# **SIEMENS**

# **SINUMERIK**

# MindSphere Manage MyMachines /Remote

**Function Manual** 

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**Preface** 

Valid for control: SINUMERIK 840D sl, 840DE sl SINUMERIK 828D

Software Manage MyMachines /Remote, V 1.2

#### Legal information

#### Warning notice system

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

# **⚠** DANGER

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

# ♠ WARNING

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

# **⚠** CAUTION

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

#### NOTICE

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

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

#### **Qualified Personnel**

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

#### Proper use of Siemens products

Note the following:

# **⚠** WARNING

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

# Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

#### Disclaimer of Liability

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

# **Preface**

# SINUMERIK documentation

The SINUMERIK documentation is organized into the following categories:

- General documentation/catalogs
- User documentation
- Manufacturer/service documentation

# Additional information

You can find information on the following topics at the following address (<a href="https://support.industry.siemens.com/cs/de/en/view/108464614">https://support.industry.siemens.com/cs/de/en/view/108464614</a>):

- Ordering documentation/overview of documentation
- Additional links to download documents
- Using documentation online (find and search in manuals/information)

If you have any questions regarding the technical documentation (e.g. suggestions, corrections), please send an e-mail to the following address (mailto:docu.motioncontrol@siemens.com).

# mySupport/Documentation

At the following address (<a href="https://support.industry.siemens.com/My/ww/en/documentation">https://support.industry.siemens.com/My/ww/en/documentation</a>), you can find information on how to create your own individual documentation based on Siemens' content, and adapt it for your own machine documentation.

# **Training**

At the following address (<a href="http://www.siemens.com/sitrain">http://www.siemens.com/sitrain</a>), you can find information about SITRAIN (Siemens training on products, systems and solutions for automation and drives).

#### **FAQs**

You can find Frequently Asked Questions in the Service&Support pages under Product Support (https://support.industry.siemens.com/cs/de/en/ps/faq).

# **SINUMERIK**

You can find information about SINUMERIK at the following address (<a href="http://www.siemens.com/sinumerik">http://www.siemens.com/sinumerik</a>).

# Target group

This publication is intended for:

- Project engineers
- Technologists (from machine manufacturers)
- Commissioning engineers (systems/machines)
- Programmers
- Users

#### **Benefits**

The function manual describes the functions so that the target group knows them and can select them. It provides the target group with the information required to implement the functions.

# Standard scope

This documentation describes the functionality of the standard scope. Extensions or changes made by the machine tool manufacturer are documented by the machine tool manufacturer.

Other functions not described in this documentation might be executable in the control. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

Further, for the sake of simplicity, this documentation does not contain all detailed information about all types of the product and cannot cover every conceivable case of installation, operation or maintenance.

# Note regarding the General Data Protection Regulation

Siemens respects the principles of data privacy, in particular the data minimization rules (privacy by design). For the "Manage MyMachines Remote" product, this means the following:

Information about the remote session duration and those participating.

The product processes/saves the following personal data:

This data does not involve data from the personal/private or intimate domain.

The data specified above is required to evaluate session information. The data saved is limited to the absolute minimum that is required to identify the sessions carried out and the associated participants. Further, it is information that is absolutely necessary to invoice costs between the service provider (OEM) and the end user.

The above specify data cannot be saved with anonymity as the purpose is to identify the associated operating personnel.

This session data can be deleted if necessary. To do this, contact customer support.

# **Technical Support**

Country-specific telephone numbers for technical support are provided in the Internet at the following address (<a href="https://support.industry.siemens.com/sc/ww/en/sc/2090">https://support.industry.siemens.com/sc/ww/en/sc/2090</a>) in the "Contact" area.

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Fundamental safety instructions

1

# 1.1 General safety instructions

# **MARNING**

# Danger to life if the safety instructions and residual risks are not observed

If the safety instructions and residual risks in the associated hardware documentation are not observed, accidents involving severe injuries or death can occur.

- Observe the safety instructions given in the hardware documentation.
- Consider the residual risks for the risk evaluation.

# **M** WARNING

# Malfunctions of the machine as a result of incorrect or changed parameter settings

As a result of incorrect or changed parameterization, machines can malfunction, which in turn can lead to injuries or death.

- Protect the parameterization against unauthorized access.
- Handle possible malfunctions by taking suitable measures, e.g. emergency stop or emergency off.

1.2 Warranty and liability for application examples

# 1.2 Warranty and liability for application examples

Application examples are not binding and do not claim to be complete regarding configuration, equipment or any eventuality which may arise. Application examples do not represent specific customer solutions, but are only intended to provide support for typical tasks.

As the user you yourself are responsible for ensuring that the products described are operated correctly. Application examples do not relieve you of your responsibility for safe handling when using, installing, operating and maintaining the equipment.

# 1.3 Industrial security

#### Note

#### Industrial security

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. Products and solutions from Siemens constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the Internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. using firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that can be implemented, please visit:

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

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

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

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

Further information is provided on the Internet:

Industrial Security Configuration Manual (<a href="https://support.industry.siemens.com/cs/ww/en/view/108862708">https://support.industry.siemens.com/cs/ww/en/view/108862708</a>)

# 1.3 Industrial security

# **∱** WARNING

#### Unsafe operating states resulting from software manipulation

Software manipulations, e.g. viruses, Trojans, or worms, can cause unsafe operating states in your system that may lead to death, serious injury, and property damage.

- Keep the software up to date.
- Incorporate the automation and drive components into a holistic, state-of-the-art industrial security concept for the installation or machine.
- Make sure that you include all installed products into the holistic industrial security concept.
- Protect files stored on exchangeable storage media from malicious software by with suitable protection measures, e.g. virus scanners.
- On completion of commissioning, check all security-related settings.
- Protect the drive against unauthorized changes by activating the "Know-how protection" converter function.

Introduction

# 2.1 Product information

# MindSphere

MindSphere is a Cloud-based, open IoT operating system from Siemens. Using this system, you connect your SINUMERIK control systems (machines) and physical infrastructure to the digital world. MindSphere provides you with a complete overview of your data at all times.

Several MindSphere-based applications are available to you.

"Manage MyMachines /Remote" is one of these applications.

# Manage MyMachines /Remote

With "Manage MyMachines /Remote", you can provide efficient and low-cost support for machine tools and production equipment via the Internet.

In the event of a fault, the service organization of the machine manufacturer has fast access to important control data and diagnostic functions. In that way, the machine manufacturer or maintenance department can immediately analyze the current condition of the machine tool in which a fault occurred.

Remote Sessions (remote access) helps you avoid time-consuming on-site service assignments and prepare them better. Machine manufacturers can reduce their warranty costs while providing more efficient service support.

#### References

In addition to the manuals, you can also find data sheets and FAQs at the following link:

MindSphere (https://support.industry.siemens.com/cs/de/en/view/109742256)

MindSphere documentation (https://documentation.mindsphere.io.)

# 2.2 Setting up the SINUMERIK control system for Manage MyMachines / Remote

# **Procedure**

Ensure that the SINUMERIK system has been set up to use Manage MyMachines /Remote.

Observe the information in the following chapter in the Function Manual "Manage MyMachines":

- Setting up the SINUMERIK control system for Manage MyMachines
- Sequence
- Check and update the versions
- SINUMERIK Integrate
- SINUMERIK 840D sl
- SINUMERIK 828D
- Adapt SINUMERIK Operate
- Integrate MindSphere
- Disconnect the SINUMERIK control system from MindSphere

# 2.3 System requirements

# **Prerequisite**

"Manage MyMachines" is a prerequisite for using "Manage MyMachines /Remote".

# References

Notes on how to connect remote control systems are provided in the following manual:

"Manage MyMachines /Remote - installation in existing control environments" and "SIMATIC IoT2040".

# Hardware and operating software

The connection is established via the "Manage MyMachines /Remote Service Client".

# SINUMERIK 840D sl

SINUMERIK Integrate client software version	Operating software SINUMERIK Operate version	Hardware version	Operating system
2.0.13	4.5 SP4, HF1, 2, 3, 4	NCU 730.3 PN	Linux
	4.5 SP5, HF1, 3, 5	PCU 50.5	Windows 7
	4.5 SP6, HF3, 5, 7, 8, 10, 11, 13		
	4.5 SP6, HF1, 12	NCU 730.3 PN	Linux
	4.5 SP6 HF2	PCU 50.5	Windows 7
3.0.13	4.7 SP2 HF1, 3, 4	NCU 730.3 PN	Linux
	4.7 SP3, HF1, 2, 3, 4	PCU 50.5	Windows 7
	4.7 SP4, HF1, 4, 6		
	4.7 SP5, HF1		
	4.7 SP6, HF1, 3, 4, 5		
	4.8 SP1, HF1, 2, 3		
	4.8 SP2, HF1, 3		
	4.8 SP3, HF1		
	4.7 SP4, HF3, 5	NCU 730.3 PN	Linux

# 2.3 System requirements

# SINUMERIK 828D

SINUMERIK Integrate client software version	Operating software SINUMERIK Operate version	Hardware version	Operating system
2.0.13	4.5 SP4	PPU 281.3	Linux
	4.5 SP5, HF1, 2	PPU 261.3	
	4.5 SP6, HF1, 2, 3, 4		
3.0.13	4.7 SP2, HF1	PPU 241.3	1
	4.7 SP3, HF2		
	4.7 SP4, HF1, 2		
	4.7 SP5		
	4.7 SP6, HF1		
3.0.13	4.8 SP4, HF1	PPU 271.4	

#### Note

# "Remote STEP 7"

# **SIMATIC Manager**

The following versions of SIMATIC Manager are supported: 5.4 and 5.5

# SINUMERIK control system

Screen resolution	1600 x 1200
	1680 x 1050
	1920 x 1200

# Operator PC

Processor	1 GHz processor
RAM (GB)	4
Free hard disk capacity (GB)	1

<sup>&</sup>quot;Remote STEP 7" is available on SINUMERIK Operate under Linux.

<sup>&</sup>quot;Remote STEP 7" is **not** supported by SINUMERIK 828D.

Operating systems	Windows 7 SP1 (x64) Professional/Enterprise/Ultimate
	Windows 10 (x64) Pro/Enterprise
Screen resolution	800 x 600
	1280 x 1024
	1366 x 768
	1440 x 900
	1600 x 1200
	1680 x 1050
	1920 x 1200
	1920 x 1080

# **Industrial PC**

Processor	1 GHz processor
RAM (GB)	4
Free hard disk capacity (GB)	1
Operating systems	Windows 7 SP1 (x64) Professional/Enterprise/Ultimate
	Windows 7 Standard Embedded
	Windows 10 (x64) Pro/Enterprise
Screen resolution	At least 1980 x 1080

# Note

# SINUMERIK Integrate applications

Parallel operation with SINUMERIK Integrate applications is not possible.

