

SIEMENS

SIMATIC

Process Control System PCS 7 SIMATIC Management Console (V9.1 SP1)

Operating Manual

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Legal information

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 DANGER
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 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.

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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.

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Note the following:

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

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Security information

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

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

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

You can find more information on protective measures in the area of industrial security by visiting:

<https://www.siemens.com/industrialsecurity>.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends performing product updates as soon as they are available and using only 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

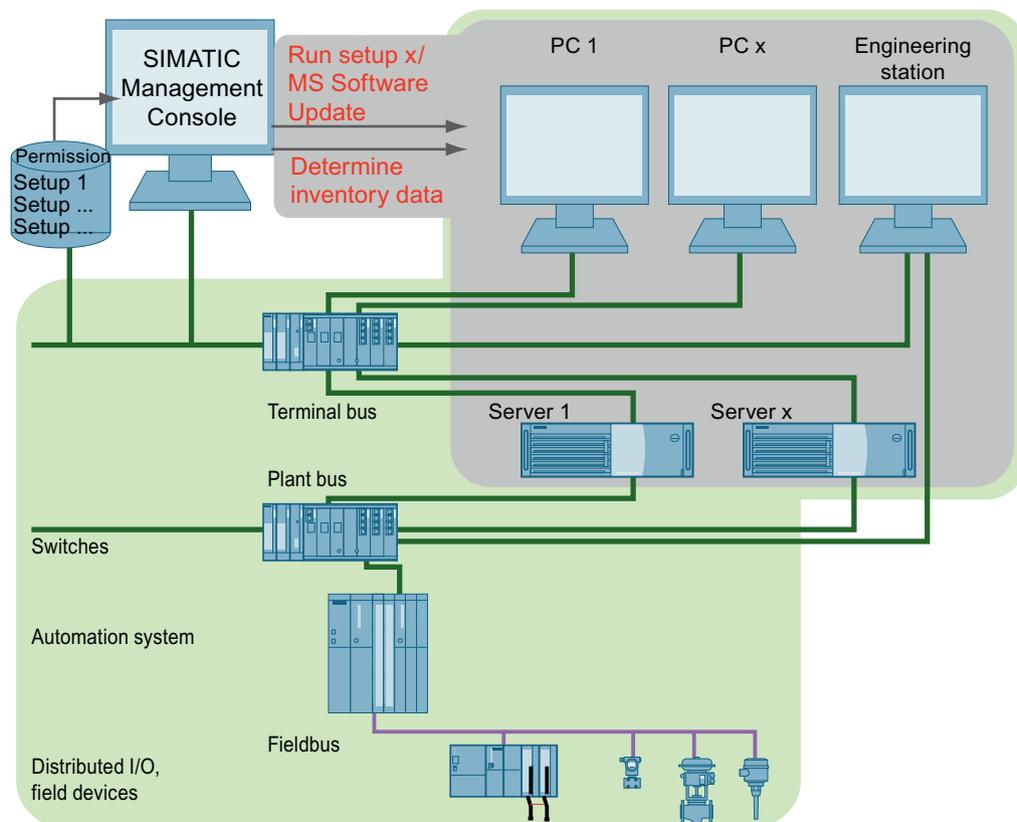
<https://www.siemens.com/industrialsecurity>.

Preface

SIMATIC Management Console

- The PCS 7 SIMATIC Management Console (referred to as Management Console in the rest of the documentation) is a software product from the SIMATIC PCS 7 series.
- The Management Console provides functions for determining inventory data and software administration of the PCS 7 plant.
(Example: In the figure given below, Determine inventory data; Components present in the plant area marked in green)
- Software administration with a central Management Console is more efficient than using a local PCS 7 installation.
(Example: In the figure given below, Run setup x; Components present in the plant area marked in gray)

The Management Console software packages are available in the *Process Control System; SIMATIC PCS 7* software.



Scope of the documentation

This documentation applies to the software package *Process Control System; SIMATIC PCS 7 Management Console V9.1.1*.

Required basic knowledge

- This documentation is intended for personnel working in the fields of commissioning and service.
- Basic knowledge of working with computers and Windows operating systems is required for using the Management Console.
- Knowledge of operating system administration in the relevant network environment is required for setting up permissions.
- Basic knowledge of functions and configurations of SIMATIC PCS 7 is also essential.

Options for accessing PCS 7 documentation

The documentation required for PCS 7 includes the following types:

- **PCS 7 Readme**

The readme file is available in two versions:

- **PCS 7 Readme (Offline)**

This version is installed by PCS 7 Setup. The file only contains general information and links to documents on the Internet.

- **PCS 7 Readme (Online)**

This is the version which contains all the information about the installation and use of PCS 7, in a format that the users are already familiar with. The file is only available on the Internet so that we can keep it up to date.

Note

The information provided in the *PCS 7 Readme (Online)* on the Internet takes precedence over **all** the other PCS 7 documentation. Refer PCS 7 Online Readme (<https://support.industry.siemens.com/cs/ww/en/view/109801032>).

Please read *PCS 7 Readme* carefully; it contains important and supplementary information for PCS 7.

- **PUD Manager**

The "PUD Manager" is an innovative tool to access documentation, comes with PCS 7 software. Some of the highlights are as follows:

- Create your own Manual library.
- Customize the documentation set according to your needs.
- Efficient search algorithm to access your information.

For more information on PUD Manager, refer Process Control System PCS 7; PUD Manager Online Help.

The PUD Manager can also be accessed using the SIMATIC Manager as shown below:

SIMATIC Manager > Help > Introduction

As soon as the user opens the PUD Manager, user can find the documentation stored in a hierarchical way:

PCS 7 System Documentation

- PCS 7 - Documentation Vx.x
- PCS 7 - Operating instructions - OS Process Control Vx.x
- PCS 7 - Installation Manual - PC configuration Vx.x
- PCS 7 - Configuration Manual - Engineering System Vx.x

- PCS 7 - Configuration Manual - Operator Station Vx.x
However, you can extend and update the scope of available user documentation to your needs by downloading the individual zip files provided for the manuals and adding it under the "Pendingupdates" folder.

To integrate or update documents, the user must exit the PUD Manager from the system tray, run the PUD application as an administrator and make all the hidden folders visible.

The downloaded package (Zip file) must be stored in the directory:

ProgramData > Siemens > PUDManager > Public > BaseSnippetsRepository > PendingUpdates

User can download the Zip files from the following link Plant and User Documentation Manager for SIMATIC PCS 7 (<https://support.industry.siemens.com/cs/ww/en/view/109748882>).

PCS 7 Product Documentation

Contains information about special hardware and software components. The individual documents provide detailed information on the specific component.

Full versions of the documentation are available on the "Technical Documentation SIMATIC PCS 7" web pages:

Technical Documentation SIMATIC PCS 7 (<https://support.industry.siemens.com/cs/ww/en/view/109801081>)

Additional information can be found under the product overview *Process Control System PCS 7; PCS 7 - Documentation*; Section "Options for accessing the documentation".

Information for administrators

Users who have only administered Windows operating systems can acquire the necessary PCS 7 knowledge in the PCS 7 documentation. An introduction to the installation and configuration of computers in PCS 7 plants in the *SIMATIC* can be found here; *Process Control System PCS 7; PCS 7 - PC-Configuration* documentation.

Note

Updating the software and the "SIMATIC Management Agent" service

The software update using the Management Console cannot be performed for some software packages of PCS 7. The following software packages can only be distributed as new installations with the SIMATIC Management Console:

- Process Historian
- Information Server
- OpenPCS 7
(Update of the "SIMATIC Management Agent" service is available only for the versions ranging from 8.1 - 9.1.x).
- Web Option for OS
(Web Client or Web Diagnostic Client: Updating the "SIMATIC Management Agent" service is available only for the versions ranging from 8.1 - 9.1.x).
- Safety Matrix
(To upgrade the Safety Matrix of the "SIMATIC Management Agent" service, user must uninstall the existing Safety Matrix in the target station, and install the latest version available manually).

You can find additional information on this in the following sections:

- Section "Downward compatibility with the agents (Page 79)"
 - Section "Update or repair SMAgent (Page 67)"
-

Supported PCS 7 versions

The following table provides information on the supported versions of PCS 7 for the SIMATIC Management Console V9.1.1:

SMMC version	PCS 7 version
SIMATIC Management Console V9.1.1	<ul style="list-style-type: none"> • PCS 7 V8.2.1 • PCS 7 V9.0.1 • PCS 7 V9.0.2 UpdateCollection03 • PCS 7 V9.0.3 • PCS 7 V9.1 • PCS 7 V9.1.1

Changes compared to the previous version

Given below is an overview of the most important changes in the documentation compared to the previous version:

Table 2-1 Overview of the most important changes

Version	Changes
As of V9.1.1	<ul style="list-style-type: none"> <li data-bbox="268 485 1439 676"> <p>• Critical Windows Defender events The SIMATIC Management Console comes with an option to configure automated e-mails that will be sent out, as and when critical Windows Defender events occur in any of the computers present in the network. The feature lets the users choose the outgoing e-mail server, encryption protocol to be used (SSL/TLS), port number through which the secured e-mail transmission should take place, sender information and the list of recipients.</p> <li data-bbox="268 683 1439 774"> <p>• SIMATIC Hardware Compare Users can download the required XML reference file (encrypted) from the internet, and use it to initiate SIMATIC Hardware Compare.</p>
As of V9.1	<ul style="list-style-type: none"> <li data-bbox="268 791 1439 883"> <p>• Microsoft software update The Management Console remotely controls the deployment of Microsoft software updates from WSUS to WUA on each target computer using the SIMATIC Management Agent.</p> <li data-bbox="268 889 1439 1017"> <p>• Windows Defender signature version and events The Management Console displays all the events logged in by the Windows Defender in the Events window. Critical events are displayed in the Alarms window as well. Also, inventory information of Virus protection now covers the Signature version of Windows Defender.</p> <li data-bbox="268 1023 1439 1151"> <p>• Downward compatibility with the Agents The Management Console supports communication with agents of versions 9.0 and above. This avoids the necessity to perform an update of all agents before an updated Management Console can be used with already installed PCS 7 computers of an older version.</p> <li data-bbox="268 1157 1439 1257"> <p>• Software integrity check for PCS 7 The Management Console verifies the integrity of the software to be installed as part of the remote software deployment.</p> <li data-bbox="268 1264 1439 1427"> <p>• Supported Operating system The Management Console V9.1 supports the following operating systems: Windows 10 Enterprise 2019 LTSC Windows Server 2019 Standard edition 64 bit Windows Server 2019 Data Center edition 64 bit (SIVaaS only)</p> <li data-bbox="268 1434 1439 1555"> <p>• SIMATIC Hardware Compare The Management Console can compare the versions of the installed hardware and the corresponding firm-ware with the latest versions available, and generate a detailed MS Excel report that displays the difference in the versions.</p>

Version	Changes
As of V9.0 SP1	<ul style="list-style-type: none"> <li data-bbox="311 276 1477 372">• Web server Settings The Management Console can install or update software on a target computer on which web server is in runtime. <li data-bbox="311 383 1477 478">• Plant Inventory online data The inventory details determined from device data is displayed in a separate column as online data under "Inventory" tab in the Plant view. <li data-bbox="311 489 1477 606">• Export inventory details The inventory details of plant and network objects are exported automatically. The folder location to save the exported inventory details can also be configured in the "Inventory Data Export" tab in the "Settings" dialog. <li data-bbox="311 617 1477 744">• SIMATIC Software compare The Management Console can now compare the versions of installed software with the latest version of software. The Comparison of SIMATIC software excel sheet displays the difference in the version and the product links to download the respective software. <li data-bbox="311 755 1477 819">• Project inventory data export in iBase format The Inventory data exported for a project is generated in iBase format.
As of V9.0 Update 2	<ul style="list-style-type: none"> <li data-bbox="311 829 1477 861">• The online inventory details can be determined for field devices also.
As of V9.0 Update 1	<ul style="list-style-type: none"> <li data-bbox="311 904 1477 968">• The inventory data for I/O modules now includes information about the slot position of the module in the rack.

Version	Changes
As of V9.0	<ul style="list-style-type: none"> • Inventory data for ET200SP HA devices The SIMATIC Management Console gathers additional inventory data for ET200SP HA devices that is available through PROFINET. This includes device information that is not configured or visible in PCS 7 hardware engineering (HW Config). Other devices connected to a PCS 7 system through PROFINET provide additional hardware information which the SIMATIC Management Console is able to display as part of the plant hierarchy and inventory reports. • Include manually entered inventory data for external components in inventory report. • The inventory provides the build number of the installed Windows version. This is due to a change in MS upgrade philosophy starting from Windows 10. Feature updates (former patches) will no longer be reflected in versions but only shown as a difference in the build number. • Additional to the tape the following data on the hard disk will be displayed: <ul style="list-style-type: none"> – Manufacturer – Name – Form factor – Capacity – Driver version – Driver date • The details of the installed third-party software will be extended with: <ul style="list-style-type: none"> – SQL server – Installed version of Microsoft .NET Framework with version number – Microsoft patches with Product name, Publisher, Title, KB and installation date. – Installed security software with manufacturer, product, version (Symantec Endpoint Protection, McAfee Agent, McAfee Endpoint Protection Suite, Trend Micro OfficeScan Corporate Edition V11.0). • The inventory report has been extended to include the following information: <ul style="list-style-type: none"> – Number of Process Objects used in the ES project. This information will be available as part of a new entry "Project" under the ES in the Plant View. • The SIMATIC Management Console can also be started without a license. In this case all the computers can only be assigned to a single group called "Non-licensed computers". The only functions available in this group are Determine Inventory Data, Export Inventory Data and Update SMAgent. • In case SMAgent licenses on the SIMATIC Management Console are not sufficient to assign further computers to user defined groups, computers can still be assigned to the "Non-licensed computers". • Export maintenance data to an XML file using "Project inventory data export..." feature. • System ID (SID) included in the inventory data. • The availability of a target computer is not checked for database functions like "Project inventory data export..." or "Apply Inventory Data Profile" in case data for the target computer is available in the database. • The alarm message system is improved as follows: <ul style="list-style-type: none"> – Dedicated message texts differentiate between online and offline determination of inventory data (plant view).

Version	Changes
As of V8.2	<ul style="list-style-type: none"> • Structure of the plant <ul style="list-style-type: none"> – In a Windows domain, the best security level is possible through Kerberos authentication of the frames between the Management Console and computers with installed SIMATIC Management Agent. – The frames to establish a connection between the Management Console and managed computers with installed SIMATIC Management Agent are protected by a Pre-Shared Key (PSK = shared network key). • Conditions for installation and application of the Management Console The installation and application of the Management Console is released when the following requirements are met on the computers with installed SIMATIC Management Agent (Management Console and managed computers): <ul style="list-style-type: none"> – The operating system has been approved for this PCS 7 version. You can find additional information on this in the <i>Process Control System PCS 7; PCS 7 Readme</i> documentation. – PCS 7 Version at least PCS 7 V8.0 and higher with the latest released service pack • Installation of software PCS 7 V8.0 and higher with the latest released service pack The following software has been released for installation with the Management Console software: PCS 7 V8.0 and higher with the latest released service pack. The functionality of the Management Console cannot be used on computers that are operated with Windows XP or Windows Server 2003. • Rights management The Management Console supports the addition of (domain) user groups in the local user groups. • Setup packages The content of the setup packages is apparent. • You can find a list of all products and PCS 7 components that can be installed using the Management Console in the Industry Online Support under entry ID 107796665: Internet link (http://support.industry.siemens.com/cs/ww/en/view/107796665)
As of V8.1	<ul style="list-style-type: none"> • The operating states on the PC stations are determined and displayed for the following PCS 7 products before the installation of software packages: Operator Station (PCS 7 OS); SIMATIC BATCH; SIMATIC Route Control • Inventory data profiles allow the comparison of actual device configurations with the target device configurations • Ongoing installation procedures are displayed in a list, if the installation procedures were started using the Management Console. • Installation report for PCS 7 plants with installed PCS 7 version as of the DVD PCS 7 V8.0 SP2. Requirement: The installation procedures were started using this Management Console.

Basics

3.1 Functions of the Management Console

Basic functions of the Management Console

The following functions are available without configuration of the Management Console:

- Displaying computers of a network
In a PCS 7 plant, the Management Console can establish a connection to the computers on which the "SIMATIC Management Agent" service is installed. For additional information refer "Installing the Management Console (Page 28)".
- Assigning computers to the Management Console
- Defining groups containing the computers to be managed
- Displaying and exporting alarms
- Displaying and exporting event logs

The following functions of the Management Console require configuration or user selections:

- "Functions for software administration (Page 20)"
These functions support administrative tasks in PCS 7 plants.
- "Functions for determining inventory data (Page 21)"
These functions gather information on objects in PCS 7 plants.

Remote service and remote operation

Note

SIMATIC Management Console and the other computers present in the network can be remotely accessed only to initiate and authenticate the installation of Management Agents in the respective computers. Any other remote operation of the SIMATIC Management Console is not supported.

3.2 Description of the functions

3.2.1 Functions for software administration

The SIMATIC Management Console has the following functions for central administration of software on assigned computers.

- The installed SIMATIC software of a computer can be determined on the SIMATIC Management Console. For additional information refer "Installing SIMATIC software (Page 85)".
- The SIMATIC Management Console uses the functions of the relevant product setup for the installation of SIMATIC software packages. The following installation variants are possible:
 - Installing software packages
 - Updating software packages

Note

Installing and updating the *Process Control System; SIMATIC PCS 7* software package

- Note the following in the section "Preface; Table 2-1 Overview of the most important changes (Page 14)".
 - The SIMATIC Management Console cannot be used to install or update SIMATIC softwares in the computer(s) in which it is currently installed. For instance, the Engineering station software has to be manually installed and updated using the Engineering station software setup in the SIMATIC Management Console computer.
-
- Microsoft software updates can be installed in all the SIMATIC Management Agent computers using the SIMATIC Management Console. For additional information refer Installing and updating software-Overview (Page 80).

Confirming license terms and safety instructions

NOTICE
License terms and security instructions If the license terms and security instructions are accepted when the setup files are created, the terms and instructions must also be provided to all other persons who are also authorized to install setup packages. Recommendation: Copy the contents to a file and notify the authorized persons of the contents.

Example

The following steps are required for the installation of SIMATIC software when using the Management Console.

Example for the installation of OS clients in PCS 7 plants:

- Optional step: Create the "OS client" group
For additional information refer "Assigning computers (Page 62)".
- Save the software in the network (for example, on a local drive or a file server).
Permission for this storage location must be set up for the users of the Management Console.
Additional information on this is available in the section "Managing rights (Page 25)".
- Setup management
Adding software packages using setup management in the Management Console
Additional information can be found in section "Setup management... (Page 145)".
Optional step: Configure setup packages.
Save the required settings for a specific setup (for example, OS client). This configuration can be performed repeatedly without the setup dialog having to be run again.
For additional information refer "Setup packages (Page 83)".
- Select computers (or "OS client" group only) and run installation.
For additional information refer "Installing SIMATIC software (Page 85)".

Executing setup

- The Management Console installs the software packages on assigned computers.
- The Management Console enables the simultaneous installation of SIMATIC software on several computers.

Note

Process mode

Before installing the software on operator control and monitoring stations, we recommend that the user performs the following steps:

- Exit process mode
- Close the projects

If the user does not exit the process mode manually, the system will automatically exit the process mode and close the projects before the software installation begins.

Additional information

- Section "Installing the Management Console (Page 28)"
- Section "Managing rights (Page 25)"

3.2.2 Functions for determining inventory data

The Management Console provides functions for determining inventory data of objects in a PCS 7 plant.

Note

Determine inventory data

The computers of the plant must be at least of the version PCS 7 V8.0.

Note the following in the section "Preface; Table 2-1 Overview of the most important changes (Page 14)".

Objects

Inventory data can come from both objects in the plant (online data) and objects in project data (offline data). Inventory data can be acquired for the following PCS 7 plant objects:

- Computer
- Network components (Ethernet switches)
- Automation system components
- Remote I/Os (including the I/O modules)
- Field devices

Inventory data

Inventory data can include the following information:

- Plant designation (depending on the designation system, e.g., HID / TAG)
- Geographical location (depending on the designation system, e.g., LID)
- Description (user-defined)
- Message (user-defined)
- Device name
- Device type
- Serial number
- Article number (e.g. Siemens: MLFB; order number)
- Hardware version
- Operating system version
- Firmware version
- Windows Defender Signature version
- Installed SIMATIC software
- License information (license keys for SIMATIC software)
- Third-party software installed with PCS 7 software media.

Additional information

- Section ""Inventory data" tab (Page 52)"
- Section "Determining inventory data in the network view (Page 101)"

Installation of the Management Console

4.1 Managing rights

You must set up permissions in order to use the Management Console.

User groups and users

The required user groups are created by the installation of the software. Assign the users to the user groups in line with their roles.

- **SIMATIC Management Administrators**
Members of this group have unrestricted access to and all permissions for the Management Console.
Enter the members of this group in the "Administrators" Windows group on the target computers. This gives the members of this group permission to make changes to the installed software.
- **SIMATIC Management Users**
Members of this group are given restricted access to and "Read only" permission for the Management Console.
Include users that have been assigned to the "SIMATIC Management Administrators" user group on the Management Console computer in the "SIMATIC Management Users" user group as well.
- **Windows logon to the Management Console computer:**
To install the software using the Management Console, the user must log in to the operating system with the login credentials. User with Administration rights need not login to windows. Instead, the user can login directly to the management console.

Note

Changing Windows user management

- Computer has to be restarted if changes were made to the local Windows groups in the Windows user management while operating the Management Console.
 - Always make changes to the user groups for the target system computers as well. Changes to the local Windows groups take effect once the program is restarted.
 - The target system computer has to be restarted if changes were made on the target systems in the "SIMATIC Management Users" group in Windows user management.
-

Assigning users to user groups

Enter users in the following user groups:

- **On all computers in the plant:**
Include all users in the "SIMATIC Management Users" group.
- **On all target computers:**
All members of the SIMATIC Management Administrators group on the Management Console who are to install software should be included in the (Windows) administrator group.
- **On the Management Console computer only:**
All users of the **Management Console** must be members of the following groups:
 - "(Windows) Administrators" group
 - "SIMATIC Management Administrators" group
 - "SIMATIC Management Users" group

Add the users to the necessary user groups. The membership in a user group depends on the functions which the user is to execute.

