# SIEMENS

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# SIMATIC

# Information Server 2014 SP3 SIMATIC Information Server

System Manual

# Legal information

# Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

# **A**DANGER

indicates that death or severe personal injury will result if proper precautions are not taken.

# 

indicates that death or severe personal injury **may** result if proper precautions are not taken.

# 

indicates that minor personal injury can result if proper precautions are not taken.

# NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

# **Qualified Personnel**

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

#### Proper use of Siemens products

Note the following:

# 

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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# **Information Server - Installation Notes**

# 1.1 Type of delivery and licenses of Information Server

# Information Server type of delivery

Information Server 2014 SP3 is provided in the following delivery units:

- "Process Historian / Information Server 2014 SP3" DVD
- "PCS 7 V9.0 SP1" DVD

# License types

# Client connections and licenses

You require a license for each active client connection of the Information Server. The clients include:

- The Information Server add-in for Microsoft Office Excel
- The Information Server add-in for Microsoft Office Word
- The Information Server add-in for Microsoft Office PowerPoint
- Microsoft Internet Explorer, as soon as the connection to Information Server is established.

# Type codes for the licenses

The SIMATIC Information Server provides the following license types:

Product	Version	License type	Validity
Information Server	2014	Single	Unlimited
Information Server client access	-	Single	1
Information Server client access	-	Single	3
Information Server client access	-	Single	5
Information Server client access	-	Single	10
Information Server data source access	-	Single	1
Information Server data source access	-	Single	3

1.1 Type of delivery and licenses of Information Server

# License count for client access

Each active client connection of the Information Server requires a license. The number of clients depends on the number of PCs, not on the number of applications that are open on a PC. Even when multiple report clients are connected to the Information Server from a PC, only one license is required.

Assignment of a client license:

- Connection with the Information Server via Internet browser/Web application
- Connection with the Information Server via Microsoft Excel, Word oder PowerPoint
- · Use of various URLs which the server cannot identify as one source

Release of a client license:

- Logout from the Web application
- Inactivity after 20 minutes
- Closing of Microsoft Excel, Word oder PowerPoint.

# License count for data source access

The following license conditions apply to applications:

- You access the Process Historian database without a license.
- You need a license to access a WinCC station.
- You need a license to access a PCS 7 station.
- You need a license for a redundant WinCC user station.
- You need a license for a redundant PCS 7 user station.

# Information Server trial license

- Setup also installs a trial license.
- With the basic Information Server license, the Information Server includes the option of selecting a trial license in the license prompt.
- The trial license is activated at the first start of the Information Server.
- The trial license is valid for 30 days.
- The trial version becomes a full version when you install a license.

# 1.2.1 Hardware requirements

# Overview

This section specifies the hardware configuration requirements for Information Server.

# Hardware requirements

Information Server requirements:

- Up to 10 Information Server clients as Web application or Microsoft Office add-in
- With infrequent to frequent reporting

The following hardware requirements must be fulfilled for the aforementioned demands:

Medium	Minimum	Recommended
CPU	INTEL INTEL XEON E3-1268L V3; 2.3 GHz	INTEL XEON E5-2650L V2; 2.6 GHz
RAM	8 GB (64-bit operating system)	32 GB (64-bit operating system)
Hard disks	≥ 500 GB SATA	≥ 1 TB SATA

# Process Historian and Information Server on the same system

Process Historian and Information Server can be installed and operated on the same system.

In this case the two server applications share the available hardware resources. It is advisable to install higher-grade equipment to be prepared for higher data request rates from the WinCC client systems and Information Server clients.

#### Note

If Process Historian and Information Server are to be installed on the same PC, they need to be installed on the same SQL server instance. The Process Historian has hereby to be installed first.

Recommendation for RAM:

At least 16 GB

# WinCC and Information Server on the same system

The following hardware requirements must be met for installation of WinCC and Information Server on one computer (One Station Installation):

- Windows 7 SP1 x64
- Intel Quad Core
- 8 GB RAM

#### Note

If WinCC and Information Server are to be installed on the same PC, they need to be installed on the same SQL server instance.

WinCC has to be installed first for this purpose.

This equipment is sufficient for the operation of:

#### WinCC

- Version V7.4
- About 1000 tags can be archived per second
- About 5 alarms can be triggered per second

# **Information Server**

- Up to two Report Subscriptions with alarms can be triggered per minute
- Up to two Report Subscriptions with tags can be triggered per minute (time period query about 1 to 2 hours and 1 to 2 tags per report)

# 1.2.2 Software requirements

# 1.2.2.1 Software requirements

The SIMATIC Information Server 2014 SP3 works with the SIMATIC Process Historian 2014 SP3. Use PCS 7 V8/V9 or WinCC V7 as the data source.

This section contains the following information:

- Supported Microsoft operating systems
- Supported software components
- Required software installations and settings

# **Operating system**

Operating system	Configuration	Comments	
Windows 7	Professional SP1	Standard installation	
	Enterprise SP1	32-bit and 64-bit	
	Ultimate SP1		
Windows 8.1	Professional	Standard installation	
	Enterprise	32-bit and 64-bit	
Windows 10	Professional	standard installation	
	Enterprise	32-bit and 64-bit	
Windows Server 2008	Standard SP2	32-bit	
Windows Server 2008 R2	Standard SP1	64-bit	
Windows Server 2012 R2	Standard	64-bit	
Windows Server 2016	Standard	64-bit	

# Supported operating systems

# Internet Information Server (IIS)

Before installing the SIMATIC Information Server, you must first install the Internet Information Service (IIS).

Additional information is available in the section "Installing Internet Information Services (IIS) (Page 12)".

# Database

The Information Server requires the Microsoft SQL Server 2014 SP2 64-bit on the server. The SQL Server is automatically included in the Information Server installation.

The corresponding access rights must be set up for accessing the SQL server data. Read the relevant documentation.

SQL database	Configuration	Comments
SQL Server 2014	SP2	32-bit and 64-bit

# Data sources

Data source	Version
PCS 7	V8.0 SP1 and V8.0 SP2
	V8.1 and V8.1 SP1
	V8.2
	V9.0
WinCC	V7.0 SP3 Update 6 and V7.2 Update 4
	V7.3 SE including Update 1
	V7.4

# Internet browser

The browser you use must support HTML5.

Product	Version / Comments	
Internet Explorer	As of version 11.0	
	Make the following setting:	
	1. Open the "Compatibility view settings" under "Tools".	
	2. Clear the "Intranet sites in compatibility view" check box.	
Mozilla Firefox	current version	
Google Chrome	current version	

# Installation of Office add-ins

# Requirement

The following components must be installed on the system to enable installation of the Office add-ins for Information Server:

- Microsoft Office
- Visual Studio Tools for Office (VSTO Runtime)

Additional information is available in the section "Installing Visual Studio Tools for Office (VSTO Runtime) (Page 19)".

# Supported Office versions

The following 32-bit Microsoft Office products are supported for the Office add-ins:

Product	Comments
Microsoft Office 2007 SP3	32-bit
Microsoft Office 2010 SP1	32-bit
Microsoft Office 2013	32-bit
Microsoft Office 2016	32-bit

# Note

# Observe the following when changing the administrator password on the Information Server

When you change the administrator password, you must carry out the following additional settings:

- 1. You also have to change the passwords in the "Information Server Datahost Service" and "Information Server Scheduler" in the "Log on" properties/tab.
- 2. In the IIS Manager, you have to open the dialog "Advanced settings" via the context menu in the "InfSrvPool" application pool and proceed as follows:
  - Select "Identity" and click the button to browse in this line.
  - Enter the new user with the new password.
  - Click "OK" in all the windows.
- 3. Restart the computer.

# See also

Installing the Information Server (Page 24) Installing Visual Studio Tools for Office (VSTO Runtime) (Page 19) System requirements (Page 7) Installing Internet Information Services (IIS) (Page 12)

# 1.2.2.2 Installing Internet Information Services (IIS)

This section describes the installation of Internet Information Services (IIS) for the approved operating systems.

You do not need a data medium or download for the installation of the Internet Information Services (IIS).

# See also

Software requirements (Page 9)

# Installing IIS for Windows 7 SP1

This section describes installation of the Internet Information Services (IIS) in Windows 7 SP1.

# Requirement

• You are logged on as administrator.

# Procedure

- 1. Select "Start > Control Panel > Programs > Programs and Features".
- 2. Click the "Turn Windows features on or off" link in the dialog.
- 3. Open the "Windows Features" dialog.
- 4. Open the "Internet Information Services" in the explorer view of the "Windows Features" dialog.
- 5. Specify the required settings for the "Internet Information Services".

Under "Application Development Features", select:

- ASP.NET
- .NET Extensibility
- ISAPI Extensions
- ISAPI Filters

Select the following in the next "Common HTTP Features" section:

- Static Content
- Directory Browsing

In the "Security" section, select:

- Basic Authentication
- Windows Authentication

Select the following under "Web Management Tools":

- IIS Management Console
- 6. Install the "Internet Information Services (IIS)" with the settings you have made.

# Result

The required settings are complete and the Internet Information Services (IIS) are installed on Windows 7 SP1.

# Installing IIS for Windows 8.1

This section describes installation of the Internet Information Services (IIS) on Windows 8.1.

# Requirement

• You are logged on as administrator.

# Procedure

- 1. Select "Charms > Settings > Control Panel > Programs and Features".
- 2. Click the "Turn Windows features on or off" link in the dialog. The "Windows Features" dialog opens.
- 3. Open the "Internet Information Services" in the explorer view of the "Windows Features" dialog.
- 4. Specify the required settings for the "Internet Information Services".
- 5. Under "Application Development Features", select:
  - ASP.NET 4.5
  - .NET Extensibility
  - ISAPI Extensions
  - ISAPI Filters

Verify or select the following settings in the "Common HTTP Features" section:

- HTTP Errors
- Default Document
- Static Content
- Directory Browsing

In the "Security" section, select:

- Basic Authentication
- Windows Authentication

Select the following under "Web Management Tools":

- IIS Management Console
- 6. Install the "Internet Information Services (IIS)" with the settings you have made.

# Result

The required settings are complete. The Internet Information Services (IIS) are installed on Windows 8.1.

# Installing IIS for Windows Server 2008 SP2

This section describes the installation of the Internet Information Services (IIS) on a Windows Server 2008 SP2.

# Requirement

• You are logged on as administrator.

# Procedure

- Configure the settings in Server Manager using the "Add Role" wizard. Configure the "Web Server (IIS)" role as follows:
- 2. Select "Start > Control Panel > Programs and Features" to open Server Manager.
- 3. Select "Roles" in the explorer of Server Manager.
- 4. Select "Add Roles" in the 'Roles Summary'.
- 5. Select the "Web Server (IIS)" option in the "Select Server Roles" dialog.
- 6. Specify the settings in "Web Server (IIS) > Role Services".

Under "Web Server > Application Development", enable:

- ASP.NET
- .NET Extensibility
- ISAPI Extensions
- ISAPI Filters

Under "Web Server > General HTTP Features", enable:

- Static Content
- Directory Browsing

Select "Web Server > Security" and select:

- Basic Authentication
- Windows Authentication

Select "Web Server > Management Programs" and select:

- IIS Management Console
- 7. Install the "Web Server (IIS)" server role based on your settings.

# Result

The required settings are complete and the Internet Information Services (IIS) are installed on Windows Server 2008 SP2.

# Installing IIS for Windows Server 2008 R2 SP1

This section describes the installation of Internet Information Services (IIS) on Windows Server 2008 R2 SP1.

# Requirement

• You are logged on as administrator.

# Procedure

- Configure the settings in Server Manager using the "Add Role" wizard. Configure the "Web Server (IIS)" role as follows:
- 2. Select Start > Programs > Administration > Server Manager to open Server Manager.
- 3. Select "Roles" in the explorer of Server Manager.
- 4. Right-click to open the shortcut menu and select 'Select Role Services'.
- 5. Select the "Web Server (IIS)" option in the "Select Role Services" dialog.
- 6. Specify the settings in "Web Server (IIS) > Role Services".

Select "Web Server > Application Development" and select:

- ASP.NET
- .NET Extensibility
- ISAPI Extensions
- ISAPI Filters

Select "Web Server > General HTTP Features" and select

- Static Content

Select "Web Server > Security" and select:

- Basic Authentication
- Windows Authentication

Select "Web Server > Management Programs" and select:

- IIS Management Console
- 7. Install the "Web Server (IIS)" server role based on your settings.

# Result

The required settings are complete and the Internet Information Services (IIS) are installed on Windows Server 2008 R2 SP1.

# Installing IIS for Windows Server 2012 R2

This section describes the installation of the Internet Information Services (IIS) on a Windows Server 2012 R2.

# Requirement

• You are logged on as administrator.

# Procedure

- Configure the settings in Server Manager using the "Adding roles and features wizard". Configure the "Web server (IIS)" role with the installation wizard as follows:
- 2. Activate the "Role-based or feature-based installation" option in the "Select installation type" dialog.
- 3. Activate the "Select server from server pool" option under "Select target server".
- 4. Under "Roles", activate the "Web server (IIS)" role in the next menu, "Server roles". The "Adding roles and features wizard" dialog opens.
- Activate "Include management tools (if available)".
   The selection window opens.
- 6. Confirm the action with "Add Features".
- 7. Back in the configuration wizard, select the "Features" submenu.
- 8. Select ".NET Framework 3.5 Features" and activate ".NET Framework 3.5".
- 9. Select ".NET Framework 4.5 Features" and activate "ASP.NET 4.5".

