SIEMENS

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Introduction

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Valid for control: SINUMERIK 840D sl/ 840DE sl/ 828D SINUMERIK ONE Software Manage MyMachines /Spindle Monitor, Version 02.05.01.00

03/2024 A5E45212179B BD

Legal information

Warning notice system

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

A DANGER

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

🛕 WARNING

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

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

NOTICE

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

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

Qualified Personnel

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

Proper use of Siemens products

Note the following:

A 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 Aktiengesellschaft. 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.

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Introduction

1.1 About Manage MyMachines

Insights Hub

Insights Hub is a cloud-based, open IoT operating system from Siemens that connects your machines and physical infrastructure with the digital world. This gives you a complete overview of your data at all times.

Several Insights Hub-based applications are available – the "Manage MyMachines for Industrial Operations X Cloud".

Manage MyMachines

The "Manage MyMachines" MindApp visualizes numerous operating and plant-specific data of machine tools or individual machine components for production, service and maintenance. This increases the transparency of the machine tools connected in Insights Hub.

The following functions are possible:

- Globally distributed machines can be managed and displayed.
- Visualize relevant information in an overview page.
- Intuitive creation of rules and queries.
- Simple installation through integrated SINUMERIK Integrate client.
- Combines critical machine data for a meaningful analysis.
- Create your own digital service portfolio based on the MindApp.

The data that you provide is exclusively variables from the NC, the PLC or from the drives. This data enables conclusions to be drawn with regard to:

- Availability
- Operating times
- Operating state, state duration
- Maintenance, wait times
- Technical state

The corresponding data is either preconfigured or can be defined centrally by the user and configured with appropriate warning limits. It is also possible to identify trends with the aid of measuring series.

Data processing and visualization are realized on the Insights Hub platform.

1.2 About this documentation

1.2 About this documentation

Overview

This document describes the following:

- How to connect Insights Hub to the SINUMERIK control More information can be found at: Setting up the SINUMERIK control system for Manage MyMachines (Page 31)
- The functionality of Manage "MyMachines for Industrial Operations X Cloud" **More information** can be found at: Working with Manage MyMachines (Page 209)

Target group

This publication is intended for:

- Project engineers
- Technology experts (from machine manufacturers)
- Commissioning engineers (systems/machines)
- Programmer-users

Benefits

The Function Manual describes the functions in such a way that the target group is aware of them and can select them. The manual provides the target group with the information required to implement the functions.

Standard scope

This documentation only describes the functionality of the standard version. This may differ from the scope of the functionality of the system that is actually supplied. Please refer to the ordering documentation only for the functionality of the supplied drive system.

It may be possible to execute other functions in the system which are not described in this documentation. This does not, however, represent an obligation to supply such functions with a new control or when servicing.

For reasons of clarity, this documentation cannot include all of the detailed information on all product types. Further, this documentation cannot take into consideration every conceivable type of installation, operation and service/maintenance.

The machine manufacturer must document any additions or modifications they make to the product themselves.

Websites of third-party companies

This document may contain hyperlinks to third-party websites. Siemens is not responsible for and shall not be liable for these websites and their content. Siemens has no control over the information which appears on these websites and is not responsible for the content and information provided there. The user bears the risk for their use.

1.3 Documentation on the internet

1.3.1 Documentation overview Manage MyMachines

You can find comprehensive documentation on Manage MyMachines and Manage MyMachines /Spindle Monitor functions under: Documentation in Insights Hub (<u>https://siemens.mindsphere.io/en/docs/ManageMyMachine.html</u>).

You can find information on Insights Hub at the following link: Insights Hub (<u>https://plm.sw.siemens.com/en-US/insights-hub/</u>).

You can find information on the topic of industrial security at Cybersecurity information (Page 19) and in the Configuration Manual "SINUMERIK / SIMOTION /SINAMICS, Motion Control, Industrial Security".

1.4 Feedback on the technical documentation

1.4 Feedback on the technical documentation

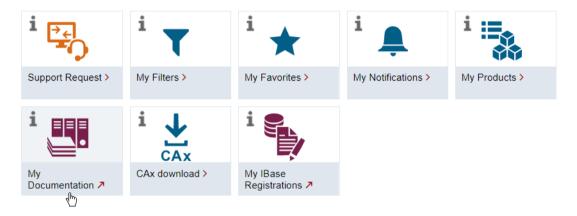
If you have any questions, suggestions, or corrections regarding the technical documentation published in the Siemens Industry Online Support, use the link "Give feedback" link which appears at the end of the entry.

1.5 mySupport documentation

With the "mySupport documentation" web-based system you can compile your own individual documentation based on Siemens content, and adapt it for your own machine documentation.

To start the application, click on the "My Documentation" tile on the "mySupport links and tools" (<u>https://support.industry.siemens.com/cs/ww/en/my</u>) portal page:

mySupport Links and Tools



The configured manual can be exported in RTF, PDF or XML format.

Note

Siemens content that supports the mySupport documentation application can be identified by the presence of the "Configure" link.

1.6 Service and Support

1.6 Service and Support

Product support

You can find more information about products on the internet: Product support (<u>https://support.industry.siemens.com/cs/ww/en/</u>) The following is provided at this address:

- Up-to-date product information (product announcements)
- FAQs (frequently asked questions)
- Manuals
- Downloads
- Newsletters with the latest information about your products
- Global forum for information and best practice sharing between users and specialists
- Local contact persons via our Contacts at Siemens database (→ "Contact")
- Information about field services, repairs, spare parts, and much more (\rightarrow "Field Service")

Technical support

Country-specific telephone numbers for technical support are provided on the internet at address (<u>https://support.industry.siemens.com/cs/ww/en/sc/4868</u>) in the "Contact" area.

If you have any technical questions, please use the online form in the "Support Request" area.

Training

You can find information on SITRAIN at the following address (<u>https://www.siemens.com/</u> sitrain).

SITRAIN offers training courses for automation and drives products, systems and solutions from Siemens.

Siemens support on the go



With the award-winning "Industry Online Support" app, you can access more than 300,000 documents for Siemens Industry products – any time and from anywhere. The app can support you in areas including:

- Resolving problems when implementing a project
- Troubleshooting when faults develop
- Expanding a system or planning a new system

Furthermore, you have access to the Technical Forum and other articles from our experts:

- FAQs
- Application examples
- Manuals
- Certificates
- Product announcements and much more

The "Industry Online Support" app is available for Apple iOS and Android.

1.7 OpenSSL

1.7 OpenSSL

This product can contain the following software:

- Software developed by the OpenSSL project for use in the OpenSSL toolkit
- Cryptographic software created by Eric Young.
- Software developed by Eric Young

You can find more information on the internet:

- OpenSSL (<u>https://www.openssl.org</u>)
- Cryptsoft (<u>https://www.cryptsoft.com</u>)

1.8 General Data Protection Regulation

Siemens observes standard data protection principles, in particular the data minimization rules (privacy by design).

For this product, this means:

The product does not process or store any personal data, only technical function data (e.g. time stamps). If the user links this data with other data (e.g. shift plans) or if he/she stores person-related data on the same data medium (e.g. hard disk), thus personalizing this data, he/she must ensure compliance with the applicable data protection stipulations.

Introduction

1.8 General Data Protection Regulation

Security instructions

2.1 Fundamental safety instructions

2.1.1 General safety instructions

🛕 WARNING

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.

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.

2.1.2 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 customer-specific solutions, but merely serve to provide assistance with 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.

2.1.3 Cybersecurity information

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

2.1 Fundamental safety instructions

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 cybersecurity concept. Siemens' products and solutions 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. firewalls and/or network segmentation) are in place.

For additional information on industrial cybersecurity measures that may be implemented, please visit

https://www.siemens.com/cybersecurity-industry.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that 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 Cybersecurity RSS Feed under

https://new.siemens.com/cert.

Further information is provided on the Internet:

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

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 state-of-the-art, integrated industrial cybersecurity concept for the installation or machine.
- Make sure that you include all installed products in the integrated industrial cybersecurity concept.
- Protect files stored on exchangeable storage media from malicious software by with suitable protection measures, e.g. virus scanners.
- Carefully check all cybersecurity-related settings once commissioning has been completed.

2.2 Security instructions in Insights Hub documentation

Take into consideration the content of the following Insights Hub documentation:

- Insights Hub security model (<u>https://assets.new.siemens.com/siemens/assets/api/uuid:6b876b5e-5594-4da4-90e0-e9e0c6f1f1e1/siemens-plm-mindsphere-security-model-wp-75966-a7.pdf</u>)
- Insights Hub architecture (<u>https://documentation.mindsphere.io/MindSphere/concepts/</u> concept-architecture.html)
- Authentication & Authorization (<u>https://documentation.mindsphere.io/MindSphere/</u> <u>concepts/concept-authentication.html</u>)

Note

Applying the defense-in-depth concept

To protect industrial plants and systems comprehensively against cyber attacks, measures must be applied simultaneously

at all levels. From the operational level up to the field level – from access control to copy protection. Therefore, apply the "Defense in depth" protection concept to avoid security risks in your environment before setting up the OPC UA server.

Note in particular that the company network must not be connected to the Internet without suitable

protective measures.

More information on the defense-in-depth concept, protective measures and general Industrial Security can be found in the Industrial Security Configuration Manual (https://support.industry.siemens.com/cs/ww/de/view/108862708).

2.3 Data management, confidentiality and encryption

2.3 Data management, confidentiality and encryption

If you connect your machines using "Manage MyMachines", "Manage MyMachines" generates public/private encrypted "onboard.key" files, which are used to onboard assets.

Furthermore, when transferring data from your machine to Insights Hub, "Manage MyMachines" uses customer-specific OAUTH-2.0 tokens, which are provided by Insights Hub.

HTTPS with TLS 1.2 is used to establish all of the communications between the individual components.

System requirements

Hardware and operating software

SINUMERIK 840D sl

SINUMERIK Integrate	Operating software	Hardware version	
client software version	SINUMERIK Operate version		tem
2.0.11	4.5 SP4, HF1, 2, 3, 4	NCU 7x0.3 PN	Linux
2.0.12	4.5 SP6, HF1, 3, 5, 7, 8, 9, 10, 11,	NCU 7x0.3B (PN)	
2.0.13	12, 13, 14, 15, 16, 17, 18, 19		
2.0.14	4.5 SP5, HF1, 3, 5	PCU 50.5	Windows 7
2.0.16	4.5 SP6, HF2, 3, 5, 7, 8, 10, 11, 13,	IPC427E	Windows 10
2.0.18	14, 15, 16, 17, 18, 19	IPC477E	
2.0.19			
2.0.20			
2.0.21			
2.0.22			
2.0.24			
3.0.11	4.7 SP1, HF1	NCU 7x0.3 PN	Linux
3.0.12	4.7 SP2, HF1, 3, 4	NCU 7x0.3B (PN)	
3.0.13	4.7 SP3, HF1, 2, 3	PCU 50.5	Windows 7
3.0.14	4.7 SP4, HF1, 3, 4, 5, 6	IPC427E	Windows 10
3.0.16	4.7 SP5, HF1	IPC477E	
3.0.18	4.7 SP6, HF1, 3, 4, 5, 6, 7		
3.0.19	4.7 SP7, HF1, 3		
3.0.24	4.7 SP7, HF14		
3.0.26	4.8 SP1, HF1, 2, 3		
	4.8 SP2, HF1, 3		
	4.8 SP3, HF1		
	4.8 SP4, HF1, 3, 4, 6, 8		
	4.8 SP5, HF5, 6		
	4.8 SP6, HF1, 3, 4, 5		
	4.8 SP7		
	4.95		

SINUMERIK Integrate client software version	Operating software SINUMERIK Operate version	Hardware version	Operating sys- tem
4.0.15	4.92, HF3	NCU 710.3B	Linux
4.0.16	4.93, HF1, 2	NCU 7x0.3B (PN)	
4.0.18	4.94, HF3, 4	PCU 50.5	Windows 7
4.0.19	4.95	IPC427E	Windows 10
4.0.20	4.95, HF1	IPC477E	
4.0.22	4.95 SP1, HF1		
4.0.25	4.95 SP1, HF3		
4.0.26	4.95 SP3, HF2		
4.0.27			

SINUMERIK ONE

SINUMERIK Integrate client software version	Operating software SINUMERIK Operate version	Hardware version	Operating sys- tem
4.0.15	6.13, HF1, 2, 4, 6	NCU 1740	Linux
4.0.16	6.14, HF3	NCU 1750	
4.0.18	6.15, HF1	NCU 1760	
4.0.19	6.15 SP1	IPC 427E	Windows 10 IoT
4.0.20	6.15 SP1, HF1	MCU 1720	Enterprise LTSB
4.0.21	6.15 SP1, HF3		2016, 64 bit
4.0.22	6.15 SP1, HF5		
4.0.23	6.15 SP3		
4.0.26			
5.0.27	6.23	NCU 1750	Linux

SINUMERIK 828D

SINUMERIK Integrate	Operating software	Hardware version	
client software version	SINUMERIK Operate version		tem
2.0.11	4.5 SP4	PPU 281.3	Linux
2.0.12	4.5 SP5, HF1, 2	PPU 261.3	
2.0.13	4.5 SP6, HF1, 2, 3, 4	PPU 241.3	
2.0.14			
2.0.16			
2.0.18			
2.0.19			
2.0.20			
2.0.21			
2.0.22			
2.0.24			
2.0.26			
2.0.27			
3.0.11	4.7 SP2, HF1	PPU 290.3	
3.0.12	4.7 SP3, HF2	PPU 28x.3	
3.0.13	4.7 SP4, HF1, 2	PPU 26x.3	
3.0.14	4.7 SP5	PPU 24x.3	
3.0.16	4.7 SP6, HF1, 2		
3.0.18	4.7 SP7, HF1, 3, 4, 5		
3.0.19			
3.0.24			
3.0.26			
3.0.13	4.8 SP4, HF1	PPU 271.4	
3.0.11	4.8 SP4, HF1, 2, 3, 4, 5	PPU 27x.4	
3.0.12	4.8 SP5, HF5, 6	PPU 29x.4	
3.0.13	4.8 SP6, HF1, 2, 3		
3.0.14	4.8 SP7		
3.0.19			
3.0.20			
3.0.21			
3.0.22			
3.0.27			
4.0.17	4.94		
4.0.18	4.95, HF1		
4.0.19	4.95 SP3		
4.0.21			
4.0.22			
4.0.25			
4.0.26			
4.0.27			

Retrofit

SINUMERIK Integrate Client Version	Operating software HMI Advanced Version	Hardware version	Operating sys- tem
4.15.0.13	7.7.1.0	IPC 427D	Windows 10
	7.7.1.1		

Controllers from third-party suppliers

Controller name	MA Adapter software version	Machine Agent Core version	Hardware	Remarks
Fanuc	2.0.0-44	From 1.2.0	Oi	All systems are suppor-
			31i-B	ted
Heidenhain	1.0.0	From 1.2.0	iTNC530	Cyclic triggers and val-
			TNC128	ue-based triggers are
			TNC320	supported
			TNC620	
			TNC640	
Beckhoff	2.0.0-12	From 1.9.2	Twincat3 PLC	Only cyclic triggers are
			Twincat3 CNC	supported
Mitsubishi	2.0.1-2	From 1.11.4	M800W	All functions are sup- ported
OPC UA	1.3.0	From 1.5.7	Controllers that have an OPC UA server li- cense and are installed	Cyclic triggers and val- ue-based triggers are supported
MT Connect	1.0.0	From 1.2.0	MT Connect-compati- ble controllers	Cyclic triggers and val- ue-based triggers are supported

SINUMERIK Integrate Gateway

The following SINUMERIK Integrate Client software versions support the Gateway function:

- 04.01.08.01
- 04.01.10.00

Operator PC

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

Web browser or tablet

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
- Microsoft Edge (Chromium based)
 Version from 85.0.564.51 up to the current version
- Safari for tablets iOS and Android systems are supported for the current version and 10 inch tablet size.

Note

Parallel operation with SINUMERIK Integrate applications is not possible

Security notes

NOTICE

Security standards for SINUMERIK controls connected to Insights Hub

SINUMERIK controls connected to Insights Hub via TLS 1.2 /https comply with 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.

The actions required in this regard are described in the following Configuration Manual: Industrial Security (<u>https://support.industry.siemens.com/cs/ww/en/view/108862708</u>).

NOTICE

Data misuse due to an unprotected Internet connection

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

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

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

Note

SINUMERIK control system security

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

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

Note

Operating PC security

The security measures required (e.g. virus scanner, firewalls, operating system patching) must be implemented on the PCs that are used to visualize and configure Insights Hub applications at the OEM or end user facility.

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

Note

Data archiving

When archiving your exported data, observe that you are responsible for ensuring that this data is securely archived.

This also includes the following measures:

- Save exported data to an area with restricted access within the OEM/end customer location. These include, for example, restricted access to SharePoints or databases through user administration with proof of authorization.
- Protect your encrypted storage locations, such as SharePoints, against manipulation.
- If absolutely necessary, only store your confidential or security-relevant data encrypted on your PC / systems or the network. Security-relevant data includes sensitive data, such as archives, passwords, or executable files (*.exe).
- Regularly back up your security-relevant data and carefully protect it against loss and manipulation.

Note

Transporting data

Apply the following measures when transporting data:

- If you send confidential and/or security-relevant data by e-mail, always send this e-mail encrypted or signed, especially in the public domain or on the Internet.
- If you wish to transport confidential and/or security-relevant data on a data storage medium (USB flash drive, hard disk, etc.), carefully investigate as to which data storage media are considered secure. These data storage media must be regularly checked for viruses. Always save your data on local data storage media so that the data is encrypted.

These measures are especially important for sensitive data, such as archives, passwords or executable files (*.exe).

Type of delivery

The updates and more 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 -

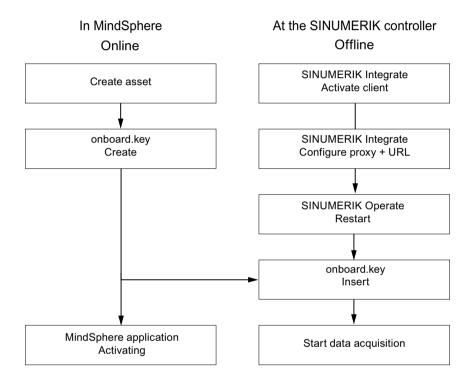
You contact Siemens Service and Support.

Setting up the SINUMERIK control system for Manage MyMachines

4.1 Activating the data acquisition

Overview

To use the Insights Hub application, you must carry out various steps in Insights Hub and on the SINUMERIK control itself.



Procedure

In Insights Hub:

- Create the desired assets.
 More information can be found at: Asset Manager (Page 100)
 Detailed information can be found at: Insights Hub Asset Manager System Manual
- 2. Create the "onboard.key". **More information** can be found at: Connecting controls with Insights Hub (Page 156)
- Activate the required Insights Hub application.
 More information is provided at: Activating Manage MyMachines (Page 112)

4.1 Activating the data acquisition

At the SINUMERIK control system:

- 1. Check the installed version. **More information** can be found at: Displaying version data (Page 33)
 - If an appropriate SINUMERIK Integrate version is not installed, then perform a client update.
 - More information can be found at: Client update under Windows (Page 36)
- Activate the SINUMERIK Integrate client.
 More information can be found at: Activating the SINUMERIK Integrate client (Page 45)
- 3. Enable the use of SINUMERIK Integrate. **More information** can be found at: Activating SINUMERIK Integrate use (Page 46)
- 4. Configure the URL and proxy.
 - On the SINUMERIK 840D sl control system:
 More information can be found at: Configuring the URL and proxy (Page 47)

- OR -

- On the SINUMERIK 828D control system:
 More information can be found at: Configuring the URL and proxy (Page 55)
- 5. Restart Windows.
- 6. Insert "onboard.key".
 - On the SINUMERIK 840D sl control system: More information can be found at: Install the registration key on a SINUMERIK control system (Page 50)
 - OR -
 - On the SINUMERIK 828D
 More information can be found at: Install the registration key on a SINUMERIK control system (Page 58)
- 7. Start with editing the diagram.

Note

File "onboard.key"

The file "onboard.key" contains security-related information for the one-time connection setup of a SINUMERIK control with Insights Hub and must therefore be stored securely – both on the end device on which the file is temporarily stored, and on the target controller. This connection setup key is only no longer relevant when the connection between the SINUMERIK control system and Insights Hub has been completely established.

This file is then automatically deleted on the SINUMERIK control system.

Secure the end devices used for this accordingly, for example, using antivirus programs, firewalls, OS updates, etc.

4.2 Checking and updating the versions

4.2 Checking and updating the versions

4.2.1 **Displaying version data**

In the "Version data" window you can check whether you are using a suitable version.

Only use the versions specified in this document. Additional information is provided in Chapter: System requirements (Page 23).

The following components with the associated version data are specified:

- CNC software Among other things, the SINUMERIK Operate version is displayed in the details.
- PLC basic program
- PLC user program

System extensions Among other things, the SINUMERIK Integrate version is displayed in the details.

- OEM applications
- Hardware

٠

Information is provided in the "Nominal version" column as to whether the versions of the components differ from the version supplied on the CompactFlash card.

lcon	Description
✓	The version displayed in the "Actual version" column matches the version of the CF card.
1	The version displayed in the "Actual version" column does not match the version of the CF card.

Procedure

- 1. Start the SINUMERIK Operate operating software on the SINUMERIK control system.
- 2. Press the <MENU SELECT> key.
- 3. Select the "Diagnostics" operating area.



Press the "Version" softkey. 4. The "Version data" window opens. The data of the available components is displayed. 5.



Select the component for which you would like more information.

6.

4.2 Checking and updating the versions



Press the "Details >" softkey in order to obtain more detailed information on the components displayed.

SINUMERIK Op Uersion: 04.08.			Logbook
InternalUersion	: 04.08.02.00.038	1	
Name	Actual version	Target version	
Basesystem	04.08.02.00	\checkmark	
Applications	04.08.02.00	\checkmark	
3D graphics	04.08.02.00		
Qt	04.08.04.00	\checkmark	
ACE/TAO	6.1.2	\checkmark	
Autostart	04.08.02.00	\checkmark	
Language files	04.05.00.00	\checkmark	
Online help	04.05.00.00	\checkmark	
			Details
			Save

Start a client update if you have the required SINUMERIK Integrate version on your SINUMERIK control system.

Information is provided in the following chapter as to how you perform a client update:

- Client update under Windows (Page 36) - OR -
- Client update under Linux (Page 41)

4.2.2 Installing a SINUMERIK 828D update

If you are not using a suitable software version on the SINUMERIK 828D control, you must install the required software update/backup.

Procedure

1. Switch the control on. The following is displayed during startup:

O Press SELECT key to enter setup menu

 Press the <SELECT> key within three seconds.
 To call the "Startup menu", press the following keys in succession: Menu back key, HSK2 (horizontal softkey 2), VSK2 (vertical softkey 2)



Note

PPU with touch operation

To call the "Startup menu" during startup, there is an additional shortcut key for all PPUs: "8" → "2" → "8"

3. The "Startup menu" is displayed, "Normal startup" is the default setting.

	Startup menu	
	Normal startup	
	 Reload saved user data 	
	O Install software update/backup	
	 Create software backup 	
	 NCK default data 	
	O Drive default data	
	○ PLC default data	
	O HMI default data	
	○ Factory settings	
	Change Grinding type	
	Activate/Deactivate option Surface Turning	
	O Delete OEM files	
	O Delete user files	
	O PLC-Stop	
Normal system startu	p	

4. Select the "Install software update/backup" option to install an update on the system CompactFlash card from the user CompactFlash card or USB flash drive.

4.2 Checking and updating the versions

- 5. The following message is displayed: "Do you want to install the software update? Either CF card or USB stick must be plugged in".
- 6. Insert the USB flash drive into the USB interface on the front of the operator panel. Click on "Yes".
- 7. Make sure that only individual ".tgz" files are located on the USB flash drive. Press the <INPUT> key to install the required files.
- 8. The installation preparation and then the installation procedure are shown on the screen.
- At the end, the following message is displayed: "Restoring complete. Switch off and remove data medium!"
 Switch off the control Remove the storage medium

Switch off the control. Remove the storage medium.

Further information on commissioning SINUMERIK 828D can be found in the SINUMERIK 828D Commissioning Manual.

4.2.3 Client update under Windows

Requirement

The SINUMERIK Integrate client update required "setup.exe" was transferred into the installation directory.

Procedure

- 1. Start the SINUMERIK control system in the Windows service mode.
- 2. Open the installation directory.
- 3. Start setup file "setup.exe" with a double-click. SINUMERIK Integrate Client - InstallShield Wizard opens.



4. The welcome screen opens and shows the applications to which the update applies. Click "Next >" to start the installation preparation.

🖟 SINUMERIK Integrate Client 🛛 🛛 🔀			
	SIEMENS	Welcome to the setup of SINUMERIK Integrate Client	
		The setup will install: Access MyBackup Access MyMachine Analyze MyCondition Analyze MyPerformance Manage MyMaintenance Manage MyPrograms Manage MyPrograms Manage MyTools	
	SINUMERIK	To continue, click Next.	
InstallShield < Back Next > Cancel			

- 5. The "License Agreement" window opens. Read the license agreement.
 - If you want to print the terms, click "Print."
 - Then activate the "I accept the terms in the license agreement" checkbox and click "Next >".

- OR -

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

Ŕ	SINUMERIK Integrate Client	×
	License Agreement Please read the following license agreement carefully.	
	Please note: This software is protected under German and/or US American Copyright Laws and provisions in international treaties. Unauthorized reproduction and distribution of this software or parts of it is liable to prosecution. It will be prosecuted according to criminal as well as civil law and may result in severe punishment and/or damage claims. Please read all license provisions applicable to this software before installing and using this software. You will find them after this note. If you purchased this coftware on a CD marked on "Trial Version" or tegrather	
	I accept the terms in the license agreement I do not accept the terms in the license agreement	
Ir	<pre>stallShield< Back Next > Cancel</pre>	

6. The next window displays the installation directory for the application. Click "Next >" to accept the directory suggested by the setup.

🛃 SINUME	RIK Integrate Client 🛛 🛛 🕅
	on Folder At to install to this folder, or click Change to install to a different folder.
	Install SINUMERIK Integrate Client to: C:\Program Files\Siemens\Sinumerik\HMIs \
InstallShield -	< Back Next > Cancel

The default path for installing the SINUMERIK Integrate client is identical for SINUMERIK One. The screens displayed are different:

👷 SINUME	RIK Integrate Client			X
Destination Click Net	on Folder at to install to this folder, or click	Change to install to	a different folder.	と
	Install SINUMERIK Integrate Cli C:\ProgramData\Siemens\Mot			
InstallShield -		< <u>B</u> ack	Next >	Cancel

7. The Wizard is ready to start the installation. Click "Install" to start the installation.

🖶 SINUMERIK Integrate Client	
Ready to Install the Program The wizard is ready to begin installation.	C
Click Install to begin the installation.	
If you want to review or change any of your installation settings, click Back. Cl exit the wizard.	lick Cancel to
InstallShield	Cancel

8. The installation is started, and the progress is displayed with a progress bar.

🛃 SINUME	RIK Integrate Client
-	SINUMERIK Integrate Client Iram features you selected are being installed.
1 6	Please wait while the InstallShield Wizard installs SINUMERIK Integrate Client. This may take several minutes.
	Status:
	Validating install
InstallShield –	
uistalionielo -	< Back Next > Cancel

9. Click "Finish" to complete the installation.

🛃 SINUMERIK Integrate Client			
SIEMENS	InstallShield Wizard Completed		
	The InstallShield Wizard has successfully installed SINUMERIK Integrate Client. Click Finish to exit the wizard.		
SINUMERIK			
InstallShield	Show the Windows Installer log		
n istalisi itain	< Back Finish Cancel		

4.2.4 Client update under Linux

Precondition

- Emergency Boot System V04.70.05.00
- SINUMERIK Operate 4.5 SP4 - OR -
- SINUMERIK Operate 4.7 SP2 - OR -
- SINUMERIK Operate 4.9x

Procedure

- 1. Copy the "sinintclient.tgz" file to the USB flash drive.
- 2. Insert the USB flash drive into the NCU.
- 3. Start the NCU.
- 4. In the menu, select "Update NCU Software and Data" with the cursor keys and press the "OK" softkey.

Smergency Boot System - V04.70.05.00	
Firnware Update	
Diagnosis	
Backup NCU Software and Data	
Update NCU Software and Data	_
Restore NCU Software and Data	
Modify NCU Settings	
Service Shell	
Restart	
hostart	
	_
	Ok
↓ ↑ Page↓ Page↑	

5. In the menu, select "Update system software from USB memory stick" with the cursor keys and press the "OK" softkey.

Emergency Boot System - Software update	
Update system software from USB memory stick	
Recover system from USB memory stick (reformat CF card)	
Update system software from network drive	
Recover system from from network drive (reformat CF card)	
Connect to network drive	
	Cancel
	Ok
∔ t Page∔ Page1	

6. You receive a list with all tgz files.
Select the current file.
Press the "OK" softkey to confirm your selection.
- OR -

Press the shortcut key <Shift> + <F8> on the operator panel.

ency Boot System - Restore system Current source: USB-Stick hintclient_03.00.01.00.002.tgz
anci i ch03 . 60 . 61 . 60 . 66 132
t Pagel Paget

7. The selected file is displayed.

Press the "OK" softkey to confirm your selection. - OR -

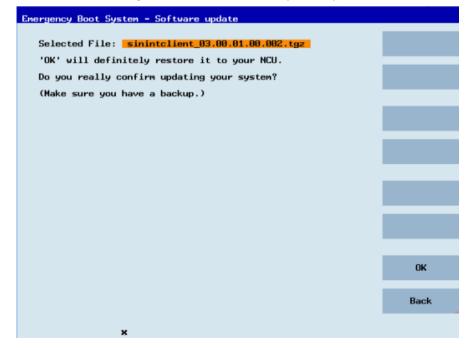
Press the shortcut key <Shift> + <F8> on the operator panel.

Emergency Boot System - Software update	
Selected File: sinintclient_03.00.01.00.002.tgz	
	_
	Back
	ОК
×	

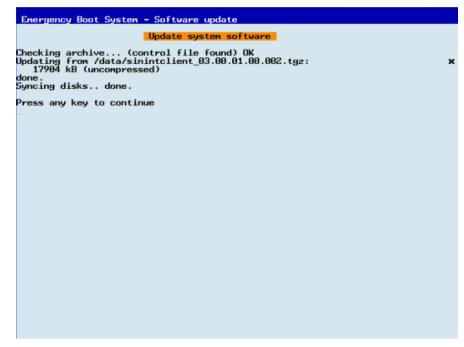
8. A confirmation prompt appears.

Press the "OK" softkey to confirm the confirmation prompt. - OR -

Press the shortcut key <Shift> + <F7> on the operator panel.



9. The installation is started.



10. When the installation has been completed, the following message appears. Remove the USB flash drive.

Select "Restart" from the menu and press the "OK" softkey.

