

## SIMATIC HMI

### WinCC flexible 2008 SP5 WinCC flexible 2008 SP5 readme

#### System Manual

Printout of the Online Help

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## 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.

#### **DANGER**

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.

#### **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:

#### **WARNING**

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.

### Trademarks

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### Disclaimer of Liability

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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# Security information

## Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or 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.

Customer is responsible to prevent unauthorized access to its plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the Internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens' guidance on appropriate security measures should be taken into account. You can find more information about industrial security on the Internet at:

<http://www.siemens.com/industrialsecurity> (<http://www.siemens.com/industrialsecurity>)

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends to apply product updates as soon as available and to always use the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

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

<http://www.siemens.com/industrialsecurity> (<http://www.siemens.com/industrialsecurity>)

## Communication via Ethernet

With Ethernet-based communication, the end user is responsible for the security of his data network. Proper functioning of the data network cannot be guaranteed under all circumstances, for example, in case of targeted attacks that result in an overload of the device.

## Network settings

The following table shows the network settings of the respective product that you require to analyze the network security and to configure external firewalls:

Name	Port number	Transport protocol	Direction	Function	Description
Ethernet/IP	44818 2222	TCP UDP	Outbound Inbound	Ethernet/IP channel Ethernet/IP channel	The Ethernet/IP protocol is used for connections with Allen Bradley controllers.
Modbus TCP	502	TCP	Outbound	Modbus TCP channel	The Modbus TCP protocol is used for connections with Schneider controllers.
RFC 1006	102	TCP	Outbound	S7 channel	Communication with SIMATIC S7 controllers via Ethernet/PROFINET.
Mitsubishi PLC	5002	TCP	Outbound	Mitsubishi MC channel	The Mitsubishi protocol is used for connections with Mitsubishi controllers.

## Handling project files

Protect your project and Runtime files from unauthorized access. Zip the project and Runtime files and set up a password for the ZIP file.

Only use project and Runtime files from reliable sources.

## Remote transfer

Disable remote transfer for Panels when it is not required.

# General information

## Contents

General information that is not included in the online help.

### Avoiding problems when using Kaspersky Antivirus

Kaspersky Antivirus wrongly identifies the following programs that are required for operation of WinCC flexible as viruses: "HmiES.exe", "TraceServer.exe" and "WinCC flexible 2008.lnk".

To prevent these programs from being automatically deleted by Kaspersky Antivirus, proceed as follows:

1. Disable the "Automatically execute recommended actions" in "Settings > General > Interactive Protection".
2. Add the programs "HmiES.exe" and "TraceServer.exe" in "Settings > Advanced > Threats and Exceptions > Exceptions > Specify trusted programs".
3. Enable the following settings for the two added exceptions:
  - Do not examine files to be opened
  - Do no control program activity
  - Do not apply restrictions of the higher-level process (program)
  - Do not control the activity of the subprograms
  - Permit interaction with the user interface of Kaspersky Total Security

### Avoiding problems when using Symantec Endpoint Protection

Symantec Endpoint Protection wrongly identifies the following files that are required for operation of WinCC flexible as viruses: "HmiSmartStart.resources.dll" and "HmiES.resources.dll".

To prevent these programs from being automatically deleted by Symantec Endpoint Protection, proceed as follows:

1. Click on "Options" under "Status > Virus and Spyware Protection".
2. Deactivate the "Enable Bloodhound heuristic virus detection" checkbox.

### Microsoft Windows update

When WinCC flexible and WinCC flexible Runtime are installed, all required components of the operating system that are not present at the time of installation will be added. After having installed WinCC flexible, we highly recommend running "Microsoft Windows Update" to check for new security patches.

## Display of HTML pages in Pocket Internet Explorer

The Pocket Internet Explorer of HMI panels is only released for simple HTML pages based on HTML 3.0 standard.

## "Save as" in case of several WinCC flexible instances

Errors may develop if you call the "Save as" function in the source after a copy-and-paste operation between instances.

## Entries in the Windows event display by WinCC flexible

Warnings that are caused by the Microsoft SQL Server or the Automation License Manager can occur in the Windows event display. These warnings are not critical and do not impair the functionality of WinCC flexible.

## Working on external media

Working on external media such as network drives or USB media can decrease performance. We recommend that projects be edited on the local hard disk.

## Error message "User Instance Mode" when starting WinCC flexible

If you have installed Microsoft SQL Server 2014 Express, an error message may be generated at the start of WinCC flexible indicating that "User Instance Mode" could not be started.

We recommend a restart.

## Getting Started - WinCC flexible 2008

The Getting Started for WinCC flexible is based on version 2008. This means certain descriptions may not match the latest version 2008 SP5.

## Getting Started Options

The documentation on "Getting Started Options" mentions the Microsoft SOAP Toolkit 3.0 as a prerequisite. As of version 2008 of WinCC flexible, the installation of the Microsoft SOAP Toolkit 3.0 is no longer necessary.

## Turkish operating system: Folder names

If the folder name includes an "i", you may experience some problems with Turkish operating systems, such as C:\temp\_i.



## **Data backup via USB**

"Backup/Restore" in the Control Panel has been approved for use via USB for the following HMI devices:

- MP 177 - USB stick with 2 GB capacity only
- TP 177B 4" - USB stick with 2 GB capacity only
- MP 277
- Mobile Panel 277
- Mobile Panel 277 IWLAN V2
- MP 377

## **See also**

General Information (Page 29)

General information (Page 37)

General information (Page 45)



# Installation/removal

## Contents

Information on the installation that is not included in the online help.

## USB drivers

The supplied USB drivers are not supported in Windows 10.

## Microsoft SQL Server cannot be installed

If the installation of the Microsoft SQL server is not possible, please check the "Automatic startup type" of the "Service" on your computer. "Deactivated" is not allowed to be set at the "Automatic startup type". Due to a restriction of the Microsoft setup, this service is a requirement for a successful installation.

## Changing the license

In order to carry out a license change, terminate WinCC flexible Auto Start. After you have carried out the change successfully, you can re-activate WinCC flexible Auto Start.

## Port activation for ALM

Port activation takes place automatically during installation of WinCC flexible. You can activate or deactivate the usage of port activation.

## Release of directories and programs

Installation grants all users rights to write to the following directories under "%ALLUSERSPROFILE%\Application data":

- "SIEMENS AG\SIMATIC WinCC flexible"
- "SIEMENS AG\SIMATIC WinCC flexible 2008\Caches"

You need these directories to execute the central logs for WinCC flexible.

Installation enables the following programs in the Windows firewall:

- SIMATIC WinCC flexible 2008 Application
- SIMATIC WinCC flexible 2008 Trace Server
- Automation License Manager

## Installation of SIMATIC products

Disable the "WinCC flexible Start Center" before you start installation of a SIMATIC product.

## Installation Microsoft SOAP Toolkit 3.0

As of version 2008 of WinCC flexible, the installation of the Microsoft SOAP Toolkit 3.0 is no longer necessary.

## WinCC flexible integrated in SIMOTION SCOUT

The following requirements have to be met to ensure trouble-free operation of WinCC flexible integrated in SIMOTION SCOUT:

- Work memory: 4 GB
- Processor: Dual Core

Review the additional information in the online help in all cases. The section "SIMOTION SCOUT project data" describes important performance features of integrated operation.

## Installation sequence for integrated operation in SIMOTION SCOUT

Install the software in the following sequence.

Integrated operation will be ensured without any problems when you observe this installation sequence.

1. Step 7
2. SIMOTION SCOUT
3. WinCC flexible

Refer to the compatibility table provided with the SIMOTION SCOUT CD.

## Audit Viewer

The Audit Viewer has been released

- for operating systems in the languages German, English, French, Italian and Spanish
- for an MUI operating system in one of the languages listed above
- for evaluation of an Audit Trail generated in one of the languages listed above.

The Audit Viewer V7.2.0 is located in the following directory on the WinCC flexible product DVD: /Support/Audit Viewer/Setup.

## Audit Trail and Log with Checksum

Before you update WinCC flexible with a new Service Pack or by a new version, you will have to exit and save the Audit Trail or the logs with checksum. After updating WinCC flexible, Audit Trail or the logs with checksum will be continued with new files.

The new version of WinCC flexible will start the logs at a defined state.

## Error message during installation

You may occasionally see the error message "S7oiehsx.exe - Error in application" during installation of WinCC flexible.

Confirm the error message with "OK." The error message does not affect operation of WinCC flexible.

## Installation of WinCC flexible 2008 SP5

Close all open SIMATIC applications before you start installation of WinCC flexible 2008 SP5.

## Changing the installation

If you have installed WinCC flexible 2008 SP3, use WinCC flexible 2008 SP5 to update your existing installation to the latest version. Changes to the installed version, however, are not possible.

Proceed as follows to change the existing installation and add components, such as integration into Step7 or adding languages:

1. Open "Control Panel > Add or remove programs".
2. Select "WinCC flexible 2008 SP5."
3. Click "Change". The WinCC flexible InstallShield Wizard opens.
4. Change the installation to meet your requirements.
5. Finish the installation.