10. Specify the required settings for the "Internet Information Services".

Under "Application Development Features", select:

- ASP.NET 3.5
- ASP.NET 4.5
- .NET Extensibility 3.5
- .NET Extensibility 4.5
- ISAPI Extensions
- ISAPI Filters

Verify or select the following settings in the "Common HTTP Features" section:

- HTTP Errors
- Default Document
- Static Content
- Directory Browsing

In the "Security" section, select:

- Basic Authentication
- Windows Authentication

Select the following under "Web Management Services":

- IIS Management Console
- 11.Click "Next" to go to the "Confirm installation selections" submenu.
- 12. Check your configuration settings.

13.In the installation wizard, complete the configuration by clicking "Install".

# Result

The required settings are complete. The Internet Information Services (IIS) are installed on Windows Server 2012 R2.

# 1.2.2.3 Installing Visual Studio Tools for Office (VSTO Runtime)

# Requirement

• You are logged on as administrator.

# Requirements for installation of the Office add-ins

The following components must be installed on the system to enable installation of the Office add-ins for Information Server:

- Visual Studio Tools for Office (VSTO Runtime)
- Microsoft.NET Framework 4.5.1

Visual Studio Tools for Office (VSTO Runtime) is generally installed using the setup of the WinCC or PCS 7 DVD.

• Installing Information Server Office Add-Ins (Page 31)

For direct installation via the Information Server website, you can download the Visual Studio Tools for Office (VSTO Runtime) from the following link:

http://www.microsoft.com/en-us/download/ (<u>http://www.microsoft.com/en-us/download/</u>)

(Search input: Visual Studio Tools Office)

Note the information from Microsoft regarding system requirements. If you want to install a different language, refer to the information from Microsoft for details.

You can download Microsoft.NET Framework 4.5.1 from the following link:

 http://www.microsoft.com/en-us/download/details.aspx?id=40779 (http://www.microsoft.com/en-us/download/details.aspx?id=30653)

# Installing Visual Studio Tools for Office (VSTO Runtime)

- 1. Download the suitable VSTO version for the installed Office version.
- 2. Run the software setup.
- 3. Follow the instructions of the installation wizard.

### Result

The 'Visual Studio Tools for Office' are installed.

# See also

Microsoft.NET Framework 4.5.1 Download (<u>http://www.microsoft.com/en-us/download/details.aspx?id=40779</u>)

# 1.2.3 Security settings

# Introduction

This section describes the configuration of the security settings for Information Server.

Always take the following into account:

- The security settings of the firewall are the basis of the security concept.
- Additional Windows services, such as IS-Ready or CCCAPHServer, must be configured via the operating system with user rights.
- Use complex passwords.
- Set an access barrier if several logon attempts are unsuccessful. You can find additional information under "https://technet.microsoft.com/en-us/library/cc757692(v=ws.10).aspx?f=255&MSPPError=-2147217396 (<u>https://technet.microsoft.com/en-us/library/cc757692(v=ws.10).aspx?f=255&MSPPError=-2147217396</u>)":
- If required, rename the Administrator account.

# User permission for the Information Server service

The Information Server Ready (IS-Ready) component is configured with the "Service Configuration Wizard".

The description for user permission can be found in the section "Installing the Information Server Ready component (Page 29)".

# Adapting the security settings of the browser

Adapt the security settings in the browser. The procedure described in the example is for the Internet Explorer:

- 1. Open the settings for the "Internet options".
- 2. Open the "Security" tab.
- 3. Deactivate the "Protected mode" setting for the current zone.
- 4. Select the zone "Local intranet" or "Trusted sites". Click "Sites".

Add the following links to the sites:

- http://<PC name>
- about:blank
- 5. Deactivate the "Require server verification (https) for all sites in this zone" option.
- 6. In the Security tab, click "Custom level". Under "User authentication", select the option "Prompt for user name and password".

#### Note

For the initial commissioning, the "Automatic logon with current user name and password" setting is required.

# Firewall security settings

# Settings of the internal firewall for the Information Server

Name	Logs	Port
IS Network Discovery	UDP	137
IS Web Access http	TCP	80
IS Web Access https	TCP	443
IS Data Host	TCP	65125
IS DiscoverServiceInstaller	UDP	5049
IS Ready update Plugin	ТСР	1200
Scheduler	TCP	64721

# Note

The firewall ports that are opened through the installation of Information Server and IS-Ready must be manually removed after an uninstall.

# Firewall settings when using different subnets

When different subnets are used it is necessary to adjust certain firewall settings accordingly:

Computer	Action	Name	Protocol	Port
Process Histo- rian	Customize rule	PH SQL Server port	ТСР	3723
Process Histo- rian	Customize rule	PH Discovery Ser- vices	TCP	5048
Process Histo- rian und WinCC	Create new rule	IS SQL Server brows- ing	UDP	1434
Information Server	Customize rule	Scheduler	ТСР	64721

#### Note

Create the rule on the corresponding computer.

- 1. Open the "Windows Firewall with Advanced Security" to modify the rules.
- 2. Go to the corresponding rule and open "Properties > Range" using the shortcut menu.
- 3. Under "Remote IP Address", select "IP addresses".
- 4. Click "Add...".

#### Note

Here, you can enter the IP addresses or the subnet.

5. Confirm the dialog.

#### Note

The firewall ports that are opened through the installation of Information Server and IS-Ready must be manually removed after an uninstall.

# Notes for communication on the Internet

#### **Communication: Connection via HTTPS**

To increase the security of your communication, configure the server in such a way that only HTTPS connections are supported.

You need a digital certificate for the Information Server. For more information, refer to "How to Set Up an HTTPS Service in IIS" (http://support.microsoft.com/kb/324069 (http://support.microsoft.com/kb/324069)) in Microsoft Support.

Make sure that the database and application servers communicate in a shared area to exchange confidential data, a so-called demilitarized zone (DMZ).

If the database server and the application server are located in separate areas, use appropriate measures to ensure confidential communication (authentication and encryption). For example, use a Virtual Private Network tunnel (VPN).

Avoid cross-site request forgery for the web server (Cross-Site Request Forgery).

The cross-site request forgery is similar to the weak point caused by cross-site scripting (XSS, Cross Site Scripting). The attack is triggered when an authenticated user clicks on a malicious link. This weak spot exists even if scripting is deactivated in the browser.

Siemens recommends:

- Do not work with other applications or services that have anything to do with the Internet.
- Log off when you do not need the web server any longer.

You can find additional information in the Microsoft MSDN Portal under "IIS Security":

 http://msdn.microsoft.com/de-de/library/ms172965%28v=sql.105%29.aspx (http://msdn.microsoft.com/en-us/library/ms172965%28v=sql.105%29.aspx)

# Defense in depth

See the notes on "Industrial Security" on the Siemens website:

 http://www.industry.siemens.com/topics/global/en/industrialsecurity/concept/Pages/defense-in-depth.aspx (<u>http://www.industry.siemens.com/topics/global/en/industrial-</u> security/concept/Pages/defense-in-depth.aspx)

# See also

http://www.industry.siemens.com/topics/global/en/industrial-security/concept/Pages/defensein-depth.aspx (<u>http://www.industry.siemens.com/topics/global/en/industrial-</u> security/concept/Pages/defense-in-depth.aspx)

http://support.microsoft.com/kb/324069 (http://support.microsoft.com/kb/324069)

http://msdn.microsoft.com/de-de/library/ms172965%28v=sql.105%29.aspx (http://msdn.microsoft.com/en-us/library/ms172965%28v=sql.105%29.aspx)

https://technet.microsoft.com/en-us/library/cc757692(v=ws.10).aspx?f=255&MSPPError=-2147217396 (<u>https://technet.microsoft.com/en-us/library/cc757692(v=ws.10).aspx?f=255&MSPPError=-2147217396</u>)

Information Server - Installation Notes

1.3 New installation / Initial installation

# 1.3 New installation / Initial installation

# 1.3.1 Installing the Information Server

Use one of these DVDs for installation:

- "Process Historian / Information Server 2014 SP1" DVD
- "PCS 7 V9.0 SP1" DVD

# Server installation

To administer the Information Server, install the "Information Server 2014 SP3".

You use this computer to create and manage the configured reports and dashboards.

# Configuration manager

The configuration manager is launched automatically at the first restart after installation of the Information Server. The configuration manager makes all required settings for operating the Information Server.

In the configuration manager, you specify how the Information Server is launched. You can specify to call Information Server as new website or as virtual directory.

After the configuration, you must restart the computer using the configuration manager.

# Installation of Information Server Ready

The WinCC stations and the PCS 7 Operator Stations (OS) need the "Information Server Ready" (IS-Ready) component for communication with the Information Server.

IS-Ready is always installed as option when you install Process Historian, PCS 7 or WinCC V7. In this case, the IS-Ready component is also selected in the setup and cannot be deselected.

However, if you are using a PC with a WinCC version prior to WinCC V7.2, you must install IS-Ready later. Additional information is available in the section "Installing the Information Server Ready component (Page 29)".

# Installation of the Information Server Office add-ins

If you want to use the reporting in MS Excel, MS Word or MS PowerPoint, the Information Server Office add-ins must be installed on the PC. Select this component during installation.

If you want to use Office add-ins on a PC without an Information Server installation, follow the instructions in the section "Installing Information Server Office Add-Ins (Page 31)".

# Installing Information Server BATCH Options

If you are using the Information Server BATCH Options for PCS 7 for SIMATIC BATCH reporting, you must also install the BATCH Options.

Follow the instructions in the section "Installing Information Server BATCH Options at a later time (Page 32)".

# Information Server and Process Historian on the same computer

Use the program package "Process Historian and Information Server 2014 SP3" if you have installed and want to operate Information Server and Process Historian on the same computer.

# Requirement

- An HTML5-compliant Internet browser is installed, for example, Internet Explorer 11.
- The Internet Information Service (IIS) is installed.

1.3 New installation / Initial installation

# Procedure: Installing the Information Server

- 1. Run the setup.
- 2. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 3. If necessary, enter the following information in the "User information" dialog:
  - User
  - Associated organization
- 4. Depending on which DVD you used, select the following "Type of installation":
  - Process Historian / Information Server 2014 SP3: No selection required.
  - PCS 7 V9.0 SP1: "Package installation" or "Custom installation".
- 5. Select the component you wish to install in the "Program packages" dialog:
  - Process Historian / Information Server 2014 SP3:

Category "Information Server": Information Server 2014 SP3

- PCS 7 V9.0 SP1:

Category "Runtime > Archiving and Reporting": Information Server 2014 SP3

- 6. If required, select additional components:
  - Information Server Office Addin 2014 SP3
  - Information Server BATCH Options 2014 SP3 (Reporting for SIMATIC Batch)
- 7. If necessary, confirm the changes to the system settings in the "System settings" dialog.
- 8. Start installation.
- 9. To complete the installation, reboot the system.

You can also perform the restart at a later time.

- 10. Run the configuration manager that opens after the restart.
- 11.Enter the user name and the password for the DataHost scheduler. Use the user name and the password of the administrator who installed the Information Server.
- 12.In the "IIS configuration" step, select the "Create a new website" option and then select the port "80".
- 13.Restart the computer.

# Setting up users

The group membership is defined the first time a new user logs in. The group membership can only be defined once at the beginning and can then no longer be changed.

# Assigning user groups

You use the Windows Computer Management for user management and assignment to the Windows user groups.

- SIMATIC Report Administrators: Installing and configuring the Information Server
- SIMATIC Report Publishers: Creating and downloading reports
- SIMATIC Report Services: Creating connections to a data source
- SIMATIC Report Users: Viewing reports
- SIMATIC Report Viewers: Read access to reports under "Public"

#### Note

# Opening the web application locally on the Information Server

If you use an operating system with active user account control, such as Windows 7, Windows Server 2008 or Windows Server 2008 R2, it may also be necessary to start the web application as an Administrator with advanced rights.

# Procedure

- 1. Open the Windows Computer Management.
- 2. Navigate to "Local Users and Groups".
- 3. Open the "Groups" folder and double-click on the group to which you wish to assign the user.
- 4. Click the "Add" button to add the user to the group.
- 5. Acknowledge the dialog with "Apply".

1.3 New installation / Initial installation

# Procedure: Configuration in the browser

- Open the browser as administrator.
   "Right click the browser symbol > in the shortcut menu right click the browser name > Run as administrator"
   The browser opens.
- 2. Enter the previously defined URL in the browser bar. The Web application of the Information Server opens.
- 3. From the drop-down list select a Microsoft SQL Server instance in which the Information Server stores its data.

#### Note

# Add database file path

By default the database files are saved in the SQL directory "Data" (e.g. C:\Program Files\Microsoft SQL Server\MSSQL12.HISTORIAN\MSSQL\DATA). If you would like to select a storage location, activate the option "Enter database file path" and add the destination path.