Function to be executed	Required membership in the user group	
	Required Membership on Management Console	Required Membership in a Target Computer
<ul style="list-style-type: none"> • Installing SIMATIC software • Updating the "SIMATIC Management Agent" on the target computer (remote computer) • Determining inventory data (plant view¹⁾) • Installing Microsoft software updates • Updating SIMATIC software 	<ul style="list-style-type: none"> • (Windows) administrators • SIMATIC Management Administrators 	<ul style="list-style-type: none"> • (Windows) administrators • SIMATIC Management Users
<ul style="list-style-type: none"> • Disable console assignment • Adapting setup management • Event display: Deleting events 		<ul style="list-style-type: none"> • SIMATIC Management Users.
<ul style="list-style-type: none"> • Determining inventory data (network view) • Exporting inventory data • Creating, changing, applying inventory data profile • Creating installation reports • Creating installation reports for Microsoft software updates • Create license report • Exporting reports 		<ul style="list-style-type: none"> • SIMATIC Management Users

¹⁾See note "Determining inventory data in the plant view"

Note

SQL database can only be accessed by a Windows user logged in on the SIMATIC Management Console computer. Also, the user must be a part of the SMMC Management Administrators and/or SMMC Management Users group to be able to access the database.

Note**Determining inventory data in the plant view**

Requirements on the engineering station and Maintenance Station:

- A member of the "**SIMATIC Management Users**" group must be logged onto the engineering station.
This user must be a member of the "SIMATIC NET" group on the engineering station.
 - If inventory data of switches is to be determined online, the following conditions must also be fulfilled:
 - The switches are configured on a Maintenance Station.
 - The user logged onto the engineering station is a member of the "SIMATIC NET" group on the Maintenance Station.
-

Setting up permissions for Management Console users

For the installation of software packages, permissions for the users of the Management Console are to be set up. Set up the permissions for the locations where software packages are stored. These locations include the following:

- Local drives
- Folders on the computer
- Folders in the network
- External drives

Specify the settings on the relevant computer (e.g. file server, management computer, target computer).

Note**Setting up permissions for users**

Ensure that permissions are set up for the following users:

- Users of the Management Console
 - The "SIMATIC Management Users" group on the target computer
-

Note

Recommendation for increased plant safety

The SMB signature is a function of the operating system. With SMB, communication can be signed at the level of the package.

- To increase the security of your plant, "SMB-2 Signing" can be activated.
- Apply this setting according to the specifications of the operating system manufacturer.

Inadequate protection of the SIMATIC Management Console installation can have the result that the SIMATIC Management Console installation and thus the managed documents could be manipulated.

- Make sure that the user logged on to the local computer in Windows does not have administrator rights.
 - Make sure that only the administrator and no other users have write permission for the directory in which SIMATIC Management Console is installed.
-

Application-specific permissions for software

Application-specific permissions for groups and users should always be set up for all computers using Windows media (administration of workgroups or domains).

Additional information

For additional information on permissions and creating users in the online help of the operating system, use keyword "Help and support".

4.2 Installing the Management Console

Management Console in the network

- Always choose to set up one Management Console in a network. As presence of several Management Consoles in a network can lead to inconsistencies.
- If possible, install the Management Console on a computer that is not required for operator control and monitoring purposes. Recommended computers are:
 - Separate PC
 - Engineering station
- The Management Console should **not** be installed on the following computers:
 - Computers with server functions (e.g. servers or single-station systems for OS, BATCH, Route Control, Domain Controller)
 - Computers for acquiring archive data (e.g. Process Historian)

Requirements

The following requirements must be met before using the Management Console:

- **Operating system**

The operating system installed on the computers has been released for SIMATIC PCS 7. For additional information refer : "www.siemens.com/pcs7-documentation (<http://www.siemens.com/pcs7-documentation>)".

- **Permission**

The user must have administrator rights to install the Management Console.

- **Software**

The software to be installed is available from **one** shared storage location (shared network path, for example \\<Computer name>\<Shared name>). More information can be found on the naming conventions and path information in the *PCS 7 Readme - Online* documentation.

Preparation for the use of the Management Console

Install the necessary software as described below:

- On the Management Console computer
- On all computers to be managed (Agent computers)
Information on this is available in the section "Installing SIMATIC Management Agent (Page 31)".

On the Management Console computer

The Management Console computer is the computer from which administrative tasks are to be executed.

Install the software package "SIMATIC Management Console" on the Management Console computer using the PCS 7 setup via "Package installation". The "SIMATIC Management Agent" software is automatically installed as well.

Note

We highly recommend using "Package installation" over "User-defined installation" as the installation type while installing the "SIMATIC Management Console" software package on the Management Console computer.

Updating the Management Console

Please note the following points when updating the software on plant computers:

- Backing up Management Console data. Management Console's configuration with backed up data can be restored.
For additional information refer "Back up data... (Page 131)".
- On the Management Console computers:
Update the software by installing a later version of the "SIMATIC Management Console". The following data is retained:
 - Configuration data
 - Project data
 - Information of the "Event display"
- On all computers to be managed:
Update the "SIMATIC Management Agent" service by means of the Management Console network view.
Information on this is available in the section "Update or repair SMAgent (Page 67)"
- From PCS 7 V9.0, a new group named "Non-licensed computers" is added automatically to the network view. If a group exists with the same name, then the user is asked to rename the group.

Note

To update the SQL server please refer-

Update the SQL Server with SIMATIC Process Historian/ Information Server (<https://support.industry.siemens.com/cs/ww/en/view/109748200>)

Additional information

- Section "Starting the Management Console (Page 39)"
- Section "Managing rights (Page 25)"
- Section "Relocate the Management Console in the network (Page 37)"
- Section "Communication using different subnets (Page 34)"

4.3 Installing SIMATIC Management Agent

Requirements

The following requirements must be met before using the Management Console:

- **Operating system**
The operating system installed on the computers has been released for SIMATIC PCS 7.
For additional information refer - *Process Control System; SIMATIC PCS 7 Readme (online)*
- **Permission**
The user must have administrator rights to install the Management Console.
- **Software**
The software to be installed is available at a shared storage location (shared network path).
For additional information refer - *Process Control System; SIMATIC PCS 7 Readme (online)*

On all computers to be managed in the network (Agent computers)

Note

Domain controller

The "SIMATIC Management Agent" service should not be installed on a domain controller.

You must install the "SIMATIC Management Agent" service on computers to be managed before you can use the Management Console. You have the following installation options:

- Installation using the PCS 7 setup
Requirements: The operating system has been approved for this PCS 7 version of the setup.
- Installation from a data media.

The software package required for installation of the "SIMATIC Management Agent" is available in the following directory: ...\\PCS7_Vxx\\Additional_Products\\SMA__Vx.x

1. To install the "SIMATIC Management Agent" service, run the setup.exe file.
2. Follow the instructions in the subsequent dialogs.

Note

Starting the "SIMATIC Management Agent" service

- If the "SIMATIC Management Agent" service was not explicitly selected in the PCS 7 setup, start the service on the respective computer for access.
 - If the "SIMATIC Management Agent" service was explicitly selected in the PCS 7 setup or re-installed separately, the service is activated on the respective computer.
 - The status of the service does not change if the "SIMATIC Management Agent" service was updated at a later time.
-

Starting/Stopping the "SIMATIC Management Agent" service

1. Right click "Start Task Manager" on the affected computer.
2. Click "Services..." in the "Services" tab.
The "Services" dialog box opens.
3. Select the "SIMATIC Management Agent" entry in the "Name" column in the "Standard" tab.
4. Select the shortcut menu command "Properties".
The "SIMATIC Management Agent Properties" dialog box opens.
5. Select the "Startup type" in the drop-down list.
Options:
 - Automatic (Delayed Start)
 - Disabled
6. Click "Apply".
7. Select the "Service status" to start or stop the "SIMATIC Management Agent".
8. Click "OK".

Uninstallation of the SIMATIC Management Agent

The SIMATIC Management Agent can be uninstalled through the following methods:

- Control panel

Uninstallation of the SIMATIC Management Agent through control panel

1. Open "Control Panel"(Start > Control Panel).
2. Select "Uninstall a program" (Programs > Programs and Features).
3. On the "Uninstall or change a program" dialog, select SIMATIC Management Agent from the installed program list.
4. Click "Uninstall".

The SIMATIC Management Agent is successfully uninstalled.

Installation of the "SIMATIC Management Agent" via a remote desktop connection

For additional information refer- "Installing the SIMATIC Management Agent over remote desktop connection (Page 32)".

4.4 Installing the SIMATIC Management Agent over remote desktop connection

Remote access to the SIMATIC Management Console is generally not approved.

Preparing to install the "SIMATIC Management Agent" service

Prepare for the installation as described in section "Installing the Management Console (Page 28)".

Note

Remote installation

Remote installation of the "SIMATIC Management Agent" service is only permitted if process mode is disabled on the computers on which the service is to be installed.

The software for the installation of the "SIMATIC Management Agent" service is available from **one** shared storage location (shared network path, for example, \\<Computer name>\<Shared name>).

Procedure

The following steps can be carried out as an alternative to local installation of the "SIMATIC Management Agent" service.

1. Set up release for the path at which the software for the installation of the "SIMATIC Management Agent" service is to be run.
2. Open "mstsc" using the search box in the start menu.
The "remote desktop connection" is opened.
3. In the "Computer" input box, enter the computer name or the TCP/IP address of a target computer on which the "SIMATIC Management Agent" is to be installed.
4. Click "Connect".
The remote desktop connection opens.
5. In the "User name" input box, enter the name of the administrator who has administrator rights on the target computer.
6. Enter the password of the administrator in the "Password" input box.
7. Click "OK".
And start working remotely on the target computer in the network.
8. Open Windows Explorer.
9. In the command line, enter in UNC notation the share path on which the software package is located (\\<Computer name>\<Share name>).
10. Navigate to the setup for the "SIMATIC Management Agent":
...\\PCS7_Vxx\Additional_Products\SMA__Vx.x
For example:
\\<Computer name>\<Share name>\PCS7_Vxx\Additional_Products\SMA__Vx.x
11. Run setup.
The "SIMATIC Management Agent" software package is installed.
12. Close the remote desktop connection.
13. Repeat steps 4 to 13 for all other target computers.

4.5 Communication using different subnets

Observe the following information if there is a firewall between the following computers:

- SIMATIC Management Console computer
- Target computer (computer with installed SIMATIC Management Agent)

Communication in the same subnet

If the SIMATIC Management Console computer and the target computers with installed SIMATIC Management Agent are in the same subnet, the PCS 7 Security Controller automatically makes the adjustments required for the local Windows firewall:

- On the SIMATIC Management Console computer during installation of the SIMATIC Management Console.
- On the target computer during installation of the "SIMATIC Management Agent" service.

Communication using different subnets

Note

Network type: Domain or workgroup

The type of network in which the SIMATIC Management Consoles - computers and the computers with installed SIMATIC Management Agent - are located must always be the same.

If the computers are located in different subnets, the communication settings of the local Windows firewall and any existing external firewall are to be adjusted, if installed.

Configuration of the local Windows firewall

As standard, the local Windows firewall of a computer only enables the local subnet as authorized area.

Change the "SIMATIC Management Agent" (SMAgent_32.exe) service for the computers in the local firewall:

1. Open the settings of the Windows firewall.
2. Select the advanced settings.
3. Select "Inbound Rules" in the tree structure.
4. Select the "SIMATIC Management Agent" program and open the properties from the shortcut menu.
5. Open the "Scope" tab.
6. In the "Remote IP Address" area, enable the setting "These IP addresses".
7. Enter the required subnet areas or fixed IP addresses.

Configuration of the external firewall

Make the following changes if both these statements apply:

- The computers are located in different subnets.
- The communication between the SIMATIC Management Console computer and the target computer with installed SIMATIC Management Agent is protected by an external firewall.

When using an external firewall, add exceptions for the subnets in the settings of this firewall. Add the following TCP and UDP ports:

- 7911
- 7912

If an external firewall or router which is used closes inactive connections then, ensure that the update cycle time in SMMC is less than the timeout of the device to close inactive connections.

Note

Automatic detection of computers is limited to the particular subnet in order to limit the network load. Therefore, the computers that are not a part of the subnet must be manually assigned to the SIMATIC Management Console by right-clicking on "Network" and choosing the "Add computer" option.

Additional information

For additional information on the documentation *Process Control System PCS 7; PCS 7 - PC Configuration*.

- Access to PC stations outside a subnet
- Using encrypted communication

4.6 Licensing

The SIMATIC Management Console is a product of PCS 7 that requires a license. SIMATIC software checks the license for software use based on license keys. These license keys are the technical representatives of the license.

License keys for use of the Management Console

The unrestricted use of the complete SMMC functionality requires the following licenses:

License Key	No of Licenses	Remark
Management Console	Per Management Console	Version specific license.
SIMATIC Management Agent	1 per managed computer	Version independent.

Using Management Console without SMMC License

During SIMATIC Management Console startup, the user is prompted to accept all previously assigned computers (if applicable) to be moved to "Non-licensed computers" group or to cancel the start of SIMATIC Management Console in order to install the required license.

Using Management Console with insufficient SMA Licenses

- The number of installed SMA licenses is lower than the number of computers assigned to user defined groups.
- During SIMATIC Management Console startup, the user is prompted to select assigned computers (if applicable) to be moved to "Non-licensed computers" group or to cancel the start of SIMATIC Management Console.

Using Management Console with Non-licensed computers

Computers in "Non-licensed computers" group can be specified as Engineering Station in order to select a project for inventory.

Under the "Non-licensed computers" node, the functions available for the computers are as follows:

Network View	Plant View
Determine Inventory Data, Export Inventory Data, and Update SMA agent	Determine Inventory Data, Export Inventory Data, Project Inventory Data Export.

Using Management Console with PCS 7 Trial License

With the installation of the Management Console, a license key for the demo mode is automatically available.

- Duration: 14 days
- The size of the plant is limited to 10 Agent computers.

Additional information

- Information on the number of used license keys is available in the section ""License keys" tab (Page 52)".
- For additional information on licenses and license-dependent quantity structures of PCS 7 in the documentation *Process Control System PCS 7; Licenses and Quantity Structures*.
- For additional information on the provision of license keys in the plant in the documentation *SIMATIC; Automation License Manager*.
- Information on licensing models can be requested from Siemens contact person.
- When the SMA license key is not sufficient for all the assigned computers, a dialog is displayed, where computers can be deselected to move from the network to the "Non-licensed computers" folder.
- When SIMATIC Management Console license is not available or the trial license is no longer valid, a dialog is displayed, where SIMATIC Management console can be opened with all the assigned computers in the "Non-licensed computers" folder or cancel the opening process from SIMATIC Management Console.

4.7 Relocate the Management Console in the network

Activate a new Management Console in the network

Note

Only one Management Console is permitted in the network

In a network, try to install only one Management Console. That way, computers that are to be managed only report the information to a single Management Console computer.

Back up of the Management Console data can be saved in the database, and can be restored whenever required.

To activate the Management Console on another computer (Referred as "Console2"), the following scenarios apply:

- Computer "**CONSOLE1**" is **available** in the network:
 - Back up the Management Console data from "CONSOLE1" computer. Refer section "Back up data... (Page 131)".
 - Cancel the console assignment between the managed computers and "CONSOLE1" so that "CONSOLE2" can take over. Refer section "Disable console assignment (Page 133)".
 - Uninstall the Management Console on the computer "CONSOLE1".
- "**CONSOLE1**" computer is **not available** in the network, computer "**CONSOLE2**" is **operational**.
Select between either of the following actions:
 - Use the function "Recover database" on the computer "CONSOLE2" to back up the data of the Management Console of computer "CONSOLE1".
 - Reconfigure the Management Console data.

4.8 Removing the Management Console

Depending on the purpose, different software packages are installed on the computers for using the Management Console functions.

- The following software packages are installed on a computer with Management Console:
 - The Management Console
 - The "SIMATIC Management Agent"
- Only "SIMATIC Management Agent" is installed on a computer without Management Console.

Uninstall the following while executing the removal through the "Programs and Functions" software management:

- SIMATIC Management Console
- SIMATIC Management Agent

Note

- Uninstalling the SIMATIC Management Agent is only possible through MS Windows functions, which are available in the SEBU_SMA installation software (PCS 7 additional products.)
 - Uninstalling the software is necessary to convert the Management Console computer into a managed computer.
 - To convert the Management Console into a managed computer (Agent computer), the actual Management Console is to be uninstalled using "Programs and features". Which will stop the SIMATIC Management Agent services temporarily. The SIMATIC Management Agent services are to be manually restarted through services.msc in the Agent computer, so that it can be assigned to the new Management Console.
-

Operator control

5.1 Starting the Management Console

SIMATIC Management Console can be found in the Windows Start menu.
Use the search box in the start menu to open: **SIMATIC Management Console**.

Remote service and remote operation

Users can neither operate nor execute functions of the Management Console over a remote connection.

Logon

Authenticate with "user name" and "password" before working with the Management Console.

Enter the pre-shared key for the first application of the Management Console.

The pre-shared key should be changed at regular intervals. To do this, select the menu command **Options > Set pre-shared key... .**

For additional information refer "Connecting (Page 71)".

Note

- The user must be a member of the local "SIMATIC Management Users" group.
 - While logging in, always use the credentials associated with the environment in which the Management Console is installed. In most cases, the environment would be "Domain". So, the computer would be connected to the domain, and identification methods of domain will be used to authenticate the account. In that case, use a Windows credential that is a member of the domain to log into the application.
 - If in case, the environment of the computer in which the Management Console is installed has to be switched from Workgroup to Domain or vice-versa-
 - Make sure to manually add all the users associated with the Management Console to the "SIMATIC Management Users" and "SIMATIC Administrators" group for that particular environment.
If not, the users won't be able to access the SIMATIC Management Console database and therefore can't log in.
 - Once done, restart the machine for the privileges to take effect.
-

Switching language in menus and dialog boxes

Select the menu command **Options > Language... .**

Assigning computers with the Management Console

After starting the SIMATIC Management Console for the first time, assign at least one computer to the Management Console:

To do so, drag a computer from the "Non-assigned computers" folder and drop it into the "Network" folder in the network view.

Note

Representation of the computer with the Management Console in network view

- Management Console is active, only when the first computer is connected to the network.
- When at least one computer has been assigned to the Management Console, the computer in which the Management Console is installed gets highlighted in **bold**.

If in case the authentication fails, and a connection could not be established with the required computer, check-

- The correctness of the credentials entered.
- If the system clocks of the Management Console and the selected computer are synchronized. Make sure that the time difference between the two systems are not more than 4 minutes.

Additional information

- Section "Assigning computers (Page 62)"
- Section "Managing rights (Page 25)"
- Section "Language... (Page 139)"

5.2 Layout of the user interface

Layout of the main window of the Management Console	
• Title of the dialog box SIMATIC Management Console - <Name of the local computer>	
• Menu bar	
• Toolbar	
• Project views (Network view / Plant view) This area displays a structure with groups and computers on the left side of the dialog box.	• Details area This area displays information on the object selected in the project view.
	• "Messages" area This area displays messages concerning actions and objects.
• Status bar	

Display

The plant objects are displayed in the project view on the left side of the Management Console dialog box. The width of this area can be changed. Use the tabs to select how the plant objects are displayed:

- Network view (Page 44): The network view shows the computers of the network in a tree structure defined by the user.
Select the network view to perform the following with the Management Console:
 - Determine the inventory data of computers
 - Install software on target computers (remote installation)
- Plant view (Page 49): The plant view shows the objects of the PCS 7 projects in a tree structure.
 - Select the plant view to use the Management Console to determine the inventory data of PCS 7 plants.

The right side of the dialog box contains the details area and "Messages" area.

- In the details area, select which information is to be displayed from the tabs. The information displayed depends on the following conditions:
 - The object selected in the project view
 - The menu command (menu line, toolbar, shortcut menu)

Note

View when you reopen the Management Console

The Management Console always starts in the network view.

Details area and "Messages" area

The following tabs are available following installation of the Management Console:

- Tabs in details area

Network view	Plant view
<ul style="list-style-type: none"> • "Installed SIMATIC software" tab (Page 51) • "Inventory data" tab (Page 52) • "License keys" tab (Page 52) • "Device status" tab (Page 53) 	<ul style="list-style-type: none"> • "Inventory data" tab (Page 52)

- Alarm list (Page 59)

Adjusting areas

- The size of the two areas can be changed in inverse ratio to one another. When one area is maximized, the other one is hidden.
- The header indicates which area is shown.

Sorting in tables

It is possible to sort the content of some tables of the Management Console.

- When this is possible, a small triangle symbol appears when clicked in the header of the table (see "Computer name" column in the "Messages" area of the "Main window").
- To change the sort order, click the header of the column selected for sorting.

Status bar

The status bar includes information on the actions and the current user. Detailed information is available in the section "Status bar (Page 57)".

Additional information

Section ""Event display" dialog box (Page 60)"

5.2.1 Title bar

The following is displayed in the title bar:

- The product name
- The name of the computer on which the Management Console is installed.

5.2.2 Menu bar

Layout

Given below is an overview of the Management Console menus.

Menu	Submenu
File	<ul style="list-style-type: none">• Back up data... (Page 131)• Restore data... (Page 132)• Exit (Page 132)
Edit	<ul style="list-style-type: none">• Create group (Page 133)• Delete group (Page 133)• Disable console assignment (Page 133)• Update network view (Page 134)
View	<ul style="list-style-type: none">• Network view (Page 135)• Plant view (Page 136)• Event display... (Page 137)• Running installations... (Page 137)• SMAgent license display... (Page 138)

Menu	Submenu
Options	<ul style="list-style-type: none"> • Language... (Page 139) • Set pre-shared key... (Page 139) • Settings... (Page 140) • Setup management... (Page 145) • Project inventory data export... (Page 148) • External components... (Page 148) • Inventory data profile wizard... (Page 149) • Create license report... (Page 150)
? (Help)	<ul style="list-style-type: none"> • Available plug-ins... (Page 151) ¹⁾ • Help (Page 151) • Info... (Page 151)

¹⁾ The plug-ins supplied with the Management Console cannot be installed or removed separately.

5.2.3 Toolbar

The toolbar is located below the menu bar. By clicking on a button, the menu command can be invoked without having to open a menu.

Toolbar



Symbols

Meaning of the symbols:

Symbols	Menu command
	Update network view (Page 134)
	Create group (Page 133)
	Delete group (Page 133)
	Inventory data profile wizard... (Page 149)
	Apply inventory data profile... (Page 119)
	Create installation report... (Page 94)
	Determine inventory data <ul style="list-style-type: none"> • Determining inventory data in the network view (Page 101) • Determining inventory data in the plant view (Page 106)

Symbols	Menu command
	Exporting inventory data <ul style="list-style-type: none">Exporting inventory data in the network view (Page 102)Exporting inventory data in the plant view (Page 111)
	Installing SIMATIC software (Page 85)

5.2.4 Project view

5.2.4.1 Network view

Select the network view to perform the following with Management Console:

- Determine the inventory data of computers
- Install SIMATIC software on target computers (remote installation)
- Install Microsoft software updates on target computers (remote installation)

Note

Following installation of the Management Console

The following objects are displayed in the network view following installation of the Management Console:

- "Network" node
 - "Non-licensed Computers" (computer which has no SMAgent license)
 - "Non-assigned Computers" group (includes newly discovered computers in the same subnet with installed and activated SIMATIC Management Agent service)
 - Name of the computer with the local Management Console.
-

Preparing the network view

To be able to use the functions of the Management Console, add the computers of the network to the Management Console. For additional information refer:

- Section "Create group (Page 66)"
- Section "Assigning computers (Page 62)"
- Section "Adding computers (Page 63)"

Objects in the network view

The network view shows the computers of the network in a tree structure defined by the user.