# Web browser

You can use the following web browsers:

- Chrome Version from 65.0.3325.18 (64 bit) up to the current version
- Firefox Version 59.0.2 (64 bit) up to the current version

# Security notes

#### NOTICE

#### Security standards for SINUMERIK controls connected to MindSphere

The connection of SINUMERIK controls to MindSphere via TLS 1.2 /https meets the highest security standards.

SINUMERIK versions that do not meet these standards are not part of the product. For these versions, additional security measures must be taken.

You are solely responsible for preventing unauthorized access to your plants, systems, machines and network. Systems, machines and components should only be connected to the company's network or the Internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

#### NOTICE

#### Data misuse due to an unprotected Internet connection

An unrestricted Internet connection can lead to data misuse, e.g. when transferring the asset data.

Before establishing a network connection, ensure your PC is exclusively connected to the Internet via a secure connection. Pay attention to the security-relevant notes.

Further information about communications security can be found in the Configuration Manual: Industrial Security (https://support.industry.siemens.com/cs/ww/en/view/108862708).

#### Note

# Backing up the operator PC (service engineering side)

The necessary security measures (e.g. virus scanner, firewalls, OS patching, etc.) must be implemented on the PCs that are used for visualization and configuration of "Manage MyMachines /Remote" with the machine operator or end customer.

Further information about PCs in the industrial environment can be found in the Configuration Manual: Industrial Security (<a href="https://support.industry.siemens.com/cs/ww/en/view/108862708">https://support.industry.siemens.com/cs/ww/en/view/108862708</a>).

#### Note

# Backing up the SINUMERIK control (machine operator side)

The necessary security measures (e.g. virus scanner, firewalls, operating system patching, etc.) must be implemented on the SINUMERIK controls.

Further information about communications security can be found in the Configuration Manual: Industrial Security (<a href="https://support.industry.siemens.com/cs/ww/en/view/108862708">https://support.industry.siemens.com/cs/ww/en/view/108862708</a>).

#### NOTICE

#### Misuse of data

It is essential to use secure data storage when saving your data - particularly your confidential data. Store this data, encrypted locally or encrypted on the network. Make sure that this data cannot be accessed by unauthorized personnel.

This applies to the following data:

- Archive files
- Image files
- Project files
- Trace files
- Safety-relevant data

Further information about secure data storage can be found in the Configuration Manual: Industrial Security (<a href="https://support.industry.siemens.com/cs/ww/en/view/108862708">https://support.industry.siemens.com/cs/ww/en/view/108862708</a>).

#### NOTICE

# Data manipulation possible

There is a risk that an attacker could gain access to the operating PC within the network. There, the hacker can read or manipulate various system components (e.g. the content of databases). In this way, the attacker can change tool data, NC programs, machine archives, or the system structure itself, for example. "Manage MyMachines /Remote" cannot prevent this type of attack.

• As the person responsible for the machine network, it is therefore imperative that you take the appropriate industrial security measures for the production/machine network.

Siemens AG accepts no liability for this!

#### Note

#### Saving the data that has been captured

The "Manage MyMachines Remote" product was developed by Siemens, also taking into account the "Privacy By Design" principle. This means that the service provider (OEM) makes the decision as to how long the captured data, such as information about the time period and participation in remote sessions, is saved.

# NOTICE

# Allowing remote access to the SINUMERIK controller

Only allow a remote access session if you know the following:

- Have you been notified of a remote access session?
- Do you know and trust the person who is conducting the session?

# **Delivery form**

The "Manage MyMachines /Remote Service Client" is available via the "Manage MyMachines / Remote" application.

# 2.3 System requirements

The updates and further information on the applications and products are stored on PridaNet and can be downloaded directly from there.

- OR

You can contact your machine manufacturer.

- OR -

You can contact the Siemens Service & Support.

# Logging in to MindSphere

3

# **Prerequisites**

You have to have a subscription to an IoT Value Plan (S,M,L) in MindSphere.

# **Procedure**

- 1. Click the link provided per mail by the Siemens AG. The website is displayed: https://<your-tenant-name>.mindsphere.io
- 2. The "Sign In" window opens.
  - Enter your e-mail address and your password.
  - Click the "Sign In" button.



# Sign In Email address or WebKey username\* Password\* Sign In Forgot Password Not registered? Create a new account.

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- OR -

If you have forgotten your password, click "Forgot Password?".

The "Forgot Password?" window opens.

Enter your e-mail address and click the "Submit" button.

Your password is reset and you are informed of this via e-mail.

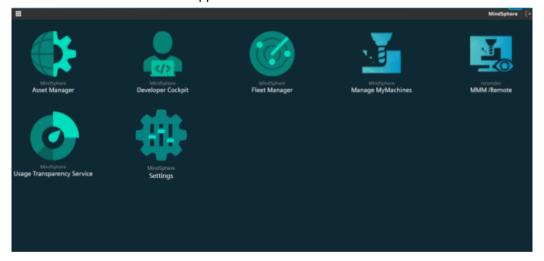


# Forgot Password?



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3. The launch pad is opened. You can access the individual applications via this user interface.



Open Manage MyMachines /Remote

4

# **Prerequisites**

- The SINUMERIK control system has been successfully connected with Manage MyMachines.
- The owner of the tenant, in which the Manage MyMachines /Remote application is operated, must use Multi Factor Authentication (MFA).

#### References

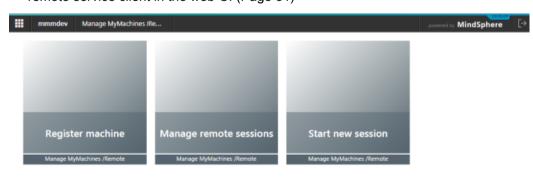
- You will find more information on how to connect a SINUMERIK control system to Manage MyMachines in the Function Manual: Manage MyMachines, Manage MyMachines /Spindle Monitor, in Chapter: "Setting up the SINUMERIK control system for Manage MyMachines".
- Information about the owners of the tenant is provided in the System Manual: User Management, in Chapter: "Administering users"

#### **Procedure**

1. To open Manage MyMachines /Remote, click on the "MMM /Remote" symbol.



- 2. The "Manage MyMachines /Remote" window opens and you have the following options:
  - Register machines
     Additional information on this topic can be found in the following Chapter: Registering machines (Page 27)
  - Manage remote access sessions
     Additional information on this topic can be found in the following Chapter: Using Manage MyMachines /Remote (Page 51)
  - Start new session
     Additional information on this topic can be found in the following Chapter: Starting a remote session as a SE (Page 58)
  - Third party software
     The "Siemens third-party software disclosure document" document opens, and in addition to important information, there is a list of the necessary software and their associated licensing terms and conditions.
  - Download Manage MyMachines /Remote Service Client Additional information on this topic can be found in the following Chapter: Download the remote service client in the web-UI (Page 31)



nird Party Software Download Manage MyMachines /Remote Service Client

Registering machines

5

You have the possibility of registering SINUMERIK control systems for Manage MyMachines / Remote and authorization to issue session recordings.

# Parameter

Parameter/symbol	Description	
Machine	Displays the name of the SINUMERIK control system.	
Machine path	Shows the path of the SINUMERIK control system.	
Registration status	Displays the state of the SINUMERIK control system:	
	Registered	
	Disconnected	
Permission to record the session	Displays whether the authorization for recording the session is available or not:	
	• Yes	
	• No	
Authorization to access PLC	Displays whether authorization to access the PLC is available or not:	
	• Yes	
	• No	
←	The "Manage MyMachines /Remote" start page opens.	
▼ ~	Opens window "My filter" to filter the SINUMERIK control systems (machines) according to specific criteria.	
+	In the "My Filters" window you add additional values for the search.	
▼ ^	Closes window "My filters".	
The "Edit" symbol opens the setting options of the Manage Nothines /Remote at the SINUMERIK control system:		
	Manage MyMachines /Remote registration status:	
	Disconnected	
	Registered     If activated, then option checkbox "I hereby accept, " must be activated.	
	Authorization to record the session:	
	• Yes	
	• No	
	Authorization to access PLC:	
	• Yes	
	• No	

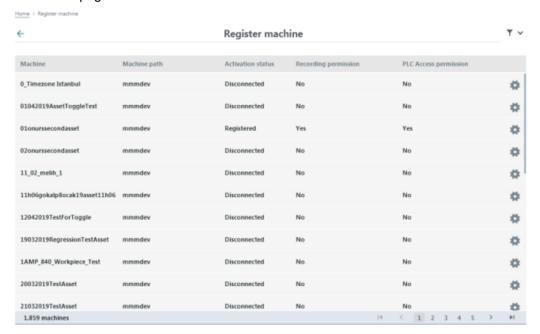
#### **Procedure**

1. Click on "Register machines".



2. Window "Register machines" opens and displays the overview of the SINUMERIK control systems (machines).

In the status line you can see the number of machines that have been identified as well as the window pages.



3. Select a SINUMERIK control system (machine) and click on "Edit".

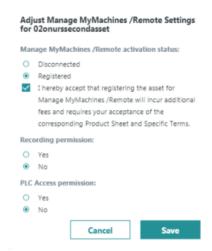
4. Window "Adjust Manage MyMachines /Remote settings for <Machine>" opens. Activate the required settings.

If you do not wish to make a selection, click on "Cancel". The window is closed without saving the selection.

- OR -

Click "Save" if you wish to save the selection.

The window is closed.



5. The setting of the SINUMERIK control system (machine) is updated in the table overview. A message is output in the upper right-hand area of the window indicating that your selection was successful, and the costs of the item that you selected are displayed.



# Filter machines

- 1. Click the "Filter" symbol.
- 2. The "My Filters" window opens and allows machines to be filtered according to the following criteria:
  - Machine path
  - The "+" icon allows the search to be further restricted by entering text.
  - Click on "Reset filter" to remove the filter selection.



# Download the remote service client in the web-UI

# **Prerequisites**

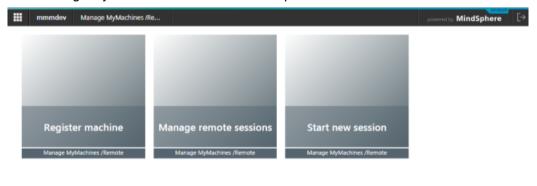
The SINUMERIK control system has been successfully connected with Manage MyMachines.