- 4. Confirm with "Install or update".
- 5. After completion of the installation click "Continue". The view "Project Configuration" opens.
- 6. Select "Add project". The dialog "Add project" opens.
- 7. Assign a data source type to the project and click "Continue".
- 8. Define a computer name by entering a "host name" or a "Server IP". Click "Select projects".
- 9. Select the projects you wish to add and enter their names.
- 10.Click "Add".

# Result

- The Information Server is installed.
- The Web page for the Information Server was created.

# See also

Software requirements (Page 9) Installing Information Server Office Add-Ins (Page 31) Installing the Information Server Ready component (Page 29) Installing Information Server BATCH Options at a later time (Page 32)

# 1.3.2 Installing the Information Server Ready component

The WinCC stations and the PCS 7 Operator Stations (OS) need the "Information Server Ready" (IS-Ready) component for communication with the Information Server.

IS-Ready is always installed as an option when you install one of the following products:

- Process Historian
- PCS 7
- WinCC V7

# Requirement

For using IS-Ready with WinCC:

- The user must be part of the SIMATIC HMI user group.
- The PC on which Is Ready is installed requires at least 8 GB RAM.

For using IS-Ready with Process Historian:

• The user must be created as system administrator on the SQL Server instance.

The following applies to the use of IS-Ready both with WinCC and Process Historian:

• The user must have the rights to create a database.

# Note

The Microsoft SQL Server 2008 R2 database was supported up to the version Information Server 2014 SP1. The Microsoft SQL Server 2014 SP1 database is supported as of version Information Server 2014 SP2. A user who was defined as local administrator under the database version 2008 R2 automatically has the right to create a database. With database version 2014 SP1, you have to additionally assign the right to the user.

# Procedure

- 1. Run the setup.
- 2. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 3. Select the component you wish to install in the "Program packages" dialog:
  - Category "Information Server": Information Server 2014 SP3
- 4. Start installation.
- 5. To complete the installation, reboot the system.

You can also perform the restart at a later time.

6. Configure the IS-Ready service with the service configuration wizard.

1.3 New installation / Initial installation

# Configuring IS-Ready service

Once the PC has been restarted, start the configuration wizard.

You use the service configuration wizard to specify the user under which the IS-Ready service is run. The user should be the same user who installed the Information Server.

The user of the IS-Ready service is automatically a member of the "SIMATIC HMI" user group.

# Note

# Using IS-Ready with WinCC

Create a group with the name SIMATIC Report Services and add the IS Ready service user to the group.

# Procedure

1. Start the configuration wizard from the "Siemens Automation" program group:

SIMATIC > IS-Ready > IS-Ready Configuration

- 2. Select the "Run with user credentials" option in the "New security setting" area.
- Enter the user under which the Information Server was installed. Enter the password. The user must have been created on the OS.
- 4. Complete the configuration with "Finish".

You can run the configuration wizard at any time to modify the access rights.

# Note

# The specified passwords must be identical on the computers.

Make sure that all specified passwords are identical on the following systems:

- WinCC OS/PCS 7 OS
- PH server

Make sure to notice any changes to passwords.

# Result

The Information Server Ready component is installed on the PC.

# See also

Installing the Information Server (Page 24)

# 1.3.3 Installing Information Server Office Add-Ins

To use the Office add-ins of MS Excel, MS Word or MS PowerPoint for reporting, these addins must be installed on the PC.

You can install the Office add-ins with the Information Server. Additional information is available in the section "Installing the Information Server (Page 24)".

If you want to use Office add-ins on a PC without an Information Server installation, follow these instructions.

# Requirement

• Microsoft .NET Framework 4.5.1 is installed.

# Procedure

- 1. Open the Information Server Web application.
- 2. Select "Download Office add-ins" on the start page to load the Office add-ins.
- 3. Follow the instructions of the installation wizard.
- 4. Wait for the Windows installer to initialize the "SIMATIC Information Server add-in setup".
- 5. Select the elements you want to install under 'Information Server add-in'.

Installation of the Office add-ins demands a certain amount of free space on your HDD. The required space and location is displayed in the 'Programs' setup dialog.

- Click "Storage space" if you want to query the storage space that is available on your system.
- Click "Help" if you need additional support.
- 6. Check the summary of the components to install in the next dialog view.

Click "Back" and follow the instructions of the wizard if you want to revise the previously selected settings.

7. Start installation.

# Result

The Office add-ins are installed for the Information Server.

# See also

Installing the Information Server (Page 24)

1.3 New installation / Initial installation

# 1.3.4 Installing Information Server BATCH Options at a later time

If you are using the Information Server BATCH Options for PCS 7 for SIMATIC BATCH reporting, you must also install the BATCH Options.

Follow the steps below:

- 1. Install Information Server or run the upgrade installation.
- 2. Install Information Server BATCH Options.

# Requirement

• The latest version of the Information Server is installed on the PC.

# Procedure

- 1. Start the setup from the PCS 7 DVD.
- 2. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 3. Select the "Custom installation" type of installation.
- 4. In the category "Archiving and Reporting", select the required component "Information Server BATCH Options".
- 5. To complete the installation, reboot the system.

#### Result

The "Information Server BATCH Options" component is installed or updated.

#### See also

Installing the Information Server (Page 24) Upgrading Information Server (Page 34)

# 1.4 Information Server Upgrade Installation

# 1.4.1 Overview of the upgrade installation

You can upgrade a previous version of the Information Server to the current version using the upgrade installation.

# Procedure of the upgrade installation

To upgrade the Information Server , follow the instructions in the Installation Notes of the Information Server 2014 SP3.

Depending on the installed version, the upgrade installation may need to take place via intermediate versions, as shown in the following table:

From version	Via version	Via version	Via version	To version
V8.0	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
V8.0 Update 1	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 1	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 2	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 3	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 4	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 5	2013 Update 6	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 6	-	2014 SP1 Update 1	2014 SP2	2014 SP3
2013 Update 7	-	2014 SP1 Update 1	2014 SP2	2014 SP3
2014	-	-	2014 SP2	2014 SP3
2014 Update 1 1)	-	-	2014 SP2	2014 SP3
2014 SP1	-	-	2014 SP2	2014 SP3
2014 SP1 Update	-	-	2014 SP2	2014 SP3
2014 SP2	-	-	-	2014 SP3
2014 SP2 Update	-	-	-	2014 SP3
2014 SP2 Update 2 <sup>1)</sup>	-	-	-	2014 SP3
2014 SP2 Update 3 1)	-	-	-	2014 SP3

1) After the update installation, check the settings of the component "Information Server Ready" (IS-Ready).

# See also

Upgrading Information Server (Page 34)

1.4 Information Server Upgrade Installation

# 1.4.2 Upgrading Information Server

You can upgrade a previous version of the Information server to the current version using the upgrade installation.

# Procedure

- 1. Close all active processes of the predecessor version of Information Server and shut down the application.
- 2. Run the setup.
- 3. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 4. Follow the instructions of the installation wizard.
- 5. Select "Update" as the setup type.

The "Update software" dialog shows the components which are updated.

- 6. Start installation.
- 7. To complete the installation, reboot the system.

You can also perform the restart at a later time.

8. Run the configuration manager that opens after the restart.

# Result

The Information Server is updated.

# 1.4.3 Upgrading Information Server Ready

After the upgrade installation of the Information Server server, upgrade the other PCs of the system:

- On the WinCC stations
- On the PCS 7 operator stations (OS)

Install the Information Server Ready (IS-Ready) and configure the IS-Ready service.

When you upgrade the PC, the Information Server Ready (IS-Ready) component is automatically installed at the same time.

After each installation of an update or upgrade check the settings of IS-Ready.

# Installing the Information Server Ready

- 1. Remove the previous version of IS-Ready.
- 2. Restart the computer.
- 3. To start the Information Server Ready Setup, follow these steps:
  - For PCS 7:

On the PCS 7 DVD 2, start the Setup via: "27\_InformationServer\_<xxx>\ISReady\setup\setup.exe".

- For WinCC:

"Process Historian / Information Server" DVD

Run the setup.

4. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 5. To complete the installation, reboot the system.
- 6. Configure the IS-Ready service with the service configuration wizard.

1.4 Information Server Upgrade Installation

# Configuring IS-Ready service

Once the PC has been restarted, start the configuration wizard.

You use the service configuration wizard to specify the user under which the IS-Ready service is run. The user should be the same user who installed the Information Server.

The user is automatically a member of the "SIMATIC HMI" user group.

# Procedure

- Start the configuration wizard from the "Siemens Automation" program group: SIMATIC > IS-Ready > IS-Ready Configuration
- 2. Select the "Run with user credentials" option in the "New security setting" area.
- Enter the user under which the Information Server was installed. Enter the password. The user must have been created on the OS.
- 4. Complete the configuration with "Finish".

You can run the configuration wizard at any time to modify the access rights.

#### Note

# The specified passwords must be identical on the computers for a user.

Make sure that all passwords specified for a user are identical on the following systems:

- WinCC OS/PCS 7 OS
- PH server
- Witness server

Make sure to notice any changes to passwords.

# Result

The Information Server Ready component is installed on the computer.

### 1.4.4 Upgrading Information Server Batch Options

### Introduction

If you are using the Information Server BATCH Options for PCS 7 for SIMATIC BATCH reporting, you must also install the BATCH Options.

Follow the steps below:

- 1. Install Information Server or run the upgrade installation.
- 2. If you upgrade from Information Server 2013 to Information Server 2014 SP3 , you need to re-install the installed Information Server BATCH Options from Information Server 2013
- 3. Install Information Server BATCH Options.

### Requirement

• The latest version of the Information Server is installed on the PC.

### Procedure

- 1. Start the setup from the PCS 7 DVD.
- 2. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 3. Select the "Custom installation" type of installation.
- 4. In the category "Archiving and Reporting", select the required component "Information Server BATCH Options".
- 5. To complete the installation, reboot the system.

1.4 Information Server Upgrade Installation

### Procedure when upgrading from Information Server 2013 auf Information Server 2014 SP3

#### Note

#### Upgrade installation

Depending on the installed version, the upgrade of the Information server BATCH options must take place via intermediate versions, as shown in the table in section Overview of the upgrade installation (Page 33):

- 1. Insert your PCS 7 DVD2.
- 2. Open the "Additional\_Products" folder and re-install the installed Information Server BATCH Options .
- 3. To complete the installation, reboot the system.
- 4. Configure the Information Server:
  - Start Internet Explorer 11 as administrator. Enter "http://localhost" as the URL.
  - Select the report server instance and start the configuration.
- 5. When the configuration is complete, start the setup from the PCS 7 DVD.
- 6. Follow the instructions of the installation wizard.

Read the License Agreement and the Open Source License Agreement.

- 7. Select the "Custom installation" type of installation.
- 8. In the category "Archiving and Reporting", select the required component "Information Server BATCH Options".
- 9. To complete the installation, reboot the system.

### Result

The "Information Server BATCH Options" component is installed or updated.

# **Information Server - Release Notes**

### 2.1 Release Notes

### Content

These release notes contain important information for the SIMATIC Information Server.

The statements in these Release Notes are more binding than the instructions in the manuals and in the online help.

Read these release notes carefully as they contain useful information.

#### "IIS Configuration": Change focus to dialog

There may be some rare cases in which the "IIS Configuration" dialog is covered up by the "SIMATIC Information Server Setup" when installing the Information Server and Process Historian.

Change the focus to the "IIS Configuration" dialog to make a manual input.

#### Memory: Expansion

If the main memory is not sufficient for creating a report, the maximum limit of the reporting services will not automatically be recalculated.

In this case start the Configuration Manager of the Information Server manually.

For 32 Bit operating systems, it can be found under:

• C:\Program Files\Siemens\InformationServer\ConfigurationManager\ConfigurationManager.exe

For 64 Bit operating systems, it can be found under:

• C:\Program

 $\label{eq:second} Files (x86) \\ \mbox{Siemens} \\ \mbox{InformationServer} \\ \mbox{ConfigurationManager} \\ \mbox{Configuratio$ 

The limit of the main memory is readjusted.

2.1 Release Notes

### Unexpected response in the Office add-in

If the Office add-in exhibits an unexpected response, a dialog opens which prompts you to disable the Office add-in.

1. Confirm the dialog with "YES".

To re-activate the Office add-in, proceed as follows:

- 1. Open the Office application.
- 2. Select the "File" tab.
- 3. Click the "Options" button.
- 4. Navigate to "Add-ins" in the "Categories" area.
- 5. Navigate to "Disabled Items" in the "Manage" field.
- 6. Click "Go...".
- 7. Select the Information Server Office add-in and click "Enable".
- 8. Click "Close".
- 9. Restart the Office application.

You can find additional information under: Enable the add-in (<u>https://msdn.microsoft.com/en-us/library/ms268871.aspx</u>)

#### See also

http://support.automation.siemens.com/WW/view/en/67502173 (http://support.automation.siemens.com/WW/view/en/67502173)

# 2.2 Service and Support

### 2.2.1 Warnings

### Safety information

### Warning notice system

This manual contains notices you must observe to ensure your personal safety and to prevent damage to property. Notices referring to your personal safety are highlighted in the manual by a safety alert symbol; notices referring to property damage only have no safety alert symbol. The warning notices shown below are graded according to the degree of danger.

# 

indicates that death or severe personal injury will result if proper precautions are not taken.

# 

indicates that death or severe personal injury may result if proper precautions are not taken.