Emergency Boot System - V04.70.05.00	
Firnware Update	
Diagnosis	
Backup NCU Software and Data	
Update NCU Software and Data	
Restore NCU Software and Data	
Modify NCU Settings	
Service Shell	
Restart	
	ж
	Ok
1 t Pagel Paget	

4.3 SINUMERIK Integrate

4.3 SINUMERIK Integrate

4.3.1 Activating the SINUMERIK Integrate client

Procedure

- 1. Start the SINUMERIK Operate operating software on the control.
- 2. Press the "Setup" and "Mach. data" softkeys.
- 3. Press the "Password" softkey.
- 4. The "Set password" window opens.
- 5. Enter the password for "Manufacture" and press the "OK" softkey.
- 6. Press the menu forward key and the "Display MD" softkey.
 - Set the machine data MD9108 \$MM_SINUMERIK_INTEGRATE to "1".

SIE	MENS		ERATE 25.05.10 10:30	2	AUT
Display n	nachine data				
9006	<pre>\$MM_DISPLAY_SWITCH_OFF_INTERVAL</pre>	60	min po	_	_
9009	<pre>\$MM_KEYBOARD_STATE</pre>	0	po		
9032	\$MM_HMI_MONITOR		po		
9056	\$MM_ALARM_ROTATION_CYCLE	0	ms po	_	-
9057	<pre>\$MM_ENABLE_CHANNEL_MSG_FILTER</pre>	1	po		-
9100	<pre>\$MM_CHANGE_LANGUAGE_MODE</pre>	1	im		
9102	\$MM_SHOW_TOOLTIP	1	im	_	
9103	\$MM_TOOLTIP_TIME_DELAY	1	s im		
9104	\$MM_ANIMATION_TIME_DELAY	10	s im		
9105	\$MM_HMI_WIDE_SCREEN	0	po		
9106	<pre>\$MM_SERVE_EXTCALL_PROGRAMS</pre>	1	po	Be	set
9107	\$MM_DRV_DIAG_DO_AND_COMP_NAMES	3H	im		0)
9108	\$MM_SINUMERIK_INTEGRATE	1	im		
9110	\$MM_ACCESS_HMI_EXIT	1	po		
9111	\$MM_HMI_MEM_LIMIT_USER	0	po	Sea	irch
9112	\$MM_HMI_SKIN	1	po		
9900	\$MM_MD_TEXT_SWITCH	0	im	53	ter
9990	\$MM_SW_OPTIONS	0H	im	r II	ter
Activatin	g SINUMERIK Integrate products				I
^			>		=
		innel Axis 3D SD	Display MD		

- 7. Press the <MENU SELECT> key followed by the menu forward key.
- 8. The "SINUMERIK Integrate" softkey is displayed on the extended horizontal softkey bar.



4.3 SINUMERIK Integrate

4.3.2 Activating SINUMERIK Integrate use

Procedure

- 1. Press the "SINUMERIK Integrate" softkey. The "SINUMERIK Integrate" welcome window opens.
- 2. Press the "Settings" softkey. The "Settings" window opens displaying the system status "Use DEACTIVATED".
 - Press the "Activate use" softkey.

SINU INTE REF.POINT				84/18/13 2:21 PM
Settings				
System status SINUMERIK Integrat –Manage MyProgra		ATED		Activate use
-Manage MyTools -Access MyMachin -Access MyBackup -Analyze MyPerfor -Analyze MyConditi	nance			Proxies
				Basic installation
				App installation
<u>~</u>				
Settings			Teleservice	Online services

- 3. The confirmation prompt "Do you want to activate the use of SINUMERIK Integrate applications?" is displayed.
 - Press the "OK" softkey to confirm the prompt. The use of SINUMERIK Integrate applications is enabled.

4.4 SINUMERIK ONE and SINUMERIK 840D sl

4.4.1 Configuring the URL and proxy

Note

Transferring SINUMERIK data to the Insights Hub platform

The following steps allow you to transfer SINUMERIK data to the Insights Hub platform.

By performing the steps described below, in particular through input and confirmation of the Web service URL, processes are performed automatically in which software scripts are loaded to the SINUMERIK control.

Precondition

The use of SINUMERIK Integrate has been activated.

Check whether the Internet connection is available and activated:

• TCU:

Press "Online Services". The "Login" window is opened. If this is not the case, check the connected Internet connection.

• PCU:

Start the control in service mode, and call up an Internet page using the Web browser, for example, "www.siemens.com".

Procedure

The "Settings" window is open.

- 1. Press the "URLs >".
- 2. Press "Edit" and select the following settings:
 - Directory: Select the "User" entry in the "Directory" drop-down list.
 - Display home page: Select the "Overwrite here" check box.
 - RenderService: Select the "Overwrite here" check box.
 - Web service URL: Select the "Overwrite here" check box.
 - Enter the following web service URL depending on which Insights Hub system you are connected to: Insights Hub V3 Livesystem (<u>https://gateway.eu1.mindsphere.io/api/agentcom-mmmops/v3/ws11</u>)
 Insights Hub Alibaba (<u>https://gateway.cn1.mindsphere-in.cn/api/agentcom-dimcopt/v3/ws11</u>)
 - Enter the required value in the "Transmit timeout in seconds" input field. The default value is 200. Then select the "Overwrite here" check box.
 - Enter the required value in the "Receive timeout in seconds" input field (default value is 200), and select the "Overwrite here" check box.

Directories:	User -	
Display home page		🗹 Overwrite here
RenderService		🗹 Overwrite here
URL Web service		🗹 Overwrite here
https://gateway.eu1.mindsphe	re.io/api/agentcom-mmmops/v3/ws1	1
Send timeout in seconds	200	🗹 Overwrite here
Reception timeout in seconds	298	🗹 Overwrite here

3. Press "OK".

A syntax check is performed and the access data is saved. Usually, the settings are now complete. If further adaptations need be made within your company network, read the following paragraph:

Proxy adaptations (optional)

- Clarify with your network administrator whether the Proxy settings have to be adjusted for the connection to Cloud mode. If this is necessary, proceed as follows:
- Press "Proxys >". The stored settings are displayed.

- 3. Press "Edit" and then select the following settings:
 - Select the "Use fix proxy" check box.
 - Enter your proxies in the "Proxy 1" to "Proxy 3" input fields.
 - Select the "Overwrite here" check box even if you only enter one proxy in order to accept the new entry.

Directories:	User *	l -
Use system proxy settings		Overwrite here
Automatic		Overwrite here
Use proxy script		Overwrite here
URL (proxy script)		
✓Use fix proxy		✓ Overwrite here
Praxy 1	sq4.ocimaws.net:3128	
Praxy 2		
Praxy 3		
Direct		Overwrite here

- 4. Press "OK" to save the settings.
- 5. If authentication is required for the proxy, press "Authorization".
 - Select the "Overwrite here" check box to accept the new entry.
 - Enter the user data in the "Domain", "User name" and "Password" input fields.

Directories:	User -	
		⊻Overwrite here
Domain:		
User name:	mtaproxy	
Password:		
		Overwrite here
Workstation:		

- 6. Press "OK" to save the settings.
- 7. Restart the control so that the access data can take effect.

Additional ports

Activate the port for HTTPS communication to ensure secure data transfer between the user server and the control.

- 1. Press softkey "Commissioning" >" Network" > "Company network". The "Company network settings" window opens.
- 2. Press "Change" to edit the settings.
- 3. In the "Firewall exceptions" area, add port "TCP/443" in the "Additional ports" input box.
- 4. Press "OK".

						01/12/21 11:02 AM
Company netwo	rk settings					
Cataurau						
Gateway						
DNS server						
Timeserver						
Host name						
C Active proto	cols					
⊘ 0CP						
∠ LLDP						
Firewall exc	eptions					
S7 comm	nunication (TCP/18	2)				
VNC acc	ess (TCP/5900)					
SSH (TCF	9/22)					×
Additional p	orts	TCP/443				Cancel
·						
					>	ОК
Setup archive		Net- work DPs	🙆 Safety	Swivel data		

4.4.2 Install the registration key on a SINUMERIK control system

Activating SINUMERIK Integrate generates the setup of the URL/proxy and the restart in the directory of the "boot_job" folder.

- Operate (PCU): C:\temp\boot_job
- Operate (NCU): /var/tmp/boot_job (accessible on the CF card via WinSCP)

The boot_job folder is created automatically. If the folder was not set up, then check that the device has the correct network connection (e.g. proxy settings, permitted IP list for Insights Hub addresses, etc.).

There are 2 ways to copy the "onboard.key" to the SINUMERIK control system:

- Via the SINUMERIK Operate user interface
- With the aid of WinSCP

Precondition

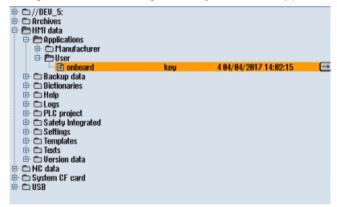
- The "onboard.key" has been generated.
- The "boot_job" folder is created on the SINUMERIK control system, e.g. at C:\temp
- The time and date on the control system has been synchronized with the current time and date.
- The Internet connection has been checked and is established.

Procedure with SINUMERIK Operate (PCU 50)

- 1. Insert the USB flash drive with the "onboard.key" file into the PCU. The USB flash drive is shown in the directory tree.
- 2. Copy the file "onboard.key" into the following directory: C:\temp\boot_job.
- 3. Check the PCU configuration.

Procedure with SINUMERIK Operate (NCU)

- 1. At the SINUMERIK control system, start the SINUMERIK Operate operating software.
- 2. Press "Setup".
- 3. Press "System data". The directory tree is displayed.
- Insert the USB flash drive with the "onboard.key" file into the NCU. The USB flash drive is displayed in the directory tree. If the USB flash drive is not detected by SINUMERIK Operate, you must change to a different USB port or configure a logical drive. Further information is provided in Chapter: Create drive (Page 53)
- 5. Select the "onboard.key" and press "Copy".
- 6. Navigate in the following directory: HMI data\Applications\User and press "Paste".



7. Then restart.

Procedure with, e.g. WinSCP (NCU)

- 1. Copy the generated "onboard.key" file using a suitable tool, e.g. using WinSCP via the network to the control system.
- 2. Start the SINUMERIK control system and open the directory /var/tmp/boot_job.

🖢 boot_job - manufact@]			11.1.				2 ×
Local Mark Files Comr							
🖶 🚝 📮 Synchronize			Queue +	Fransfer Settings Default		• 🔊 •	
manufact@192.168.214	-						
🐌 My docur 🔹 🚰 🕎	(+ · + ·	🖻 🖬 🏠 🎜	ę	🔒 bc 🔹 🚰 😨 🖛	•	🔽 🏫 🎜 🚟 Find	d Files *
🙀 Upload 🎲 📝 Edit	× 🗟 🖏	Properties 📑 🍟 🛙	$+ - \forall$	Download 🔛 📝	Edit 🗶 🚮 🛛	Properties 🎽 🛛	+ - 🛛
C:\Users\AuDUser\Docume	nts			/var/tmp/boot_job			
Name	Size	Type	Changed	Name	Size	Changed	Rig
<u>si</u>		Parent directory	8/3/2016	😹 🗉		10/20/2016 2:33 PM	rw.
< Bof0Bin0of0	ш		.⊧ dden	<			,
B OF 0 B IN 0 OF 0		410	doen	000100110010		SCP 💷	0:23:33
👩 🥖 🕻	1 🚞						2 PM 0/2016

- 3. Insert the "onboard.key" file in the "boot_job" directory.
 - If a "cert.key" file exists in the /var/tmp/boot_job folder, then the control system was already connected to Insights Hub.
 Delete the complete content of folder "boot_job" and empty the cache. Then insert the new "onboard.key" file.
 - Alternatively, you can also insert the "onboard.key" file into the following directory: /user/ sinumerik/hmi/appl.
- 4. Then start the SINUMERIK Operate operating software. When the connection to the server is successful, the "cert.key" file is created.
- 5. The onboarding process is completed. The "onboard.key" is no longer displayed in the directory.

4.4.3 Create drive

Parameters

Entry		Meaning
Connection Front		USB interface that is located at the front of the operator panel.
X203/X204		USB interface X203/X204 that is located at the rear of the operator panel.
	X212/X213	TCU20.2/20.3
Symbolic		Symbolic name of the drive

Procedure

2	1.	Select the "Start-up" operating area.
Setup		
нмі	2.	Press the "HMI" and "Log. drive" softkeys. The "Set up drives" window opens.
Log. drives		
	3.	Select the softkey that you want to configure.
>> Level	4.	To configure softkeys 9 to 16 or softkeys 17 to 24, click the ">> Level" softkey.
Change	5.	To allow input fields to be edited, press the "Change" softkey.
	6.	Select the data for the appropriate drive or enter the required data.
Details	7.	Press the "Details" softkey if you want to enter additional parameters. Press the "Details" softkey to return to the "Set up drives" window.



8. Press the "OK" softkey.

The entries are checked.

A window with a prompt opens if the data is incomplete or incorrect. Acknowledge the prompt with the "OK" softkey.

The drive, e.g. "usb-NEU" is shown in the directory tree.

🖶 🗂 //DEV_5:	
🕀 🗂 Archives	
🖻 🗁 HMI data	
🐵 🗂 Applications	
🕀 🗂 Backup data	
🐵 🗂 Dictionaries	
🕀 🗂 Help	
D Logs	
🖶 🕀 PLC project	
🕀 🗂 Safety Integrated	
🕀 🗂 Settings	
🕀 🗂 Templates	
Texts	
🕀 🗂 Version data	
🖮 🗂 NC data	
🖶 🗂 System CF card	
🖶 🗂 USB	
🕀 💼 usb-NEU	
	_

4.5 SINUMERIK 828D

4.5.1 Configuring the URL and proxy

Note

Transferring SINUMERIK data to the Insights Hub platform

The following steps allow you to transfer SINUMERIK data to the Insights Hub platform.

By performing the steps described below, in particular through input and confirmation of the Web service URL, processes are performed automatically in which software scripts are loaded to the SINUMERIK control.

Precondition

The use of SINUMERIK Integrate has been activated.

Procedure

The "Settings" window is open.

- 1. Press the "URLs >".
- 2. Press "Edit" and then select the following settings:
 - Directory: Select the "User" entry in the "Directory" drop-down list.
 - Display home page: Select the "Overwrite here" check box.
 - RenderService: Select the "Overwrite here" check box.
 - Web service URL: Select the "Overwrite here" check box.
 - Enter the following web service URL depending on which Insights Hub system you are connected to: Insights Hub V3 Livesystem (<u>https://gateway.eu1.mindsphere.io/api/agentcom-mmmops/v3/ws11</u>)
 Insights Hub Alibaba (<u>https://gateway.cn1.mindsphere-in.cn/api/agentcom-dimcopt/v3/ws11</u>)
 - Enter the required value in the "Transmit timeout in seconds" input field. The default value is 200. Then select the "Overwrite here" check box.
 - Enter the required value in the "Receive timeout in seconds" input field (the default value is 200), and select the "Overwrite here" check box.

Directories:	User 💌	
Display home page		🗹 Overwrite here
RenderService		🗹 Overwrite here
URL Web service		🗹 Overwrite here
https://gateway.eu1.mindsphe	ere.io/api/agentcom-mmmops/v3/ws1	1
Send timeout in seconds	200	🗹 Overwrite here
Reception timeout in seconds	200	🗹 Overwrite here

3. Press "OK".

A syntax check is performed and the access data is saved.

4. In order to establish a connection from the customer network, you must adapt the proxy settings.

Press "Proxys >". The stored settings are displayed.

- 5. Press "Edit" and then select the following settings:
 - Select the "Use fix proxy" check box.
 - Enter your proxies in the "Proxy 1" to "Proxy 3" input fields.
 - Select the "Overwrite here" check box even if you only enter one proxy in order to accept the new entry.

Directories:	User *	
🗌 Use system proxy settings		🗹 Overwrite here
Automatic		🗹 Overwrite here
Use proxy script		🗹 Overwrite here
URL (proxy script)		
✓Use fix proxy		🗹 Overwrite here
Praxy 1	sq4.ocimaws.net:3128	
Praxy 2		
Praxy 3		
Direct		☑ Overwrite here

- 6. Press "OK" to save the settings.
- 7. If authentication is required for the proxy, press "Authorization".
 - Select the "Overwrite here" check box to accept the new entry.
 - Enter the user data in the "Domain", "User name" and "Password" input fields.

Directories:	User	•
		⊻Overwrite here
Domain:		
User name:	mtaproxy	
Password:		
		Overwrite here
Workstation:		

- 8. Press "OK" to save the settings.
- 9. Restart the control so that the access data can take effect.

Additional ports

Activate the port for HTTPS communication to ensure secure data transfer between the user server and the control.

- 1. Press "Commissioning" >" Network" > "Company network". The "Company network settings" window opens.
- 2. Press "Change" to edit the settings.
- 3. In the "Firewall exceptions" area, add port "TCP/443" in the "Additional ports" input box.
- 4. Press "OK".

					01/12/21 11:02 AM
Company network settings					
0.1					
Gateway	_				
DNS server	_				
Timeserver					
Host name NCU1					
Active protocols					
⊡ 0CP					
Firewall exceptions					
S7 communication (TCP/102)					
VNC access (TCP/5900)					
SSH (TCP/22)					
Additional ports	TCP/443				Cancel
			Contract of	Þ	ОК
Setup Li- archive censes	2911	🙆 Safety	Swivel data		

4.5.2 Install the registration key on a SINUMERIK control system

The activation of SINUMERIK Integrate, the setting up of the URL/proxy and the restart creates the "boot_job" folder in the /var/tmp/ directory.

The boot_job folder is created automatically. If the folder was not set up, then check that the device has the correct network connection (e.g. proxy settings, permitted IP list for Insights Hub addresses, etc.).

Copy the "onboard.key" to the SINUMERIK control system, e.g. using WinSCP.

Precondition

- The "onboard.key" has been generated.
- The "boot_job" folder is created on the SINUMERIK control system, e.g. at C:\tmp

- The time and date on the control system has been synchronized with the current time and date.
- The Internet connection has been checked and is established.

Procedure

- 1. Copy the generated "onboard.key" file using WinSCP for example via the network to the SINUMERIK control system.
- 2. Start the SINUMERIK control system and open the directory, e.g. /var/tmp/boot_job. If the "boot_job" folder does not exist, then create the folder manually.

🏂 boot_job - manufact@1	192.168.214.1 -	WinSCP				-	- 2 💌
Local Mark Files Comr	mands Sessio	on Options Remote	Help				
🖶 🚟 📮 Synchronize	🖬 🥜 💽	0	Queue + 1	Fransfer Settings Default		• 🔊 •	
💭 manufact@192.168.214	1 🚅 New	Session					
👔 My docur 🔹 🚰 🕎	(🗈 🗈 🏠 🎜	9 ₆	🔒 bc + 🚝 🕎 🛛 🖛 •	-> - 💽	🖻 🏠 🎜 🐂	Find Files **
I 🔐 Upload 🎲 🛛 🖉 Edit	× of the	Properties 📑 🍟 🛛	+ - \	Download 😭 📝 B	at 🗙 🚮 [Properties *	
C:\Users\AuDUser\Docume	nts			/var/tmp/boot_job			
Name	Size	Type	Changed	Name	Size	Changed	Rig
<u>su</u>		Parent directory	8/3/2016	💑 🖬		10/20/2016 2:33	PM rec:
€[m		÷.	<			+
0 B of 0 B in 0 of 0		4 hi	dden	0 B of 0 B in 0 of 0	0	SCP 💷	0:23:33
	-						0:23:33 2:52 PM
() ()						- 🔁	10/20/2016

- 3. Open folder "boot_job" and insert file "onboard.key".
 - If a "cert.key" file exists in the /var/tmp/boot_job folder, then the control system was already connected to Insights Hub.
 Delete the complete content of folder "boot_job" and empty the cache. Then insert the new "onboard.key" file.
- Then start the SINUMERIK Operate operating software. When the connection to the server has been successfully established, then the "cert.key" file is created.
- 5. The onboarding is completed and the "onboard.key" is no longer displayed in the directory.

4.6 Adapting SINUMERIK Operate

4.6.1 Exchanging a certificate (optional)

In order to achieve comprehensive security, it is necessary to update the certificate "cacert.pem". The following manual steps are required for this purpose.

Note

Manage MyMachines and Manage MyMachines /Remote

On SINUMERIK devices with Integrate Clients, versions exists with expired QuoVadis intermediate certificate signatures. This certificate expired on November 06, 2022. Checking the validity of this certificate leads to an immediate connection abort or failure of onboarding in the SINUMERIK Integrate Client. This prevents remote access sessions from occurring.

Due to the expiry of the QuoVadis Global SSL ICA G3 certificate, the connection to the machine is terminated if the following SINUMERIK Integrate Client versions are involved:

- 02.00.19/02.00.20/02.00.21
- 03.00.19/03.00.20/03.00.21
- 04.00.19 / 04.00.20 / 04.00.21

This only applies to the SINUMERIK ONE, SINUMERIK 840D sl, and SINUMERIK 828D Operate controls.

The SINUMERIK 840 D PL is not affected.

Note

SINUMERIK Integrate clients: previous versions

For previous versions, the certificate in the cacerts.pem file is still valid. No update is required for these clients.

Please check the SINUMERIK Integrate Client version before performing a certificate update.

SINUMERIK Operate with SINUMERIK Integrate client under Linux

- 1. Open the directory: card/addon/sinumerik/hmi/sinintclient/cfg
- 2. Select "cacerts.pem".

					1
Name	Туре	Length	Date	Time	Activate
🕀 🗂 cycles			82/84/16	8:31:57 AM	HEUVALE
🖻 🛱 hmi			10/28/16	7:55:38 AM	
🖶 🗂 appl			82/84/16	8:31:57 AM	New
🖻 🗂 base			82/84/16	8:31:57 AM	HOW
😐 🗂 cfg			01/13/17	4:20:17 PM	
🖶 🗰 hip			82/84/16	8:31:57 AM	0000
🖶 🗅 hlps 🖶 🗂 ico			82/84/16	8:31:57 AM 8:31:57 AM	Open
⊕ ⊂ ing			82/84/16 82/84/16	8:31:57 AM	1
			82/84/16	8:31:57 AM	Mark
⊕ Co proj			82/84/16	8:31:57 AM	Mark
🖻 🗁 sinintclient			01/13/17	4:28:17 PM	
🖶 🗂 appl			01/13/17	4:28:17 PM	0
🕀 🗂 base			81/13/17	4:28:17 PM	Сору
🖻 🗁 cfg			81/13/17	4:28:17 PM	
- 🖻 cacerts	pem	241485		4:28:17 PM 🖃	
- 🖻 ePS	nsp	974		12:00:00 AM	Paste
🖻 ePSConfig.indi	xsd	21548		12:00:00 AM	
🔤 ePSConfig.man	xsd	21611	01/01/70	12:00:00 AM	
ePSConfig.syst	xml	7640		11:43:29 AM	Cut
ePSConfig.syst	xsd	30600	01/01/70	12:00:00 AM 12:00:00 AM	
🖻 🖻 ePSConfig.user	xsd	21106	01/01/70	12.00.00 111	
/addon/sinumerik/hmi/sinintclient/cfg				Free: 1.0 GB	
<u>~</u>		4			
MD data I NC II System		H	IMI 📔	System data	Øptim./

3. Use WinSCP, for example, to open "cacerts.pem" in the editor.

Local Mark Files Com E Com Synchronize manufact@192.168.21	🗖 🦑 💽			Transfer Settings Default	•	<i>®</i> ·	
] cf • 🚝 🕎 ← • •] Pownload [] 27 Edi /addon/sinumerik/hmi/sinin	t 🗙 🛃 🕞 Proper		
Name eboot etc Install Log PLC_Prj USB_TOOLS \$\$80ase.log	Size	Type File folder File folder File folder File folder File folder File folder Text Document	Changed 5/13/201 5/13/201 8/9/2016 11/20/20 10/5/201 12/19/20 5/13/201	Name	F5 nd Delete F6 Shift+F5 Shift+F6 F8 F2	nged //2017 4:20 PM //2017 4:20 PM	
<	11	2 h	• idden	slaesvc L2 Properties 316 KB of 250 KB in 1 of 18	SCP	2017 4:20 PM	•

4. Insert the content of "Customer Root CA" at the end of "cacerts.pem".

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Quz/209 Copy Chri-C TPVQrT60/fikeVSF3UUri3/suf52/whik citz Qu2/209 Copy Chri-C TPVQrT60/fikeVSF3UUri3/suf52/whik citz Qu2/209 Paste Chri-V Yy9Vad930L1KT22H8XXy3Qk53G72RT- Qu2/209 Delete TPAUH8XXy3Qk53G72RT- Delete TPAUH2AWXEE/2A080HV1959L1KT210/ TEWTUX721 Selet All Chri-A XMP2244 Find. Chri-A VMP2244 Find. Chri-A VMP2244 Find. Chri-A VMP2244 Find. Chri-A VMP244 Find. Chri-A VMP244 Selet All Chri-A VMP244 Find. Chri-A VMP244 Selet All Chri-A VMP244 Selet All Chri-F VMP244 Selet All Chri-F VMP244 Selet All Chri-F VMP244 Selet All Chri-F VMP244 Selet All Selet All Selet All Chri-F Selet All	XR5ICO de	Cut	Ctrl+X	JAA4IBDwAwggEKAoIBAQCVJAgIKXol	
dibý 20 Pase Ctrl +V dislibit Tr Stvdiševěk I Bajskím (* 7 * 7 est vysvá se still tr MzH kazyšík sist zíka colouel Oddete Iondrag88nc+MuCh71P59zu0Mkz10/ TAQH/BAUAWEB/ZADBONHV38B478E textu us Select All Ctrl +A vinz zákad Ctrl +A Zmrcevkr Jaků Tazůví Zimyčke stratuny vinz zákad Find. Ctrl +A zmrcevkr Jaků Tazůví Zimyčkavá Sizaví Zimyčke v zákad zákad Vinz Zikad find kez Find Ctrl +A vinz Zikado Ctrl +A José Sizaví Zikad Bill Gelete Ctrl +A José Sizaví Zikad Bill Vinz Zikado Etek Sizaví Zikad Bill Vinz Zikad Bill Se Zikado Ctrl +H José Sizaví Zikad Bill Vinz Zikad Bill Se Zikado Etek Sizaví Zikad Bill Fill Ekk Sizaví Zikad Bill Vinz Zikad Bill Se Zikado Etek Sizaví Zikad Bill Fill Ekk Sizaví Zikad Bill Se Sizaví Zikad Bill Se Sizaví Zikad Bill Se Sizaví Elek Sizaví Zikad Bill Fill Ekk Sizaví Zikad Bill Se Sizaví Zikad Bill Se Sizaví Zikad Bill Se Sizaví Zikad Bill Se Sizaví Elek Sizaví Zikad Bill Fill Ekk Sizáví		C	Child C		
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MCAQY JUPOGN		Delete		OndTRQ8Bnc+MUCH71P59zuDMKz10/	
NIDZŽ4 18 Find CHI-F OOBVEFH/TZaTCZsy78DA38045-gKV BMAD C CHI-F OOBVEFH/TZaTCZsy78DA38045-gKV MAD ZPZQFUZ,ZSY78DA5002E BAEDI C Find Next F3 EKQSTb47b0N01Attuk1x1B0kF6Bw1K Sgyrn6 G to Line Number CHI+G F3 EKQSTb47b0N01Attuk1x1B0kF6Bw1K SBF0HEMZZ/A1CMN0Hw0LxXXn317Z GKbXC G G to Line Number CHI+G F0HK0tw5rbgb7MzV1Cb1d34VEZVBN acRHr F7 EKRSTb47b0N0Attuk1x1B0kF6Bw1K SDYHOLPKSEda07wNQ	MCAQY a	Select All	Ctrl+A	3ZMFCwVRYJaw1hZ2UVZ21mMCEwHZAH	
ESMAQ Medeal & Replace CH+H gCBP13vr31tvv72pvk1o5ze gCBP13vr513aCGKp04k+bw480v77 gCBP13vr513aCGKp04k+bw480v77 EKQ5Tb47bbN01AtuLf1x1E0kF66w1k BF07tE942-41C47000+m00Lx0Xn6172 G6bxC G fo to Line Number Ctrl+G F04HK0tw5r0gb7Mzv1ch1d34vEzV8N EX9HoLPK5Eda07wNq m →		El-1	0.1.5		
B4Eq1 € Replace Cbtl+H GcBpH3vn5fJJaCGkgDdk+bb480w27 B4CB1 € Rind Next FJ EcKG5tb47b001Attk1F1E0KF6Bw1K B9gyn6 6 Find Next FJ EcKG5tb47b001Attk1F1E0KF6Bw1K B8F04tEM2ze/a1Chm00Hw0Lx0XnG1Y2 GRbxC 6 Go to Line Number Ctrl+G FQHK0tw57bgb7Mzv1cb1d34vEzV8N acRHr EN Preferences		Find			
9gyn6 to tenze to te		Replace	Ctrl+H	SqCBpH3vn5fJJaCGkqDdk+bw48Dw7v	
GPGDXC Go to Line Number Ctrl+G FQHKOTw5rDgD7MzVICb1d34vEZv8N DX9HoLPKSEdao7wNq		Find Next	F3	REKQSTb47bDN0lAtuR1xlE0kF68wlK 58FoMtEMze/alCkm0oHw0Lx0xnG1yZ	
EN Dreferences	ʻQRbxC 🛌	Go to Line Number	Ctrl+G		
		Preferences			-
				-	

- 5. Close the file to save the certificate.
- 6. Perform a restart.