# References

You will find more information on how to connect a SINUMERIK controller to Manage MyMachines in the Manage MyMachines Function Manual, in Chapter: "Connect machine with Manage MyMachines"

# **Procedure**

1. The "Manage MyMachines /Remote" window opens.



2. In the footer, click on "Download Manage MyMachines /Remote Service Client".

Download Manage MyMachines /Remote Service Client

- 3. The "Download Manage MyMachines Remote Service Client" opens and lists these options:
  - "Manage MyMachines /Remote Service Client for machine operators PCU": Client for installation on the SINUMERIK control system (PCU)
  - "Manage MyMachines /Remote Service Client for machine operators IPC": Client for installation on the IPC
  - "Manage MyMachines /Remote Service Client for service engineers 64 bit": Client for installation on an operating PC with a 64-bit operating system
  - "Manage MyMachines /Remote Service Client for service engineers 32 bit": Client for installation on an operating PC with a 32 bit operating system
- 4. Behind "Accept", click on "Terms of Use" or the small arrow and read the associated information.

Then activate option checkbox "Accept Terms of Use".

If you wish to cancel the operation, then click "Cancel".

- OR -

To download the corresponding version, activate the check box and click "Download".

5. Then carry out the installation and configuration.

Additional information can be found in the following chapters:

Setting up Manage MyMachines /Remote - Machine operators (MO) (Page 33)

Setting up Manage MyMachines /Remote - service engineer (SE) (Page 43)

# 7.1 Installing Manage MyMachines /Remote Service Client MO

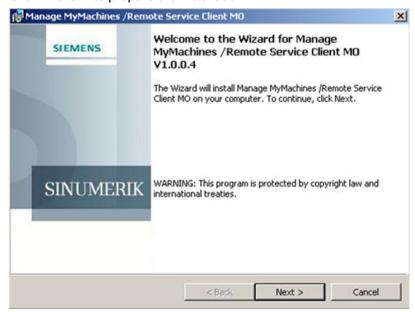
# **Prerequisites**

You have downloaded "Manage MyMachines /Remote Service Client MO" on the operator PC, e.g. onto a USB flash drive.

You will find information on this in Chapter Download the remote service client in the web-UI (Page 31).

#### **Procedure**

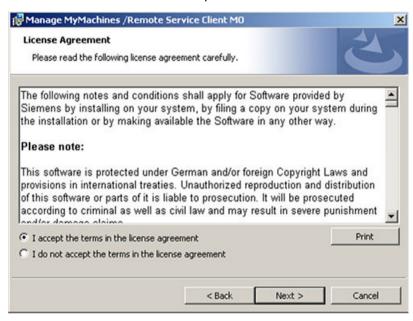
- 1. Copy "Manage MyMachines /Remote Service Client MO", e.g. from the USB flash drive to the SINUMERIK control system or the IPC.
- 2. Open the directory in which "Manage MyMachines /Remote Service Client MO" has been copied.
- Double-click to start the "setup.exe" setup file.
   The welcome dialog "Welcome to the Wizard for Manage MyMachines /Remote Service Client MO " opens and displays the current version.
   Click "Next >" to prepare the installation.



#### 7.1 Installing Manage MyMachines /Remote Service Client MO

- 4. The "License Agreement" window opens. Read the license agreement.
  - Click "Print" if you want to print out the conditions.
  - Then select the "I accept the terms in the license agreement" check box and click "Next >".
    - OR -

Click "< Back" to return to the previous window.

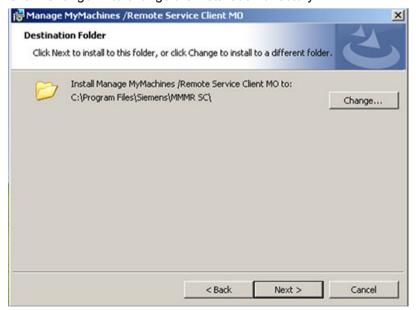


5. The "Destination Folder" window opens.

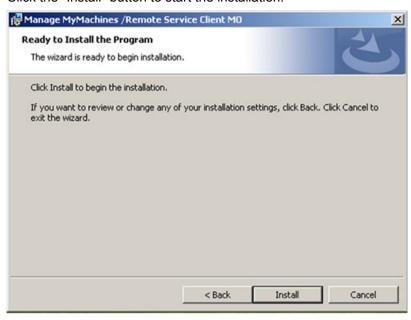
Click "Next >" to accept the directory suggested by setup.

- OR -

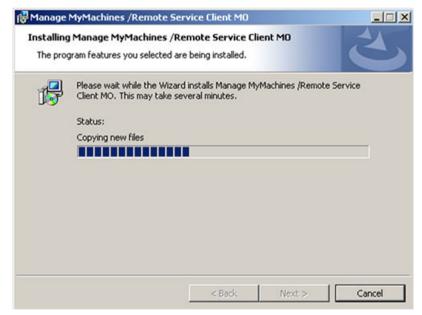
Click "Change..." to change the installation directory.



6. The "Ready to Install the Program" window is opened. Click the "Install" button to start the installation.



7. The "Installing Manage MyMachine /Remote Service Client MO" window is opened. The installation is started.



# 7.1 Installing Manage MyMachines /Remote Service Client MO

8. The "Welcome to the Certificate Import Wizard" window opens. Click on "Next >".



The "Certificate Store" window is opened.
 Select the check box "Automatically select the certificate store based on the type of certificate".

Click "Next >".



10. The "Completing the Certificate Import Wizard" window opens and shows you the settings. Click on the "Finish" button. The certificate is imported.



11. You receive a message that the certificate was successfully imported. Click "OK".



7.1 Installing Manage MyMachines /Remote Service Client MO

12. The "Wizard Completed" window opens. Click "Finish" to complete the installation.



13. After the installation has been completed, the SINUMERIK control system or the IPC has to be restarted.

# 7.2 Entering the address of a proxy server

# Overview

If access to the Internet is done via a proxy server, define the desired method via the proxy settings.

Settings	Description	
Do not use a proxy (direct connection)	Establishes a direct connection to the Internet.	
Automatic proxy detection	Automatically determines the address of a proxy server to access the Internet.	
Use system proxy settings	The suggested setting:	
	Uses the setting saved in Internet Explorer to go into the Internet.	
	Click "Internet options" to open the Internet options of the system in order to check or change the proxy settings.	
Use Manufacturing IT client proxy settings	Uses the settings of the Manufacturing IT client to gain access to the Internet.	
Use automatic configuration script:		
Address	Address input of the proxy server from which the proxy script is downloaded.	
Use these proxy settings (manual):		
Server	Address input (address and port) to specify a specific proxy server.	
Port		
Use these proxy credentials:		
User name	Input of the access data if the proxy server requires a login.	
Password		
Remember authentication data	The access data is stored retentively in the system.	
	The password is stored in encoded form.	

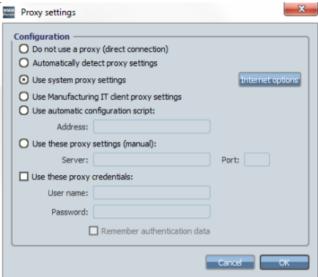
### **Procedure**

- 1. Open "Manage MyMachines /Remote Service Client".
- 2. Call "Settings" > "Proxy..." in the menu bar. The "Proxy settings" window opens.

# 7.2 Entering the address of a proxy server

- 3. Select the desired proxy setting.
- 4. Click "OK" to save the settings.
  - OR -

Click "Cancel" to reject the settings.



# Using your own proxy logon data

If you are using your own proxy logon data, select the "Use these proxy settings (manual):" check box.

- 1. Then select the check box "Use these proxy credentials:" and enter your user name and password.
- 2. Select the "Remember authentication data" checkbox if you want to save your login data permanently.
- 3. Click the "OK" button to save the settings.

# 7.3 Integrating an OEMFrame application into HMI sl

# Integrating an OEM Frame application

The Windows OEMFrame applications are used to generate and use softkeys. The required settings are described in this chapter based on an example.

You will have to modify or create the following files:

- Configuration file "systemconfiguration.ini"
- Configuring the start softkey
   In order to start an OEMFrame application from the operating software, configure a softkey
   on the expansion bar of the operating area.

# Example configuration file "systemconfiguration.ini"

In file "systemconfiguration.ini", save the call for Manage MyMachines /Remote Service Client accordingly. Depending on the access protection level assigned to you, you extend the "systemconfiguration.ini" file contained in the relevant directory.

- <HMIInstallDir>\\hmi\oem\sinumerik\hmi\cfg
- <HMIInstallDir>\\hmi\addon\sinumerik\hmi\cfg
- <HMIInstallDir>\\hmi\\user\sinumerik\hmi\oem\

#### **Extensions**

Add the following line to the [areas] section:

```
AREA500=name:=MMMR, process:=ProcessOEM
```

Add the following line to the [processes] section:

```
PROC500=process:=ProcessOEM, cmdline:="C:\\Program Files (x86)\\Siemens\\MMMR SC\\ManageMyMachinesRemoteServiceClientMO.exe", oemframe:=true, deferred:=true, classname:="QWidget"
```

Adjust the indexes of the relevant entries (PROC500, AREA500) in accordance with your HMI configuration.

The path for the executable file of the service mode client can differ from the path stated above, depending on the version installed (32 bit/64 bit) and the path selected during installation.

#### References

You will find further general information about the options for the integration of OEMFrame applications in the Commissioning Manual: "SINUMERIK Operate (IM9)", in Chapter "Integrating OEMFrame applications".

7.3 Integrating an OEMFrame application into HMI sl

# 8.1 Installing Manage MyMachines /Remote Service Client SE

# **Prerequisites**

You have downloaded the client setup.

You will find more information in Chapter: Download the remote service client in the web-UI (Page 31).

#### **Procedure**

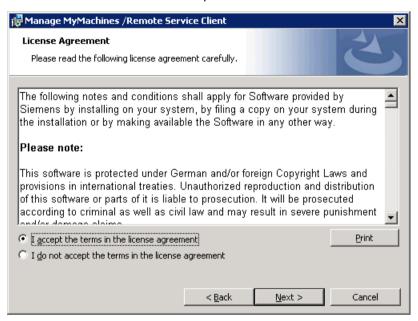
- 1. Open the installation directory on the operator PC.
- Double-click to start the "setup.exe" setup file.
   The welcome dialog "Welcome to Wizard for Manage MyMachines /Remote Service Client SE" is opened and displays the current version.
   Click "Next >" to prepare the installation.



#### 8.1 Installing Manage MyMachines /Remote Service Client SE

- 3. The "License Agreement" window opens. Read the license agreement.
  - Click "Print" if you want to print out the conditions.
  - Then select the "I accept the terms in the license agreement" check box and click "Next >".
    - OR -

Click "< Back" to return to the previous window.

