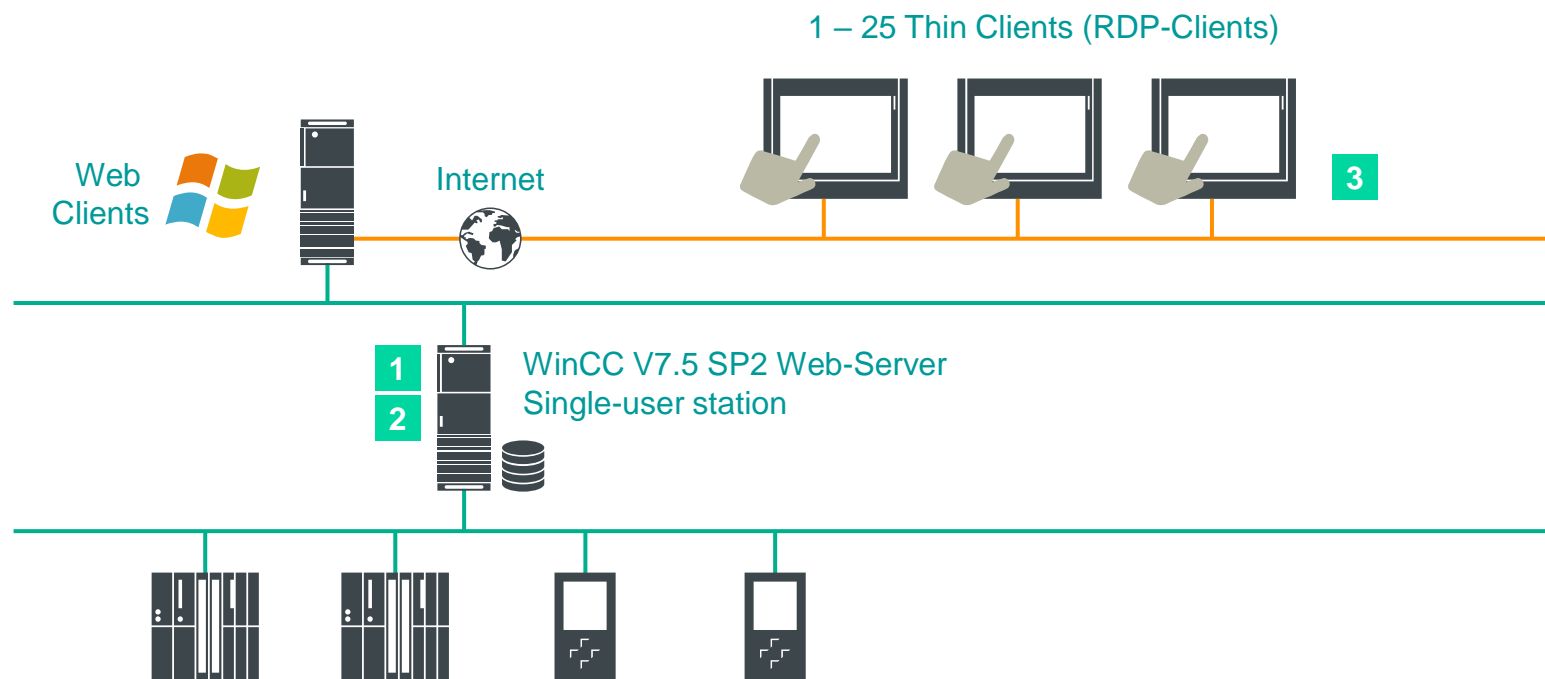
2

### WinCC WebDiagnostics Client

MLFB: 6AV6362-1BA00-0BB0

3

## Web-Solution 1 – Web Solution based on (RDP-Clients) on Industrial Thin-Client V3/Thin-Client V3 PRO



By using the services of the Windows Server Terminal, it is possible to use the functions of the WebNavigator or DataMonitor for thin Clients (low resources and operating system not supported by WinCC) e.g.: SIMATIC webpanel (customized Thin-Client)

### WinCC V7.5 SP2 basic package

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

### WinCC WebNavigator

E.g. für 10 Clients  
MLFB: 6AV6362-1AF00-0BB0

2

OR

### WinCC DataMonitor

E.g. Für 10 Clients  
MLFB: 6AV6362-3AF00-0BB0

2

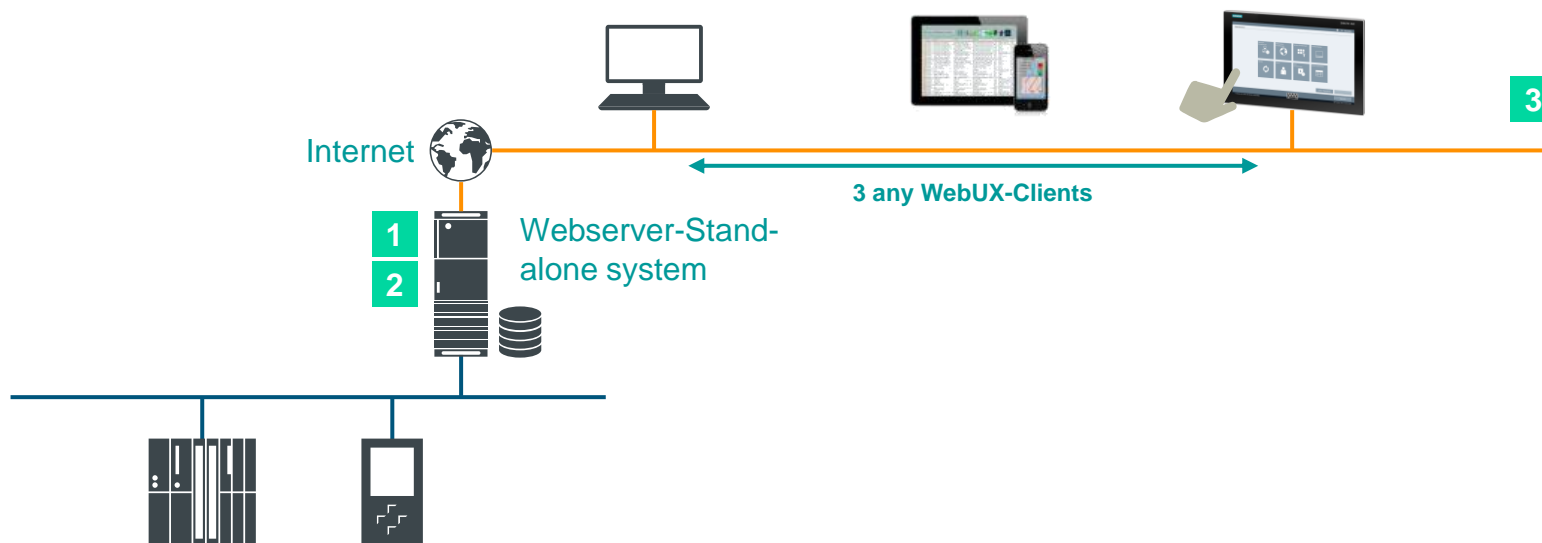
### Thin-Client V3/Thin-Client V3 PRO

6AV6646-1BA15-0AA0 SIMATIC ITC1500 V3  
6AV6646-1BA15-0NA0 SIMATIC ITC1500 V3  
6AV6646-1BA18-0AA0 SIMATIC ITC1900 V3  
6AV6646-1BA18-0NA0 SIMATIC ITC1900 V3  
6AV6646-1BA22-1AA0 SIMATIC ITC2200 V3  
6AV6646-1BA22-1NA0 SIMATIC ITC2200 V3

3

New update planned for Standard ThinClient V3  
in Q1 FY22 with new Browser update to latest  
Chromium Version

## Web Solution 2 – Operator control and monitoring of WinCC systems with **current** HTML 5 browser (Tablet/PC / WebPanel)



- WinCC clients run with the hypervisor system
- That WinCC systems run like a normal application in virtual machines
- WinCC itself can not be a virtual system on a hypervisor, but always requires a Windows VM
- WinCC servers can also be operated with the hypervisor system
- The number of WinCC clients/servers depends on the physical resources of the host computer