# 

indicates that minor personal injury may result if proper precautions are not taken.

### NOTICE

indicates that property damage may result if proper precautions are not taken.

### Note

indicates important information about the product and its use or a specific section of the documentation to which you should pay particular attention.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A warning notice of injury to persons with a safety alert symbol may also include a warning relating to property damage.

2.2 Service and Support

### **Qualified personnel**

The product/system described in this documentation may be operated only by personnel qualified for the specific task in accordance with the relevant documentation, in particular its warning notices and safety information. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

### Proper use

Note the following:

## 

### Proper use of Siemens products

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be adhered to. The information in the relevant documentation must be observed.

### Trademarks

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### Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions only form one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the Internet if necessary and only to the extent necessary and with appropriate protective measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens' guidance on appropriate security measures should be taken into account. For more information about industrial security, please visit

https://www.siemens.com/industrialsecurity (<u>https://www.siemens.com/industrialsecurity</u>)

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends applying product updates as soon as they are available and always using the latest product versions. Using versions that are obsolete or are no longer supported can increase the risk of cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under

https://www.siemens.com/industrialsecurity (https://www.siemens.com/industrialsecurity)

### **Disclaimer of liability**

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. However, since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions. Suggestions for improvement are welcomed.

Information in the online documentation is more binding than that in the manuals and PDF files.

Observe the Release Notes and Installation Notes. Information in the Release Notes and Installation Notes is more binding than that in the manuals and online help.

2.2 Service and Support

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Siemens AG

**Division Digital Factory** 

SIMATIC Human Machine Interfaces

P.O. Box 4848

D-90026 Nuremberg, Germany

### See also

https://www.siemens.com/industrialsecurity (https://www.siemens.com/industrialsecurity)

### 2.2.2 Customer Support

### **Customer Support and Technical Support**

You can reach the SIMATIC hotlines at the times specified in the following table. The SIMATIC hotline employees speak German and English. The Authorization hotline offers French, Italian or Spanish customer support in addition to German and English.

### **Technical support**

Nuremberg	(GMT +1:00)
Service Hours	Monday - Friday, 8:00 to 17:00 (CET/CEST)
Phone	+49 (0)911 895 7222
Fax	+49 (0)911 895 7223
E-mail	http://www.siemens.com/automation/support-request
	(http://www.siemens.com/automation/support-request)

An overview of the Technical Support is available at the following URL:

 http://support.automation.siemens.com/WW/view/en/16605032 (http://support.automation.siemens.com/WW/view/en/16605032)

### Automation Value Card (AVC)

The Automation Value Card (AVC) provides extended Technical Support and is available 24 hours every day of the week. Information on the AVC can be found at the following URL:

 http://support.automation.siemens.com/WW/view/en/21981898 (http://support.automation.siemens.com/WW/view/en/21981898)

### SIMATIC Customer Online Support

### Service and Support

An overview of the support offering for our products is available at the following URL:

 http://www.siemens.com/automation/service&support (http://www.siemens.com/automation/service&support)

In Product Support, for example, you will find downloads of firmware updates, service packs and useful utilities.

Online Help is available so that you can successfully use the Support offering. Open the Online Help by selecting the corresponding button on the Internet site or at the following URL:

 http://support.automation.siemens.com/WW/support/html\_00/help/Online\_Hilfe.htm (http://support.automation.siemens.com/WW/support/html\_76/help/Online\_Hilfe.htm) 2.2 Service and Support

### WinCC FAQs

Online Support with information on FAQs (Frequently Asked Questions) may also be found at the following URL:

 http://support.automation.siemens.com/WW/view/de/10805548/133000 (http://support.automation.siemens.com/WW/view/en/56732738/133000)

### **Technical Forum**

The Technical Forum supports exchange with other SIMATIC users. It is available at the following URL:

 http://www.siemens.com/automation/csi/forum (http://www.siemens.de/automation/csi\_en/forum)

#### Technical documentation for SIMATIC products

You can find a guide to the technical documentation provided for individual SIMATIC products and systems at the following URL:

http://www.siemens.com/simatic-tech-doku-portal (<u>http://www.siemens.com/simatic-tech-doku-portal</u>)

#### Contact person database

To contact your local agent, search our contact database at the following URL:

 http://www.automation.siemens.com/partner/index.asp (http://www.automation.siemens.com/partner/index.asp?lang=en)

### **Product Information**

### SIMATIC Products

Go to the following URL for additional information about SIMATIC products:

http://www.siemens.com/simatic (http://www.siemens.com/simatic)

### See also

Internet: Information on Information Server (http://www.siemens.com/wincc)

Internet: Technical support (http://support.automation.siemens.com/WW/view/en/16605032)

Internet: Automation Validation Card (AVC) (http://support.automation.siemens.com/WW/view/en/21981898)

Internet: Service and Support (http://www.siemens.com/automation/service&support)

Internet: Process Historian and Information Server FAQs (http://support.automation.siemens.com/WW/view/en/56732738/133000)

Internet: Support Technical Forum (http://www.siemens.de/automation/csi\_en/forum)

Internet: Support Search (http://www.siemens.de/automation/csi\_en/km)

Internet: Support Online Help (http://support.automation.siemens.com/WW/support/html\_76/help/Online\_Hilfe.htm)

Internet: Technical documentation for SIMATIC products (<u>http://www.siemens.com/simatic-tech-doku-portal</u>)

Internet: Contact person database (http://www.automation.siemens.com/partner/index.asp?lang=en)

Internet: SIMATIC Products (http://www.siemens.com/simatic)

2.2 Service and Support

# **Information Server - Documentation**

### 3.1 Overview

### Introduction

The SIMATIC Information Server is a reporting system that uses the Microsoft Reporting Services and accesses historic data of a process control system.

The SIMATIC Information Server can be used to compile, evaluate and visualize the process values, messages and recipe data of a process control system in graphics or tables.

The Process Historian server, WinCC stations and PCS 7 OS can be used as data sources. A network connection is required for access.

Access the Web application of the Information Server with one of the following Web browsers that supports HTML5:

- Microsoft Internet Explorer
- Mozilla Firefox
- Google Chrome

The following applications are available for creating reports:

- Information Server web application
- Office add-ins for Microsoft Excel, Word and PowerPoint

### Access rights

If you are connected to a Process Historian server or a PCS 7 OS/WinCC OS, you can access the archived data of projects that are released for you. The access rights required for this must be configured in the respective project.

3.1 Overview

### Reporting

A variety of report templates are available for creating reports. You may use external applications to define further custom report templates.

The reports and report templates are created by means of the web application or Office addins. Use the same report templates in both applications.

You can parameterize a report template, for example, by selecting a tag that contains the start and end time of the necessary monitoring period. The parameters you set define the report content.

The selected report template determines the way the queried information is displayed. The results of the respective query are visualized in the report as tables or charts.

### Evaluated data

The Information Server provides report templates for the following data:

- Process values
- Messages
- Batch logs (recipes) of SIMATIC BATCH
- Process data analysis of the SIMATIC WinCC / Performance Monitor.

The SIMATIC WinCC / Performance Monitor makes its own report templates available during installation. Additional information is available in the documentation of the Performance Monitor.

#### Note

For more information about the report templates, refer to 'Report templates (Page 70)'.

### **Report layout**

The Information Server can visualize the queried data in various forms. You can output and save the reports "online" or export them to a local drive.

The Information Server offers various options for creating, editing and viewing a report:

Preview

Use the "Preview" menu entry to parameterize a report template that you can use to generate a report. This report is displayed in a preview window and is not saved.

You can configure frequently used report templates to suit your requirements and store these along with these settings as "Presets" on the report server.

### Saved report

You can create reports in the following formats and save them on the: Information Server:

- PDF
- XML
- HTML
- MS Word
- MS Excel
- Export

You can export the saved reports to a local drive for further processing.

Dashboard pages

You can create your own dashboard pages for the presentation in the browser. A variety of layouts are available for this purpose.

To design the dashboards, use the provided widgets, for example, for displaying a report or explanatory text.

The displayed reports are updated when the dashboard is loaded and displayed as a snapshot.

• Office add-ins

You can create and view reports in Word or PowerPoint.

Excel offers more options for processing the report data.

## 3.2 Example: Creating a report with data from Process Historian

### Introduction

The following example shows you how to create a report in the Information Server with archived process data from Process Historian.

### Requirements

- The Information Server has been installed.
- A Web page has been created with the configuration manager.
- The Internet Explorer has been set up according to the description in the Installation Notes.
- You are logged on to the Web application of the Information Server in the role of "Administrator".
- The Information Server has a network connection to a computer on which Process Historian is available.
- The Process Historian must be activated.
- The following licenses must be available:
  - License for the Information Server
  - Client-Access license for the Information Server

### Procedure

1. Open the Internet Explorer. Enter "http://<ComputerName>" to establish a connection to the Information Server.

🦲 http	p://ph	03/ - Ir	nternet Exp	lorer				
90	•€	🎜 htt	p:// <b>ph03</b> /					
] File	Edit	View	Favorites	Tools	Help			
Wind	lows S	ecurity	1					×
Co	nnectin	ig to PH(	03.					
								_
			User name	2				
			Password					
			Domain: PH0		edentia	s		
				er my er	Cucintua	5		
						ОК	Cancel	
						L		

2. Enter the same user name and the same password that you specified in the configuration manager during the installation process. The Information Server Web application opens.



3. Click the "Administration" menu item.

- 4. Click the "Configuration" menu item.
- 5. Click the "Reporting" menu item.
- 6. Click the "Project" menu item.
- 7. Enter the computer name of the Process Historian in the "Server name or IP address" field. Select the "Process Historian" option.

The standard name of the SQL instance is displayed. Check whether the standard name matches the connected Process Historian database. If necessary, change the name of the SQL instance.

Click the "Select projects" button.

A Home	🖶 Home 🛛 📽 Administration 🚽	
Dashboard	Configuration	
Reporting		
Lownload	Project Templates	
Administration	🗅 Create folder 🗎 Delete folder	Connect projects
<	C Project	Server name or IP address PH03
		Туре
		Process Historian
		O WINCC- / PCS7 OS
		SQL instance
		historian
		Select projects

8. Select the project and click "Add".

onfiguration			
Project Templates		_	
	Project	Туре	Custom name (optional)
C) Project	TCC810MP	SIMATIC PCS 7	

You have connected a Process Historian data source with the Information Server.

onfiguration	
Project Templates	
🗅 Create folder 💼 Delete folder	Connect projects
CD Project     TCC810MP	Server name or IP address
	Туре
	<ul> <li>Process Historian</li> </ul>
	O WinCC- / PCS7 OS
	SQL instance

9. Click the "Reporting" menu item.



10.Use a standard report template to access the data stored in the Process Historian. Select the "Table" template from the "Tags" folder.

🛠 Home 🛛 🖵 Reporting 🗸		
<ul> <li>Report templates</li> <li>Templates</li> <li>Public</li> <li>Messages</li> <li>Tags</li> <li>Aggregation trend</li> <li>Trend</li> <li>Aggregation matrix</li> <li>Matrix</li> <li>Aggregation table</li> <li>Table</li> <li>Achive configuration</li> <li>Archive configuration chain</li> </ul>	Table         Shows tag data in table format over a specific time period in sequential order.         Image: Create report / subscription         Reports (0)         Image: View       Download         Image: Download       Image: C         Preview       N         Processing       C	C Mod N
	Subscriptions (0)	, ~

11.Click "Create report/Subscription".

👫 Home 🛛 🖵 Rep	orting - New report
Project	TCC810MP v
Start	Relative 5/5/2015 1:44:36 PM 🕮 🕤
End O	Relative 5/5/2015 1:46:36 PM III ·
Tags	Name
	· · ·
	B Add
Create parameter pre	eset Show preview
	Cancel Create subscription Create report

12.Select a project. Specify a start time and an end time. Then click "Add" to select a tag.

13.Use the "+" button to select a tag whose data you want to output in the report.

Archives Technological view	Enter text	to search for	٩
• B1	Select	Name	v Win
R1_Unit R2_Unit	D	R1_Unit/SWD_Level.QACT_VAL	OS
R3_Unit R6_Unit	0	R1_Unit/SWD_Temp.QACT_VAL	OS
<ul> <li>Simulation</li> </ul>	0	R1_Unit/Temp.QACT_VAL	OS
	0	R1_Unit/Unit.VBA_ID	OS
	<		>
Name		WinCC project Scan of	ycle Archiving
<			>

### Information Server - Documentation

*3.2 Example: Creating a report with data from Process Historian* 

### 14.Click "Save".

Archives	Enter text	to search for			٩
Technological view     B1	Select	Name			Win
R1_Unit R2_Unit	0	R1_Unit/SWD_Level.QACT_VAL			OS
R3_Unit R6_Unit	0	R1_Unit/SWD_Temp.QACT_VAL			OS
<ul> <li>Simulation</li> </ul>	0	R1_Unil/Temp.QACT_VAL			os
	0	R1_Unit/Unit.VBA_ID			osi
	<				>
Name		WinCC project	Scan cycle	×	Archiving
R1_Unit/Temp.QACT_VAL		OS810		<b>1</b> s	~
		120			2
<					>
Remove All					
			1	Cancel	Save

希 Home 📮	Reporting - N	lew report					
Project	TCC810M	P	٠				
Start ()	Relative	5/5/2015 1:44:36 PM	•				
End ()	Relative	5/5/2015 1:46:36 PM	•				
Tags	Name						
	R1_Unit/T	emp.QACT_VAL	^	•			
			~				
	8		C Add				
Create parame	ter preset	Show	v preview				
					Cancel	Create subscription	Create report

15.Click "Show preview".