SINUMERIK Operate under Windows

- 1. Open the "Customer Root CA" file in the editor and copy the entire content to the clipboard.
- 2. Use WinSCP, for example, to open "cacerts.pem" in the editor. C:\ProgramData\Siemens\MotionControl\addon\sinumerik\hmi\sinintclient\cfg\cacerts.pem

👔 M - 😂 🗛 - M 🚯 *	al 🔒 cfg	- 🖼 4 + 14	100.0	1 2 2 1	8	
C-User/AudUser/Documents	/card/siemens/smammik/hms/clg					
Name Ext	Name Ext		Size (Changed	Rights	1
Automatisierung Bluetooth Eigene Bilder	 AcxDictionary.acx AcxDictionary.acx alarmtexteditor.db.oem.ai alarmtexteditor.db.oem.ai alarmtexteditor.db.oem.pi 	lams_plc.hmi	58 2 81 2 78 2	8.12.2012 (8.02.1994 (8.02.1994 (8.02.1994 (8.02.1994	PROEMOZ-JE PROEMOZIMO PROEMOZIMO PROEMOZIMO PROEMOZIMO	
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ePS-Nahtstelle.sdf e e e e e e e f e	52 B of 12 057 B in 1 of 97 P5 Copy 3 F6 Move 📬 F7 Cre	Custom Com File Names	mands F9	02.1994 Properties	F10 Que	

3. Insert the content of "Customer Root CA" at the end of "cacerts.pem".

4390	END CERTI	FICATE
1391		
6392	BEGIN CEP	TIFICATE
6393	MIIE0zCCA7ugAv	IBAgIQGNrRniZ96LtKIVjNzGs75jANBgkqhkiG9w0BAQUFADC8
1394	yjELMAkGA1UEBh	MCVVMxFzAVBgNVBAoTD1Z1cm1TaWduLCBJbmMuMR8wHQYDVQQL
1395	Ex2WZXJpU21nbi	BUcnVzdCBOZXR3b3JrMTowOAYDVQQLEzEoYykgMjAwNiBWZXJp
\$396	U21nbiwgSW5jLi	AtIEZvciBhdXRob3JpemVkIHVzZSBvbmx5MUUwQwYDVQQDEzxW
43.97	ZXJpU21nbiBDbG	FzcyAzIFB1YmxpYyBQcmltYXJ5IEN1cnRpZmljYXRpb24gQXV0
1398	aG9yaXR5IC0gRz	UwHheNMDYxMTA4MDAwMDAwWheNMzYwNzE2MjMlOTU5WjCByjEL
6399	MARGAIUEBHMCVV	MxFzAVBgNVBAoTD121cm1TaWduLCBJbmMuMR8wHQYDVQQLEx2W
\$400	2XJpU21nbi8Ucr	VzdCB0ZXR3b3JrMTow0AYDVQQLEzEoYykgMjAwNiBWZXJpU21n
4401	biwgSW5jLiAtIE	Zvc1BhdXRob3JpemVkIHVzZ5Bvbmx5MUUwQwYDVQQDEzxWZXJp
4402	U21nbiBDbGFzcy	AzIFB1YmxpYyBQcmltYXJ5IEN1cnRpZmljYXRpb24gQXV0aG9y
6403	aXR5IC0gRzUwgg	EiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAcIBAQCvJAgIKXc1
1404	nmAMqudL007cfl	w8RRy7K+D+KQL5Vw1jZIUVJ/Xxrcgx1V016CqqpkRzj/15Vbex
6405	tOuz/o9+B1fs70	Pb2mIVYc9gDaTY3vjgw2IIFVQT60nKWVSFJuUrjxuf6/WhkcIz
6406	5dhDY2pSS9KP6H	IBRTdGJaXvHcPaz3BJ023tdS1bT1r8Vd6Gw9KI18q8ckmcY5fQG
6407	BO+QueQA5N06tP	n/ArroPo7gi+s3i+z016zy9vA9r911kTMZHRxAy3QkGSGT2RT+
6408	rCpSx4/VBEnkjW	NHiDxpg8v+R70rfk/Fla4OndTRQ8Bnc+MUCH71P59zuDMKz10/
\$409	NIeWiuST6CUVAg	MBAAGjgbIwga8wDwYDVR0TAQH/BAUwAwEB/zAOBgNVHQ8BAf8E
5410	BAMCAQYwbQYIKy	YBBQUHAQwEYTBfoV2gWzBZMFcwVRYJaW1hZ2UvZ21mMCEwHzAH
6411	BgUrDgMCGgQUj+	XTGoasjY5rw8+AatRIGCx7G54wJRYjaHR0cDovL2xvZ28udmVy
6612	aX2 Undo	bySnaWYwHQYDVR00BBYEFH/TZafC3ey78DAJ80M5+gKv
4413	Mzi Redo	BQUAA4IBAQCTJEowX2LP2BqYLz3q3JktvXf2pXki00zE
4414	p61	mAl+X6/WzCh18gGqCBpH3vn5fJJaCGkgDdk+bW48DW7Y
6615	5ge Cut	IMnNZBU4gcmU7qKEKQsTb47bDN01Atukix1E0kF6BW1K
4416	WES Copy	f+eEZSqVir2G316BFoMtEMze/aiCKm0oHw0LxOXnGiYZ
4417	410 Paste N	UV4otp6F01vvpX1FQHKOtw5rDgb7MzVIcbidJ4vEZV8N
6418	hne Delete	thg/aFzyQkqFOFSDX9HoLPKsEdao7WNq
6419	Delete	
4420	Select All	
\$421		

- 4. Close the file to save the certificate.
- Store the adapted file in the same directory again: C:\ProgramData\Siemens\MotionControl\addon\sinumerik\hmi\sinintclient\cfg
- 6. Perform a restart.

4.6.2 Activating logs for troubleshooting

At the SINUMERIK control system, activate the logs in the "ePSConfig.user.xml" file for troubleshooting.

Procedure

- 1. Press the "System data" softkey.
- 2. Navigate in the following directory: System CF card/user/sinumerik/hmi/cfg.
- 3. Open file "ePSConfig.user.xml".

Note

Path to the "ePSConfig.user.xml" file

The path to the "ePSConfig.user.xml" file can be found here: Path description ePSConfig.user.xml (<u>https://documentation.mindsphere.io/resources/html/manage-my-machine-eu1/readme/de-DE/113606291083.html</u>)

4. Make the following setting:

```
<le><logging>
<separateScriptLog active="1">1</separateScriptLog>
<scriptLogPath active="1">/var/tmp/scriptLog</scriptLogPath>
<scriptLogSeverity active="1">8</scriptLogSeverity>
<uiScriptLogSeverity active="0">2</uiScriptLogSeverity>
<maxScriptLogSize active="1">10000</maxScriptLogSize>
<maxLogLifeTimeDays active="0">30</maxLogLifeTimeDays>
</logging>
```

5. Restart the SINUMERIK control system and have the log files sent to you.

4.7 Setting the action log

4.7 Setting the action log

In the "Action log Settings" window you can specify whether the operating sequences are to be logged.

Here, you select which control actions should be logged, so that operating sequences can be tracked and understood at a later date.

Note

No liability

Siemens accepts no responsibility for the completeness of the action log data or for any subsequent data manipulation.

When the action log is active, you can display recorded traces in the system data using the following files:

- "actual_actionlog.com", actual action log report
- "actual_crashlog.com", crashlog backup

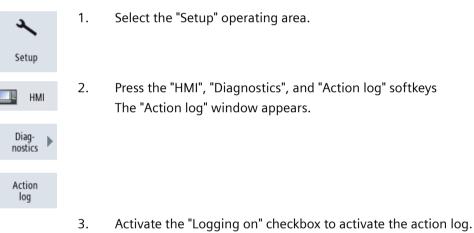
Data that can be logged

Parameter	Description
Logging on	Logging is activated or deactivated.
Logged data:	
Alarm status change	Incoming and outgoing alarms are logged.
Keyboard actions	All actions on the operator panel front and on an external keyboard are logged.
Channel status change	NC/PLC states are logged via the information channel status. If this infor- mation can be obtained in a timely manner, in many cases these states can be used to verify the operation of the machine control panel.
Window switchover	The form and dialog names (assigned by the programmer) are logged each time a window is opened or closed.
Writing NCK/PLC data	The writing of NCK and PLC variables is logged.
File access	Copying to the NC is logged.
Function calls in the NCK (Pl service)	Some program calls, for example, ASUB, are logged.
Curr. program status	Additional information for particular events is activated. For important alarms that require NC stop, NC start, or NC reset, actual values and the current block are recorded, for example.
	The program ascertains which channel and which spindle are used for the additional information.

4.7 Setting the action log

Parameter	Description
Write interval for file:	Settings for updating files:
	• "automatic": The action log saves the information to an internal buf- fer. If the buffer is full, the entries are written to the CF card. The entries may be lost when the control is switched off.
	 "after every event": All entries are backed up immediately, thus preventing data loss due to a power failure or similar. Notice: As CF cards only permit a limited number of write accesses, this setting is not recommended for normal operation.
	• "time-controlled": New entries are backed-up for a defined length of time. An additional input field appears in which you can specify a period in seconds.
Save log as file for alarm(s)	The alarm numbers for which a "crash log" is generated are specified. The alarms are entered separated by a comma.

Procedure



4. Check the relevant checkbox if you want to acquire particular events in the action log.

4.7 Setting the action log

		04/23/20 2:45 PM
Action log settings		
✓Logging ON		
Recorded data:		
Alarm status change	✓ Writing of NCK / PLC data	_
✓Keystrokes	✓ File accesses	
Channel status change	Function calls in NCK (PI service)	
☑ Window change	Channel 1	
	Curr. program status Spindle 1	
File write interval:		
		Cancel
Save log as file on alarm(s):		
		OK
MD data NC	HMI Sustem	Doptim./

4.8 PCU retrofit

4.8 PCU retrofit

Precondition

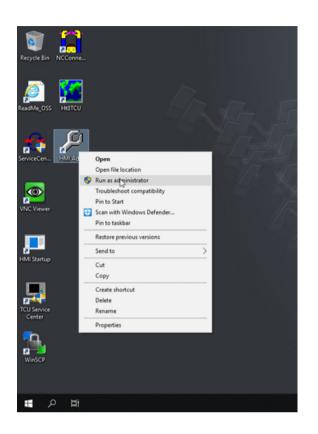
HMI-Advanced V7.7 is installed. More information about the installation is provided in the Commissioning Manual SINUMERIK 840D PCU Retrofit.

When configuring the "Local Area Network (LAN) Settings", "Automatically detect setting" should be disabled.

😭 Internet Properties	?	×
🍖 Local Area Network (LAN) Settings		×
Automatic configuration Automatic configuration may override manual settings. 1 use of manual settings, disable automatic configuration.	o ensure the	
Automatically detect settings	\triangleright	
Address		
Proxy server Use a proxy server for your LAN (These settings will r dial-up or VPN connections). Address: Port: 80 Bypass proxy server for local addresses OK	Advanced Cancel	
Local Area Network (LAN) settings LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings.	LAN settings	
OK Cancel	Ar	oply

HMI-Advanced must be started as administrator:

4.8 PCU retrofit



Setting up SINUMERIK Integrate Client for PCU Retrofit

- 1. Install the current SINUMERIK Integrate Client. More information is provided in the Installation Manual SINUMERIK Integrate 5, Manage MyResources, Optimize MyProgramming /NX-Cam Editor, Analyze MyPerformance /OEE.
- 2. Open the following file: F:\add_on\MH\settings.ini
 - Change the following entry: [APP]
 ACCESSTYPE ="DDE"
 - Save and close the file.
- 3. Open the following file: F:\add_on\regie.ini
 - Change the following entry: [StartupConfiguration]
 Startup42 = name := oemframe, cmdline := "cmd.exe /c F:\\add_on\\MH\ \MhDdeService.exe"
 Startup43 = name := oemframe, cmdline := "cmd.exe /c F:\\add_on\\MH\ \MachineHandler.exe"
 - Save and close the file.
- 4. Create and connect the machine with Insights Hub. More information is provided in Chapters:
 - Setting up the SINUMERIK control system for Manage MyMachines (Page 31)
 - Connecting controls with Insights Hub (Page 156)

4.8 PCU retrofit

5.1 Activating data acquisition with Machine Agent

Overview

To be able to use Insights Hub, several different steps must be made in Insights Hub and in the Machine Agent software.

Procedure in Insights Hub

- 1. Install the latest version of the Machine Agent Management app.
- Create the required assets.
 For more information: Asset Manager (Page 100) or in the Insights Hub Asset Manager System instructions.
- 3. Generate the "Onboard Key" For more information: Activating Manage MyMachines (Page 112)
- 4. Activate the required "Manage MyMachines for Industrial Operations X Cloud". For more information: Overview (Page 193)

Procedure for the Machine Agent software

- Check the network settings and the configuration of the machine IP. For Internet access: Connect port x1P1 with the PC/IPC. For the connection between the machine and Machine Agent: For Fanuc, use port 8193 to connect with the PC/IPC.
- 2. Install the Machine Agent Launcher on your PC/IPC. More information is provided in the installation instructions of the Machine Agent software.
- 3. Check the Machine Agent folder. Check that the "commands" folder exists on your PC/IPC. Enter the Ethernet settings of your machine system/Ethernet/IP.

5.1 Activating data acquisition with Machine Agent

- 4. Enter the onboard Key "commands" folder of your PC/IPC.
- 5. Start the Machine Agent Launcher from your PC/IPC.

Note

"Onboard key" file

The "onboard key" file contains security-relevant information for a one-time connection between a SINUMERIK control system and Insights Hub, and must therefore be securely saved on the end device AND the target control system. The setup key is no longer required only after the connection between the SINUMERIK control system and Insights Hub has been fully established.

The SINUMERIK control system then automatically deletes the file. Install antivirus programs, firewalls etc. on the end devices that you are using, etc.

5.2 Logging in to Insights Hub

Precondition

You require a MindAccess user account in Insights Hub.

More information on creating an account can be found at:

- "Insights Hub Settings System Manual"
- "Insights Hub Asset Manager System Manual"

Procedure

- Click the link provided by email from Siemens AG. The website is displayed: https://<tenant-Name>.eu1.mindsphere.io The "Sign In" window opens.
- 2. Enter your e-mail address and your password.
- 3. Click on "Sign In".

SIEMENS

or create an account	
Sign In has changed. If you previous username , please use your email N	
Email	
user@domain.com	
Password	@ Show
Enter your password	
	Forgot your password
Sign In	

- OR -

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

5.2 Logging in to Insights Hub

4. Click on "Back to Sign In".

SIEMENS Reset your Password Enter your email address. We'll email you instructions to reset your password. Please check your spam folder. Email Back to Sign In Submit

5. The launch pad opens. You can access the individual applications via this user interface.



5.3.1 Installing the machine agent

Using machine agents, you have the option of connecting other controls (not SINUMERIK controls) with Insights Hub.

Procedure

1. Install the "MachineAgentLauncher" on your IPC. Click on the Machine Agent Management App.



2. Download the Machine Agent.

→ C △ a mmmiot-machineagentmgr	mt-mmmops.eu1.mindsphere.jo/machineagent/management		0 x 0 * ± 1 & :
mmmiot Machine Agent Manageme	ent		Siemens Xcelerator 🗘 [-
chine Agent Management	Machine Agent Man	agement	
Machine Agent Install Bundle : 1.6.5 Adapter Management	Download		
Adapter Name	Adapter Version	Actions	
Fanuc Adapter	1.1.0-75		
Fanuc Adapter	1.3.0-42		
Fanuc Adapter	1.4.0-62		
Fanuc Adapter	1.4.0-56		
Heidenhain Adapter	1.0.0-25		
MTConnect Adapter	1.0.0-56		
7 total			
			Upload New Adapter

A ZIP folder is created after a successful download.

machineagent_1.5.7 (1).tar.gz	30.03.2023 13:10	GZ File	19.326 KB
-------------------------------	------------------	---------	-----------

3. Unzip the ZIP folder.

🕑 📕 📼		Extract	machineagent_1.5.7 (1).tar		
File Home Share	View	Compressed Folder Tools			
🕆 💶 > Thi	is PC > Do	wnloads > machineagent,	1.5.7 (1).tar		
		Name	Date modified	Type	Size
Quick access Desktop		windows10.tar	12.01.2023 09:16	TAR File	20.096 KB
Downloads	*				

4. Install the .exe file.

Home Share				
· + • • •	his PC > Downloads > machineagent_1.5.7	(1).tar > windows10 > windows10		
-	Name	Date modified	Туре	Size
Quick access Desktop	a manifest ison	1.12.2022 16:04	JSON File	1 KB
Downloads	setup.exe	12.01.2023 09:13	Application	20.093 KB
Documents	*			
C Dictured	*			

The Machine Agent has been installed on your PC:

Processes Performance App his	story Sta	artup Users Details Services		
Name	PID	Description	Status	Group
MachineAgentLauncher	13392	MachineAgentLauncher	Running	
C MapsBroker		Downloaded Maps Manager	Stopped	NetworkService
S MBAMAgent	14504	BitLocker Management Client Service	Running	
Contraction MessagingService		MessagingService	Stopped	UnistackSvcGro
MessagingService_e4a49		MessagingService_e4a49	Stopped	UnistackSvcGro
MicrosoftEdgeElevationServ		Microsoft Edge Elevation Service (Mic	Stopped	
MicrosoftSearchInBing	6920	Microsoft Search in Bing	Running	
MixedRealityOpenXRSvc		Windows Mixed Reality OpenXR Servi	Stopped	LocalSystemNe
MozillaMaintenance		Mozilla Maintenance Service	Stopped	
🔍 mpssvc	3124	Windows Defender Firewall	Running	LocalServiceNo
S MSDTC	18608	Distributed Transaction Coordinator	Running	
MSISCSI		Microsoft iSCSI Initiator Service	Stopped	netsvcs
🔍 msiserver		Windows Installer	Stopped	
MsKeyboardFilter		Microsoft Keyboard Filter	Stopped	netsvcs
Solution Natural Authentication		Natural Authentication	Stopped	netsvcs
💫 NcaSvc		Network Connectivity Assistant	Stopped	NetSvcs
Contraction New York	848	Network Connection Broker	Running	LocalSystemNe
NcdAutoSetup		Network Connected Devices Auto-Set	Stopped	LocalServiceNo

- > This PC > Windows (C:) r ~ Date modified Name ess Install ons 30.03.2021 22:32 commands 14.04.2022 12:44 ects Gradle 4.05.2021 14:06 hpswsetup 28.05.2021 16:12) inetpub 22.03.2022 01:54 ents Intel 28.03.2022 08:45 ads
- 5. Create a folder "commands" in your temporary C:\directory.

Check the "Machine Agent Core installation" on the IPC:

- Open the task manager
- Switch to the Service tab
- Find the "MachineAgentLauncher"
- Check whether the "MachineAgentLauncher" is active and is running.

😥 Tesk Manager				- 🗆 X	
File Options View					-
Processes Performance App hi	story St	artup Users Details Services			
Name	PID	Description	Status	Group	^
MachineAgentLauncher	6856	MachineAgentLauncher	Running		
Q, MapsBroker		Downloaded Maps Manager	Stopped	NetworkService	
Q, MBAMAgent	2900	BitLocker Management Client Service	Running		
C. McpManagementService		McpManagementService	Stopped	McpManagem	
Q, MessagingService		MessagingService	Stopped	UnistackSvcGro	
Q, MessagingService, 4cdc39		MessagingService_4cdc39	Stopped	UnistackSvcGro	
Q, MicrosoftEdgeElevationServ.		Microsoft Edge Elevation Service (MicrosoftEdgeElevationService)	Stopped		
Q, MicrosoftSearchinBing	7192	Microsoft Search in Bing	Running		
Q, MixedRealityOpenXRSvc		Windows Mixed Reality OpenXR Service	Stopped	LocalSystemNe	
C. MozillaMaintenance		Mozilla Maintenance Service	Stopped		
Q, mpsavc	3628	Windows Defender Firewall	Running	LocalServiceNo	
G_MSDEC	19172	Distributed Transaction Coordinator	Running		-
Q_MSISCR		Microsoft (SCS) Initiator Service	Stopped	netsycs	
Q, maiserver		Windows Installer	Stopped		
Q, MsKeyboardFilter		Microsoft Keyboard Filter	Stopped	metavos	
Q, Natural Authentication		Natural Authentication	Stopped	netsycs	
All NewSyc		Network Connectivity Assistant	Stopped	NetSivcs	
Q,NcbService	2680	Network Connection Broker	Running	LocatSystemNe	
Q, NodAutoSetup		Network Connected Devices Auto-Setup	Stopped	LocalServiceNo	
Q, Netlogon	1728	Netlogon	Running		
G, Netman		Network Connections	Stopped	LocatSystemNe	
C. netprofm	3068	Network List Service	Running	LocalService	
Q_NetSetupSvc		Network Setup Service	Stopped	netsycs	
Q, NetTopPortSharing		Net.Top Port Sharing Service	Stopped		
D. Next terfor	1777	Microsoft Research Container	Pussing	LocalKandrahia	*

6. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Asset Manager" and create an asset.

Further information is provided in Chapter: Asset Manager (Page 100)

 In the launch pad, open Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App" and connect the control with Insights Hub. Further information is provided in Chapter: Connecting controls with Insights Hub (Page 156)



- 8. Select the required assets in the left-hand side of the window. To filter the assets, use the search function and open "Connectivity".
- 9. Enter the Mac address and the proxy value into the associated input fields and click on "Connect Controller with Machine Agent to Insights Hub".

	SIEMENS	Shopfloor Mgmt. App.	Siemens Xcelerator	\$ [→
<u>T</u> b	←		Shopfloor Management Application	0
Shopfloor	Search		Connectivity Application Advanced	
Gateway	0	BlackScreenTestAsset_DoNo mmmdev.MMMTestAsset_DoMotDolete	hereby accept the conditions which can be downloaded under the following link <u>Conditions</u>	
uta Mappi List	ng (1)	CelliAsset_DoNotDelete	Connect SINUMERIK (with Integrate Client) to Insights Hub By clicking orbeard button, onbeard key will be downloaded and orbearding steps will be shown.	
© MP :	٢	CelliAsset_DoNotDelete_TEst mmmdev.celit .	Orbourd	
€ 9 55∧	٢	D85_IPC_96_DoNotDelete mmmdev.XMMTesAvset_DoNotDelete 10.113.35.96	Connect Controller with Machine Agent to Insights Hub By clicking orboard button, onbeard key will be downloaded and orboarding steps will be shown. Mac Address Procy Address	
MMM /Remote		DB5_NCU_200_DoNotDelete mmmdev.MMX/TestAsset_DoNotDelete 163.242.151.200	Onbord	
C: Asset Manager	, 🕩	D85_NCU_202_DoNotDelete mmmdev.3MM/files/wat_DoNotDelete 163.242.151.202		

The onboard key is downloaded.+

10. Enter the key into the commands folder in your temporary C:\directory. The commands folder must be empty. Any file located in it must be deleted.

This PC > Windows (C:) > commands					
Name	^	Date modified	Туре	Size	
E135E26AE367	.command	18.04.2022 14:31	COMMAND File	4 KB	

11. Wait a short time until the .exe file and the .result file are displayed.

A			
Name	Date modified	Type	Size
E135E26AE367.command.exec	14.04.2022 12:43	EXEC File	4 K3
E135E26AE367.command.result	14.04.2022 12:44	RESULT File	1 Ki

12. Reload the Shopfloor Management app to check whether the onboard status has changed.

III SI	EMENS	Shopfloor Mgmt. App.						Siemens Xcelerator	. [→
<u>⊥</u> ⊳	←			Shopfloor	Manageme	nt Applic	ation		٢
Shopfloor		42/42	Connectivity	Data Mappings	Application				
© Gateway	0	Autoloin_lava17_2_Test_Do mmmdex.MMMTestAsse_DofuzDelese		nboarded with Mac					
Deta Mapping List	0	AutoJoin_Java17_Test_DoN remmder: MMMTestAsset_DoNotDelete		Disconnect from Mac		n by circling also			
0 1		AutoJoinImpTest_DoNotDel mmmdes.MMMTestAsse_DoNotDelete	P	roxy Address	Reconnec	t with Machine	Agent		
AMP ::	٢	AutoJoinImpTest2_DoNotDelete revender.MMMTestAsse_DoNotDelete .							
SSA		BFC_SSA_DoNotDelete mmmdex ssa_BFC_type_DoAotDelete -							
Asset Manager of	0	BlackScreenTestAsset_DoNo menndes MMMTestAsset_DoNotDelete							

13. In window "Shopfloor Management Application" > "Shopfloor", open tab "Data Mappings".

_			Photo Barrowski Barrowski Paralisa
5	÷		Shopfloor Management Application
-			Connectivity Bala Magnings Application Advances
2	Θ	Server, Asset	Please initial the adaption from Machine Agent Details page using the below link. Otherwise smarted errors might accur
(o 1 a 1 a 1 a 1 a 1 o 1	Θ	Dens, CNC, FDN, Softwideline mention from (n. 19, 2010, 10, 11, 11, 11)	Securit das maprix
	Θ	2014_033001_04NextDelate Terminolog_in_com	Brank - Brank -
	Θ	Disturbance, Dr. DafetDafete ministration, and an annual state	Sanara Tencit Naman
	Θ	Statutional, H., Schotbalana 	ucleanary .
0	Θ	Solutions, M. Solutions 	
age c	Θ	Disturbance, (P., Defectivelane memory and a second	
	Θ	Disturbance, Defectively.com	

14. Select the required data mapping from the drop-down list and click on "Apply". The "Machine Agent Details (adapter installation)" link is displayed.

15. Click on the link.

+					Shop	floor Mana	gement Applica	ation		
Inert .		tier cae	annectivity	Outo Mappings	Application					
•	Demo_Asset 	1	0 Pear	e install the adapter f	from Machine Age	nt Details page so	ing the below link, Othe	erwise unsvanted en	ors might occur	
•	Demo_CNC_PDN_DoAusDelete		54	ected data mapping M	Correct					
۲	DEX_8280x1_0xNotDelete			Della Macompi Machina, Neel	·	A0071				
۲	Disturbance_04_DoftedDelete 									
۲	Disturbance_05_DofortDeleta	11								
۲	Disturbance_06_DoNotDelate									
۲	Disturbance_07_DoNotDelete ministeries_ministeries_me herhead									
۲	Disturbance_DoNotDelete									
۲	#000 									

The appropriate notes are displayed if you have not selected a data mapping, or have not installed an adapter:

0	Bitte Datenzuordnungen auswählen und dann den Adapter Installieren!
	Wählen Sie eine beilebige Datenzuordnung für die Installation aus Datenzuordnungen - Anwenden
0	Bitte imtallieren Sie den Adapter von der Machine Agent-Detailveite über den folgenden Link. Anvorsten können unerwürschte I auftreten
	Ausgewühlen Deterszuerörung : teet2
	Daterzuordnungen - Anwenden

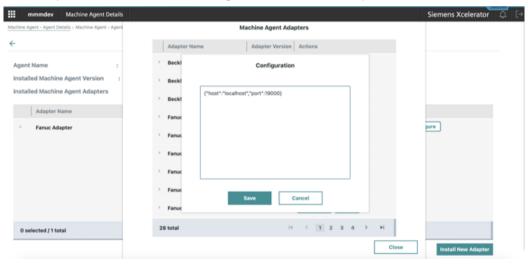
- 16. Select the required data mapping from the drop-down list and click on "Apply". The "Machine Agent Details (adapter installation)" link is displayed.
- 17. Click on "Install new adapter" to install the corresponding adapter for the asset. More information is provided in Chapter: Machine Agent Details (Page 82)

18. Click on "Configure".

mmmdev Machine Agent Details			Siemens Xcelerator 🗘
hine Agent - Agent Details > Machine Agent - Agent		Machine Agent Adapters	
	Adapter Name	Adapter Version Actions	
gent Name :	Beckhoff Adapter	1.0.0-10 Configure Install	
nstalled Machine Agent Version :	> Beckhoff Adapter	1.0.0-13 Configure Install	
nstalled Machine Agent Adapters	Beckhoff Adapter	1.0.0-7 Configure Install	
Adapter Name	Fanuc Adapter	1.0.0-53 Configure Install	
> Fanuc Adapter	> Fanuc Adapter	1.0.0-75 Configure Install	aure
	Fanuc Adapter	1.0.0-86 Configure Install	
	Fanuc Adapter	1.0.0-18 Configure Install	
	> Fanuc Adapter	1.2.0-21 Configure Install	
	> Fanuc Adapter	1.2.0-22 Configure Install	
0 selected / 1 total	28 total		н
		1	Close Install New Adapter

19. Populate the field and then click on "Save".

Each adapter has its own default configuration. You must adapt these.



20. Wait until the adapter status has changed.

mmmdev Machine Agent D				powered by SIEMENS MindSphere
chine Agent - Agent Details > Machine Agent - Ag	pent Details			
			Machine Agent - Agent Details	
Agent Name	: Dem	io_Asset_2		
installed Machine Agent Version	: 1.5.7	Update		
installed Machine Agent Adapters				
Adapter Name		Adapter Version	Installation Status	Actions
No data to display				

21.In window "Shopfloor Management Application" > "Shopfloor", open tab "Application". Move the slider to the right to activate access to "Manage MyMachines".

III S	IEMENS	Shopfloor Mgmt. App.		presently MindSphere C+
36	+		Shopfloor Management Application	۲
Staffor	demo	4/12/	Connectivity Data Mappings Application Advanced	
Q. Galenay	۲	Beckhoff_Demo_DoNotDelete	Manage NyMachines C Analyse MyPerformance	Manage WyMachines /Remote
ing Data longering Uit	۲	Center, Asset	Manage MyMachines Evaluti Daathe access for Urbange MyMachines application	
	۲	Denne_CNC_PDN_DoNotDelete mension/hantbox_14_04_2422_13_232 -	Consert strategies 1: 19 months examplements.	
100 - Sa	۲	IPC_Dema_Asset_DoNotDelete	Manage MyMachines //Spindle-Monitor Enter Death access for Usarga MyMachines Aphilate Machine application	
10	۲	IPC127E_Overmach_Dems_Asset_DoNa		
Anner:	۲	LM_DemoAsset menuari District (181) 01 1	Simumenti, Sterioko Asalsidance, Fialure Analysia Eroster Osalie access for Simunelit. Service Asalance Fialure Analysis Com	
vange :	۲	MMMDemoAsset22.11_DoNotDelete sensels:torthortge .		
	۲	Overmach, IPC Demo Asset_DoNotDel		

An application cannot be selected under tab "Application" if you have not selected a data mapping or have not installed an adapter. A note is displayed.

5.3.2 Machine Agent Details

The "Machine Agent Details" application includes an overview of all available agents in the machine agent backend and lists the following parameters:

- Machine name
- MAC address
- Status
- Connection status

The application provides the following functions:

- Querying and if necessary updating the machine agent version of each individual machine
- Remote management of the agent adapter:
 - Overview of the available adapters on the server
 - Configuration, installation and deletion of adapters

Parameters

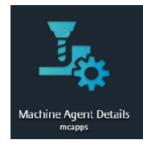
Parameters	Description
Machine Agent - Agent Details	
Machine name	Displays the agent name.
	You can enter between 2 and 256 characters.
MAC address	Displays the MAC address of the machine on which the machine agent is installed.
	The address is unique in the backend.
Status	Displays the onboard status:
	NONE
	ONBOARDED
	OFFBOARDED
	WAITING TO ONBOARD
	WAITING TO OFFBOARD
	RECONNECT REQUESTED
	• DELETED
Connection status	ONLINE
	OFFLINE
	The agent is displayed as being "offline" if no data have been uploaded in the last five minutes.
Installed machine agent adapter	
Agent name	Displays the agent name.
Version of the installed machine agent	Displays the version of the installed machine agent.
Update	The "Update" field is activated if a new machine agent version is available. Click on "Update", to install the latest machine agent version.
Adapter name	Displays the installed adapter names.
Adapter version	Displays the installed adapter version.
Installation status	Displays the installation status:
	NONE
	WAITING_TO_INSTALL
	INSTALLED
	WAITING_TO_UNINSTALL
	INSTALLATION_ERROR
	UNINSTALLATION_ERROR

Parameters	Description
Actions	 "Delete" symbol: Click on the "Delete" symbol to uninstall the adapter on the agents.
	 Click on "Configure" to enter a new configura- tion for the adapter.
ā	Removing the adapter on the agent.
~	Opens the launch pad.
Machine agent adapter	
Adapter name	Displays the name of the available adapter.
Adapter version	Displays the versions of the available adapters.
Actions	Contains the buttons
	Installing
	Configure Click on "Configure" to call the current adapter information.
	Click on the "Expansion" icon to display the meta data of the adapter in the "pkginfo.json" file.