## See also

24435650 (<http://support.automation.siemens.com/WW/view/en/24435650>)



# Special features with Windows 7 and Windows 10

## Contents

General information that is not included in the online help.

## Permitted characters

WinCC flexible supports the full ASCII character set. We advise users, however, to refrain from using localized special characters. You should in particular refrain from using these special characters in the names of objects used in scripts.

## New entries in the Windows Start menu

Under Windows 7, the entries of the SIMATIC product group are available under:  
"Start > All Programs > Siemens Automation".

Under Windows 10, the entries of the SIMATIC product group are available under:  
"Start > Siemens Automation".

## Slow response of Sm@rtServer

The following programs start and respond very slowly:

- HMI TouchInputPC
- Sm@rtServer: Key combination <Ctrl+Alt+Del> during logon

The delay is caused by the Internet certification check with callback.

Remedy:

The following files are available in the Support\Windows7\CRL\_Check directory on your product DVD:

- DisableCRLCheck\_LocalSystem.cmd
- DisableCRLCheck\_CurrentUser.cmd

---

### Note

The certificate check on callback will be disabled for all users or computers. To restore the default settings, run the following files from the product DVD:

\Support\Windows7\CRL\_Check

Files:

- RestoreDefaults\_LocalSystem.cmd
  - RestoreDefaults\_CurrentUser.cmd
-

1. Execute the file "DisableCRLCheck\_\_LocalSystem.cmd" with administrator rights. To do so, enter the command "Run as administrator" in the shortcut menu of the file.
2. Restart the computer.

Proceed as follows if the problem persists:

1. Execute the file "DisableCRLCheck\_\_CurrentUser.cmd" with user rights. Double-click the file.
2. Restart the computer.

### **PC Runtime: Communication drivers**

The following communication drivers for PC Runtime are not supported under Windows 7:

- SIMATIC S5 DP
- SIMATIC 500/505 DP

### **System function "SetDaylightSaving"**

The system function "SetDaylightSaving" is not supported for PC-based HMI devices under Windows 7.

### **Creating a new graphic object as OLE object**

The entry "Bitmap Image" is no longer available under Windows 7. Use "Paintbrush Picture" instead.

### **Logs and recipe data on a server with Windows 7**

The following HMI devices are not suitable for storing logs and recipe data on a server with Windows 7:

- OP 77B
- TP 170B, OP 170B
- TP 177B, OP 177B
- TP 270, OP 270
- TP 277, OP 277
- MP 270
- MP 370
- Mobile Panel 170
- Mobile Panel 177



## Stopping the Sm@rtServer

Sm@rtServer always runs as a service in Windows 7. This means you cannot stop the Sm@rtServer in Runtime with the Notification Area in the taskbar. You have the following options to stop the Sm@rtServer:

- Exit the system function "ControlSmartServer"  
Configure the system function "ControlSmartServer" to a button, for example. At the system function select the "Stop" mode. Stop the Sm@rtServer by clicking the button in Runtime.
- Stopping the Sm@rtServers with the Control Panel:  
Open the "WinCC flexible Internet Settings" in the Control Panel and activate the "Remote" tab. Click "Stop". The Sm@rtServer will be stopped.
- Stopping the Sm@rtServer with Runtime:  
Open the "WinCC flexible Internet Settings" in the Control Panel and activate the "Remote" tab. Activate the option "Close with Runtime". The Sm@rtServer will be stopped when Runtime is stopped.

## Working with standard user rights

If you work with standard user rights under Windows 7, do not disable the "User Account Control" (UAC).

The "User Account Control" is enabled by default under Windows 7.

You can find additional information about "User Account Control" in Windows 7 Help.

## Serial OS update with an MP 377

If you run a serial update with an MP 377, you may sporadically encounter a connection abort when using Windows 7.

If the connection aborts, run the "Reset to factory settings" function.

Use Ethernet or USB for the connection when updating the OS.

## Teleservice in Windows 7

Teleservice for Windows 7 is not approved.



# Special features for languages

## Contents

Special features that are not included in the online help.

### Display of Asian fonts in Runtime

If you use fonts that are not the standard fonts of WinCC flexible for the project configuration, display problems may occur at some HMI devices.

Use only the standard fonts or extend the collection of fonts on the HMI device to include those fonts used in the project.

### Error during import in WinCC flexible of national letters and special characters from ProAgent

If you have imported ProAgent data or ALARM-S messages with national letters and special characters from WinCC flexible 2007 Hotfix 5 or earlier into an integrated project and migrated to WinCC flexible 2008 with this project, errors may occur when importing the national letters and special characters.

#### Remedy:

1. Disable the connections to the respective S7 programs with national letters and special characters for ProAgent data or ALARM-S messages.
2. Select the "Delete Temporary Files" command from the "Tools" menu.
3. Reactivate the connections you have deactivated in step 1.
4. Select the desired ProAgent units in the "ProAgent" editor.

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#### Note

ProAgent is only supported in Windows 7.

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### Missing fonts for Asian languages

In Windows 10 the fonts for the following languages do not belong to the standard installation package and are not preinstalled:

- Korean
- Chinese (Hong Kong)
- Chinese (Macao)
- Chinese (Taiwan)

If a font is not installed, an error message is output during compiling.

#### Remedy

Install the missing font or the corresponding Windows language pack yourself by clicking "Download fonts for all languages" under "Control panel > Appearance and Personalization > Fonts".

### **See also**

Microsoft Support ([https://answers.microsoft.com/en-us/windows/forum/windows\\_10-start/some-fonts-are-missing-after-upgrade/95839dfa-0df2-4bc0-875a-fd6b57e61fe4](https://answers.microsoft.com/en-us/windows/forum/windows_10-start/some-fonts-are-missing-after-upgrade/95839dfa-0df2-4bc0-875a-fd6b57e61fe4))

# Migration

## Migration of WinCC flexible 2007

The migration of projects from WinCC flexible 2007 and earlier versions is not possible.

If you want to open a project from WinCC flexible 2007 or older in WinCC flexible 2008 SP5, the following error message appears:

"The project cannot be converted, because Microsoft has discontinued migration support for MSDE databases since SQL Server 2012.

MSDE was used by WinCC flexible 2007 or earlier versions.

Please first convert your old project with a WinCC flexible 2008 SP3 installation in Windows 7 or XP."

After migration under WinCC flexible 2008 SP3, you can open the project in WinCC flexible 2008 SP5.



# Transfer

## Contents

Information on transfer that is not included in the online help.

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### Note

#### Automatic termination of Runtime

If the automatic transfer has been activated on the HMI device and a transfer is initiated on the configuration PC, the currently active project is terminated automatically.

The HMI device then automatically switches to "Transfer" mode.

After the commissioning phase, deactivate the automatic transfer so that the HMI device cannot be inadvertently switched to transfer mode.

The transfer mode may trigger unwanted responses in the system.

To restrict access to the transfer settings and prevent unauthorized modification, assign a password in the Control Panel.

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## Avoiding problems when using Pack&Go

If you create a file with Pack&Go on a PC with Windows 10 (64 bit) and want to transfer this file to a PC with Windows 7 (32 bit), an error message relating to an impermissible parallel configuration appears and the transfer is terminated.

Install S7DOS before using Pack&Go.

S7DOS can be installed together with ProSave.

More information about this together with the link for downloading ProSave can be found under entry ID 10347815 (<https://support.industry.siemens.com/cs/document/10347815/servicetool-simatic-prosave?dti=0&pnid=13614&lc=de-WW>) in Siemens Industry Online Support.

## Serial transfer via RS-485 interface

When an HMI device is communicating with the PLC via the RS-485 interface and MPI or PROFIBUS, the "Remote Control" box must be cleared (disabled) for serial transfer.

Clear the "Remote Control" check box under "Channel" tab in the "Transfer Settings" dialog.

Manually select serial transfer.

## Remote transfer via serial interface

Remote transfer of the project is not possible if you have not configured a connection to a PLC in the WinCC flexible project. The following options are available in order to carry out the transfer:

- Create a connection via MPI or DP interface in the WinCC flexible project and switch to "Online: Off". Remote transfer is possible with this setting.
- Alternatively stop Runtime on the HMI device and start the transfer manually.

## Transfer via Ethernet connection with router

Ensure that the internal transfer buffer of the router exceeds 1 Kbyte if an Ethernet connection with a router is used for transferring. In the case of routers with a transfer buffer < 1 Kbyte message splitting can result in message corruption and thus in the transfer being aborted.

## Execute a "Rebuild all" before transferring data to the HMI device

Recompile the entire project by executing the "Rebuild all" command before releasing your project to the production process.

It is also advisable to execute a "Rebuild all..." command at suitable intervals to reduce the time required for compiling delta data in current engineering sessions.

Execute a full compilation by selecting the "Project > Compiler > Rebuild all..." menu command.

If you have configured several HMI devices, the "Select HMI devices for generation" dialog will open after you have executed the "Rebuild all" command.

Select the HMI devices to be generated from this dialog. Multiple selection is possible.