The report is shown in the preview:

Project	TCC810M	P	Ψ	Table		
Start	Relative	5/5/2015 1:44:36 PM		Table Tag perie System/active/HT Until Temp.(2001) VML Until Temp.(2001) VML	Tenestary 65/2015 10:44:06:227 65/2015 10:44:07:227	Value 12.016517829096 12.0037721242441
End 0	Relative	5/5/2015 1:46:36 PM	0	SystemAntherRit (UnilTerry GACT_VAL SystemAntherRit (UnilTerry GACT_VAL SystemAntherRit (UnilTerry GACT_VAL SystemAntherRit UnilTerry GACT_VAL	5/5/3/45 13 44 38.227 5/5/2/45 13 44 39 227 5/5/3/45 13 44 40 227 5/5/2/45 13 44 40 227	12.0167591558220 12.0042315245502 12.0142315245502 12.0172356207231 12.9130101064199
Tags	Name			Systemicsteelin (http://www.gatociae.org/ Systemicsteelin (http://www.gatociae.org/ Systemicsteelin (http://www.gatociae.org/ Systemicsteelin (http://www.gatociae.org/	5/5/10/5 13:44:42:207 6/5/20/5 13:44:42:207 5/5/20/5 13:44:42:207 5/5/20/5 13:44:45:207	12 8561256136715 12 817533458542 12 0040612213156 17 9136258969424
	R1_Unit/T	emp.QACT_VAL	^ i	Bycenskeisten (Um Erup BACT, VA Bycenskeisten (Um Erup BACT, VA Bycenskeisten (Eruf Erup BACT, VA	55(9)(5)(5)(4)(4)(2)(2)(5)(2)(4)(4)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)	12 01810/02/7001 12 0310/02/00/000 12 02/04/02/00/000 12 018114/00/000 12 018114/00/000 12 018114/00/000 12 018114/00/000 12 01811/01/000 12 01811/01/00/000 12 01811/01/00/000 12 01811/01/00/000 12 01810/00/000 12 01810/000 12 01800/000 12 00
			Add	6/5/02/18 + 168 196 794		
Create parame	ter preset	Show	v preview	-	1 of 4	

16.Click "Create report".

17.Enter a name. Select the report format, such as "PDF".

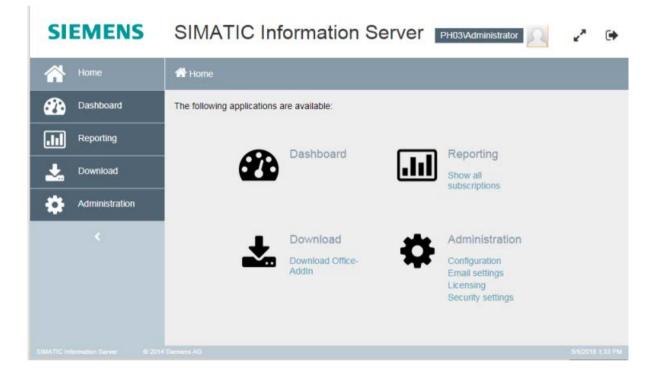
18.Click "Save". The report is listed in the list of reports.

3.3 Information Server Web application - overview

# 3.3 Information Server Web application - overview

### Introduction

The Information Server Web application is the central location for the administration and management of report templates and subscriptions.



### Structure of the web application

Object/ Menu	Area	Use	
Frame:	-	On all pages of the web application:	
Navigate up		Current user, interface language	
		Log out, (arrow to right)	
		<ul> <li>Breadcrumb bar to navigate within an Information Server portal</li> </ul>	
Frame:	-	Information Server portal:	
Navigate left		Homepage	
		Dashboard	
		Reporting	
		Download	
		Administration	

3.3 Information Server Web application - overview

Object/ Menu	Area	Use		
Homepage	-	Overview of portal:		
		Dashboard		
		Reporting:		
		<ul> <li>Reporting</li> </ul>		
		<ul> <li>Subscriptions</li> </ul>		
		Download:		
		<ul> <li>Office add-ins</li> </ul>		
		Administration:		
		<ul> <li>Configuration</li> </ul>		
		<ul> <li>E-mail settings</li> </ul>		
		– Licensing		
		<ul> <li>Security settings (user management)</li> </ul>		
Dashboard	-	Creation and viewing of dashboards		
Reporting	-	List of report templates for process values, messages and recipe data:		
		Report templates:		
		<ul> <li>Display details</li> </ul>		
		<ul> <li>Select and configure or select the preset</li> </ul>		
		<ul> <li>Save as preset</li> </ul>		
		Reports:		
		– Create		
		– Display		
		– Edit		
		– Download		
		– Delete		
		Subscriptions:		
		– Create		
		– Display		
		– Edit		
		– Delete		

## 3.3 Information Server Web application - overview

Object/ Menu	Area	Use	
Download	-	SIMATIC Information Server add-in for MS Office	
Administration	Configuration: Reporting > Project	Establishing a connection with a Process Historian or PCS 7 or WinCC OS as the data source:	
		Data source	
		Authentication mode	
		User and password	
		• Set a user-defined name for display in the Information Server	
		Folder:	
		Create folder	
		Delete folder	
		Selected access to existing projects:	
		Show settings	
		Specify authorizations	
		Delete project	
	Configuration:	Management of the report templates:	
	Reporting > Templates	Create folder	
		Delete folder	
		Import report templates (upload)	
		Export report templates (download)	
		Delete report templates	
		Move report templates	
	E-mail settings	Specifying settings of the SMTP mail server for sending reports by e-mail:	
		Server IP/ name	
		Port	
		Email address of the sender	
		Test connection for verification:	
		• E-mail address of a recipient for the test e-mail	
	Licensing	Display the status of licenses, sorted by installed and used li- censes:	
		Server	
		Client access	
		Data source access (WinCC)	
		Data source access (PCS 7)	
	Users	List of users that have been created in the Windows groups.	
		The user profile shows the assigned roles under "Permissions".	
		Use "Language" to select the user interface language of the web application.	

3.4 Administration

# 3.4 Administration

### 3.4.1 Configuration

### Information Server Configuring the web application

The configuration manager is executed on completion of the setup during the initial start of the operating system. It determines, among other things, the HTTP address via which access is provided to the Information Server.

### Note

### Configuration of the Internet Information Services (IIS)

The configuration of the Internet Information Services (IIS) may not be changed for the Information Server.

### Opening the Information Server web application

### Requirement

• The user must be a member of the user groups "SIMATIC Report" in the Windows computer administration.

For more information about the user groups, refer to "User management (Page 66)".

### Opening the Information Server website

Enter the address (URL) that corresponds with configuration "1" or "2" in the address bar of the browser.

Page view	IIS Configuration of the operating mode	Use
http://localhost	Configuration 1	Locally on the Information Server
http:// <pc name=""></pc>	Configuration 1	From the network
http://localhost/informationserver	Configuration 2	Locally on the Information Server
http:// <pc name="">/Informationserver</pc>	Configuration 2	From the network

### Note

### Releasing licenses by logging out from the Web application

Use the "Logout" link to log off from the Web application.

If you close the browser without logging out, the client license remains in use until the session closes.

### Note

#### Internet Explorer does not display Information Server

If the Internet Explorer does not display the Web application of the Information Server, check the Internet Information Services (IIS), the Reporting Services and the .NET Framework 4.5.1 installation.

You must confirm the .NET Framework 4.5.1 settings after the registration of IIS.

#### Managing folders

You can create new folders and delete existing folders to manage projects and report templates.

#### Requirement

• You are a member of the "SIMATIC Report Administrators" Windows group:

#### Create folder

- 1. Click "Administration > Configuration > Reporting".
- 2. Click "Create Folder" under "Project" or "Templates" in the respective directory.
- 3. Enter the desired name for the folder and confirm with "OK".

The folder is created in the list of project folders.

#### **Delete folder**

- 1. Click "Administration > Configuration > Reporting".
- 2. Click on the folder to be deleted under "Project" or "Templates" in the respective directory.
- 3. Click "Delete Folder".
- 4. Confirm the security prompt.

The folder is deleted.

### See also

Connect data source (Page 67) User management (Page 66)

### 3.4.2 User management

The group membership is defined the first time a new user logs in. The group membership can only be defined once at the beginning and can then no longer be changed.

### **Authorizations**

You use the Windows Computer Management for user management and assignment to the Windows user groups.

The Information Server uses the following local Windows user groups:

- SIMATIC Report Administrators: Installing and configuring the Information Server
- SIMATIC Report Publishers: Creating and downloading reports
- SIMATIC Report Services: Creating connections to a data source
- SIMATIC Report Users: Viewing reports
- SIMATIC Report Viewers: Read access to reports under "Public"

#### Note

#### Opening the web application locally on the Information Server

If you use an operating system with active user account control, such as Windows 7, Windows Server 2008 or Windows Server 2008 R2, it may also be necessary to start the web application as an Administrator with advanced rights.

### Procedure

- 1. Open the Windows Computer Management.
- 2. Navigate to "Local Users and Groups".
- 3. Open the "Groups" folder and double-click on the group to which you wish to assign the user.
- 4. Click the "Add" button to add the user to the group.
- 5. Acknowledge the dialog with "Apply".

#### See also

Connect data source (Page 67) Configuration (Page 64)

### 3.4.3 Connect data source

To gain access to project data, connect the Information Server to a data source. You can work with the following data sources:

- PCS 7 project
- WinCC projects
- Process Historian database
- WinCC OA

### Note

### Project archive

You can create folders to structure projects. Whether an available project is a PCS 7 project is indicated in brackets.

Assign an alias name to projects of the same name.

### Requirement

- You are logged on to the Web application of the Information Server in the role of "Administrator".
- The Information Server has a network connection to a computer on which the data source is available.
- In the case of a connection to Process Historian, Process Historian must be activated.

### Procedure

- 1. Select "Administration" in the navigation area.
- Select "Configuration > Reporting". The configuration screen for the reporting is displayed.
- 3. Under "Connect projects" in the "Project" view, enter the server name or IP address in the text box.
- 4. Select the data source under "Type".

The standard name of the SQL instance is displayed. With a connection to Process Historian, check whether the default name matches the SQL instance of the connected Process Historian database. If necessary, change the name of the SQL instance.

5. Click "Select projects".

The connection to the data source is established.

The available projects are displayed.

- Select the desired projects. You can distinguish between projects of the same name by the OS name.
- 7. Select "Add" to connect the projects.

#### Information Server - Documentation

3.4 Administration

### Result

A connection is established with the selected project.

The data of the project are available for report creation.

### Note

### Reconnecting data source (PCS 7 OS/ WinCC)

If the database name on the PCS 7 OS or WinCC station changes, you have to reconnect the project under "Administration > Projects".

Prior to this, you must remove the connection that is already configured.

### See also

Configuration (Page 64) User management (Page 66)

### 3.4.4 Editing e-mail settings

You have to specify the settings of the SMTP mail server to send reports by e-mail.

### Requirement

• You are logged on to the web application of the Information Server in the role of "Administrator".

### Procedure

- 1. Select the "E-mail settings" in the "Administration" portal.
- 2. Enter the required data in the 'Settings of the SMTP mail server' area:
  - Server IP/ name
  - Port
  - Email address of the sender
- 3. Click "Apply" to save the settings.

Click "Reset" to reset a configuration, if necessary.

- 4. Enter the e-mail address of a recipient in the 'Test connection' area.
- 5. Save the email configuration before testing.
- 6. Click "Send" to check the set configuration.

A test e-mail is sent.

### Result

You have changed the e-mail setting of the Scheduler.

3.5 Reporting

# 3.5 Reporting

### 3.5.1 Report templates

### 3.5.1.1 Report templates - Overview

The Information Server provides report templates for the following data:

- Messages
- Process values
- SIMATIC BATCH logs
- Process data analysis of the SIMATIC WinCC / Performance Monitor.

The SIMATIC WinCC / Performance Monitor makes its own report templates available during installation. Additional information is available in the documentation of the Performance Monitor.

### Note

### FAQs for the creation of customized report templates

In addition to the above named templates, you can create customized report templates for the Information Server based on Process Historian data in the WinCC and PCS 7 Environment.

You can find additional information in the following FAQs: FAQs on the creation of customized report templates

(https://support.industry.siemens.com/cs/document/64906050/creation-of-report-templatesfor-the-information-server-based-on-process-historian-data-in-the-wincc-und-pcs-7environment?dti=0&lc=en-WW)

### Configuration of report templates

You can assign different parameters to a report template. The basic parameters for process values and messages include:

- Project name
- Start time
- End time

Time that you can specify as absolute time or relative, for example:

- Absolute time: 2 February 2014, 10:30 AM
- Relative time: The last two hours since the creation time of the respective report.

You may specify additional parameters, depending on the report template you selected.