If you need a 19 / 22" web panel, it can be ordered on request from [ender.yuzbasioglu@siemens.com](mailto:ender.yuzbasioglu@siemens.com)

### WinCC V7.5 SP2 Basic package

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

### WinCC WebUX

E.g. WebUX Operate 3 Clients  
MLFB: 6AV6362-2BD00-0BB

2

### WebPanel (IWP1500MT)

MLFB: 6AV6646-7BA00-0AA0

#### Attention:

**The HTML browser (Mozilla Firefox) of the standard Thin-Client V3 is not suitable for WebUX!**

Please order the new WebPanel based on Thin Client V3 with the new Google Chrome browser =>V66

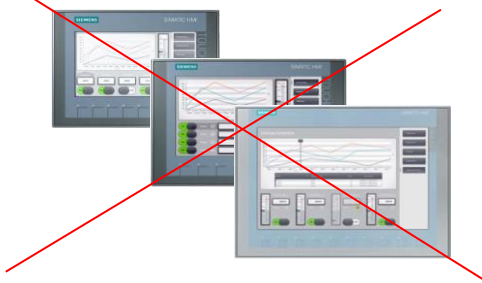
SIOS Link

3

SIEMENS

## Background information WebPanel / SIMATIC Industrial Thin Clients

- SIMATIC HMI IWP700 / IWP900 / IWP1200
- Based on SIMATIC HMI Basic Panels
- => **Not enough performance**



- SIMATIC Industrial Thin Client V3: 15", 19", 22"
- SIMATIC Industrial Thin Client V3 PRO: 15", 19", 22"

- Browser: based on **Firefox Version ESR 52**  
→ **not supported**



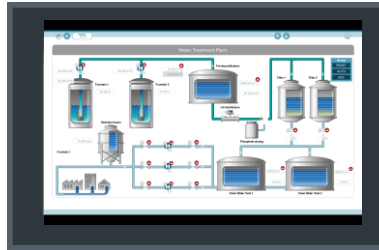
Restricted © Siemens AG 2021

### WebPanel 15"



(available with 19"/22" special order)

MLFB : 6AV6646-7BA00-0AA0



- Based on SIMATIC HMI
- ITC V3 Panels
- Size: 15"
- Display resolution: 1366x768
- Integrated current **Chromium Browser v66**

### SIMATIC Industrial Thin Clients



**Situation: Q1 2022**

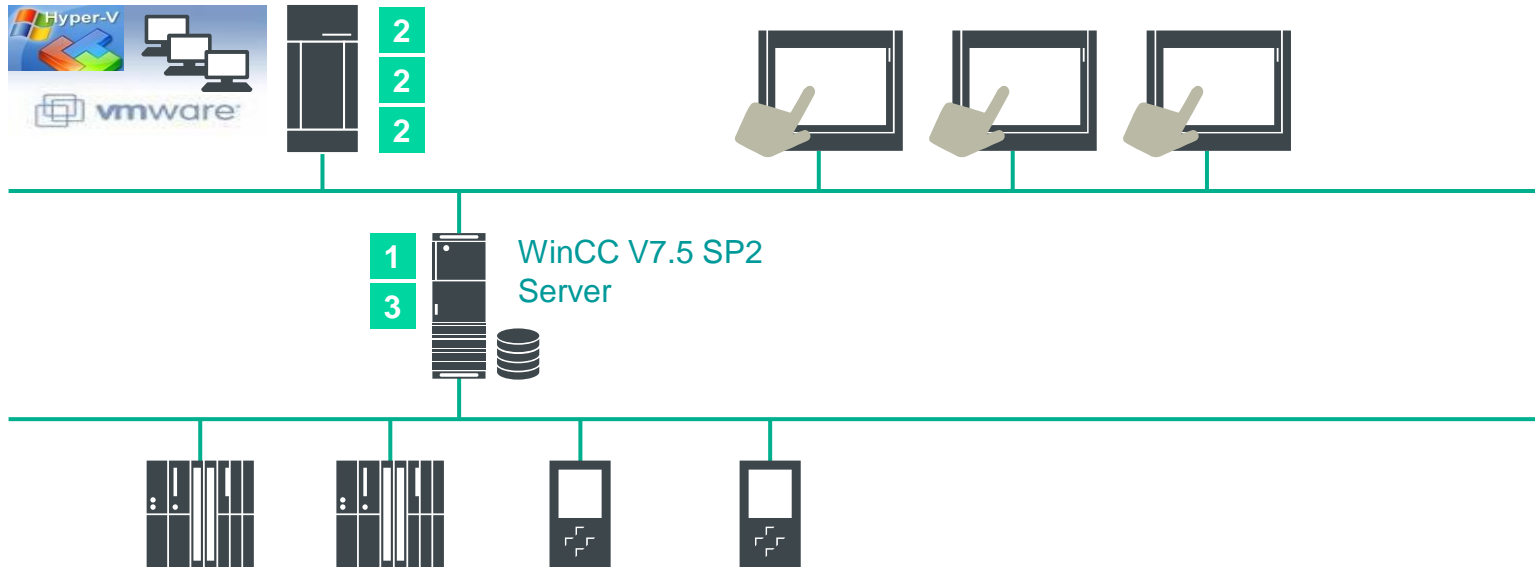


- More display sizes: 12" and 24"
- Update of SIMATIC Industrial Thin Client PRO: 12", 15", 19", 22", 24"
- Browser update to latest Chromium Version  
→ **supported**

# Virtualization for the clients and/or WinCC Servers

Beispiel: Virtuelle WinCC  
Clients on Hypervisor

Thin Clients via remote access to the  
WinCC clients of the host machine



- WinCC clients run with the hypervisor system
- That WinCC systems run like a normal application in virtual machines
- WinCC itself can not be a virtual system on a hypervisor, but always requires a Windows VM
- WinCC servers can also be operated with the hypervisor system
- The number of WinCC clients/servers depends on the physical resources of the host computer