The following computers are displayed in the network view when the Management Console opens:

- Computers with an activated SIMATIC Management Agent are detected automatically.
- Computers that have already been assigned to the Management Console. The computers are shown regardless of their availability.

Object	Meaning
Non-assigned computers ¹⁾	The computer has been recognized by the Management Console. Note: To be able to use the functions of the Management Console, assign the computer to the Management Console.
Non-licensed computers	The following functions are used in this node: <ul style="list-style-type: none"> • SMAgent Update • Determine inventory data • Export inventory data
Assigned computers ¹⁾	The computer has been assigned to the Management Console. Options: <ul style="list-style-type: none"> • The computer communicates with the Management Console. • The computer does not communicate with the Management Console. Examples of such computers are: <ul style="list-style-type: none"> – Computers which are switched off. – Computers which have been excluded from the analysis for servicing purposes. – Different pre-shared key between Management Console and computers with installed SIMATIC Management Agent Additional information is available in the section "How to change the pre-shared key on a computer at a later time (Page 74)".
Groups with computers ¹⁾	Every user of the Management Console can create groups and move computers within the Management Console.

¹⁾ See symbols in the network view

Symbols in the network view

An symbol indicates the current status of a computer. For additional information refer "Symbols in the network view (Page 46)".

Updating the view

For an up-to-date display of the computers connected to the Management Console, select the menu command **Edit > Update network view** (F5).

Information is displayed in the tabs in the details area when clicked on a SIMATIC PC station.

Note

For all other objects, no data is displayed (network nodes, groups, non-assigned or non-accessible computers).

Additional information

- Section "Starting the Management Console (Page 39)"
- Section "Create group (Page 66)"
- Section "Network view (Page 135)"

5.2.4.2 Symbols in the network view

Table 5-1 Symbols for the type

Icon	Meaning
	Network folder Computers located directly in the network folder are assigned to the local Management Console.
	Group
	Computer

Table 5-2 Symbols for the status of groups

Icon	Status	Meaning
	Plant-specific group	This group contains the computers which are assigned to this group on the local Management Console.
	Non-assigned computers	This group contains the computers which are not assigned to the local Management Console.
	Action "running"	Actions have been started for at least one computer in this group. At least one action has not yet been completed.
	Action "successful"	Actions started for the computers in this group have been completed successfully.
	Action "faulty"	Actions have been started for at least one computer in this group. At least one error was detected during execution. <ul style="list-style-type: none"> • Open the group folder and check the messages for computers with action errors. • For additional information, see symbol for "Action faulty" computer'.

Table 5-3 Symbols for the status of computers

Icon	Status	Meaning
	Not assigned	<p>The computer has been recognized by the Management Console or the pre-shared key on the assigned computer differs from the pre-shared key of the local Management Console.</p> <ul style="list-style-type: none"> To be able to use the functions of the Management Console, you must assign the computer to the Management Console. <p>Causes</p> <p>Computers are marked with the "Not assigned" symbol in the following cases:</p> <ul style="list-style-type: none"> After the user logs on: <ul style="list-style-type: none"> The computers are not assigned to any Management Console. The authentication between the Management Console and the target computer has failed. For additional information refer "Managing rights (Page 25)". After updating the view: <ul style="list-style-type: none"> The computers are not assigned to any Management Console. The computers are already assigned to another Management Console.
	Assigned	The computer is assigned to the local Management Console and is available.
	Check	The Computer is being checked.

Icon	Status	Meaning
	Not available	<p>Causes:</p> <ul style="list-style-type: none"> The computer is switched off or rebooting The SIMATIC Management Agent service is not active/disabled in the target computer <p>Actions to be taken:</p> <ul style="list-style-type: none"> The users can wait or try to reset the status of the target computer The users can check the status of the SIMATIC Management Agent service in the computer and take necessary action <p>Other Causes:</p> <p>The computer is assigned to the local Management Console but is not available. This may be the case when the target computer and the SIMATIC Management Console are a part of the same domain but are in different subnets.</p> <ul style="list-style-type: none"> The Management Console communicates with the target computers using the connection details that are stored internally during the initial network assignment. So, when the connection data of a target computer is modified (Assigned with a different IP address or to a different subnet), the SIMATIC Management Console cannot access the target computer. To update the connection details of a target computer: <ul style="list-style-type: none"> Remove the target computer from the network Update the network view Add the computer back to the network
	Action "running"	Actions have been started for this computer. At least one action has not yet been completed.
	Action "successful"	Actions started for this computer have been completed successfully.
	Action "running" - error detected	<p>Actions have been started for this computer. At least one error was detected during execution.</p> <ul style="list-style-type: none"> Check the messages for computers with action errors.
	Action "completed" - error detected	<p>All actions are finished for this computer. At least one error was detected during execution.</p> <ul style="list-style-type: none"> Check the messages for computers with action errors.
	Version mismatch with compatibility	The master Management Agent and the client Management Agent are of different versions, yet they are compatible. Management Console will be able to communicate with the target computer, but only for limited functionalities.
	Version mismatch without compatibility	<p>The computer is outdated, it must be updated to facilitate communication between the computer and the Management Console.</p> <p>Refer "Updating the SMAgent" for more information.</p>

Table 5-4 Symbols for readiness of computers for installation

Icon	Status	Meaning
	Status unknown	The status of the computer has not been determined yet.
	Ready for installation	The computer is ready for installation.
	Not ready for installation	The computer is not ready for installation. For additional information refer "Computer is not ready for installation (Page 127)"

5.2.4.3 Plant view

Select the plant view to use the Management Console to determine the inventory data of PCS 7 plants.

Note

Following installation of the Management Console

The plant view only shows the "Plants" node.

Preparing the plant view

The following steps must be taken to display information about objects of the PCS 7 plants in the plant view:

1. Add the engineering stations to the Management Console.
For additional information refer "Settings... (Page 140)".
2. The PCS 7 projects of the plants are available.
For additional information refer "Dialog box "Add plant (2/2) - Select projects" (Page 105)".

Plant view objects

When you select an object within a project in the plant view, information on the selected object is displayed in the "Inventory data" tab.

Object (examples)	Nested objects (examples)
SIMATIC station (automation system)	CPU
	Communications processors
	Modules of the central and distributed I/O
Switches	Modules
Field devices	
External components	Customer components Example: Printer, Displays, Switches.

Symbols in the plant view

A symbol indicates the current status of the objects in the plant view. For additional information refer "Symbols in the plant view (Page 50)".

Updating the view

Determine the inventory data in the plant view again.

Additional information

- Section "Starting the Management Console (Page 39)"
- Section "Plant view (Page 136)"

5.2.4.4 Symbols in the plant view

Table 5-5 Symbols for the type

Icon	Meaning
	Attachment folder
	Multiproject in the plant view
	Project in the plant view
	Rack
	SIMATIC station
	SIMATIC H station
	I/O module, power supply, CP, CPU, etc. Components added in the hardware configuration (e.g. WinCC application, etc.)
	Field device
	PC station / Automation system
	Network switch
	External components

5.2.5 Details areas in the network view

5.2.5.1 "Details area" overview in the network view

Information in the details area

The details area displays information on an object selected in the project view. This central area shows context-sensitive information.

Updating the display

The following objects can be updated in the network view:

- Network folder
- Non-licensed computers
- Groups
- Individual computers

Tabs in details area

In the details area, you will see the following tabs:

- "Installed SIMATIC software" tab (Page 51)
- "Inventory data" tab (Page 52)
- "License keys" tab (Page 52)
- "Device status" tab (Page 53)

5.2.5.2 "Installed SIMATIC software" tab

Display of information of a selected computer.

On the **"Installed SIMATIC software"** tab, software details, software packages and software installed on the computer are displayed.

The software details of the product are displayed at the beginning of the table. Software details such as Product Name, Version, Release Version, Technical Version and Installation Date are displayed. The software details are displayed in bold.

Only the name and Installation date of the installed software packages are displayed. This information is also displayed in bold.

The software installed from the software package are also displayed in the table. The installed software details such as Version, Release Version, Technical Version, and Installation Date are also displayed.

Note

Only the installation date of the software package is displayed and not the version details of the software package.

The installation date of the software package is not modified due to the installation of an update for the software package.

The column "Latest version" is displayed on the "Installed SIMATIC software" tab only when the software versions are compared through "Compare SIMATIC software versions..." option. This column lists the latest version of the installed software and the values in the "Latest version" column is displayed only when there is a difference between the installed version and latest version of the software.

5.2 Layout of the user interface

If the software version is different from the version specified in the version definition file (XML), then the installed software details are displayed in red. If the software version is same as the version in the XML file, then the installed software details are displayed in black.

If SIMATIC software version comparison is applied for a network, group or a computer, the status of the computer is displayed as "Comparison of SIMATIC software versions:<applied date and time>" at the top of the tab.

If inventory details are determined for the network, the status is changed to "Inventory determined: <date and time>" and the "Latest version" column is not displayed.

For more information on the SIMATIC software version comparison feature see, Comparing SIMATIC software versions (Page 121).

Procedure

You can find additional information about this in the section "Determining inventory data in the network view (Page 101)".

5.2.5.3 "Inventory data" tab

The "Inventory data" tab displays information on an object selected in the project view. In the network view, the inventory data of a computer that has been assigned to the Management Console are determined. Inventory data of a computer includes extensive details about - hardware, software, Operating system and much more.

Procedure

For additional information refer "Inventory data in the network view (Page 101)".

5.2.5.4 "License keys" tab

The license keys found on computers using the "Determine inventory data" function can be displayed in this tab.

Note

Detailed information on license keys

Detailed information on license keys can be obtained with the Automation License Manager.

The "Status" column only shows the following information for the respective license key:

- Installed
- Used

Details of the other columns can be found in the description for the Automation License Manager.

Procedure

For additional information refer "Determining inventory data in the network view (Page 101)".

5.2.5.5 "Device status" tab

The "Device status" tab shows the status information and operating modes of the selected computer in the network view.

Requirements

- The computer is connected to the Management Console.
- The network view is opened, and a computer is selected.

Procedure

1. For additional information refer "Determining inventory data in the network view (Page 101)".

Note

Update time

The information in the "Device status" tab is updated after the following events:

- After a computer in the network view is selected for the first time (change to another PC or back)
- Automatically after expiration of the update time for devices (see paragraph "Setting the update")

Setting the update

- The device status is automatically updated in the SIMATIC Management Console.
 - Specify the cycle time for updating in the menu Options > Settings > "Update device status" tab (Page 140).
-

Result

- Up-to-date information for available computers is shown in the details area.
- The latest status information is displayed for the selected computer in the "Device status" tab.

Status information

The status information contains computer-specific properties:

- **Connection status**
Shows the status of the connection to the Management Console:
 - Connected
 - Physically available
 - Not available
- **Action**
Shows the status of the current action or the last action executed.
Examples:
 - SIMATIC software installation running without errors since <date, time>
 - SIMATIC software installation completed without errors <date, time>
- **Agent Version**
Shows the version of the "SIMATIC Management Agent" service installed on the computer.
- **Role**
Displays the configurations of the PC stations based on the installed software packages.
Examples:
 - OS server
 - OS client/engineering station

For additional information refer the *Process Control System PCS 7; PCS 7 - PC Configuration* documentation.

- **Operating mode (WinCC)**
Displays the determined operating mode of WinCC for the computer. Options:

Operating mode	Information on the product
---	Product is not installed or no project is open.
Active	Process mode active
Inactive	No process mode
State change	Product is installed, the operating mode is currently being changed.
Not initialized	Product is installed but the role has not yet been initialized.
Unknown	Product is installed but the role could not be determined.

- **Autostart (WinCC)**
Displays the determined AutoStart configuration of WinCC and the activated project for the computer. Options:

AutoStart	Information on the project
Active	The path and name of the activated project are shown.
Not active	AutoStart is not activated.

- **Operating mode (BATCH)**

Shows the determined operating mode of SIMATIC BATCH for the computer. Options:

Operating mode	Information on the product
---	Product is not installed or no project is open.
Active	Process mode active
Inactive	No process mode
State change	Product is installed, the operating mode is currently being changed.
Inactive, ready to install	Product is installed but the role has not yet been initialized.
Unknown	Product is installed but the role could not be determined.

- **AutoStart (BATCH)**

Displays the determined AutoStart configuration of SIMATIC BATCH and the activated project for the computer. Options:

AutoStart	Information on the project
Active	AutoStart is activated.
---	AutoStart is not activated.

- **Operating mode (Route Control)**

Displays the determined operating mode of SIMATIC Route Control for the computer. Options:

Operating mode	Information on the product
---	Product is not installed or no project is open.
Active	Process mode active
Inactive	No process mode
State change	Product is installed, the operating mode is currently being changed.
Inactive, ready to install	Product is installed but the role has not yet been initialized.
Unknown	Product is installed but the role could not be determined.

- **Autostart (Route Control)**

Displays the determined AutoStart configuration of SIMATIC Route Control and the activated project for the computer. Options:

AutoStart	Information on the project
Active	AutoStart is activated.
---	AutoStart is not activated.

- **Redundancy status**

Displays the determined redundancy status for the computer. Options:

Redundancy status	Information on the redundancy status
Not initialized	Product is installed but the role has not yet been initialized.
Master (redundant partner <computer name>)	The computer is the master of the redundant computer pair. The redundant partner <computer name> is available.
Standby (redundant partner <computer name>)	The computer is ready for operation. The computer can take over the tasks of the redundant computer <computer name>.
Error	Redundancy faulty. Correct the fault.
---	Redundancy is not available for the role of the computer (e.g. ES is not installed/enabled)

5.2.6 Details area in the plant view

5.2.6.1 "Details area" overview in the plant view

Information in the details area

The details area displays information on an object selected in the project view. This central area shows context-sensitive information.

Updating the display

In the plant view, information of the object can be updated using the "Determine inventory data" shortcut menu. The information is shown only in the "Inventory data" tab.

Tabs in details area

In the details area, following tabs are available:

- "Inventory data" tab (Page 56)

5.2.6.2 "Inventory data" tab

The "Inventory Data" tab displays inventory data of the object (project / multiproject) selected in the plant view.

In the plant view, the inventory data of the object selected in the tree structure is determined.

The determined plant inventory details of the selected component are displayed in this tab. On the "Inventory Data" tab, selected object and its configured devices can be viewed in the tree view. Also, the inventory details of other plant such as property of the device, value (offline), and value (online) are displayed.

The inventory data determined from configuration data on the engineering machine is displayed in the Value (offline) column and the inventory data determined from device is displayed in the Value (online) column.

When the configuration data (offline) is determined it overwrites the existing plant inventory details and the Management Console displays only the latest value (offline) details. When the device data (online) is determined, both Value (offline) and Value (online) details are displayed.

Note

If connection to the Automation system device is not available, then the determined device data (online) displays only offline values.

Procedure

You can find additional information about this in the section "Inventory data in the plant view (Page 104)".

5.2.7 Status bar

The status bar is the lowest bar in the dialog box of the Management Console.

Layout

Given below is an overview of the elements in the status bar:

Cell	Information	Notes
1st cell	Information about menu functions	When you move the mouse pointer over one of the following objects, information about the menu function is displayed: <ul style="list-style-type: none"> • Menu commands • Icons in the toolbar
2nd cell	Information on the plant view	Currently running action
3rd cell		A bar shows the progress of an ongoing action.
4th cell	Information on network view (only for "Update network view")	Information on updating the network view
5th cell		A bar shows the progress of the network view update.
6th cell	Logged-on user	Shows the Windows user logged on to the Management Console.

5.2.8 Messages and events

Alarm lists

Information about all the Management Console objects are displayed in lists.

Default setting:

New entries are added in the first row and scrolling is automatic.

The lists are available at the following locations:

- In the details area: "Alarm list (Page 59)"
This information is deleted when the following actions are performed:
 - The Management Console is closed.
 - The Console GUI language is switched.

Information for the following objects is only displayed in the "Messages" tab:

- Unavailable PC stations
- In the ""Event display" dialog box (Page 60)"
This information is saved and retained even when the Management Console is closed

Note

While exporting Alarm/Event list to Microsoft Excel, the "Seconds" information is not visible in the "Date/Time" column in some cases.

Causes:

Cell property of the column "Date/Time" is set to Custom (hh:mm format).

Configuring columns

- Sorting a column:
Left-click on the header of the relevant column to sort in ascending or descending order.
- Hiding and showing a column:
 - Right-click on the relevant table header
 - In the shortcut menu, select which columns are shown and hidden.
 - To change the display, click on the corresponding menu entry.

5.2.8.1 Alarm list

Alarms

Alarm messages for all the objects of the Management Console are displayed. These messages are deleted in the following cases:

- The Management Console is closed.
- The user interface language is switched (menu: "Options > Language...").

Entries in the "Alarms" tab

A message consists of the following data:

- Date/time
- Computer name
- Description of the event which has occurred.

Export

The information displayed in the message list can be exported to a CSV file.

1. Select the shortcut menu command **Export...** in the message list.
2. In the "Save as" dialog window, enter the name of the export file and select the path where the export file should be stored.
 - "Save" button:
The information is exported.
 - "Cancel" button:
The information is not exported.

The CSV file can be processed further (e.g. in Microsoft Excel).

Delete

Information displayed in the message list can be deleted.

Select the shortcut menu command **Delete all** in the message list.

Autoscroll

New messages are automatically displayed in the message list if the default setting for "Autoscroll" in the Management Console is not changed.

To change this setting, select the shortcut menu command "Autoscroll" in the message list.

- Select the check box on the menu command which means Autoscroll is activated.
- Clear the check box on the menu command which means Autoscroll is deactivated.

Showing message information

If a message information is not completely displayed in the message list, use the shortcut menu command **Display message information text** to open a window in which the complete message is displayed.

5.2.8.2 "Event display" dialog box

The event display logs information on operator actions and changes in the Management Console. The event display is shown in a separate dialog box.

Calling the event display

To do this, select the menu command **View > Event display...** .

The event display shows information on the following:

- Logons and logouts from the Management Console
- Failed login attempts
- Available computers that are assigned to the Management Console

Note

Display for non-assigned and unavailable computers

- "Computer not accessible" event
For unavailable computers.
 - No event display
For non-assigned computers.
-

Entries in the event display

An entry consists of the following data:

- User name
- Date/time
- Event (short description)
- Description of the event which has occurred.
- Computer name
- Type: Alarm, warning, information

Log

The following events are logged in the event display:

- Activation of the computer role "SIMATIC Management Console"
- Assign / cancel assignment of computers to the Management Console
- User logons to the Management Console
- All the events logged by Windows Defender

- Feedback on installations
 - Performed actions/functions
 - Faulty actions/functions
- Activation of Demo mode

Note

Critical events logged in by Windows Defender are displayed in the "Alarms" window as well.

Export

The information shown in the event display can be exported to a CSV file.

1. Click "Export..." in the event display.
2. In the "Save as" dialog window, enter the name of the export file and select the path where the export file should be stored.
 - "Save" button:
The information is exported.
 - "Cancel" button:
The information is not exported.

The CSV file can be processed further (e.g. in Microsoft Excel).

Delete

The information shown in the event display can only be deleted by users with administrative rights.

- "Delete all" button:
All entries in the event display are deleted.

5.3 Configuring the Management Console

5.3.1 Assigning computers

Once the Management Console has been started, computers on which the "SIMATIC Management Agent" is activated attempt to establish communication with the Management Console.

- If communication is successfully established, the computers then appear in the Management Console tree structure.
Display:
"Non-assigned computers" folder in the network view.
- Computers which have already been assigned to the Management Console always appear in the Management Console tree structure.
Display:
Under the "Network" folder or groups, groups can be created.
Under the "Non-licensed computers" folder.

Requirements

- The user is logged on as the administrator of the Management Console (see section "Managing rights (Page 25)").
- Group the computers to ensure that administration tasks in networks can be executed efficiently. For additional information refer:
 - Section "Create group (Page 66)"
 - Section "Delete group (Page 133)"

Assigning computers (establishing identification)

1. Select the "Non-assigned computers" group in the network view.
2. Select a computer.
3. Select the **Assign computer** command in the shortcut menu.
4. Select the <Group> or the **Network** folder or **Non-licensed computers** from the submenu. Note that only the groups of the first level below the "Network" folder are displayed. The identification process is started.

Note

The "Non-licensed computers" folder can be used only to update SMAgent, determine inventory data and export inventory data. This folder groups computers for which a corresponding SMAgent license is not installed.

If the identification process between the Management Console and the computer is successful, the computer is assigned to the Management Console:

- The computer is moved according to the selection.
- The symbol is updated.
For additional information refer "Network view (Page 44)"

Note**Rule for redundant computers**

Always insert the computers of a redundant pair into the same group.

Note**Disable assignment**

Removing assigned computers from the management:

Options:

- Shortcut menu item "Cancel assignment"
- Use the shortcut menu "Assign computer" to move the computer to the default group "Non-assigned computer".
- The assignment of the computer to the Management Console can also be made by dragging the computer to the default group "Non-assigned computer".

Computers that are not available in the network can be moved to the "Non-assigned computers" group. After refreshing the network view, these computers are no longer present in the tree structure.

Updating the display

For an update of the information displayed, select:

- the menu command **Edit > Update network view**
- or
- Press the (F5) key

Computers outside the local network

Computers which are not located in the local network can be manually assigned to the Management Console. For additional information refer "Adding computers (Page 63)".

Additional information

- Section "Update or repair SMAgent (Page 67)"
- Section "Disable console assignment (Page 133)"
- Section "Canceling the assignment of a computer (Page 65)"

5.3.2 Adding computers

Computers can be assigned to the Management Console manually. Log on computers to the Management Console with this function, even if these computers do not exist in the subnet of the Management Console.

The following are examples of this:

- The computers are located outside the accessible network
- The computers are configured for expansion or change of the network (preparing configuration).

Note

Rule for redundant computers

Always insert the computers of a redundant pair into the same group.

Manually assigning computers outside the subnet

The following requirements apply if computers are to be assigned outside the Management Console subnet to the Management Console:

- The authorizations are configured.
For additional information refer "Managing rights (Page 25)".
- The gateways are configured.
For additional information refer "Communication using different subnets (Page 34)".
- If the Management Console computer is a member of a domain, the computers to be assigned to the Management Console must belong to a trusted domain.

Procedure

1. Select a folder in the network view (network or group).
2. Select the "Add computer..." command in the shortcut menu.
The "Add computer" dialog opens.
3. Enter the name of the computer. Click "OK".
To add multiple computers, separate the computer names with semicolons.

Result

The computers are displayed in the selected folder. The icon in front of the computer name indicates the status.

For additional information refer "Symbols in the network view (Page 46)".