## Transfer canceled by user

It may take up to 5 minutes to cancel a transfer. No other transfer is possible during this period. You will receive the following message in this case: "A transfer is already in progress. Please wait until the first transfer has finished."

Transfer can be continued as usual after expiration of this waiting period.

## Project transfer using the Ethernet ISO profile

The ISO profile of the Ethernet protocol is not supported for the project transfer.

## Indirect transfer of a project: Recipes

If you transfer a project with recipes, you may see the following error message in some rare cases.

"Error upon accessing file (Host): File '<Pack&Go\_Folder>\PDATA.recipe.zip' not found!"



**Remedy:**

1. Reboot the HMI device.
2. Copy the following files from "<Pack&Go\_Folder>\Transfer\" to "<Pack&Go\_Folder>\Extern\VersionStore\".  
mfc71.dll  
mfc71u.dll  
msvcp71.dll  
msvcr71.dll
3. Repeat the transfer.

**HMI device with PROFINET: Communication error during connection establishment**

Note the following specifications to avoid a communication error during establishment of connection between HMI device and configuration PC:

- The subnet mask of the configuration PC and the HMI device must be the same.
- The IP network address range must match the used subnet mask.
- The network address of the configuration PC and the HMI device must be the same. They need to have a unique host address, such as 192.168.0.1 and 192.168.0.2.
- A default gateway is required if the network address is different, such as 192.168.x.y and 192.160.x.y.

**Routing via SIMOTION CPU 4.1.2**

The transfer of the configuration via S7 Ethernet does not work in case of routing via SIMOTION CPU 4.1.2.

**MPI / DP download is not functioning:**

If CP 5603 is directly in the WinLC RTX EC and is plugged into IF2, no PROFIBUS transfer is possible. In this case, the CP belongs solely to the CPU.

If CP 5613 A2 is configured directly on an index in the station editor, PROFIBUS transfer to WinCC flexible RT is possible. Remote transfer is not possible in this case, because the remote functionality of the RT loader has no connection to the Softbus interface of the station editor. The RT loader must be manually switched to transfer mode.

If the CP is not plugged in the station editor and is also not assigned to WinLC, PROFIBUS transfer to WinCC flexible RT is possible. The access point must be provided via the PG/PC interface in this case.

For remote transfer, it is important to ensure that the project also has a valid PROFIBUS connection because the RT will overwrite the parameters of the PG/PC interface at startup.

If no connection is configured, PROFIBUS and remote access are inactive.



# Other information

## Contents

Additional information that is not included in the online help.

## WinCC flexible /Archive and WinCC flexible / Audit

The checksums for Log and Audit Trail files were expanded as part of WinCC flexible 2008 SP2.

## S7 routing via Ethernet

S7 routing via Ethernet is not possible with WinCC flexible Runtime.

## Updating the operating system

It is not possible to update the operating system via routed connections.

## Transferring licenses to a panel on 64-bit operating systems

If you are running a 64-bit operating system and the "Edit > Connect target systems > Connect HMI device" menu command is not available in Automation License Manager, open command line input and run the following command with administrator rights:

```
"%WINDIR%\system32\RegSvr32.exe" "%CommonProgramFiles%\siemens\AlmPanelPlugin\ALMPanelParam.dll"
```

## Use of the mouse wheel in Runtime

The use of the mouse wheel in Runtime is not supported on all panels.

## Transfer via Teleservice

We do not recommend transfer via GPRS, UMTS, GSM or LTE, as breakdowns in communication may occur.

## Chinese characters in Simulation

If you output Chinese strings in a project, it may occur that Chinese characters are shown in the script output fields in Simulation, even if the Runtime language "Chinese" is not activated. This problem only occurs in Simulation.

### **Fast change of wireless networks over SSID**

The WLAN Selection Tool (WST) enables fast changing between prepared WLAN configurations. If you use several separate WLAN areas in your plant, you can save a configuration for each wireless network and change between wireless networks with the WST.

# Engineering System

## 9.1 General Information

### Contents

General information on WinCC flexible that is not included in the online help.

### Logging on network drives

We do not recommend that you log alarms, tags, and Audit Trail directly on a network drive. Power supply can be interrupted at any time. This means there is no guarantee for a reliable operation of logs and audit trails.

We recommend you save the logs and audit trails on your local hard drive or a local storage card. Use the system function "ArchiveLogFile" to save the logs or the audit trail long-term on a network drive. This step ensures reliable operation.

### Security updates

When WinCC flexible is installed, all required components of the operating system that are not available yet are installed. After you have installed WinCC flexible, run "Microsoft Windows Update" to check for new security patches.

### Importing project texts

The > < ' and & characters may not be used in an import file.

### Project Wizard

When a new project is created using the Project Wizard, it is possible to have a header created in the screen template. The header is not supported by OP 73micro, TP 177micro, OP 73, OP 77A and TP 177A HMI devices.

### Differences in the visualization of screen elements on the HMI device

The representation of screen elements (symbol library, images or texts) on the configuration computer can deviate from the representation on the HMI device. The deviation can be caused by:

- The display technology
- Differences in the resolution at the configuration computer and the HMI device

You should always check the final layout on the HMI device.

## User dictionaries

User dictionaries are read-only if you open multiple instances of WinCC flexible.

## Replacing HMI devices with DP configuration

The configuration for direct keys is not altered when you replace an HMI device with DP configuration. The HMI device cannot be operated in Runtime if the direct-key configuration is incorrect, for example, when using an incompatible DP slave. Always check the direct-key configuration and the existence of appropriate DP modules in HW Config when you replace an HMI device.

## Project texts: Fields in the function "Automatic Compilation"

Contrary to statements made in the online help, the function "Automatic Compilation" is available even if the text for compilation includes tags or text lists. If the fields have a different format in the source language, then the fields will be displayed first in the target language followed by the texts separated by spaces.

## Starting the simulator

If a simulation is already running in the background, you may not be able to always start another instance of the simulator correctly.

## Printing reports

If you want to print a report, you should first set the online language to the logging language.

## Report: Printing the Audit Trail

If you want to print an Audit Trail in Runtime, Audit logging must be stopped. No operations related to the FDA-conform process can be active as long as an Audit Trail is being printed.

## Audit Trail

Prior to commissioning check that the printout of the Audit Trail is complete with the selected print settings using the configured font and size.

In particular check the first line of an Audit Trail entry consisting of "Data record ID", "Time stamp", "DeltaZuUTC" and "UserID".

## Moving tags for address multiplexing

You have created the tags Tag\_1 and Tag\_2 for address multiplexing. Tag\_2 is the address of the tag Tag\_2.

Create a folder to organize the tags. Move Tag\_2 to this folder. To refresh the display in the "Tags" editor, close and reopen the editor.

**Modicon MODBUS TCP/IP: Number of elements per array**

For a tag with "Modicon MODBUS TCP/IP" connection, the maximum number of elements per array is 50.

**See also**

Integration in STEP 7 (Page 47)

## **9.2 Projects**

**Contents**

Information on working with recipes that is not included in the online help.

**Managing projects in Windows Explorer**

WinCC flexible creates a project database on the hard disk when you save a project. The project database is stored in the Windows file manager with the extension \*.hmi. A log file (\*\_log.ldf) is stored for each project database. Consistency of data cannot be guaranteed without this log file.

The project database can be moved, copied and deleted together with the corresponding log file in the Windows Explorer, as you are used to with other files. However, ensure that the database and the log file are not separated from each other during copying and moving.

For further information, refer to Working with Projects in section "Managing projects in the Windows Explorer."

**Opening integrated projects**

When a WinCC flexible project originating from an older version is opened for the first time with WinCC flexible 2008, conversion starts by default. The conversion may require some time and, in the case of very large projects, may also require some hours.

If the project was opened directly from the SIMATIC Manager, the conversion progress is shown by means of a display. In the case of very large progress, this does not show the actual course. In this case the CPU utilization of the computer indicates that conversion is still running.

The conversion process should not be aborted.

**Access problems at project files**

If configuration files cannot be copied/moved or "Save As" is not possible or other access problems occur, the following solution can be tried:

Open and close the project and then carry out the failed action again - if appropriate in connection with a previous rebooting of the computer.

### **"Save as" to external USB media**

If you save a project to external media with the "Save as" command, it may take a few minutes.

We recommend saving the project locally and then copying it to an external data storage device using the Windows Explorer.

### **Incorrect display of symbolic IO fields after conversion**

When a project is converted to a later version of WinCC flexible, any symbolic IO fields included in the project will be displayed incompletely.

Delete the incorrect symbolic IO field and reconfigure the symbolic IO field.

## **9.3 Recipes**

### **Contents**

Information on working with recipes that is not included in the online help.

### **OP 77A, TP 177A and Basic Panels: Reaction of the buttons to page changes**

The "Save" dialog with its "Yes", "No" and "Cancel" buttons is displayed if you edit a recipe data record and trigger a page change without having saved the recipe data record. The "No" and "Cancel" buttons trigger the same reaction: The changes you have made to the recipe data record will not be saved.