## WinCC V7.5 SP2 basic package

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC Client

MLFB: 6AV6381-2CA07-5AX0

2

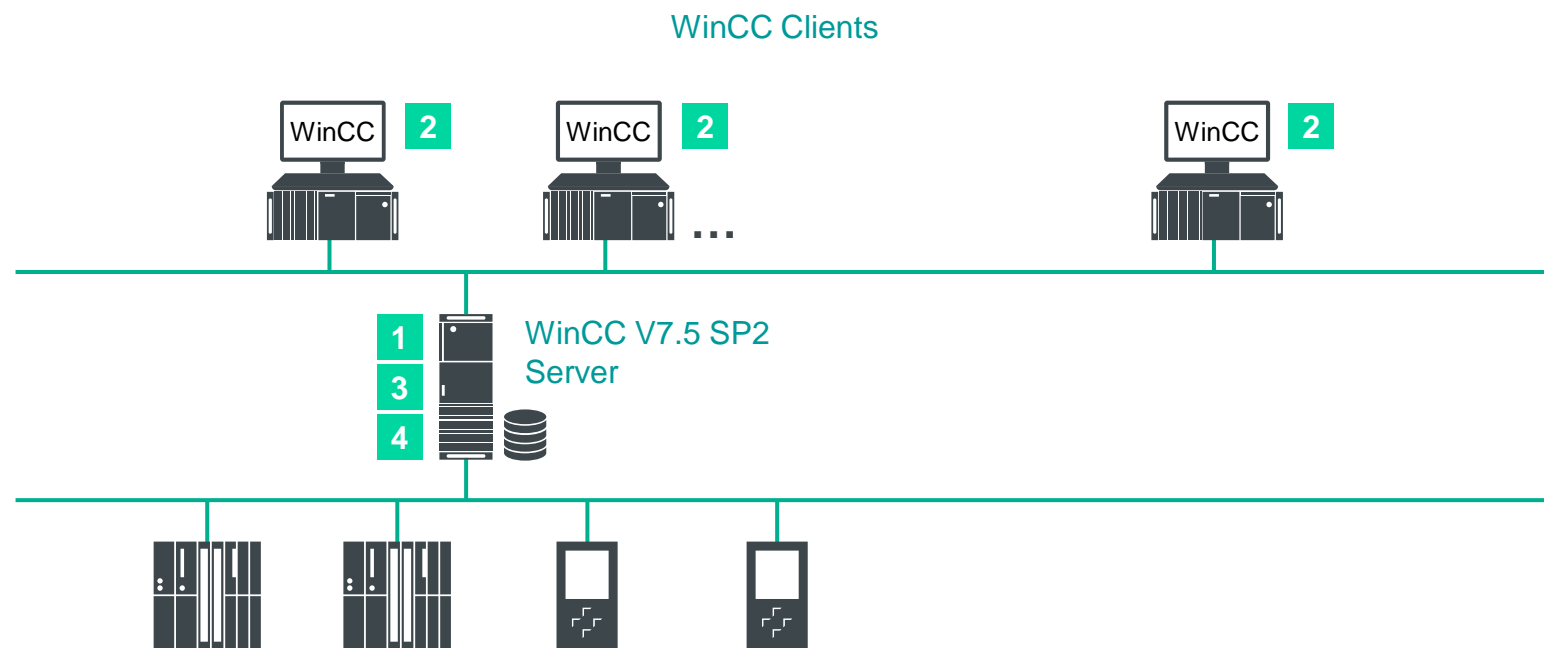
## WinCC Server

MLFB: 6AV6371-1CA07-5AX0

3

# WinCC V7.5 SP2 User archives

## User data management



- WinCC user archives allows a user to manage his archives in the form of tables
- E.g.: Management of recipes – management of batch parameters, etc.
- The user archive license is on the server
- The user archives component is installed for each Client but no user archives license is required for these customers

### WinCC V7.5 SP2 RT Basic

WinCC V7.5 SP2 RT client  
SIMATIC Net V16

1

### WinCC Client

MLFB: 6AV6381-2CA07-5AX0

2

### WinCC Server

MLFB: 6AV6371-1CA07-5AX0

3

### WinCC User archives

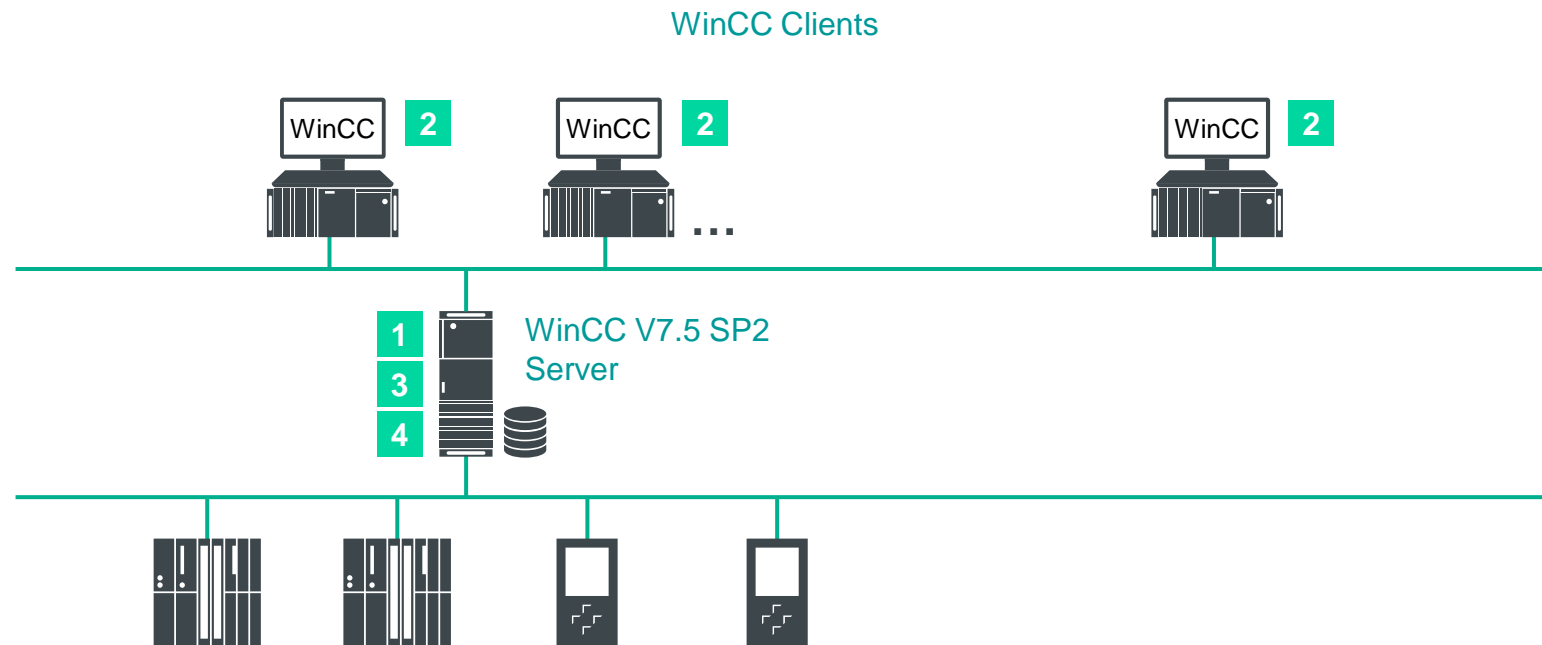
MLFB: 6AV6371-1CB07-5AX0

4



# WinCC Archives

## Archives tags



- With WinCC archive, the number of archive tags can be increased
- The base license is valid for 512 archive tags
- The archive license is located on the server
- Licenses are countable (which become 512 archive variables of the base package not added to the 5,000 archive tag package)
- You can increase the number of archive tags that need to be licensed by combining several packages

### WinCC Runtime

WinCC V7.5 SP2 RT n

1

### WinCC Client

MLFB: 6AV6381-2CA07-5AX0

2

### WinCC Server

MLFB: 6AV6371-1CA07-5AX0

3

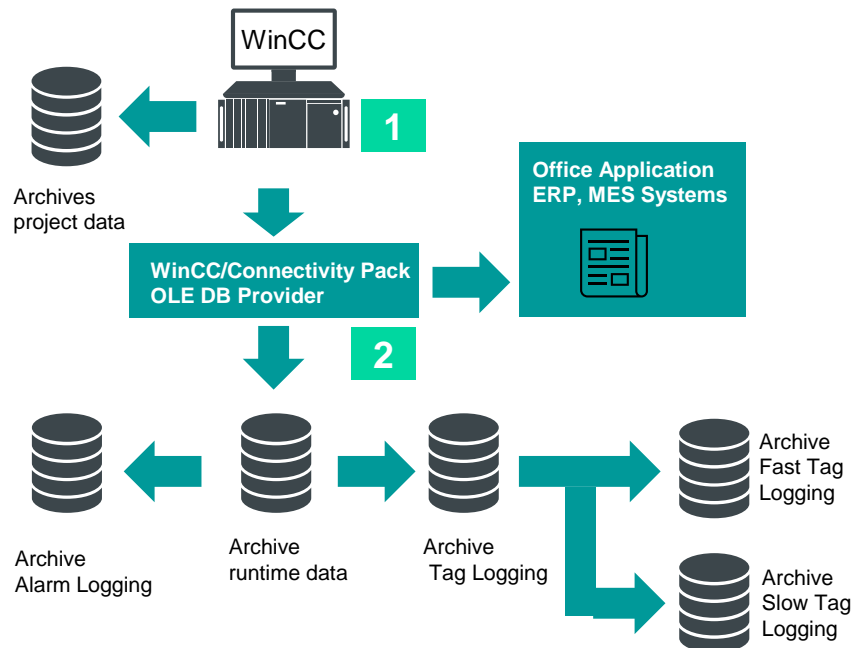
### WinCC Archives

E.g. 1,500 archives variables  
MLFB: 6AV6371-1DQ17-5AX0  
E.g. 5,000 archives variables  
MLFB: 6AV6371-1DQ17-5BX0

4

# Export of WinCC archive data with the SIMATIC WinCC/Connectivity Pack

WinCC stores the data compressed and binary coded in the archives. The archived process variables and messages can be displayed via WinCC controls. However, the underlying format is not suitable for analyzing and further processing the data. The SIMATIC WinCC/Connectivity Pack option is used to export the WinCC archive data. It provides the WinCC OLE DB provider. The WinCC OLE DB provider enables transparent access to the WinCC archive data.