Procedure

1. In the launch pad, open Manage MyMachines for Industrial Operations X Cloud "Machine Agent Details".

The home page "Machine Agent - Agent details" opens and displays the machine overview.



2. Click on an underscored agent machine name in the left-hand column.

Machine Agent - Agent Ortalis			
÷	Machine Age	nt - Agent Details	
Machine Name	MAC Address	Status	Connection State
DenemeTecronetSon	03-17-78-24-38-46	NONE	Offline
Deneral Partion	00-17-75-24-38-16	OFFSOARDED	Office
Heiden1603	05-81-79-59-29-6C	ONBOARDED	Offline
Heiden1603.1	54-CB-2B-BC-8A-7F	OFFBOARDED	Office
Heiden1603.2	85-20-39-90-02-36	ONBOARDED	Offline
Heidenhais Tertilgent 005	03-15-50-30-50-91	OFFBOARDED	Offline
heldenHeinText1	45-19-47-50-33-32	OPTBOARDED	Offline
mabe test 10.03.22 test 1	28-60-99-85-94-43	ONBOARDED	Offline
make.test 22.03.22.DeNotDelete	AC-00-03-46-25-95	OFFBOARDED	Offline
make1902.1	86-60-70-50-78-86	OFFBOARDED	Offline
mabs1903.2	00-C7-82-78-A1-21	ONBOARDED	Offline
mate 1903.3	5D-68-2C-84-A9-43	ONBOARDED	Offline
mabs1703	10-85-14-80-75-00	ONBOARDED	Online
54 total			Н С 1 2 3 4 Э Н

Window "Installed Machine Agent Adapter" with information on the selected machine agent adapter opens.

Button "Update" at the top left in the window is activated if the machine agent version must be updated.

3. Click on button "Update" to install the latest machine agent version.

mmmdev Machine Agent D					presented by SIEMENS MindSphere	Φ
chine Agent - Agent Ditalis > Machine Agent - Ag	pent Details		Marking Arrest	Patrila		
			Machine Agent - A	igent Details		
Agent Name	1	Demo_Asset_2				
nstalled Machine Agent Version	:	1.5.7 Update				
installed Machine Agent Adapters						
Adapter Name		Adapter Version		Installation Status	Actions	
No data to display						
0 selected / 0 total						
					Install New Advator	

When clicking on "Update", the green status message "Update process has been started" is displayed at the upper right in the window.

achine Agent - Agent Details > Machine Agent - Ag	gent Details			Update process has been sta
-		Machi	ne Agent - Agent Details	
Agent Name		01_12_22_mabe_test_alarm		
Installed Machine Agent Version		1.5.6 Update		
Installed Machine Agent Adapters				
Adapter Name		Adapter Version	Installation Status	Actions
> Fanuc Adapter		1.3.0-42	🛹 Installed	Configure
0 selected / 1 total				
				Install New Adapter

If you click on button "Update" while an update is active, the orange warning "The agent is updating at this moment" is displayed at the upper right in the window.

Machine Agent - Agent Details > Machine Agent - Ag	ent Details			This agent is updating at this moment.
←		M	achine Agent - Agent Details	
Agent Name	: 01	_12_22_mabe_test_alarm		
Installed Machine Agent Version Installed Machine Agent Adapters	: 13	5.6 Update		
Adapter Name		Adapter Version	Installation Status	Actions
> Fanuc Adapter		1.3.0-42	✓ Installed	Configure
0 selected / 1 total				
				Install New Adapter

Note

Displaying adapter metadata

You can display the metadata via symbol "Expansion" to the left of the particular Machine Agent adapter in file "pkginfo.json".

This is possible in window "Installed Machine Agent Adapter" and in the overview of available adapters in window "Machine Agent Adapter".

The list of machine agent adapters is displayed.

4. Click on the "Delete" icon in the right-hand column "Actions" to uninstall an agent. - OR -

To configure an agent, click on the "Configure" field in the "Actions" column on the right.

5. To install a new adapter, click at the lower right in the window on "Install New Adapter". Pop-up "Machine Agent Adapters" opens. It includes the list of requested and not yet installed machine agent adapters available in the backend.

- 6. Click on "Install" to install the required adapter. - OR -Click on "Close" to close the window.
 - Machine Agent Adapters Adapter Version Actions Adapter Name Beckhoff Adapter 1.0.0-13 Configure Install Fanuc Adapter 1.2.0-120 Configure Install Fanuc Adapter 1.2.0-131 Configure Install 1.2.0-133 Configure Install Fanuc Adapter Fanuc Adapter 1.3.0-44 Configure Install Configure Install Fanuc Adapter with Default 1.0.0-78 Heidenhain Adapter 1.1.0-44 Configure Install Configure Install Heidenhain Adapte 1.1.0-49 Heidenhain Adapte Configure Install 1.1.0-43 73 total 14 < 1 2 3 4 5 > H Close

Note

Installation status "WAITING TO INSTALL"

Installation status "WAITING TO INSTALL" is displayed if you have requested a new adapter. This adapter is no longer displayed in pop-up "Machine Agent Adapters".

7. Click on "Configure" to configure the required adapter to connect to the machine. The "Configuration" pop-up menu opens.

The actual configuration requirements depend on the adapter type:

{ "hos	t": "localhost",		
	t": 19000		
}			

Configuration

SINUMERIK adapters do not have to be configured.

If required, enter the parameters for the configuration and click on "Save". - OR -

Click on "Close" to close the window.

- 8. To uninstall an adapter from an asset, on the start page "Machine agent details on the agents" click on the underscored machine name in the first column. The list of installed adapters is displayed.
- 9. In the adapter line, click on the "Delete" icon in the right-hand column. The changed status is displayed in column "Installation status".

Note

Uninstalling an adapter

After uninstalling the adapter, you must restart the machine agent before you can install a new adapter.

Configuration example MT Connect Adapter

For MTConnect adapters you must enter the following parameters:

- Host
- Port
- Device name

Configuration

{	"host": "http://mtconnect.mazakcorp.com", "port": 5717, "deviceName":"M12346"	
	Save Cancel	

Configuration example for a Fanuc adapter

For Fanuc adapters you must enter the following parameters:

- Host
- Port
- Timeout
- File transfer time out

```
{
"host": "localhost",
"port": 8193,
"timeout": 10,
```

"file_transfer_timeout": 900 }				
	Configuration			
	("host":"141.29.126.250","port":8193,"series";"301","tim eout":10,"file_transfer_timeout":900)			
	Save Cancel			

Configuration example for an OPC UA adapter

- Host
- Port
- Username
- Password
- AlarmNI
- AlarmNode

```
1
"host": "localhost",
"port": 8193,
"userName": "username",
"password": "",
"alarmNI": 2,
"alarmNode": "Sinumerik"
}
```

5.3.3 Machine Agent Management

The "Machine Agent Management" application contains an overview of all the adapters available in the machine agent backend and lists the following parameters:

- Adapter name
- Adapter version

The application provides the following functions:

- Checks the current version of the machine agent installation bundle
- Downloads the machine agent installation bundle

- Overview of the adapters
- Displays the "pkginfo.json" file with all adapter package information
- New adapter upload
- Deletes the adapters if they are not installed on any agent

Parameters

Parameters	Description
Machine agent installation bundle	Displays the installation bundle version.
Adapter name	Displays the adapter name.
Adapter version	Displays the adapter version.
Actions	The adapter is removed by clicking on the "Delete" icon.
>	Opens the file with the package information.
0	The black "Info" icon is in front of the adapters in- stalled by the superuser.
	The line is marked in green.
	As a user, you cannot delete these adapters.
ā	Removes the adapter.
	 The "Delete" icon is only activated with non- SINUMERIK adapters and deactivated generic adapters. Generic adapters cannot be deleted.
	• An adapter can only be deleted if it is not instal- led on an agent.
÷	Opens the launch pad.

Procedure

1. In the launch pad, open Manage MyMachines for Industrial Operations X Cloud "Machine Agent Management".



Home page "Machine Agents - Management" opens.

drive Agent Menagement		
	Machine Agent Management	
Machine Agent Install Bundle : 1.2.0 Dewebeed		
Adaptar Naree	Adapter Versian	Actions
> () Farwe Adapter	1.6.0-53	
* Heidenhain Adopter	1.0.0-25	0
SinamarikAdapter_Operate_2,7.4,6.4,7.4,8,NOJ	144,332	0
2 tetal		
		Upload New Adap

- 2. Click on "Download" to download the current version of the installation bundle. A "tar.gz" file is downloaded.
- Click the "Delete" icon in the right column "Actions" to delete an adapter. The "Delete" icon appears only for third-party adapters. You can delete the adapter only if it is not installed on any agent.

4. Click on the extension arrow at the left in front of the particular adapter name to open the "Pkginfo.json" file with the package information.

MaderspectAcapents					
÷	Machine Agent Management				
Nachine Agent Issuell Dundle : 1.2.0 Somehani					
Adapter Management					
Asimptive Hanny	Lategree United	Letters			
5 H	V-ha	8			
 International vectors (Control (2014) - 4 + 4 + 4 + 4 + 10, 3 	10025	•			
1 Come Adapter	100.50				
 Tank Alarta 	DOW .	•			
<pre>Process Fit Model:</pre>					
10 w z			H - K - 1 - 2 - 2 - 4 - 5 - 2 - 11		

5. Click on "Upload new adapter" to install a new adapter. The available adapters are displayed in the "tar.gz" file format.

If an adapter with the same name and version already exists, the following error message is displayed in the upper right corner: "Adapter with the same name and version already exists for this user"

		Machine Agent Management	
Aachine Agent Install Bundle : .dapter Management	1 Uid kopieren)	
Adapter Name		Adapter Version	Actions
> O Farruc Adapter		1.0.0-77	
• O Heidenhain Adapter		1.0.0-25	
> O Mabesdidsdscsz		1.4	
• O Nitsubishi Adapter		1.0.0	
• O Mitsubishi Adapter		1.0.0-99	
> O Mitsubishi Adapter		1.0.0-57	
Mitsubishi Adapter		Development build 2022-06-13 11:46:14.173026	
21 total			14 < 1 2 3 > H

If the files you want to upload are without the "pkginfo.json" information, the following error message is displayed in the upper right corner: "pkginfo.json not found in content"

	Machine Agent Management		
Aachine Agent Install Bundle : D	umitoad		
Adapter Name	Adapter Version	Actions	
P Fanuc Adapter	1.0.0-77		
9 B Heidenhain Adapter	1.0.925		
> Ø Mabesdabdscsz	1.4		
> () Mitsubishi Adapter	1.0.0		
> 0 Mitsubishi Adapter	1.0.0-99		
🕖 Mitsubishi Adapter	1.0.0-57		
> 🛛 Mitsubishi Adapter	Development build 2022-06-13 11:46:14.173026		
21 total			H C 1 2 3 > H

If the format of the selected file is not "tar.gz", the following error message is displayed in the upper right corner: "File extension must be tar.gz"

chine Agent Managemeert			File extension must be Jacge
	Machine Agent Management		
Machine Agent Install Dunclle : 1.2.0 Download Adapter Management			
Adapter Name	Adapter Version	Actions	
O Tamac Adapter	1.0.0-53		
* Heldenhain Adapter	1.0.0-25	0	
SkrumenikAdapter_Operate 2,7-4,5-4,7-4,8,NOJ	1.0.0,222	0	
J total			
			Upload New Adapter

5.4 Icons and buttons in Insights Hub

lcon	Description			
	Switches to the launch pad.			
Customer-specific tenant name,	Opens a menu and shows the following data:			
e.g.	Tenant name			
Siemens AG	Tenant type			
	Tenant location			
Manage MyMachines	Opens a menu with the following information:			
	Shows the version			
	Copyright Siemens AG			
	Links to the product:			
	Function Manual			
	• Readme			
	Application Note			
	Readme OSS			
	Insights Hub OSS			
	Support information			
	Release notes			
	Insights Hub status			
Siemens Xcelerator	Opens a menu with the following information and links to the prod- uct:			
	• Privacy			
	– App Store			
	 Platform status 			
	 Platform data 			
	Information			
	 Training Academy 			
	 Documentation 			
	 Support Center 			
	 Online Community 			
	– Company			
	• Directive			
	– Permissible use			
[→	Logs out of Insights Hub after a confirmation prompt.			
Asset Manager	_1			

Integrating Insights Hub

5.4 Icons and buttons in Insights Hub

lcon	Description
Asset Manager	Opens a menu with the following information:
	Shows the version
	Copyright Siemens AG
	Links to the product:
	Third-party software
	Documentation - System Manual Asset Manager
₩	Hides the list of assets.
■ →	Shows the list of assets again.
Filter	Text box for free text search
Q	Opens the Asset search
1 29	Switches to the hierarchical view of the assets
Ø	Edits an asset
Ð	Adds a subordinate asset
	Opens a selection of "Asset Manager" functions, and provides the option of directly accessing the required view.
	Share asset
	Move asset
	• Files
	Operations Insight
	Delete asset
Operations Insight	
Operations Insight	"Operations Insight" is the successor of the "Fleet Manager" appli- cation.
	Opens a menu with the following information and links to the prod- uct:
	Shows the version
	Copyright Siemens AG
	Links to more information:
	Third-party software: Frame Application
	Third-party software: Frame Dashboards
	Third-party software: KPIs
	Third-party software: Work orders
	Third-party software Web
	Components
	Third-party software: Tour guide
	Documentation - Operations Insight System Manual
Shopfloor Management App	

5.4 Icons and buttons in Insights Hub

lcon	Description
Shopfloor Mgmt. App.	Opens a menu with the following information:
	Shows the version
	Copyright Siemens AG
	Links to the product:
	Function Manual
	Readme
	Application Note
	Readme OSS
	Insights Hub OSS
	Support information
	Release notes
	Insights Hub status
ManageMyMachines /Remote	
Manage MyMachines /Remote	Opens a menu with the following information:
	Shows the version
	Copyright Siemens AG
	Links to the product:
	Function Manual
	• Readme
	Application Note
	Third-party software
	Release notes
	Insights Hub status

5.5 Managing users

5.5 Managing users

You process/edit users, roles and rights in the Manage MyMachines for Industrial Operations X Cloud "Settings".

More information can be found at: MindSphere documentation (<u>https://siemens.mindsphere.io/en/docs/mindaccess.html</u>)

Precondition

The following roles are required to use "Manage MyMachines":

- mmmdashboard
- user
- admin

The following role is required to use the "Shopfloor Management Application":

shopfloormgmtapp

Manage MyMachines

For "Manage MyMachines", you can create users with different rights.

The following users are available:

- Standard users
 - mtaassetconfig.user
 - mmmdashboard.user
 - basicservice.user
 - agentcom.user
- Administrator
 - mtaassetconfig.admin
 - mmmdashboard.admin
 - basicservice.admin
 - agentcom.admin
- Subtenant user

Shopfloor Management Application

You create users with various rights for the "Shopfloor Management Application":

- Standard user: shopfloormgmtapp.user
- Administrator: shopfloormgmtapp.admin

The following roles are required for the use of Machie Agent Connectivity:

- machineagentdetails
- machineagentmgmt

Procedure

1. In the launch pad, click on the "Settings" application.



The "Settings" window opens and offers you user administration for editing/processing.

- 2. Create or edit the users.
- 3. Assign the corresponding roles.

5.6 Asset Manager

5.6.1 Overview

Functions

"Asset Manager" is a Manage MyMachines for Industrial Operations X Cloud of the Industrial IoT platform from Siemens. In the "Asset Manager", using assets, you model the structure of an industrial process within Insights Hub.

The specific functions and configuration options for the "SINUMERIK" area are discussed in the following.

Using an asset type, you can define which aspects should be integrated into the template. Using asset types, you have the option of creating a template, e.g. for several devices, and linking this with your aspects. When creating a new asset, you can access the template or the type.

Aspects are combined, preconfigured data and form the context for evaluating industrial processes. An aspect can comprise several variables. Within an industrial process, assets transfer the aspects into the Manage MyMachines for Industrial Operations X Cloud as time series data.

5.6.2 Opening the Asset Manager

Procedure

1. In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Asset Manager".



The "AssetManager" window opens and you have the following options:

- Edit assets
- Add subordinate assets
- Creating assets
 More information can be found in the following section: Creating an Asset (Page 104).
- Creating and editing types
 More information can be found in the following section: Creating an asset type (Page 102)
- Creating and editing aspects

ଜ	Home				
₽1 Å 🖞 🔅	AssetManager AssetManager provides you with the functiona WhatLiewat Tenant details Name Time zone Location mmmdev Europætierlin kartalyeniden, 22 istanbul. co	ing functionality	Consumption 103 of 200 Assets 43 of 50 Types 10 of 10 Agents	0	
	Asset Model				
	Assets An asset is a digital representation of a machine or an automation system with one or multiple automation units (e.g. PLC) connected to MindSphere.	Types A type is a pre-configured template for an asset. Ansist take on the properties of the type on which they are based, within the type you can define which aspects are integrated into the samplust.	Aspects Aspects are a data modeling mechanism for waters. Aspects group whethed data paints based on their logical association and can consist of several variables.		
	Features				
	Sharings In the charings tab all relevant information about all bahings and tharing offers on your teams are shown. In this tab also the possibility for termination and status retrieval is given. d_{0}^{ab} 31 Sharings d_{0}^{ab} 0 sending requests d_{0}^{ab} of pending requests d_{0}^{ab} view your sharings	Connectivity In the "Connectivity" tab you can see assets representing a connectivity element, e. g. Mindconnect twop, of you tenanet with its related connectivity intermation (online status, firmware vention).			
>					

5.6.3 Creating an asset type

The following asset types are supported:

- BasicAsset
- BasicAsset > BasicDevice
- BasicAsset > BasicDevice > BasicSinumerikAsset
- BasicAsset > BasicAgent
- BasicAsset > BasicAgent > MindConnectIoT2040
- BasicAsset > BasicAgent > MindConnectLib
- BasicAsset > BasicAgent > MindConnectNano

Procedure

1. In the left window pane, click the "Library" > "Asset Types" button. The "BasicAsset" window opens.

命	Types	core.basicasset	000
۲	BasicAsset	⊲ BasicAsset	
ପ	Create type		
80 . 68	Fiber	Description Taxes type for the Asset Management Service.	
ā	* Core types	General Ulages	
	BeisAgent (D)		
	BaskApplication	Variables No variables entered yet	
	BankOwice Statistics		
	Baidtfeastly metadoleastly	Aspects No aspects entered yet	
	Basic Edge Data Asset	Les effects noures Ver	

2. Select "BasicDevice" and click on the small arrow (navigate to the child element). The "BasicDevice" window opens.

- 3. Select "BasicSinumerikAsset" and click on the small arrow (navigate to the child element). The "BasicSinumerikAsset" window opens.
- 4. Click on "+ Create type" to create a new asset type. The "Create type" window opens.
 - Enter a name for the new asset type.You must enter a name and this activates the "Save" button.
 - Enter a description of the new asset type.
 - Select an image with the maximum permitted size of 5 MB.

Note

Images in the working area

Ensure that the name of the image in your working area is unique.

- Add your chosen variables.
- Add your chosen aspects.
- Click "Save" to create the new type.

- General		
Type ID:		
mmmdev.MMMTestAutomationType		
Selected type of asset cannot be changed		
Name: *		
Name		
Description:		
Description		
255 characters left		
Please classify your asset:		
The classification of an asset cannot	he channel afterwards	
The classification of an asset cannot	be changed afterwards.	
Performance		

Filtering an asset type

- 1. Open the "Types" window.
- 2. In the center window pane, select "BasicDevice" > "BasicSinumerikAsset".
- 3. In the input field "Filter", enter the name. The corresponding data is displayed in the right-hand window area.

5.6.4 Creating an Asset

Online status

Manage MyMachines for Industrial Operations X Cloud can evaluate the status of an asset using variable "OnlineStatus". This variable is predefined in the aspects of the following asset types:

• BasicSinumerikAsset

5	Home	core.basicasset > core.basicdevice >	core.basicsinumerikasset			0 E	0
	c Back BasicDevice	⊲ BasicSinum	erikAsset				
2	G Create type	(8 constantictinumeritance) (*17 A					
0		Description					
0	Filter	Basic asset type for Sinumerik devices.					
3	* Core types	General Usages					
	BasicSinumerikAsset	Variables					
		Name \$ Unit	Data type	Max. length	Default value		
		manufacturer -	STRING	255		Inherited	
		Aspects					
		Name \$	Aspect	Category			
		 AgentOnlineStatus 	core.agentstatus	Dynamic	Defined	~ 7	
		Name ‡	Unit	Data type	Max. length		
		onlineStatus		BOOLEAN	100 C		
		> Alarms	core.sinumerikbasicalarms	Dynamic	Defined	~	
as	icAgent						
ð	icAgent	core.basicasset > core.basicagent				2 🕀	ť
1 9	5					0 💿	ť
5 5 7	⊘ Types	BasicAgent				1 3	ť
8	⊘ Types BasicAsset	BasicAgent	nent Service.			2 3	Ċ
	Types BasicAsset Create type	BasicAgent Generatoria (22000) Description Besic agent type for the Asset Managen	nent Service.			0 💿	Ċ
8	Types BasicAsset Create type Filter	BasicAgent Creaters Constant Constant	nent Service.			0 3	ť
	Types BasicAsset Create type Filter Core types BasicAgent	BasicAgent Concentration Concentration Besic agent type for the Asset Managen General Usages Variables	nent Service.			2 3	ť
		BasicAgent Conceases Conceases	nent Service.			2 3	
		BasicAgent Concentration Concentration Besic agent type for the Asset Managen General Usages Variables	nent Service. Aspect	Cabigory		0	
		BasicAgent Constant Constant		Category Static	Defined	7	
		BasicAgent Concernent Concernent Description Basic agent type for the Asset Manager Ceneral Usages Variables No variables entered yet Aspects Name 2	Aspect		Defined		
		BasicAgent Concentration	Aspect core.connectivitystatus	Static		7	
		BasicAgent Contended of the Asset Manager Basic agent type for the Asset Manager General Usages Variables No variables entered yet Aspects Name 2 connectivityStatus detucts status	Aspect core.connectivitystatus core.agentstatus	Static Dynamic	Defined	7	

To monitor the online status, use an asset type that is based on these types.

Procedure

- 1. In the left window pane, click "Assets".
- 2. In the center window pane, click "+ Create asset". In the right window pane, you can see "Select type".
- 3. In the "Filter" field, enter the name of the required asset type or select the type that you have just generated from the list.
- 4. Click on "Create".

Filter			
	BasicArea core.basicarea	care type	Area type for creating asset Nerarchy levels.
	BasicSite core.basicsite	сани тури	Site type for creating asset bierarchy levels.
	EdgeAnalyticsApplication core.edgeanalyticsapplication	care type	Represents the Edge Analytics Application present on the Edge device
	IndustrialEdge cons.industrialEdge	core type	Industrial Edge Agent asset type
	MindConnect XS09 core.mcX509	care type	Asset type for agents provisioned automatically with X.509 certificates
	MindConnectF81500 com.mcfb1500	care type	In order to connect a \$7-1500 PLC, please use the asset type for MindConnect Library. This asset type will be discontinued a
	MindConnectIntegration core.mcintegration	care type	MindConnect integration Agent asset type
	MindConnectioT2040 com.mciot2040	case that	MindConnect tol 2040 Agent asset type
	MindConnectLib conv.mclib	core type	MindConnett Ub Agent asset type

The "Add asset" window opens.

5. In the "Name: *" input field, enter a name. This input field is a mandatory field.

- 6. Populate the input fields in the "General" and "Location" areas. The "Save" button is activated.
- 7. Click "Save" to save the new asset.

ŵ	
ି 🕕	Add asset
2	- General
ъe	Type ID:
	cone basicarea
0 ⁰	Selected type of asset cannot be changed
Æ	Name: *
856	News News
	Description:
	Description
	per exercise as
	+ Location
	*
	+ Vorlables
	- Static aspects
	Name
	> consetPoint
	1 Set rates with
	The shows BM
	* Reputed input faild
-	See Cool
•	

The new asset is displayed.

		No events in th			
spects 7					
	Name		Status		C
	feedrate_PLC_bit		No data 2020-08-0	available 2 10:26:00	2
	MachineOee		No data 2020-01-0	available u totasiso	eź.
9 4 1	MachineState		No data 2020-08-0	available 2 to:as:ee	2
OFFLINE ONLINE STATIC	TimeBased		No data 2020-08-0	available 2 10:28:00	1e
	valuebased		No data 2020-00 0	available 2 10:28:00	1d
riables					
Name \$	Data type	unit	Max. length	Value	
manufacturer	STRING		255		

5.6.5 Share asset

You have the option of releasing assets for other tenants using the "Cross Tenancy" function.

Insights Hub functions, such as data associated with time series, asset information, aspects etc. are then visible for these end users.

Note

Functions that are not supported

The following functions are not supported:

- File upload
- Asset localization

Any data shared requires an active authorization or rejection by the receiving tenant. Within a cooperation, the tenant that has been released remains the sole owner of the data that has been released.

Note

Data and configuration visible in shared assets

If the "Manage MyMachines" application is used with function "Cross-Tenancy", then data and configurations are also visible in those tenants at which the assets have been shared. Carefully check the level of criticality of the configuration used by you or your customer and the data that could be possibly disclosed.

Note

Role as tenant administrator

If you use function "Cross-Tenancy" in your role as "Tenant-Admin", then comply with the description in the corresponding Insights Hub Manual.

More information on the "Cross-Tenancy" function is provided in the manual: Asset Manager System Manual (<u>https://siemens.mindsphere.io/en/docs/mindaccess.html</u>).

Precondition

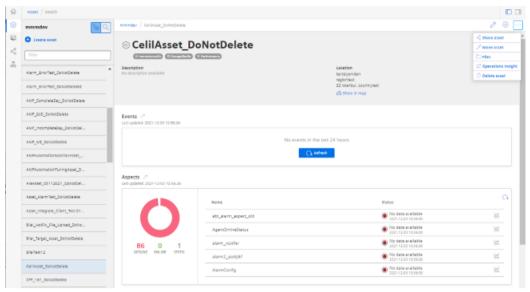
You need an existing cooporation with another tenant.

More information on creating a cooperation is provided in the Manual: System Manual Settings (<u>https://siemens.mindsphere.io/en/docs/mindaccess.html</u>)

Procedure

- 1. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Asset Manager".
- 2. Select the required asset in the left-hand side of the window.
- 3. Click on the button with dots in the top right hand section of the screen.

4. Select "Share asset".

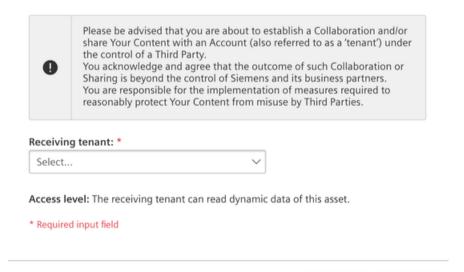


Window "Offer Sharing" opens.

- 5. Read the note:
- 6. Select the receiving tenant from the drop-down list.
- 7. Click on "Share".

Offer	Sharing:	220623	Demo	Mabe

7	١.		Ì	٢	
	2	ĸ	L		
1	۴		٦	k	



Cancel

5.6 Asset Manager

- 8. You receive a message, and in the lower section of the window in the "Shares" area you can see the status of the asset:
 - Accepted
 - Open
 - Failed
- 9. Open application "Shopfloor Management Application". The "Shopfloor Management Application" window opens.
 - Activate the functionality for "Manage MyMachines".
 - Activate the functionality for "Manage MyMachines /Spindle Monitor".
 Option "Manage MyMachines /Spindle Monitor" must be available and visible.

10. Activate the functionality for "Manage MyMachines".

11. Activate the functionality for "Manage MyMachines /Spindle Monitor".

Option "Manage MyMachines /Spindle Monitor" must be available and visible.

	📲 Manage MyMachines
_	
	Manage MyMachines
	Enable/Disable access for Manage MyMachines application
	Manage MyMachines /Spindle-Monitor

You can identify the released asset at the following icon:



5.7 Shopfloor Management Application

5.7.1 Overview

Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" has buttons in the left-hand section of the window that allow you to do the following.

- Activation of assets for the applications:
 - "Manage MyMachines"
 - "Analyze MyPerformance"
 - "Manage MyMachines /Remote"
 - "Asset Manager"
- Configuring variables
- Configuration of a gateway

Precondition

You require the following user role to use the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application":

• shopfloormgmtapp

More information is provided in Chapter: Managing users (Page 98).

Buttons

Button	Description
Ψ.	Select an asset from "Shopfloor".
Shopfloor	In the "Application" tab, activate or deactivate access to the applications "Manage MyMachines" and/or "Manage MyMachines / Spindle Monitor".
	More information can be found in the following chapters:
	Billing model UTS (Usage Transparency Service) (Page 112)
	Billing model PB (Package Builder) (Page 122)
	You configure the variables and file upload in the "Advanced" tab.
	More information on the configuration of triggers can be found in this Chapter: Configuring variables (Page 130)
	More information about the file upload function can be found in this chapter: File upload (Page 142)
	Under "Gateway", you integrate data from "SINUMERIK Integrate Analyze MyCondition" into Insights Hub.
Gateway	More information is provided in Chapter: SINUMERIK Integrate Gateway (Page 203)
=	Add other controllers under "Data Mapping List".
Data Mapping List	More information is provided in Chapter: Data mapping list (Page 153)

Button	Description
<u></u>	Window "Machine overview" of the Insights Hub ApplicationManage MyMachines for Industrial Operations X Cloud "Manage MyMachines" is opened under "MMM".
MMM 2	More information is provided in Chapter: Working with Manage MyMachines (Page 209)
	Note: A prerequisite is that you have the appropriate MMM user role.
0	The "Overview" window of Manage MyMachines for Industrial Operations X Cloud "Analyze MyPerformance" is opened under "AMP".
AMP 🗠	More information can be found in the "Analyze MyPerformance" Function Manual.
MMM /Remote c	Window "Navigation view" of the Manage MyMachines for Industrial Operations X Cloud "Manage MyMachines / Remote" is opened under "MMM /Remote". More information is provided in Function Manual "Manage MyMachines /Remote".
Asset Manager @	Manage MyMachines for Industrial Operations X Cloud "Asset Manager" is opened under "Asset Manager". More information is provided in Chapter: Asset Manager (Page 100)

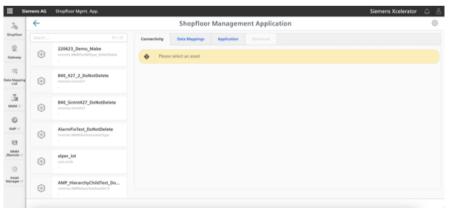
Procedure

1. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".