When your SMAgent license count is not enough for the inserted target pc, then the target pc is added to "Non-licensed computers" node.

Additional information

- Section "Canceling the assignment of a computer (Page 65)"
- Section "Disable console assignment (Page 133)"

5.3.3 Canceling the assignment of a computer

Disable console assignment

To assign a computer to a different Management Console, cancel the console assignment to the local Management Console.

Depending on the desired result, choose one of the following options:

Changing the console assignment of individual computers

1. Select the computer.
2. Select one of the following shortcut menu commands:
 - **Assign computer > Non-licensed computers**
 - **Assign computer > Non-assigned computers**

Changing the console assignment of all computers

1. To continue using the configured settings of the Management Console for another computer, back up the data.
For additional information refer "Back up data... (Page 131)".
2. Select the menu command "Disable console assignment (Page 133)".
3. Start the Management Console to which the computers of the plant are assigned. Assign the computers to this Management Console.

Note

Canceling the assignment of a computer

When the assignment of a computer to a Management Console is removed, the associated pre-shared key is removed.

Result

The computers are moved to the "Non-assigned computers" group and receive the status "Non-assigned". For additional information refer "Symbols in the network view (Page 46)".

5.3.4 Reset status

This menu command is used to update the icons displayed at the object.

Procedure

1. Open the Management Console in the network view...
2. Select a single computer, a group, or root "network".
3. Select the menu command "Reset status" from the shortcut menu.

Additional information

- Section "Update network view (Page 134)"

5.3.5 Create group

Administration of groups

Group the computers to ensure that administration tasks in networks can be executed efficiently.

- Each computer can be assigned to any group depending on the number of licenses available.
- A computer may either be in no group at all or in a maximum of one group.

The following functions can be executed:

- Create group
- Rename group
- Delete group (Page 133)

A Tree structure with the existing groups in the Management Console network view displays:

- "Network" group
- "Non-assigned computers" group
- "Non-licensed computers" group
- Groups created by an administrator

Requirements

- The user is logged on as the administrator of the Management Console (see section "Managing rights (Page 25)").
- Preparation for use of the Management Console is complete.
For additional information refer "Installing the Management Console (Page 28)".

Create group

Once the Management Console has been started, computers on which the "SIMATIC Management Agent" is activated attempt to establish communication with the Management Console. If no plant-specific groups have as yet been created, create plant-specific groups and assign the computers to the plant-specific groups.

Recommendation:

Working with the Management Console in larger plants becomes more manageable when plant-specific groups are created (for example, dividing up computers into groups of servers and assigned clients; distribution according to plant areas).

1. Select the network folder in the network view.
2. Select the menu command **Create group** in the shortcut menu.
3. Enter a name for the plant-specific group.

Additional information

- Section "Network view (Page 44)"
- Section ""Edit" menu (Page 133)"
- Section "Adding computers (Page 63)"
- Section "Assigning computers (Page 62)"

5.3.6 Update or repair SMAgent

The shortcut menu function "Update SMAgent..." is only available for target computers on which the "SIMATIC Management Agent" is installed.

A prerequisite for using the Management Console is that the version of the "SIMATIC Management Agent" installed must be identical to the version of the Management Console to which it is assigned to.

Before updating the SMAgent from V8.2 to a higher version, there must be no pending files on the target computer and the same user account must be used which was used in the earlier versions to perform SMAgent Update to a higher version.

NOTICE

Computers with SIMATIC BATCH prior to PCS 7 Version 8.1 SP1

The SIMATIC Management Agent cannot be updated via the Management Console.

Install the SIMATIC Management Agent on the local computer via the setup from the following folder of the SIMATIC PCS 7 DVD or PCS 7 media:

Additional_Products > SMA__Vx.x.

Note

Updating the "SIMATIC Management Agent" service is prohibited for target computers on which one of the following software packages is installed:

- Process Historian
- Information Server
- Web option for OS
 - Web Server
 - Web Client or Web Diagnostic Client

Updating the "SIMATIC Management Agent" service is possible as of installed version 8.1.

The "SIMATIC Management Agent" service can be updated on a target computer on which web server is in runtime by enabling the "Web server Settings". For additional information, please refer to the section Downward compatibility with the agents (Page 79).

The "SIMATIC Management Agent" service cannot be updated (from an older version to current version) on a target computer with SIMATIC Management Console installed on it.

Basic procedure

The following actions are required for updating the "SIMATIC Management Agent" service:

- Update the "SIMATIC Management Agent" service on the target computer using the Management Console.
- Deactivate the process mode on the target computer by SIMATIC Management Agent when it is necessary for the update. This is because reboots are executed for updates older than V8.2.
- Close any open project on the target computer by SIMATIC Management Agent, when it's necessary for the update. This is because reboots are executed for updates older than V8.2.
- Update SMAgent.

Note

- Reboot the target computer by the Management console, if necessary.
 - Activate the process mode by SIMATIC Management Agent when Autostart is configured.
-

Computers with different versions of the "SIMATIC Management Agent" service

The Management Console automatically checks the version of the "SIMATIC Management Agent" service on each computer. The following versions are compared during the check:

- Version of the service on the Management Console computer
- Version of the service on the target computer in the network

If the comparison shows a difference in the versions, the respective target computer in the network (not the Management Console computer) is marked with the following symbol in the network tree view:



That means, the version of the "SIMATIC Management Agent" is different to the version on the Management Console computer and it is not compatible. Only the "Update SMAgent" function is available for the computers marked with this symbol. All functions are available after updating the service.

The Management Console can manage and communicate with the SIMATIC Management Agents of certain old versions. In that case the following symbol is displayed:



For more information refer Downward compatibility with the agents (Page 79)

Requirements

- The "SIMATIC Management Agent" setup is available on a shared storage path (File server or local folder).
- A share has been set up for the user for this storage path.
- The storage path is entered in the "SIMATIC Management Agent" tab. Storage path: "SIMATIC PCS 7 DVD or PCS 7 media: Additional_Products > SMA__Vx.x. " or a copy from the SMAgent Setup.
- The user is a member of the Windows user group "SIMATIC Management Administrators".

Note

Requirement for shared update of SIMATIC Management Agents (group or multiple computers).

When computers are selected for shared update of SIMATIC Management Agents, the same version of the SIMATIC Management Agent must be installed on these computers.

Example:

The shared update of SIMATIC Management Agents of version 8.0 SP2 and version 8.1 SP1 is not possible when the computers are in the same group. An error message will be displayed.

Procedure

1. Select an object in the network view.
 - Network
 - Group
 - Computer
 - Non-licensed computers
2. Select **Update SMAgent...** from the shortcut menu.
 - The "SIMATIC Management Agent Setup" dialog opens.
 - The "SIMATIC Management Agent" setup is selected or can be selected if a SIMATIC Management Agent Setup has not been entered in the "Settings" option.
3. Select the setup. Click "Next". The "Install SIMATIC software (2/4) - Computer status" dialog for the selected setup is displayed.
4. Make the necessary settings. For additional information refer "Dialog "Install SIMATIC software (2/4) - Computer status" (Page 91)".
5. Click "Next".
The "Install SIMATIC software (3/4) - Configure start behavior" dialog opens.
6. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (3/4) - Configure start behavior" (Page 92)".
7. Click "Next".
The "Install SIMATIC software (4/4) - Requirements for the installation of the SIMATIC software" dialog opens.
8. On the "Install SIMATIC software (4/4) - Requirements for the Installation of the SIMATIC software" dialog, you can select the below option to continue with the update:
"I have read the readme file for the products to be installed. I confirm that I have read and understood the installation and security information".
9. Select both the check boxes:
"I have made sure that no setups are active or have been started by other processes on the target computers".
"I agree that process mode is ended on the target systems".
10. Click "OK".
The actions required to update SIMATIC Management Agent are performed.

Result

The service is updated on all computers that were selected for installation.

Once the update is complete, the status symbol for the computers in the network view is also updated.

Updating the SMAgent on computers in different subnets

If the SIMATIC Management Console and the target computers with installed SIMATIC Management Agent are located in different subnets, consider the following criteria:

- If the computers are supposed to continue communicating across subnet boundaries as they did before the SMAgent update, then check or re-establish the system-specific configuration of the Windows Firewall.

Additional information

- Installing SIMATIC software (Page 85)
- Communication using different subnets (Page 34)

5.3.7 Backing up and restoring a project

The general configuration, complete Network and Plant view trees, inventory data, and settings for the Management Console can be backed up to a file. Using the saved file, the configuration and settings can be restored on any computer with SIMATIC Management Console installed in it.

5.4 Using communication

5.4.1 Connecting

As of V8.2, the frames to establish a connection between the Management Console and managed computers with installed and activated service "SIMATIC Management Agent" are protected by a **Pre-Shared Key**.

Pre-shared key

- The pre-shared key is an application-specific, shared network key that was agreed to beforehand.
The protection only involves the connection frames required for the application of the Management Console. The pre-shared key has no effect on the connection frames from other applications.
- Enter the pre-shared key for the first application of the Management Console.
The Management Console automatically assigns the pre-shared key to a computer when it is initially assigned to the Management Console.

Note

Canceling the assignment of a computer

When the assignment of a computer to a Management Console is removed, the pre-shared key is removed on this computer.

Note

Make sure that the PSKs (Pre-shared keys) are invalidated in the whole plant (e.g. by setting a new PSK using "SIMATIC Management Agent Configurator"), when a SIMATIC Management Console computer is decommissioned.

Updating the pre-shared key

Recommendation: Change the pre-shared key regularly. To do this, select the menu command **Options > Set pre-shared key... .**

- The pre-shared key is changed on the Management Console with the following effect:
The update of the pre-shared key is applied to all computers assigned to the Management Console if these could be reached until the assignment was completed.
- If a computer assigned to the Management Console cannot be reached for the update of the pre-shared key, the following applies:
A message in the alarm/event log of the Management Console indicates the non-updated computer.
Remedy error:
Open the "SIMATIC Management Agent Configurator" locally on the non-updated computer. For additional information refer "How to change the pre-shared key on a computer at a later time (Page 74)".

Rules for establishing a connection

The following applies to the connection between SIMATIC Management Console and SIMATIC Management Agent:

Network in which the computer is located		The following applies to the connection:
Management Console	Plant computers with SIMATIC Management Agent	
Domain	Domain	Connection possible
Workgroup	Workgroup	
Domain	Workgroup	No connection possible.
Workgroup	Domain	

- If both connection partners are in a Windows domain, connection is possible. The Kerberos protocol is used for the connection.
- If both connection partners are in a Windows workgroup, connection is possible. The NTLM protocol is used for the connection.
- If only one connection partner is a member of the domain, no connection is possible.

Connection establishment behavior depending on pre-shared key

The following applies regarding connection establishment between Management Console and computers in the plant:

Pre-shared key		The following applies to the connection:
On the Management Console	On the plant computer with SIMATIC Management Agent	
Same pre-shared key		Connection possible
Pre-shared key	No pre-shared key	Pre-shared key is saved, connection possible
Pre-shared key	Different pre-shared key	No connection possible > Message in the event log of the Management Console.
Same pre-shared key, but the plant computer is assigned to another Management Console. Note: A plant may only have one Management Console.		Check the connection and correct the settings if necessary. For additional information refer "Relocate the Management Console in the network (Page 37)".

Firewall

PC stations can be located in different subnets in a network. The subnets can, for example, be connected by routers and protected by a firewall. The firewall rules must be adapted to allow access to the other network in each case. For additional information refer the documentation *Process Control System PCS 7; PCS 7 - PC Configuration*.

Additional information

- Section "Starting the Management Console (Page 39)"
- Section "SIMATIC Management Agent Configurator (Page 73)"

5.4.2 SIMATIC Management Agent Configurator

As of SIMATIC Management Console V8.2, connection frames between the Management Console and computers with activated SIMATIC Management Agent are encrypted. The pre-shared key must be entered for the first application of the Management Console.

"SIMATIC Management Agent Configurator" dialog box

Information displayed:	Meaning
Currently connected SIMATIC Management Console	Displays the name of the computer on which the currently connected SIMATIC Management Console is installed. This entry can be empty when the computer is not connected to a SIMATIC Management Console.
Last assigned SIMATIC Management Console	Displays the name of the computer to which the local computer had established a connection with a SIMATIC Management Console. This entry can be empty when the computer was not connected to a SIMATIC Management Console.

Actions with the "SIMATIC Management Agent Configurator"

Following can be done using the "SIMATIC Management Agent Configurator" application:

Actions	Meaning
Reset pre-shared key	Deletes the pre-shared key on the local computer that was assigned by a SIMATIC Management Console or a user.
New pre-shared key...	Opens the dialog box "Set pre-shared key...". For more information refer "Set pre-shared key... (Page 139)". The action only has an effect on the local computer.

5.4.3 How to change the pre-shared key on a computer at a later time**Note**

The Management Console can only establish communication links to computers for which the same pre-shared key is configured.

It might be necessary to change the pre-shared key for a computer in a plant at a later time (for example, after restoring a configuration by using a backup).

Requirements

- Administrative rights are required to change the pre-shared key.
- Execute the action on the local computer.

New pre-shared key

1. Open the **SIMATIC Management Agent Configurator** as administrator in the "Siemens Automation" folder from the Windows Start menu.
The "SIMATIC Management Agent Configurator" dialog box opens.
2. Click "New pre-shared key".
The "Set pre-shared key" dialog box opens.

3. Enter the pre-shared key defined in the Management Console into the input boxes.
For more information refer "SIMATIC Management Agent Configurator (Page 73)".
4. If it matches the pre-shared key, the current Management Console is shown in the dialog window.
5. Click "OK".
6. Click "Close".

Reset pre-shared key

1. Open the **SIMATIC Management Agent Configurator** as administrator in the "Siemens Automation" folder from the Windows Start menu.
The "SIMATIC Management Agent Configurator" dialog box opens.
2. Click "Reset pre-shared key".
The pre-shared key is assigned to the computer from the Management Console.
3. Click "OK".
4. Confirm the restart of the SIMATIC Management Service. Click "OK".
5. Click "Close".

5.5 Installing and updating software

5.5.1 Integrity check for PCS 7 software

The SIMATIC Management Console verifies the integrity of the software to be installed as part of the remote software deployment.

Software integrity check

The software integrity check is performed during the following processes:

- Installing SIMATIC software
- Updating SIMATIC software
- Updating SIMATIC Management Agent

Note

As of SIMATIC Management Console V9.1.1, software integrity check functionality is not supported for the PCS 7 setups older than V9.1.

General course of action during Software integrity check:

- The integrity check of setup for all the instances of triggered installations.
- If the integrity check is successful, the actual remote installation begins on the agent computer, and the status updates will be displayed in the "Event display" and "Alarms window" of the Management Console.
- If the integrity check fails, the remote installation will be stopped, and the status will be displayed in the "Event display" and "Alarms window" of the Management Console.

Note

- The user is prompted with an option to either allow or deny integrity check before starting an installation/update.
 - Simultaneous integrity checks for different computers are allowed only when software packages or SIMATIC Management Agent updates are being installed.
 - When a granular installation is in progress, installation of a software on a different computer will be permitted only after the previously initiated integrity check concludes.
 - If the PCS 7 installation media is placed in a shared path, ensure that it only has read-only privileges to prevent setup/external users from making unauthorized changes to the files. That way the integrity of the installation media remains intact.
-

Procedure

By default, Software integrity check will be enabled. To disable/re-enable Software integrity check -

1. Select Options > Settings option.
2. Open the 'Software Administration' Tab. Enable or disable the option - "Software integrity check enabled" based on the requirement.
If the "Software integrity check is disabled, a comment must be added in the "Comment on selection" window.
3. Click "Finish"

Note

- The results of an integrity check can either be found under the SIMATIC Management Console alarms or event displays.
 - Integrity check fails when an existing file/folder is deleted or altered in the PCS 7 Bundle.
 - Integrity check doesn't fail if a new file/folder is added to the PCS 7 Bundle.
-

5.5.2 Software Update

Note

The following computers are changed by the steps to be executed:

- Computers with installed SIMATIC Management Console
 - Computers in the plant with installed SIMATIC Management Agent
-

Prerequisites

- Installed software on the computer with installed SIMATIC Management Console
 - SIMATIC Management Console as of V8.1
- Required software packages
 - SIMATIC Management Console V9.0; SIMATIC Management Agent V9.0

Basic procedure

The SIMATIC Management Console is updated in four steps:

1. Store the installation files.
2. Back up the configuration and setting data of the SIMATIC Management Console.
3. Update the computer with installed SIMATIC Management Console.
4. Restore the configuration and setting data of the SIMATIC Management Console.

Storing the installation files

1. Use the PCS 7 DVD with the following structure:
 - ...|PCS7_Vxx|DVD
2. Use the PCS 7 media with following structure e.g. USB drive:
 - ...|PCS7_Vxx|media

Note

- The software packages to be installed must be available on a shared path.
 - Ensure that the selected path names do not exceed 85 characters when you set the paths for the software.
 - Select a path with a unique name for each software package. For example:
 - \\<Computer>\<Path>\<SMMC_Version_and_Date> (example path for the SIMATIC Management Console Vxx software package)
 - \\<Computer>\<Path>\<SMA_Version_and_Date> (example path for the SIMATIC Management Agent Vxx software package)
 - Ensure to unzip only the Web Package. Enable the option "Extract the product without being installed".
-

Backing up the configuration and setting data

To backup the configuration and setting data:

1. Start the "SIMATIC Management Console" application.
2. Select "File > Back up data...".
3. Follow the instructions in the dialogs. The following data is backed up:
 - Configuration and setting data
 - Inventory data
 - Information of the "Event List"
4. Select "Edit > Disable console assignment"
5. Close the "SIMATIC Management Console"

Updating the computer with installed SIMATIC Management Console

1. Open the path in which you have stored the SIMATIC Management Console software package. Information on this step is available in paragraph "Basic procedure", step 1: in the example "...SMMC_Version_and_Date" or starts the setup.exe in the PCS 7 DVD or the PCS 7 media.
2. Start the setup.exe file. Follow the instructions in the dialogs.
3. Perform a restart of the computer once the installation is complete.

The installation of the new version of the SIMATIC Management Console is complete.

Restoring the configuration and setting data

To restore the configuration and setting data of the SIMATIC Management Console. Follow the steps outlined below:

1. Start the "SIMATIC Management Console" application.
2. Select "File > Restore data...".

3. Select the path of the backed up configuration and setting data.
 4. Perform a restart of the computer once the restoration is complete.
- The restoration of the configuration and setting data is complete.

Result

The update of the SIMATIC Management Console is complete.

5.5.3 Downward compatibility with the agents

The SIMATIC Management Console supports the downward compatibility in the following manner:

- The SIMATIC Management Console can communicate with the SIMATIC Management Agents of previous SIMATIC Management Console versions, starting with V9.0.
- Functionality of the SIMATIC Management Console is limited to that of the respective older SIMATIC Management Console version.

Prerequisites

The downward compatible SIMATIC Management Agents must be re-assigned to the SIMATIC Management Console application in order to establish communication.

System behavior for downward compatibility

- When you right click on any computer in the "Network" view, irrespective of the action that is chosen, a warning is provided before proceeding to the "SIMATIC Management Console" dialog box. Click "Yes/No" depending on the action that needs to be executed on the agent.
- Computers with SIMATIC Management Agent of version older than V9.0 display a status "Version mismatch without compatibility" and the corresponding icon. The SIMATIC Management Agent must be updated to the latest version available in order to communicate with the SIMATIC Management Console (SMMC).
- Computers with SIMATIC Management Agent of version V9.x display a status "Version mismatch with compatibility" and the corresponding icon. The SIMATIC Management Console will be able to communicate with these agents for available functionalities.
- Functionalities of the SIMATIC Management Console of an older version of the SIMATIC Management Agent depend on the agent version and are automatically enabled/disabled in the "context/toolbar" menus.

5.5 Installing and updating software

- For all the available actions in older agents, the user is prompted with a warning for limited functionalities. The user can continue with the limited functionality or cancel the action.
- The limitations in terms of available functionality for older SIMATIC Management Agents are listed below:
 - The following features introduced in V9.1.1 are not supported in SIMATIC Management Agents older than V9.1:
 - Tracking of Windows Defender events
 - Automated e-mail configuration for notifying Windows Defender events
 - The following features introduced in V9.1 are not supported in SIMATIC Management Agents older than V9.1:
 - Remote Microsoft update management (disabled in context menu > Network view)
 - Microsoft update installation report (disabled in context menu > Network view)
 - For SIMATIC Management Agents older than V9.0.1, the following features are not supported:
 - Determining the station data (disabled in context menu > Plant view)
 - Persistence of offline and online data (Plant view) – either offline configuration data or online device data can be determined and stored.
 - Determining the network and plant inventory only retrieves attributes supported by the corresponding version of the SIMATIC Management Console. Attributes added in the later versions are not retrieved.
 - Status of the actions performed by the older SIMATIC Management Agents are not reflected in the computer status icon. It continues to display the "Version mismatch with compatibility" icon until the agents are updated to the latest version available.

5.5.4 Installing and updating software-Overview

Requirements

- The software to be installed is available from one shared storage location (shared network path, for example \\<Computer name>\<Shared name>).
- A share has been set up for the user for this storage path of the software.
- The user is a member of the Windows user group "SIMATIC Management Administrators".

Note**Installation**

Updating software using the Management Console is not permitted for some software and package installations of PCS 7.

The following software and package installations of PCS 7 can only be distributed as new installations with the SIMATIC Management Console:

- Process Historian
- Information Server
- OpenPCS 7 (update of the "SIMATIC Management Agent" service possible as of installed version 8.1).
- Web Option for OS
(Web Client or Web Diagnostic Client: Updating the "SIMATIC Management Agent" service is possible as of installed version 8.1).

This software needs to be manually installed for a software update.

Note**Adding computers to process mode using autostart**

Make sure that starting a computer with a modified installation is not going to cause plant faults. This is particularly important when installing software on computers in redundant systems.

Take particular care with computers for process mode with the following software:

- PCS 7 OS
 - SIMATIC BATCH
 - SIMATIC Route Control
-

Note**Dependency of the interface language**

In the case of an installation using the Management Console, the following applies to a software installation or update:

The installation depends on the language that was set on the Management Console:

- When a setup package is created
- When software is updated

If this language is not available, the software will be installed by the Management Console in English and needs to be switched after installation.

Set the interface language of the Management Console accordingly before updating software or creating a setup package.

Note**Transferring and updating license keys**

This function requires the Automation License Manager.

Functions of the setup management

Note**Installation of software packages without user input**

Only SIMATIC products made available by PCS 7 can be installed without user input.

Note**Disclaimer of liability**

Siemens accepts no liability for any damage which may occur as a result of the use of the Management Console for the installation of software which has not been approved.