## WinCC V7.5 SP2 Basis Package

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC/ConnectivityPack

MLFB: 6AV63711DR075AX0

2

## SIOS Link

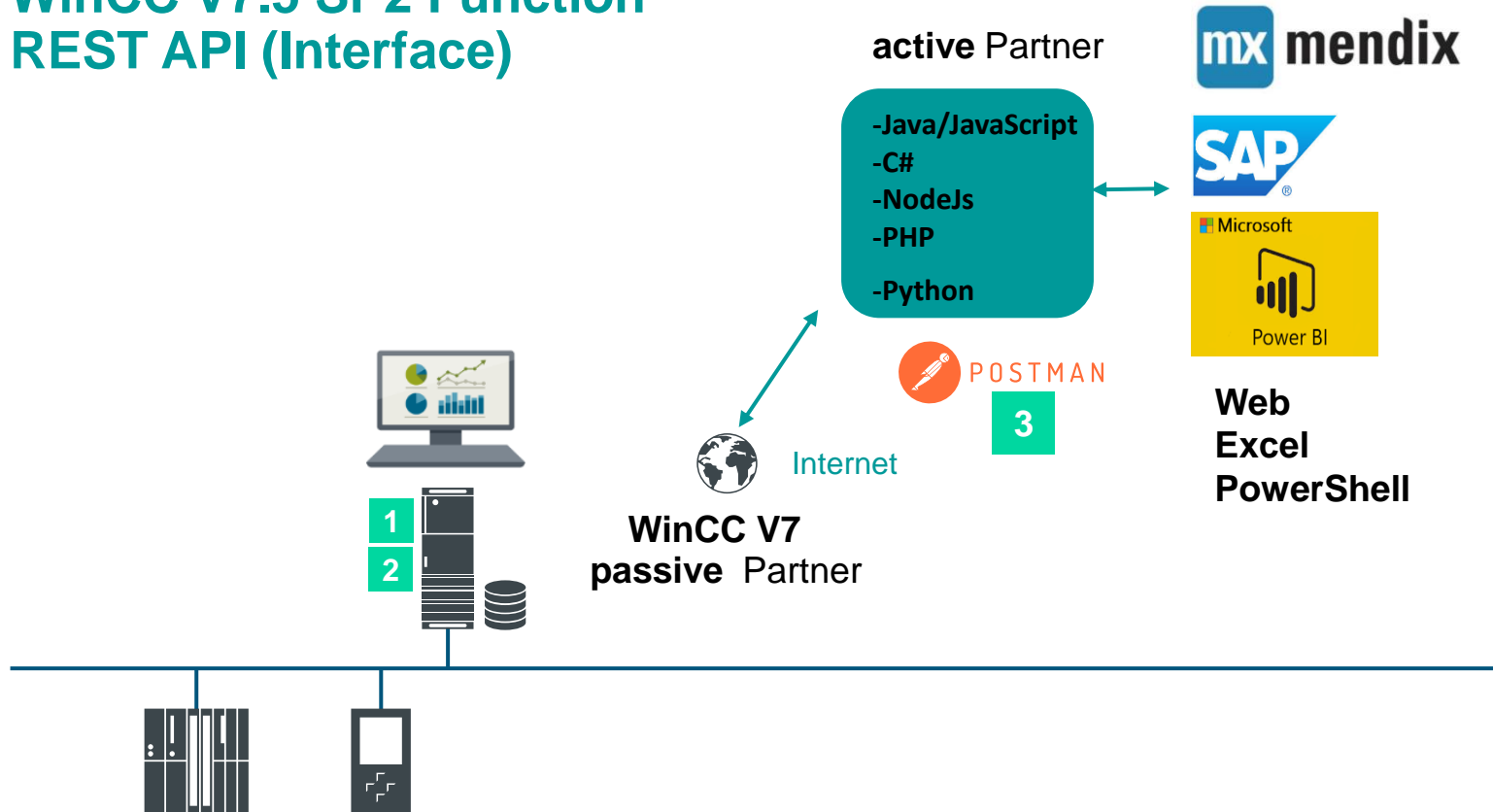
The following data can be exported :

- Archived process values
- Archived messages

Three variants are considered for the creation of the new data formats:

- Export of the archive data via a VB script in the WinCC project
- Export of the archive data via Visual Basic for Applications (VBA) with Excel
- Export of the archive data via MS SQL Server Management Studio

# WinCC V7.5 SP2 Function REST API (Interface)



## Additional Information

The REST interface offers the opportunity to get access to RT data

- Read Process Tags
- Write Process Tags

[SIOS Link](#)

## WinCC V7.5 SP2 Basis paket

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC/ConnectivityPack

MLFB: 6AV63711DR075AX0

2

Test tool :  
Postman

3

# WinCC V7.5 SP2 Function REST API (Interface)

REST stands for **RE**presentational **S**tate **T**ransfer

## Additional Information

### Most Used Programming Languages for APIs

- Java
- NodeJS / JavaScript
- Java (Android)
- Python
- PHP
- NodeJS
- cURL
- C# / .NET
- Objective-C

# Details WinCC V7.5 SP2

## REST interface for read and write tags

Tag Management

Tag Management

Internal tags

Tags [ Simulation ] - Search results

	Name	Value	Data type
1	RedTag	220	Unsigned 32-bit value

WinCC Cloud

WinCC Cloud	<input checked="" type="checkbox"/>
WinCC Cloud Cycle	1 min
Read authorization	Rest Interface
Write authorization	Rest Interface

Enable tags for the REST interface and assign the needed authorization from the User Administration

GET

https://WIN10-1909:34568/WinCCRestService/TagManagement/Value/RedTag


The connection can be tested with tools like Postman

Body Cookies Headers (4) Test Results

Pretty Raw Preview Visualize Text

1

```
{ "variableName": "RedTag", "dataType": 2, "value": "220", "timestamp": "2020-11-13T13:34:44.8220Z", "qualitycode": 128, "errorcode": 0 }
```

 POSTMAN

The REST interface offers the opportunity to get access to RT data with own applications like Mendix Apps or Power BI

Structure tag elements [ Line ] - Search results				
	Name	Value	Data type	Length
1	Line1.Energy	98	Unsigned 32-bit value	4
2	Line1.Progress	Heating	Text tag 8-bit character set	255
3	Line1.Quality	96	Unsigned 32-bit value	4
4	Line1.State	1	Unsigned 8-bit value	1



Wincc REST Service with Mendix

localhost:8080/index.html?profile=Responsive

mx Home

Line 1 - Quality

96%

State

Production

Quality

96

Energy (in kW/h)