### **OP 77A, TP 177A and Basic Panels: Overwriting changed values**

If you change the values of a recipe data record in the recipe view while transferring a recipe data record between PLC and the HMI device, the altered values will be overwritten in the recipe view.

### **Disabling synchronization of tags in the process picture**

Clear the "Synchronize tags" option in an extended recipe view. This means the recipe data record values cannot be changed outside the recipe view in the configured I/O fields.

The following system functions have no effect if you have cleared the "Synchronize tags" option.

- LoadDataRecord
- SaveDataRecord
- SetDataRecordTagsToPLC
- GetDataRecordTagsFromPLC



## 9.4 Screens and Screen Objects

### Contents

Information on screen and screen object configuration that is not included in the online help.

### Special considerations regarding OLE graphics

If you edit an OLE graphic with Microsoft Paint, you may not change the file format with the "Save as" command before returning the OLE graphic to WinCC flexible.

The entry "Bitmap Image" is no longer available in Windows 7 and Windows 10. Use "Paintbrush Picture" instead.

### Inserting OLE object

When you create a new graphic from an OLE object, the dialog "OLE-Graphic edit process" will open in the background.

The dialog will remain active in the background as long as the dialog "Insert object" stays open.

The dialog "OLE-Graphic edit process" shuts down automatically as soon as you close the dialog "Insert object."

Click Back in WinCC flexible to close the dialog, to return to WinCC flexible and to shut down the OLE server.

### OLE object

Do not use an OLE object of the type "Package" in Windows 7 or Windows 10.

### Text lists with variables in faceplates

Configure text lists with variables in a faceplate. If you supply the variables with values via a dynamic interface, you may not interconnect them with an array element.

### Key switch as direct key

If the direct key tag is connected to a process and communication is up, the actual value is transferred from the PLC to the tag. The tag that contains the current position of the key is overwritten by this process. The key switch tag then no longer reflects the current value of the key switch, for example, if the Mobile Panel is switched off while the key is being turned.

## 9.5 User Administration

### Contents

Information on the user administration that is not included in the online help.

### Simulation with export of user data

During a simulation you can also test the exporting of user data. After a completed simulation, delete the export file with the password list on the PC. This setup ensures that nobody has unauthorized access to the passwords.

### Importing password lists

When password lists are imported, the passwords are not checked for conformity to the rules set up in the Engineering System.

If the users are exported from a project where passwords rules are not set, they can be imported into a project that has password rules. It is therefore possible to have users without special characters in their password in a project that requires special characters.

### "Login using password exclusively" option

The option is activated as default for new projects in the following HMI devices:

- OP 77A
- OP 77B
- TP 177B 4"color PN/DP
- KTP400 Basic mono PN
- KTP400 Basic mono PN Portrait

The default setting for the option "Login using password exclusively" is deactivated for all other HMI devices.

The migration of projects from WinCC flexible 2007 and earlier versions is not supported.

### Deleting users with active "group number hierarchy"

The active "Group number hierarchy" check box allows administrators to manage only the users assigned a group number which is less than or equal to that of the administrator.

If WinCC flexible does not assign the highest group number for the default "Admin" user, then you will no longer be able to manage user groups in Runtime.

Example:

- user configured with administrator rights of group 20
- user configured with user rights of group 10
- default "admin" user created by WinCC flexible of group 9

If you delete the user with group 20, you can no longer edit the user of group 10. You will no longer be able to assign users to groups 10 and 20.

The reason is the lower group number. The remaining user with "administrator rights" of group 9 is ranked lower than the user with "user rights" of group 10.

## SIMATIC Logon

If you use SIMATIC Logon, make sure that the names of the Windows user groups and users do not contain the '/' and '\' characters.

The duration of logon for a SIMATIC Logon user who is used in more than one group on the server PC, has been shortened. The installation requirement for this is Simatic Logon V1.5 SP3 Patch 1/Update 1.

---

### Note

It is recommended to address the Simatic Logon server directly via an IP address for performance reasons.

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## 9.6 System Functions and Scripting

### Contents

Information on script programming that is not included in the online help.

### "NotifyUserAction" system function

FDA guidelines stipulate that the tags for the following parameters must always contain a value in Runtime:

- Category
- Object name
- Description

### System function "AdjustContrast"

The system function "AdjustContrast" is only supported by Basic Panel KTP 600 Basic Mono PN and KTP 400 Basic Mono PN.

### "CallText" system function in faceplates

The system function "CallText" is not supported in faceplates.

### System function "ClearDataRecordMemory"

The "ClearDataRecordMemory" system function can only be used to delete recipe data records. It cannot be used to delete recipes.

## 9.7 Import and export

### Content

Information on import and export functions that is not included in the online help.

### Importing and exporting SIMOTION tags

SIMOTION tags can neither be imported nor exported. WinCC flexible does not support imports and exports with symbolic addressing. SIMOTION only allows symbolic addressing.

# Communication

## 10.1 General information

### Contents

Information on communication drivers that is not included in the online help.



#### CAUTION

##### Ethernet communication

In Ethernet-based communication, such as PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService and OPC, it is the end user who is responsible for the security of his data network. The proper functioning of the device cannot be guaranteed in all circumstances; targeted attacks, for example, can lead to an overloading of the device.

### PROFIBUS DP communication driver

The PROFIBUS DP driver (TI505-DP) is not enabled for use in Runtime on your PC or for the simulation of the HMI devices.

### Communication via DH485 protocol

The DH485 protocol for the communication with Allen-Bradley controllers is not enabled for use in Runtime on your PC or for the simulation of the HMI devices.

### Drivers for CP 5512 communications processor

The drivers for the CP 5512 are no longer included in this software version. If CP 5512 is used, the following needs to be installed before installing this software:

<https://support.industry.siemens.com/cs/ww/en/view/78453460> (<https://support.industry.siemens.com/cs/ww/de/view/78453460>)

Please note that CP 5512 can be used only in Windows 7 32-bit or lower version. CP 5512 is not compatible as of Windows 8 or with 64-bit operating systems.

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#### Note

The USB 2.0 module CP 5711 has been available since 2009 as functional successor.

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### Connecting cable order numbers not up-to-date

The online help contains order numbers for connecting cables that have been discontinued.

For detailed information, refer to Siemens Online Support under entry number: 26556941 (<http://support.automation.siemens.com/WW/view/en/23486974>)

You will find the order numbers for connecting cables in the catalog under "HMI accessories".

### Diagnostic Repeaters on PROFIBUS

Communication at OP 73micro, TP 177micro, OP 73, OP 77A and TP 177A HMI devices may be disrupted when a diagnostic repeater and an HMI device are operated on the same PROFIBUS network, and the diagnostic repeater is used for line diagnostics.

### Changing the CPU type in STEP 7

If you change the CPU type in STEP 7, the connection between symbols and this CPU is disconnected in WinCC flexible.

Select "Reconnect" in order to reconnect the symbols to the CPU.

### Modification of the baud rate at MPI/DP networks

Applies for the following devices:

- MP 277
- Mobile Panel 277
- MP 377

If you modify the baud rate in the MPI/DP network, the HMI device has to be rebooted.

### PC adapter MPI/PROFIBUS aborts the connection at MP 377

The PC adapter MPI/PROFIBUS (6ES7-972-0CA23-0XA0) is not approved for the transfer of images or projects to an MP 377.

### PROFINET IO direct keys

You must always use the new GSDML file in HW Config of the STEP 7 project if you are using the current image for the HMI devices. You can change the version of the GSDML file accordingly by editing the properties of the HMI device in HW Config.

The new features in PROFINET IO (e.g. the topology editor) require an IO controller (S7CPU) of a more recent design. HW Config informs you of whether or not your IO controller supports the new features by generating a corresponding alarm once you have assigned the HMI device to the IO controller. You need to upgrade your IO controller in this case.

### Communication via OPC

"OPC XML Gateway" is used for the OPC communication.

You can find additional information on OPC at <https://opcfoundation.org/> (<https://opcfoundation.org/>).

An OPC Server is installed on an HMI device and is used to communicate with a PLC.

If you are using a tag of "String" data type to access an OPC Server tag of "String" data type and the string length in the PLC exceeds the tag "Length", the "Value change" event configured at this tag is triggered persistently in Runtime, regardless of whether or not the string in the PLC has changed.

In this case, you should carefully check the string length in the PLC and configure a tag of "String" data type and appropriate "Length".

### OPC: Using the HMI device under Windows 7 and Windows 10

HMI device	Data exchange over	Operating system	OPC server	OPC client
PC, Panel PC	DCOM	Windows 7 Windows 10	OPC DA server	OPC DA client

### OPC: OPC Item Browser quantity structure

You should not configure more than 1000 tags in the OPC Item Browser.

### OP 73micro, OP 73, OP 77A, TP 177A, TP 177micro and Basic Panels: Updating of tags

Tags with a configured cycle time of 100 ms will usually be updated after 120 ms.

### OP 77A, TP 177A and Basic Panels: Drivers for non-Siemens PLCs

Arrays with more than 100 data words will not be supported for connections to "Modicon Modbus" and "Allen-Bradley DF1."