Follow the steps below to install software packages:

1. Enter the storage locations of software packages in the Management Console
Function: Setup management... (Page 145)
2. Optional:
Settings for software packages with configuration-specific setup dialogs
Function: Settings... (Page 140)
3. Putting together software packages
Function: Setup packages (Page 83)
4. Installing the software packages on selected computers and groups
Function: Installing SIMATIC software (Page 85) or Updating SIMATIC software (Page 88)

NOTICE**Operating target computers during software installation**

To avoid undefined states, the following actions are prohibited during the software installation:

- Operation of target computers.
- Switching the operating mode.

No check for incomplete installations

After installing software, it might be necessary to restart the computer. This restart is used to apply settings in the operating system. If the computer is not restarted before carrying out an additional installation, inconsistent operating states may occur. When using the Management Console to install or update software, pending requests to restart are executed automatically.

Ensure that there are no pending requests for a restart, to avoid restarting of the computer after installing or updating software.

5.5.5 Setup packages

Management Console can be used to efficiently install softwares with identical settings on computers.

- To prepare for software installation, create setup packages using the Management Console.
- To install the software, you only select the computers or computer groups and the setup package.

Note

Updating software

Need not create setup packages for updating software using a PCS 7 DVD as of PCS 7 V8.0 SP2. The setups must be known to the Management Console.

For additional information refer:

- Section "Preface; Table 2-1 Overview of the most important changes (Page 14)"
- Section "Setup management... (Page 145)"
- Section "Updating SIMATIC software (Page 88)"

Multiple setups cannot be selected while updating the software.

Setup packages

Save the following with a plant-specific name in a setup package:

- Combinations of setups which can be installed without configuration-specific setup dialogs.
- Settings for a SIMATIC setup program with configuration-specific setup dialogs
 - Example: Settings in the PCS 7 setup to install multiple software packages using a setup package. To create a setup package, start the setup of PCS 7 on the Management Console. Setup runs in configuration mode. The selected installation parameters are stored in a setup package file.
 - When making the selection, note that specific settings are required for certain software packages. For additional information refer: "Settings... (Page 140)".

Names of plant-specific setup packages can be found under the "Setup packages" tab in the "Setup management" dialog.

Select only one setup package for installation. New interactive entries need not be created in the setup dialogs of the software packages contained in the setup package.

Requirement

The setup packages have been entered in the Setup management in the "Setups" tab.

List of setup packages

1. Select the menu command **Options > Setup management**.
The "Setup management" dialog opens.
2. Open the "Setup packages" tab.
The list of setup packages is displayed in the "Setup management" dialog.

Note

List of setup packages

If a setup package includes a number of software packages for PCS 7 setup, the displayed information can be expanded for the setup package in the list by clicking "+".

The contained software packages are displayed.

Add setup package

1. Open the list of setup packages (menu command **Options > Setup management > "Setup packages"** tab).
2. Click "Add".
3. Enter a name for the setup package. Click "Next".
4. In the "Setup packages" list, select the setup of the software package that is to be installed.

Note

Only the setups (plant-specific setups) entered in the "Setups" tab in the "Setup management" dialog can be selected. If the desired setup is unknown, add it to the list in the "Setups" tab.

5. Click "Next".
If a SIMATIC setup which requires configuration-specific setup dialogs for software installation is selected, these dialogs open and the settings are saved in the setup package.
6. Click "Next".
The summary for the setup package is displayed.
Supplementary information can be added in the "Comment on setup" input box.
This information is displayed when the setup package is selected.
7. Click "Finish".
The setup package is adopted in the list in the "Setup packages" tab.

Remove setup package

1. Open the list of setup packages (menu command **Options > Setup management > "Setup packages"** tab).
2. Select an entry in the table.
3. Click "Remove".
The "Confirm removal" dialog opens.
4. Confirm by clicking "Yes".
The setup package is removed from the list.

Additional information

Section "Setup management... (Page 145)"

5.5.6 Installing SIMATIC software

Install software with the Management Console as of the following:

Process Control System; SIMATIC PCS 7; V9.1 with the latest service packs.

Requirements

- The computers on which the software is to be installed are assigned to the Management Console.
- All the necessary permissions have been set up. For additional information refer "Managing rights (Page 25)".
 - The user is a member of the Windows user group "SIMATIC Management Administrators".
 - The software to be installed is available from one shared storage location (shared network path, for example \\<Computer name>\<Shared name>).
 - A share has been set up for the user for this storage path of the software.
- Setups and software packages are entered in the Management Console. For additional information refer "Setup management... (Page 145)".
- Observe the information in the section "Settings... (Page 140)".
- Computers of a redundant pair must be assigned to the same group.

Note

Installing a redundant server pair

If the partner computer is not recognized as fully available, the Management Console rejects the installation of software packages in process mode. In process mode, the servers of a redundant server pair can only be installed one after the other for availability reasons (mutual exclusion of readiness for installation).

Try to identify the servers that belong to a redundant server pair in the detailed information about the computer (see section "Dialog "Install SIMATIC software (2/4) - Computer status" (Page 91)").

Note

Number of simultaneous remote installations

With the SIMATIC Management Console, software packages can be installed on multiple computers at the same time. The number of computers on which an installation can be carried out at the same time depends on the following factors:

- Performance/speed of the network
- Performance of the file server (Storage location of the PCS 7 media)

Do not carry out a remote installation on more than 20 to 30 computers at the same time in order to avoid an overload. This is provided that no other actions (for example, inventorying) are running on the SIMATIC Management Console computer.

Note

Computers with hard disk encryption/activated BIOS password

Some software packages require a restart of the computer during or after installation of the software.

If passwords must be entered for computers after a restart (BIOS, hard disk encryption, etc.), the remote installation cannot be completed without "local" operator input when you use the SIMATIC Management Console.

Recommendation

1. To install the same software packages on multiple computers, create installation-specific groups (OS Client, for example).
2. Assign the computers to an installation-specific group.
3. Apply the setup package to the group.

For additional information refer "Assigning computers (Page 62)".

Procedure

NOTICE
Possible restart due to installation
Please note that installing software may initiate a restart of the target computer.

1. In the network view, select the object on which software or a software package should be installed.
Possible selection:
 - A computer
 - A group
2. Select the shortcut menu command **Install SIMATIC software....**
The "Install SIMATIC software (1/4) - Select software" dialog window is displayed.
For additional information refer "Dialog "Install SIMATIC software (1/4) - Select software" (Page 91)".
3. Select the setups/setup packages. Click "Next".
The "Install SIMATIC software (2/4) - Computer status" dialog for the selected setup/setup package is displayed.
4. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (2/4) - Computer status" (Page 91)".
5. Click "Next".
The "Install SIMATIC software (3/4) - Configure start-up behavior" dialog opens.
6. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (3/4) - Configure start behavior" (Page 92)".
7. Click "Next".
The "Install SIMATIC software (4/4) - Requirements for the installation of the SIMATIC software" dialog opens.
8. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (4/4) - Requirements for the installation of the SIMATIC software" (Page 94)".
9. Click "OK".
The actions required for the installation of the selected software are performed.

Note

- On the "Setup package" tab, you can only select one setup package to install.
 - Multiple setup packages cannot be installed on the same computer simultaneously and if the setup package is selected, then all the products configured for the setup gets installed on the computer.
-

Show progress

The number of plant components and component availability may mean the process can take some time.

The symbol "Action running" is displayed for the status of a group during an action. Detailed information is displayed within the group at the computer symbol.

Information on the symbols is available in the section "Symbols in the network view (Page 46)".

If error messages come up in the Management Console, refer the following section: "Determining the cause (Page 123)".

Note

No check for incomplete installations

After installing software, it might be necessary to restart the computer. This restart is used to apply settings in the operating system.

- If the computer is not restarted before carrying out an additional installation, inconsistent operating states may occur. When using the Management Console to install or update software, pending requests to restart are executed automatically.
 - To skip restarting of the computer after installing or updating software, make sure that there are no pending requests for a restart.
-

Note

Software installation timed-out notification

The time-out notification occurs in the "Alarms" window, when the software installation to the assigned computer from the Management console takes more than 12 hours. The installation status of the assigned computer can be monitored even after the time-out notification occurs.

5.5.7 Updating SIMATIC software

Update software with the Management Console as of the following version:

Process Control System; SIMATIC PCS 7; V9.1 with the latest service packs

Requirements

- Software is to be updated from the PCS 7 media.
- The computers on which the software is to be installed are assigned to the Management Console.
- All the necessary permissions have been set up. For additional information refer "Managing rights (Page 25)".
 - The user is a member of the Windows user group "SIMATIC Management Administrators".
 - The software to be installed is available from one shared storage location (shared network path, for example \\<Computer name>\<Shared name>).
 - A share has been set up for the user for this storage path of the software.
- Setups are entered in the Management Console. For additional information refer "Setup management... (Page 145)".
- Observe the information in the section "Settings... (Page 140)".

Note**Updating a redundant server pair**

In process mode, the servers of a redundant server pair can only be updated one after the other for availability reasons (mutual exclusion of readiness for installation). Identify the servers that belong to a redundant server pair in the detailed information about the computer (see section "Dialog "Install SIMATIC software (2/4) - Computer status" (Page 91)".

Note**Number of simultaneous remote accesses**

Using PCS 7 Setup, installed software can be simultaneously updated on multiple computers with the SIMATIC Management Console. The number of computers on which a simultaneous update can be carried out depends on the following factors:

- Performance/speed of the network
- Performance of the file server (storage location of the PCS 7 media)

Do not carry out a remote update on more than 20 to 30 computers at the same time in order to avoid an overload. This is provided that no other actions (for example, inventorying) are running on the SIMATIC Management Console computer.

Note**Computers with hard disk encryption/activated BIOS password**

Some software packages require a restart of the computer during or after installation of the software.

If passwords must be entered for computers after a restart (BIOS, hard disk encryption, etc.), the remote installation cannot be completed without "local" operator input when you use the SIMATIC Management Console.

Procedure**NOTICE****Possible restart due to installation**

Please note that installing software may initiate a restart of the target computer.

Note

- Multiple setups cannot be selected while updating the software.
- Select only the setup.exe files from the PCS 7 setup.

1. In the network view, select the object on which software should be updated from the PCS 7 setup.
Possible selection:
 - A computer
 - A group
2. Select the shortcut menu command **Update SIMATIC software...**
The "Install SIMATIC software (1/4) - Select software" dialog window is displayed.
For additional information refer "Dialog "Install SIMATIC software (1/4) - Select software" (Page 91)".
3. Select the setup. Click "Next".
The "Install SIMATIC software (2/4) - Computer status" dialog for the selected setup is displayed.
4. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (2/4) - Computer status" (Page 91)".
5. Click "Next".
The "Install SIMATIC software (3/4) - Configure start-up behavior" dialog opens.
6. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (3/4) - Configure start behavior" (Page 92)".
7. Click "Next".
The "Install SIMATIC software (4/4) - Requirements for the installation of the SIMATIC software" dialog opens.
8. Make the necessary settings.
For additional information refer "Dialog "Install SIMATIC software (4/4) - Requirements for the installation of the SIMATIC software" (Page 94)".
9. Click "OK".
The actions required for the installation of the selected software are performed.

Note

Progress display

The number of plant components and component availability may mean the process can take some time.

The symbol "Action running" is displayed for the status of a group during an action. Detailed information is displayed within the group at the computer symbol.
Information on the symbols is available in the section "Symbols in the network view (Page 46)".

If error messages come up in the Management Console, refer to the information in the section "Determining the cause (Page 123)".

5.5.8 Dialog window "Install SIMATIC software" (Update SIMATIC software)

5.5.8.1 Dialog "Install SIMATIC software (1/4) - Select software"

In this dialog box, configure settings based on the setup target:

Setup target	Selection
Groups	Select the PCS 7 Setup.
Computer	Select the software/software packages you want to install or update.

Note

Setups that are not integrated in PCS 7 Setup

These software packages (WinCC Update, for example) can only be installed using the Management Console, if the following requirements are met:

- No input is required in the Setup dialogs during the execution of the setup.
- A setup package has been created for this product.

5.5.8.2 Dialog "Install SIMATIC software (2/4) - Computer status"

The "Computer status" dialog opens when setup packages are installed using the Management Console. Computer-specific information is displayed:

Column	Identification	Meaning
Run setup	Check box selected	The computer is selected for the installation.
	Check box cleared	The computer is not selected for the installation. For additional information refer "Computer is not ready for installation (Page 127)".
	Check box grayed out	The computer cannot be selected for the installation. For additional information refer "Computer is not ready for installation (Page 127)".
Status (ready for installation)	 Ready for installation	The computer is ready for installation.
	 Not ready for installation	The computer is not ready for installation. For additional information refer "Computer is not ready for installation (Page 127)".
	 Status unknown	The status of the computer has not been determined yet.

Column	Identification	Meaning
Detailed information	+ / -	<p>Use this symbol in the tree structure to display the determined computer-specific information:</p> <ul style="list-style-type: none"> • Computer name • Information on the role of a computer <ul style="list-style-type: none"> – PCS 7 Operator Stations – SIMATIC BATCH – SIMATIC Route Control – Engineering station • Information for redundant computers <ul style="list-style-type: none"> – Redundancy information (master/standby - redundant partner) – Redundancy switchover (is possible/is not possible) • Information for special PCS 7 software packages <p>For additional information, refer to the section "Computer is not ready for installation (Page 127)".</p>
Computer		<ul style="list-style-type: none"> • Name of the computer • Role of the computer • Software package that is installed

Note**Update software on redundant computers**

The simultaneous updating of a pair of servers in process mode is blocked in the Management Console.

Recommendation:

1. First update the computer which is not the current master.
2. After this update and completing any necessary measures and any adjustment procedures that may be necessary, switch the master over.
3. After this, update the partner computer of the updated computers.

"Select all" or "Deselect all" button

Only for selectable check boxes.

- "Select all" button
Selects the "Run setup" check box for all available computers.
- "Deselect all" button
Clears the "Run setup" check box for all available computers.

Note the additional information in the table in this section.

5.5.8.3 Dialog "Install SIMATIC software (3/4) - Configure start behavior"

The "Configure start behavior" dialog opens while installing setup packages using the Management Console.

Information on the automatic launch of process mode for the computers selected for installation is displayed.

Automatic launch of process mode

For each computer, the Management Console checks whether the "Launch process mode" option is run automatically after switch-on (or restart). If the relevant entries are found for a given computer, the "Restore startup type" check box for this computer is available in the "Configure start behavior" dialog.

Default setting: "Restore start type" check box cleared

"Restore start type" check box cleared	Meaning
Grayed out	No entries for the automatic launch of process mode have been found on the computer.
Disabled	<p>Entries for automatic launch of process mode were found. These settings are reset after installation of the software.</p> <p>Note: If the "Restore start type" option was enabled before the software was installed, enable automatic launch of process mode for establishing the plant-specific startup behavior after installing the software.</p>
Selected	<p>If the user selects the "Restore start type" check box, the original settings for the automatic launch of process mode are retained.</p> <p>Caution!</p> <ul style="list-style-type: none"> • Additional steps are required for certain installations. • Please note that startup sequence cannot be set up for the computers.

"Select all" or "Deselect all" button

Only for selectable check boxes.

- "Select all" button
Selects the "Restore start type" check box for all available computers.
- "Deselect all" button
Clears the "Restore start type" check box for all available computers.

Note the additional information in the table in this section.

5.5.8.4 Dialog "Install SIMATIC software (4/4) - Requirements for the installation of the SIMATIC software"

Setting the options

Installation can be done only after the following settings are specified:

- Activated option button "I have read the readme file for the products to be installed. I confirm that I have read and understood the installation and security instructions."
- Activated check box "I have made sure that no setups are active or have been started by other processes on the target computers".
- Activated check box "I agree that process mode is ended on the target systems".

Additionally, to update the software for a group-

- Select the option "I accept the terms of the above license agreements and confirm that I have read and understood the security information".

5.5.9 Create installation report...

This function provides information about the software installation for the selected period in a report.

Requirements

- Note the following in the section "Preface; Table 2-1 Overview of the most important changes (Page 14)".
- The installed software packages were installed with PCS 7 Setup as of PCS 7 V8.0 SP2. Software installations of separate products support the installation report only with the following information:
 - Installation started message.
 - Installation completed message.
- The installation procedures in the report period were started using this Management Console software package.

Procedure

1. Select one of the following objects in the network view:
 - Network
 - Group
 - Computer
2. In the shortcut menu, select the command **Create installation report...**

3. Select a reporting period and a storage location.
Input options:
 - Start: Date
 - End: Date
 - Define the file and location for the installation report:
 - Click the "..." button:
 - Select the folder in which the file is to be saved.
 - Change the file name if required.
4. Click "Save".
The installation report is generated in PDF format.

5.5.10 Microsoft Software Updates installation

Microsoft software update management

The Microsoft software update management provides the following:

- Allows the user to install Microsoft (MS) software updates on all the target computers in which SIMATIC Management Agent is installed.
- Follows the same set of steps executed during the deployment of SIMATIC software updates.
- Reports information about Microsoft (MS) software updates that are already installed and the ones that are currently being installed.
- Updates the user about the progress and status of the update deployment.

Note

- Microsoft (MS) software updates might take several hours for a computer that is being updated every month regularly under normal conditions.
 - The SIMATIC Management console remotely deploys the Microsoft software updates from WSUS (Windows Server Update Services) to WUA (Windows Update Agent) on each target computer using the SMA (SIMATIC Management Agent).
-

Prerequisites for a Microsoft software update

The following are the requirements that a user needs to ensure before deploying the Microsoft software update:

- Clean up the system drive
- Ensure that at least 10GB of free space is available in the system.

Installing Microsoft software updates

Perform the following steps to install the Microsoft (MS) software updates:

1. In the network view, select the target computer in which the Microsoft software updates are to be installed.
2. Select "Install Microsoft software updates" from the context menu.
The "Install Microsoft software updates (1/3) - Select computer" dialog window is displayed.
3. Select the computer on which the updates are to be installed. Click "Next".
The "Install Microsoft software updates (2/3) - Select start up" dialog window is displayed.
4. Select startup type after the update management. Click "Next".
The "Install Microsoft software updates (3/3) - Requirements for the installation of the Microsoft software updates" dialog window is displayed.
5. Enable the setup disclaimer option. Click "Finish".
A confirmation message is sent to the target computer for user approval.

Note

- Microsoft software updates cannot be deployed on the target computers in which one of the following software packages are installed:
 - Process Historian
 - Information Server
 - Do remember that the context menu option - "Install Microsoft software updates" is enabled by default, but the Microsoft software updates installation feature is only available for SIMATIC Management Agents of version V9.1 or higher.
-

Deployment

The SIMATIC Management Console pops-up a confirmation box in the target computers, for the operator to confirm the deployment of Microsoft software updates in the respective computers. The operator can either choose to confirm or postpone.

Note

- Selecting the "Postpone" button closes the window which re-appears after the configured time interval. In case the message window is not confirmed or postponed within the configured time-out, a confirmation is assumed automatically.
 - For information on the WSUS, please refer *Process Control System PCS 7; Compendium Part F – Industrial Security*.
-

Microsoft software updates

- Navigate to Options > Settings option, select the "Microsoft software updates" tab.
- Configure the postponement related settings - postpone duration, maximum number of postpones and the message window time-out based on the requirement.
- Click "OK" to confirm the same.
Based on the configured settings, a confirmation box pops-up in the target computers.

Reporting the installed Microsoft software updates

The progress of Microsoft software updates being updated on the target computer is displayed in the SIMATIC Management Console alarms window.

The successful completion or an aborted update is reported. The first inventory of a computer following an update identifies the newly installed updates as a part of the Microsoft software inventory.

The SIMATIC Management console provides an installation report for the deployment of Microsoft software update similar to an installation report for SIMATIC software deployment.

Generating the report

1. Select the computer in the "Network" view.
2. In the context menu, select the command "Create Microsoft software updates installation report".
The "Create Microsoft software updates installation report" dialog box appears.
3. Select a reporting period and a storage location.
 - Input options:
 - Startdate
 - Enddate
 - Define the file and location for the installation report:
 - Click the "..." button:
 - Select the folder in which the file is to be saved.
 - Change the file name if necessary.
4. Click "OK".

Error handling

- The Management Console monitors the duration of the following phases during the deployment of the Microsoft software updates with a defined time limit:

Phase	Duration before timeout cancellation [hours]
Download from WSUS	1
Installation on target computer	1
Complete deployment	~12

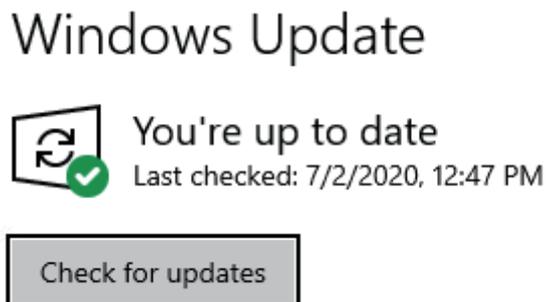
- Messages related to the progress and status of the installation process are displayed in the message window, and are logged as events.

For more information on Microsoft updates, please refer Microsoft Support (<https://support.microsoft.com/>)

Windows Update

Windows Update ("Settings > Update & Security") may display updates that have already been installed via the SIMATIC Management Console under "Available updates" in the target computer. Since, the updates are deployed via the SIMATIC Management Console and the scanning is done by Microsoft, there might be a small delay in the status update at Microsoft's end. To be sure about the installation status, check the "Alarms" window of the SIMATIC Management Console.

To get a detailed overview of the updates, please export the Microsoft software updates installation report. If the status does not get updated in the respective target computer, click on "Install now" or "Check for updates" in the "Windows Update" dialog box, to initiate a scan.



5.6 Determine inventory data

The "Determine inventory data" function causes the Management Console to gather information from the plant for a selected object.

- In the network view, call the function from the shortcut menu of the following objects in the tree:
 - Network
 - Group with assigned computers
 - An assigned computer
 - Non-licensed computers
- In the plant view, call the function from the shortcut menu of the following objects in the tree:
 - Multiproject
 - Project

Information displayed

	Network view	Plant view
Requirements	<p>The network computers must be assigned to the Management Console.</p> <p>For more information refer-</p> <ul style="list-style-type: none"> • Section "Create group (Page 66)" • Section "Assigning computers (Page 62)" • Section "Adding computers (Page 63)" 	<p>The PCS 7 project must be known, including the associated Engineering Station.</p> <p>For more information refer-</p> <ul style="list-style-type: none"> • Select Engineering Station: Section "Settings... (Page 140)" • Select PCS 7 project: Section ""Add plant" overview (Page 104)"
"Inventory data" tab	<p>To access the following, select Inventory data>Installed software>Installed third-party software:</p> <ul style="list-style-type: none"> • Hardware information and Operating system configuration. • Installed version of Microsoft .NET Framework and Microsoft SQL server with version number • Microsoft patches with Product name, Publisher, title, KB and installation date. • Installed security software with manufacturer, product, version (Windows Defender, McAfee Agent, McAfee Application Control). 	<p>Display project-specific information for the following objects:</p> <ul style="list-style-type: none"> • Automation systems • Field devices • Network components • License name and Process Object count
"SIMATIC software" tab	<p>Information on SIMATIC software installed on the computers</p> <p>For additional information, refer to the section ""Installed SIMATIC software" tab (Page 51)"</p>	No information
"License keys" tab	<ul style="list-style-type: none"> • Information on the license keys installed on the computer; <p>Only the following states are displayed in the "License status" column:</p> <ul style="list-style-type: none"> – Installed – Used <ul style="list-style-type: none"> • Detailed information on license keys can be obtained with the Automation License Manager. <p>For additional information, refer to the section ""License keys" tab (Page 52)"</p>	No information
"Device status" tab	<ul style="list-style-type: none"> • Information on the device status of a computer • Status information • Operating states <p>For additional information, refer to the section ""Device status" tab (Page 53)"</p>	No information

Basic procedure

1. Select view
2. Select object
3. Determine inventory data
For more information refer-
 - "Determining inventory data in the network view (Page 101)"
 - "Determining inventory data in the plant view (Page 106)"

5.6.1 Requirement for the "Determine inventory data" function

Assign user-specific names and descriptions in projects.