98

Progress

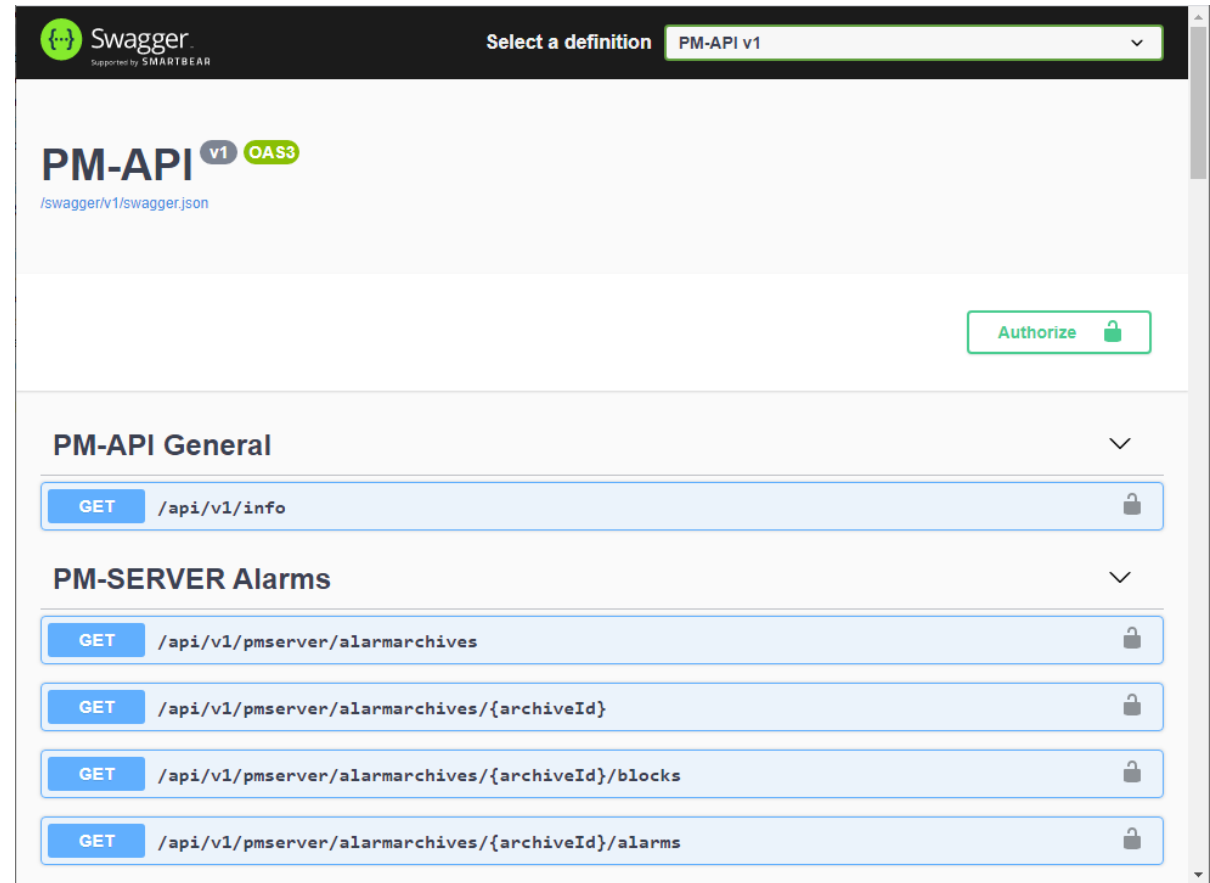
Heating

Refresh

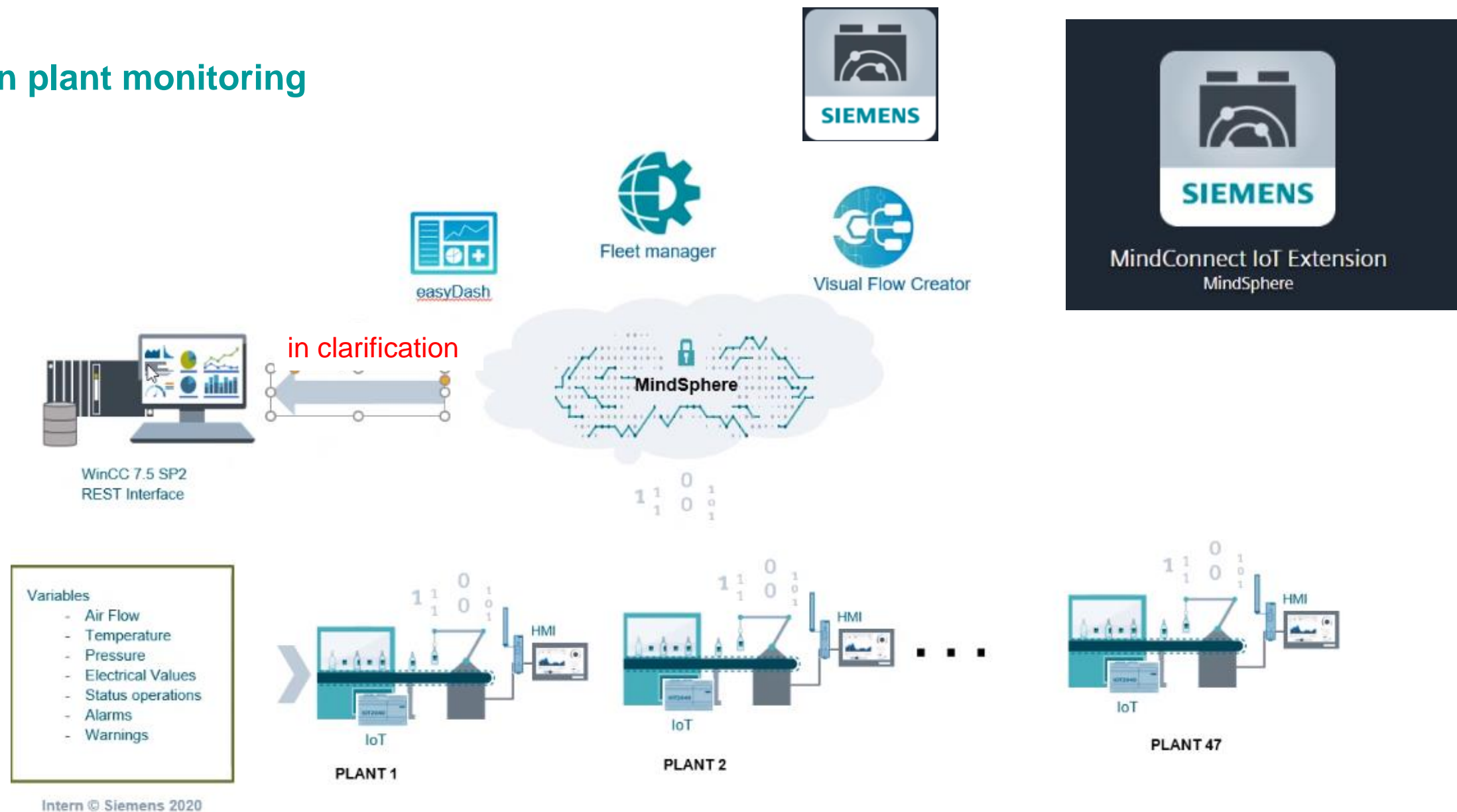
# WinCC Premium Add-ons

## PM-Server Programming Interface REST API

- Support of a REST API
  - Enables data exchange between different Systems / Webservices
- Enables Access of PM-SERVER to
  - alarm archives**
  - Read Process Tags**
  - Write Process Tags**
- Simple integration of tags and alarms into external tools