Window "Shopfloor Management Application" > "Shopfloor" opens.

2. Select the required asset in the central section of the window.



5.7.2 Billing model UTS (Usage Transparency Service)

5.7.2.1 Activating Manage MyMachines

Precondition

- You have purchased Manage MyMachines for Industrial Operations X Cloud.
- You require the following user roles:
 - mmmdashboard.admin
 - shopfloormgmtapp.admin

More information is provided in Chapter: Managing users (Page 98)

• You have connected the machine with Insights Hub. More information is provided in Chapter: Connecting controls with Insights Hub (Page 156)

Procedure

- In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App". Window "Shopfloor Management Application" > "Shopfloor" > tab "Application" > "Manage MyMachines" opens.
- 2. Select the required asset in the left-hand side of the window.
- 3. To filter the assets, enter a character string in the "Search ..." field.

III Sie	mens AG	Shopfoor Mgmt. App.	Siemens Xcelerator	
76	÷		Shopfloor Management Application	۲
Shopfloor	spring	117418	Connectivity Data Mappings Application Advanced	
오 Geteway	٥	06_03_24_spring_test_serdar retubec.serdar_test_type_DuffetDelete	🚡 Manage MyMachines 📀 Analyze MyPerformance 🛃 Manage MyMachines /Remote	
ing Data Mapping List	٠	06_03_24_spring_test_serifa mbdes serier_test_type_DofeEdete	Manage MyMachines Enable Databa across for Manage MyMachines application	
<u>л</u> ми:	0	1-06_03_24_spring_test_serd modes under out type Collecteires	Construction National Science Sciences &	
	٥	1-07_03_24_spring_test_serd	Manage MyMachines /Spindle-Monitor Evalue Dautes assess for Manage MyMachines /Epindle-Monitor application	
Annote ::	٥	130224_test_for_tpring_ma modes.setile_int_type_DatesDates		
Asset Manager (?		130224_best_for_spring_sin		

4. Move the slider to the right to activate the use of "Manage MyMachines" for this asset. A "Charging Model" pop-up opens and you can choose between different charging models. More information is provided in Chapter: Defining the billing period (Page 115)

5.7.2.2 Deactivating Manage MyMachines

If you deactivate Manage MyMachines, you receive information about the availability of the asset configuration. If you are still in the subscription period, the configurations remain available until the specified date. If you do not reactivate Manage MyMachines, all asset configurations will be deleted.

Procedure

 Window "Shopfloor Management Application" > "Shopfloor" > tab "Application" > "Manage MyMachines" opens.

Select the required asset in the left-hand section of the window.

- 2. Move the slider to the left to deactivate the use of "Manage MyMachines" for this asset.
- 3. A pop-up "confirmation" opens.
 - Click on "Confirm" to deactivate Manage MyMachines.
 OR -
 - Click on "Cancel" to cancel the operation.

Confirmation			•	Save
Asset configuration MyMachines?	ns will be lost after 09/10/2022. Do you want t	o disable Man	age	
		Cancel		Confirm

5.7.2.3 Activating Manage MyMachines /Spindle Monitor

You can display information and recorded operating conditions from the SMI24 Sensor Module of a spindle. The SMI24 is available as an option for a large number of Weiss spindles. After being tested, the spindles of other manufacturers can be converted to SMI24.

More information can be found in the following Chapters:

- Manage MyMachines /Spindle Monitor (Page 308)
- Determining the address of the spindles (only for 840D sl) (Page 375)
- Determining the address of the spindles (only for 828D) (Page 373)

Precondition

- You have purchased Manage MyMachines for Industrial Operations X Cloud.
- For Manage MyMachines for Industrial Operations X Cloud "Manage MyMachines", option button "12 months enablement (charged annually upfront)" is activated under "Charging Model".
- The Weiss spindle is equipped with an SMI24 module.

Procedure

- In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App". Window "Shopfloor Management Application" > "Shopfloor" > tab "Application" > "Manage MyMachines" opens.
- Select the required asset in the left-hand part of the window. To filter this asset, enter a character string in text box "Search". Set the slider to the right to activate the use of "Manage MyMachines /Spindle Monitor" for this asset.

III Sie	mens AG	Shopfloor Mgmt. App.	Siemens Xcelerator	48
1 ₆	←		Shopfloor Management Application	٢
Shopfloor	spring		Connectivity Data Mappings Application Advanced	
요 Gateway	0	06_03_24_spring_test_senda modes.sedur_test_type_OxfocDelete	🚡 Manage MyMachines 😰 Manage MyMachines /Remot	•
E Deta Mapping Lief	0	06_03_24_spring_test_serda missies.serda.jest_type_DafasDelete	Manage MyMachines Enable Daste access for Manage MyMachines application	
ши: 0	٥	1-06_03_24_spring_test_serd mode.ueda_test_type_Datestates	Comet twiscel in 12 north enablement.	
AMP ::	0	1-07_03_24_spring_test_serd mission series (int_type_Datasticities -	Manage MyMachines /Spindle-Monitor Evolution Databases for Manage MyMachines Standard Monitor application	
MAM /Remote :?	٥	130224_test_for_spring_ma ender.unde_test_type_Defectives -	Course statistical i 12 months enablement.	
Asset Manager (7	0	130224_test_for_spring_sin minimum.cml, (mt., type_CulturEnter		

A pop-up "confirmation" opens.

- 3. Click on link "Product Sheet and Specific Terms for Manage MyMachines" and read through the information.
- 4. Activate the "I confirm that I am authorized to activate the upgrade at the fees and terms and conditions set out in the Product Sheet and Specific Terms for Manage MyMachines /Spindle Monitor." check box.
- 5. Click on "Next".

- OR -Click on "Cancel" to cancel the operation.

📀 Conf	firmation Save	2
	I confirm that I am authorized to activate the upgrade at the fees and terms and conditions set out in the <u>Product Sheet and Specific Terms for Manage</u> <u>My/Machines /Spindle-Monitor</u> .	
	Cancel New	st

The window with message "Measured values and information from the additional main spindle device SMI24 are shown and stored." opens.

6. Click "OK" to confirm and to save the displayed values.

wn and stored.	normation from the additional	I main spindle device SMI24 are
lave Number	Drive Number	Bus Number

You receive confirmation that the configuration has been saved successfully.

7. Click on "OK" to close the message.

Con	firmation	🛛 📀 Save
۲	The configurations were successfully saved.	
		ОК

Manage MyMachines /Spindle-Monitor Product Sheet and Specific Terms

If you click on the link "Product Sheet and Specific Terms for Manage MyMachines /Spindle Monitor", the document will be downloaded.

You obtain information about the product:

- Preconditions
- A brief product description
- Cost model
- Special Terms & Conditions
- Export control regulations
- Safety information
- Explanation of terms

5.7.2.4 Defining the billing period

You can select one of the following settlement models:

- Monthly package
- Annual package
- Regularly annually

You can only activate the separate "Manage MyMachines /Spindle Monitor" offer if you have activated "Manage MyMachines" as an annual package or regularly annually. You can also activate "Manage MyMachines /Spindle Monitor" if the remaining activation duration of "Manage MyMachines" is less than 1 year. "Manage MyMachines /Spindle Monitor" is then only available up to the end of the quotation validity period.

Precondition

You require the following user roles:

- shopfloormgmtapp.admin
- Admin role for the application (mmm/amp/mmmremote) you are changing

More information is provided in Chapter: Managing users (Page 98)

Activating the 12-month charging model

- In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App". Window "Shopfloor Management Application" > "Shopfloor" > tab "Application" > "Manage MyMachines" opens.
- 2. Select the required asset in the left-hand side of the window. To filter the assets, enter a character string in the "Search ..." field.
- To activate the use of "Manage MyMachines" for this asset, move the slider to the right. The access is activated. A pop-up "Charging model" opens.
- 4. Activate the "12 months enablement (charged annually upfront)" option button.
- If you do not want the selection, click the "Cancel" button.
 OR To confirm the selection, click on "Next"

1	Chan Barry Maria
lo confirm	the selection, click on "Next".

<u> </u>	←	Shopfloor Management Application	a.
Shapfloor	Search	160/106 Application Advanced	
오 Gataway		mendersällshentigen i Manage MyMachines C Analyze MyPerformance Manage MyMachines /Remote	
Data Mapping		247HmIAdvanceNew messades slichterstype Manage MyMachines	
	(1)	247MachineRestart Enable/Diable access for Manage MyMachines application	
C AMP C	0	840dSL TCLI DoNot mmmdoxAMAtheidveitmeits Scharging Model Confirmation Studiscription Options Save	
SSA		Alarm_ErrorTest_Do O 1 month enablement (charged monthly in arrears) 	
MMM /Remote ()		Alarm_ErrorTest_Do Cancel Not	
Asset Manager @		AMP_CompleteDay	

- 6. Click on link "Product Sheet and Specific Terms for Manage MyMachines" and read through the information.
- 7. Activate the "I confirm that I am authorized to activate the upgrade at the fees and terms and conditions set out in the Product Sheet and Specific Terms for Manage MyMachines." check box.

- 8. Click on "Next".

 OR Click on "Cancel" to cancel the operation.
 Charging Model
 Confirmation
 Subscription Options
 Save

 I confirm that I am authorized to activate the upgrade at the frees and terms and conditions set out in the Product Sheet and Specific Terms for Manage Modachines.
- 9. Activate the "Start Now (Automatically renewed)" option button to start the runtime with the current date.



- OR -

Activate the "Custom Duration" option button to specify the runtime individually.

) Start Now (Automatic Custom Duration	ally renewed)		
Stori Delo 09/02/2023	Ē	Renovala/Cyclea 1	Year(s)
Renewel Date 09/02/2024	Ē	Subscription End Date 09/02/2025	
Tag Name		Tag Value	
Tag Name		Tag Value	
Tag Name		Tag Value	

10. If you only wish to use "Manage MyMachines", click on "Next".

🕒 Cha	ging Model 👘 Confirmation 👘 💼 Subscription Options —	📀 Save
۲	The configurations were successfully saved.	
		ОК

Data acquisition is initiated if the "Start Now" (Automatically renewed) option is enabled or the "Custom Duration" option is enabled and the start date is set to "Today". If the "Custom Duration" option is enabled and the start date is not set to "Today", data acquisition will start at the date you specified.

Activating the 1-month charging model

1. To select a monthly period, activate the "1 month enablement (charged monthly in arrears)" option button and click on "Next".

Subscription Op	ions — Save
1 month enablement (charged monthly in arrears) 12 months enablement (charged annually upfront)	
	Cancel Next

A note is displayed indicating that you cannot activate the "Manage MyMachine /Spindle Monitor" application.

- 2. Click on link "Product Sheet and Specific Terms for Manage MyMachines Package " and read through the information.
- 3. Activate the "I confirm that I am authorized to activate the upgrade at the fees and terms and conditions set out in the Product Sheet and Specific Terms for Manage MyMachines Package." check box.

If you wish to use "Manage MyMachines /Spindle Monitor", then the annual payment option is required.

Click on "Cancel" to return to the selection.
 OR -

If you only wish to use "Manage MyMachines", click on "Next".



5. Activate the "Start Now (Automatically renewed)" option button to start the runtime with the current date.



- OR -

Activate the "Custom Duration" option button to define the runtime individually. You receive confirmation that the configuration has been saved successfully.

6. Click on "OK" to close the message.

Cha	ging Model 💫 💿 Confirmation 👘 💿 Subscription Options —	Save
۲	The configurations were successfully saved.	
		ОК

Data acquisition is initiated if the "Start Now" (Automatically renewed) option is enabled or the "Custom Duration" option is enabled and the start date is set to "Today". If the "Custom Duration" option is enabled and the start date is not set to "Today", data acquisition will start at the date you specified.

Setting the "Custom Duration"

- 1. In the "Start Date" input field, open the calendar to define the start date.
- 2. In the "Renewal Date" input field, open the calendar to define the start date.
- In the "Renewals/Cycles" input field, specify the renewal period in years. The "Subscription End Date" field is automatically populated if you define the "Start Date", "Renewal Date" and "Renewals/Cycles" text boxes. The subscription end date obtained from the renewal period is displayed.
- 4. Add the individual tag names in the "Custom Tag Name" input field.
- 5. Add the individual tag values in the "Custom-Tag Value" input field.
- 6. Click "Cancel" to exit the procedure.
 - OR -

Click the "Confirm" button to confirm the time period.

You receive confirmation that the configuration has been saved successfully.

Editing the billing period

When entering the data for the custom period, note the following:

- The renewal cycle for years/months must be between 0 and 99.
- The name of the custom tag and the value of the custom tag must not exceed 30 characters.

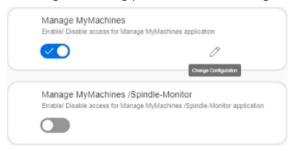
O Start Now (Automat	Confirmation	Subscription (Options 🛛 🜑
 Custom Duration 	, , ,		
Start Date 09/10/2022		Nerwysis/Cycles -1	Month(s)
		Renewal cycle must be a value	e from 0 to 99
Renewal Date 09/11/2022	۲	Subscription End Date 09/10/2022	
Tag Name testtesttesttesttesttest	ttesttest	Tag Value	
Name can contain at most 30	character		
Tag Name		Tag Value	

Note

Multiple billing when changing the start date or subscription option

If you change the start date of an active billing period or the subscription option, then you receive a new billing, even if the new billing period already lies in the active billing period.

1. To change the billing period, click the "Change Configuration" icon.



A "Charging Model" pop-up opens and you are notified when the next settlement date will be.



The "Subscription Options" pop-up contains a note that the subscription for the asset is already active for a billing period.

If you change the "Renewal date" or the "Renewals/Cycles" of the billing period, the newly selected option will not take effect until the end of the currently active subscription option.

If you change the "Start date" of the billing period, the newly selected option becomes active at the defined start date.

The billing occurs either on the same day or later.

The "Subscription Options" pop-up contains a note that the subscription for the asset is already active for a billing period.

8	Charging M — 🙆 Confirms	na — 📀 Subscription Opti — 🛑	Save
	Important Notice: Current selected is 12 months enablem The subscription will end on: 00/11/20. Asset has already subscription between Next Order Information: Next order payment selection is 12 mo Next order will start on date: 15/12/20. Start Now (Automatically rene Custorn Duration	023. n 09/11/2022 and 09/11/2023. anths enablement. 022.	
	Start Date 09/11/2022	RenewalsOydes 0 Year(s)	
	Renewal Date 09/11/2023	Subscription End Date 09/11/2023	
	Tag Name	Tag Value	
	Tag Name	Tag Value	
	Tag Name	Tag Value	
		Cancel	Confirm

The "Subscription Options" pop-up contains a note that the subscription for the asset is already active for a billing period.

If you set the billing period in the future, you will see the activation date and the slider will be displayed in yellow.

Manage MyMachines Enable/Disable access for Manage N	lyMachines application	
\checkmark	Ø	
Activation for this asset will start by 0	8/08/2022	

NOTICE

Billing data as static variables

The billing data are saved as static variables, and can be displayed in the machine view.

More information is provided in Chapters:

- Configuring a machine overview (Page 215)
- Filtering according to static variables (Page 224)

Manage MyMachines Product Sheet and Specific Terms

If you click on link "Product Sheet and Specific Terms for Manage MyMachines Package", window "Manage MyMachines /Remote Product Sheet and Specific Terms" opens.

You obtain information about the product:

- Preconditions
- A brief product description

- Cost model
- Special Terms & Conditions
- Export control regulations
- Safety information
- Explanation of terms

5.7.3 Billing model PB (Package Builder)

5.7.3.1 Activating Manage MyMachines

Precondition

- You have purchased Manage MyMachines for Industrial Operations X Cloud, and you have a package quota to activate the use of "Manage MyMachines Package" for assets.
- You require the following user roles:
 - mmmdashboard.admin
 - shopfloormgmtapp.admin

More information is provided in Chapter: Managing users (Page 98)

• You have connected the machine with Insights Hub. More information is provided in Chapter: Connecting controls with Insights Hub (Page 156)

Procedure

- 1. In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud Application "Shopfloor Management App".
- 2. Window "Shopfloor Management Application" > "Shopfloor" > tab "Application" > "Manage MyMachines" opens.
- 3. Select the required asset on the left-hand side of the window. To filter the assets, enter a character string in the "Search ..." field.

4. To activate the use of "Manage MyMachines" for this asset, move the slider to the right.

III si	emens AG	Shopfloor Mgmt. App.	Siemens Xcelerator		
<u>T</u> b	÷		Shopfloor Management Application	(0
Shepfoor			Connectivity Data Mappings Application Advanced		
Q. Cutemay	٥	06_03_24_spring_test_sendar mtsdec.sendar_test_type_DeliveDelete	🚡 Manage NyMachines 💿 Analyze NyPerformance 💽 Manage NyMachines /Remot		
iiii Data Mapping List	٠	06_03_24_spring_test_serda mbdev under_test_type_DoffstDelete	Manage MyMachines Evalue Double access for Manage MyMachines application		
	0	1-06_03_24_spring_test_serd mbdex serier_test_type_Defectiveles	Correct Molice Correct which is a 1 month enablement. Near writewert date: 56042014.		
10	٠	1-07_03_24_spring_test_serd modes and _bet_type_billedbese	Manage MyMachines (Spindle-Monitor Ender Dealer access for Manage MyMachines figuretie Monitor application		
panda r	٠	130224_best_for_spring_ma relates serier_bet_type_Defectives			
Asset Manager (*		130224_test_for_spring_sin modes serie_test_type_behaddees			

A pop-up "confirmation" opens.

- 5. Click on link "Product Sheet and Specific Terms for Manage MyMachines" and read through the information.
- 6. Activate the "I confirm that I am authorized to activate the upgrade at the fees and terms and conditions set out in the Product Sheet and Specific Terms for Manage MyMachines." check box.
- 7. Click on "Next". - OR -

Click on "Cancel" to cancel the operation.

🚫 Con	imation		Save
V	I confirm that I am authorized to activate the upgraditerms and conditions set out in the <u>Product Sheet an</u> <u>Terms for Manage MyMachines</u> .		and
		Cancel	Next

You receive confirmation that the configuration has been saved successfully.

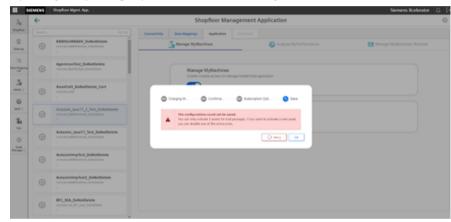
8. Click on "OK" to close the message.



- OR -

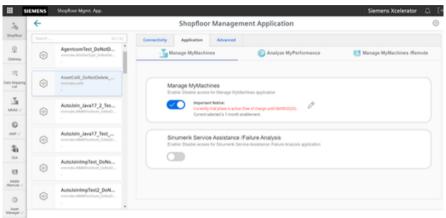
You receive a message that the configuration was not able to be saved due to the package quota. The reason for this are the assets, which are activated in the tenant and which therefore exceeds the package quota. You must visit the store to increase your package quota and to activate the assets in the tenant.

9. Update your package quota and click on "Retry".



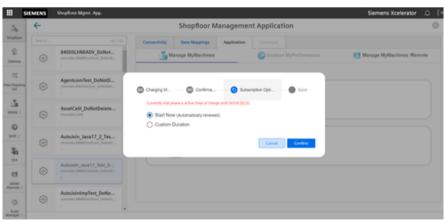
Notifications about packages that have expired

• If you have purchased a test package, before the package expires, you receive the following messages in applications "Shopfloor Management App" and "Manage MyMachines".



AgentcomTe	st_DoNotDelete	a7	AssetCelil_DoNotDelet	Machine Over	view			0	▼ ~
AgentcomTe	st_DoNotDelete	1	AssetCelil DoNotDelet						
				te_Cert #"	CelilAsset_DoNotDe		CeliiAsset_DoNotD	elete_TEst	24 #
Alarms Tenant ID Location HMI Un Ty HMI Versi NC Progra	pe SINUMERIC Op on 04.07.07.11	P	Alarms Sinarel ID Location HMI Urtype HMI Version NC Pospan	Unknown mmmdev Istanbul countr SINUMERIK Op 04.05.03.08 N.ALARK MIP	Alarms Tenant ID Location HML UType MML Version KC Pogram	C pending mmmdv bsahub countr SHUMERIK Op O4 05 03 08 N. K. AMM MPF	Alarms Terant ID Location HMI UT Type HMI Version NC Program	Unknown menmder Istanbul countr	
2									

• If you purchased a "Manage MyMachines" test package, you are informed in two areas about the expiration date of your tenant. Initially this message is displayed while activating in the "Shopfloor Management App". Additional permanent information is displayed in the lower area of the tenant.



←		Shi	opfloor Manag	pement A	pplication	
		Connectfully Bata Mappings	Application			
	MODIL/MADV_bulletbelete remain MM/Festure1_Industries	Manage MyMac	hines	_	Analyze WyPerformance	🛃 Managa MyMachines Remote
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	AssetCall_DuNatDelete_Cart removement	© Crappi M	Contras d	3 harver	r Cpt	
	Autobio_Jaca17_2_Text_DofusDates records.Web/footunt_Inductions	. The configuration	no could not be saved. tion package found.			
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	Autolateleg Test2_DolistDelete research MitClasters, Schotberg ,					
	BFC SSA DoNotDelete					

5.7.3.2 Deactivating Manage MyMachines

If you deactivate Manage MyMachines, all asset configurations are deleted.

Procedure

 Window "Shopfloor Management Application" > "Shopfloor" > tab "Application" > "Manage MyMachines" opens.

Select the required asset in the left-hand section of the window.

- 2. Move the slider to the left to deactivate the use of "Manage MyMachines" for this asset.
- 3. A pop-up "confirmation" opens.
 - Click on "Confirm" to deactivate Manage MyMachines.
 OR -
 - Click on "Cancel" to cancel the operation.



4. You will receive a confirmation that the configuration has been saved successfully. Click the "OK" button to close the message.

Cor	firmation	— 🚫 Save
۲	The configurations were successfully saved.	
		ОК

5.7.3.3 Activating Manage MyMachines /Spindle Monitor

You can display information and recorded operating conditions from the SMI24 Sensor Module of a spindle. The SMI24 is available as an option for a large number of Weiss spindles. After being tested, the spindles of other manufacturers can be converted to SMI24.

More information can be found in the following Chapters:

- Manage MyMachines /Spindle Monitor (Page 308)
- Determining the address of the spindles (only for 840D sl) (Page 375)
- Determining the address of the spindles (only for 828D) (Page 373)

Precondition

- You have purchased Manage MyMachines for Industrial Operations X Cloud "Manage MyMachines /Spindle Monitor", and you have a package quota to activate the use of "Manage MyMachines /Spindel Monitor Package" for assets.
- The use of "Manage MyMachines" is activated for the required asset.
- The Weiss spindle is equipped with an SMI24 module.

Procedure

- In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App". The "Shopfloor Management Application" > "Shopfloor" > "Application" tab > "Manage MyMachines" window opens.
- 2. Select the required asset in the left-hand part of the window. To filter this asset, enter a character string in text box "Search".
- 3. To activate this asset to use "Manage MyMachines /Spindle Monitor", set the slider to the right.

Ть	←		Shopfloor Management Application	
opficer			Connectivity Data Mappings Application Advanced	
Q. Annay		06_03_24_spring_test_serda modec.sedar_test_ype_Dofectivies	🚡 Manage MyMachines 🔗 Analyze MyPerformance 🔠 Manage MyMachines /Remo	0e
Happing List	٠	06_03_24_spring_test_serda retains under (int, type_Collectore -	Manage MyMachines Enter Date access to thimage to/Alextime application	
2 M :- O	١	1.06_03_24_spring_test_serd	Correct Molice Correct valued a 12 months enablement. Next antiferent date 1903/2015.	
8	0	1-07_03_24_spring_test_serd makes under just_type_Databases	Manage MyMachines (Spindle-Monitor Enter Datase costs for Manage MyMachines Righted Industries application	
0		130224_test_for_spring_ma missionantin_mit_type_Defectives	Correct Molece Generat Worker & 12 months enablement, Next settlement date: 1903/3033.	
iger ::	Ŵ	130224_test_for_spring_sin		

A pop-up "confirmation" opens.

4. Click on link "Product Sheet and Specific Terms for Manage MyMachines" and read through the information.

- 5. Activate the "I confirm that I am authorized to activate the upgrade at the fees and terms and conditions set out in the Product Sheet and Specific Terms for Manage MyMachines /Spindle Monitor." check box.
- 6. Click on "Next". - OR -

Click on "Cancel" to cancel the operation.

🔇 Conf	firmation	Save
	I confirm that I am authorized to activate the upgrade at the fees an and conditions set out in the <u>Product Sheet and Specific Terms for</u> <u>MyMachines /Spindle-Monitor</u> .	
	Can	cel Next

The window with message "Measured values and information from the additional main spindle device SMI24 are shown and stored." opens.

7. Click "OK" to confirm and to save the displayed values.

asured Values and Ir wn and stored.	formation from the additional	I main spindle device SMI24 are
Slave Number	Drive Number	Bus Number
4	4	1

You receive confirmation that the configuration has been saved successfully.

8. Click on "OK" to close the message.

Con	firmation	🚫 Save
۲	The configurations were successfully saved.	
		ОК

- OR -

You receive a message that the configuration was not able to be saved due to the package quota. This is due to assets that are activated in the tenant, thereby exceeding the package quota. You must visit the store to increase your package quota and to activate the assets in the tenant.

Update your package quota and click on "Repeat".

36	4							Siemens Xcelerator	
	+			Sh	opfloor Mar	nagement A	Application		٥
Dapher			Connecturity	Data Mappings	Application				
Q. General		84005LIMADV_DoAlorDelete		Janage Mytte	chines		Analyze MyPerformance	Manage MyMachines Hamole	
ing Des Massing Lat		AgenteamTest_DoAutDelete reconstructions_technology_Instations .			e MyMachines totte access for the	rage MyMachines a	epicator		
		AssetCell_DoAstDelete_Cert		Снеред И	© Continue	© 1-1-1-1	a (34 — 😧 Save		
36 1		Autoisis java17,2,3est_DokotDelete menda Mikhlestaat_Isikatines		A You can only ach	ions could not be sav ivate 3 access for trial one of the active one	pockages. If you wa	eri fa activate a new annel,		
0		Autoioin, Java17_Init_DoNotDelete mension. Multi-features .					() my (
Norage 7		Autolaining/test_DokotDelete reveals.Matthemat_blackerse .							
		Austaliainting/Text2_DuRotDeletor remove MM/Texture_Subactionse -							
		BFC_SSA_DoAlatDelete mentals so_FC_bar_behaltere .							

5.7.4 Changing the billing model

You can migrate an application, such as "Manage MyMachines", from a standalone application to a package version and vice versa.

On migration from a standalone application to a package version, the assets activated for the application are retained. They are not deactivated. Due to the limited resources that are assigned to the package version, compatibility must be checked with product management to avoid performance problems.

In the migration from a package version to a standalone application, the application is deactivated for assets that are already activated.

5.7.5 Configuring variables

5.7.5.1 Overview

Using this function, you can individually configure which data is sent from the machine to Insights Hub, and how this data is sent. If a specific alarm occurs, for example, you can define that the HMI trace, NC status and machine data are sent from the machine to Insights Hub.

Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" allows you to individually configure the following trigger:

- Time-based/cyclic trigger (Page 133)
- Configuring a value-based trigger (variable) (Page 135)
- Alarm-based trigger (Page 139)
 You also have the option of sending an alarm per email.
 You can find more information on the configuration in this Chapter: Configuring an alarm message and sending by email (Page 161)
- File upload (Page 142)

It is also possible to copy all configurations of one asset to another asset.

More information: Copying configurations (Page 148)

Precondition

- Manage MyMachines is activated for the required asset or the activation date has been defined to be in the future. More information is provided in Chapter: Activating Manage MyMachines (Page 112) For an activation data in the future, the previously set configurations only become active on the activation date.
- To send HMI traces to Insights Hub, the HMI action log on the machine must be activated for the following data:
 - HMI trace
 - NCU data
 - Machine data



Software option

In order to use the variable data, you need the "Path length evaluation" software option (6FC5800-0AM53-0YB0).

• If the "Manage MyMachines" application is used with the "Cross-Tenancy" function, the data and configurations are then visible in the tenants, but they cannot be changed.

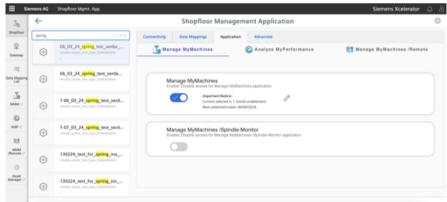
lcons

Icons	Description
(+)	Creates a new configuration.
	Copies the configurations of an asset to other assets.
	More information is provided in Chapter: Copying configurations (Page 148)
	When copying, the "Configuration activated" or "Configuration deactivated" set- ting is also copied.
~	Click the down arrow to open the area and to display the associated configura- tions.
^	Click on the up arrow to close the area.
	Set the slider to the right to activate the corresponding configuration.
	The data for this configuration are recorded and sent to Insights Hub.
	As default setting, each new configuration is activated.
	Set the slider to the left to deactivate the corresponding configuration.
	The data for this configuration are not recorded and sent to Insights Hub.
	Opens a configuration that has already been created in order to make changes.
Û	Deletes a configuration that has already been created.

Procedure

1. In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".

The "Shopfloor Management Application" > "Shopfloor" > "Application" tab > "Manage MyMachines" window opens.



2. Select the required asset in the central section of the window.

- 3. Open the "Advanced" tab in the right-hand section of the window. The window with the overview of the configurations that have been created opens.
 - If you have an incorrect configuration or a configuration that is no longer required, set the slider to the left to deactivate the configuration. The data flow from the machine to Insights Hub is stopped. The associated configuration is not displayed in window "Machine aspects". It takes up to 15 seconds until data recording stops.
 - Set the slider to the right to activate the required configuration.
 - To change an existing configuration, click on the "Edit" icon in the corresponding line.
 - To delete an existing configuration, click on the "Recycle bin" icon in the appropriate line.
 Confirm the message that the operation cannot be undone.

Application	Advanced		
		(
Time based	/ cyclic trigger		^
cyclicitesta	spect		1
Variable val	ue based trigge	r	^
variabletest	lasport		
Alarm base	d trigger		^
olomibased	Restaspent		•••
File Upload			^
fleupicada	ent		()

- Click on the "+" button to add a new configuration. The input window to select the functions opens. Select one of the following functions:
 - Time-based/cyclic trigger (Page 133)
 - Configuring a value-based trigger (variable) (Page 135)
 - Alarm-based trigger (Page 139)
 - File upload (Page 142)

Application	Advanced			
		•		
		•	0	
		Select E	dit Save	
				Cancel
	Cyclic	On C	Change	File
	\mathcal{P}			P_
	C.	<u>M</u>	<u>_!\</u>	Es l
	Time based / cyclic trigger (Variables)	Variable value based trigger	Alarm based trigger	File Uplead

More information

You can find more information about NC variables in the List Manual:

- SINUMERIK 840D sl, NC variables
- SINUMERIK 828D, NC variables

5.7.5.2 Time-based/cyclic trigger

Configure the "Time-based/cyclic trigger", to periodically send variable values from the machine to Insights Hub:

If you no longer require the configuration, you can deactivate this in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" using the slider.

