

SIEMENS

SIMATIC

Information Server 2014 Information Server - Documentation

System Manual

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

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

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

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

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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.

You can access the web application of the Information Server with commonly available web browsers. You also use the web interface to administer the Information Server.

The following applications are available for creating reports:

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

Starting requirements

Configure a connection to the Process Historian in the web browser or to a PCS 7 or WinCC OS.

The Information Server web application runs in browsers that support HTML5, for example:

- Microsoft Internet Explorer
- Mozilla Firefox
- Google Chrome

Requirements for the Information Server

You can find detailed information on the requirements for the Information Server and licensing in the Installation Notes.

Access rights

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

The access rights are linked to the folder where the data is stored on the Information Server:

- Public
This folder is available to any user of the Information Server.
- Private
Data stored in the "Private" folder is only available to the user logged on at given time.

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 add-ins. 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 21)'.

Report layout

The Information Server can visualize the queried data in various forms. You can output and save 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.

Information Server web application

The Information Server web application is the main editor for administration and management of report templates and subscriptions.

The homepage of the web application provides access to the work and task areas of the Information Server, the portal.

Use the menu navigation at the left to navigate between these areas:

- Starting page (home)
- Dashboard
- Reporting
- Download
- Administration

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

Note

Releasing licenses by logging off from the web application

Use the "Logoff" link to log off from the web application.

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

Structure of the web application

Object/ Menu	Area	Use
Frame: Navigate up	-	On all pages of the web application: <ul style="list-style-type: none"> • Current user, interface language • Log out, (arrow to right) • Breadcrumb bar to navigate within an Information Server portal
Frame: Navigate left	-	Information Server portal: <ul style="list-style-type: none"> • Homepage • Dashboard • Reporting • Download • Administration

Object/ Menu	Area	Use
Homepage	-	Overview of portal: <ul style="list-style-type: none"> • Dashboard • Reporting: <ul style="list-style-type: none"> - Reporting - Subscriptions • Download: <ul style="list-style-type: none"> - Office add-ins • Administration: <ul style="list-style-type: none"> - Configuration - E-mail settings - Licensing - Security settings (user management)
Dashboard	-	Creation and viewing of dashboards
Reporting	-	List of report templates for process values, messages and recipe data: <ul style="list-style-type: none"> • Report templates: <ul style="list-style-type: none"> - Display details - Select and configure or select the preset - Save as preset • Reports: <ul style="list-style-type: none"> - Create - Display - Edit - Download - Delete • Subscriptions: <ul style="list-style-type: none"> - Create - Display - Edit - Delete
Download	-	SIMATIC Information Server add-in for MS Office

Object/ Menu	Area	Use
Administration	Configuration: Reporting > Project	Establishing a connection with a Process Historian or PCS 7 or WinCC OS as the data source: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Show settings • Specify authorizations • Delete project
	Configuration: Reporting > Templates	Management of the report templates: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • Server IP/ name • Port • Email address of the sender Test connection for verification: <ul style="list-style-type: none"> • E-mail address of a recipient for the test e-mail
	Licensing	Display the status of licenses, sorted by installed and used licenses: <ul style="list-style-type: none"> • 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.

Administration

3.1 Configuration

This section describes the configuration of the Information Server.

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 15)".

Opening the Information Server website

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

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

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 "Protective mode" setting for the current zone.

4. Select the zone "Local intranet" or "Trusted sites". Click on "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".

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 4.0 installation.

You must confirm the IIS settings after registration of .NET Framework 4.0.

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 17)

User management (Page 15)

3.2 User management

Under "Users" in the "Administration" portal, you can see the list of users that have access to the Information Server.

You can see the details of a user under "Display":

- User name
- Display name
- E-mail address (optional, can be changed)
- Language (language of the web application, can be changed)
- Permissions (assigned Windows user groups)
- To reset user-specific view settings, click "Delete all status data of the application".

Alternatively, the logged on user can open and edit his own user profile. To do this, click on the user name in the header area of the frame.

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: Install and configure the Information Server
- SIMATIC Report Publishers: Create and download reports
- SIMATIC Report Services: Make connections to a data source
- SIMATIC Report Users: View 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.

Rights for the connection to data sources

Connection of PCS 7 projects, WinCC projects or Process Historian archives is made in the Information Server via the "Administration" portal in the "Projects" area.

The following rights must be assigned for this process using the roles in the user groups:

- SIMATIC Report Administrators: User who logs on using the web interface and may work in the "Administration" area.
- SIMATIC Report Database Users: User who logs on to the SQL database.
This user must exist on both the Information Server and on the PC where the data source is located.
The user must have SIMATIC HMI permissions on the PC with the data source.

Note

Connecting data sources

For more information about connecting projects, see section "Connect data source (Page 17)".

See also

Configuration (Page 13)

3.3 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

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 the PC on which the data source is located.