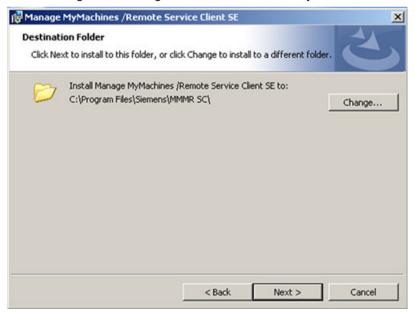


4. The "Destination Folder" window opens.

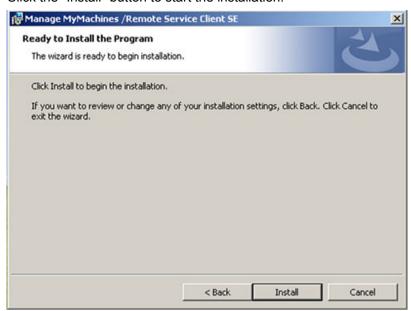
Click "Next >" to accept the directory suggested by setup.

- OR -

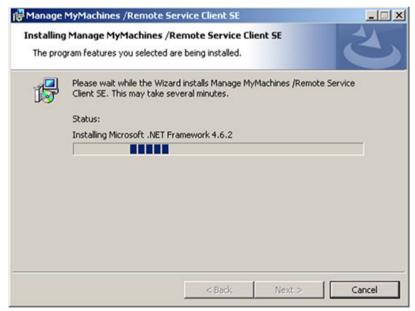
Click "Change..." to change the installation directory.



5. The "Ready to Install the Program" window is opened. Click the "Install" button to start the installation.



6. The "Installing Manage MyMachine /Remote Service Client SE" window is opened. The installation is started.



## 8.1 Installing Manage MyMachines /Remote Service Client SE

7. The "Welcome to the Certificate Import Wizard" window is opened. Click on "Next >".



The "Certificate Store" window is opened.
 Select the check box "Automatically select the certificate store based on the type of certificate".

Click "Next >".



9. The "Completing the Certificate Import Wizard" window is opened, and shows you the settings.

Click on the "Finish" button to import the certificate.



10. You receive a message that the certificate was successfully imported. Click "OK".



8.1 Installing Manage MyMachines /Remote Service Client SE

11. The "Wizard Completed" window opens. Click "Finish" to complete the installation.



12. After installation has been completed, the following icon appears on the desktop for starting Manage MyMachines /Remote:



13. After the installation has been completed, a restart is required.

# 8.2 Entering the address of a proxy server

# Overview

If access to the Internet is done via a proxy server, define the desired method via the proxy settings.

Settings	Description	
Do not use a proxy (direct connection)	Establishes a direct connection to the Internet.	
Automatic proxy detection	Automatically determines the address of a proxy server to access the Internet.	
Use system proxy settings	The suggested setting:	
	Uses the setting saved in Internet Explorer to go into the Internet.	
	Click "Internet options" to open the Internet options of the system in order to check or change the proxy settings.	
Use Manufacturing IT client proxy settings	Uses the settings of the Manufacturing IT client to gain access to the Internet.	
Use automatic configuration script:		
Address	Address input of the proxy server from which the proxy script is downloaded.	
Use these proxy settings (manual):		
Server	Address input (address and port) to specify a specific proxy server.	
Port		
Use these proxy credentials:		
User name	Input of the access data if the proxy server requires a login.	
Password		
Remember authentication data	The access data is stored retentively in the system.	
	The password is stored in encoded form.	

### **Procedure**

- 1. Open "Manage MyMachines /Remote Service Client".
- 2. Call "Settings" > "Proxy..." in the menu bar. The "Proxy settings" window opens.

# 8.2 Entering the address of a proxy server

- 3. Select the desired proxy setting.
- 4. Click "OK" to save the settings.- OR -
  - Click "Cancel" to reject the settings.



# Using your own proxy logon data

If you are using your own proxy logon data, select the "Use these proxy settings (manual):" check box.

- 1. Then select the check box "Use these proxy credentials:" and enter your user name and password.
- 2. Select the "Remember authentication data" checkbox if you want to save your login data permanently.
- 3. Click the "OK" button to save the settings.

Using Manage MyMachines /Remote

# 9.1 Overview of the functions

The following functions enable diagnostics to be performed and faults to be corrected via the control. It is up to the service engineer to execute the functions for all problems via remote access on a PC with a mouse and keyboard.

To be able to use these actions you must activate the functions in Manage MyMachines / Remote.

# **Functions**

Function	Description
Screen sharing	Permits the display and remote operation of a control. For safety reasons, however, it is not possible to initiate machine movements or to start NC programs.
	Additional information is provided in Chapter: Screen enable (Page 65)
File transfer	Enables the transfer of one or more files or directories. Transfer can be from the workplace PC to the control or vice versa. This allows, for example, patches to be imported for the error correction. The control can also be updated quickly. Even complex NC programs are transferred to the service engineer for offline testing or for modification via file transfer.
	Additional information is provided in Chapter: Transfering files (Page 69)
Remote STEP 7	With STEP 7, the control tasks can be implemented based on the SI-MATIC S7 automation systems.
	Additional information is provided in Chapter: Remote STEP 7 via the Internet (Page 78)
Conference call	Allows several service engineers to participate in a conference. You either participate with an observing role or as leader of the conference.
	Additional information is provided in Chapter: Transferring the conference leadership (Page 82)
Automatic recording of the meeting	Enables the session to be recorded and stored on the server as an event entry.
	Additional information is provided in Chapter: Evaluating remote session (Page 84)

# 9.2 Remote access sessions

#### 9.2.1 Overview

# **Prerequisites**

The necessary client software has already been installed on the SINUMERIK control or the operator PC and has been configured.

Additional information can be found in the following chapters:

Setting up Manage MyMachines /Remote - service engineer (SE) (Page 43)

Setting up Manage MyMachines /Remote - Machine operators (MO) (Page 33)

# Example

The following description is an example scenario.

- 1. The machine operator contacts the service engineer with a problem.
- 2. The service engineer starts the session.

  Additional information is provided in Chapter: Starting a remote session as a SE (Page 58)
- 3. The service engineer informs the machine operator that a session has been initiated.
- 4. The machine operator at the SINUMERIK control system opens the Manage MyMachines / Remote Service Client and logs on for the session.
  Additional information is provided in the following chapters: Joining a remote session as MO (PCU/NCU) (Page 60), Joining a remote session as MO (IPC) (Page 62)
- 5. All of the functions are available as soon as both participants have entered the session:
  - Remote access, including remote control
  - File transfer
- Additional or monitoring participants can enter a session.
   Additional information on this topic is provided in Chapter: Entering a remote session (Page 63)
- Session data are recorded and can be viewed in an overview.
   The data is also available at a later point in time.
   Additional information is provided in Chapter: Managing remote access sessions (Page 54)
- 8. You can review a session in more detail and you have the opportunity of changing and exporting log files.
  - Additional information is provided in Chapters: Changing session data (Page 88) and Exporting log files (Page 87)

# 9.2.2 User roles and operator interface

# User roles

You can participate in a session with the following roles:

- 1. Session leader
- 2. Machine operator
- 3. Observing service engineer

These user roles can have different states and are defined on the user interface with different icons:

Sym- bol	No.	Role	Status
2	1	Session leader	The session leader actively participates in the session.
<b>&amp;</b>	2.	Session leader	The session leader is active and hosts the session (desktop sharing).
2	3	Machine operator	The machine operator participates actively in the session.
♣	4	Machine operator	The machine operator hosts the session.  The session leader does not control the remote desktop.
2	5	Machine operator/service engineer	Transfer control
*	6	Machine operator	The machine operator was present in the session, but is currently not present.
2	7	Observing service engineer	The observing service engineer participates actively in the session.
*	8	Observing service engineer	The observing service engineer was in the session, but is currently not present.

#### Information

It is possible to participate as an observing service engineer as follows:

- A service engineer at the operating PC leads the session
- A machine operator at the SINUMERIK control system participates in the session

# User interface

	Description
Conference data	
Machine ID	Shows the ID of the machine.
Status	Displays current information for the session.
Tenant	Shows the organization of the connected machine.
Participants	

### 9.2 Remote access sessions

		Description
Name		Shows names and configuration of the participants.
		The icon shows the role of the participant.
Status		Shows the current role of the participant.
Tenant		Shows the organization of the current user.
Remote access	드	Shows a remote access.
		Is only displayed for the machine operator.
		Shows a terminated participant access.
		Shows that the function to end remote access is not available because desktop sharing has not been started.
		In this state, you cannot perform any function via the button.
File transfer	<b>P</b>	Shows the data transfer. Is only displayed for the machine operator.
Transfer of leader- ship	22	Shows the transfer of leadership. Is only displayed for the observing service engineer.

# Symbols on the status bar

Symbol	Description
MO	Operating mode of the application - currently only the machine operator (MO).
<b>®</b>	Shows an active remote access.
=	Shows an active file transfer.
•	Shows a session recording.
ì	Shows no participation in the conference.
ivi	Participation in a conference has been performed.
	The conference has been interrupted because of a network error.

# 9.2.3 Managing remote access sessions

You can see all of the sessions in overview "Session overview", and you can do the following:

- View and edit additional details of a session.
- · Delete session overview
- Export a log file.
   For additional information, refer to Chapter: Exporting log files (Page 87)
- As service engineer start a new session.

  For additional information, see Chapter: Starting a remote session as a SE (Page 58)

# Parameter

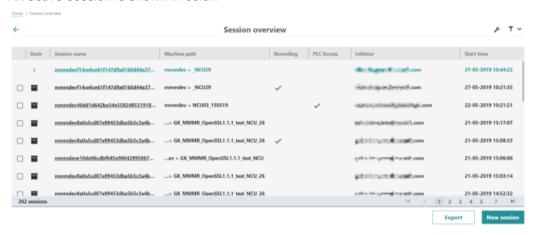
Parameter/symbol	Description
Status	Shows the following statuses:
-	Shows a closed session.
~	Indicates that a session was saved.
>	Opens more session details.
Session name	Indicates the session name.
Machine path	Shows the path of the SINUMERIK control system.
Recording	Indicates whether the session was recorded.
~	
PLC access	Indicates whether the PLC was accessed or not
Initiator	Shows the e-mail address of the service engineer.
Start time	Shows the session date in the following format: DD-MM-YYYY hh:min:sec
<b>←</b>	Opens window "Manage MyMachines /Remote".
▼ ∨	Opens window "My filters" and you can then filter the sessions according to the following criteria:
	Name of the initiator
	Session name
	Machine path
	Recording
	Start time
+	Creates an additional filter criterion in window "My filters".
iii	Deletes a filter criterion in window "My filters".
▼ ^	Closes window "My filters".
۶	Opens a window in which you configure when session information is deleted.

#### **Procedure**

1. Click on "Manage remote sessions".



2. The "Session overview" window opens and displays an overview of all sessions. An active session is shown in color.



# Configuring schedules

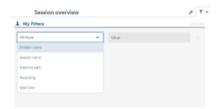
You have the option of defining when session information is deleted.