### Use of PROFINET IO with Panel HMI devices

When you use PROFINET IO to connect the direct keys and LEDs of HMI devices with the PLC, you can set an offset for the address range of the inputs and outputs during configuration in HW Config.

The following restriction applies when you use a PROFINET IO capable CPU of the 400 series in connection with one of the HMI devices listed below:

The offset for the start of the address range of the inputs may not exceed the offset for the start of the address range of the outputs.

The limitation applies to the following HMI devices:

- OP 177B
- OP 277
- Mobile Panel 177

To configure the address parameters, open the PLC with the CPU of the 400 series in HW Config. Select the HMI device connected with PROFINET IO in the station window of HW Config. The lower area of the station window shows a table in detailed view with the properties of the HMI device. Select the table row with the addresses of the HMI device and open the object properties with the shortcut menu.

Select the "Addresses" tab in the "Object Properties" dialog. Configure the offset for the inputs under "Inputs > Start." Configure the offset for the outputs under "Outputs > Start."

#### Simulation with process connection

Simulation with process connection is not possible with SIMATIC Manager V5.6 for the following HMI devices:

- TP 177A
- KTP1000 Basic DP
- KTP600 Basic color DP

#### Communication problems with PC/PPI cable and STEP 7-Micro/WIN

If you install WinCC flexible and STEP 7-Micro/WIN, problems with the communication via the PC/PPI cable may occur, irrespective of the sequence of installation.

If you want to establish communication using the PC/PPI cable, proceed as follows:

Removing the PC/PPI cable driver

1. Select the "Set PG/PC interface" command in the "Start > Settings > Control Panel" menu.
2. In the "Interface" area, click "Select".
3. In the "Installed" area, select "PC/PPI cable".
4. Click "Remove".  
The driver is now removed.
5. Install the "PC/PPI cable" again.

#### PC adapter MPI/PROFIBUS for PCs with dual-core processors

The PC adapter MPI/PROFIBUS (6ES7-972-0CA23-0XA0) is not approved for communication of PCs with dual-core processors.

#### TS Adapter IE and TS Adapter II in MP 370 and MP 377

An OS update via "TS Adapter II" and "TS Adapter IE" has not been released for the following HMI devices:

- MP 370
- MP 377



### Special features of a connection with the Mitsubishi PG protocol and protocol 4

There are different limits for the address ranges for the CPUs of different series. Refer to the Mitsubishi Computer Link manuals to determine the appropriate limits. In the Q series, it is only possible to address up to 8191 in the M and D area.

### OP 73micro, OP 73 and OP 77A, TP 177 micro, TP 177 A and Basic Panels: Parallel communication for projects integrated in STEP 7

Note the following for projects integrated in STEP 7:

- Parallel communication via MPI/DP and Ethernet is not permitted.
- Only one connection is permitted.

### Allen-Bradley: Communication via DH485 protocol

Different from the description in the Online Help, you may set up the following protocol parameters:

- Data bits: "8 bits"
- Parity: "even"
- Stop bits: 1 bit

### WinAC RTX

WinCC flexible Runtime is installed. It is possibly necessary to manually reinsert a CP that was configured for WinAC RTX as IF module before you run WinAC RTX.

## 10.2 OPC

### Special features of OPC communication

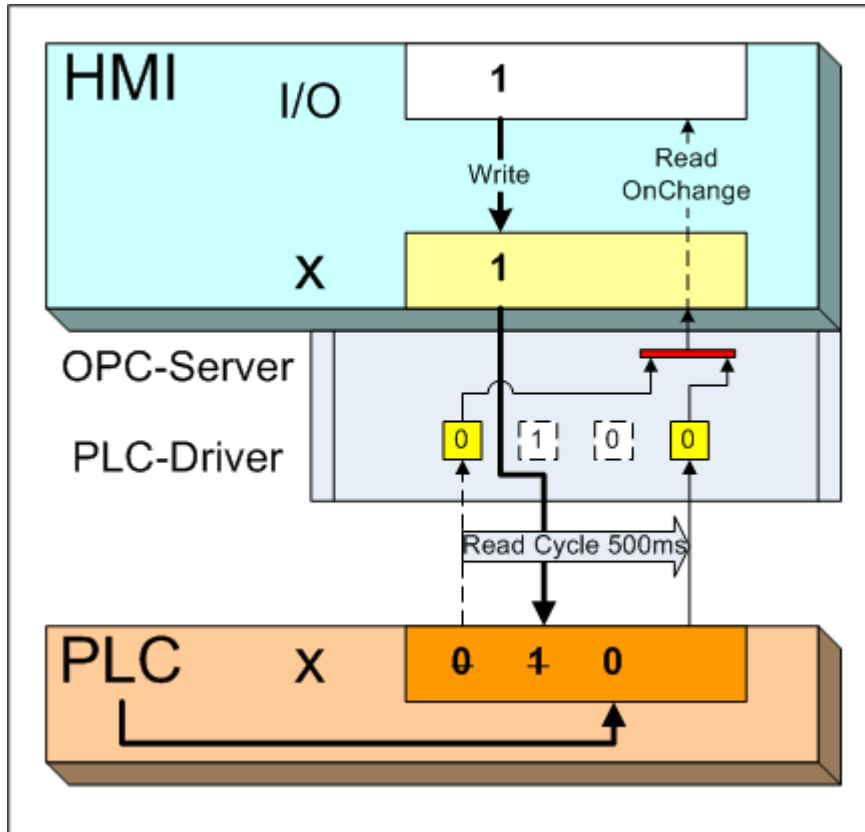
Requirements: An OPC Server is installed on an HMI device and is used to communicate with a PLC.

When using a tag of the data type "String" to access an OPC Server tag of data type "String" and the string length in the PLC exceeds the tag "Length", the Runtime program continually triggers the "Value change" event configured at this tag, regardless of whether or not the string in the PLC has changed.

In this case, you should carefully check the string length in the PLC and configure a tag of "String" data type and appropriate "Length".

### Inconsistent OPC tag values in the PLC and HMI device

Requirements: A tag "x" is configured in an I/O field on the HMI device, for example, and is synchronized automatically with the corresponding tag "x" on the PLC by way of OPC server.



After an operator has entered a new value in the I/O field, e.g. "1", the value of tag "x" in the PLC is synchronized by changing it from "0" to "1" (Write), for example. In reverse direction, the HMI device reads the tag value from the PLC (Read) in asynchronous mode (e.g., at intervals of 500 ms, as configured in the tag.) However, the HMI device is only updated after the value has changed (Read OnChange).

A value change is not made available to the OPC server if the PLC or a different HMI device now reset the value of tag "x" to its old "0" value within the read cycle, i.e. "0 -> 1 -> 0". The value of tag "x" is now set to "1" on the HMI device and to "0" on the PLC.

#### **CAUTION**

##### **Inconsistent OPC tag values in the PLC and the HMI device:**

To avoid concurrent write access of other communication nodes and of the PLC itself to the same configured tag in the PLC, for example, set up separate read and write tags on the HMI device.

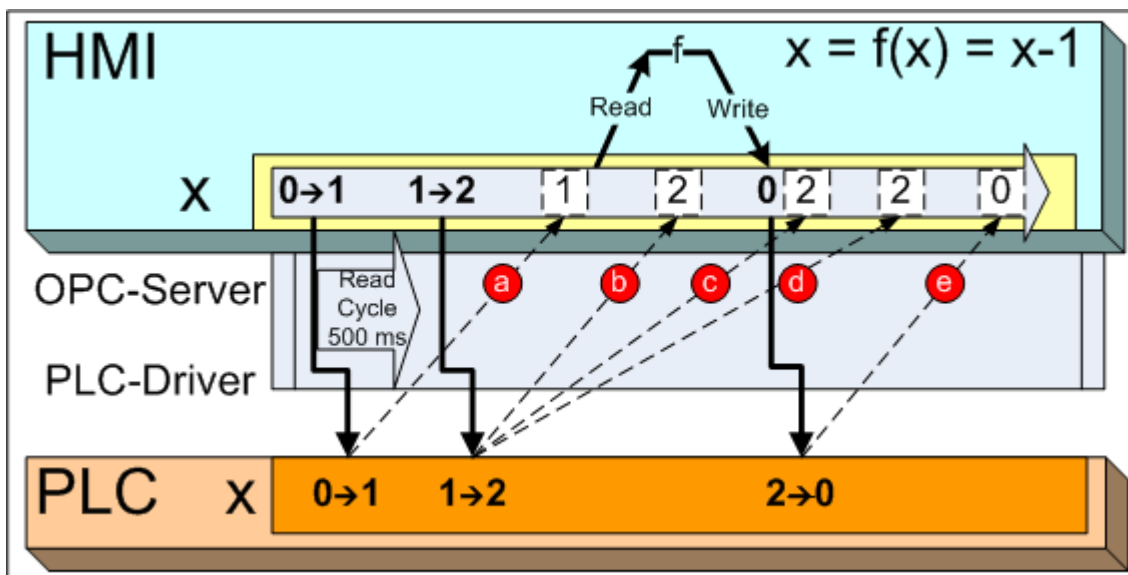
Rapid successive changes of an OPC tag value on the HMI device will generate incorrect values on the PLC:

A tag "x" is configured on the HMI device and is synchronized automatically with the corresponding tag "x" on the PLC by way of OPC server.