Procedure

1. Select "Administration" in the navigation area.
2. 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 data source depends on whether you are using data from a Process Historian archive or from a WinCC or PCS 7 project.
The SQL instance is displayed.
5. Click "Select projects".
The connection to the data source is established.
The available projects are displayed.
6. Select the desired projects.
7. Select "Add" to connect the projects.

Result

A connection is established with the selected project.

The data of the project are available for report creation.

See also

Configuration (Page 13)

User management (Page 15)

3.4 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 and click "Send" to check the set configuration.
A test e-mail is sent.

Result

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

Reporting

4.1 Report templates

4.1.1 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.

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: February 2, 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.

Templates for messages

In templates for messages, you can, for example, specify message classes, the number of displayed values or a source.

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.

Templates for Excel reports

Regardless of the type of data processed, you can create specific report templates for MS Excel.

You can use these Excel templates for subscriptions.

4.1.2 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 specification	Time unit	Web application	Office add-ins
s	Second	✓	✓
m	Minute	✓	✓
h	Hour	✓	✓
d	Day	✓	✓
t	Current day	✓	✓
w	Week	✓	✓
y	Year	✓	✓

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	Now minus 24 hours plus 30 minutes
t-3m	12:00 AM of the current day minus three minutes

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 specification	✓	✓

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.

4.1.3 Templates for messages

The Information Server has the following report templates for messages:

Table 4-1 Messages/ alarms

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 acknowledgment).
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 message class	Table: All messages of a selected message class.
Messages sorted by priority	Table: All messages sorted by priority.
Messages sorted by timestamp	Table: All messages sorted by timestamp.
Commented messages	Table: All commented messages.
Quantity by message class	Bar chart: Number of messages for all message classes.
Total duration until acknowledgment	Bar chart: Hit list of messages requiring acknowledgment sorted by total duration until acknowledgment. All acknowledgment durations are totaled individual acknowledgment durations: Time period from "came" to "acknowledged".
Total duration until gone	Bar chart: Hit list of messages requiring acknowledgment sorted by total duration until acknowledgment. All acknowledgment durations are totaled individual acknowledgment durations: Time period from "came" to "gone".

4.1.4 Templates for process values

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

Table 4-2 Process values/ tags

Template	Type	Unit	Description
Aggregation trend	Trend chart	Defined time interval	Aggregated tags within a <i>defined timer interval</i> .
Trend	Trend chart	Defined time interval	Tags within a <i>defined timer interval</i> .

Template	Type	Unit	Description
Aggregation matrix	Table	Defined time interval	Compiled tags within a <i>defined timer interval</i> in columns.
Matrix	Table	Defined time interval	Tags within a <i>defined timer interval</i> in columns.
Aggregation table	Table	Defined time interval	Compiled tags within a <i>defined timer interval</i> in continuous sequence.
Table	Table	Defined time interval	Tags within a <i>defined timer interval</i> in continuous sequence.
Archive configuration	Table	Selected tags	Archive configuration of <i>selected tags</i> .
Archive configuration chain	Table	All derived archive tags	Archive configuration of selected tag including 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.

4.1.5 Templates for batch reports

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

4.1.6 Templates for Excel reports

Using Excel templates with the Information Server

You can upload report templates created in Excel as ERT file (Excel Report Template) to the web application. Excel templates include custom 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.

Loading Excel template

You load the report template created in Excel to the Information Server by means of "Create Report > Excel Templates".

1. You select the required folder, the directory level 'Public' or 'Private'.
2. Click "Create Folder" and enter the folder name.
3. Confirm the action with "Create".
4. Enter a name for the template in the selected folder.
5. Click the "Browse ..." button and select the required Excel template from the computer.
6. Click "Upload".

Result

The template created in Excel is available to authorized users of the Information Server as ERT file (Excel Report Template).

4.2 Working with the Web application

4.2.1 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 off from the web application**

Use the "Logoff" 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 37)

4.2.2 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.
2. Select a template under "Report templates" in the navigation bar.
The reporting and subscription lists are displayed.
3. 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 properties you want to display.
6. To create the report, click "Show preview".

7. 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.

4.2.3 Working with subscriptions

4.2.3.1 Settings for subscriptions

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.
- Export format
Select the desired format for saving the report.
 - PDF
 - XML
 - HTML
 - MS Word
 - MS Excel
- Storage location or settings for sending by e-mail

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.
3. 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.

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
- "Daily" or "Weekly" or "Monthly" field
Maximum number of report creations, for example, three days in a row
- Frequency
 - Daily
Once: At a specific time
Recurring: At specific intervals of hours or minutes ("Delay" 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 22)".

See also

Creating subscriptions (Page 33)

Time specifications (Page 22)

4.2.3.2 Creating subscriptions

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 30).

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.

Requirement

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

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

- Creating a report (Page 28)
- Time specifications (Page 22)

4.2.4 Managing report templates

4.2.4.1 Uploading report template

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.
4. 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.