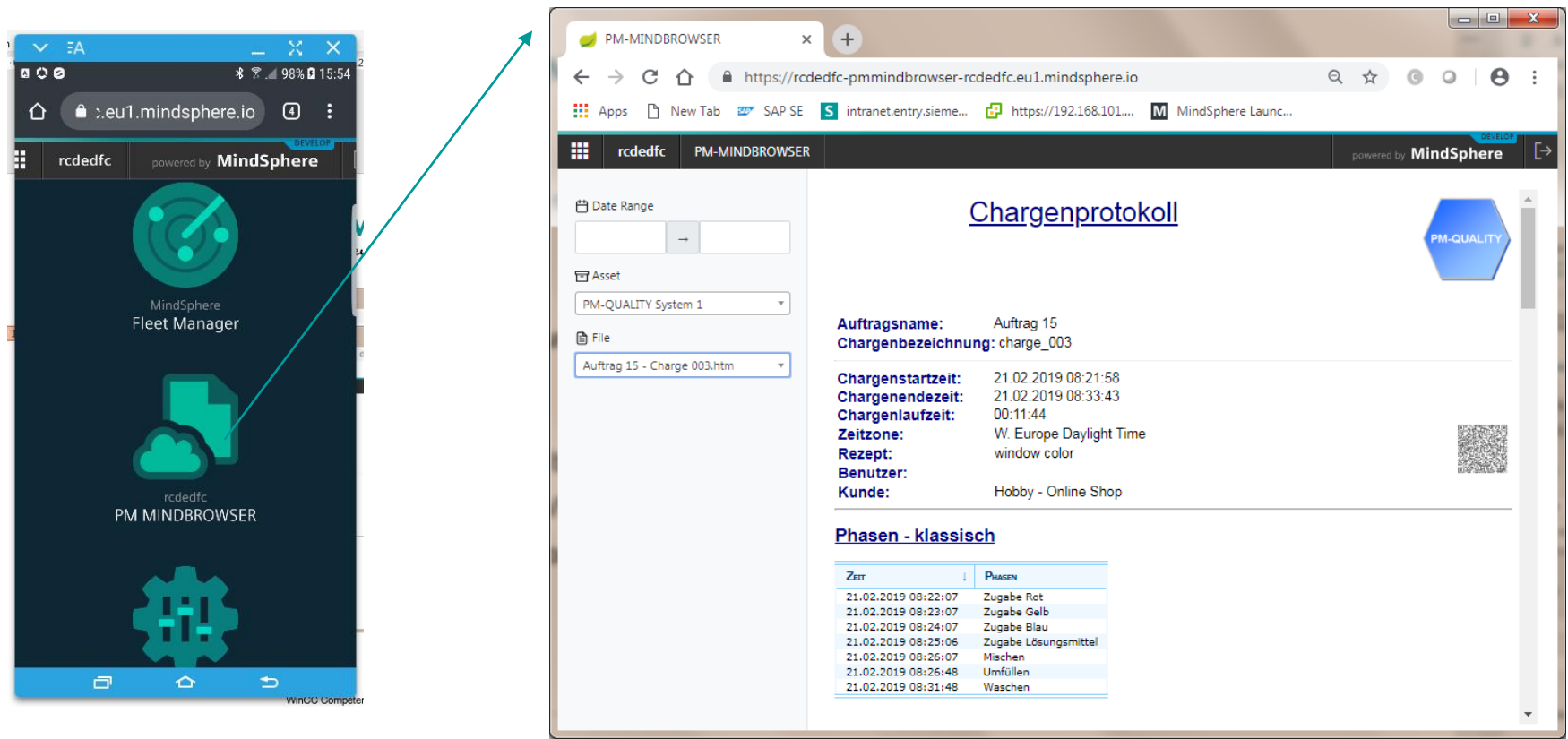
# Oxygen plant monitoring



# WinCC Premium Add-ons

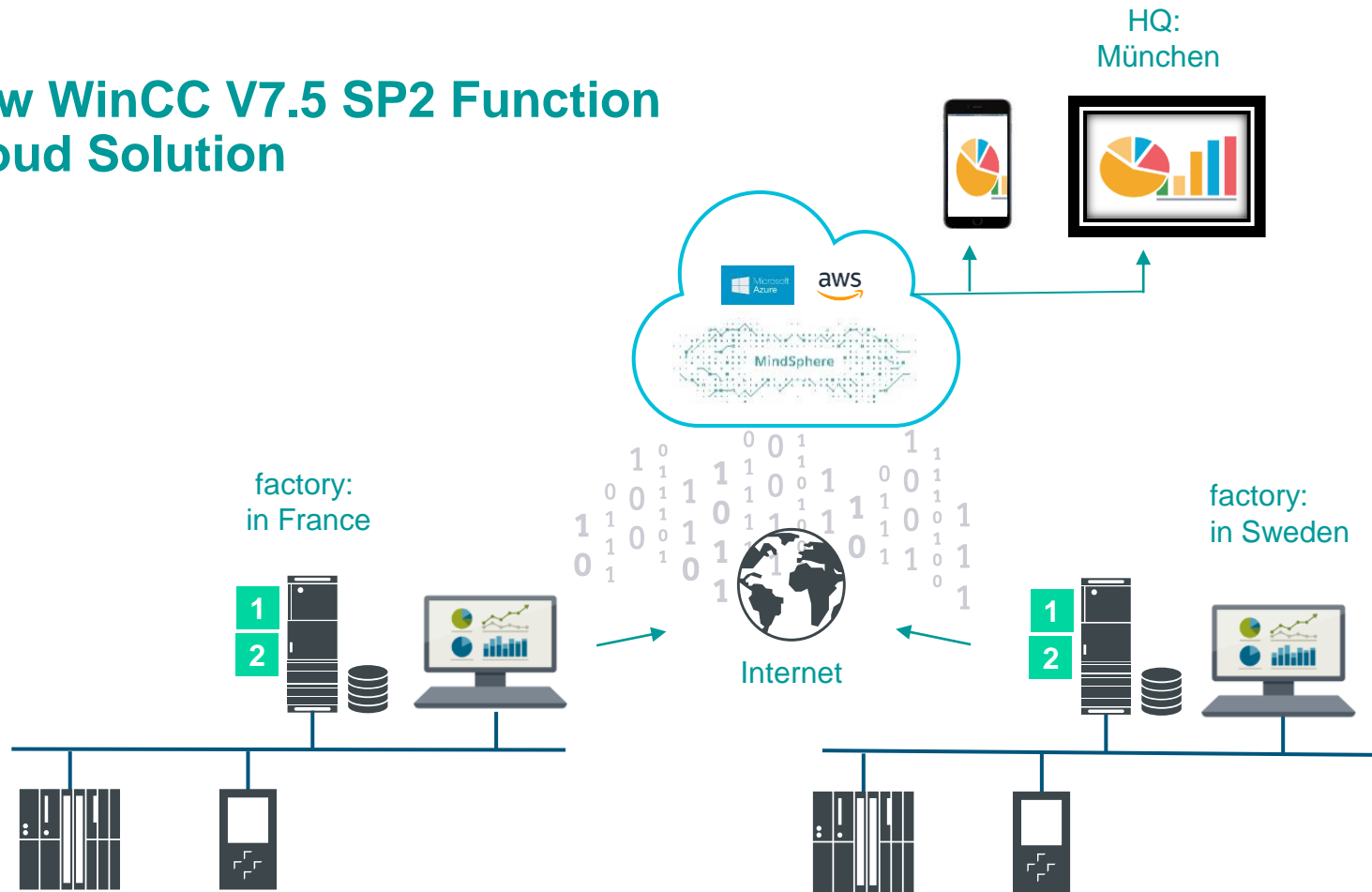
## PM-OPEN MINDCONNECT V1.5

PM-OPEN MINDCONNECT V1.5 enables the distribution and **display reports** from **PM-QUALITY** and **PM-ANALYZE** via Mindsphere





# New WinCC V7.5 SP2 Function Cloud Solution



## Additional Information

- SP1 supports of MindSphere on “AWS/Azure Cloud over MQTT”
- SP2 supports of MindSphere on “Alibaba Cloud”

• **Application example**

**SIOS Link**

## WinCC V7.5 SP2 Basis paket

WinCC V7.5 SP2 RT n  
SIMATIC Net V16

1

## WinCC/Cloud Connect V7.5

MLFB: 6AV6362-5AA07-5AH0

2

The "WinCC Cloud Connector" is configured as an **"MQTT client"**. It sends(published) the selected tags to the MQTT Broker. From this central location, the data is available in the cloud for further processing. The "WinCC Cloud Connector" functions as a so called **"Publisher"**, which makes the data freely available for further processing. The **WinCC system cannot** be configured as **"Consumer"**. This means that **the WinCC system can store data in the cloud**, but has **no read access to the data in the cloud**.