- 1. Click on the "Wrench" icon in the upper right-hand section of the window.
- Window "Configure scheduler" opens.From the spin box, select the number of days after which session information should be deleted.



# Filtering session overview

- Click on the "Filter" icon.
   The "My filters" window opens.
- 2. From the drop-down list, select an attribute for filtering and enter the associated value.
  - Using the "+" symbol, define additional criteria to further restrict the search.
  - You delete individual filter criteria using the "Recycle bin" icon.
  - Click on "Reset filter" to display all session information.

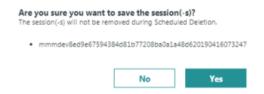


# Changing a status

- 1. Select one or more sessions.
- 2. Click the "Change status" button.

  The "Are you sure you want to save the session(s)?" window opens.
- 3. Click on "Yes" to save session information.
  - OR -

Click on "No" to cancel the operation.



#### Delete session overview

#### Note

### Active session

You cannot delete an active session!

### 9.2 Remote access sessions

- 1. Select one or more sessions.
- Click on "Delete".A confirmation prompt is displayed.
- 3. Click on "Delete" to delete session information.
  - OR -

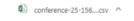
Click on "Close" to cancel the operation.



# **Exporting session overview**

- 1. Select one or more sessions.
- 2. Click on "Export".

  The file is displayed in the lower section of the window.



# 9.2.4 Starting a remote session as a SE

Only a service engineer can start a remote session.

### **Procedure**

1. Click on "New session".



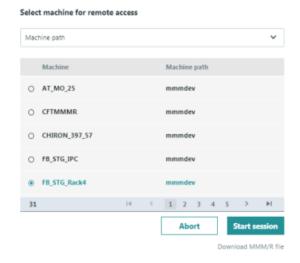
- OR -

Click on "Manage remote sessions".

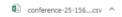


The "Session overview" window opens and displays an overview of all sessions. Click on "New session".

The "Select machine for remote access" window opens.
 Selected the required machine path to filter the SINUMERIK control systems (machines) that are displayed.



- 3. Activate the check box of the required SINUMERIK control system (machine) and click on "Start session".
- 4. File "client\_xx" is downloaded and is displayed in the lower left-hand section of the window.



#### 9.2 Remote access sessions

- 5. Open the file.
  - Window "Opening client" opens.
  - Activate check box "Open with" and from the drop-down list, select entry "Manage MyMachines /Remote Service Client...".
  - Click "OK" to open the client.
- 6. Window "Session overview" opens.

# 9.2.5 Joining a remote session as MO (PCU/NCU)

### **Prerequisites**

As machine operator, the service engineer has informed you that he is initiating a remote session.

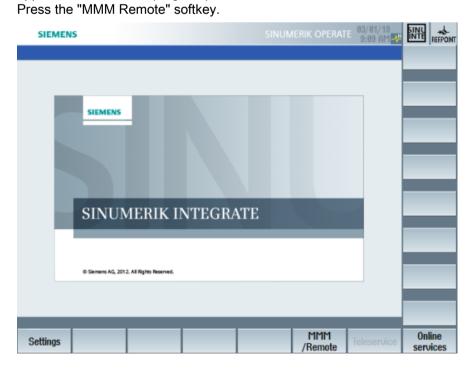
#### **Procedure**

- 1. Start the "SINUMERIK Operate" operating software.
- 2. Press the menu forward key and press softkey "SINUMERIK Integrate".
- 3. The "SINUMERIK INTEGRATE" window opens.

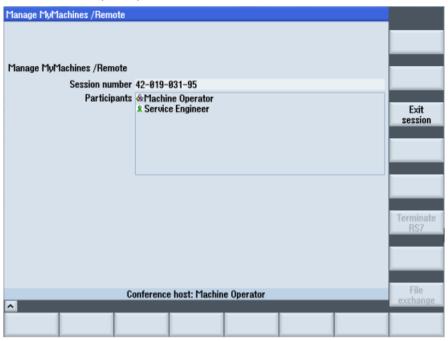
#### For information

The "MMM /Remote" softkey is available and activated if you have integrated Manage MyMachines /Remote as an OEMFrame application.

Additional information on this topic is provided in Chapter. Integrating an OEMFrame application into HMI sI (Page 41).



4. The "Manage MyMachines /Remote" session window opens, and you see the session number and the participants.

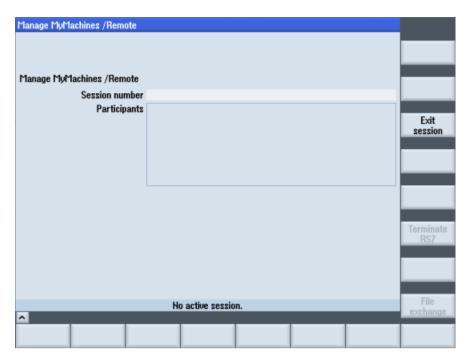


### - OR -

You see the appropriate message in the status bar if the service engineer has still not started a session.

Press the "Exit session" softkey if you wish to close the window.

#### 9.2 Remote access sessions



5. The participants are displayed at the PC once the participants have been registered at the SINUMERIK control system.

You can use the following functions at the PC:

- File transfer
- Desktop sharing
- Remote STEP 7 is only available for SINUMERIK Operate with Linux

# 9.2.6 Joining a remote session as MO (IPC)

# **Prerequisites**

- The "Manage MyMachines /Remote Service Client for machine operators IPC" is installed. You can find additional information on this topic in the following chapter: Download the remote service client in the web-UI (Page 31).
- As machine operator, the service engineer has informed you that he is initiating a remote session.
- The service engineer has started the session.

#### **Procedure**

- Open the MO IPC client.
   The "Welcome" window is opened.
  - Enter "User name" and for tenant enter "your-tenant-name".
  - When using the system for the first time, enter the IDs of the machines.
     The machine IDs are in the URL of the machines registered for Manage MyMachines / Remote, which you select in Manage MyMachines.
  - Click "OK".



2. The "Manage MyMachines /Remote Service Client" session window opens. The session is established and you can see the list of participants.



### Information

You can participate as often as you want in a session that has been opened. Only the session leader can finally close that session.

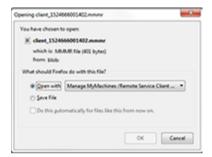
# 9.2.7 Entering a remote session

### **Prerequisite**

The session is active.

#### **Procedure**

- 1. The "Session overview" window is open.
  In the overview, select the active session (marked in color).
- 2. The "Session overview of .." opens. Click on "Join".
- 3. File "client xx" is downloaded.
- Open the file. Window "Opening client" opens.
  - Activate check box "Open with" and from the drop-down list, select entry "Manage MyMachines /Remote Service Client...".
  - Click "OK" to open the client.



5. The "Manage MyMachines /Remote Service Client" window opens, and you are automatically dialed into the session.



# 9.3 Screen enable

Desktop sharing enables the display and remote operation of a control. For safety reasons, however, it is not possible to initiate machine movements or to start NC programs.

- The owner of the conference requests desktop sharing.
- The machine operator consents to screen sharing.

# **Prerequisites**

- The connection between the PC and the SINUMERIK control system has been established.
- The machine operator consents to screen sharing.
- The "Screen sharing" function is activated.

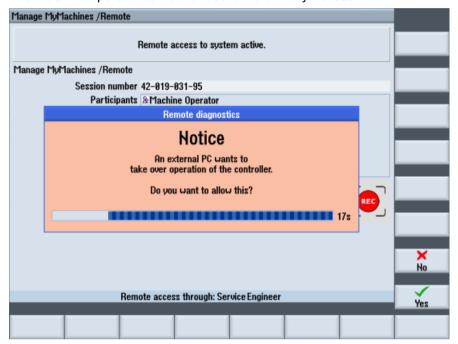
#### **Procedure**

1. The owner of the conference clicks the "Desktop sharing" icon to access the SINUMERIK control.



2. The machine operator at the SINUMERIK control system receives a message that an external PC wishes to access the control system.

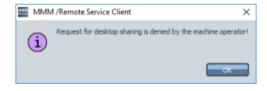
The machine operator can either authorize or deny access.



The machine operator clicks "No" to deny access.

The service engineer cannot control the SINUMERIK control system of the machine operator until access permission is issued by the machine operator.

The service engineer sees the following message:

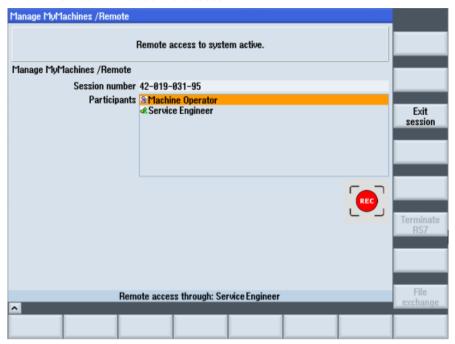


- The machine operator clicks "Yes" to authorize access.

The user interface of the SINUMERIK control system is then displayed at the operator PC.

The service engineer can now access the SINUMERIK control system.

The "REC" icon indicates the access.



#### Note

#### Only one screen can be enabled.

If remote control is already active, a second screen enable cannot be started on the same SINUMERIK control within the existing session.

#### Note

### Scaling the screen

If you change the screen size at the PC, then the size of the operating interface is also scaled.

When access is terminated, the position and size of the screen is saved. If you reopen the same session, then the same screen size is displayed.

# 9.4 Transferring conference ownership

A session enables participation of several service engineers.

In a conference, you have different roles. You will find more information on the roles in Chapter: User roles (Page 93).

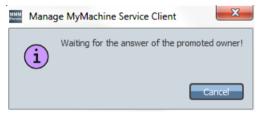
As owner of the conference, you can transfer control to other observing service engineers.

#### **Procedure**

1. As owner of the conference, click the icon Promote Owner in the line of the service engineer to whom you want to transfer control.



After calling the function, the following message appears on your operator PC:



The following query appears on the operator PC of the selected service engineer:



2. The observing service engineer must click the "Yes" button if he or she wishes to take over control.

#### Note

If the observing service engineer rejects the transfer of control with the "No" button, a message appears on the operator PC of the owner of the conference to indicate this.

- 3. Acknowledge transfer as the previous owner of the conference.
- 4. The machine operator agrees to the transfer of control. Control is then transferred to the chosen observing service engineer. The changed user roles are updated accordingly in the list of participants.

# 9.5 Transfering files

It is possible to transfer single or multiple files or directories between the operator PC and SINUMERIK control and vice versa. This allows, for example, patches to be imported for error correction.

# **Prerequisites**

- The connection is established between the operator PC and the SINUMERIK control.
- The machine operator (MO) participates actively in a session.
- The "File Transfer" function is current.