You can only change the following parameters of a created report template:

- Name
- Comment
- Format

You can find more information on the time specifications on the page Time specifications (Page 72)

### **Templates for messages**

In templates for messages, you can, for example, specify message classes, the number of displayed values or a source. You can find more information on page Templates for messages (Page 75)

### Templates for process values

In templates for process values, you specify concrete tags that you can select from the following archives:

- Process value archive
- Compressed archive

You can assign additional parameters such as a statistical calculation method or a relative timestamp.

You can find more information on page Templates for process values (Page 76)

### Templates for SIMATIC BATCH batch reports

In PCS 7, Information Server provides the report template "Batch Stepping Protocol" for batches by default. A separate SIMATIC BATCH add-on is available for this purpose.

### 3.5 Reporting

### **Templates for Excel reports**

You can store templates that were created in Excel as ERT (Excel Report Template) files in a report template folder in the Information Server. Excel templates include their own layouts, texts and contents.

You use the Excel templates in the Web application of the Information Server to create a subscription. You cannot create reports with Excel templates in the Web application.

All configurations that you have created in Excel are retained in the Excel templates.

### See also

Templates for messages (Page 75)

Templates for process values (Page 76)

Time specifications (Page 72)

### 3.5.1.2 Time specifications

### **Relative time specifications**

Relative time specifications are placeholders for a time period. The time period has no absolute start or end time. A relative time specification therefore requires a reference time.

The reference time can be absolute or relative. If there is a plus sign before the relative time specification, the time period given is after a reference time.

A leading minus sign indicates that the period is in advance of a reference time.

The following table shows the available relative time specifications:

Relative time spec- ification	Time unit	Web application	Office add-ins
ms	Millisecond	$\checkmark$	$\checkmark$
S	Second	$\checkmark$	$\checkmark$
m	Minute	$\checkmark$	$\checkmark$
h	Hour	$\checkmark$	$\checkmark$
d	Day	$\checkmark$	$\checkmark$
w	Week	1	$\checkmark$
mo	Month	$\checkmark$	$\checkmark$
у	Year	$\checkmark$	$\checkmark$

The following table shows the separate relative time specifications:

Relative time spec- ification	Time unit	Web application	Office add-ins
t	Current day	$\checkmark$	$\checkmark$
у	Yesterday	1	$\checkmark$
*	Current time	√	$\checkmark$
1-31	1st - 31st of the month	$\checkmark$	$\checkmark$

Special feature of relative time specification "y":

The relative time specification "y" designates both a "Year" and "Yesterday". The context in which the "y" is used determines the relative time specification.

When the "y" is used at the start of the time period, it represents the relative time specification "Yesterday".

When the "y" is used in combination with a number, it stands for the relative time specification "Year".

Special feature of the relative time specification "1-31":

The relative time specification "1-31" includes all numbers between 1 and 31. When one of these numbers is not used in direct combination with another relative time specification, the number stands for this day of the month.

### Examples for relative time specifications

The following table gives examples of relative time specifications:

Example	Description
13.01.2012 10:00:00+1d-2h+30m	13.01.2012, 10:00 AM plus one day minus 2 hours plus 30 minutes
*-24h+30m	Current time minus 24 hours plus 30 minutes
t-3m	12:00 AM of the current day minus three minutes
2y-3mo	2 years minus 3 months
y-15h	12 AM of the previous day minus 15 hours
12	The 12th of the month

## Absolute time specification

An absolute time specification defines a specific time.

The following table shows the possible absolute time specifications:

Absolute time specification	Time unit	Web application	Office add-ins
dd.mm.yyyy hh:mm:ss	Date with time speci- fication	$\checkmark$	~

### Examples for absolute time specifications

The following table gives examples of absolute time specifications:

Example	Description
12.08.2012	Specified date
10.03.2009 14:00:00	2:00 PM on the specified date

### Combined time specifications

A combined time expression is a specific reference time followed by a relative time expression.

The following table gives examples of combined time specifications:

Combined time specification	Description
*-2d+10h	Current time minus two days, plus ten hours
t+32s	Current day, midnight plus 32 seconds

#### Note

#### Times in different time zones

If different time zones are set on the Information Server and Information Server client, the local time zone of the server is displayed in the reports.

#### Times in MS Excel

Timestamps entered in cells are read during configuration of tags in Excel.

### See also

Report templates - Overview (Page 70)

# 3.5.1.3 Templates for messages

The Information Server has the following report templates for messages:

Template	Description	
Acknowledgment duration	Frequency distribution chart: Number of messages within a defined time interval requiring acknowledgment, sorted by acknowledgment duration (duration from occurrence of message until acknowledgment).	
Messages per day	Bar chart: Number of messages requiring acknowledgment per day, classified by message class.	
Messages by origin	Bar chart: Number of messages by origin, sorted in descending order. Only messages requiring acknowledgment are considered.	
Messages by priority	Bar chart: All messages by priority (messages requiring acknowledg- ment).	
Messages per 10 minute period	Histogram: Number of messages per 10 minute period as time-related measure. According to EEMUA, more than 10 messages within a 10 minute period indicate the start of a message burst during which messages are displayed faster than they can be processed by the operator.	
Messages by priority	Pie chart: Number of messages requiring acknowledgement by priority.	
Average acknowledgment duration	Bar chart: Number of messages by average acknowledgment duration of messages within a time interval.	
Messages filtered by mes- sage class	Table: All messages of a selected message class.	
Messages sorted by priori- ty	Table: All messages sorted by priority.	
Messages sorted by timestamp	Table: All messages sorted by timestamp.	
Commented messages	Table: All commented messages.	
Number of messages by message class	Bar chart: Number of messages for all message classes.	
Total duration until ac- knowledgment	Bar chart: Hit list of messages requiring acknowledgment sorted by total duration until acknowledgment. All acknowledgment durations are to- taled individual acknowledgment durations: Time period from "came" to "acknowledged".	
Total duration until "out- going"	Bar chart: Hit list of messages requiring acknowledgment sorted by total duration until acknowledgment. All acknowledgment durations are to- taled individual acknowledgment durations: Time period from "came" to "gone".	

# See also

Report templates - Overview (Page 70)

## 3.5.1.4 Templates for process values

The Information Server has the following report templates for process values:

Template	Туре	Area	Description
Aggregation trend	Trend chart	Defined time interval	Aggregated tags within a <i>defined timer</i> interval.
Trend	Trend chart	Defined time interval	Tags within a <i>defined timer interval</i> .
Aggregation matrix	Table	Defined time interval	Compiled tags within a <i>defined timer inter-</i> <i>val</i> in columns.
Matrix	Table	Defined time interval	Tags within a <i>defined timer interval</i> in col- umns.
Aggregation table	Table	Defined time interval	Compiled tags within a <i>defined timer inter-</i> <i>val</i> in continuous sequence.
Table	Table	Defined time interval	Tags within a <i>defined timer interval</i> in con- tinuous sequence.
Archive configuration	Table	Selected tags	Archive configuration of selected tags.
Archive configuration chain	Table	All derived archive tags	Archive configuration of selected tag includ- ing all <i>derived archive tags</i> .

#### Note

#### Differing process values

Compressed process values can significantly differ from the process values stored in the archive. The deviation depends on the compression algorithm used.

#### Delayed display of current process values

Depending on the method of storage and compression algorithm, current process values may be stored in the database with a time delay. In this case, the archive values are not collected, for example, until the defined size of the data packet is reached. Only then will the archive values be transferred to the database.

This behavior may cause the process values of the last 10 minutes to be missing in the report, for example.

To view the process values from this period, update the report after a few minutes.

See also

Report templates - Overview (Page 70)

# 3.5.2 Working with the Web application

## 3.5.2.1 Working with the web application

The Information Server web application is designed for easy and intuitive operation.

The basic operator actions are summarized in this section.

#### Note

### Releasing licenses by logging out from the Web application

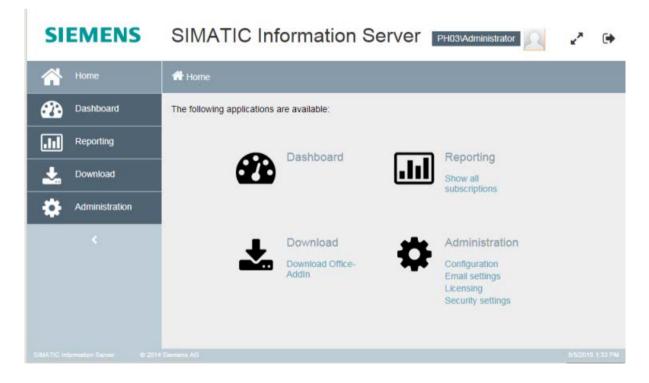
Use the "Logout" link to log off from the Web application.

If you close the browser without logging off, the client license remains occupied until the session is closed.

## Layout of the homepage

The frame remains unchanged during the use of the Information Server. This allows the user profile with the language settings and logoff to be performed at any time.

The menu navigation of the selected portal is displayed as title path in the header area of the frame.



You can see the Information Server portal in the work area:

- Dashboard
- Reporting (report creation)
- Download
- Administration

The applications and the start view can also be accessed via the left navigation bar. Clicking on the arrow below the last icon expands or minimizes the bar to a desired size.

### **Basic commands**

You can use the following basic commands in the Information Server:

- Move element to another folder
- Upload element
- Download element
- Edit element
- Delete element

The commands for processing an element are similar as those under Microsoft Windows.

### Language change

1. Click on on your user profile at the right top of the screen.

The user profile is displayed.

- 2. Click on the currently selected language in the "Language" line. Select the desired language.
- 3. Click "Save".

The web application is updated and takes on the current language settings.

#### Note

#### Changing the user interface language

If the user interface language is not displayed correctly, check to see if you have installed the operating system and Microsoft Office with the matching Multilingual User Interface.

#### See also

Working with Office add-ins (Page 94)

# 3.5.2.2 Creating a report

### Creating a report

You have the following options for creating reports:

- View online via the preview
- Save with "Create report" on the Information Server
- Local saving via downloading a created report
- Local saving via a subscription
- Sending via an e-mail via a subscription

### Options for creating a report

If you save a report on the Information Server, you can specify the following settings:

- Name of the report
- Comment for describing the report
- Storage location

If you disable the "Private" option, all Information Server users have access to the report.

Online report

To view the report in the browser, select the "Online report" option.

• Export format

Select the desired format for saving the report.

- PDF
- XML
- HTML
- MS Word
- MS Excel

## Saving parameter presets

When you create a report frequently with the same parameters, you can save these parameters as presets for the report template.

### Procedure

- 1. Select "Create parameter preset" button after configuring the report.
- 2. In the "Create preset for report parameters" dialog, enter a name.
- 3. If the preset should be visible for all users, disable the "Private" option.

The configured report template is displayed with the "Create Report/Subscription" button from the drop-down list.

Click "Manage presets" to edit, sort and delete the parameter presets.

## Requirement

• A connection to the Process Historian Server or PCS 7 OS/ WinCC OS has been established.

### Procedure

- 1. On the homepage of the Information Server, select the "Reporting" application.
- Select a template under "Report templates" in the navigation bar. The reporting and subscription lists are displayed.
- Select "Create report/subscription".
   The parameter input fields for the report template are displayed.
- 4. Select a project.
- 5. Assign the parameters to the report template with the required specifications, for example:
  - Start: Start time with date and time
  - End: End of the time period with date and time
  - Tags: Tag whose value is displayed
- 6. To create the report, click "Show preview".
- To save the report in the Information Server, click "Create report". The "Create report" dialog opens.
- 8. Specify the settings.
- 9. The report is created and displayed in the report list of the report template.

## Alternative procedure: Apply presets

If a configured report template is saved, you can use "Manage presets" to apply these settings.

- 1. On the homepage of the Information Server, select the "Reporting" application.
- 2. Select a template under "Report templates" in the navigation bar.
- 3. Use the right arrow on "Create report/subscription" button to open the list of saved presets.
- 4. Select the desired preset.

The parameter input fields for the report template are displayed.

- 5. If necessary, change the displayed parameters.
- 6. Follow the procedure for creating a report.

### Result

The created report is now in the report list of the selected template.

You can view, download, edit or delete the report.

#### Note

### Deleting reports through multiple selection

You can delete reports either individually or through multiple selection. To do so, select the reports you want to delete while keeping the Shift or Control button pressed. Confirm the selection.

Deleting through multiple selection is only possible for the reports shown in the current view of the table.

# 3.5.2.3 Working with subscriptions

### Settings for subscriptions

### Introduction

To automatically create a report at a future point in time, you can create a subscription.

Reporting via a subscription can be started by various triggers:

- One-time creation of a report at a specific point in time, for example, by starting an analysis at the beginning or end of the week.
- Cyclic creation of a report at a recurring point in time, for example, to regularly obtain an analysis of the previous week every Monday.
- Reporting initiated by an event, for example, when a tag limit is exceeded or a specific message is triggered.

## **General Settings**

You can make the following settings for all subscriptions:

Private

If you disable the "Private" option, all Information Server users have access to the subscription.

Online report

To view the report in the browser, select the "Online report" option.

• Enabled

If you disable the option, the subscription is paused.

The reporting is not performed until the subscription is enabled again and the condition for the trigger occurs.