The following example illustrates the issue. Tag "x" is read by a system function (Read); "f" is changed and the result is written to the tag (Write).

Example of system functions "f":

IncrementValue(), SetBitWhileKeyPressed() etc.



Events that may trigger inconsistent values on the PLC:

- Tag "x" is changed twice in rapid succession on the HMI device, e.g. by means of system function "IncrementValue()" 0 -> 1 -> 2.
- Following these transitions, the "DecrementValue()"  $f(x) = x - 1$  system function is called immediately on the HMI device.
- The HMI device receives the value changes "1" and "2" with delay.

If the value change "1" is received before Read (a), the system function decrements the incorrect value "1" to "0" and writes it back to the PLC. The value "2" was already saved to the PLC. The system function returns an effect other than expected by the operator.

Examples:

- A value is decremented twice.
- A bit is no longer reset.
- A value is not incremented.
- Situations in which the value change to "2" is possibly ignored (possible alternatives):
- The system function has already read the incorrect value "1" (b).

- The HMI device discards the changed value "2" because the write operation is currently active (c).
- The changed value "2" is overwritten again with the incorrectly changed value "0" on completion of the write operation (d).

**NOTICE**

**Avoid rapid successive changes to an OPC tag value. Scenarios which may result in the problem described above:**

- Jogging mode by pressing a control element several times, for example, by means of rapid successive execution of the "IncrementValue" function as shown earlier in the example.
- Function list in which the same tag was changed several times.
- Script for 1 to 10  $x = x + 1$ , for example
- Combination derived from the three scenarios

Avoid the problem described earlier by setting up an interval between rapid successive changes of the tag value of at least twice the duration of the read cycle of this tag. This minimum value also depends on the OPC server implementation and on server load.

## Starting OPC-XML Gateway

If no TIA Portal is installed parallel to WinCC flexible, you will be denied access to the file "C:\ProgramData\Siemens\OpcXmlGateWay\RT2XML.dcf".

### Remedy

1. Select the file RT2XML.dcf and the entry "Properties" in the shortcut menu.  
The "Properties" dialog opens.
2. Select the "Security" tab and click "Edit".
3. Add the user that is to be granted full access.
4. Under "Authorizations", activate "Full access" for the newly created user.
5. Confirm with "OK".

It is also possible to start the OPC-XML Gateway with administrator rights.

# Runtime

## 11.1 General information

### Contents

General information that is not included in the online help.



#### **CAUTION**

##### **Ethernet communication**

In Ethernet-based communication, such as PROFINET IO, HTTP, Sm@rtAccess, Sm@rtService and OPC, it is the end user who is responsible for the security of his data network. The proper functioning of the device cannot be guaranteed in all circumstances; targeted attacks, for example, can lead to an overloading of the device.

### **Internal flash memory on Windows CE devices**

Cyclic write access to internal flash memory is not allowed, because this reduces the useful life of flash memory and of the HMI device.

You should preferably use external memory cards, in order to prolong the useful life of your device, and to benefit from their higher performance in saving data records and data logging.

### **Maximum number of files in the root directory of memory cards or internal flash**

The capacity of the root directory on a memory card or internal flash memory is limited to 256 files. This limit does not apply to subdirectories.

### **Data loss in archives**

In order to prevent loss of data, always terminate the Runtime software before switching off the voltage supply. Close the project by using the control element to which the "StopRuntime" function was assigned in your configuration.

Alternatively, you use the uninterruptible power supply (UPS) to ensure a controlled shutdown of the HMI device.

### **Communication via OPC**

"OPC XML Gateway" is used for the OPC communication.

You can find additional information on OPC at <https://opcfoundation.org/>.

## Integrated firewall of the antivirus tools

Authorize access to the following locations in the firewall to work without problems in WinCC flexible Runtime:

- [Installation directory of the Automation License Manager] almappp\almappx.exe
- %CommonProgramFiles%\Siemens\SWS\almsrv\almsrvx.exe

## High CPU load

For fault-free operation, disable the "Norton Auto Protect" option in the "PC Norton Protection Center". The "Norton Auto Protect" option may result in a high CPU load. The high CPU load may block execution of other processes.

## Backup

Runtime must be terminated before you run a backup.

## Windows 7: Changing system time in Runtime

A Windows user who wishes to set the system time of the PC via Runtime, for example, by means of a date/time field or a controller job, needs to have the corresponding access rights.

You assign these rights in the "Security Configuration Manager".

The user must be entered under "Security Settings > Local policies > User rights > Change the system time". Alternatively, the user is a member of the "Siemens TIA Engineer" user group.

## See also

<https://opcfoundation.org/> (<https://opcfoundation.org/>)

<https://support.industry.siemens.com/cs/de/en/view/78453460> (<http://support.automation.siemens.com/WW/view/78453460>)

## WinCC flexible integrated

### 12.1 Integration in SIMOTION

#### Contents

Information on integrated operation in SIMOTION that is not included in the online help.

#### Enabling the integration of WinCC flexible in SIMOTION SCOUT

Integration of WinCC flexible 2008 has been approved for the following versions of SIMOTION SCOUT.

- Windows 7 (32-bit/64-bit):  
WinCC flexible 2008 SP5 with STEP7 5.5 and SIMOTION Scout 4.4  
WinCC flexible 2008 SP5 with STEP7 5.6 and SIMOTION Scout 5.1
- Windows 10 (64-bit)  
WinCC flexible 2008 SP5 with STEP7 5.6 and SIMOTION Scout 5.1

Proceed as follows to enable the integration of WinCC flexible in SIMOTION SCOUT:

1. Select "Settings" from the "Options" menu.
2. Click the "WinCC flexible" tab.
3. Enable the option "Use and display WinCC flexible component."

#### AxisMotor screen

There is no length information in the "ShowAxisMotor" screen for "Backlash compensation".  
Assign start value 1 for the created tag (Tag\C230\Axis\_1\AxisMode).

### 12.2 Integration in STEP 7

#### Contents

Information on integrated operation in STEP 7 that is not included in the online help.

#### Interconnecting STEP 7 symbols in new STEP 7 projects

The interconnection of STEP 7 symbols with WinCC flexible tags will cause problems, if the corresponding STEP 7 project was created while another WinCC flexible project was still open.

Close all WinCC flexible projects before you create a new STEP 7 project.

## Symbol server

Extensive changes in your STEP 7 project may cause problems at the symbol server. Close all WinCC flexible projects before you make any substantial changes in your STEP 7 project.

This is valid in particular:

- If changes are to be made to station names, CPU names or S7 program names.
- If one or more S7 stations are to be copied to a S7 project in SIMATIC Manager -stations or deleted from an S7 project.

### Wrongly labeled S7 symbols on tags

If all S7 symbols on tags are labeled as faulty (orange marking of the "Symbol" cell) after a HMI project integrated in STEP 7 has been opened, it can be helpful to save the entire S7 project under a different name in the SIMATIC Manager with the help of "Save as" (with reorganization option enabled).

## Multiple sessions with integrated projects

Multiple WinCC flexible sessions for STEP 7 projects may cause problems in the synchronization of data between STEP 7 and WinCC flexible, for example, when setting online data, or saving data. To avoid such problems, make sure you run a WinCC flexible session only for one STEP 7 project.

Also avoid opening several WinCC flexible instances from STEP 7.

## SIMATIC Manager: "PLC > Compile and Download Objects"

The use of the "PLC > Compile and Download Objects" function of SIMATIC Manager may cause problems. If you encounter problems, activate only one SIMATIC HMI station in the selection table each time you compile.

## Copying integrated connections

If you copy integrated connections by using copy-and-paste, the "Station", "Partner" and "Node" columns remain empty. Drag the columns across manually.

## Deleting an HMI device

By deleting an HMI device in WinCC flexible (except WinCC flexible Runtime), you remove the entire HMI station from SIMATIC Manager, including all of its sublevel components.

## Integrated project with CFC components and ALARM\_S alarms

The following requirements have to be met to process a project that includes CFC-specific components and ALARM\_S alarms:

- The engineering tool "CFC" has to be installed
- or
- STEP 7 V5.5 or higher is installed.



## Incorrect representation of (HMI) PC stations

The following options are available for restoring a (HMI) PC station that can no longer be correctly compiled in HW Config:

### Backup copy of the configuration is available

1. Delete the corrupt (HMI) PC station in the SIMATIC Manager.
2. Copy the backup station data to the SIMATIC Manager.

### Backup copy of the configuration is not available

1. Close HW Config.
2. If an error has occurred, you will see two WinCC flexible Runtimes on the target station in the SIMATIC Manager. Delete the lower WinCC flexible Runtime in the SIMATIC Manager.
3. Create a new (HMI) PC station corresponding to the old target station in the SIMATIC Manager.
4. A WinCC flexible Runtime is created by default when a new HMI PC station (such as PC 877) is created. Delete this WinCC flexible Runtime.
5. In HW Config, open the new and the corrupt (HMI) PC station.
6. Copy the corrupt station in HW Config. This includes: WinCC flexible Runtime, CPU, software components and interface cards.
7. Compile the newly created and completely configured (HMI) PC station in HW Config.
8. Close HW Config.
9. Delete the corrupt station in the SIMATIC Manager.
10. Reconnect the previously used network connection for the (HMI) PC station via NetPro or WinCC flexible 2008.