Requirement for the "Determine inventory data" function

When using the "Determine inventory data" function, please note that the following characters are not permitted in user-specific names and descriptions:

!"§\$%&/()=?´+ #'<>

Checking and adapting

If inventory data cannot be determined for an object, carry out the following steps:

1. Check all the characters in the user-specific names or descriptions for the device in SIMATIC Manager.
2. Adapt the configuration.
3. Determine the inventory data again.

Example of a user-specific device name

- Virtual adapter name for SOFTNET IE RNA

Determining information about switches and field devices

For more information refer "Determining inventory data in the plant view (Page 106)".

5.6.2 Inventory data in the network view

5.6.2.1 Determining inventory data in the network view

Using the "Determine inventory data" shortcut menu command, update the information shown in the details area of the Management Console.

Note

Delayed display on the Management Console

Actions on the SIMATIC Management Console that are executed in addition to the action "Determine inventory data" can cause a delayed display on the Management Console.

Requirements

The computers for which the information is to be determined must be assigned to the Management Console.

Procedure

1. Select the object for which you want to determine inventory data:

- Network
- Group
- Computer

For example, **Inventory data of the hard disk in the computer**

The following inventory data of the hard disk in the computer from the "Installed hardware" can be determined:

- Size
- Driver date
- Driver name
- Driver version
- Manufacturer
- Serial number
- Type

2. Select the **Determine inventory data...** command in the shortcut menu for the object. The "Determine inventory data" dialog window opens.

5.6 Determine inventory data

- 3. The following options are already selected by default. If only some of the information should be determined (e.g. only the license keys), the other check boxes can be cleared.

Options	Meaning
"Determine computer information" check box	Obtains the device-specific data. ¹⁾
"Determine license keys" check box	Obtains the installed license keys. ¹⁾
"Determine SIMATIC software" check box	Obtains the installed SIMATIC software. ¹⁾

¹⁾ The object data is obtained from the PCS 7 plant online.

- 4. Observe the following notes:
Click "OK".
The inventory data is determined.

Note

Show progress

The duration of the process depends on the number and availability of the plant components.

NOTICE
Inventory data is not determined Please note that inventory data is not determined when the Management Console is ended during determination of inventory data.

Result

After the inventory data was successfully determined, it is shown in the detail view in the "Inventory data" tab.
Detailed information is displayed within the group at the computer symbol.
For more information refer "Symbols in the network view (Page 46)".

Additional information

- Section "Exporting inventory data in the network view (Page 102)"
- Section "Determining the cause (Page 123)"
- Section ""Details area" overview in the network view (Page 50)"
- Section ""Determine inventory data" not executed (Page 128)"

5.6.2.2 Exporting inventory data in the network view

The Management Console exports the inventory data of objects in the network view automatically after successful determination of inventory data. Export is possible for the following objects:

Objects of the network view (export format of file: XLSX)

- All managed computers under network
- All managed computers under a group
- Export the inventory data of a single, selected computer

Exported data

The following data is exported depending on the selected basic object:

Basic object in the network view

The following data is displayed:

- Computer
- Hardware data
- Licenses
- Installed SIMATIC software
- Installed third-party software (To access the following information, select **Inventory data > Installed software > Installed third-party software**).
 - SQL Server
 - Installed version of Microsoft .NET Framework with version number
 - Microsoft patches with Product name, Publisher, Title, KB and installation date.
 - Installed security software with manufacturer, product, version (Windows Defender, McAfee Agent, McAfee Application Control).

Windows Defender events and signature version

Signature version is important information about the current state of the antivirus software. After the determination of computer inventory, the signature version is read only for Windows Defender by the SIMATIC Management Console.

The SIMATIC Management Console inventory information of virus protection provides the additional information regarding the installed signature version for the "Windows Defender".

Requirement

- The inventory data for the basic object has been determined.
- For more information refer "Determining inventory data in the network view (Page 101)".

Procedure

The information shown in the details area can be exported to a file.

1. Select the basic object and choose one of the following actions:
 - Select the **Export inventory data...** command in the shortcut menu
 - In the toolbar, click the "Export inventory data" button.
 - Click the "..." button:
 - The "Export inventory data" dialog window opens.
 - Select the folder in which the file is to be saved.
 - Change the file name if required.
 - Select the cover page.
2. Click "OK".

The information is exported.

5.6 Determine inventory data

The file name of the export inventory data file is displayed in the format: <default folder path>_<file name>_<time stamp>.

Note

- The location path for the export inventory data can be specified on the "Inventory Export" tab. For more information see, "Settings...". This setting is applicable only for automatically generated export inventory data files.
-

Opening exported inventory data

The exported inventory data can be opened for further use:

The recommended program is Microsoft EXCEL (XLSX file)

The versions of programs recommended for use with PCS 7 can be found in the *PCS 7 Readme online* on the Internet.

Additional information

Section "Saving information in files (Page 128)"

Section "Identifying errors (Page 123)"

5.6.3 Inventory data in the plant view

5.6.3.1 "Add plant" overview

The PCS 7 projects on the engineering station contain important details on PCS 7 plants. When determining the inventory data, the Management Console reads some of this data from the project.

Requirement

- The engineering station is set (menu "Options > Settings"; tab "Specify Engineering Station"). For more information refer "Settings... (Page 140)".
- The projects to be selected must be known on the engineering station in SIMATIC Manager.
- Ensure that no changes are made to the engineering station while the projects are being determined.

Procedure

The "Add plant" dialog box contains the following steps for preparing for determining inventory data:

1. Specify engineering station (Page 105)
2. Select projects (Page 105)

5.6.3.2 Dialog window "Add plant (1/2) - Specify Engineering Station"

The PCS 7 projects on the engineering station contain important details on PCS 7 plants. When determining the inventory data, the Management Console reads some of this data from the project.

The "Add plant" dialog box contains the following steps for preparing for determining inventory data:

1. Select Engineering Station
2. Select projects

Requirement

- The engineering station is set (menu "Options > Settings"; tab "Specify Engineering Station"). For more information refer "Settings... (Page 140)".
- The projects to be selected must be known on the engineering station in SIMATIC Manager.
- Ensure that no changes are made to the engineering station while the projects are being determined.

Procedure

1. Open plant view in the Management Console.
2. Select the **Add plant...** command in the shortcut menu.
The dialog window "Add plant (1/2) - Specify Engineering Station" opens.

Note

- If no Engineering Station has been entered, the following alert box appears: "Please first define an Engineering Station under "Options". For more information refer "Settings... (Page 140)".
 - When a previous inventory is in the network view only the computers with an installed engineering station can be selected.
-

3. In the drop-down list, select the engineering station from which PCS 7 plant multiprojects/ projects are to be added.
4. Click "Next".
The "Dialog box "Add plant (2/2) - Select projects" (Page 105)" dialog box opens.

5.6.3.3 Dialog box "Add plant (2/2) - Select projects"

In this dialog, choose the projects from which the inventory data are to be determined.

Requirements

- Select the engineering station on which the projects are available.
- In SIMATIC Manager make sure to get access to the selected projects.

Procedure

1. In the list, select the multiproject/project.

Note

List of multiprojects/projects

Users of the Management Console can determine the inventory data without entering a password since the Management Console only has read access to projects. For more information refer "Managing rights (Page 25)".

The following projects of the selected engineering station can be found in the list:

- PCS 7 multiprojects/projects displayed in the SIMATIC Manager
 - Blocked / password-protected PCS 7 multiprojects/projects
-

2. Click the "Finish" button.

Result

The Management Console is ready to determine the inventory data for the selected project.

5.6.3.4 Determining inventory data in the plant view

Using the "Determine inventory data" shortcut menu command, update the information shown in the details area of the Management Console on the "Inventory data" tab.

Note

Delayed display on the Management Console

If actions are performed in addition to the "Determine inventory data" action in the SIMATIC Management Console, it is possible that the additional actions will delay the display on the Management Console.

Requirements

- The computers for which the information is to be determined must be assigned to the Management Console.
- To obtain PCS 7 project-specific inventory data via plant view:
 - The Management Console is able to access the engineering station data. For more information refer "Managing rights (Page 25)".
 - The engineering station has been specified. For more information refer "Settings... (Page 140)".
 - The PCS 7 project assigned to the plant has been selected. For more information refer ""Add plant" overview (Page 104)".

- To determine inventory data of a PCS 7 project on an engineering station, observe the following points:
Ensure that, during determination of the inventory data, no changes are made to the project for which inventory data is being determined. Note that the project can be stored in the following locations:
 - On this engineering station
 - On another engineering station
 - On a project server
- A member of the "SIMATIC Management Users" group is logged onto the engineering station. This user is a member of the "SIMATIC NET" group on the engineering station.
- All changes on the engineering station are complete.

Note**Inventory data of switches**

If inventory data from switches is determined offline, only the following information about the switch is available:

- Switch name
- IP address

If inventory data of switches is to be determined online, the following conditions must also be fulfilled:

- A PCS 7 Maintenance Station (ASSET Management) is configured in your PCS 7 project.
- The switches are configured on this Maintenance Station.
- The user logged on to the engineering station is a member of the following groups:
 - On the engineering station: Member of the local group "Administrators" (the member does not have to be logged in as an administrator)
 - On the maintenance station: Member of the group "SIMATIC NET"
- On the Maintenance Station, where the switches are configured in the SIMATIC Net-configuration of Siemens communication settings, the option "Remote basis and remote OPC-communication (UA and COM)" should be manually activated. It is recommended to deactivate this option after the online determination.

If these conditions are not met, the inventory data of switches is determined offline.

Note

Inventory data of field devices

Requirements:

- SIMATIC PDM (as of V8.0) is installed on the engineering station.
Note the section "Preface; Table 2-1 Overview of the most important changes (Page 14)".
- The field devices are configured using SIMATIC PDM in the PCS 7 project.
- The Management Console is able to access the SIMATIC PDM data.

The Management Console only determines the data of field devices that is relevant for the inventorying.

- In a system where field devices are configured, to get the complete online inventory data install PDM and inventory data must first be determined with PDM.
 - The inventory data for redundant field devices is also determined with PDM.
 - The inventory data of the field devices is always determined from the project.
 - The online display does not determine data from field devices that are in process mode, so that a load is not placed on communication with the automation system and/or with the field devices.
 - If inventory data from field devices is determined, only the following information about the field device is available:
 - Plant designation (HID/TAG)
 - Description (if available)
 - Device type
 - Firmware version
 - Hardware version
 - Article number / name
 - Message (if available)
-

Note

Inventory data of CP device types

The following inventory data of a PCS 7 project on an engineering station can be determined for CP device types:

- IP and MAC address for CP16x3
 - IP and MAC address for CP443-1
-

Note

Interface module shown multiple times

If the "Configuration via PDM" option is activated in the "General" tab for an interface module in HW Config, this interface module is shown multiple times in the plant view:

- "Configuration via PDM" option not activated (default)
 - The interface module is shown with lower-level field devices on the automation system.
 - "Configuration via PDM" option activated
 - The interface module is shown with lower-level field devices on the automation system.
 - For field devices, the interface module is shown with lower-level field devices.
-

Note

Inventory data of Process objects

The following inventory data of a PCS 7 project on an engineering station can be determined:

- Process Object count
- System ID (when available)

Procedure

1. Select the object for which you want to determine inventory data.
 - Multiproject
 - Project

Select the object for which you want to determine station data:

 - Automation System
2. Select the **Determine inventory data/Determine station data** command in the shortcut menu for the object.
The "Determine inventory data" dialog window opens.
3. Read the information displayed on the "Determine inventory data (1/2) – Condition for determining inventory data" dialog window and select "I have made sure that no changes will be made to PCS 7 projects" to continue with determining inventory data.
4. Select one of the options in "Determine inventory data (2/2) – Specify the data source" dialog window:

Options	Meaning
"Determine inventory data from configuration data (offline)" check box (default setting)	The data is determined based on the PCS 7 project available on the engineering station.
"Determine inventory data from device data (online/PDM)" check box	The data is obtained from the PCS 7 plant including the field devices.

Note the following:

<p>NOTICE</p> <p>Functions of the engineering station are disabled</p> <p>While inventory data is being determined, the SIMATIC Management Console disables the functions on the engineering station that are required for processing the PCS 7 project.</p> <p>Make sure that the PCS 7 project does not need to be processed. Actions in SIMATIC manager, HW Config and NetPro are disabled.</p>
--

5.6 Determine inventory data

5. Click "Finish".
6. If "Determine inventory data from configuration data (offline)" as the data source has been chosen, the below dialog box is displayed. Select "Yes" to continue.

Note

While determining inventory data from configuration data (offline), it overwrites the existing online inventory plant data. Select "Determine inventory data from device data (online/PDM)" to view the updated online plant data.

The inventory data is determined.

NOTICE
Inventory data is not determined
Please note that inventory data is not determined when the Management Console is ended during determination of inventory data.

Note**Progress display**

The duration of the process depends on the number and availability of the plant components.

The progress of actions is indicated:

- The symbol "Action running" is displayed for the status of a computer during an action.
 - The symbol "Action running" is displayed for a group while actions are running for a computer.
Communication errors are only displayed directly on the computer.
-

Note**Module properties in the plant view**

For modules, the configured properties can be found in the "Inventory data" tab. Therefore, it is possible that the displayed properties may differ for the same modules.

Result

After the inventory data was successfully determined, it is shown in the detail view. Detailed information is displayed within the group at the computer symbol. Information on the symbols is available in the section "Symbols in the plant view (Page 50)".

Canceling determination of inventory data

If the function "Determine inventory data" is being executed in the plant view, the command "Cancel determination of inventory data" can be selected from the shortcut menu.

Note

Data obtained

Data already obtained is discarded.

Additional information

- Section "Exporting inventory data in the plant view (Page 111)"
- Section "Determining the cause (Page 123)"
- Section "Determine inventory data" not executed (Page 128)"
- Section "External components" (Page 148)

5.6.3.5 Exporting inventory data in the plant view

The Management Console exports the inventory data of objects in the plant view automatically after successful determination of inventory data. Export is possible for the following base objects:

- Multiproject
- Project

Exported data

The following data is exported depending on the selected basic object:

- The determined inventory data for the selected base object is exported.
- Links to the Internet are provided for additional information about Siemens products.
- Export inventory data to an XML file using "Project inventory data export..." feature.

Requirement

- The inventory data for the basic object has been determined.
- For additional information refer "Determining inventory data in the plant view (Page 106)".

Procedure

Export the information shown in the details area to a file.

1. Select the basic object and choose one of the following actions:
 - Select the **Export inventory data** command in the shortcut menu
 - In the toolbar, click the "Export inventory data" button.
 - Click the "..." button:
The "Export inventory data" dialog window opens.
 - Select the folder in which the file is to be saved.
 - Change the file name if required.
2. Click "OK".
The information is exported.

The file name of the export inventory data file is displayed in the format: <default folder path>_<file name>_<time stamp>.

Note

Location path for the export inventory data can be specified in the "Inventory Export" tab. For more information see, "Settings...". This setting is applicable only for automatically generated export inventory data files.

The file name of the exported inventory data determined from configuration data and device data are displayed in the format: <configuration data>_<Projectname>_<date and time> and <Online device data>_<projectname>_<date and time>.

Opening exported inventory data

The exported inventory data can be opened for further use:

The recommended program is:

- XLSX file: Microsoft EXCEL

Export report contains links to the Internet

Internet links for **Siemens products** can be found in the export report of inventory data from the plant view. If the computer is connected to the Internet, more information about each product can be found via these links. The information is determined based on the article number of the product.

Additional information

Section "Saving information in files (Page 128)"

Section "Identifying errors (Page 123)"

5.6.4 Determining information for computers

Details area - Inventory data

If a computer is selected in the project view, data on the selected computer is displayed in the details area in the "Network view" tab.

Actions for computer

- Section "Determining inventory data in the network view (Page 101)"
- Section "Exporting inventory data in the network view (Page 102)"

5.6.5 Filter for inventory data

5.6.5.1 "Inventory data profile wizard" overview

The Management Console allows the user to compare ACTUAL device configurations with saved device configurations.

As a filter for the comparison, apply inventory data profiles that is created with the inventory data profile wizard.

Inventory data profile

An inventory data profile is a configurable filter for inventory data in the Management Console. Several parameter sets can be created per inventory data profile. When an inventory data profile is applied to the inventory data of a view of the Management Console, the result is automatically exported to an XLSX file.

Application examples:

- Comparing determined inventory data with an inventory data profile (software and hardware information).
- Determining data of all CPUs of a PCS 7 plant in preparation for the firmware update.
- Determining all computers on which a specific operating system is installed.

Basis for an inventory data profile

- Determined inventory data is the basis for the inventory data profile:
 - Specific inventory data is available on the Management Console. This inventory data has been determined in the required view. For additional information refer "Determine inventory data (Page 98)".
 - The function "Determine inventory data" has been successfully completed for the view-specific object:

View	Object
Network view	Computer or network
Plant view	PCS 7 project of the associated engineering station

- Known data is the basis for the inventory data profile (e.g., article number of a device)

Actions in the "Inventory data profile wizard" dialog

Create inventory data profiles in the "Inventory data profile wizard" dialog.

The "Inventory data profile wizard" includes the following dialogs:

1. Select view and action (Page 114)
2. Create/change inventory data profile (Page 115)

The following actions are possible:

 - Create parameter set
 - Change parameter set
 - Delete parameter set
 - Import parameter set
3. Save and/or export inventory data profile (Page 119)

Apply inventory data profile

Inventory data profiles can be applied to inventory data of a selected view. The following actions are possible:

- Apply inventory data profile to inventory data from the network view
- Apply inventory data profile to inventory data from the plant view

For additional information refer "Apply inventory data profile... (Page 119)".

5.6.5.2 Dialog "Inventory data profile wizard (1/3) - Select view and action"

The Management Console allows you to compare ACTUAL device configurations with saved device configurations.

Creating/loading/deleting the inventory data profile

1. Select the menu command **Options > Inventory data profile wizard... .**
The "Inventory data profile wizard 1/3 - Select view and action" dialog opens.
2. Select the view containing the determined inventory data on the Management Console:
 - Network view
 - Plant view

Note

Selected view

- If the current inventory data has been determined in the network view, an inventory data profile cannot be created for data of the plant view.
 - To create an inventory data profile based on known data (without determined inventory data), the view with the required inventory data is to be found.
-

3. Select from the following options:
 - Create new inventory data profile
 - Load inventory data profile (e.g. to adapt this inventory data profile)
The view-specific inventory data profiles can be found in the drop-down list that opens.
 - Delete inventory data profile
 - Import inventory data from XML file (e.g. to adapt this inventory data profile)
Inventory data profiles created by an export can be imported and edited.
4. Click "Next".
The "Inventory data profile wizard (2/3) - Create/change inventory data profile" dialog opens.

5.6.5.3 Dialog "Inventory data profile wizard (2/3) - Create/change inventory data profile"

This dialog is in the inventory data profile wizard.

Inventory data profile

An inventory data profile is a configurable filter for inventory data in the Management Console. Several parameter sets can be created per inventory data profile. When an inventory data profile is applied to the inventory data of a view of the Management Console, the result is automatically exported to an XLSX file.

Application examples:

- Comparing determined inventory data with an inventory data profile (software and hardware information).
- Determining data of all CPUs of a PCS 7 plant in preparation for the firmware update.
- Determining all computers on which a specific operating system is installed.

"Name for the inventory data profile" input box

- If "Create new inventory data profile" option is chosen, a name must be entered in the input box "Name for the inventory data profile".

Note

Naming conventions

The following special characters are allowed in the name: Space, underscore, dash, period.

- If "Load inventory data profile" option is chosen, an existing inventory data profile must be selected in the dropdown list.
- If "Import inventory data profile from XML file" option is chosen, an inventory data profile file must be selected at its storage location using the "..." button.
 File type: XML file
 An inventory profile file can be recognised by its name:
 InventoryDataProfile_SIMATICSoftware_<... Version>.xml
 After the inventory data profile file has been selected, the name of the imported filter is displayed: SIMATICSoftware_<... Version> (e.g. SIMATICSoftware_<...> V8.2)

Note

Inventory data profile file in the PCS 7 media

You can find a file for pre-defined, version-specific filters:

- Additional Products/SMMC

Copy this file to the PC and make it available as a filter using the "Import inventory data profile" option.

Parameter set

1. Adapt the parameter set in the table. The following actions are possible:

- Create parameter set
- Change parameter set
- Delete parameter set

Execute the following actions:

Use the examples in the table below for orientation.

Table 5-6 Example 1: Simple parameter set - Determine "Installed SIMATIC software"

Logic operation	Category	Subcategory	Field	Operand	Value
AND / OR	Category (1)	Subcategory (1)	Field (1)	Operand (1)	Value (1)
	Installed software	SIMATIC software	Name	not equal to	?

Table 5-7 Example 2: Simple parameter set - Determine "Installed SIMATIC BATCH software"

Logic operation	Category	Subcategory	Field	Operand	Value
<i>Example 2: Simple parameter set - Determine "Installed SIMATIC BATCH software"</i>					
	Category (1)	Subcategory (1)	Field (1)	Operand (1)	Value (1)
	Installed software	SIMATIC software	Name	Includes	BATCH

Table 5-8 Example 3: Extended parameter set: Determine "Installed SIMATIC BATCH software prior to version 8.2"

Logic operation	Category	Subcategory	Field	Operand	Value
AND / OR	Category (1)	Subcategory (1)	Field (1)	Operand (1)	Value (1)
	Installed software	SIMATIC software	Name	Includes	BATCH
	Category (2)	Subcategory (2)	Field (2)	Operand (2)	Value (2)
AND	Installed software	SIMATIC software	Version	older than	8.2.0.0

Table 5-9 Example 4: Extended parameter set: Determine automation systems in which certain modules are combined, e.g. "CPU 410-5H" and "CP 443-1 Advanced".