- Possible delivery methods
  - Folder

### Note

The file name in the target folder is composed of the specified file name and the time stamp. If no file name is specified, the name of the subscription and the time stamp are used. The reports are saved to the target folder after they have been triggered by the specified trigger.

If the file is to always be overwritten by the latest report, the following code must be added to the file name: <file\_name>%-ts%

The code replaces the file in the target folder and in the database.

- Email:
- Email (with link)
- Potential export formats
  - PDF
  - XML
  - HTML
  - MS Word
  - MS Excel

You cannot change the parameters of the subscribed report.

### Notification via e-mail

You can also activate that the report is sent by e-mail.

The following options are available:

• E-mail

The e-mail contains the report as an attachment.

• E-mail (with link)

The e-mail contains a link to the report in the specified target directory.

Enter the following settings:

• Email address of the recipient

If necessary, add more e-mail addresses under "CC" or "BCC".

- The subject of the e-mail
- Priority of the e-mail
- Message text in the "Message" field
- Return address (optional)

# Trigger

You can select the following triggers for a subscription:

- Tag trigger
- Message trigger
- Time trigger

## Tag trigger

- 1. Select the data source and the desired project.
- 2. Use "Add" to select the triggering tag.
- Select whether the tag trigger is triggered by any change or when a limit is reached. Enter the desired limits if needed.

# Message trigger

- 1. Select the data source and the desired project.
- 2. Use "Add" to select the triggering message.

# Note

When tag and message triggers are used, reports are only output about events when the time between two events is greater than 1 minute.

### Time trigger

To trigger a report once, select the desired date and time.

To create a a report cyclically, select "Recurring" and specify the following settings:

Beginning

The starting time for the cyclic creation

• End (optional)

Maximum period for which the subscription is active

- Frequency
  - Daily

Once: At a specific time

Recurring: At specific intervals of hours or minutes ("Interval" field) within the period between "Beginning" and "End"

- Weekly on the selected days of the week

Once or recurring (see settings under "Daily")

 Monthly on a specific date, for example, on the 5th day of the month, or on a specific day, for example, every 3rd Monday of the month

Once or recurring (see settings under "Daily")

Only relative time information is useful for configuring a recurring subscription.

For additional information, refer to "Time specifications (Page 72)".

### See also

Creating subscriptions (Page 87) Time specifications (Page 72)

# **Creating subscriptions**

### Introduction

In a subscription, you specify the content- and time-based criteria for the creation of reports. You can find the available settings for a subscription under Settings for subscriptions (Page 82).

Only relative time information is useful for configuring a recurring subscription.

### List of subscriptions

To view all subscriptions, select the "Subscriptions" area in the "Reporting" portal.

To view the subscriptions for a specified report template, select the desired report template in the "Reporting" portal. The report list contains the subscriptions that are based on this report template.

You can edit and delete the subscription displayed in this list.

#### Note

#### All-day recurring subscriptions

If you want to create a subscription which creates recurring reports around the clock for you, then define the start time as 00:00.

## Requirement

 A connection to the Process Historian Server or PCS 7 OS/ WinCC OS has been established.

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3.5 Reporting

# Procedure

	1. On the homepage of the Information Server, select the "Reporting" application.
	2. Select a template under "Report templates" in the navigation bar.
	The reporting and subscription lists are displayed.
	3. Select "Create report/subscription".
	If presets have been saved for the report, you can optionally apply these settings.
	4. Set the parameters for the subscription with the required specifications.
	You can view the report with "Show preview".
	5. Click "Create subscription" and enter the desired settings.
	6. Click "Save".
Result	
	A subscription is created for the selected report and shown in the list of subscriptions.
	You can view, download, edit, disable, enable or delete the subscription.
See also	
000 a130	Creating a report (Page 79)

Time specifications (Page 72)

# 3.5.2.4 Managing report templates

## Uploading report template

### Introduction

You can upload report templates from the PC to the Information Server.

## Requirement

• A report template is saved locally on the PC.

### Procedure

- 1. Select "Administration" in the navigation area.
- 2. Select "Configuration > Reporting".

The configuration screen for the reporting is displayed.

- 3. Click on the target folder in the "Templates" view.
- Click "Upload" in the "Templates" view.
   The existing report templates are loaded.
- 5. Select the desired report template.
- 6. Complete the process with "Upload".

### Note

SQL queries affect the availability of the Process Historian and/or the WinCC server as well as the Information Server.

### Result

The uploaded report template is located in the selected target folder.

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3.5 Reporting

# Downloading report templates

### Introduction

You can download report templates from the Information Server locally to the PC.

#### Requirement

• An report template is stored on the Information Server.

### Procedure

- 1. Select "Administration" in the navigation area.
- Select "Configuration > Reporting". The configuration screen for the reporting is displayed.
- 3. In the "Templates" view, click on the folder in which the report template is located.
- Select the desired template and then click "Download" in the same line. The template is downloaded.
- The remaining procedure depends on the browser used.
   In most cases, the downloaded template is stored in the "Downloads" folder.

### Result

A report template is saved on the PC.

# Moving report templates

## Requirement

• An report template is stored on the Information Server.

# Procedure

- 1. Select "Administration" in the navigation area.
- 2. Select "Configuration > Reporting".

The configuration screen for the reporting is displayed.

- 3. In the "Templates" view, click on the folder in which the report template is located.
- Select the template and then click "Move" in the same line. The "Move template" dialog opens.
- 5. Select the destination directory.

## Result

The report template is located in the selected target folder.

## **Deleting report templates**

### Effects

When you delete a report template, the following associated objects are also deleted:

- Created reports
- Subscriptions

## Requirement

• A report template is available on the Information Server.

### Procedure

- 1. Select "Administration" in the navigation area.
- 2. Select "Configuration > Reporting".

The configuration screen for the reporting is displayed.

- 3. In the "Templates" view, click on the folder in which the report template is located.
- 4. Select the template and then click "Delete" in the same line.
- 5. Confirm the prompt with "Yes".

### Result

The selected element is deleted.

# **Uploading Excel templates**

## Requirement

• An Excel template is available.

## Procedure

- 1. Select "Create report" in the navigation area.
- 2. Select the "Excel templates" tab.
- Select the folder to which the Excel template is to be saved.
   To create a new folder, enter a folder name and then click "Create".
- 4. Click "Upload".
- 5. Navigate to the storage location for the Excel template.
- 6. Select the desired Excel template and then click "Upload".

### Result

An Excel template is available in the web application.

# 3.5.3 Working with Office add-ins

#### 3.5.3.1 Integrating Office add-ins

#### Introduction

You can download the installation files for Microsoft Office add-ins from the homepage of the Information Server web application.

The Office add-ins are a technical prerequisite for inserting reports in Microsoft Word, PowerPoint and Excel, or for editing in Excel.

The setup routine of the SIMATIC software guides you through the installation. For additional information, refer to the Installation Notes.

#### Note

The concurrent use of different Office versions on one computer is not supported.

#### Office add-ins

The Office add-in for Word and PowerPoint can be used to complete the following tasks:

- Creating a report
- Inserting a report
- Connecting Information Server

The Office add-in for Excel can be used to complete the following tasks:

- Configuring a report template
- Inserting a report
- Inserting and editing process values
- Inserting and editing messages
- · Filling report templates with archive data
- · Graphically evaluating process values
- Saving a report
- Opening saved reports
- Connecting Information Server

You may use the Office add-ins to insert reports you have already created as graphic image.

# Requirement

- The Office applications Word, PowerPoint and Excel are installed on the system.
- The Office applications are closed.
- You have administrator rights on the local PC.

### Procedure

- 1. Start the Information Server web application.
- 2. In the "Download" portal, download the installation package of the Office add-in.
- 3. Select a storage location for the EXE file.
- 4. Run the software setup.
- 5. Follow the instructions of the installation wizard.
- 6. Click "Finish" to complete installation.

### Result

You have successfully integrated the Office add-ins in the installed Office applications. Once the Office application starts, the menu bar contains a new "Information Server" tab.

### 3.5.3.2 Linking Office add-ins with the Information Server

### Requirement

- Microsoft Word, PowerPoint and/ or Excel are installed.
- The Information Server and the Office add-ins are installed.

#### Procedure

1. Start the Office application.

At the initial start after the installation of the Office add-ins, the "Select server" dialog box opens.

2. Enter the name of the computer on which the Information Server is installed to establish a connection. Confirm your selection with "OK".

If you use an HTTPS connection, enter the PC name. It is not possible to connect via "https://localhost".

A logon dialog for authentication opens.

#### Note

The structure of the connection string depends on the configuration of the Information Server website. The configuration of the website is described in the 'Configuration' section of the administration manual.

The following entries are possible:

- <Computer name>
- <Computer name>/Informationserver
- 3. Enter the user name and password and confirm with "OK".

The settings for the connected server are still available the next time you open the Office applications.

### Result

You are connected to the Information Server. You can use Office applications to edit the report templates and create reports.

# 3.5.3.3 Reports in Office applications

## Introduction

The Information Server has add-ins for Excel, Word and PowerPointMicrosoft applications. These add-ins can be used to create and insert reports in Excel, Word and PowerPoint.

The Office applications distinguish between two types of reports:

• Report templates

You can create a report on the Information Server and integrate it as a graphic in an Excel, Word or PowerPoint file. The report creation corresponds to the procedure in the Information Server web application.

• Excel report templates

You can create report templates for Excel. Process values or messages are inserted into the cells of an Excel worksheet. You can update the cell contents when you use relative time information.

You can continue processing the data with the Excel functions. You can visualize the process value progress with the Excel graphic function, for example.

A connection to an Information Server must be established to call up information for a report.

# Information Server tools for Excel, Word and PowerPoint

The following table explains the tool functions provided by the Excel or Word and PowerPoint add-ins:

Symbol	Application	Function
	Excel, Word and PowerPoint	Creating a new report based on a report template
	Excel, Word and PowerPoint	Creating and inserting a report based on a configured report template
<sub>6</sub> «	Excel	Inserting and editing tags
$\searrow$	Excel	Inserting and editing messages
	Excel	Reading out data for configured tags or messages from the Pro- cess Historian database or PCS 7 or WinCC OS
	Excel	Opening an Excel report template from a file or from the Infor- mation Server
	Excel	Storing an Excel report template into a file or on the Information Server
9	Excel, Word and PowerPoint	Connecting Information Server

### Note

### Display of queries with multi-page results in Word

In the case of queries with multi-page results, it is always only the first page that is displayed.

### See also

Linking Office add-ins with the Information Server (Page 96)

# 3.5.3.4 Configuring Properties of an Archive Tag

## Introduction

To insert a tag into an Excel spreadsheet, open the "Add Tag" dialog on the "Information Server > Tags > Insert" tab.

Specify the layout and configuration of the tags in the "Properties" area.

# Layout settings of a tag

The layout settings are displayed by the "Insert Tag" dialog in the "Properties" area of the "Layout" tab.

The following table provides an overview of the layout settings of a tag:

Selection	Settings	Description
Spreadsheet, cell	Coordinates	Specifies the target cell of the tag.
Alignment	Vertical	Specifies the representation of the determined process values.
	Horizontal	
Heading	Header	Specifies if and where a heading for the tag is displayed.
	Footer	
Timestamp	Left	Specifies where the timestamp of the process value is displayed, to the left
	Right	or right of the displayed process value.
Quality code	Left	Specifies where the quality code of the process value is displayed, to the
	Right	left or right of the displayed process value.

# Tag configuration

The configuration settings are displayed in the "Insert Tag" dialog in the "Properties" area of the "Configuration" tab.

The following table provides an overview of the configuration settings of a tag:

Selection	Settings	Description
Start	Option field for date and time	By selecting the date and time, you specify a start time for the data query.
End	Option field for date and time	By selecting the date and time, you specify an end time for the data query.
Time series	"Settings" button > "Time series" dialog box	In "Time series" mode, you can specify whether the original pro- cess values or interpolated values are displayed.
Calculation	"Settings" button "Calculation" dialog window	In "Calculation" mode, you specify a "Time interval" for which an aggregate is formed. In the "Calculation mode" field, you can select from the calculation methods from which an aggregate of the process values is determined.

For more detailed information on the settings for "Time series" and "Calculation", refer to the section Editing a tag in Excel (Page 105)

### 3.5.3.5 Selecting an Information Server

### Introduction

You can use the multifunction bar to connect to a different server while working in Excel, Word or PowerPoint.

### Requirement

- There is a network connection to the Information Server. Alternatively:
- The Office add-ins are installed locally on the client computer.

#### Procedure

1. Click the "Server" icon in the multifunction bar.

The "Select server" dialog opens.

2. In the drop-down list, select the Information Server or enter the name of a server to which a connection is to be established. Click "OK".

Alternatively, you can enter an IP address.

### Result

You have made a connection to the selected server.

#### Note

#### No connection to Information Server

If you could not establish a connection to the Information Server, check whether an appropriate license is available and whether there are network problems.

#### Multifunction bar not active

If there is no connection to the Information Server or no connection could be created, the multifunction bar commands are disabled.

# 3.5.3.6 Editing reports

### Inserting a report via Office add-ins

### Introduction

Report templates that are stored on the Information Server can be inserted in Office applications.

The function "Insert Report" of the Office add-ins for Excel, Word and PowerPoint is identical.