## Important icons

Icon	Description
<b>_</b>	Opens the higher level in the directory tree.
0	Updates the view of the directory tree. The directory list is only updated automatically when other actions, such as navigation, copying, renaming or deleting, have been performed. If the machine operator makes changes to the directory tree outside of the remote session, the owner of the conference must update the view.
<b>≅</b> *	Creates a new subdirectory in the selected directory level.

# Displaying file properties

In the "Filetransfer" window, the following file properties are displayed in the file system in the column view:

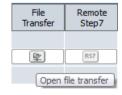
- File size
- Date of the last change
- Attributes

When you close the window, the window size and position are saved. When the function is opened again, the window is restored with the same dimensions.

You can set the column width and position. However, the settings are not saved.

### Start transmission

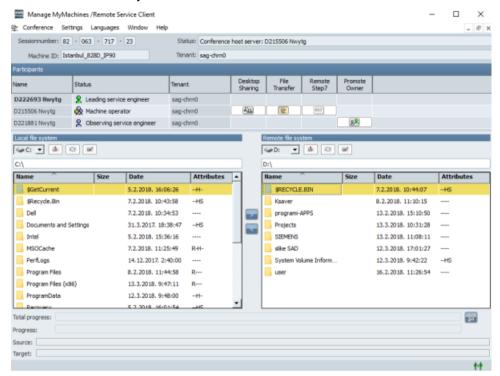
1. Click the "Open file transfer" icon to start the file transfer.



2. The "Filetransfer" window is displayed once the function has been established. You can now transfer files between your PC (local file system) and another PC (remote file system).

### 9.5 Transfering files

- 3. Use the cursor to navigate to the required files.
- 4. Some directories and files are protected. If you do not have sufficient access rights, the message "Access denied" is displayed.
- 5. Select the files or directories that you want to transfer, either at the PC (local file system) and/ or at the remote file system.



6. Copy the selection into the appropriate directory using symbols ">" / "<". No other actions can be performed during the copying procedure.

#### Note

The file transfer can be canceled by the machine operator. In this case, the message "Filetransfer canceled!" appears

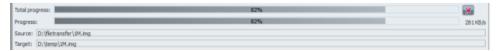
#### Note

If a directory or a file already exists in the target system, the following prompt is displayed: "Path already exists on the remote file system. Overwrite?". The source and target directories are also displayed.

Confirm this message with "OK".

If you no longer want to receive such messages, select the "Use on all in the operation!" check box before confirming.

The operation is displayed on a progress indicator.



7. The machine operator must grant permission for the file transfer at the SINUMERIK control.

### Note

### Issuing permission for all functions of a session

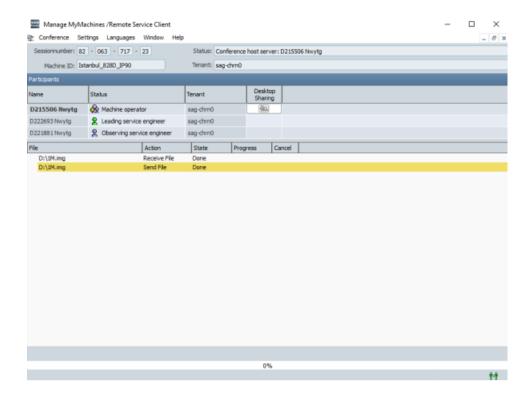
If the machine operator activates option checkbox "Grant approval for all actions in this session" then approval is also issued for the following functions of the session:

- Screen sharing
- File transfer
- STEP 7 via Internet
- Automatic session recording
- Transfer is started if the machine operator presses the "Yes" softkey.
- Transfer is denied if the machine operator presses the "No" softkey.



8. You see the result at the end of the data transfer.

# 9.5 Transfering files



# Confirming data transfer at the SINUMERIK control system

The machine operator is requested to grant permission. A message window is displayed.

If the remote session with file transfer is to apply to the entire session, the machine operator selects the "Apply to all in the process!" check box. The machine operator then enables the remote session with "Yes".

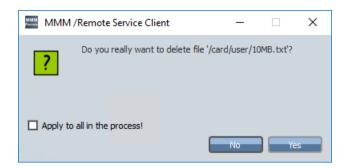
### Note

### No permission for the entire session

If the machine operator does not grant general permission for all of the actions for the entire session, the service engineer cannot access the SINUMERIK control when the confirmation prompts are being displayed. The service engineer can see the screen of the machine operator during this time, but can no longer perform any operations.

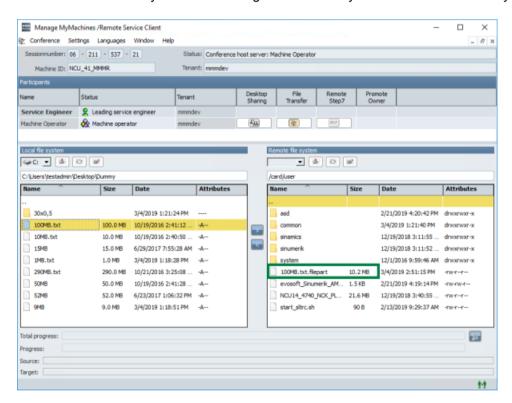
Only after confirmation by the machine operator can the service engineer access the SINUMERIK control.

If, for example, the service engineer wishes to delete several files from the system of the machine operator, then the appropriate permission is requested.



## Resuming the file transfer

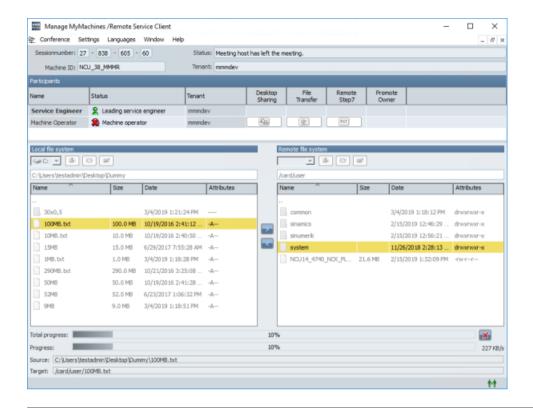
If a file transfer is interrupted by a temporary network fault, the copy procedure is resumed automatically when the connection is established again. During network failure, the corresponding window is deactivated. As soon as the network fault has been corrected, file transfer is automatically resumed starting from the last byte transferred successfully.



If the connection cannot be re-established during the current session, then the transfer can be continued manually in a later, separate session.

The service engineer must start the copying procedure to the same target directory again. If the system finds the incomplete file from the previous unsuccessful transfer in this directory, then the operation is continued from precisely this position.

#### 9.5 Transfering files



#### Note

## Check the source and target files

To ensure that the source and target files are identical, the checksums are compared first. This calculation can take several minutes for large files (above approx. 100 MB). During this interval, the message "Waiting for confirmation!" is displayed in the status bar.

## Creating a new directory

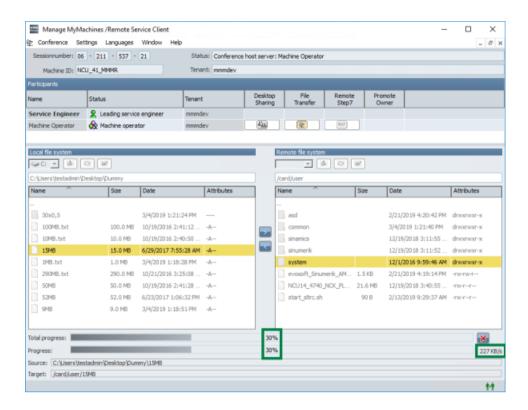
You can create new directories on your operator PC or on the SINUMERIK control in the same way.

- 1. Navigate to the required directory level.
- 2. Click the icon is to create a new directory.
- 3. Assign a name to the new directory.

## Performance optimization of the file transfer

The "speed" of file transfer depends on the specific network configuration and the network load. The file transfer rate can also fluctuate substantially during transfer.

In addition to the progress bar, the current percentage and transfer rate (KB/s) can be observed.



## Display of the file transfer in the log

The actions performed by the service engineer are shown in the dialog below the list of participants in the log.

Log window of the file transfer		
File	The log window of the file transfer opens automatically when the service engineer performs an action.	
	The window can also be shown or hidden via the "Conference > File Transfer Log" window.	
	The directory and the file name to which the actions performed by the service engineer refer, are displayed in the window.	
	The log settings can be specified.	
Action	Shows the type of action.	
Status	Shows the current status of the action.	
Sequence	Shows the progress as a percentage and as a progress bar. A progress bar and percentage is also shown in the lower part of the window.	
×	The machine operator can cancel the action via the icon.	

The log is shown automatically when the service engineer starts the file transfer. Irrespective of this, the machine operator can open and close the log manually:

- Call the "Conference" > "File transfer log" menu.
   You will see the log with the current status in the lower window.
- 2. During the file transfer, in addition to the name of the current file, you will see the action performed, the status, a progress bar and an icon to cancel the file transfer in the log window.

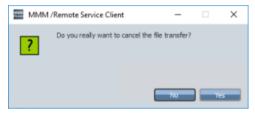
#### 9.5 Transfering files

#### Note

In the "Settings" menu, you specify whether the file functions performed during a session are to be written to a log file.

## Canceling file transfer

- 1. Click on icon to cancel an ongoing file transfer.
- A confirmation prompt is displayed.Click on "Yes" to irrevocably cancel the file transfer.



## **Deleting files**

- 1. Select the directories or files to be deleted.
- 2. Right-click to call the "Delete file" menu command.

#### Note

If you delete a directory or a file with write protection, the following prompt is displayed: "File is write-protected, do you still want to delete it?"

- Click "OK" to delete the message.
- If you no longer want to receive such messages, select the "Use on all in the operation!" check box before confirming.

You cannot perform any other actions during deletion.

## Assigning attributes

As a remote user, you can change the attributes of transferred files or directories:

- 1. Select the appropriate file or directory.
- 2. Right-click to call the "Set attributes" menu command.

  The setting dialog opens for the attributes of the selected element (file or directory).

- 3. Set the required attributes via the check boxes.
- 4. Click "OK" to confirm the settings.



## **Ending file transfer**

You end file transfer in the same way:

- Owner of the conference: You close file transfer using icon "X" in the upper right-hand section of the window.
- Owner of the conference: You close file transfer and end the conference. File transfer and any operations still in progress are terminated.
- Machine operator: You leave the conference.
   The message "File transfer canceled!" is displayed.

## 9.6 Remote STEP 7 via the Internet

With the aid of the "Remote STEP 7" function, as a remote user, you can execute all of the functions in SIMATIC Manager.