# Functional differences of WinCC RT Professional V16 und WinCC 7.5 SP2

Functions	WinCC RT Professional V16	WinCC V7.5 SP2
<b>PowerTags</b>	ES: 512, 4 k, max. RT: 128, 512, 2 k, 4 k, 8 k, 64 k, 100 k, 150 k, 265 k	RC: 128, 512, 2 k, 8 k, 64 k, 100 k, 150 k, 256 k RT: 128, 512, 2 k, 8 k, 64 k, 100 k, 150 k, 265 k
<b>Screens/screen objects</b>	No limit/no limit	No limit/no limit
<b>Alarms</b>	150,000	150,000
	256 alarm classes, 32 types in groups, 17 alarm priorities	256 alarm classes 17 alarm priorities (0 to 16)
<b>Server/client</b>	<b>1</b> server/ <b>32</b> clients	<b>18</b> servers/ <b>64</b> clients; 50 multi-clients
<b>Trends<sup>1</sup> 500/512 archive tags incl.</b>	Max. 80,000 (server)	Max. 80,000 (server)
<b>Recipes<sup>2</sup></b>	No limit/Elements per recipe: 500/1,000,000 fields Records per archive: 10,000	No limit/ Elements per recipe: 500/1,000,000 fields Records per archive: 10,000
<b>WebNavigator</b> <b>WebUX</b>	Max.150 clients Max.100 clients	Max.150 clients Max.100 clients
<b>PLC connections</b>	Up to <b>128</b> connections, <ul style="list-style-type: none"> <li>• <b>Max. 128 x S7-1200/S7-1500 Connections</b></li> <li>• <b>Max. 64 x S7-300/400 Connections</b></li> </ul>	<b>128</b> x S7-1500/ <b>32</b> x S7-1200 / <b>64</b> x S7-300/400

<sup>1</sup> V7.x: Archive tags → Max. 60,000 tags (32-bit OS)/260,000 tags (64-bit OS) in a project (incl. logging tags)

<sup>2</sup> V7.x: UserArchives → Max. 320,000/640,000 screen objects in a project (32-bit OS/64-bit OS)

# Functional differences of WinCC RT Professional V16 und WinCC 7.5 SP2

Communication	WinCC Professional V16	WinCC V7.5 SP2
MPI/PROFIBUS	Yes	Yes
OPC UA	OPC UA Server: DA, HAD, A&C (Alarm and Condition)	UA Server: DA, HAD, A&C (Alarm and Condition)
	UA Client (DA)	UA Client (DA/ <b>A&amp;C</b> )
SIMOTION	<b>Via OPC UA</b>	<b>Yes</b>
SINUMERIK	NO	Add-on
Allen Bradley	Ethernet/IP	Ethernet/IP
Modicon	Modbus (TCP)	Modbus (TCP)
Mitsubishi	MC TCP/IP	i-QR PLCs
IEC Client	NO	IEC 61850 (Add-on)
DNP3	NO	Option Telecontrol
MQTT	NO	WinCC Cloud Connect (write Tags to the Cloud)
REST Interface	NO	<b>Yes</b> (Read / write Tags)

# Packages

## SIMATIC IPC and SIMATIC Software

+Best State of the art technology



+SIMATIC WinCC Software



### Packages

Available for all SIMATIC IPCs that meet the SCADA requirements  
2 x order numbers:

1 x for the IPC

1 x for the software

Price advantage **with *simultaneous* ordering** of the  
– **SIMATIC IPC + the WinCC V7 software**

**SIOS Link**

# Promoters Selection Guide

## Packages with WinCC V7 and WinCC RT Professional (Update 04/2021 )

These packages are offered with the following SIMATIC IPCs:

### •SIMATIC Box PC

IPC127E (only client and single-user station for small projects)

IPC227D / IPC227E (only client and single-user station)

IPC327E (only client and single-user station)

IPC427D / IPC427E

IPC627C / IPC627D / IPC627E

IPC827C/ IPC827D

IPC527G



### •SIMATIC Panel PC

IPC227D / IPC227E (only client and single-user station)

IPC377E (only client and single-user station)

IPC477D (PRO) / IPC477E (PRO)

IPC677C / IPC677D / IPC677E



### •SIMATIC Rack PC

IPC347G

IPC547E / IPC 547G/**547J**

IPC647C / IPC 647D / IPC647E

IPC847C / IPC 847D / IPC847E

IPC1047



### •SIMATIC Industrial Tablet PC

ITP1000



**Only for German  
SCADA SSP**

[\\ad001.siemens.net\dfs001\File\DE\promotoren\\_vm\VM\\_Ware\2020\\_02\\_Image\\_IP127E\\_Wind10\\_WinCCV75SP1](\\ad001.siemens.net\dfs001\File\DE\promotoren_vm\VM_Ware\2020_02_Image_IP127E_Wind10_WinCCV75SP1)

# SCADA Multimonitoring with SIMATIC

## IPC647E / IPC847E IPC547G / IPC547J



# High End Rack IPC – next generation SIMATIC IPC547J



## SIMATIC IPC547J



### Improved user friendliness

- Extended enclosure concept (front LEDs)
- Easy modification



### Latest technology and top system performance

- Intel Xeon / Core i processors ("Comet Lake" / 10th Generation)  
up to 10 cores / 20 threads
- DDR4 memory, up to 128 GB
- USB 3.1 Gen 2 and Type C
- M.2 NVMe SSD can be used
- 3x graphic interfaces with 4K monitor support
- Windows 10 IoT Enterprise 2019 LTSC (64-bit) / Server 2019 (64-bit)

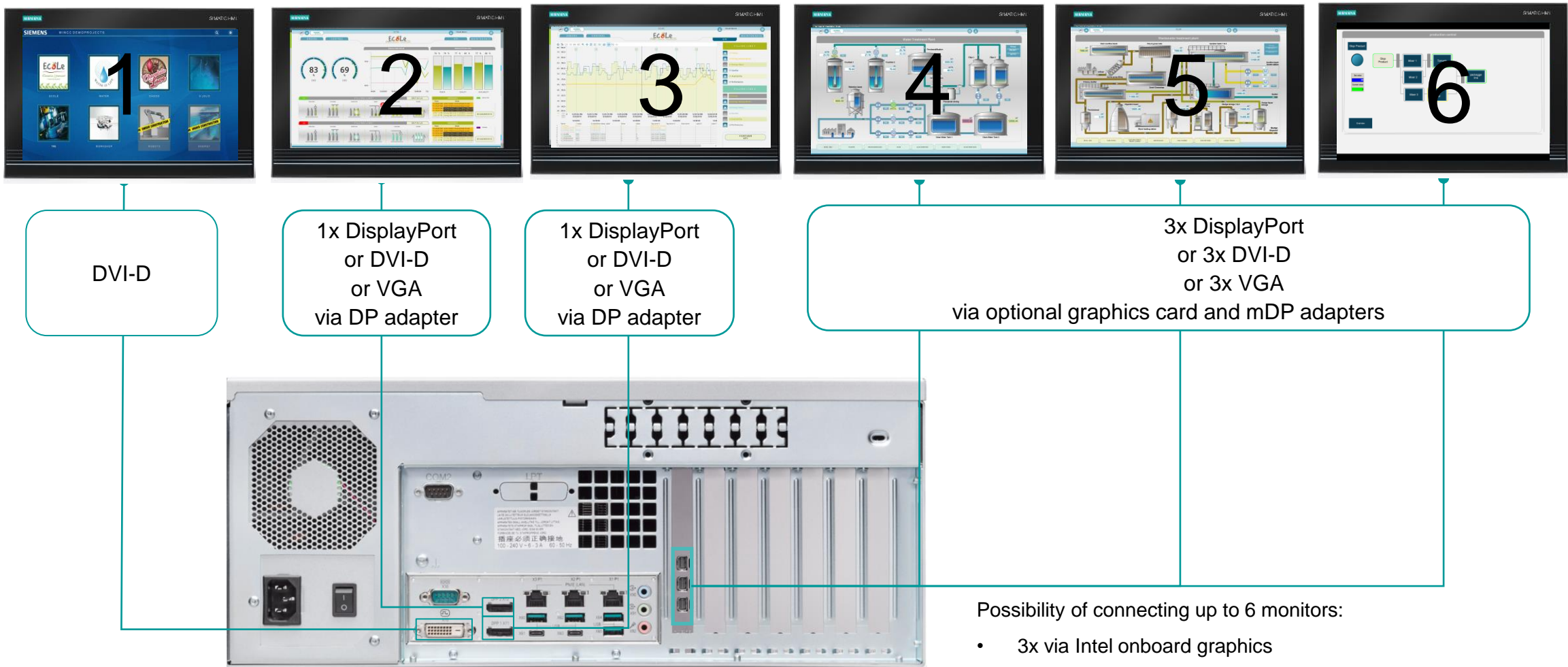


### Greater flexibility and security

- Two optional graphics cards in configurator
- 3x Gigabit Ethernet
- TPM 2.0 (optional)

# SIMATIC IPC547J with NVIDIA P400 graphics card

## Multi-monitoring (Intel Hybrid multi-monitor support)



- Possibility of connecting up to 6 monitors:
- 3x via Intel onboard graphics
  - 3x via NVIDIA P400 graphics card (optional)