Logic operation	Category	Subcategory	Field	Operand	Value
AND / OR	Category (1)	Subcategory (1)	Field (1)	Operand (1)	Value (1)
	Plant inventory data	CPU	Device type	Includes	CPU 410-5H
	Category (2)	Subcategory (2)	Field (2)	Operand (2)	Value (2)
AND	Plant inventory data	CP	Device type	Includes	CP 443-1

Note

Drop-down list "AND / OR" (logic operation)

If a logic function is selected in the "AND / OR" column in the drop-down list, parameter set (1) is expanded by 5 parameters (2). The two lines of the parameter set can be linked with the selected logical function.

Note**Parameters and categories**

The possible parameters depend on both the view in which the inventory data was determined on the Management Console, as well as the categories included in the available inventory data:

- Inventory data (from the network view or from the plant view)
 - Installed SIMATIC software
 - Installed third-party software
 - Installed version of Microsoft .NET Framework with version number (Select **Inventory data > Installed software > Installed third-party software**).
 - Microsoft patches with Product name, Publisher, KB, installation date, and title.
 - Installed security software with manufacturer, product, version (Symantec Endpoint Protection, McAfee Agent, McAfee Endpoint Protection Suite, Trend Micro OfficeScan Corporate Edition V11.0).
 - Licenses
 - From plant inventory data (configuration information)
-

Note**Value for inventory data profile based on known data**

Make sure to find the exact value to filter the inventory data. Alternatively, select the PCS 7 installation packages to filter the inventory data.

Example:

If the installed software is determined, insert the "Release version" in the "Value" field. The "Versions" drop-down list offers values that have not been filtered for the product (SIMATIC BATCH). The contained values represent the technical versions of the installed software products.

Recommendation:

Determine the inventory data before you create specific inventory data profiles to determine the required data more easily.

Create/modify/delete parameter sets

The selection of the parameters of a parameter set takes place according to the information determined with the "Determine inventory data" function.

- The combinations within a parameter set result from the selection in the "Category" and "Subcategory" drop-down lists.
- Select the Column, Operand and Value settings to limit the search.

Several parameter sets can be created for an inventory data profile. All parameter sets contained in an inventory data profile are combined by the "OR" logic operation.

Creating a parameter set in the profile table

- Adapt the lines of the parameter set.
- Then click "Add".

Changing a parameter set in the profile table

- Double-click a row in the profile table.
- Adapt the lines of the parameter set.
- Click "Change". This applies the change to the parameter set.

Removing a parameter set from the profile table

- Select a row in the profile table.
- Click the "Remove" button.

Finish settings

Click "Next".

The "Inventory data profile wizard (3/3) - Save inventory data profile" dialog window opens.

5.6.5.4 Dialog box "Inventory data profile wizard (3/3) - Save inventory data profile"

This dialog is in the inventory data profile wizard.

Categories in the export file (XLSX file)

The categories configured as filters in the inventory data profile are displayed.

Save / export inventory data profile

1. Select the option boxes in the "Categories in the export file" area for the desired inventory data.
2. Make the settings for the profile:
 - "Save" check box
The inventory data profile is saved in the Management Console.
 - "Export" check box
Click "..." to select the folder where the inventory data profile is to be exported.
The inventory data profile is stored as an XML file in the file system.
3. Click "Finish".

5.6.5.5 Apply inventory data profile...

The Management Console allows users to compare ACTUAL device configurations with saved device configurations.

Apply an inventory data profile to the determined inventory data of a selected view for the comparison. The following actions are possible:

- Apply inventory data profile to inventory data from the network view
- Apply inventory data profile to inventory data from the plant view

Applying an available inventory data profile (XML file)

When an inventory data profile is available in an XML file, you must import the inventory data profile from the XML file to the Management Console prior to the application. For additional information refer "How to import an inventory data profile from an XML file (Page 120)".

Requirements

- The function "Determine inventory data" has been successfully completed for the view-specific object. The inventory data has been determined in the required view (network view or plant view). For additional information refer:
 - Section "Determining inventory data in the network view (Page 101)"
 - Section "Determining inventory data in the plant view (Page 106)"
- The required inventory data profile has been created in the Management Console. For additional information refer ""Inventory data profile wizard" overview (Page 113)".

Procedure

1. Select the desired object in the tree structure.
 - Network view: Network, group, computer
 - Plant view: Multiproject, subproject
2. Select the "Apply inventory data profile" command in the shortcut menu. The "Apply inventory data profile" dialog box opens.
3. Select the desired inventory data profile from the "Inventory data profile" drop-down list.
4. Click "..." to select the folder in which the export file is to be saved. For additional information refer "Saving information in files (Page 128)".
5. Click "Apply".
The inventory data is filtered and the results are saved in the export file.

Note

Message

If no matches are found for the created inventory data profile, you receive a message.

Additional information

Refer Comparing SIMATIC hardware versions (Page 122)

5.6.5.6 How to import an inventory data profile from an XML file

The function "Import inventory data profile" is best suited as preparation for the comparison of operator's own inventory data with other inventory data.

Requirements

- An inventory data profile was exported as XML file.
For additional information refer "Dialog box "Inventory data profile wizard (3/3) - Save inventory data profile" (Page 119)".
- Access to the XML file is possible in the Management Console.

Applying an available inventory data profile

- Import the provided inventory data profile from the XML file.
For additional information refer "Dialog "Inventory data profile wizard (1/3) - Select view and action" (Page 114)"; "Import inventory data profile from XML file" option
The imported inventory data profile is available in the inventory of the inventory data profiles of the Management Console.
- In the next step, apply the inventory data profile to the operator inventory data.
For additional information refer "Apply inventory data profile... (Page 119)".

5.6.6 Comparing SIMATIC software versions

Compare SIMATIC software versions overview

Compare SIMATIC software version is a feature which allows the users to compare the version of the installed software with the latest version of the software as updated in the recent PCS 7 bundle. The comparison excel sheet generated through this feature displays the difference between the two versions of the software. This allows the user to view the list of software which is different from the version specified in the version definition file (XML) and also provides the link to update the software as defined in the version definition file.

Requirements

- The function Software Compare is enabled only for licensed computers.
- The version reference file is provided in the PCS 7 website.

Procedure

To compare software versions of installed software to the latest version of software:

1. Open the Network view in the Management Console.
2. Select a network, computer or a group of assigned computers which are to be compared.
3. In the context menu, select the command "Compare SIMATIC software versions...".

4. On the "Compare SIMATIC software version" window, click the "..." button to select the version definition file.

Note

- The version reference file which consists of the standard versions of the software is provided with the PCS 7 bundle in .XML format. This XML file must be selected for software compare.
- The version reference file for the latest PCS 7 software can be downloaded from the PCS 7 website. This XML file must be selected for software compare."

5. Select the cover page for the software compare file from the drop-down list.
6. Click the "..." to select the storage path for the software version compare export excel sheet.

Note

The name of software version compare export excel sheet is saved in the format: ComparedVersion_<date and time>.xlsx file.

The software version compare is successfully completed.

In the ComparedVersion_<date and time>.xlsx file, the General Project Information and Comparison of Installed SIMATIC SW can be viewed. The Comparison Installed SIMATIC SW sheet lists the Computer name, Product name, Installed version, Latest version of the software and if there is a difference between the versions.

In the version reference file, certain software is listed as Ignored Profiles. The software listed under Ignored Profiles are not displayed in the compared version excel file.

Note

After the software version compare is successfully completed, status of the software compare can be viewed in the "Alarms" tab.

The updated and outdated software can be viewed in the "Installed SIMATIC software" tab. Also, the software details of the Ignored Profiles can be viewed on the "Installed SIMATIC software" tab.

For additional information see "Inventory data" tab (Page 56)

5.6.7 Comparing SIMATIC hardware versions

The SIMATIC Management Console provides a way to compare the existing modules in a plant project/multiproject with the latest hardware and firmware versions of the modules. An excel report is generated consisting of the latest hardware and/or firmware versions for the outdated modules. The same is visible in the SMMC "Plant view" in the project/multiproject level.

Requirements

- SIMATIC Management console V9.1.1, latest update.
- A plant is added and project inventory data is determined.
- Download the XML reference file (Item 6) from here (<https://support.industry.siemens.com/cs/ww/en/view/109794407>).

Procedure to compare hardware versions

To compare the versions of the installed hardware and the latest hardware available:

1. Open the Plant view in the Management Console.
Refer Add Plant (Page 104) for more information.
2. Click the "... " to browse the storage path of the downloaded XML reference file.
3. Select "Compare SIMATIC hardware versions..." option from the context menu in project/multiproject level.
4. Select the cover page for the hardware compare file from the drop-down list.
5. Click the "... " to browse the storage path for the hardware version compare export excel sheet.
6. Click "OK".
The confirmation window when online device data is not present is displayed.
7. Click "Yes".
The output of the hardware comparison is visible on the tool also can be exported as an excel sheet.

5.7 Identifying errors

5.7.1 Determining the cause

If an unexpected behavior is observed in the SIMATIC Management Console, following points are to be checked:

- SIMATIC Management Agent not started (Page 124)
- Management Console cannot be operated (Page 124)
- Computers are not recognized
- Computer is not recognized by the Management Console (Page 124)
- Software cannot be installed (Page 125)
- Setup program is not found (Page 126)
- Setup package is not run (Page 126)
- Function cannot be operated (Page 128)

5.7 Identifying errors

- Requirement for the "Determine inventory data" function (Page 100)
- "Determine inventory data" not executed (Page 128)

5.7.2 SIMATIC Management Agent not started

The Management Console cannot be operated.

Question	Procedure
Have you installed a new Management Console?	Activate the "SIMATIC Management Agent" service is on the computer (see chapter "Installing SIMATIC Management Agent (Page 31)").

5.7.3 Management Console cannot be operated

The Management Console cannot be operated.

Possible messages:

- The action cannot be executed. The number of computers exceeds the number of available license keys. For this reason, computers are to be removed from the assignment.
- No license exists for the SIMATIC Management Agent.

Question	Procedure
Are sufficient license keys available for the "SIMATIC Management Agent" service on the computer with the Management Console?	<p>Check the number of assigned target computers and available license keys on the computer of the Management Console.</p> <p>Perform one of the following actions so that the Management Console can be operated:</p> <ul style="list-style-type: none"> • Install additional license keys for the "SIMATIC Management Agent" service on the computer with the Management Console. • Remove target computers from the assignment to the Management Console.

5.7.4 Computer is not recognized by the Management Console

Check the following:

Question	Procedure
Has the computer with the Management Console been replaced?	Check whether the computer is assigned to another Management Console.
Has the computer been moved from workgroup to domain or are there any changes in the domain?	Restart Management Console computer.
Is there a network connection to the computers?	Open "cmd" using the search box in the start menu. In the DOS window, enter the ping <IP address>
Is the computer prepared for access via the Management Console?	Check whether the "SIMATIC Management Agent" service is installed and activated/started.

Question	Procedure
Is the valid pre-shared key entered on the target computer?	Check the pre-shared key.
Is the IP address or Windows hostname changed in the SIMATIC Management Agent target computer?	<p>If the IP address or hostname of a target computer which was already assigned to Management Console is changed, then to reconnect with the Management Console:</p> <ol style="list-style-type: none"> 1. Disable assignment of the target computer. 2. Reboot the Management Console. 3. Assign the target computer again.

5.7.5 Software cannot be installed

Check the following:

Question	Procedure
Has the computer been assigned to the Management Console?	Check the Management Console to see which icon is displayed for target computers.
Is the computer prepared for access via the Management Console?	Check whether the "SIMATIC Management Agent" service is installed and activated/started.
Is the Management Agent on the target computer up to date?	Check the Management Console to see which icon is displayed for target computers.
Is the current user authorized to carry out the action?	Check the permissions in the user management of the domain or locally on the computers.
Was the Management Console restored from a backup?	If the Management Console was restored from a backup on a newly installed or a different computer, software packages in the backup must be created again.

5.7.6 Setup cannot be started

If you see the message "Setup cannot be started ..." on the console, check the following:

Question	Procedure
Is another setup process (Example: A Security software) running on the target computer?	<p>Check if another setup process (Example: A Security software) is running on the target computer.</p> <ul style="list-style-type: none"> • If no other setup process is running, reboot the target computer. • If another setup process (Example: A Security software) is running, wait until it is completed and then reboot the target computer.
Does the user on the target computer have permission to access the target system?	<p>Check the following on the target computer:</p> <ul style="list-style-type: none"> • Is the user account set up? • Is the user account active? • Have the administrative permissions been entered?
Does the user have administrative rights on the target system?	Increase the level of the user's permissions.

5.7 Identifying errors

Question	Procedure
Does the user have permission to access the share location on which the software is stored?	Allow access to the target system.
Are the installation requirements on the target system met?	Ensure that the installation requirements are met.

5.7.7 Unable to create setup package

Check the following:

Question	Procedure
Unable to create setup packages	Possible Cause: <ul style="list-style-type: none"> • Low bandwidth (less than 256 Kbit/s) of the connection to the storage of the setup files. Check the strength of the connection.

5.7.8 Setup program is not found

Check the following:

Question	Procedure
Is the setup file available in the storage location?	Check the software storage location (network path and name of the setup file).

5.7.9 Setup package is not running

Check the following:

Question	Procedure
Are the necessary software packages available?	Check the software storage location (network path and name of the setup file).

5.7.10 Computer is not ready for installation

Check the following:

Question	Procedure
Are processes running on the installation computer that may prevent installation of the software packages?	<p>Check the redundancy status. Pay attention to possible effects on process mode (e.g. if redundancy switchover is required).</p> <p>Note: Redundancy status prevents software update In process mode, the servers of a redundant server pair can only be installed one after the other for availability reasons (mutual exclusion of readiness for installation).</p> <ul style="list-style-type: none"> • When a server pair is in process mode, simultaneous update of both computers using the Management Console is blocked in the Management Console. • The redundant partner is not available. • The software cannot be installed on the current master because the redundancy switchover is not possible. <p>If PCS 7 software packages are being updated prior to version 8.1 on computers on which SIMATIC BATCH or SIMATIC Route Control is installed: Check whether process mode is activated.</p> <p>Note: Process mode prevents additional actions To update these software packages while using the SIMATIC Management Console, you must ensure that process mode of all software packages is ended for these PC stations.</p>
Setup cannot be installed?	<p>Check whether the setup is suitable for installation with the Management Console. The software update using the Management Console cannot be performed for some software packages of PCS 7. The following software packages can only be distributed as new installations with the SIMATIC Management Console:</p> <ul style="list-style-type: none"> • Process Historian • Information Server • OpenPCS 7 (update of the "SIMATIC Management Agent" service possible as of installed version 8.1). • Web Option for OS (Web Client or Web Diagnostic Client: Updating the "SIMATIC Management Agent" service is possible as of installed version 8.1). <p>These software packages need to be manually installed for a software update.</p>
Is the installation computer a server?	<p>Make sure that the server is not in the "fault" state.</p>
Have you checked the following causes?	<ul style="list-style-type: none"> • Is the computer prepared? <ul style="list-style-type: none"> – Management Console cannot be operated (Page 124) – Setup program is not found (Page 126) – Setup package is not running (Page 126) • Is the computer available? <ul style="list-style-type: none"> – Computer is not recognized by the Management Console (Page 124)

5.7.11 Function cannot be operated

Check the following:

Question	Procedure
Is the current user entered in the "SIMATIC Management Users" user group on the Management Console computer and the target computer?	Check the permissions in the user management of the domain or locally on the computers.
Is the inoperable function the setup management?	Check that all installations are complete. For additional information refer "Running installations... (Page 137)".

5.7.12 "Determine inventory data" not executed

Check the following:

Question	Procedure
Are user-specific names used in the project with characters that are not permitted?	Check the user-specific names in the project. For additional information refer "Requirement for the "Determine inventory data" function (Page 100)"
Should the inventory data of switches be determined online?	Check whether the conditions for determining online data have been met: <ul style="list-style-type: none"> • A user is logged on to the engineering station. • The user logged on to the engineering station is a member of the local Windows group "SIMATIC NET".
Should the inventory data of field devices be determined online?	The online display does not include the determination of field devices that are in process mode. This means that a load is not placed on communication to the automation system or to the field devices.
Should the inventory data of field devices be determined offline?	Check whether the conditions for determining data of field devices have been met: <ul style="list-style-type: none"> • SIMATIC PDM (as of V8.0) is installed on the engineering station. • The field devices are configured using SIMATIC PDM in the PCS 7 project. • The Management Console is able to access the SIMATIC PDM data.

5.8 Saving information in files

Using the Management Console, you can export information in files.

Information

Information	Preparation	Procedure	File format
Event log	None	<ol style="list-style-type: none"> 1. Menu command File > Event display (Page 60) 2. "Export" button 3. Select path and enter file name 4. Save 	<ul style="list-style-type: none"> • CSV
Alarm protocol	None	<ol style="list-style-type: none"> 1. Select the shortcut menu command Export in the message list. 2. Select path and enter file name 3. Save 	<ul style="list-style-type: none"> • CSV
Inventory data	Menu command Determine inventory data	<ol style="list-style-type: none"> 1. Select object 2. "Export inventory data" shortcut menu command Exporting inventory data in the network view (Page 102) or button 	<ul style="list-style-type: none"> • XLSX
Inventory data filtered using an inventory data profile	Menu command: <ul style="list-style-type: none"> • Determine inventory data • Inventory data profile wizard • Apply inventory data profile 	<ol style="list-style-type: none"> 1. Select object (in the view in which the inventory data was obtained) 2. Shortcut menu command Apply inventory data profile... (Page 119) 3. Select inventory data profile 4. Select path and enter file name 5. Apply 	<ul style="list-style-type: none"> • XLSX
Installation report	Menu command Create installation report	<ol style="list-style-type: none"> 1. Menu command Options > Create installation report... (Page 94) 2. Select a reporting period 3. Select path and enter file name 4. Save 	<ul style="list-style-type: none"> • PDF
License report	None	<ol style="list-style-type: none"> 1. Menu command Options > Create license report... (Page 150) 2. Select path and enter file name 3. Save 4. Forward file to Siemens contact person 	<ul style="list-style-type: none"> • XLSX
Project inventory data export	<ul style="list-style-type: none"> • "Add plant" overview (Page 104) • "Dialog window "Add plant (1/2) Specify Engineering Station" (Page 105) • "Dialog box "Add plant (2/2) – Select projects" (Page 105) • "Determining inventory data in the plant view" (Page 106) 	<ol style="list-style-type: none"> 1. Select "Options> Project inventory data export..." 2. Select the project to export data in XML format. 3. Select the cover page for your project from the "Please select the cover page" drop down list. Select the storage location for your XML file from the "Please select the storage location" button and click "OK". 	<ul style="list-style-type: none"> • XML

Note

Visualization of the files

- To read PDF files, a PDF reader that is compatible with PDF 1.7 (ISO32000-1:2008 PDF) is required.
 - We recommend Microsoft EXCEL for editing the XLSX and CSV files.
-

Menus and dialog boxes

6.1 "File" menu

6.1.1 Back up data...

Following data can be backed up into a file from the SIMATIC Management Console :

- Inventory data of Plants and all the computers that are assigned to the SIMATIC Management console.
- All the events that were logged in by the SIMATIC Management console.
- Setup management related configurations
- All the settings configured under "Options" > "Settings".
- Language settings.

Using the backup file, the data can be restored on any computer on which the Management Console is installed.

Note

Pre-shared key

The pre-shared key valid at the time of the backup is not saved. To restore communication to the connected computers, the currently valid pre-shared key must be known.

Note

Alarms

Alarms recorded by the SIMATIC Management Console cannot be backed up.

Procedure

1. Select the menu command **File > Back up data**.
The "Back up / recover SIMATIC Management database" dialog opens.
2. Select the path and file name for the backup file.
3. Click "OK".

6.1.2 Restore data...

Using the backup file, following data can be restored on any computer on which the SIMATIC Management Console is installed:

- Inventory data of Plants and all the computers that are assigned to the SIMATIC Management console.
- All the events that were logged in by the SIMATIC Management console.
- Setup management related configurations
- All the settings configured under "Options" > "Settings".
- Language settings

Note

Restoring data from a Management Console with assigned computers

- First use the "Disable console assignment (Page 133)" menu command before restoring the data.
 - The valid pre-shared key is not included in the backup.
To restore communication to the connected computers, the currently valid pre-shared key must be entered.
-

Procedure

1. Select the menu command **File > Restore data**.
The "Back up / recover SIMATIC Management database" dialog opens.
2. Select the path and file name of the back up file.
3. Click "OK".

Note

Consider the following factors while restoring a back up file in the SIMATIC Management Console computer:

- Data present in the SIMATIC Management Console are overridden with data in the back up file.
 - The overridden data cannot be retrieved unless a back up of the data is taken before restoring the back up file.
-

6.1.3 Exit

Exits the Management Console dialog box.

6.2 "Edit" menu

6.2.1 Create group

This menu command is used to create groups in the network view.

Version 1:

1. Select the network object in the network view.
2. Select the menu command **Create group** in the shortcut menu.

Version 2:

1. Select the network object in the network view.
2. Select the menu command **Edit > Create group**.

Result

A folder for a group with the name "New group" is created in the network view.

Recommendation: Rename the new group.

6.2.2 Delete group

This menu command is used to delete groups from the network view structures.

Procedure

1. Select the group in the network view.
2. Select the menu command **Edit > Delete group**.
The computers in the previously selected group are moved to the "Non-assigned computers" folder.

Note

The menu command "Delete group" cannot be used for the "Unassigned computers" group.

6.2.3 Disable console assignment

This menu command is used to cancel the console assignment to all computers in the network.

6.2 "Edit" menu

The console assignment of the Management Console to all computers in the network must be canceled if the Management Console is to be switched to another computer.

Note

All data of the Management Console is deleted.

Requirements

- The user is logged on as the administrator of the Management Console (see section "Managing rights (Page 25)").
- The Management Console is started.

Procedure

1. Select the menu command **Edit > Disable console assignment**.
A note on canceling the console assignment is displayed.
2. Click "OK".
The console assignment is canceled.

Result

Management Console can be started on another computer.

Additional information

Section "Adding computers (Page 63)"

6.2.4 Update network view

This menu command is used to update the displayed information.

Called via keyboard: <F5>

Note

This menu command can only be used on the objects of the network view.

6.3 "View" menu

6.3.1 Network view

This menu command is available when the plant view is displayed in the Management Console.

Calling functions via the shortcut menu

The table below sets out functions which can be run for objects in the network view using the shortcut menu.

Information on the availability of this function can be found in the relevant section of this documentation.