4.2.4.2 Downloading report templates

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.
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 desired template and then click "Download" in the same line.
The template is downloaded.
5. 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.

4.2.4.3 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.
4. 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.

4.2.4.4 Deleting report templates

Effects

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

- Created reports
- Subscriptions

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.
4. Select the template and then click "Delete" in the same line.
5. Confirm the prompt with "Yes".

Result

The selected element is deleted.

4.2.4.5 Uploading Excel templates

Requirement

- An Excel template is available.

Procedure

1. Select "Create report" in the navigation area.
2. Select the "Excel templates" tab.
3. 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.

4.3 Working with Office add-ins

4.3.1 Integrating Office add-ins

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.

4.3.2 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. Connection via "https://localhost" is not possible.
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.

4.3.3 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
	Excel	Inserting and editing tags
	Excel	Inserting and editing messages
	Excel	Reading out data for configured tags or messages from the Process Historian database or PCS 7 or WinCC OS
	Excel	Opening an Excel report template from a file or from the Information Server

Symbol	Application	Function
	Excel	Storing an Excel report template into a file or on the Information Server
	Excel, Word and PowerPoint	Connecting Information Server

See also

Linking Office add-ins with the Information Server (Page 38)

4.3.4 Configuring Properties of an Archive Tag

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 Horizontal	Specifies the representation of the determined process values.
Heading	Header Footer	Specifies if and where a heading for the tag is displayed.
Timestamp	Left Right	Specifies where the timestamp of the process value is displayed, to the left or right of the displayed process value.
Quality code	Left Right	Specifies where the quality code of the process value is displayed, to the 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.

Selection	Settings	Description
Time series	"Settings..." button > "Time series" dialog box	In "Time series" mode, you specify if the determined process values are to have an inner or outer time limit. You also specify the interval in which the process values are to be interpolated.
Calculation	"Settings..." button "Calculation" dialog box	In "Calculation" mode, you specify a "Time period" in seconds (s), minutes (m) or hours (h). In the "Calculation type" field, you specify the calculation mode that is used to determine the process values. You can choose between "Min", "Max", "Average", and "Total".

4.3.5 Selecting an Information Server

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.

4.3.6 Editing reports

4.3.6.1 Inserting a report via Office add-ins

You can insert a report that is stored on the Information Server in an Office application.

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

Requirement

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

Procedure

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

Result

A report is inserted into the active Office application.

4.3.6.2 Creating a report

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.

4.3.6.3 Inserting a tag in Excel**Requirement**

- You are connected to the Information Server.

Procedure

1. 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.

4.3.6.4 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 are available in the section 'Configuring Properties of an Archive Tag (Page 40)'.

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

Result

A tag is configured in the Excel worksheet.

4.3.6.5 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. Click "OK".

Note**Extended shortcut menu**

The "Copy/ Paste" function is available for tags as of version 2013 in the shortcut menu; you open it with a right-click.

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

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

You can use additional functions with the shortcut menu in the "Edit element" window.

Right-click a tag:

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

Result

You have modified the parameters of a process value.

4.3.6.6 Deleting a tag in Excel**Requirement**

- A tag is available in the Excel worksheet.

Procedure

1. Click the "Tag > Edit tag" command in the multifunction bar.
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.

4.3.6.7 Inserting message in Excel

Requirement

- You are connected to the Information Server.

Procedure

1. 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.

4.3.6.8 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.
4. 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.

Note**Extended shortcut menu**

The "Copy/ Paste" function is available for messages as of version 2013 in the shortcut menu; you open it with a right-click.

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

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

Result

The changes to the message block are applied.

4.3.6.9 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.

4.3.6.10 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.

4.3.7 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.

4.3.8 Providing templates

4.3.8.1 Exporting Excel templates

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.

4.3.8.2 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.
2. 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.

4.3.9 Using the alarm filter

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.
Set conditions to restrict the attributes output.
5. Click "OK" to accept the filter settings.
6. Click "Accept" to accept the filter settings for the current message block.

Result

You have successfully specified the filter settings for a message.

Working with dashboards

In the "Dashboard" portal you can create your own pages for display in a web environment. The Information Server provides preconfigured layouts and widgets for this.

Layout of a dashboard

To create a dashboard, select a template (layout) and the widgets that should be displayed as content.

A dashboard consists of one or more web parts that are filled with the widgets made available. The widgets contain a variety of information from projects and reports. This functionality allows you to view process values and data from message archives in parallel across various periods of time.

The templates define the number and position of the web parts that appears in the dashboard.

Widgets

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.

You can use a widget as often as you want and configure it differently for each web part.

Information Server 2014 provides the following widgets:

Text editor

You can make headers and add explanatory text, for example. 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.

You can also create tables and add links.

Report template

If you drag the "Report template" widget onto a web part, the "Settings" dialog opens.

Select a report template and set the desired report parameters.

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.

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 existing 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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