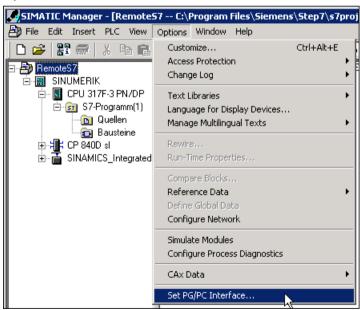
## **Prerequisites**

- The SIMATIC Manager must be installed on the local PC.
- The Service Engineer Client must then be installed.
- The client on the machine operator side must support "Remote STEP 7".
- The network interface of the SIMATIC Manager on the PC must be adapted.
- The "Step 7 via Internet" function is updated.
- The "Commissioning engineer" or "Service engineer" role must be assigned.
- The operator at the SINUMERIK control system must have adequate access rights.
  - Machine manufacturer (password)
  - Service (password)
  - User (password)

## Changing the network interface of the SIMATIC Manager

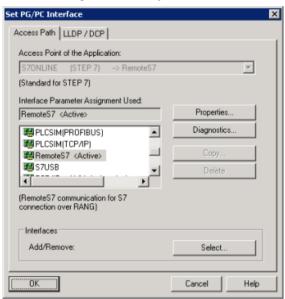
To be able to use the "RemoteS7" function, the network interface of SIMATIC Manager must first be changed.

1. Open the menu "Tools" > "Set PG/PC interface..." in SIMATIC Manager.

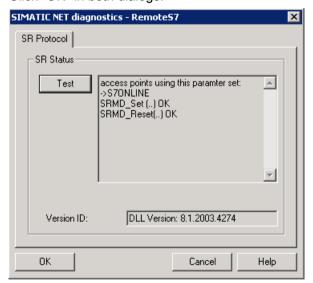


2. The "Set PG/PC Interface" dialog opens.

- 3. Click the "Access Path" tab.
  In the "Interface Parameter Assignment Used" list, navigate to the "RemoteS7" interface parameter assignment and select the appropriate entry.
- 4. Click on "Diagnostics..." if you wish to test the interface parameterization.



The Diagnostics dialog then opens.
 Click "Test". The result is displayed in the Diagnostics dialog.
 Click "OK" in both dialogs.



## Starting "Remote STEP 7"

1. Click on the "RS7" icon to remotely access the SINUMERIK control system.



- 2. The function start depends on the default setting:
  - "Remote STEP 7" is active after a short time when the "Always request permission" function is selected.
  - If the "Always request permission" function is not selected, the machine operator must permit access.

If the machine operator presses the "Yes" softkey, access is permitted.



3. If the machine operator presses the "No" softkey, access is denied for the remote user. The remote user receives the following message:



#### Access rights at the SINUMERIK control system

At the PC, the service engineer clicks on "RS7".

The following access rights are required at the SINUMERIK control system to start "Remote STEP 7":

- Access level 1 = machine manufacturer (password)
- Access level 2 = service (password)
- Access level 3 = user (password)

#### Inadequate access rights

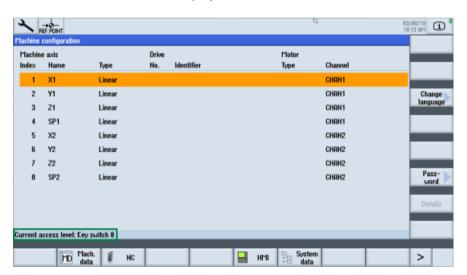
The message is also displayed if the access rights are inadequate:



Inadequate access rights are:

- Access level 4 = keyswitch 3
- Access level 5 = keyswitch 2
- Access level 6 = keyswitch 1
- Access level 7 = keyswitch 0

The current access level is displayed in the lower section of the window.



## Closing "Remote STEP 7"

- 1. Check that no operations are active in the SIMATIC Manager.
- 2. Click the "RS7" icon again to end the remote access.
- 3. Confirm the prompt with "Yes" if you really want to terminate the function.

## 9.7 Transferring the conference leadership

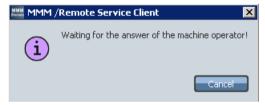
As conference owner, you can transfer the conference leadership to another, observing service engineer. The owner role therefore switches to another operator.

#### **Procedure**

1. As conference owner, click the icon Leadership transfer the line of the service engineer to whom you want to transfer the leadership.



After calling the function, the following message appears on your PC:



The following query appears on the PC of the selected service engineer:



2. The observing service engineer must click the "Yes" button to take over the conference leadership.

## Note

If the observing service engineer rejects the transfer of leadership with the "No" button, an appropriate message appears on the PC.

- 3. As former conference leader, you must then confirm the transfer. If the "Always request permission" function is not active, the machine operator must also confirm the transfer of leadership. The message "Waiting for confirmation from the machine operator!" appears on your PC and on the PC of the next conference leader.
- 4. The machine operator agrees to the transfer of leadership. The conference leadership is then transferred to the desired observing service engineer. The changed user roles are updated accordingly in the list of participants.

#### Note

#### Rejecting the transfer

If the machine operator rejects the transfer, you and the observing service engineer receive the following message: "The transfer of leadership has been rejected by the machine operator!"

# 9.8 Evaluating remote session

In ManageMyMachines /Remote, you can evaluate and view remote sessions.

## Overview of information

The following information is displayed in the "Conference" window:

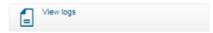
Information	Description	
Initiator	Shows the e-mail address of the session leader.	
Conference ID	Shows the session number of the conference.	
Start time	Shows the start of the conference with the date and time.	
End time	Shows the end of the conference with the date and time.	
Duration	Shows the duration of the conference.	
Details	Shows further information about the conference.	

Further information is displayed in the "Conference details" window:

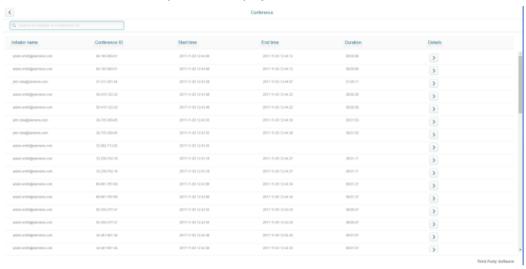
Information	Description	
"Participants" tab		
User name	Shows the e-mail address of the user.	
Tenant	Shows the organization.	
Entry time	Shows the entry time with the date and time.	
Exit time	Shows the exit time with the date and time.	
Duration	Displays the duration in hours, minutes and seconds.	
"Data transfer" tab		
File size	Shows the file size in bytes.	
File name	Shows the file name.	
Sender	Shows the e-mail address of the sender.	
Receiver	Shows the e-mail address of the receiver.	
Start time	Shows the start time with the date and time.	
End time	Shows the end time with the date and time.	
Duration	Displays the duration in hours, minutes and seconds.	
"Promote owner" tab		
Current owner of the conference	Shows the e-mail addresses of the current and previous conference owners.	
Previous conference owner		
Conference owner's time	Displays the duration of the owner of the conference in hours, minutes and seconds.	

#### **Procedure**

1. Click the "View logs" button.

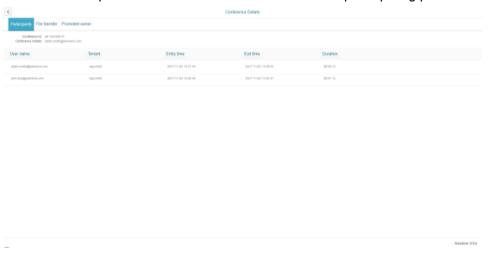


2. The "Conference" window opens and displays an overview of all sessions.



## Displaying detailed information

- 1. If you want to take a closer look at a conference, select the desired conference and click the ">" button in the Details column.
- 2. The "Conference details" window opens and offers you 3 tabs.
- 3. Click the "Participants" tab for more information about the participating persons.



## 9.8 Evaluating remote session

4. Click the "Data transfer" tab for more information about the data.



5. Open the "Promote owner" tab for more information about the owners of the conference.



## 9.9 Exporting log files

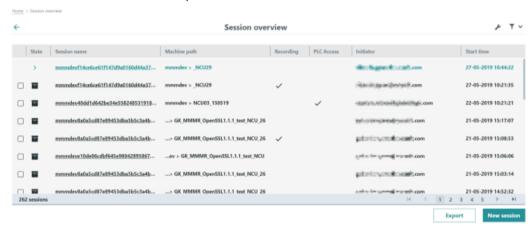
You have the option of exporting the log file for a session.

## **Procedure**

1. Click on "Manage remote access sessions".



2. The "Session overview" window opens and displays an overview of all sessions. Select a session and click "Export".



3. A browser window opens.

Navigate to the file in the required directory.

# 9.10 Changing session data

## **Parameter**

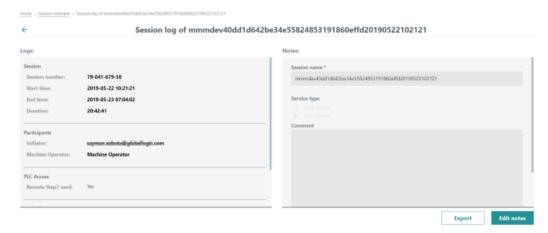
Parameter	Description		
Logs:	Shows the following session data:		
Session			
	Session ID	Shows the session ID.	
	Start time	Shows the start and end time in the following format:	
	End time	Year-month-day (YYYY-MM-DD)	
		Hour:Minute:Second (hh:mm:ss)	
	Duration	Displays the total duration of the session in the following format:	
		Hour:Minute:Second (hh:mm:ss) The session is still active if the data is shown in color.	
Nodes			
	Initiator	Shows the e-mail addresses of the service engineer.	
	Machine opera- tor	Shows the machine operator.	
PLC access			
	Remote STEP 7	Shows whether the PLC access is via Remote STEP 7:	
	used	• Yes	
		• No	
Notes	•		
	Session name *	Shows the session names.	
	Service type	Shows the following:	
		Fee-based service	
		Free service	
	Comment	You can add additional comments to the session.	

<sup>\*</sup> Is a mandatory field and must be filled out

#### **Procedure**

When a session is finished, you can still edit or add session data.

- 1. In the overview, select a session and click on the session name.
- 2. The "Session information from <session name>" window opens.
  - Click on the "Edit notes" button.
  - The right window area is released for changes and additions.
     Note: You cannot change the log data!
     You can enter a different name in the "Session name" text box.
     You can add further information in the "Comment" text box.



- 3. Click on "Save" to save the changes.
  - OR -

Click "Abort" to discard the entries.

## 9.11 Ending the remote session

For the various participants, a session is terminated in various ways

- The service engineer terminates the session:
  - The machine operator at the control system sees the following message: "Session ended".
  - The other participants see the following message: "The session has been terminated by the owner"
- An observing participant terminates the session:
  - The window is closed, however the session remains active.
  - The observing participant can join the active session again at any time.
- The machine operator at the control system exits the session:
  - The session remains active for all of the other participants.
  - The remote access function is deactivated.