Object	Group functions	Computer-specific functions	Other functions
Network nodes	<ul style="list-style-type: none"> Create group (Page 133) 	<ul style="list-style-type: none"> Adding computers (Page 63) Canceling the assignment of a computer (Page 65) 	<ul style="list-style-type: none"> Reset status (Page 65) Updating the SMAgent Determining inventory data in the network view (Page 101) Exporting inventory data in the network view (Page 102) Apply inventory data profile... (Page 119)
Group	<ul style="list-style-type: none"> Create group (Page 133) Create group (Page 133) Delete group (Page 133) 	<ul style="list-style-type: none"> Adding computers (Page 63) Canceling the assignment of a computer (Page 65) 	<ul style="list-style-type: none"> Reset status (Page 65) Updating the SMAgent Determining inventory data in the network view (Page 101) Exporting inventory data in the network view (Page 102) Apply inventory data profile... (Page 119) Installing SIMATIC software (Page 85) Updating SIMATIC software (Page 88) Create installation report... (Page 94) Microsoft Software Updates installation (Page 95) Comparing SIMATIC software versions (Page 121)

6.3 "View" menu

Object	Group functions	Computer-specific functions	Other functions
Assigned computers	-	<ul style="list-style-type: none"> • Adding computers (Page 63) • Canceling the assignment of a computer (Page 65) 	<ul style="list-style-type: none"> • Reset status (Page 65) • Updating the SMAgent • Determining inventory data in the network view (Page 101) • Exporting inventory data in the network view (Page 102) • Apply inventory data profile... (Page 119) • Installing SIMATIC software (Page 85) • Updating SIMATIC software (Page 88) • Create installation report... (Page 94) • Microsoft Software Updates installation (Page 95) • Comparing SIMATIC software versions (Page 121)
Non-assigned computers	-	<ul style="list-style-type: none"> • Assigning computers (Page 62) 	-

-: Function not available

Reset status

The "Reset status" function resets the status displayed by the SIMATIC Management Console. Application example:
 An already completed action is displayed with "Action is running". This means that additional actions are blocked on this computer.

6.3.2 Plant view

This menu command is available when the network view is displayed in the Management Console.

Select the plant view to use the Management Console to determine the inventory data of PCS 7 plants.

Note

Following installation of the Management Console

The plant view only shows the "Plants" node.

Preparing the plant view

The following steps must be taken to display information about objects of the PCS 7 plants in the plant view:

1. Add the engineering stations to the Management Console.
For more information refer "Settings... (Page 140)".
2. The PCS 7 projects of the plants are available.
For more information refer "Dialog box "Add plant (2/2) - Select projects" (Page 105)".

Calling functions via the shortcut menu

The table below sets out functions which can be run for objects in the plant view using the shortcut menu.

Requirements:

- One of the following objects (or a lower-level object) is selected in the tree view.
- The inventory data has been determined for the object or a higher-level project.

Object	Determine inventory data	Export inventory data	Remove <Object>	Reset status
Multiproject	X	X	X	-
Subproject of a Multiproject	X	X	-	-
Single project	X	X	X	-
Engineering station	-	-	X	X

X: Function can be executed

-: Not possible

Additional information

- Section "Starting the Management Console (Page 39)"

6.3.3 Event display...

This menu command opens the "Event viewer" dialog box.

6.3.4 Running installations...

This menu command can be used to check whether installations started with the Management Console are currently still running.

Displaying the status of installations

Select the menu command **View > Running installations**.

The "Overview of running remote installations" dialog opens.

The table in the dialog shows the following information in every filled line:

- Date / Time: Start of the installation of the product shown in the "Description" column
- Computer name: Name of the computer on which the installation has started
- Event (short description): Featured setup package or setup
- Description: Displays the currently running installation step and the associated product
- User name: Name of the Windows user who started the installation of the setup package or the Setup program.

The update of the "SIMATIC Management Agent" service via the shortcut menu command "Update or repair SMAgent (Page 67)" is not displayed in the "Overview of running remote installations" dialog.

Table is empty?

If there is no entry in the table, all remote installations that were started with the Management Console are terminated when the menu is opened. For more information refer "Event display (Page 60)".

6.3.5 SMAgent license display...

The following information is displayed in the dialog box:

- Number of occupied licenses
The number of used "SIMATIC Management Agent" license keys shows how many computers are connected to the Management Console.
- Number of free licenses
The number of free "SIMATIC Management Agent" license keys shows how many additional computers can be connected to the Management Console.

6.4 "Options" menu

6.4.1 Language...

Language displayed in the menus and dialog boxes

The language displayed in the menus and dialog boxes is set as follows after installation of the Management Console:

- **Operating system language**
If the menus and dialog boxes are available in the language of the operating system.
- **English**
If the menus and dialog boxes are not available in the language of the operating system.

Switching language in menus and dialog boxes

1. Select the menu command **Options > Language**.
2. Select one of the available languages.
3. Click "OK".

6.4.2 Set pre-shared key...

Use the dialog box to specify the pre-shared key for the communication of computers with the Management Console.

Procedure

1. Pay attention to the information in the dialog box.
 - To hide the entires from people around, select the check box "Hide characters when typing" (default setting: selected).
 - Enter the new pre-shared key.
 - Enter the new pre-shared key also in the "Confirm new pre-shared key" input box.
2. Click "OK".

Adapting the pre-shared key at a later time

More information on subsequent changes to the pre-shared key on a computer with installed SIMATIC Management Agent in the section "How to change the pre-shared key on a computer at a later time (Page 74)".

6.4.3 Settings...

The **Options > Settings** command is used to specify settings for work with the Management Console.

"Specify Engineering Station" tab

On the "Specify Engineering Station" tab, select the PCS 7 engineering stations where PCS 7 projects are stored. Some information for determining the inventory data is obtained from project data.

Requirement

- The engineering stations are assigned using the Management Console. For more information refer "Assigning computers (Page 62)".

Function	Selection
Preparing the Management Console for evaluating engineering station project data.	<ol style="list-style-type: none">1. In the "Add ES" drop-down list, select the computer name of one or more engineering stations.2. Click on the "Add" button. The computers are added to the list "Available ES".3. Click "OK" <p>Note: Then select the PCS 7 project – or projects – from the plant view. The license name and the process object count can also be found when the project is selected (Only when we determine the inventory data for the added plant).</p>

"SIMATIC Management Agent Setup" tab

Using this tab specify the network path and the name of the setup file to which the software has been copied for updating the "SIMATIC Management Agent" service.

Enter the network path (in UNC notation) and the name of the setup file in the "Network path and name of a setup file" input box.

Note

The functions of the Management Console can only be used on the computers in the network on which the same version of the "SIMATIC Management Agent" service is installed.

"Web server" tab

On the "Web server" tab, select the check box to update or install software through Management Console on a target computer with an active runtime of the web server.

If the check box is selected, the Management Console ends the active runtime of the web server and closes the projects on the target computer and then, the Management Console installs or updates the software on target computers.

Note

If auto-start is enabled on the target computers and in the Management Console, then after the installation of software the projects start automatically.

If the check box on the "Web server" tab is not selected and the runtime of the web server is active, the Management Console does not allow the installation of the software and a  is displayed in the "Status" column as displayed in the below dialog.

"Update device status" tab

In this tab, specify the cycle time for determining the device status. The Management Console attempts to update the required information within the specified time.

Function	Possible values
Setting the cycle time (in minutes) for device status check <ul style="list-style-type: none"> • Default value: 1 min 	<ul style="list-style-type: none"> • 0.5 • 1 • 5 • 10 • 30 • 60

"Update network status" tab

On this tab, specify the cycle time for updating the network status. The Management Console attempts to update the required information within the specified time.

Function	Possible values
Setting the cycle time (in minutes) for updating the network status <ul style="list-style-type: none"> • Default value: 5 min 	<ul style="list-style-type: none"> • 1 • 2 • 5 • 10 • 30 • 60

"SIMATIC Batch" tab

Global settings are required for installing SIMATIC BATCH. These settings enable setups to be executed on the target computers without local entries.

6.4 "Options" menu

For additional information, please refer to the following documentation:

- Section "Computer is not ready for installation (Page 127)"
- SIMATIC BATCH help

"Inventory Data Export" tab

On the "Inventory Data Export" tab, the location to save the automatically generated inventory data export files can be specified.

The inventory data files of objects in both plant and network view are automatically exported and saved only in the specified location.

The automatically generated inventory data export file of objects in a plant and network view are saved in the format:<Project name>_<date and time> and Inventory data_<date and time> respectively.

Cover page for the export inventory data file can also be chosen.

Note

When inventory data export path is not specified in the "Inventory Data Export" tab, by default the automatically generated inventory data export files are saved in the Libraries>Documents folder.

"Cover page" tab

Cover pages can be created for reports and exports with the Management Console. The list displays the names of the configured cover pages.

Objective / Action	Procedure
Add/edit cover page	<ul style="list-style-type: none"> • Click "Add". • Select a cover page entry in the list. Click "Edit". <p>Opens the dialog box "SIMATIC Management Console - Configuring cover page".</p> <ol style="list-style-type: none"> 1. SIMATIC Management Console (1/4) - Configuring cover page Enter the plant-specific information in the dialog box. 2. SIMATIC Management Console (2/4) - Configuring cover page Enter the contact information of the plant operator in the dialog box. 3. SIMATIC Management Console (3/4) - Configuring cover page Enter the contact information of the contact person (Siemens) in the dialog box. 4. SIMATIC Management Console (4/4) - Configuring cover page Enter a comment with up to 500 characters in the input box. This comment will be visible on the cover page.
Delete cover page	<ol style="list-style-type: none"> 1. Select a cover page entry in the list. 2. Click "Delete".

Objective / Action	Procedure
Export cover page to a file	<ol style="list-style-type: none"> 1. Select a cover page entry in the list. 2. Click "Export". 3. Select the export path.
Import cover sheet into list	<ol style="list-style-type: none"> 1. Click "Import". 2. Select the path of the import file.
Change name of a cover page	<ol style="list-style-type: none"> 1. Select a cover page entry in the list. 2. Click on the name. The area changes into an input area. 3. Enter a name.

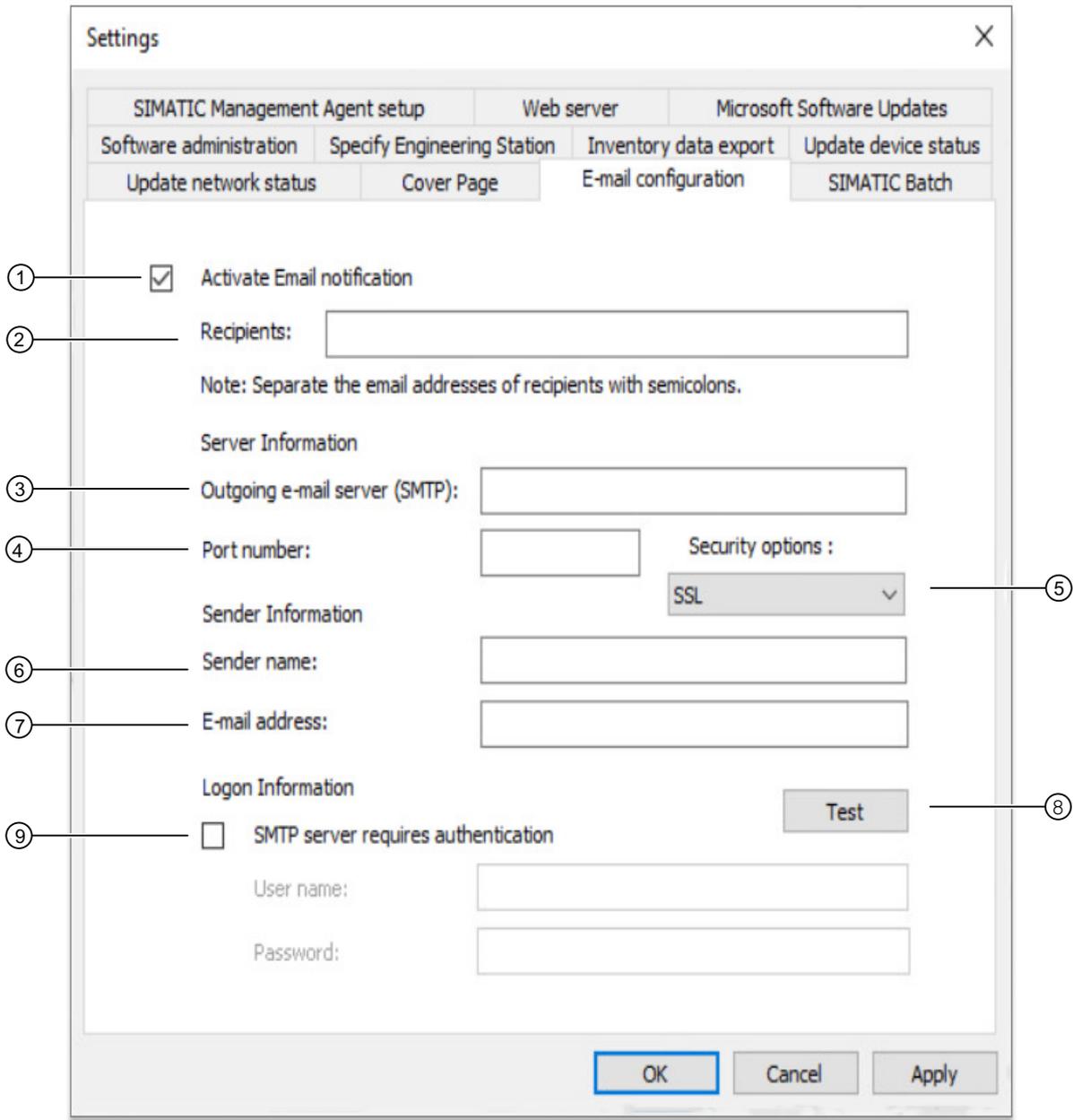
"E-mail configuration" tab

This tab allows the operators to enable and configure an automated e-mail system, that sends out alerts to the listed operators as and when critical Windows defender events occur in any of the computers present in the network. The feature lets the operators configure the following e-mail settings:

1. Check or uncheck the checkbox to enable or disable the feature.
2. List of operators to be alerted when critical events occur.
3. Outgoing SMTP server through which the e-mails are to be sent.
4. SMTP SSL/TLS port number through which the secured e-mail transmission should take place. In general, port 465 is used.
5. SMTP protocol comes without a native security layer. So, we recommend using an encryption protocol **SSL** (Secure Socket Layer) or **TLS** (Transport Layer Security).
6. "From name" to be used in the e-mail alerts.
7. "From e-mail address" to be used in the e-mail alerts.
8. This option lets the operator do a test run of the e-mail alert system with the configured settings. Before sending out the test e-mail, SIMATIC Management Console verifies all the settings configured in the tab, and displays corresponding error messages if any of the filled-in data does not fit in the expected standard.
9. When enabled, the operators can provide their username and password, which is later used by the SMTP server to authenticate the e-mail account. When an e-mail is to be sent out by the SIMATIC Management Console, the given credentials are validated. If the credentials are valid, the e-mail will be sent to the listed recipient e-mail addresses.

Note

We highly recommend using an e-mail server that uses SMTP protocol for e-mail transmission.



"Microsoft software updates" tab

This tab allows the operators to configure certain settings that would allow them to postpone the installation of the Microsoft software updates in the respective computers. The settings include- postpone duration, maximum number of postpones and the message window time-out. For more information refer Microsoft Software Updates installation (Page 95).

"Software Administration" tab

This tab allows the operator to enable or disable the option "Software integrity check". This option can be used to check the integrity of the SIMATIC softwares (That facilitates remote installation of SIMATIC softwares, update of SIMATIC Softwares and update of SMAgents on the target computers) before deploying them. For more information refer Integrity check for PCS 7 software (Page 75).

Additional information

For more information refer

- Section "Setup management... (Page 145)"
- Section "Installing SIMATIC software (Page 85)"
- Section "Setup packages (Page 83)"

6.4.4 Setup management...

Only a piece of software can be installed using the Management Console if the software is recognized by the Management Console. Assignment can be done by using the menu command "Setup management" in the "Options" menu.

Following tabs can be found in the "Setup management" dialog:

- "Setups" tab
- "Setup packages" tab

"Setups" tab

The storage location of a software package must be entered in the "Setups" list if it is to be installed with the Management Console.

Note**Providing the software**

- Possible storage location for supplied software:
 - Directories and drives
 - On the local computers or on the network
- The software to be installed is available from **one** shared storage location (shared network path, for example \\<Computer name>\<Shared name>).
- The user of the Management Console must have access to the local drives, external drives or folders. For more information refer "Managing rights (Page 25)".
- Software distributed between more than one media (for example, 2 DVDs) must be copied to the same storage location. This ensures that the media does not need to be changed during software installation.
- Only members of the "SIMATIC Management Administrator" user group can install or update SIMATIC Management Software.
- User must be a member of "SIMATIC Management User" group to create packages.

Name	Path
Plant-specific setup name	Location of the software for SIMATIC product (\\<Compute name>\<Share name>\<Name of setup file>)

Note**Setups that are not integrated in PCS 7 Setup**

These software packages (WinCC Update, for example) can only be installed using the Management Console, if the following requirements are met:

- No input is required in the Setup dialogs during the execution of the setup.
- A setup package has been created for the products.

"Setup packages" tab

Note

Make sure that only the administrator and no other users have write permission for the directory in which the setup files and setup packages for SIMATIC Management Console is located.

Create plant-specific setups for computers in the "Setup packages" tab. For installation on individual computers or groups of computers, select only the required setup packages.

Managing setup

1. Select the menu command **Options > Setup management ...** .
The "Setup management" dialog opens.
2. Select the "Setups" tab.
The "Setups" list appears in the "Setup management" dialog.
The following actions are possible:

Action	Button	Function
Add setup	Add	<p>Enter the plant-specific name for the software package in the dialog. Add the network path (in UNC notation) and the name of a setup file.</p> <ul style="list-style-type: none"> • "... " button: Select the setup file in the subsequent dialog. • "OK" button: Entry is added. • "Cancel" button: No new entry.
Remove setup	Remove	<ol style="list-style-type: none"> 1. Select an entry in the table. 2. Click "Remove". The "Confirm removal" dialog opens. 3. Confirm by clicking "Yes". <p>The software packages are removed from the list.</p>

Note

Select only one setup to create a setup package. The SIMATIC Management Console does not allow selection of multiple setups.

3. Click "OK" to close the dialog.

Note

Confirming license terms and safety instructions

Individuals who confirm the licensing conditions and safety instructions when creating setup packages must pay attention to the following:

Ensure that all persons authorized to install the setup packages accept these conditions.

Recommendation:

If necessary, copy the contents into a file and provide the authorized persons with these contents.

Additional information

Section "Setup packages (Page 83)"

Section "Project inventory data export" (Page 148)

6.4.5 Project inventory data export...

Introduction

This section briefs how the project inventory data export feature can be used for SIMATIC Management console. The SIMATIC Management Console can generate data of objects in the generic iBase format. iBase is a hierarchical representation of hardware and software data for projects. In the iBase format the data is classified into operator systems, automation systems, network systems and field components. The classification, reference ID and key number for each object can be viewed in the iBase format. This feature helps to export project data in an XML file.

Prerequisites

The following operations must be performed before exporting the inventory data. Please refer to the following sections:

1. "Add plant" overview (Page 104)
2. Dialog window "Add plant (1/2)- Specify Engineering Station" (Page 105)
3. Dialog box "Add plant (2/2) – Select projects" (Page 105)
4. Determining inventory data in the plant view (Page 106)

Note

- Project data can be exported for only one project at a time.
-

Procedure

1. In the "SIMATIC Management Console" window, select "Options>Project inventory data export". The "Select project" window appears.
2. In the "Select project" window, select the project to export data in XML format. The "Export inventory data" window appears.
3. In the "Export inventory data" window, select the cover page for the project from the "Please select the cover page" drop down list. Select the storage location for the XML file from the "Please select the storage location" file browser and click "OK".
4. An example of the iBase data in the XML file structure is shown below:

6.4.6 External components...

Use this function to get the external components in the project that cannot be directly read from any system component in the inventory data. The external components are displayed in the GUI and the inventory report.

Procedure

1. Select the **Options > External components...** menu command.
The "External components" dialog box opens.
2. In the "Please chose the file to import" area, click the [...] button to import the file.
3. Click 'OK'.
The CSV file is imported. The properties of Manual Components.csv file are:
 - The timestamp of the imported file is displayed in the "Imported on:" and "Modified on:" fields.
 - The user-defined import file must be in CSV format.
 - The first line must contain names of the header (seperated with ";").
 - The lines containing devices with their special information (seperated with ";").
 - The "External components" tab contains the same content in all languages. Translation is not needed here.
Example for customer components CSV file is as follows:
Name of device; Tech location; Serial Number; Version; Description
HP Printer 460; Test area 5; 100-55-768;V6.1; Printer for Logging
Test Switch; Test area 6; 54XC-FDE;V6.2; Switch for special test

Note

Check the "Delete External Components" option to delete the imported file, else, the newly imported file will replace the existing one.

6.4.7 Inventory data profile wizard...

The Management Console allows the user to compare ACTUAL device configurations with saved device configurations.

As a filter for the comparison, apply inventory data profiles that are created with the inventory data profile wizard.

Requirements

- Inventory data have been determined in the Management Console.
- The currently determined inventory data contains the corresponding categories.

Note

Examples of missing categories in the inventory data

- The current inventory data only contains the installed license keys:
An inventory data profile for determining "Installed SIMATIC software" cannot be created.
- Inventory data profiles are always view-specific (network view or plant view).
If the current inventory data has only been determined in the network view, inventory data profiles cannot be created for the plant view.
- If needed, determine the inventory data in the network or plant view before creating a new inventory data profile.

Actions with the inventory data profile wizard

The following actions are possible with the inventory data profile wizard:

Actions	Dialog
Select origin of inventory data and action	Section "Dialog "Inventory data profile wizard (1/3) - Select view and action" (Page 114)"
Specify parameter sets	Section "Dialog "Inventory data profile wizard (2/3) - Create/change inventory data profile" (Page 115)"
Select version categories and save/export the inventory data profile	Section "Dialog box "Inventory data profile wizard (3/3) - Save inventory data profile" (Page 119)"

6.4.8 Create license report...

Use this function to forward the plant-specific license report to a Siemens contact person.

Requirement

The engineering station has been specified.
For more information refer "Settings... (Page 140)".

Procedure

1. Select the **Options > Create license report...** menu command.
The "Create license report - use of license keys" dialog box opens.
2. Select a cover page from the drop-down list box for the license report.
3. Select a storage location for the license report.
4. Click "OK".

Result

The result is stored in an XLSX file.

6.5 "?" menu (Help menu)

6.5.1 Available plug-ins...

The command "Available plug-ins..." is used to display information about the Management Console components (plug-ins).

Requirements

The user of the Management Console is a member of the "SIMATIC Management User" Windows group.

Procedure

1. Select the menu command ? > **Available plug-ins ...** .
A list with the following columns is displayed in the dialog box:

Column	Meaning
Plug-in name	Name of the Management Console component
Company	Component manufacturer
Version	Version number of the component
Description	Area of application in the Management Console

6.5.2 Help

This menu command is used to open the "SIMATIC Management Console" help files in the PUD application.

6.5.3 Info...

Legal information is displayed.

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