Parameters

Parameters	Description
Create aspect	
Aspect name	Enter a name to designate a common group of variables.
	The name must be unique and not exceed 30 characters. The following characters are permissible:
	• Letters
	Underscore
	Numbers
Read cycle used	
Time interval	The sampling rate of the data acquisition is specified with this value.
	Select the time period from the drop-down list:
	• 5 seconds
	30 seconds
	• 1 minute
	• 5 minutes
	• 15 minutes
	• 30 minutes
	• 1 hour
	• 4 hours
	• 12 hours
	• 24 hours
Variable	

Parameters	Description					
Name	In the variable set, enter a name for the variables to be acquired.					
	The name must be unique and not exceed 30 characters.					
	The following charac	The following characters are permissible:				
	Letters	• Letters				
	Underscore					
	Numbers					
	Remark:	Remark:				
	The name of the variable must not consist solely of numbers. In this case, the text box is marked red.					
Address	Enter the address or	the path of the variable.				
	Examples:					
	Axis data:	/Nck/MachineAxis/AATRAVELCOUNT[1]				
		/Nck/MachineAxis/AATRAVELDIST[2]				
	Channel data:	/Channel/ChannelDiagnose/CuttingTime[u1]				
		/Channel/ChannelDiagnose/OperatingTime[u1]				
	Machine operating mode:	/Bag/State/opMode[u1]				
Data type	Select the data type of the variable from the drop-down list:					
	• DOUBLE					
	BOOLEAN					
	• STRING					
	Note:					
	If values exceed the floating-point number accuracy, they are displayed with faulty decimal places.					
Unit	Select the physical u	nit of the variable from the drop-down list.				
	Example: m/s ³					

Procedure

1. Click on the "Time-based / cyclic trigger (variables)" function.



The "Time-based trigger" input window opens.

- 2. Enter a name in the "Create aspect" input field.
- 3. Enter the sampling rate in the "Read cycle used" input field.
- 4. Enter the variable properties in the text boxes.

5. Click the "+" button to add a new variable. Repeat this step as often as necessary.

Note

Limiting the number of variables

You can create a maximum of 50 variables with 5-second options.

A warning message appears when the maximum number is reached.

The "Time-based trigger" input window opens.

- 6. Click the "+" button to add a new variable. Repeat this step as often as necessary.
- 7. Click the "Cancel" button to exit the Properties window without saving the entries. You are taken back to the aspects overview.
 OR -

Click the "Save" button to accept the entries. The "Data recording saved successfully" message appears.

8. Click the "OK" button to complete the operation. You are taken to an overview of the aspects.

plication Advance						
	ed					
		0	2	0		
		Select	Edit	Save		
		O.	Time based t	trigger		
						Cancel
						2/100
Create aspect						(1)
Cyclic aspect name						
Applied reading cy	cle					1
Reading cycle	*					
Variables						1
Name	Add	iress	Datatype	• Unit	•	\otimes
			÷	1		

The "Time-based trigger" input window opens.

9. Click the "OK" button to complete the operation.

5.7.5.3 Configuring a value-based trigger (variable)

View "Variable-based trigger" provides functions to create user-defined condition rules with variable values.

If a configured condition occurs, then the following data and values are sent to Insights Hub:

- Variable value
- Machine trace files
- User-defined file(s) in the specified directory

If you no longer require the configuration, you can deactivate this in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" using the slider.

Parameters

Parameters	Description
Create aspect	
Aspect name	Enter a previously created variable name.
	The name must be unique.
	If the aspect does not yet exist in Insights Hub, then the aspect is created when saving the configuration.
Configuring a trigge	r
With these settings, ye	ou specify the trigger conditions for the following actions.
Variable address	Enter the address of the variables.
Data type	From the drop-down list select the data type of the variable.
	DOUBLE
	BOOLEAN
	• STRING
	Select a comparison operation from the drop-down list.
	Greater than
	• Less than
	Equal to
	Not equal to
Variable value	Enter a value.
With the following c	onfiguration
Debounce time	Enter the debounce time.
	Remark:
	After the Condition variable has reached a specified value, the control checks whether the condition is still present until the debounce time has expired. The control does not check the status within this time.
sec	Select the time unit from the drop-down list:
	• sec
	• min
	• hr

Parameters	Description					
Hysteresis	Activate the check box to include the hysteresis.					
	The hysteresis can be a value or a percentage (absolute or relative).					
	Example:					
	The temperature is 30 degrees. The absolute hysteresis equals 5. In this case, the check is from 25 to 35 $^\circ\mathrm{C}$ instead of 30 $^\circ\mathrm{C}.$					
	Activate the "Relative" option button to record the relative value in relation to the comparison value.					
	Activate the "Absolute" option button to record the absolute value.					
	A new trigger on the comparison value is only performed when the actual value differs from the comparison value by more than the specified hysteresis.					
	Enter a comparison value, this is restricted according to the selection of the ad- dress format.					
Then acquire the f	ollowing values					
The following varial	ble is recorded and sent to Insights Hub.					
Variable address	Shows the address of the variable.					
Data type	Select the data type of the variable from the drop-down list:					
	• DOUBLE					
	BOOLEAN					
	• STRING					
Duration	Enter the recording duration. The duration must be longer than the cycle.					
	Select the time unit from the drop-down list:					
	• sec					
	• min					
	• hr					
	Minimum of 30 seconds.					
	Maximum of 24 hours.					
Cycle	Enter the cycle duration.					
	Select a time unit from the drop-down list:					
	• sec					
	• min					
	• hr					
	30 seconds is the minimum					
	24 hours is the maximum					
Adding trace files	to the trigger					
Recorded traces are	e sent as files to Insights Hub.					
Trace files	Activate the option check box for the following data:					
	HMI trace					
	NC status					
	Machine data					
	• Machine data Activate the action log setting on the machine.					

Parameters	Description		
Selecting file(s) to be	e uploaded		
The selected files that tenants database.	are available on the machine are transferred to the corresponding Insights Hub		
File or directory path	Enter the file or directory path.		
*	• The maximum file size is 100 MB		
	 If the hard disk is full, then it is possible that not all of the files are sent to Insights Hub. 		
	• When the directory path has been created, the last 10 files in this directory are uploaded to Insights Hub.		

lcons	Description
1	You will receive more information.
×	Closes the entry field.
~	Click on the down arrow to open and create further configurations.
^	Click on the up arrow to close the area of further configurations.

Procedure

1. Click on the function "Variable value-based trigger" to specify dependencies.



The "Variable-based trigger" input window opens.

- 2. Enter a name in the "Cyclic aspect name" input field.
- 3. Define a variable as trigger.
- 4. Define the settings for the trigger.

- 5. Define which data is sent to Insights Hub if the trigger occurs:
 - Recording variables
 Enter a variable address.
 - Trace files Activate the corresponding check box for "HMI-Trace", "NC-Status" or "Machine Data".
 - Files

Enter a file name or a directory path.

6. Click the "Cancel" button to exit the Properties window without saving the entries. A safety message is output, which you must confirm

You are taken back to the aspects overview.

- OR -

Click on "Save" to accept the data entered.

Message "Data recording saved successfully" is output.

Click on "OK" to exit the operation.

You are taken back to the aspects overview.

	Shopfle	oor Management /	Application				0	
Application	Advanced							
		(54	D	2 Edit	50	,		
			🕑 Varia	able based trig	ger			
								Cancel
								0.999
Aspect								0
Configur	e the trigger							0
Variable	address	DOUBLE +	Größer als	 Variable value 				
With the	: following configur	ation						a
Debour		880 W						
□ Hyel	Hysterests	O Relative	Absolute					
Zeichne	folgende Variablen	aut						œ
Varial	bie address	DOUBLE -	Duration	885	*	Cycle	865	*
Add trac	e files to trigger							a ^
	HMI-Trace	2	D NC-S	itatus		Mach	hine Data	
Select fil	ie(t) to be uploaded							0 ^
Tie :	or Directory Path *							×

5.7.5.4 Alarm-based trigger

The "alarm-based trigger" reacts to all alarms programmed in the control.

With this function, you can send specific alarms for a certain aspect and acquired status data to Insights Hub.

These alarms also contain the user range of alarm numbers that are assigned the machine functions for the machine diagnostics. If machine diagnostics are not performed on the basis of alarm numbers, these error messages cannot be integrated.

The alarm numbers that are triggered can be entered individually or in ranges. You can also hide individual or ranges of alarms from a selection.

When certain alarms occur, you can upload user-defined files to Insights Hub.

If you no longer require the configuration, you can deactivate this in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" using the slider.

Parameters and icons

Parameters	Description				
Create aspect					
Aspect name	Enter a descriptive name for the aspect.				
	The name must be unique.				
Include alarms					
Alarm numbers:	In the case of individual alarms, enter the alarm number or the alarm ID that activates the trigger.				
	The alarm number must be within the range from 0 to 999999.				
	The alarms are entered in the following notation:				
	• Separate the individual alarms through a comma, e.g. 3200, 32100,				
	• Enter the alarm number ranges with a "-" character, e.g. 4000-5000				
	The alarm list must not exceed 200 characters.				
Alarm intervals:	Enter the alarm limits.				
	• From: Enter the lowest alarm ID, e.g. 0				
	• To: Enter the highest alarm ID, e.g. 999999				
	All alarms between 0 and 999999 are included.				
Exclude alarms					
Alarm numbers:	Enter the alarm numbers that do not activate the trigger.				
	Excluded alarms are not transmitted to Insights Hub.				
	The alarm number must lie within the range from 0 to 999999.				
	The alarms are entered in the following notation:				
	• Separate the individual alarms through a comma, e.g. 3200, 32100,				
	• Enter the alarm number ranges with a "-" character, e.g. 4000-5000				
	The list of alarm numbers must not exceed 200 characters.				
Alarm intervals:	Enter the alarm limits:				
	• From: Enter the lowest alarm ID, e.g. 0				
	• To: Enter the highest alarm ID, e.g. 999999				
	All alarms between 0 and 999999 are included.				
Adding trace files	to the trigger				

Parameters	Description			
Trace files	Activate the option check box for the following data:			
	HMI trace			
	NC status			
	Machine data			
	Activate the action log setting on the machine.			
	More information is provided in Chapter: Setting the action log (Page 65).			
Selecting file(s) to be	e uploaded			
The selected files that tenants database.	are available on the machine are transferred to the corresponding Insights Hub			
File or directory path	Enter the file or directory path.			
*	The maximum file size is 100 MB			
	 If the hard disk is full, then it is possible that not all of the files are sent to Insights Hub. 			
	• When the directory path has been created, the last 10 files in this directory are uploaded to Insights Hub.			

lcons	Description
1	You will receive more information.
×	Closes the entry field.
~	Click on the down arrow to open and create further configurations.
^	Click on the up arrow to close the area of further configurations.

Procedure

1. Click the "Alarm-based trigger" function to define alarm properties, such as when an alarm should be displayed.



The "Alarm-based trigger" input window opens.

- 2. Enter a name for the aspect and specify the properties.
- 3. Click on the "Cancel" button. You receive a safety message that you must confirm. Then you will be returned to the overview.
 OR -Click the "Save" button to accept the entries. The "Data recording saved successfully" message appears.

4. To exit the operation, click on "OK". Click on "Save" to accept the entries.

lication Advanced					
	© Select	2 Eet	Sera		
	200001	Loi	Serve		
		\land Alarm based	trigger		
					Seve Canol
					0/999
Create appent. Aspect name					0
include alarms Alarm numbers: Alarm num	ber				3
Alam Intervals:		Та			
Exclude alarms					@ ~
Add trace files to trigger					@ ^
HMI-Trace		NC-Status		Machine Data	

5. Enter a file or a directory path to load data from the control to Insights Hub.

Select file(s) to be uploaded	œ	^
The + Decoder Pole*	×	t

5.7.5.5 File upload

Function "File Upload" allows files to be sent from the SINUMERIK control to Insights Hub. You can send multiple files from various directories in the same trigger. In a cyclical trigger, you can upload trace files along with the customer-specific files.

There are two variants of the "File upload" function:

- Change-dependent file upload The upload is carried out after a file is changed on the SINUMERIK control. The change date of the files is checked cyclically, i.e. hourly, on the SINUMERIK control.
- ٠ Cyclic file upload The upload is carried out in a defined time cycle. The cycle duration is specified in the user interface. The cyclic file upload does not check files for changes.

Parameters

Parameters	Description
Configuration name	Enter a name for the configuration.
	The name must be unique and not exceed 30 characters. The following characters are permissible:
	• Letters
	Underscore
	Numbers
Cyclic	The files are sent to Insights Hub at defined intervals.
	Select the time interval from the drop-down list:
	• 1 hour
	2 hours
	4 hours
	6 hours
	8 hours
	12 hours
	• 24 hours
	• 1 week
	• 1 month
Regarding the change	The control checks the files at 1-hour intervals. If the file or directory changes, the relevant files are uploaded to Insights Hub.
Adding trace files to the trigger	Recorded traces are sent as files to Insights Hub. Activate the check box for the following data:
	HMI trace
	NC status
	Machine data
	Activate the action log setting on the machine. More information is provided in Chapter: Setting the action log (Page 65).
File directories	Enter the correct file directory. A directory path must end with a "/" or "\" character. A maximum of 10 directories is permitted.
Files	Enter the file name. You can use the asterisk symbol (*) as a placeholder. A maximum of 10 files per directory is allowed. If only a directory path is entered instead of a file, the last 10 modified files in the directory are sent to Insights Hub.

lcons

lcon	Description
Œ	Create a new entry for the file or directory path.
Ø	Change the entry for the file or directory path.
	Save the entry for the file or directory path.

lcon	Description
Û	Delete the entry for the file or directory path.
1	You will receive more information.

NOTICE

Data manipulation possible

There is a risk that an attacker, within the network between SINUMERIK Integrate and Insights Hub, gains access to the file system of the server or service clients. The attacker can then read or manipulate various system components (e.g. database content). As a consequence, the attacker can manipulate tool data, NC programs, machine archives or the system structure itself, for example. This type of attack cannot be prevented by Insights Hub.

• It is therefore imperative that the person responsible for the machine network takes the appropriate industrial security measures for the production/machine network.

Siemens AG does not accept any liability in this regard.

Files

The maximum file size is 100 MB.

Use the following file extensions for the "File Upload" function:

- .xml
- .txt
- .log
- .png
- .jpg
- .ohs
- .pms
- .ems
- .mds
- .pdf
- .ini
- .csv
- .json
- .sav
- .mst
- .bst
- .stt

Procedure

1. Click the "File Upload" function.



The "File Upload" input window opens.

In the "File Upload" area, you can see the number of configurations created/number of possible configurations on the right.

	Shi	opfloor Managem	ent Application			4
Application	Advanced					
		O		2 Gat	Sama	
			Es Fil	e Upload		
						Save Cancel
c.	rfiguration name enfiguration name Cyclic On Change Hour(s) +					•
btA	i trace files to trigger		NC-Status		Machine Data	٥
File	Directories:	No directory added	۵	Files:	There are no files under this folder.	۵
		Ð			÷	

The "File Upload" input window opens.

- 2. Enter the name for the configuration.
- 3. Select the type of file upload:
 - Cyclic
 Select the cycle length.
 OR -
 - On Change
 If you activate "On Change", you can select a directory.

Configuration name Carlysone core CyclicFleUploadTes(0
🔿 Cyclic 💿 On Change		
File Directories:	٩	Files:
/var/temp/datatransfer/	Ó	There are no files under this folder.
-temp>/	VO	\odot
\oplus		

- 4. Activate the check boxes for the trace files that you want to transfer along with the customerspecific files.
- Click the "+" button in the file paths area. To simultaneously send files from multiple directories, click on this button for each directory. Once the maximum possible number of directories is reached, the button is deactivated.
- 6. Enter the directory path and click the "Checkmark" icon.
- 7. Specify the files to be transferred for each directory:
 - Click the "+" button in the file area.
 To send multiple files from this directory, click on the "+" button for each file.
 Once the maximum possible number of files is reached, the button is deactivated.
 - Enter the file name. You can use the asterisk symbol (*) as a placeholder.
 If more than 10 files correspond to the file name with placeholder, only the last 10 most recently modified files are sent to Insights Hub.
 - Click the "Checkmark" icon.
- 8. Click on the "Recycle bin" icon in the appropriate line to delete a directory path or a file.
- 9. Click on "Save" to save the configuration.
- OR -

Click the "Cancel" button to exit the window without saving the entries. You are taken back to the overview.

- 10. The "Data recording saved successfully" message appears. Click the "OK" button to complete the operation.
- 11. You can see an overview of the files in the "Operations Insight" application. For more information, see Chapter: Displaying uploaded files in "Insights Hub Monitor" (Page 162).

5.7.5.6 Restrictions when uploading files

Restrictions

The following restrictions apply for the following applications:

- You can simultaneously upload 10 files or directories.
- Ensure that no other processes obstruct the upload so that the latest version of a file can be called and uploaded.
- You can assign a name to the file or the directory. You can load 10 files to this directory once you have defined it. These files are sorted according to date of change; the latest 10 files are displayed.
- To be able to distinguish between a file and a directory, directories must end with a "/" or "\".
- Subdirectories in the selected directory are not taken into account.
- The time limit of the SINUMERIK control system must be set to 200 msec.

The following Insights Hub restrictions apply for the applications:

- Special characters are not supported for the upload.
 Do not use the following characters: ?, : , *, &, ", \$, |, `,<,>, +, !, [,]
- If files are larger than 8 MB, it is not permissible that the maximum path length of 60 characters is exceeded.
- The file size is limited to 100 MB. Files larger than 100 MB are not transferred.
- The size of a directory is limited to 500 MB. If, for example, the first 3 files in the directory exceed 500 MB, then the fourth file is not transferred.

The tested machines are listed in the following table. If the first four machines do not have a 2.5 GB memory, then only a certain amount of data is transferred. If the last 2 machines have the amount of memory required, then a total of 2.5 GB data can be transferred. Ensure that the machine has a total memory size of 2.5 GB to ensure that data is transferred.

SINUMERIK type	SINUMERIK Oper- ate	SINUMERIK Inte- grate	File size (max.)	Folder size (max.)	Trigger size (max.)
SINUMERIK 840D pl PCU 50.2	HMI Advanced 7.6.2	SINUMERIK Inte- grate 4.15.0.13	100 MB	500 MB	500 MB
SINUMERIK 840D sl NCU 710.3B PN	SINUMERIK Oper- ate 04.08.04.06	SINUMERIK Inte- grate 03.00.17.00	100 MB	500 MB	500 MB
SINUMERIK 828 PPU 271.4	SINUMERIK Oper- ate 04.08.06.02	SINUMERIK Inte- grate 03.00.13.00	100 MB	500 MB	500 MB
SINUMERIK ONE NCU 1750	SINUMERIK Oper- ate 4.5.SP6 HF19 SINUMERIK ONE OP 04.93.00.04	SINUMERIK Inte- grate 04.00.19.00	100 MB	500 MB	500 MB
SINUMERIK 840D sl PCU 0220 (Win- dows)	SINUMERIK Oper- ate 4.5.SP6 HF19	SINUMERIK Inte- grate 02.07.00.006	100 MB	500 MB	500 MB

Restrictions in order to avoid corrupted data transfer

To prevent data loss, Manage MyMachines creates an "uploadRecovery" folder into which data is transferred if the transfer to Insights Hub does not take place.

Note

Please note the following:

- The maximum directory size must not exceed 1 GB.
- Prevent changes to the upload directory, which is saved in SINUMERIK control system "uploadRecovery" folder ("<temp>/fileupload" and "<temp>/uploadRecovery"). The failover mechanism uses this folder.
- If the transfer was unsuccessful, additional transfer attempts are started within a 4-hour cycle.

Supported directories and folders

It is not permissible to upload confidential files.

Permitted file and folder extensions have been generated to comply with the security guidelines and to prevent confidential files from being uploaded.

The user is responsible for ensuring that the correct files are sent to the appropriate directory and uploaded.

The special <temp> directory

To increase the flexibility when uploading files, directory "epsConfig temp" was added to the authorized list.

Example

"epsconfig.xml" - the associated temp file is: C:\temp\ <temp>\ file is C:\temp\files\

File names

An asset cannot be saved as file if the name contains special characters. It is not permissible that the following characters are used in file names: !, +, ?, :, *, &, ", \$, /, `, <, >, [,]

5.7.5.7 Copying configurations

You have the option of copying the configurations for variables and file upload from one asset to any number of assets.

If a variable with the same name already exists for the target asset, then the address of the variables on the target asset are overwritten when copying.

The copying procedure is canceled as soon as the target asset has reached the maximum number of variables.

Note

Continuing the copying procedure after closing the browser

Copying is interrupted if you close the browser window while copying. If you open the "Shopfloor Management Application" again, you can continue the operation by clicking on "Continue".

However, this is not possible if you are using an incognito window for the copying procedure, since no data is written to the cache in the incognito window.

lcons

lcons	Description
	Opens the "Copy configuration" window.
	The "Configuration activated" or "Configuration deactivated" setting is also copied.
6	Shows the source and target of the last copying procedure.
♦	The yellow symbol indicates that there is a merge conflict warning. If you click on the icon, the warning will be displayed.
	The red symbol indicates that there is a merge conflict error. If you click on the icon, the error will be displayed.
	You will find more information on messages in the following chapter "Messages".

Procedure

- 1. In the "Shopfloor Management Application", select the asset with the required configurations.
- 2. Open the "Advanced" tab in the right-hand section of the window.
- 3. Click the ____ button.

- 4. The "Copy configuration" window opens.
 - In the "Select aspects" list, select the "Select All" check box.
 All aspects are selected.
 OR -
 - In the "Select aspects" list, select the "Deselect All" check box.
 - Then activate only the check boxes whose triggers you want to copy: Static Variables
 Time-based / cyclic trigger
 Variable value-based trigger
 Alarm-based trigger
 File upload
 - Click "Cancel" to cancel to the process.
 OR
 - click "Next".

This button is only active if you have made at least one selection.

Application Advanced	
Copy configuration	
Select Asses	
Static Variables	
C bish	
g last g last	
8 Inti	
Tone haved / spills bigger	^
Yantahin value hesed hitigan	^
Alam based trigger	^
The Upload	^
C Numhurgen	Cancel Next

- 5. Another "Copy configuration" window opens. All available target assets are listed.
 - To filter the list, enter the name of the asset (or parts of it) in the search field.
 - Activate the check box in front of the required asset.
 OR -

activate check box "Select All".

Click the "Return" button to make a new selection.
 OR -

click "Next".

Application Advanced		0
	Copy configuration	
Select Assets		
Titur		
G Select All		
C 001_sta_derestet_one_DohotDelete		ŕ.
11/100_asset_DonetDeate remedia faituarset_box_DonetDeate		
Alarm_ErrorTest_DoNotDelete meander.MMMTecdeuterationType		
Atam_EnorTest_DoNotDelete2		
AMP_completebay_boliotbeinte memder AMPis.tematerTemarentTrips_bolietDelete		
AMP PLANATON TAX DODUCTION		*
You have chosen 0 asset(s)		
		Deck Next

6. The selected assets are displayed for checking.

If red or yellow warning icons are displayed for the selected assets, you must resolve the conflicts first. As long as warnings are displayed, the "Apply" button is not selectable.

- Click the warning icon. You will receive a description and resolution of the conflict. You will find more information on warnings in the following chapter "Messages".
- When all conflicts are resolved, click the "Apply" button.

Application Advanced		0
	Copy configuration	
Belected Appets:		
Geli#2DoMotDelete		
Cell&Asset_DoNotDelete mender off		
	Di	ek Apply

- 7. The copying process is started. Progress is displayed for each asset.
- 8. In the result overview, click on one of the three badges "Successful", "Warning" or "Error" to filter the results.

Connectivity Application Advanced		0
	Copy configuration	
Result Overview (Success (0) (Warning (3) (Fall (3)		
219,2,0a%ot3eiwa reconiry.MdM/red-alconation?pr	Manage pulsifier of Min updated configurations will not whole. Scores and support earths have configured to the minimum and exact the standard configurations contained	• 🔺
215_DolivetDefete remade.html/schutomationtype	Mappy wantering: Machinery first of pool: Interfegendation with special of 5 wantering have been THE Set.	• •

Messages

The system checks various configurations when copying the data.

The following messages "Merge conflicts" are displayed:

• It is possible that the file upload path does not function on the target assets, as an unknown or different operating system type is involved.

Source and target asset have aspects that have the same name. The operation merges the configuration of these aspects if continue has been selected.

Proceed with conflicts	Remove asset from operation	1
different OS type Source and target assets	have aspects which have same r gurations of these aspects if you s	name. The operation is
Merge Conflicts	t be working on the target asset b	

• File upload configurations with trace files are not merged. The maximum trace file limit has been reached.

File upload configurations were not merged. Max. file upload limit was reached. Source and target asset have aspects that have the same name. The operation merges the configuration of these aspects if continue has been selected.



• Cyclic configurations (5 seconds) were not merged. Max. variable limit was reached. File upload configurations with trace files are not merged. The maximum trace file limit has been reached.

Copying the configuration was unsuccessful. Max. variable limit was reached.



 File upload paths will not function as the source and target assets have different operating system types.

Source and target asset have aspects that have the same name. The operation merges the configuration of these aspects if continue has been selected.

Merge Conflicts
File Uploads paths will not work since source and target assets have different OS types.
Source and target assets have aspects which have same name. The operation is going to merge the configurations of these aspects if you select to proceed.
Remove asset from operation

You have the option of clicking on the following buttons: "Proceed with conflicts" or "Remove asset from operation".

Displaying information and switching between the assets

After completing a copying procedure, the information symbol is shown in the register line. The symbol is also displayed if you switch between various assets. The information is only deleted if you start a new copying procedure.

- 1. Click on the "i" symbol to display the source and target of the last copying procedure.
- 2. In window "Active Copy Configuration", click on an asset name. Tab "Advanced" is displayed for the corresponding asset.



5.7.6 Data mapping list

You have the option of saving your own controls in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App" under "Data Mapping List".

Icons

lcon	Description	
+	Creates a new controller.	
Ū	Deletes a controller that has already been created.	
Ø	Opens a controller that has already been created for editing.	

Procedure

 In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".

Window "Shopfloor Management Application" opens.

2. In the left-hand window area, click on "Data Mapping List". A list of the controllers that have been created is displayed.

<u></u> _ (<u>.</u>	Shopfloor Management Application	
Shepfloor	Data Mapping List		o
isteway	Name		
Mapping List	test1		00
	test2		00
MM C	SINUMERIK		00
0			
MP 🖻	Norre	Address	
E3	Feedoverride	(NciChannel/State/TeedRatelpoOvr[u1]	
mote cr	Spindleoverride	/No/Channel/Spindie/speedOvr[u1,1]	
(Dr Auset	NCProgramStatus	(No/Channel/State/progStatus[u1]	
Hager II	StopCond	/Nc/Channel/State/stopCond[u1]	

- 3. Click on the "+" icon to create a new control. Window "Mapping Name" opens.
- 4. Enter a data mapping name of the control, and click on "Next". - OR -

Click on "Cancel" to cancel the operation.

0	Mapping Name	•	Mapping	Para	meters
	Data mapping name				
			Cancel		Next

Window "Mapping Parameters" opens.

- 5. Enter the addresses of the control.
 - FeedOverride address
 - NcProgramStatus address
 - NcProgram address
 - ProtectionLevel address
 - SpindleOverride address
 - StopCondition address
 - OpMode address
 - NrOfAlarms address
- 6. Click on "Save" to save the entries.
 - OR -

Click on "Cancel" to cancel the operation.

Mapping Name	Mapping Parameter
FeedOverride Address*	SpindleOverride Address*
NcProgramStatus Address*	StopCondition Address*
NcProgram Address*	OpMode Address*
ProtectionLevel Address*	NrOfAlarms Address*
ProtectionLevel Address*	NrOtAlarms Address"

5.8 Connecting controls with Insights Hub

Connect SINUMERIK controls or other controls with Insights Hub using the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".

More information about roles within Insights Hub and on configuring assets is provided in: Documentation Insights Hub (<u>https://siemens.mindsphere.io/en/docs/mindaccess.html</u>)

Precondition

- Manage MyMachines for Industrial Operations X Cloud is activated. More information is provided in Chapter: Shopfloor Management Application (Page 110)
- You need the "shopfloormgmtapp" role as a standard user or administrator in Insights Hub
- The configuration must have been saved.

Procedure

- 1. Click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".
- 2. Select the required asset in the left-hand side of the window.
- 3. Open the "Connectivity" tab in the right-hand section of the window.
- 4. Select check box "I accept the conditions, which can be downloaded from the following link. Conditions".
- Click on the "Conditions" link. The "Insights Hub – Terms & Conditions" window opens.
- 6. Click on your region.
- 7. From the list, select the appropriate Terms & Conditions.
- 8. Read the Terms & Conditions.
 OR Download the Terms & Conditions.
 OR Print the Terms & Conditions.

9. Close the window.

The "Connectivity" tab is displayed again.

- 10. Connect the asset with Insights Hub:
 - SINUMERIK controller: Activate option button "Connect SINUMERIK (with Integrate Client) to Insights Hub" and click on "Onboard".
 OR -
 - Another controller: Activate option button "Connect Controller with Machine Agent to Insights Hub". Enter the address of the controller (MAC address) and a proxy URL and click on "Onboard".

	1 h	ereby accept the conditions which can be downloaded under the following link. <u>Conditions</u>	
6	Connect Cibility (CD	W (with Internets (New) to Insights U.S.	
	Connect SINUMER	IK (with integrate client) to insights Hub	
		IK (with Integrate Client) to Insights Hub on, onboard key will be downloaded and onboarding steps will be shown.	
	By clicking onboard butte		
	By clicking onboard butte Onboard		
	By clicking onboard butte Onboard Connect Controlle	on, onboard key will be downloaded and onboarding steps will be shown.	
	By clicking onboard butte Onboard Connect Controlle	on, onboard key will be downloaded and onboarding steps will be shown. r with Machine Agent to Insights Hub	

Connecting SINUMERIK (with Integrate Client) to Insights Hub

The "onboard.key" is generated. Window "Connect with SINUMERIK" opens.

- 1. Download file "onboard.key".
- Copy the file to one of the specified storage locations in the controller.
 More information can be found in the following chapters: SINUMERIK 840D sl: Install the registration key on a SINUMERIK control system (Page 50) SINUMERIK 828D: Install the registration key on a SINUMERIK control system (Page 58) Call the troubleshooting document if you have problems with onboarding.