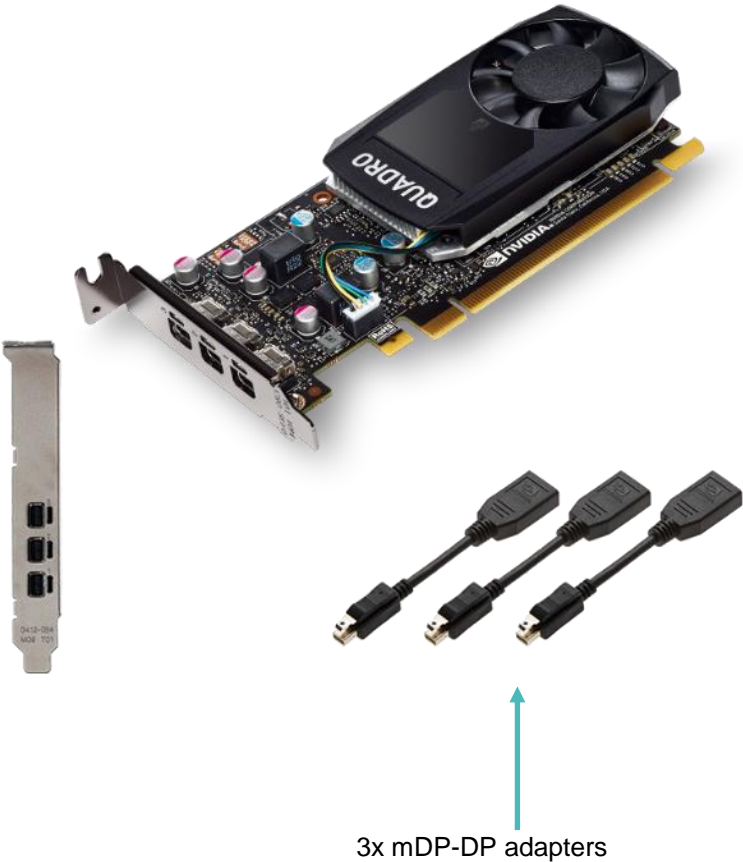
# SIMATIC IPC547J / 647E / IPC847E

## Graphics card (optional)

### NVIDIA QUADRO P400 graphics card

NVIDIA Quadro graphics processor:	256 CUDA parallel processing cores <sup>1)</sup>
Total image memory:	2 GB GDDR5
Memory bandwidth:	32 GB/s
Maximum DP resolution	4096 x 2160 @ 60 Hz
Maximum DVI resolution	1920 x 1200 @ 60 Hz
Maximum VGA resolution	2048 x 1536 @ 85 Hz
Graphics card slot:	PCI Express x16 Gen. 3.0
Form factor:	69.37 mm x 145 mm (ATX bracket, 1 slot)
Interfaces:	3x mDP 1.4 with interlock
Max. power:	30 W
Cooling:	Active with fan / Fan monitoring via DiagBase / DiagMonitor
Scope of delivery in configurator:	mDP to DP adapter (mDP to DVI-D, mDP to VGA adapters available as accessories)
API:	OpenGL 4.5 / DirectX 12 / Shader Model 5.1

<sup>1)</sup> CUDA, the parallel calculation architecture, enables a significant increase in computing performance using the performance of the graphics processor.



# SIMATIC IPC547J

## Graphics card (optional)

### NVIDIA QUADRO P2200 graphics card

NVIDIA Quadro graphics processor:	1280 CUDA parallel processing cores <sup>1)</sup>
Total image memory:	5 GB GDDR5
Memory bandwidth:	200 GB/s
Maximum DP resolution	5120 x 2880 @ 60 Hz
Maximum DVI resolution	1920 x 1200 @ 60 Hz
Maximum VGA resolution	2048 x 1536 @ 85 Hz
Graphics card slot:	PCI Express x16 Gen. 3.0
Form factor:	69.37 mm x 200 mm (ATX bracket, 1 slot)
Interfaces:	4x mDP 1.4 with interlock
Max. power:	75 W
Cooling:	Active with fan / Fan monitoring via DiagBase / DiagMonitor
Scope of delivery in configurator:	without adapter (DP to DVI-D, DP to VGA adapters available as accessories)
API:	OpenGL 4.6 / DirectX 12 / Shader Model 5.1

<sup>1)</sup> CUDA, the parallel calculation architecture, enables a significant increase in computing performance using the performance of the graphics processor.



# WinCC V7 – Comprehensive Support

## Description

### Description

With the Comprehensive Support, WinCC offers a Software Update Service (**SUS**) as a comprehensive support package.

The complete package includes current updates/upgrades to WinCC including options.

The WinCC user receives a contract at the beginning and exchange deliveries take place automatically within a period of **12 months**.

The contract is automatically extended for another year if the cancellation is not made 3 months before the end of the contract.

WinCC Comprehensive Support can be purchased for each WinCC system (single workstation, server, client).



### You must have the current software version

In order to enable cost-effective equipping of several systems with the WinCC Comprehensive Support, there are packages with **one** license as well as packages with **3** and **10 licenses** that contain a corresponding volume discount.

# WinCC V7 – Comprehensive Support

Order number (MLFB)

**WinCC Software Update Service (SUS)**  
contains current Updates/Upgrades for  
WinCC basis software and options

**Order number  
DVD**

**Order number  
download**

1 License

6AV6381-1AA00-0AX5    6AV6381-1KA00-0AX5

3 License

6AV6381-1AA00-0BX5    6AV6381-1KA00-0BX5

10 License

6AV6381-1AA00-0CX5    6AV6381-1KA00-0CX5

You must have  
the current  
software version

**WinCC V7  
RC/RT**

# WinCC V7 SCADA system

## System overview

### Stay up to date

In the current delivery releases, you are notified of which versions are no longer supported or have been declared a phased-out product.

All of the WinCC V7 packages, incl. Software Update Service (SUS), are available as a software and license download (Online Software Delivery – OSD)

- In future, receive all of the software packages as a download
- Access to all of upgrades of the automation software on the day of their publication (depending on the location)

#### SUS

Always stay up to date without additional orders – via mail or download

**Change your existing SUS to the download SUS**

<https://support.industry.siemens.com/cs/de/en/view/109747310>

**Customers with a WinCC Software Update Service contract will automatically receive new versions of the software.**

# Background info:

## SIMATIC Telecontrol V7.4 Patch 2 is released for WinCC V7.5 SP1

SIMATIC TeleControl V7.4 can be used with SIMATIC WinCC V7.5 SP1, under the following conditions:

- Use with Windows Server 2016: modification of the Simatic TeleControl V7.4 Setup
- Installation of Simatic TeleControl V7.4 Patch 02

The description of the modifications as well as the Patch 02 have been included in this contribution. SIMATIC TeleControl V7.4 can now be used with the following additional Operating Systems:

- Windows Server 2016 Standard (64-bit)
- Windows 10 Pro (64-bit)

Here are the order codes for SIMATIC Telecontrol V7.4 (on DVD+ USB Stick for licenses)

Description	Order number
SIMATIC TeleControl V7.4 Basic Engineering (per 1a Eng. Station)	<a href="#">6DL5000-7AA47-0XA5</a>
SIMATIC TeleControl V7.4 Server Runtime (6 Stations)	<a href="#">6DL5002-7AA47-0XA0</a>
SIMATIC TeleControl V7.4 Server Runtime (12 Stations)	<a href="#">6DL5002-7AB47-0XA0</a>
SIMATIC TeleControl V7.4 Server Runtime (256 Stations)	<a href="#">6DL5002-7AE47-0XA0</a>
SIMATIC TeleControl V7.4 Driver SINAUT	<a href="#">6DL5101-8AX00-0XB0</a>
SIMATIC TeleControl V7.4 Driver IEC 870-5-101/-104	<a href="#">6DL5101-8CX00-0XB0</a>
SIMATIC TeleControl V7.4 Driver DNP3	<a href="#">6DL5101-8EX00-0XB0</a>
SIMATIC TeleControl 7.4 for WinCC Upgrade V7.x to V7.4	<a href="#">6DL5002-7AA47-0XE0</a>

[SIOS Link](#)

# Thank you for your attention!



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