### Requirement

- A report template is available.
- You are connected to the Information Server.

### Procedure

- Click the "Insert" icon in the multifunction bar. The "Insert report" dialog opens.
- 2. Navigate to the required report and select the report template.
- 3. Click "Insert".

#### Result

A report template is inserted in the active Office application.

# Creating a report

### Introduction

The Office add-ins of the Information Server can be used to insert reports in Excel, Word and PowerPoint.

With the Office add-ins, you create a report with the same report templates as in the web application. The function "Create Report" of the Office add-ins for Excel, Word and PowerPoint is identical.

### Requirement

• You are connected to the Information Server.

### Procedure

1. Click the "Create" icon in the multifunction bar of the Information Server add-ins.

The "Create report" dialog opens.

2. Select the report template you want to use.

When you have selected a report template, the "Template settings" area lists the parameters of the selected report template.

3. If several projects are available, from the "Projects" drop-down list select the required project from which the values are to be retrieved.

If only one project is available, this is automatically active.

- 4. Assign parameters to the report template.
- 5. Click "Create".

### Result

A report is created in the active Office application.

# Inserting a tag in Excel

## Requirement

• You are connected to the Information Server.

### Procedure

- Click the "Tags > Insert tags" icon in the multifunction bar. The "Insert tag" dialog opens.
- 2. Select the project from which the process values are to be called from the drop-down list.
- 3. Select the required tag with a double-click/click. Confirm the action with "OK".
- 4. Click "Insert" and the selected tag is inserted into the highlighted cell.

### Result

A tag is inserted in the Excel worksheet with a minimum configuration.

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## Configuring a tag in Excel

#### Requirement

• You are connected to the Information Server.

### Procedure

1. Click "Insert tag" in the multifunction bar.

You can also select a tag in the Excel worksheet and click "Edit tag".

The "Edit tag" dialog is displayed.

- 2. You can select tags from the process value archive or from the compressed archive.
- 3. Configure the representation of tags in the "Properties" area in the "Layout" tab:
  - Target cell in the Excel worksheet
  - Orientation in the document
  - Display and orientation of the title
  - Position of the timestamp
  - Orientation of the quality code
- 4. Specify the following criteria of the process values in the "Configuration" tab:
  - Start time
  - End time
- 5. Specify how the process values are determined:
  - Sequence of process values
  - Calculation of process values

Click "Properties" to configure the sequence and the calculation of process values.

Detailed information on the configurable properties of a tag is available in the section 'Editing a tag in Excel (Page 105)'.

6. Click "Add" to enter the configured tag in the Excel worksheet.

### Result

A tag is configured in the Excel worksheet.

#### See also

Configuring Properties of an Archive Tag (Page 99)

# Editing a tag in Excel

### Requirement

- You are connected to the Information Server.
- A tag is inserted in the Excel worksheet.

## Procedure

- 1. Click the "Tag > Edit tag" icon in the multifunction bar.
- 2. Select the tag you want to edit.
- 3. Select the settings in the "Properties" area of the "Layout" tab.
- 4. Select the time settings for the tag in the "Configuration" tab.
- 5. In the "Mode" area, select:
  - Time series: The tag values are displayed unchanged or interpolated in a time series.
  - Calculation: The tag values are displayed after the use of an aggregate function.
- 6. To specify the properties of the modes, click "Settings...".
- 7. Specify the mode of the time series:
  - Interpolation: Interpolated values per selected time interval. If, for example, the time interval is one minute and the time interval for the interpolation is 10 seconds, this results in 6 interpolated values, one value per 10 seconds. If you activate the interpolation, the additional selection of the time interval and the time unit is required. The input of the maximum number is possible.
  - Original data: Unchanged archived values with their timestamps. The "Internal" limit mode includes the values in the specified time interval. The "External" limit mode includes the last value before the time interval starts, and the next value after the end of the time interval. When you select the "Internal" limit mode, you can enter the maximum number.
  - Maximum number: Relevant for interpolation and the "Internal" limit mode. When the maximum number of values is set, the values from the start of the time interval up to the maximum number are output. If the maximum number is greater than the number of values that are present in the time interval, the "Max. number" setting is ignored.

- 8. Or specify the calculation mode:
  - Specify a time interval for which an aggregate is formed.
  - Specify the aggregate for the specified time interval:
    - Minimum: The minimum value
    - Maximum: The maximum value
    - Average: The average of all values
    - Sum: The sum of all values
    - Total: The integral of values
  - Specify a conversion factor to ensure the reference to the tag values. The following table shows sample values for the conversion factor. Additional factors can, for example, be a month or a year.

Time unit	Conversion factor
Day	1
Hour	24
Minute	1440
Second	86400

The time unit is the second part of the unit/dimensions in which the tag values are measured, for example: Parts/day, tons/hour, meters/second.

- The result of the "Total" calculation mode is the overall quantity in the specified time interval, for example, how many parts were produced in the last two hours or during a shift.
- 9. Click "OK".

10.Click "Apply" to accept the layout and the configuration of tags.

### Extended shortcut menu

For tags, the "Copy/Paste" function is available in the shortcut menu.

Do not confuse these functions with the standard function in Excel.

In the "Edit element" window, you can also use additional functions by right-clicking a tag:

- New
- Delete
- Change value mode
- Change tag ...
- Copy of ...

Value mode single value	
	If you have selected the "Single value" value mode for the tag, select the time and the mode from the "Properties" area in the "Configuration" tab.
	The following modes are available for selection:
	<ul> <li>Exact: "Exact" mode shows the exact single value at the selected time.</li> </ul>
	• Back: "Back" mode searches backward from the specified time to the first single value that appears. In WinCC projects, the function searches no more than 24 hours before the specified time. An empty line is output if no value is present in this time interval.
	<ul> <li>Next: "Next" mode searches forward from the specified time to the first single value that appears. In WinCC projects, the function searches no more than 24 hours after the specified time. An empty line is output if no value is present in this time interval.</li> </ul>
	• Interpolated: "Interpolated" mode calculates the value from the previous and the following value at the selected time. If a value is present at the selected time, there is no need to select this mode.
Result	
	You have modified the parameters of a process value.
See also	
	Configuring a tag in Excel (Page 104)
	Configuring Properties of an Archive Tag (Page 99)
Deleting a tag in Excel	
Requirement	
·	A tag is available in the Excel worksheet.
Procedure	
	<ol> <li>Click the "Tag &gt; Edit tag" command in the multifunction bar.</li> </ol>
	The "Edit tags" dialog opens.
	2. Select the tag you wish to delete in the list.
	You can only delete tags individually.
	3. Open the shortcut menu with a right-click and click "Delete".
Result	
	A tag has been deleted from the Excel worksheet.

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## Inserting message in Excel

### Requirement

• You are connected to the Information Server.

### Procedure

- Click the "Message > Insert message" icon in the toolbar. The "Insert message" dialog opens.
- 2. Select a project from which messages are to be output.
- 3. Enter a name for the message block.
  - You can specify the maximum number of messages that are to be entered in Excel.
- 4. Select the "Layout" tab in the "Properties" area.
- 5. Select the start cell for the messages.
- 6. Specify the arrangement of the messages.

The messages can be entered horizontally or vertically.

- 7. Click the "Time range" tab.
- 8. Enter the start and end time for the messages.
- 9. Select the attributes for which you want to output messages.
- 10.Click "Add" to insert the message into the Excel worksheet.

## Result

A message is created in the Excel worksheet.

### Note

Position the mouse pointer on the input box for values to view a tooltip that informs you of the name of message block.

# Editing a message in Excel

#### Requirement

- A message block is inserted in the Excel worksheet.
- You are connected to the Information Server.

### Procedure

- 1. Click the "Messages > Edit messages" icon in the multifunction bar.
- 2. Select the message block whose settings you want to change.
- 3. Select the relevant tab in the "Properties" area.
- Customize the name, layout, time range and the selection of attributes for the message.
   You can select several attributes in the "Attributes" tab. Enable the respective options.
- 5. Click "Accept" to accept the changes.

#### Extended shortcut menu

For messages, the "Copy/Paste" function is available in the shortcut menu.

Do not confuse these functions with the standard function in Excel.

- Right-click of the mouse button > Information Server > Copy
- Right-click of the mouse button > Information Server > Paste

#### Result

The changes to the message block are applied.

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# Opening archive data in Excel

Requirement	
	You are connected to the Information Server.
	• A tag or a message block is inserted in the Excel worksheet.
Procedure	
	1. Click the "Execute" icon in the multifunction bar.
Result	
	Data is retrieved from the Process Historian server or PCS 7 or WinCC OS for the configured tags and message blocks.
Saving a report	
Requirement	
	A report is configured in an Excel sheet.
	You are connected to the Information Server.
Procedure	
	1. Click the "Store" icon in the multifunction bar.
	2. Select the area to which you want to save the report.
	You can save reports locally or online on the Information Server.
	3. Navigate to the relevant storage location.
	4. Click "Save".
Result	

An Excel report is stored with the selected settings and the defined layout.

### 3.5.3.7 Graphically evaluating process values

You can graphically display process values in Excel.

### Requirement

- A tag has been configured.
- Process values are available in the Excel worksheet.

### Procedure

- 1. Select the process values and the associated timestamps you want to evaluate graphically.
- 2. Select the chart type you want to use in the Excel chart function.
- 3. Place the chart at the required location in the Excel worksheet.

If you have selected relative time specifications and click "Run", you update the process values displayed in the chart.

#### Result

The process values read are displayed graphically.

#### Information Server - Documentation

3.5 Reporting

#### 3.5.3.8 Providing templates

#### **Exporting Excel templates**

#### Introduction

You can upload templates for Excel reports on an Information Server. You use the templates for Excel reports on the Information Server to create subscriptions.

#### Requirement

- An Excel template is open.
- You are connected to the Information Server.

#### Procedure

- 1. Click "Save > On Information Server" in the multifunction bar.
- 2. Select a target folder for saving the Excel template.
- 3. Click "Upload".

#### Result

An Excel template is saved on the Information Server.

#### **Opening Excel templates**

#### Requirement

- A template for an Excel report is saved locally on the PC or on the Information Server.
- You are connected to the Information Server.

#### Procedure

- 1. Click the "Open" icon in the multifunction bar.
- Select the area from which you want to open the report.
   You may open reports from a local folder or online from the Information Server.
- 3. Navigate to the desired report.
- 4. Select the report and click "Open".

#### Result

A preconfigured Excel report is opened.

### 3.5.3.9 Using the alarm filter

#### Introduction

The message filter can be used to specify criteria for the attributes of the messages. The criteria limit the number of messages displayed.

#### Requirement

• You are connected to the Information Server.

#### Procedure

1. Click the "Messages > Edit message" icon in the multifunction bar.

The "Edit message" dialog opens.

2. Open the "Name" tab and click the "Filter" button.

The "Message filter" dialog opens.

- 3. Select an attribute as filter criterion in the "Attribute" column.
- 4. Make your entries in the "Operator" and "Value" columns.
- 5. Link several attributes with operators.

Set conditions to restrict the attributes output.

Attribute	Operator	Value
State	=	+
AND		
Process value: 1	=	50
[*]		

- 6. Click "OK" to accept the filter settings.
- 7. Click "Accept" to accept the filter settings for the current message block.

### Result

You have successfully specified the filter settings for a message.

3.6 Working with dashboards

# 3.6 Working with dashboards

In the "Dashboard" portal, you can design your own pages for display in a Web environment and make them available to the users of the Web application.

The Information Server provides preconfigured layouts and widgets for designing the pages.

#### Layout of a dashboard

A dashboard consists of one or more web parts that are filled with the widgets made available. The preconfigured templates define the number and position of the Web parts that are shown in the dashboard.

The widgets contain a variety of information from projects and reports. You can use a widget as often as you want and configure it differently for each web part.

The Information Server provides the following widgets for designing the pages:

- Text editor:
  - For example, design a header and add an explanatory text. The following functions are available for formatting.
  - To include graphics or HTML pages, import the file to the Information Server or create a link to the file.
  - Create tables and add links.
- Report template:
  - By integrating reports you can, for example, display process values and data from message archives for any time period.
  - If the dashboard page opens in the browser, the widget calls up the current values from the connected data source. The report is displayed as a static snapshot. To update the values, reload the dashboard page.
  - The widget does not provide access to reports or subscriptions that were created via the "Reporting" portal.

#### Requirements

Users of the report widget must be members of the following groups:

- SIMATIC Report Users
- SIMATIC Report Publishers
- SIMATIC Report Administrators

### Creating a dashboard

- 1. To create a dashboard page, select a preconfigured layout with the required number of Web parts.
- 2. To fill a Web part with content, drag a widget onto the Web part from the list on the left. A Web part can only contain one widget at a time.
- 3. If you drag the "Report template" widget onto a Web part, the "Settings" dialog opens.
- 4. Select a report template and set the desired report parameters.
- 5. Enter a descriptive name for the dashboard page.
- 6. Save the created dashboard page. The user of the Web application can now call up the page through the "Dashboard" portal.

### Managing templates and dashboards

On the homepage of the "Dashboard" portal, you can see the existing dashboards and a preview using "Display".

You can create and edit dashboards, as well as delete, import or export them.

To import or export templates, click "Manage templates" in the top menu bar.

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3.6 Working with dashboards

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