10	←		Shopfloor Management Application	٢
Shephoar	shumefka	boar	17130 Connectivity Application Advanced	
۲ Salarany	۲	SinumerikOnboending Inceptor Minteroconnet on yee	🖉 Theody accept the confit and which can be deembeded under the following link. Oped Sara	
ing National Let			Connect with SINUMERIK	
<u></u>			1. To concern the matchine tool system with MindSylver, download the following file onboard key 2 Copy the fit to one of the following boardons 1. Aver file matchine tool	
O MPC			 I, Italian Sanchardon Vogo I, Brang Sanchardon Vogo I, Jana Sanchardon Vogoo I, Ja	
121			the default value of [TengDit] is /vai/tmp	
General C			If you are heaving too, the with onboarding read the <u>anticording rounderbooring document</u> .	
Bouri Managar tr			Com	

The status is displayed as "Waiting to Onboard with SINUMERIK Client".

- 3. Call the document for troubleshooting during the onboarding process: Troubleshooting when onboarding (Page 351)
- 4. Wait until the status changes to "Onboarded with SINUMERIK" OR -

Click on button " Cancel Onboarding" to cancel the operation. The window with the two connection options re-opens.

Connectivity	Application Advanced	
Asse	aiting To Onboard with SINUMERIK Client set is waiting for onboarding. By clicking cancel button your onboard key will remain inactive. Eancel Onboarding	
6 If y	you are having trouble with onboarding, you can read onboard troubleshooting document.	

The connection was successfully established, and the status is displayed as "Onboarded with SINUMERIK".

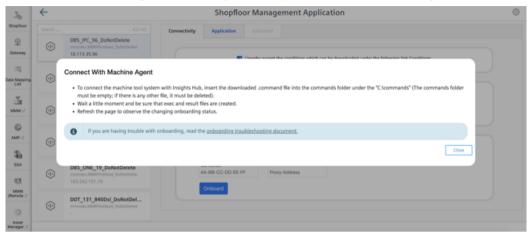
Connectivit	ty Application	Advanced		
•	Onboarded with S Asset is onboarded. You	NUMERIK In disconnect your asset by clicking disco	nnect button.	
	Disconnect from SIN	MERIK Client		

Connecting the control with Insights Hub (Machine Agent)

File "<macaddress>.command" is downloaded. Window "Connect with Machine Agent" opens.

- 1. Save file "<macaddress>.command" to the following directory: "C:/commands"
- 2. Wait until the execution and result files have been created and then refresh the page.

3. Call the troubleshooting document if you have problems with onboarding.



The status is displayed as "Waiting for Onboard with Machine Agent".

4. Call the document for troubleshooting during the onboarding process: Troubleshooting when onboarding (Page 351)

5. Wait until the status changes to "Onboarded with Machine Agent" - OR -

Click on button " Cancel Onboarding" to cancel the operation. The window with the two connection options re-opens.

Connectivi	ty Data Mappings Application Advanced	
•	Waiting to Onboard with Machine Agent Asset is waiting for onboarding. By clicking Cancel Onboarding button your onboard key will be remained inactive Cancel Onboarding	
0	If you are having trouble with onboarding, read the <u>onboarding troubleshooting document.</u>	

The connection was successfully established, and the status is displayed as "Onboarded with Machine Agent".

6. You have two options here:

Click on button "Disconnect from Machine Agent" to disconnect the asset from the Machine Agent.

The window with the two onboarding options opens.

- OR -

Click on button "Reconnect with Machine Agent" to reconnect the asset.

This option exists if, for example, changes were made to the proxy settings.

The new file "<macaddress>.command" is downloaded.

To reconnect the asset, save file "<macaddress>.command" in directory ""C:/commands".

Asset is onboarded. You can disconnect your asset by clicking disconnect button Disconnect from Machine Agent Proxy Address Reconnect with Machine Agent ()	Oni	boarded with Mac	hine Agent				
	Asse			t by clicking disconnect b	itton		
Proxy Address Reconnect with Machine Agent (1)		Disconnect from M	lachine Agent		_		
	Pro	xy Address	Reconn	ect with Machine Age	t ()	_	

5.9 Configuring an alarm message and sending by email

You have the option of configuring an alarm trigger, which notifies you by email if a "Manage MyMachines" event occurs.

Note

Maximum number of alarms per machine

Insights Hub supports a maximum of 40 alarms for an individual aspect of a machine. An email cannot be sent if this number is exceeded.

Procedure

- 1. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".
- 2. Select the required asset in the left-hand side of the window.
- 3. Click the "Alarm-based trigger" function.
- 4. The "Alarm-based trigger" input window opens.
 - Enter a name for the alarm. Specify the properties.
 - Click the "Cancel" button to exit the Properties window without saving the entries.
 You are taken back to the aspects overview.
 OR -

Click the "Save" button to accept the entries. The "Data recording saved successfully" message appears.

- Click the "OK" button to complete the operation.

plication Advanced								
		D lect		Coll	© Sea			
		L	Alarm	ı based trigger				
								anai 999
Create aspect Aspect name								3
include alarms								3
Alam numbers:	Alarm number							
Alare intervale:	From		Te					
Exclude alarms								v
Add trace files to trigger							0	^
HMI-Trace			NC-Stat	.5		Machine Data		

5. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Insights Hub Monitor".

The "Insights Hub Monitor" window opens.

More information can be found in Chapter: Displaying uploaded files in "Insights Hub Monitor" (Page 162)and in the "Operations Insight" documentation (<u>https://</u> <u>documentation.mindsphere.io/MindSphere/apps/insights-hub-monitor/introduction.html</u>). 5.10 Displaying uploaded files in "Insights Hub Monitor"

5.10 Displaying uploaded files in "Insights Hub Monitor"

The files that you uploaded with the "File Upload" function are displayed in the "Insights Hub Monitor" application.

This application replaces the "Fleet Manager" application.

More information is provided in the Documentation "Insights Hub Monitor" (<u>https://</u><u>documentation.mindsphere.io/MindSphere/apps/insights-hub-monitor/attachments.html</u>).

Precondition

You have uploaded files.

You will find further information on how to set up "File Upload" in Chapter: File upload (Page 142).

NOTICE

Data manipulation possible

There is a risk that an attacker, within the network between Mcenter and Insights Hub, gains access to the file system of the server or service clients. The attacker can then read or manipulate various system components (e.g. database content). As a consequence, the attacker can manipulate tool data, NC programs, machine archives or the system structure itself, for example. This type of attack cannot be prevented by Insights Hub.

• As the person responsible for the machine network, take measures to ensure the industrial security of the production/machine network.

Siemens AG does not accept any liability in this regard.

Procedure

1. To see the loaded files, open the new application "Insights Hub Monitor". - OR -

If you open the "Fleet Manager" application, a message will be displayed prompting you to use the new application. Click on "Take the tour".

Entiretti IV4.93			Try Operations Insight, It's much-	easter to use with expanded features, and soon re	places Fleet Manager. 🛛 🔝 Ta	ke the tour.	< ±
(i) 6/114	= t	Aspects × Rules × Files ×	· +				
😭 🔍 heller	8 🛞 🖌	📡 🔍 Suchen					\$
mmmdev > Mailar@V4.93		Type Name		Pfed	Größe (Bytes)	Geändert am (UTC)	

2. The new "Insights Hub Monitor" application opens.

Operations I Create dashboards, monitor		ur IoT data	Welcome to Operations Insight. Curious about what you can do with this application? Start the tour here Guide me later Next	(*) Kefresh
Status				Quick links
Assets © Total ① 114 See details >	Dashboards ① Total R 0 See details >	Active rules ① Istai ② 1 See details >		Explore Explore daritoards > Diplore assets > Diplore events > Create new asset in Asset Manager #
Monitoring by rules ③ Assets under maritoring 1/114	Assets with active insues	Not acknowledged events $@$	Work orders O Open In Overslage On hold O O O O	Analyze Analyze Analyze time series > % Configure Create a rule for an asset >
Monitored Not monitored See details >	€tror ●Werning €info	Error Warning Info Other See details >	Creespergr High Mudum Low See details >	Create new deshboard > Create new KPI > Create new work order >
Latest 5 errors 🔿	et Name Tir	nestame Description	Source	(1) Learn User documentation.x Oukk start tour >

5.10 Displaying uploaded files in "Insights Hub Monitor"

3. Select the asset.

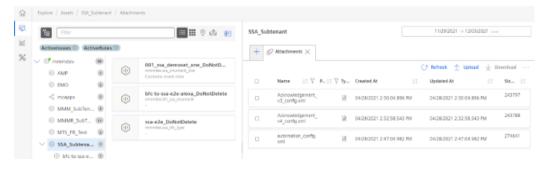
Tes Filter		🔲 🕮 🕫 🖄 📰	SSA_Subtenant		11/29/2021 → 12/03/2021 to
ActiveIssues (1) (ActiveRules	(U)		+ $@$ Attachments $ imes$		
mmmdev MP I DMO I	۲	001_ssa_demoset_one_DoNotD remedeusa_inumerit_one Contains mock data	Plugin Overvi Select a plugin to get insights		
<pre>% mcapps ® % MMM_SubTen ®</pre>	۱	bfc-to-ssa-e2e-alexa_DoNotDelete mmmdecbfc_sa_inumerik -		(Fx)	\triangle
MMMR_SubT MTS_PB_Test	۲	ssa-e2e_DoNotDelete mmmdecae_bh_type	Time Series	Rules	Events
 SSA_Subtena (8) bfc-to-ssa-e (1) 			View the assets time series data in a line chart.	Configure a rule for an asset to monitor its status.	View events of this asset and its details.
🛞 SubtenantCore 🕃			í	0	
			Info Shows general asset	Attachments View all files of an asset	

- 4. Click the "Attachments" tile. All files are displayed.
 - If you want to download a file, activate the check box in front of the required file.
 Click the "Download" button.
 - If you want to upload a file from your directory, click the "Upload" button. The Explorer opens.

Navigate to the directory in which the file is located. Click the "Open" button.

 If you want to delete a file, check the box in front of the desired file and click the dots button.

Click the "Delete" button. A security warning is output. Click the "Delete" button to delete the file.



Note

Loading identical files at different times

Insights Hub does not permit multiple instances of the same file name.

The files are loaded with names and time stamps: Filename_timestamp.

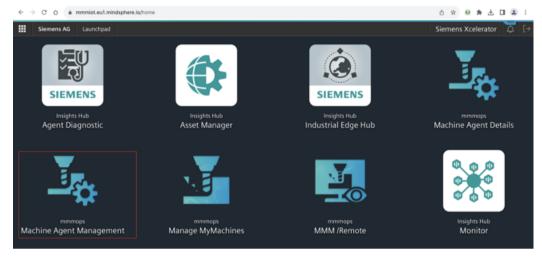
5.11.1 Using the machine agent on the server

5.11.1.1 Installing the machine agent

Using machine agents, you have the option of connecting other controls (not SINUMERIK controls) with Insights Hub.

Procedure

1. Install the "MachineAgentLauncher" on your IPC. Click on the Machine Agent Management App.



2. Download the Machine Agent.

gmt-mmmops.eu1.mindsphere.io/machineagent/management		0 x 0 * ± 1 &
sent		Siemens Xcelerator
Machine Agent Man	agement	
Download		
Adapter Version	Actions	
1.1.0-75		
1.3.0-42		
1.4.0-62		
1.4.0-56		
1.0.0-25		
1.0.0-56		
	Adapter Version 1.10-75 1.30-42 1.4.0-56 1.0.0-25 1.0.0-56	Machine Agent Management Download Actions 1.1.0-75 1 1.3.0-42 1 1.4.0-62 1 1.0.0-25 1 1.0.0-56 1

A ZIP folder is created after a successful download.

machineagent_1	.5.7 (1).t	ar.gz	30.03.2023 13:1	0 GZ	File	19.326 KB
Jnzip the ZIP	folde	r.				
		Extract	machineagent_1.5.7 (1).tar		
File. Home Share	View	Compressed Folder Tools				
← → × ↑ 💶 > T	nis PC > De	ownloads > machineager	nt_1.5.7 (1).tar			
Quick access		Name		Date modified	Туре	Size
Desktop		windows10.tar		12.01.2023 09:16	TAR File	20.096 KB
Downloads	*					
100 -						

3.

4. Install the .exe file.

	· · · · · ·			
	Name	Date modified	Туре	Size
Quick access	a manifest ison	1.12.2022 16:04	JSON File	1 KB
Downloads	setup.exe	12.01.2023 09:13	Application	20.093 KB

The Machine Agent has been installed on your PC:

Processes Performance App his	story Sta	artup Users Details Services		
Name	PID	Description	Status	Group
MachineAgentLauncher	13392	MachineAgentLauncher	Running	
MapsBroker		Downloaded Maps Manager	Stopped	NetworkService
S MBAMAgent	14504	BitLocker Management Client Service	Running	
Contraction Messaging Service		MessagingService	Stopped	UnistackSvcGro
MessagingService_e4a49		MessagingService_e4a49	Stopped	UnistackSvcGro
MicrosoftEdgeElevationServ		Microsoft Edge Elevation Service (Mic	Stopped	
MicrosoftSearchInBing	6920	Microsoft Search in Bing	Running	
MixedRealityOpenXRSvc		Windows Mixed Reality OpenXR Servi	Stopped	LocalSystemNe
MozillaMaintenance		Mozilla Maintenance Service	Stopped	
🔍 mpssvc	3124	Windows Defender Firewall	Running	LocalServiceNo.
🔍 MSDTC	18608	Distributed Transaction Coordinator	Running	
MSiSCSI		Microsoft iSCSI Initiator Service	Stopped	netsvcs
🔍 msiserver		Windows Installer	Stopped	
MsKeyboardFilter		Microsoft Keyboard Filter	Stopped	netsvcs
NaturalAuthentication		Natural Authentication	Stopped	netsvcs
S NcaSvc		Network Connectivity Assistant	Stopped	NetSvcs
NcbService	848	Network Connection Broker	Running	LocalSystemNe
NcdAutoSetup		Network Connected Devices Auto-Set	Stopped	LocalServiceNo.

5. Create a folder "commands" in your temporary C:\directory.

	Name	Date modified
SS		Date mounied
	_Installl ogs	30.03.2021 22:32
	commands	14.04.2022 12:44
ts	📕 Gradle	4.05.2021 14:06
	📜 hpswsetup	28.05.2021 16:12
nts	📜 inetpub	22.03.2022 01:54
ds	📜 Intel	28.03.2022 08:45

Check the "Machine Agent Core installation" on the IPC:

- Open the task manager
- Switch to the Service tab
- Find the "MachineAgentLauncher"
- Check whether the "MachineAgentLauncher" is active and is running.

10 Task Manager				- 🗆 X	C
File Options View					
Processes Performance App h	istory St	artup Users Details Services			
Name	PID	Description	Status	Group	^
(L) MachineAgentLauncher	6856	MachineAgentLauncher	Running		
Q, Mapsbroker		Downloaded Maps Manager	Stopped	NetworkService	
Q, MBAMAgent	2000	BitLocker Management Client Service	Running		
Q,McpManagementService		McpManagementService	Stopped	McpManagem	
Q, MessagingService		MessagingService	Stopped	UnistackSvcGro	
Q_MessagingService_Acdc39		MessagingService_4cdc39	Stopped	UnistackSvcGro	
Q, MicrosoftEdgeElevationServ.		Microsoft Edge Elevation Service (MicrosoftEdgeElevationService)	Stopped		
Q, MicrosoftSearchinBing	7192	Microsoft Search in Bing	Running		
G_MixedRealityOpenXRSvc		Windows Mixed Reality OpenXR Service	Stopped	LocalSystemNe	
C. MozillaMaintenance		Mopilla Maintenance Service	Stopped		
Q, mpsavc	3628	Windows Defender Firewall	Running	LocalServiceNo	
Q_MSOTC	19172	Distributed Transaction Coordinator	Running		-
Q, MS/SC9		Microsoft GCSI Initiator Service	Stopped	netsycs	
Q, msiserver		Windows Installer	Stopped		
Q, MsKeyboardFilter		Microsoft Keyboard Filter	Stopped	netavcs	
Q, Natural Authentication		Natural Authentication	Stopped	netsycs	
Q, NcaSvc		Network Connectivity Assistant	Stopped	NetSivos	
Q, NotiService	2680	Network Connection Broker	Running	LocatlystemNe	
Q, NodAutoSetup		Network Connected Devices Auto-Setup	Stopped	LocalServiceNo	
Q, Netlogon	1728	Netlogon	Running		
Q, Netman		Network Connections	Stopped	LocatfystemNe	
C)_netprofm	3068	Network List Service	Running	LocalService	
Q, NetSetupSvc		Network Setup Service	Stopped	netavcs	
C), NetTopPortSharing		Net Top Port Sharing Service	Stopped		
C. New Yorker	1772	Microsoft Descreet Container	Pussing	Local Kandrahia	v

6. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Asset Manager" and create an asset.

Further information is provided in Chapter: Asset Manager (Page 100)

 In the launch pad, open Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App" and connect the control with Insights Hub. Further information is provided in Chapter: Connecting controls with Insights Hub (Page 156)



- 8. Select the required assets in the left-hand side of the window. To filter the assets, use the search function and open "Connectivity".
- 9. Enter the Mac address and the proxy value into the associated input fields and click on "Connect Controller with Machine Agent to Insights Hub".

	SIEMENS	Shopfloor Mgmt. App.		Siemens Xcelerator	\$ [→
<u>T</u> o	+		Shopfloor Management Application		0
Shopflor	Search	··· 42/42	Connectivity Application Advanced		
Gatewa	v 🕀	BlackScreenTestAsset_DoNo mmmdex.MMMTestAsset_DMMsdDelete	hereby accept the conditions which can be downloaded under the following link <u>Conditions</u>		
Data Mapp List	0	CelilAsset_DoNotDelete	Connect SINUMERIK (with Integrate Client) to Insights Hub By clicking orboard button, onboard key will be downloaded and orboarding steps will be shown.		
© AMP :	0	CelilAsset_DoNotDelete_TEst www.eclil .	Onboard		
90 55A	0	D85_IPC_96_DoNotDelete menndex.MM/TestAsset_DoNotDelete 10.113.35.96	Connect Controller with Machine Agent to Insights Hub By clicking orboard button, onboard key will be downloaded and orboarding steps will be shown. Mac Addmas Proxy Addmas		
El MMM /Remote		DB5_NCU_200_DoNotDelete mmmdev.MM/TestAsset_DoNotDelete 163.242.151.200	Onboard		
C: Asset Manager		D85_NCU_202_DoNotDelete menedev.MMUTestvart_DoNotDelete 163.242.151.202			

The onboard key is downloaded.+

10. Enter the key into the commands folder in your temporary C:\directory. The commands folder must be empty. Any file located in it must be deleted.

> This PC > Windows (C:) > commands			
Name	Date modified	Туре	Size
E135E26AE367.command	18.04.2022 14:31	COMMAND File	4 KB

11. Wait a short time until the .exe file and the .result file are displayed.

~			
Name	Date modified	Type	Size
E135E26AE367.command.exec	14.04.2022 12:43	EXEC File	4 KB
E135E26AE367.command.result	14.04.2022 12:44	RESULT File	1 KB

12. Reload the Shopfloor Management app to check whether the onboard status has changed.

III SI	EMENS	Shopfoor Mgmt. App.		Siemens Xcelerator	€⇒
<u> </u>	←		Shopfloor Management Application	6	þ.
Shopfloor		42/42	Connectivity Data Mappings Application Advanced		
© Gateway		AutoJoin_Java17_2_Test_Do mmmdes.UMM/TestAsser_DoVorDelete	Onboarded with Machine Agent Asert is onboarded. You can disconnect your asset by clicking disconnect button		
Data Mapping	0	AutoJoin_Java17_Test_DoN renerdes.WMMTestAsse_DoNotDelete	Disconnect from Machine Agent		
Щ. мми: О		AutoJoinImpTest_DoNotDel renerdes WMM/SetAuse_DoNotDelese	Proxy Address Reconnect with Machine Agent ()		
AMP ::	0	AutoJoinImpTest2_DoNotDelete revendes WMMTestAsse_DoNotDelete -			
SSA Ell Mana Remote :		BFC_SSA_DoNotDelete rennedes.sa_BFC_type_DoNotDelete .			
Asset Manager :	٠	BlackScreenTestAsset_DoNo mennder MMMTestAsse_DoVerDelete			

13. In window "Shopfloor Management Application" > "Shopfloor", open tab "Data Mappings".

5	(Shopfloor Management Application	
		00.0	Consciluity Data Regimps Application Discover	
	Θ	Dense, Asset	Peace instal the adapter from Machine Apert Details page using the below Sol. Otherwise sewantist error might accur	
-		Dens, CNC, FDN, Dollardinista monocher (ac. 10, 20, 20, 20, 20, 20, 20, 20, 20, 20, 2	Second data meansy	
		SEX_REPORT_Deviationies recommend_in_comments recommend_in_comments	Normal Accession	
2	Θ	Disturbance, D4, Defield Defen Hannessen, and Annessen Hannes	Normal Annual	
8	Θ	Disturbance, 05, Dokutbahre mensen in Jacobier, 199 mensen	Minimum .	
0	Θ	Disturbance, (M. Doketbelane Second and Second and Seco		
	Θ	Disturbance, DP_Dotestbelane conductor, providence, pro- tectural		
	۲	Disturbance_Deficitive		

14. Select the required data mapping from the drop-down list and click on "Apply". The "Machine Agent Details (adapter installation)" link is displayed.

15. Click on the link.

= 1	IEMENS !	Shoplloor Mgmt. App.	proverty Min	dSphere 🔂 [+
5	4		Shopfloor Management Application	0
Deploy			Connectivity Data Maggings Application Internet	
Q. Seenay	•	Demo Asset	Please initial the adapter from Machine Agent Details page using the below link. Otherwise unwanted errors might occur	
in terr	۲	Demo_CNC_FDN_DotorDelete	Service data regorg MiCanned	
- <u></u>	۲	OKK_\$2904_boNetDelete emministic_c_per Karls DX118	Del Marriege	
3	۲	Disturbance_04_DoNotDelete		
84 83	۲	Disturbance_05_DollerDelete		
	۲	Disturbance_06_DoNotDelete		
Meage /	۲	Disturbance_07_DoNotDelete		
	۲	Beharbance_DoNotDelete sciences.co.proceed.com sci		
	۲			

The appropriate notes are displayed if you have not selected a data mapping, or have not installed an adapter:

0	Bitte Datenzuordnungen auswählen und dann den Adapter installieren!
	Wählen Sie eine beliebige Datenzuordnung für die Installation aus Datenzuordnungen
	Bite installeren Sie den Adapter van der Machine Agent-Detailweite über den folgenden Link. Ansonsten können unerwänschte Fahler suföreten
	Ausgewählte Balanzuserbung : Isel2 Detenzuordnungen - Anwenden Nachme Agent Desills (Adaptempskalzion)

- 16. Select the required data mapping from the drop-down list and click on "Apply". The "Machine Agent Details (adapter installation)" link is displayed.
- 17. Click on "Install new adapter" to install the corresponding adapter for the asset. More information is provided in Chapter: Machine Agent Details (Page 82)

18. Click on "Configure".

mmmdev Machine Agent Details		Siemens Xcelerator 🗘 [
schine Agent - Agent Details > Machine Agent - Agent	Machine Agent Adapters	
÷	Adapter Name Adapter Version Actions	
Agent Name :	Beckhoff Adapter 1.0.0-10 Configure Install	
Installed Machine Agent Version :	Beckhoff Adapter 1.0.0-13 Configure Install	
Installed Machine Agent Adapters	Beckhoff Adapter 1.0.0-7 Configure Install	
Adapter Name	Fanuc Adapter 1.0.0-53 Configure Install	
> Fanuc Adapter	Fanuc Adapter 1.0.0-75 Configure Install	aure
	Fanuc Adapter 1.0.0-86 Configure Install	
	Fanuc Adapter 1.0.0-18 Configure Install	
	Fanuc Adapter 1.2.0-21 Configure Install	
	Fanuc Adapter 1.2.0-22 Configure Install	
O selected / 1 total	28 total	
	Close	Install New Adapter

19. Populate the field and then click on "Save". Each adapter has its own default configuration. You must adapt these.

mmmdev Machine Agent Details		Siemens Xcelerator
Machine Agent - Agent Details > Machine Agent - Agent	Machine Agent Adapters	
\	Adapter Name Adapter Version Actions	
Agent Name :	> Beckl Configuration	
Installed Machine Agent Version :	> Becki	
Installed Machine Agent Adapters	("host":"localhost","port":19000) > Beckt	
Adapter Name	> Fanux	
> Fanuc Adapter	> Fanuc	pure
	> Fanot	
	> Fanoc	
	> Fanoc	
	Save Cancel	
0 selected / 1 total	28 total I 4 4 1 2 3 4 2 1	
	Close	Install New Adapter

20. Wait until the adapter status has changed.

mmmdev Machine Agent De				presenting SIEMENS MindSphere
chine Agent - Agent Ostalis > Machine Agent - Ag	rent Dettails	Machine Agent -	Agent Details	
Agent Name installed Machine Agent Version installed Machine Agent Adapters	: Demo_Asset_2 : 1.5.7 Un			
Adapter Name No data to display	Adapter	tersion	Installation Status	Actions
0 selected / 0 total				

21.In window "Shopfloor Management Application" > "Shopfloor", open tab "Application". Move the slider to the right to activate access to "Manage MyMachines".

111 s	IEMENS	Shopfloor Mgmt. App.							presently Mind	Sphere	6 (+
36	+			5	Shopfloor N	lanagement A	pplication				۲
Station	demo	9/122	Connectivity 0	lata Mappings	Application	Advanced					
Q. Getenny	۲	Beckhoff_Como_DoNotDelete	1	Manage MyMa	achines	_	Analyze MyPert	primatice	Manage MyMachines /R	amota	
ing Deta trapping UK	۲	Cerro, Asset	Г		inage MyMach	ines for Manage MyMachines	application .				
0 1	۲	Demo, CNC, PDN, DoNotDelete ennetic factor, 11, 10, 2022, 13, 17, 52				Notion listed is 12 months anable impet date: 13/12/2023	ner. I				
200 - E	۲	IPC Denna Asset DoNotDelete mmman. With lead-several of loss -		Ena	driel Clisable access	ines /Spindle-Monil for Variage MyMachines	tor . Spindle Monitor application				
104	۲	IPC127E_Overmach_Dems_Asset_DoNs		0							
Annan :	۲	LM_DemoAsset remain.DisDit(10)			drier Disable access	e Assistance /Failu for Snumerk Service As	r e Analysis sistance il alize Analysis applica	tion			
Mandgar :	۲	MMMDemoAsset22.11_DoNotDelete exercise.tbacket/pe									
	۲	Overmach_IPC_Demo_Asset_DoNotDel									

An application cannot be selected under tab "Application" if you have not selected a data mapping or have not installed an adapter. A note is displayed.

5.11.2 Using the machine agent in the Insights Hub application

5.11.2.1 Configuring variables

Overview

Using this function, you can individually configure which data is sent from the machine to Insights Hub, and how this data is sent. You can configure cyclic values and variables using machine agents.

Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" allows you to individually configure the following trigger:

- Time-based/cyclic trigger
- Variable value-based trigger

More information is provided in Chapters:

- Time-based/cyclic trigger (Page 176)
- Variable value-based trigger (Page 179)
- Alarm-based trigger (Page 183)
 You also have the option of sending an alarm per email.
 You can find more information on the configuration in this Chapter: Configuring an alarm message and sending by email (Page 161)
- File upload (Page 187)

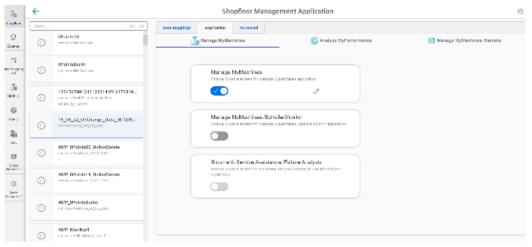
Principle

Icons	Description
(+)	Creates a new configuration.
	Copies the configurations of an asset to other assets.
	More information is provided in Chapter: Copying configurations (Page 148)
	When copying, the "Configuration activated" or "Configuration deactivated" set- ting is also copied.
~	Click the down arrow to open the area and to display the associated configura- tions.
^	Click on the up arrow to close the area.
	Set the slider to the right to activate the corresponding configuration.
	The data for this configuration are recorded and sent to Insights Hub.
	As default setting, each new configuration is activated.
	Set the slider to the left to deactivate the corresponding configuration.
	The data for this configuration are not recorded and sent to Insights Hub.
	Opens a configuration that has already been created in order to make changes.
Û	Deletes a configuration that has already been created.

Procedure

1. In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".

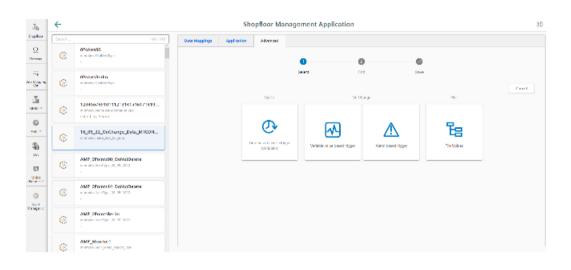
Move the slider to the right to activate access to "Manage MyMachines".



2. In the tab line, open tab "Advanced". The input window for function selection opens.

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0	AMP Monitor1 memory APA Matt Agent Test		

- 3. Click on "+" to select the configuration window for the following functions:
 - Time-based / cyclic trigger
 - Variable value-based trigger



Time-based/cyclic trigger

By configuring "Time-based/cyclic trigger" you can send values of variables at periodic intervals from the machine to Insights Hub.

If you no longer require the configuration, you can deactivate this in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" using the slider.

Parameters

Parameters Description					
Create aspect	Create aspect				
Aspect name	Enter a name to designate a common group of variables.				
	The name must be unique and not exceed 30 characters. The following characters are permissible:				
	• Letters				
	• Underscore				
	• Numbers				
Read cycle used					

Integrating Insights Hub

5.11 Machine agent

Parameters	Description						
Time interval	The sampling rate of	the data acquisition is specified with this value.					
	Select the time perio	od from the drop-down list:					
	• 5 seconds						
	30 seconds						
	• 1 minute						
	• 5 minutes						
	• 15 minutes						
	• 30 minutes						
	• 1 hour						
	4 hours						
	• 12 hours						
	• 24 hours						
Variable							
Name	In the variable set, e	nter a name for the variables to be acquired.					
		nique and not exceed 30 characters.					
	The following characters are permissible:						
	• Letters						
	Underscore						
	Numbers						
	Remark:						
	The name of the variable must not consist solely of numbers. In this case, the text box is marked red.						
Address	Enter the address or	Enter the address or the path of the variable.					
	Examples:						
	Axis data:	/Nck/MachineAxis/AATRAVELCOUNT[1]					
		/Nck/MachineAxis/AATRAVELDIST[2]					
	Channel data:	/Channel/ChannelDiagnose/CuttingTime[u1]					
		/Channel/ChannelDiagnose/OperatingTime[u1]					
	Machine operating mode:	/Bag/State/opMode[u1]					
Data type	Select the data type of the variable from the drop-down list:						
	• DOUBLE						
	BOOLEAN	BOOLEAN					
	STRING						
	Note:						
	If values exceed the faulty decimal place	floating-point number accuracy, they are displayed with s.					
Unit		nit of the variable from the drop-down list.					
	Example: m/s ³						

Procedure

1. Click on the "Time-based / cyclic trigger (variables)" function.



The "Time-based trigger" input window opens.