#### Note

## Closing a session

Only a service engineer at the PC can close a session.

#### **Procedure**

1. The following icon is displayed in the "Remote access" column if the machine operator exits the session:



2. Select the "Conference" > "Exit" menu.



- 3. If actions of the service engineer are still active when you leave the session, relevant messages are displayed.
- 4. Click on "Yes" to exit the session.

The functions or applications in progress are aborted.

- OR -

Click "No" if you do not yet want to exit the remote session.



#### - OR -

In the "Conference" menu, select the "Exit" function to terminate the conference. In the right-hand upper section of the window, click on the "X" to close the window.



9.11 Ending the remote session

# Additional Manage MyMachines /Remote Service Client functions

## 10.1 User roles

You can participate in a session with the following roles:

- 1. Owner of the conference (SE)
- 2. Machine operator (MO)
- 3. Observing service engineer in the conference (SE)

These user roles can have different states and are defined on the user interface with different icons:

Icon	No.	Role	Status
2	1	Owner of the conference	The owner of the conference participates actively in the session.
%	2	Owner of the conference	The owner of the conference is active and hosts the session (desktop sharing).
&	3	Machine operator	The machine operator participates actively in the session.
<del>⊗</del>	4	Machine operator	The machine operator hosts the conference.
			The owner of the conference does not control the remote desktop.
<u> 2</u> 2	5	Machine operator/service engineer	Transfer control
*	6	Machine operator	The machine operator was at the conference, but is currently not present.
<u>Q</u>	7	Observing service engineer	The observing service engineer participates actively in the conference.
*	8	Observing service engineer	The observing service engineer was at the conference, but is currently not present.

## Information

It is possible to participate as an observing service engineer as follows:

- A service engineer at the operator PC hosts the conference
- A machine operator at the SINUMERIK control participates in the conference

10.2 Selecting the window display

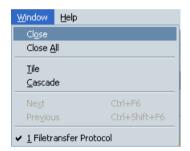
# 10.2 Selecting the window display

You have the option of defining how the window is displayed.

#### Overview

Table 10-1 Editing the window

Action	Description	
Close	Closes the window that has just been selected.	
Close all windows	Closes all open windows.	
Split	Adjusts the size of the opened windows so that all windows share the available space.	
Cascade	Displays the opened windows one behind the other.	
Next	Changes to the next open window.	
Previous	Changes to the previous open window.	
n <window name=""></window>	Changes to the open window with <window name="">.</window>	



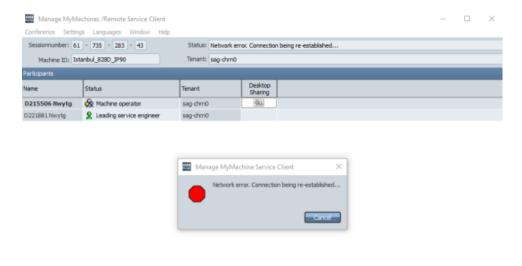
111

## 10.3 Network interruption

The following error message is displayed if the network is interrupted during an active session.

All internally active functions are terminated and "Manage MyMachines /Remote Service Client" cyclically attempts to participate in the session again.

Click the "Cancel" button to terminate the connection process.



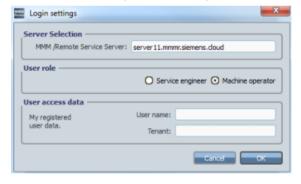
## 10.4 Setting the log-on data

You can save your login data. Your data is then automatically set when logging in.

Settings	Description	
Server selection		
MMM /Remote Service Serv-	Address of the Manage MyMachines /Remote Server	
er		
User role		
Service engineer	Activate the appropriate role.	
Machine operator		
Login data - my registered user data.		
User name	Entering the registered MindSphere user data to log in	
Tenant		

## **Procedure**

- 1. Call "Settings" > "Login..." in the menu bar. The "Login settings" window opens.
- Enter the necessary data.
   Click "OK" to save the settings.
   OR -
  - Click "Cancel" to reject the settings.



## 10.5 Setting file transfer

You can log the actions in a file during a remote session. You specify the settings of the log file in the "File Transfer Settings" window.

Settings	Description	
Temporary files		
Directory:	Specify the log directory or create a new directory in which the log files will be stored.	
	The directory selection is made in the "Find Directory" window.	
Max. file size [KB]:	Defining the maximum number of log files.	
	If "0" is entered, no log files are written. When the maximum number of files is reached, the oldest log file is deleted.	
Additional drive types		
Removable drives	The machine operator specifies which drive types the service engine	
Remote/network drives	may access. If no drive type is selected, the service engineer may only access the available hard drives.	

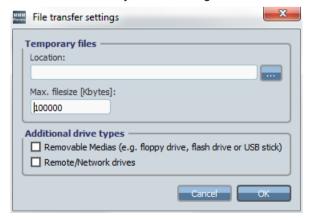
#### **Procedure**

- 1. Call "Settings" > "File transfer..." in the menu bar. The "File Transfer Settings" window opens.
- 2. A standard directory is specified for the logs.

  If you want to use another directory as the log directory, you can specify that here. Further information at: "Find directory / Create new directory".
- 3. Specify the maximum number of log files that can be saved in the log directory.
- 4. Then define which drive types are supported for the file transfer.

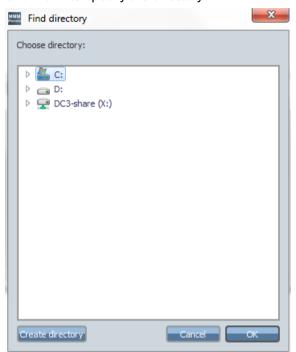
  Select the corresponding check box for each drive type that is to be supported.
- 5. Click "OK" to save the settings.
  - OR -

Click "Cancel" to reject the settings.



## Find directory / Create new directory

- 1. Click "..." behind "Directory:" if you want to set a different directory than that specified. The "Find Directory" window opens.
- 2. Select the required directory in the directory tree.OR -Click "Create new directory" to create a new directory.
- 3. Click "OK" to specify the directory.



## 10.6 Setting the language

You can make the following language setting:

- Set the language you want the display to appear in
- Define 2 favorites to speed up setting the language.
- Use language toggling.

## Changing the language in the "Languages" menu

You can change the currently displayed language on two ways.

- 1. Open the "Languages" menu.
  All the available languages are displayed. The current language is marked.
- 2. Check the check box for the required language.

  The user interface is changed and displays the texts in the corresponding language.



## Toggling the language

You must have first defined 2 favorite languages if you wish to quickly set the language.

- 1. Call "Settings" > "Language..." in the menu bar.
- 2. The "Toggle language" window opens. Select the favorite languages.

## 10.6 Setting the language

- 3. Click "OK" to save the selection.
  - OR -

Click "Cancel" to reject the selection.



4. Enter the key combination <Ctrl> and <L>. The language changes.

## 10.7 Setting the log file

A log file is frequently required for diagnostic purposes.

You can activate the creation of a log file and make further settings.

#### **Parameter**

Setting	Description	
Configuration		
Activate logging	Switches the log functionality on/off.	
Activate diagnostics logging	Performs the logging with an increased log level and a greater maximum file size. More data is therefore available for diagnostic purposes.	
	In this mode, no maximum file size and no log level must be specified. These values are specified by "Manage MyMachines /Remote".	
Directory:	Defines or creates a directory in which the log files are stored. The directory is created in the "Find Directory" window.	
Max. file size [KB]	Specification of the maximum file size in KB. "Manage MyMachines /Remote" creates a maximum of 2 log files. As soon as the first file reaches the maximum size, a new log file is created. If an older file already exists, then it is overwritten.	
Log level	Specifies whether and which data is to be logged.	
None	Do not log any data.	
Fatal	Critical errors that prevent further program execution.	
Error	Simpler errors that occur during the program execution, but that do not prevent further execution.	
Warning	Warnings that indicate problems.	
Info	Information that indicates irregularities in the execution.	
DebugN	Logging of the program execution. "N" specifies the level of detail.	

#### **Procedure**

- 1. Call "Settings" > "Logging..." in the menu bar. The "Logging settings" window opens.
- 2. Activate the "Enable logging" checkbox.

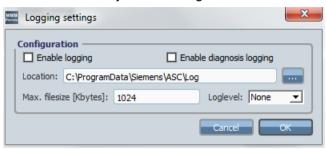
  This activates the creation of a log file. You create log files with the default settings displayed in the dialog. If required, you make fine settings for the logging.
- 3. A standard directory is specified for the log files.

  If you want to use another directory as the log file directory, specify that directory; you will find more information under: "Find directory / Create new directory".

#### 10.7 Setting the log file

- 4. Select the "Activate diagnostics logging" check box if you want an extended log file. However, you can then no longer manually define the maximum file size and the log level.
- 5. Click "OK" to save the settings.
  - OR -

Click "Cancel" to reject the settings.

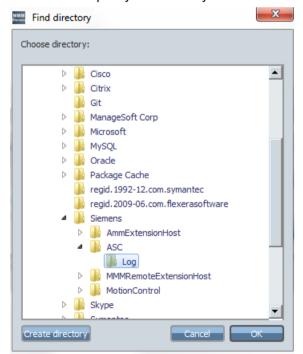


## Search/create directory

- 1. Click "..." behind "Directory:" if you want to set a different directory than that specified. The "Find Directory" window opens.
- 2. Select the required directory in the directory tree.
  - OR -

Click "Create new directory" to create a new directory.

3. Click "OK" to specify the directory.



# Appendix



# A.1 List of abbreviations

Admin	Administrator (user role)
AMM /C	Analyze MyMachine /Condition
CNC	Computerized Numerical Control:
СОМ	Communication
DIR	Directory:
FAQ	Frequently Asked Questions
h	Hour
HTTP	Hypertext Transfer Protocol
HTTPS	HyperText Transfer Protocol Secure,
IB	Commissioning engineer (user role)
ID	Identification number
IE	Internet Explorer
IFC	Interface Client
IoT	Internet of Things
IPC	Industrial PC
МВ	Megabyte
MFA	Multi Factor Authentication
MLFB	Machine-Readable Product Code
MMM	Manage MyMachines
MMM /R	Manage MyMachines /Remote
MO	Machine operator
MSTT	Machine control panel
NC	Numerical Control: Numerical control
NCU	Numerical Control Unit: NC hardware unit
OEM	Original Equipment Manufacturer
OP	Operation Panel: Operating equipment
PC	Personal Computer
PCU	PC Unit: Computer unit
PLC	Programmable Logic Control: Programmable Logic Controller
SE	Service engineer
SI	SINUMERIK Integrate
SK	Softkey
SW	Software
URL	Uniform Resource Locator, einheitlicher Ressourcenzeiger
UTC	Universal Time Coordinated

A.1 List of abbreviations

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