## Language settings when creating an HMI station

If problems occur when creating an HMI station from SIMATIC Manager, check the following:

The language selected under "Language for programs that do not support Unicode" must match the selected user interface language.

"Language for programs that do not support Unicode" can be found under:

Start > Settings > Control Panel > Regional and Language Options > Advanced.

## Configure an HMI device as a DP slave without address

If you have configured an HMI device as DP slave in a DP master system, ensure that this HMI device is located in an HMI station. Otherwise, you will not be able to assign an address.

## See also

General Information (Page 29)



## Options

### 13.1 Sm@rtAccess, Sm@rtService

#### Contents

Notes on the Sm@rtAccess and Sm@rtService options that are not included in the online help.



#### CAUTION

##### Ethernet communication

The end user is himself responsible for the security of his data network; the proper functioning of the data network cannot be guaranteed in all circumstances, for example in the case of target attacks leading to an overloading of the device.

#### Operation via Sm@rtClient for key devices after an update to WinCC flexible 2008 SP5

Due to the harmonization of key codes, the current HMI device versions of OP 170B and OP 177B before WinCC flexible 2008 SP5 are no longer compatible with previous versions of these devices as of WinCC flexible 2008 SP5. If you use one of these devices as a Sm@rtServer and want to carry out keyboard operations at a connected Sm@rtClient, you have to check whether the correct keyboard commands are transmitted. If the keyboard commands are incorrect, update the HMI device version of the HMI devices involved.

#### Transferring of key codes of F-keys and K-keys using Sm@rtClient to PC-based key devices

The F and K key codes are only transferred reliably via Sm@rtClient to the Sm@rtServer if the WinCC hotkey function is activated. Open the "SIMATIC Key Tools" via "START > Settings > Control Panel" and activate the WinCC Hotkey function by clicking the "Start" button.

#### WinAC RTX and Sm@rtServer on a Panel PC 477B

When operating a WinAC RTX and the WinCC flexible Sm@rtServer on a Panel PC 477B at the same time, only two simultaneously connected Sm@rtClients are permitted.

#### Sm@rtServer and Sm@rtClient in conjunction with a Panel PC

If you access a Multi Panel as Sm@rtServer with a Panel PC as Sm@rtClient, you will have to disable the function "WinCC hotkey" in the KeyTools.

## Simultaneous access via Sm@rtClient and RDP

You have the following options for access to an S7-mEC with WinCC flexible Runtime or a PC with WinCC flexible Runtime:

- Using Virtual Network Computing (VNC) on the Sm@rtServer
- Using the Remote Desktop Protocol (RDP) from Microsoft

Due to system restrictions, simultaneous access with VNC and RDP is not possible.

Scenario:

An S7-mEC is used as Sm@rtServer. Three Sm@rtClients access the Sm@rtServer. As soon as a PC accesses the S7-mEC using RDP, the connections to the Sm@rtClients are terminated.

## Default pages for the Integrated Web Server

The default pages for the Integrated Web Server of PC Runtime are available in "C:\Documents and Settings\All Users\Application Data\Siemens\HmiRTm\MiniWeb1.3.2\WebContent".

## Automatic scaling

No automatic scaling takes place with some relationships of server resolutions to client resolutions. As an alternative, disable automatic scaling or change the resolution of server or client.

## Settings on the HMI device

The "Blank screen on client connection" setting is not available in the "Server" tab of the "Sm@rtServer: Current User Properties" dialog.

## Listening mode of the Sm@rtClient application

The port must be enabled in the firewall to use the "Listening mode" function.

## E-mail notification

For e-mail notification, you can configure a sender name that will be specified in the e-mail. Delete the entry if the function is not supported by the SMTP server. For more information contact your service provider.

Deleting the sender name:

- In the WinCC flexible project: Editor "Device Settings " > Name of the sender
- On the HMI device: Control Panel > WinCC Internet Settings > "Email" tab > Name of sender

## On-screen keyboard

- The on-screen keyboard on the client is only available if the on-screen keyboard is also enabled on the server.

## **Sending e-mails**

- You may only send 50 e-mails at one time.

## **No S7-MEC connection via Sm@rtAccess**

You need an EM PC module if using Sm@rtAccess on on EC31. Use the Remote Desktop Protocol (RDP) as an alternative.

# **13.2 ProAgent**

## **Contents**

Information on the operation of ProAgent that is not included in the online help.

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### **Note**

ProAgent is only supported in Windows 7.

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## **ProAgent upon faulty installation of STEP 7"**

If ProAgent is installed on a PC on which no STEP 7 is installed, the "Diagnostics" entry is not available in the project tree. It is therefore not possible to select units.

The ProAgent views can be configured on this PC. When the project is generated, however the following message appears "Warning: Internal WARNING (Detail: screen element ... was created by GeneratorHmiScreen ... - Object type: SCREEN\_ITEM)". In Runtime, no ProAgent views appear on this PC.

## **Using the "Compile and Download Objects" function**

If you carry out a change in PDiag, S7-Graph or S7-HighGraph, it may be necessary to carry out a consistency check in the existing WinCC flexible projects, in order to ensure that the change has been transferred correctly to the HMI devices by means of the "Compile and Download Objects" function.

## **Number of devices in the project**

It is advisable to manage only one device per HMI project when using ProAgent.

## **Step sequence screen**

Each step sequence screen can handle a maximum of 128 steps and 128 transition.

## **Asian languages**

The ProAgent option has not been released for Asian languages.

## **13.3 ChangeControl**

### **Contents**

Information on ChangeControl option that is not included in the online help.

### **Editors of the ChangeControl option**

The WinCC flexible option WinCC flexible /ChangeControl is used for versioning of configuration data and to track changes in the configuration. The respective editors "Project versions" and "Change log" are located in the project window under version management.

### **Project versions on network drives**

Project version management is not currently supported on network drives.

## HMI devices

### 14.1 General information

#### Content

Information on special features of the HMI devices that is not included in the online help.

#### Unsupported devices

Mobile Panel 277 IWLAN V1 and all SMART Line HMI devices are not supported in WinCC flexible 2008 SP5.

#### Multi-key operation

Multi-key operation may initiate unwanted actions:

- Do not press more than two function keys simultaneously when using a keyboard device.
- Do not press more than one button at any given time when using touch devices, standard PCs or a panel PCs.

#### Converting daylight savings time and standard (winter) time

The HMI device does not automatically convert from daylight savings time to standard (winter) time. Use the in Control Panel to define whether daylight savings time or standard time is currently in effect. In order to convert from winter to summer time, activate the "Daylight savings time currently in effect" check box in the "Date/Time Properties" dialog box. The clock is converted to daylight saving time after you confirmed the change and closed the dialog. Deactivate this check box if you want to change to standard (winter) time.

You can set daylight saving time with the system function "SetDaylightSaving."

#### SIMATIC Panel PC 477, PC 577, PC 677, PC 877: Distorted display of icons

If you open projects in WinCC flexible that were created with a version of WinCC flexible 2005 SP1, the icons may be displayed distorted. The icon size of the HMI devices listed above has been adapted in WinCC flexible 2007. Remedy: Open the "Device Settings" editor and adjust the size of the icons manually to the value of WinCC flexible 2005 SP1 under "User-defined icon size". The values are listed in the following table.

HMI device	Icon size (X~Y)
PC x77 12" key	80~66
PC x77 15" key	101~85

### Restrictions for logon with access to HTML pages

If you are using the underscore character "\_" as part of the HMI device name, logon attempts with access to HTML pages of the HMI device may fail.

Do not use the underscore character "\_" in the name of HMI devices.

### HMI devices with PROFINET IO direct keys

Set up the network configuration of HMI devices which support PROFINET IO direct keys both in the Control Panel on the HMI device and in the HW Config editor. The network settings in the Control Panel must conform to the settings in HW Config. The "Automatic" mode is set as default in both editors. PROFINET IO is only available in "Automatic" or "100 Mbps full duplex" mode.

### Updating the operating system

It may take up to one minute after you have completed an operating system update to recover communication functions using the restored network settings. The PC cannot go online to the HMI device via Ethernet until this time has expired. The "Activating connection to restore device settings" message is displayed.


### SecureMode

Use SecureMode to protect the Control Panel, the task bar and the desktop of the following HMI devices against unauthorized access:

- Mobile Panel 277
- MP 177 6" Touch, MP 277, MP 377
- TP 177B 4"

Enter a password in the "Password Properties" dialog in the Control Panel of the HMI device to activate SecureMode. The "secure mode" label is displayed on the desktop.

Enter the set password to enable the operation of the Control Panel, task bar or desktop. The label "secure mode" will be hidden.

To reactivate SecureMode, double-click the symbol on the desktop . To deactivate SecureMode completely, delete the set password.

### Transfer via Teleservice

Transfer via Teleservice must not be interrupted during the data transmission to an HMI device. This type of connection is not suited for the transfer of large data volumes, as its transmission quality and the stability of the telecommunication line may be insufficient.

Use Teleservice only to transfer the project to the HMI device. Modem connections are not suited for handling return transfers, operating system updates or backup of large data volumes.

### "Activate" event: System function with external tag is not executed

HMI devices concerned: Basic Panels, OP73, OP77A, TP177A



The system function is not executed with the following constellation:

- A system function with external tag was configured for the "Activate" event of an object.
- The object as configured as first element in the tab order of the start screen.

The system function is not executed after the start of Runtime because the connection to the controller is not yet set up.

### Link between panels and enabled Windows network drives

If you are using a panel that is based on Windows CE 5, observe the following rule:

You cannot link panels to enabled Windows network drives if the time difference between the PC and the panel is greater than 1 to 2 days.

## 14.2 Panels

### Contents

Information on special features for Panels that is not included in the online help.

### OP 73: Pack&Go with Image version 1.0.0.0

It is not possible to use Pack&Go for an operating system update of the HMI device OP 73 from Image version 1.0.0.0 to a later version.

### Restore process at the OP 177 DP mono

The following dialog message can occur during the restore process on the OP 177 DP mono.

Title: "Abort Restore"

Text: "Storage Card couldn't be detected. Try restore again? Insert storage card and Press 'OK' or abort restore with 'CANCEL'."

Confirm the dialog message with "OK" so that the restore process can be terminated reliably.

### OP 277: Adjusting the brightness

It is not possible to adjust the brightness at the OP 277 HMI device. This results in an incompatibility to the predecessor model OP 270 or TP 270 respectively.

### Simulation in integrated mode with Basic Panels

PLCSIM is not supported for simulation of the Basic Panels with PN interface.

### **TP 270: Updating the operating system**

After updating the operating system, only the device settings for on-board interfaces will be restored. If you are, for example, using an Ethernet CF card for the TP 270, the IP address of the corresponding interface may not be restored.

### **Buttons for Basic Panels, TP 177A and TP 177micro**

The buttons are not reset on the TP177A, TP177-micro and Basic Panel HMI devices if you assign the Touch Calibration or Clean Screen function to their "Pressed" event.

### **OP 73, OP 73micro, OP 77A, TP 177A, TP 177micro and Basic Panels: "ShiftAndMask" system function**

You can only execute the "ShiftAndMask" function on the HMI devices OP73, OP73micro, OP77A, TP177A, TP177micro, and Basic Panels if the input tag and the output tag are of the same data type.

### **The "SimulateSystemKey" system function**

When the "SimulateSystemKey" function is executed at an input field on Basic Panels, no more operation events are processed on the touch screen until input mode is closed with a simulated "Enter" or "Esc" key.

Example:

When you delete the input field with "SimulateSystemKey", you need to enter the "Del key" followed by the "Enter key" in the corresponding function list of the function key.

### **OP 77A, TP 177A and Basic Panels: Communication partner OMRON**

The connection of an HMI device to an OMRON CPU of the OMRON SYSMAC CP1L, CP1H and CJ1M series using the Hostlink/Multilink protocol over RS232 has been system tested and released by Siemens AG.

A multipoint connection to up to 4 OMRON controllers in an RS422 four-wire multidrop configuration can be implemented with communication adapters.

### **OP 73micro, OP 73 and OP 77A, TP 177 micro, TP 177 A and Basic Panels: System limits**

The following system limits refer to the maximum number per screen:

- User view: 1
- Trend view: 4
- Alarm view: 20
- Recipe view: 5

## 14.3 Multi Panels

### Contents

Information on special features of Multi Panels that is not included in the online help.

#### MP 277: Using USB memory sticks

Only one USB memory stick may be active for saving logs or recipes on the MP 277 HMI device.

#### MP 377 as Smart Server

There may be noticeable reductions in performance when you use the MP377 as Smart Server while using the Media Player or Microsoft Viewer on the panel. We highly recommend that you do not make use of such a combination.

#### PROFINET IO with MP 377

With MP 377, PROFINET IO is activated by default in WinCC flexible 2008 SP1.

If you use PROFIBUS direct keys, deactivate PROFINET IO in the Control Panel.

## 14.4 Mobile Panels

### Contents

Information on special features of Mobile Panels that is not included in the online help.

#### Mobile Panel 177 / 277, with optional backup battery package

Configure the area "Project ID" area pointer in order to exclude improper operation by means of Mobile Panel of a plant which was not configured appropriately.

The system checks at the start of Runtime whether the project ID in the device settings of the project matches the value saved to the controller. Runtime is stopped if the value does not match.

However, the project ID is not updated if you plug a Mobile Panel with optional battery backup package into another terminal box while Runtime is active. Compatibility of the Panel

configuration with the various control programs can no longer be guaranteed in such a situation.

- Runtime is not stopped.
- Execution of the direct keys DP and PN-IO is not prevented.
- No system event is output to the HMI device.

**WARNING****Unforeseeable machine reaction to incompatible Panel configuration**

Assign all plants which contain one or several terminal boxes for a Mobile Panel different, intersystem node and IP addresses at the communication partners, for example, PLCs. This prevents access to the wrong communication partner with the same address.

**Mobile Panel 277: Using USB memory sticks**

Only one USB memory stick may be active for saving logs or recipes on the Mobile Panel 277.

**Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN V2: Zone evaluation**

The value of the variable zone ID may have the value 0 immediately after the start of Runtime. Change the zone (enter or exit) in this case.

**Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN V2: Topology Detection of STEP 7**

The topology detection of Step 7 cannot provide values in the online view, since the required LLDP service has not yet been specified for wireless in the PROFINet standard.

**Using the direct keys of the Mobile Panel 277:**

When using the WinCC flexible 2008 SP1 operating system images for Mobile Panel 277 and Mobile Panel 277 IWLAN, you will have to use a new GSDML file in the STEP 7 project in HW Config.

You will have to delete the configured Mobile Panels from HW Config and reinsert them from the new HW catalog.

**Discrepancy error in HW diagnostics**

The Mobile Panel 277 versions with MLFB 6AV6 645-0CB01-0AX0 and 6AV6 645-0CA01-0AX0 cause a discrepancy error in the HW diagnostics of an integrated project. You can avoid this error by configuring the device with MLFB 6AV6 645-0CC01-0AX0 instead.

## 14.5 HMI devices with Windows XPe

### Content

Information on special features of the HMI devices that is not included in the online help.

### SIMATIC Panel PC 477 / Microbox 420 with Windows XP embedded (XPe)

#### Transferring a project

When transferring, you can transfer the compressed source data file along with the compiled project file to the HMI device. Sufficient space has to be available on drive D: for the storage of the compressed source data. If there is insufficient space available, the transfer is terminated with a message that the process was successful. However, the compiled project file is not transferred completely so that the Runtime starts with the error message "No configuration available. Please initiate transfer".

Before you restart the transfer, check whether drive D: sufficient space is available.

#### Printer driver not found

If Windows XP embedded does not have the required driver, use the provided XP Professional driver CD or CD2. Further information on installation is provided on the CD.

#### Restrictions

The following restrictions apply for the SIMATIC Panel PC 477 / Microbox 420 with Windows XPe:

- The Allen-Bradley DH485 control driver is not authorized.
- The "Microsoft Script Debugger" and the "Microsoft Script Editor" that is supplied with Microsoft Office XP are not authorized and may not be installed.  
Use a standard PC to debug your scripts. Further information on debugging can be found in the online help under "Working with WinCC flexible > System functions and Runtime Scripting > Debugging".
- No logging to the "System" database  
If you want to configure logs on Microbox 420, you may not use the "Database / System" setting, because the SQL server that is required cannot be run together with the activated EWF.

### Enhanced Write Filter (EWF)

Enhanced Write Filter (EWF) can be used to write-protect the system partition, for example in order to increase the lifetime of the CF card. For additional information, refer to the operating instructions.

**Special points for the use of Enhanced Write Filters (EWF)**

- When Enhanced Write Filter is activated
    - Only the unlimited Single License and Floating License function.
    - The Trial licenses do not function.  
If you want to use Trial licenses, you have to deactivate the Enhanced Write Filter.
    - License keys cannot be transferred to the HMI device.  
In order to transfer license keys to the HMI device, proceed as follows:
1. In the Start menu, carry out the "Run..." command. Enter cmd and click the "OK" button. The command prompt opens.
  2. Enter "ewfmgr c: -commitanddisable" at the command prompt. The write protection for C: is switched off and accepts the modified data.
  3. Reboot the system in order to accept the changes.
  4. Transfer the required license keys to the HMI device.
  5. In the Start menu, carry out the "Run..." command. Enter cmd and click the "OK" button.
  6. Enter "ewfmgr c: -enable" at the command prompt. The write protection for C: is switched on.
  7. Reboot the system in order to accept the changes.

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