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- Enter a name in the "Create aspect" input field.
- Enter the sampling rate in the "Read cycle used" input field.
- Enter the variable properties in the text boxes.
- Click the "+" button to add a new variable.
 Repeat this step as often as necessary.

Note

Limiting the number of variables

You can create a maximum of 50 variables with 5-second options.

A warning message appears when the maximum number is reached.

Click the "Cancel" button to exit the Properties window without saving the entries.
 You are taken back to the aspects overview.
 OR -

Click the "Save" button to accept the entries. The "Data recording saved successfully" message appears.

Click the "OK" button to complete the operation.
 You are taken to an overview of the aspects. The supplementary time-based / cyclic trigger is displayed

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2. The new configuration is displayed in overview "Aspects". More information is provided in Chapter: Aspects (Page 244)

Variable value-based trigger

View "Variable-based trigger" provides you with functions to create user-defined condition rules based on variable values.

If a configured condition occurs, then the following data and values are sent to Insights Hub:

- Variable value
- Machine trace files
- User-defined file(s) in the specified directory

If you no longer require the configuration, you can deactivate this in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" using the slider.

Parameters

Parameters	Description					
Create aspect	Create aspect					
Aspect name	Enter a previously created variable name.					
	The name must be unique.					
	If the aspect does not yet exist in Insights Hub, then the aspect is created whe saving the configuration.					
Configuring a trigge	r					
With these settings, ye	ou specify the trigger conditions for the following actions.					
Variable address	Enter the address of the variables.					
Data type	From the drop-down list select the data type of the variable.					
	• DOUBLE					
	• BOOLEAN					
	• STRING					

Parameters	Description
	From the drop-down list, select the comparison operation that is restricted to the format of the variables:
	Greater than
	• Less than
	Equal to
	Not equal to
Variable value	Enter a value.
With the following configuration	
Debounce time	Enter the debounce time.
	Remark:
	After the Condition variable has reached a specified value, the control checks whether the condition is still present until the debounce time has expired. The control does not check the status again during this time.
sec	Select the time unit from the drop-down list:
	• sec
	• min
	• hr
Hysteresis	Select the check box if you want to include hysteresis.
	The hysteresis can be a value or a percentage (absolute or relative).
	Example:
	The temperature is 30 degrees. The absolute hysteresis equals 5. In this case, the check is from 25 to 35 $^\circ C$ instead of 30 $^\circ C$.
	Activate the "Quick Range" option button if the relative value in relation to the comparison value is to be recorded.
	Activate the "Absolute" option button if the absolute value in relation to the comparison value is to be recorded.
	A new trigger on the comparison value is only performed when the actual value differs from the comparison value by more than the specified hysteresis.
	Enter a comparison value, this is restricted according to the selection of the ad- dress format.
Then acquire the following values	
The following variable is recorded and sent to Insights Hub.	
Variable address	Shows the address of the variable.
Data type	Select the data type of the variable from the drop-down list:
	DOUBLE
	BOOLEAN
	• STRING

Parameters	Description							
Duration	Enter the recording duration.							
	The duration must be longer than the cycle.							
	Select the time unit from the drop-down list:							
	• sec							
	• min							
	• hr							
	Minimum of 30 seconds.							
	Maximum of 24 hours.							
Cycle	Enter the cycle duration.							
	Select a time unit from the drop-down list:							
	• sec							
	• min							
	• hr							
	30 seconds is the minimum							
	24 hours is the maximum							
Adding trace files to	the trigger							
Recorded traces are se	ent as files to Insights Hub.							
Trace files	Activate the option check box for the following data:							
	HMI trace							
	NC status							
	Machine data							
	Activate the action log setting on the machine.							
	More information is provided in Chapter: Setting the action log (Page 65).							
Selecting file(s) to b	e uploaded							
The selected files that tenants database.	are available on the machine are transferred to the corresponding Insights Hub							
File or directory path	Enter the file or directory path.							
*	• The maximum file size is 100 MB							
	• If the hard disk is full, then it is possible that not all of the files are sent to Insights Hub.							
	• When the directory path has been created, the last 10 files in this directory are uploaded to Insights Hub.							

Procedure

1. Click on the function "Variable value-based trigger" to specify dependencies.



2. The "Variable-based trigger" input window opens.

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- 3. Enter a name in the "Cyclic aspect name" input field.
- 4. Define a variable as trigger.
- 5. Define the settings for the trigger.
- 6. Define which data is sent to Insights Hub if the trigger occurs:
 - Recording variables
 Enter a variable address.
 - Trace files Activate the corresponding check box for "HMI-Trace", "NC-Status" or "Machine Data".
 - Files

Enter a file name or a directory path.

- Click the "Cancel" button to exit the Properties window without saving the entries. A safety message is output, which you must confirm You are taken back to the aspects overview.
 - OR -

Click on "Save" to accept the data entered.

Message "Data recording saved successfully" is output.

Click on "OK" to exit the operation.

You are taken back to the aspects overview. The "Variable value-based trigger" that has been added is displayed.

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	۲	AMP_Monitor1			

8. The new configuration is displayed in overview "Aspects". More information is provided in Chapter: Aspects (Page 244)

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Alarm-based trigger

The "alarm-based trigger" reacts to all alarms programmed in the Fanuc control.

With this function, you can send specific alarms for a certain aspect and acquired status data to Insights Hub.

These alarms also contained the user range of alarm numbers, which are assigned machine functions for machine diagnostics. If machine diagnostics are not performed on the basis of alarm numbers, these error messages cannot be integrated.

You can enter the alarm numbers that are triggered, either individually or in ranges. You can also hide individual alarms or ranges from a selection.

If certain alarms occur, you can upload user-defined files in Insights Hub. If you no longer require the configuration, you can deactivate this in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" using the slider.

The following special features should be noted for Fanuc controls:

- No check box is displayed as no trace files can be used for the trigger.
- Alarms cannot be excluded.
- For an alarm-based trigger, you must also enter the channel and the alarm type.

Parameters and icons

Parameters	Description
Create aspect	
Aspect name	Enter a descriptive name for the aspect.
	The name must be unique.
Include alarms	
Alarm numbers:	In the case of individual alarms, enter the alarm number or the alarm ID that activates the trigger.
	The alarm number must be within the range from 0 to 999999.
	The alarms are entered in the following notation:
	• Separate the individual alarms through a comma, e.g. 3200, 32100,
	• Enter the alarm number ranges with a "-" character, e.g. 4000-5000
	The alarm list must not exceed 200 characters.
Alarm intervals:	Enter the alarm limits.
	• From: Enter the lowest alarm ID, e.g. 0
	• To: Enter the highest alarm ID, e.g. 999999
	All alarms between 0 and 999999 are included.
Selecting file(s) to be	e uploaded
The selected files that tenants database.	are available on the machine are transferred to the corresponding Insights Hub
File or directory path	Enter the file or directory path.
*	The maximum file size is 100 MB
	• If the hard disk is full, then it is possible that not all of the files are sent to Insights Hub.
	• When the directory path has been created, the last 10 files in this directory are uploaded to Insights Hub.

Icons	Description
1	You will receive more information.
×	Closes the entry field.

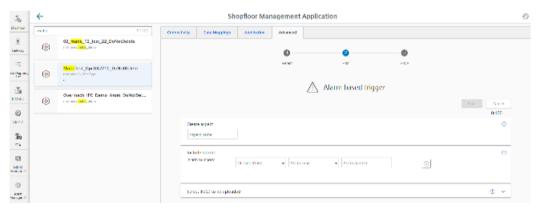
Icons	Description
~	Click on the down arrow to open and create further configurations.
^	Click on the up arrow to close the area of further configurations.

Procedure

1. Click the "Alarm-based trigger" function to define alarm properties, such as when an alarm should be displayed.



- 2. The "Alarm-based trigger" input window opens.
 - Enter a name for the aspect and specify the properties.
 - Click on the "Cancel" button.
 You receive a safety message that you must confirm.
 Then you will be returned to the overview.
 OR -
 - Click the "Save" button to accept the entries.
 The "Data recording saved successfully" message appears.
 - Click the "OK" button to complete the operation.
 You are taken to the overview.



3. To add an alarm number, populate fields "Create aspect" and "Include alarms":

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			Sele	ct file(s) to be uploa	ied					© ^
			2	lle Source	* File or Direct	ey Path *				×

4. Enter a file or a directory path to load data from the control to Insights Hub. To do this, in the drop-down list "File source", select the "Machine Agent Location". If the alarm is triggered, the file source is uploaded to the machine agent with the storage location.

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5. Once configuring has been completed, the alarm is displayed in the shopfloor management application:

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File upload

Function "File Upload" provides the option of sending files from the control to Insights Hub.

This is also possible from Fanuc controls, whereby the following must be observed:

- Trace files are not used for the trigger.
- You do not select file paths, only files.

The upload is performed in a defined time cycle. The cycle duration is defined in the user interface.

The cyclic file upload does not check files for changes.

Parameters

Parameters	Description						
Configuration name	Enter a name for the configuration.						
	The name must be unique and not exceed 30 characters. The following characters are permissible:						
	• Letters						
	Underscore						
	Numbers						
Cyclic	The files are sent to Insights Hub at defined intervals.						
	Select the time interval from the drop-down list:						
	• 1 hour						
	2 hours						
	4 hours						
	6 hours						
	8 hours						
	12 hours						
	• 24 hours						
	• 1 week						
	• 1 month						
File source	Device Stands for the machine.						
	Machine Agent Location						
	Stands for the installed machine agents.						
File	Enter the file name.						
	You can use the asterisk symbol "*" as placeholder. A maximum of 10 files is permitted.						

lcons

lcon	Description
\oplus	Create a new entry for the file or directory path.
	Change the entry for the file or directory path.
\checkmark	Save the entry for the file or directory path.
Û	Delete the entry for the file or directory path.
1	You will receive more information.

Precondition

Function "Variable Recording" was activated in Manage MyMachines for Industrial Operations X Cloud "Asset Manager".

NOTICE

Data manipulation possible

There is a risk that an attacker, within the network between SINUMERIK Integrate and Insights Hub, gains access to the file system of the server or service clients. The attacker can then read or manipulate various system components (e.g. database content). As a consequence, the attacker can manipulate tool data, NC programs, machine archives or the system structure itself, for example. This type of attack cannot be prevented by Insights Hub.

• It is therefore imperative that the person responsible for the machine network takes the appropriate industrial security measures for the production/machine network.

Siemens AG does not accept any liability in this regard.

Principle

The maximum file size is 100 MB.

Use the following file extensions for the "File Upload" function:

- .xml
- .txt
- .log
- .png
- .jpg
- .ohs
- .pms
- .ems
- .mds
- .pdf

- .ini
- .CSV
- .json
- .sav
- .mst
- .bst
- .stt

Procedure

1. Click the "File Upload" function.

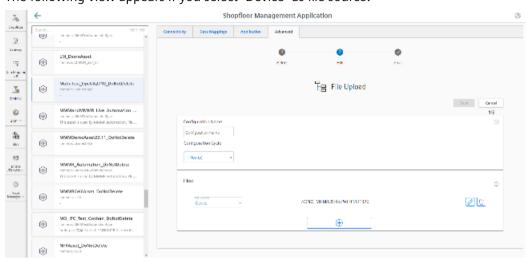


2. The "File Upload" input window opens. In the "File Upload" area, you can see the number of configurations created/number of possible configurations on the right.

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	۲	NHRAsse_DoNotDefete							

- 3. Enter the name for the configuration.
- 4. Select the cycle length of the file upload.

5. Select the file source. The following view appears if you select "Device" as file source:



The following view appears if you select "Machine Agent Location" as file source:

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- 6. Specify the files to be transferred:
 - Click the "+" button in the file area.
 Click on the "+" button for each file.
 The button is deactivated once the maximum possible number of files is reached.
 - Enter the file name. You can use the asterisk symbol (*) as a placeholder.
 If more than 10 files correspond to the file name with placeholder, only the last 10 most recently modified files are sent to Insights Hub.
 - Click the "Checkmark" icon.
- 7. Click on the "Recycle bin" icon in the appropriate line to delete a file.
- Click on "Save" to save the configuration.
 OR -

Click the "Cancel" button to exit the window without saving the entries. You are taken back to the overview. 9. The "Data recording saved successfully" message appears. Click the "OK" button to complete the operation.

10. You can see an overview of the files in the "Operations Insight" application. For more information, see Chapter: Displaying uploaded files in "Insights Hub Monitor" (Page 162).

Setting up MindConnect Nano for Manage MyMachines

6.1 Overview

Precondition

• The setup is always performed with the SINUMERIK Operate operating software.



Software option

You require the following option in order to use this function: SINUMERIK Integrate for Engineering "Access MyMachine / OPC UA".

 Applications must be activated via the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application".
 More information can be found in this Chapter: Shopfloor Management Application (Page 110).

Introduction

The following steps are required to set up MindConnect Nano:

- 1. For example, at the SINUMERIK open-loop control, activate the "Access MyMachine / OPC UA" software option.
- 2. For example, at the SINUMERIK open-loop control, configure the network.
- 3. Create aspects in Insights Hub.
- 4. Create asset type in Insights Hub.
- 5. Create asset in Insights Hub.
- 6. Assign variable in Insights Hub.
- 7. Onboard in Insights Hub.
- 8. Acquire data in Insights Hub.

See also

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

6.2 Setting up at the control system

6.2 Setting up at the control system

6.2.1 Setting the license

Procedure

- 1. Open the "Setup" operating area.
- 2. Press the "Licenses" softkey and activate the "Access MyMachine / OPC UA" option.

			81/29/14 11:31 AM
Licensing: All options			Overview
Option	Set	Licensed	
6FC5800-0AP61-0YB0			All
SINUMERIK Operate runtime OA easy screen 6FC5800-0AP64-0YB0			options
SINUMERIK Operate runtime OA solution partner 6FC5800-0AP65-0YB0			Missing
SINUMERIK Operate runtime OA .net 6FC5800-0AP66-0YB0			lic./opt.
Access MyMachine /OPC UA 6FC5800-0AP67-0YB0			Search
SINUMERIK Operate /NCU 6FC5800-0AS00-0YB0			Reset
Machining package 5 axis, add. Function 7th axis 6FC5800-0AS01-0YB0			(po)
Collision Avoidance (machine,workspace) 6FC5800-0AS02-0YB0			Exp. license requirement
Advanced Surface 6FC5800-0AS07-0YB0			Set option
Monitoring for max. tool speed / acceleration 6FC5800-0AS08-0YB0			acc. lic
Spline interpolation 6FC5800-0AS16-0YB0			K Back
Setup Circenses A Net- archive censes	A Safetu	ivel ata	

3. Restart SINUMERIK Operate to activate the license.

6.2.2 Configuring the network

Requirement

Settings of the OPC UA configuration dialog

Setting	Description			
Connection settings				
Company network:	Activate the check box.			
System network:	Activate the c	Activate the check box.		
TCP port:	TCP port via which the OPC UA communicates. This is added to the firewall ceptions for NCU and PPU. (Standard for the OPC UA communication is the port 4840)			
Message encryption	None:	Deselect the check box.		
	128-bit:	Activate the check box.		
	256-bit	Activate the check box.		

6.2 Setting up at the control system

Setting	Description
Authentication	
Admin user:	Name of the administrator with which you can add or delete other users and assign or delete user rights.
Password:	Administrator password
	You can change the password at a later point in time using the "ChangeMyPass-word" OPC UA method.
Confirm password:	Confirm the entered password.
Allow anonymous ac- cess	Activate the check box.
Automatically accept- ing certificates:	Activate the check box.
Activation	
Activate OPC UA	Activate the check box.

Note

Security risk through no or weak encryption

If no message encryption has been set up to the client, there is a risk of data manipulation. It is therefore strongly recommended that you set up a message encryption to the client.

Use the highest possible encryption standard (256 bit) to ensure secure message transmission.

Note

Assigning secure passwords

Observe the following rules when creating new passwords:

- Note that when assigning new passwords you should never assign passwords that can be easily guessed, such as simple words, easy to guess key sequences on the keyboard, etc.
- Passwords must always contain a combination of upper- and lower-case letters as well as numbers and special characters. Passwords must comprise at least 8 characters. PINs must comprise an arbitrary sequence of digits.
- Wherever possible and where it is supported by the IT systems and the software, a password must always have a character sequence as complex as possible.

Procedure

- 1. Open the "Setup" operating area.
- 2. Press the "Network" softkey.
- 3. Make the required settings for the connection, authentication and activation.

6.2 Setting up at the control system

4. Press the "OK" softkey.

N		09/07/40
× 300		82/87/19 12:19
Settings of the OPC UA Server		Status
Connection settings		Jtatus
Company network:	127.0.0.1	
Systems network:	192.168.214.241	Setting
TCP port:	4840	Certificates
Message encryption		
None:		
128 bit:	 (Basic128Rsa15) 	
256 bit:	 (Basic256, Basic256Sha256) 	
Authentication		
Admin User:	OpcUaClient	
Password:	•••••	Change
Confirm password:	•••••	Undingo
Allow anonymous access:		
Accept certificates automatically:		
Activation		
Activate OPC UA:		*
		Back
Setup F Li- Net-	🙆 Safety	

5. Perform a hardware reset on the NCU and PPU target systems. Restart the operating software on the PCU.

Further information

You can find further information in: Configuration Manual Access MyMachine / OPC UA.

6.3 Configuring Manage MyMachine functions in Insights Hub

Configure the MindConnect Nano Aspects so that these can be displayed on the "dashboard".

Reference

A detailed description of the Asset Manager can be found at the following link: Documentation Insights Hub (<u>https://documentation.mindsphere.io/MindSphere/apps/asset-manager/</u><u>introduction.html</u>), "Asset Manager" System Manual.

Variable/data point

Name	Data type	Unit	Max. length	Data point address (SINUMERIK example address)
Feed override	Double	%		ns=2;s=/Channel/State/feedRatelpoOvr[u1]
Opmode	Double	%		ns=2;s=/Bag/State/opMode[u1]
Spindleoverride	Double	%		ns=2;s=/Channel/Spindle/speedOvr[u1,1]
NCProgramStatus	Double	%		ns=2;s=/Channel/State/progStatus[u1]
StopCond	Double	%		ns=2;s=/Channel/State/stopCond[u1]
ProtectionLevel	Double	%		ns=2;s=/Nck/Configuration/accessLevel
NrOfAlarms	Double	%		ns=2;s=/Nck/State/numAlarms
NCProgram	String	%	255	ns=2;s=/Channel/ProgramPointer/progName[u1,1]

Use the variables/data points with exactly this name:

Note

"Current Alarms" function currently available

Note that the "Current Alarms" function is not supported by MindConnect Nano systems. The function shows all active alarms of a machine.

Users who use the MindConnect Nano connection do not have access to this function.

Note

"Machine status" function not available

Note that the "Machine status" function is not supported by MindConnect Nano systems. The function provides real-time updates on the machine's operating status.

Users who use the MindConnect Nano connection do not have access to this function.

Note

Unit designation for variables

The variables listed above always require a unit. The unit can either be % or a space.

Procedure

- 1. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Asset Manager".
- 2. In the left-hand side of the window, select "Aspect Types" > "Add Aspect". The following window is displayed if you have not created any variables yet:

 Aspect information Type ID: 			
mmmdev.			
Type ID cannot be changed after creation			
Name: *			
Name			
Description:			
Description			
255 characters left			
Choose category: The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Static The category is and for emits data	d afterwards.		
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data	d afterwards.		
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Stabic The aspect is used for static data	d afterwards.		
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Safe The aspect is used for static data Variables	d afterwards.		
The category of an aspect cannot be changed Dynamic Tre aspect is used for time-series data static tre aspect is used for static data Variables riease add at least one variable:			
The category of an aspect cannot be changed Opnamic The aspect is used for time-series data Stable Variables A risese add at least one variable:			
The category of an aspect cannot be changed Opnamic The aspect is used for time-series data Stafic The aspect is used for static data Variables I rease add at least one variable!			
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Stable Variables Variables I lease add at least one variable:			
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Stable Variables Variables I lease add at least one variable:	No variables entered	d yet	
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Stable Variables Variables I lease add at least one variable:		d yet	
The category of an aspect cannot be changed Dynamic The aspect is used for time-series data Stable Variables Variables I lease add at least one variable:	No variables entered	d yet	

More information on creating variables is provided in Chapter: Configuring variables (Page 130).

3. Create the new Aspect "SinumerikBasicConfig" in the "Dynamic" category with the variables listed, **without** specifying the data point address.

 Aspect information 				
Type ID:				
mmmdev.test				
Type ID cannot be changed after creation	.e.			
Name: *				
161				
Description:				
Description				
255 characters left				
Choose category:				
The category of an aspect of	cannot be changed afterwards.			
 Dynamic The aspect is used for time-series of 	derte.			
 Static The aspect is used for static data 				
 variables 				
 Variable names mi 	ust be unique inside an aspect.			
	added to the aspect it cannot be renamed or remov	ed.		
	STRING is only available for a dynamic aspect.			
	variables 🔟 bownload template 🖳 Expor	rvariables 🛛 🗍 Delete all new		
 The data type SIG_ 			Max. length	
 The data type SIG_ 	Unit	Data type	Hand Hangan	
The data type BIG Add variable		Deta type	V Nas. length	Dutte

 Create a new Asset Type under "Asset Types" > "BasicAgent" > "MindConnect Nano" with the Aspect Type "<TenantName>.SinumerikBasicConfig" with the Aspect name "CH1_BasicConfig".
 Optionally, you can define additional variables in the new Asset Type.

Note

Do not confuse

The following two aspects exist:

- core.SinumerikBasicConfig
- <tenant_name>.SinumerikBasicConfig

Always work on aspect "<tenant_name>.SinumerikBasicConfig" .

ŵ	Ubrary / Asset Types / Details / Create type				
•	< Back MindConnectNano	Create type			
Er da	MindConnectNano Create type Tribe Create type Connectory Connec	Create type: - Type information Paret type: Too monan Paret type: Too monan Paret type: Showerisatk*ppi Type is: Type is: Description: Description			
		233 descess left + stage + Veniables Adjects Adjects Adjects Adjects ConnectivitySetus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundSatus fermoundS	Aspect core.connectivitystatus core.firmoanostatus core.apentistus	Category Static Static Dynamic	inetal inetal inetal
		Save			

	mmdev Telo		
-	Create asset	Add asset	
		- General	
		Type ID:	
		CORE.MICRARIO	
		Selected type of easer connect be changed	
	FT_Subtenant	Narnel.*	
		mnnist	
	01_Mimic_genttChart_base	Description:	
A	larm_ErrorTest_DoNotDelete	Description	
A	arm_Enortest_boxotbelete2		
Al	NP_CompleteDay_DoNotDelete	255 dwatawa left	
Al	MP_SoD_DoNotDelete		
All	MP_incompleteDay_DoNotDel	- Location	
Al	NF_NG_DoNotDelete	The location of this asset is inherited. When entering any value of the location except the time zone, the whole location will be overwritten.	
Al	WPAutomationMonitorAsset	Street.	
All	WRAutomationTuningActed_D	20reit	
A	reAsset_05112021_DoNotOwl	Postal code: City: Postal code City	
A	sset_AlarmTest_DofiotDelete		
At	sset_integrate_Client_Test 01	Country: Region: Country negion	
5	Ia_HotFb_File_Upload_DoNo	Lathude: Longitude:	
5	ia_Target_Asset_DoNotDelete	45.0030001 45.0000001	
C.	ellAsset_DoNotDelete	Time cons:	
	FT_161_DoNotDelete	Select V	

5. Create a new Asset based on the Type previously created.

- 6. To connect to MindConnect Nano, click on "MindConnect Nano" in the asset. Enter the device ID of MindConnect Nano.
- Configure the MindConnect Nano network settings for the SINUMERIK controller or Insights Hub by clicking on the "Gear wheel" icon.
 Once configuration is complete, click "Download connection key." Transfer the connection key to MindConnect Nano using a USB flash drive.
- 8. Click "Add new data source" and configure the connection to your OPC UA server.
- Click "Start edit mode." Add new data points, corresponding to the values in the table above, with the data point address (SINUMERIK example address).
- To establish a relationship between data points and variables, click "Show links." To link a data point, click "Link variable". Select the appropriate variable in the dialog.

SINUMERIK Integrate Gateway

7.1 Connecting the SINUMERIK Integrate gateway

Precondition

You need administrator rights.

Various settings are configured in SINUMERIK Integrate AMC.

As "Subtenant" user, the functionality of the "SINUMERIK Integrate Gateway" is not available!

NOTICE

Setting up encrypted data transmission

To ensure that no attacker can gain access to your secret key, an encrypted connection must be set up between SINUMERIK Integrate and Insights Hub.

More information on setting up secure communication can be found in the SINUMERIK Integrate Installation Manual, in the chapter "Setting up an encrypted connection".

NOTICE

Data manipulation possible

There is a risk that an attacker, within the network between SINUMERIK Integrate and Insights Hub, gains access to the file system of the server or service clients. The attacker can then read or manipulate various system components (e.g. database content). As a consequence, the attacker can manipulate tool data, NC programs, machine archives or the system structure itself, for example. This type of attack cannot be prevented by Insights Hub.

• As the person responsible for the machine network, take measures to ensure the industrial security of the production/machine network.

Siemens AG does not accept any liability in this regard.

More information

More information on configuring Insights Hub can be found in: Installation Manual "SINUMERIK Integrate MMP, MMT, AMC, AMP, AMM/E, AMD" 7.1 Connecting the SINUMERIK Integrate gateway

Procedure

- 1. In the launch pad, click on Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".
- 2. The "Shopfloor Management Application" window opens.
 - Click "Gateway" button on the left-hand side of the window.
 - Open the "Connection details" tab
 - Select entry "Create new connection" from the drop-down list.

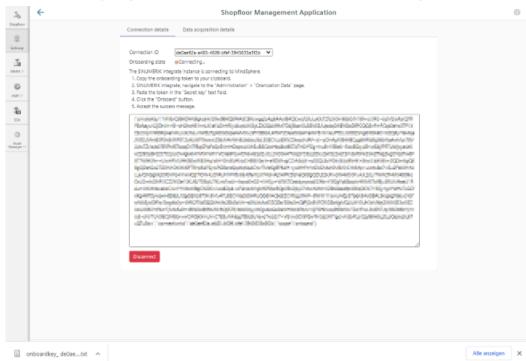
<u>I</u> b	← Shopfloor Management Application	0
Stephor D	Connection details Data acquinition details	
Gatoway	Convection ID (###20070-4288-4883-0003-05425783-010 ♥) Criboarding state 50509459-9168-4-454-945952694213 ▲ 29506459-9169-4459-4519-45694-0213 ▲	
0	The SULULIZE Program Statustication active a	
ANP ::	40651296-0071-005270-010550624211905 40052076-0107-0453-0468-0069050504 40646205-0505-429-4291-4797-010646050	
0	4900006-0510-4327-4427-7060054946 5502199-6253-427-5446-46021780009 590005-070-4335-6800-10011207617 59004-0519-003-6800-10011207617	
Manager ()	5aa2860x-c786-4426-6313-a3422159997 5a575a422.50x-64021-121-233a453335 5a69549-236-4432-462-1451-1233a453335	
	(flast)rot-Sed-427-481-44354eta43) Gibblio-Jabe40755 Gibblio-Jabe40755 Gibblio-Jabe401-446-4464-455975105 Gibblio-Sed-401-446-4559751055 *	

- 3. Click on the "Conditions" link and read the conditions.
 - Then activate the check box "I hereby accept the conditions which can be downloaded under the following link. Conditions".
 - Click on "Connect" to connect Insights Hub with SINUMERIK Integrate Analyze MyCondition.

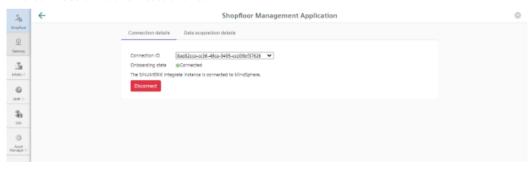
<u>I</u> 5	← Shopfloor Management Application	0
Drophore Gateway MARKET	Connection details Data acquisition details Connection ID Eserizatio-43e3-ese3-ese3-ese3-ese3-ese3-eses	
SSA SSA Accet Manager 2		

7.1 Connecting the SINUMERIK Integrate gateway

4. The "onboard.key" is generated and available for the connection to Insights Hub.



- 5. Configure the "onboard key" in SINUMERIK Integrate Analyze MyCondition. More information is provided in the Function Manual "Analyze MyCondition".
- From the drop-down menu "Connection ID", select the connection ID that you configured in SINUMERIK Integrate Analyze MyCondition. The connection is then established.



 Open tab "Data acquisition details". More information is provided in the following Chapter: Activating the variable monitor for Manage MyMachines (Page 207) 7.1 Connecting the SINUMERIK Integrate gateway

Note

SINUMERIK Integrate Gateway

Machines connected to the SINUMERIK Integrate Gateway interface are displayed as being online. To do this, for at least one aspect of the particular machine, data should be uploaded in a time interval of less than five minutes. If this is not the case, then the machine can appear offline.

7.2 Activating the variable monitor for Manage MyMachines

Requirement

In SINUMERIK Integrate Analyze MyCondition, the check box "Activated on MSP" is selected under tab "Set up functions" > "Variable monitors".

Procedure

- 1. Open the "Data acquisition details" tab.
 - Click the "Filter" button to specifically filter for "Machine / Assets" and "Variables Monitor / Aspect".
 - Click the "Load New" button if you have moved the slide for a function to "ON".
 - To save your settings, click "Save".

36	←	Shopfloor Management Application	1	*
Shopfoor Q Cotmany	Connect	tion details		
Market (*	Filter	ataway_fix_NCU119	Reford Save	
C AMP C		SLGateway_fx_NCU119_Equ	or inactive	
55A	2		ov active	
Dr Assat Manager 17	د	 Alarms 	ow oscive	

2. Click on the "Gearwheel" icon You obtain information on the "Manage MyMachines" settings. Select the "I hereby accept ..." check box and then click "Save".

Manage MyMachines activation status: I hereby accept that registering the asset for Manag	
	ê
MyMachines will incur additional fees and requires you acceptance of the corresponding Product Sheet	
Disconnected	
Registered	

7.2 Activating the variable monitor for Manage MyMachines

3. Using the slides, activate and/or deactivate functions to receive the relevant information. If you change a stored data selection, the status "changed" is displayed.

~	Test	4	*
	>	CH1_BasicConfig	or inactive
	>	Alarms	orr inactive
	>	SI_Test4_FileUpload	or inactive

4. Click the "Save" button to save the settings.

- OR -

Click "Reload" to restore the default setting.

Working with Manage MyMachines

8.1 Overview

Introduction

"Manage MyMachines" visualizes numerous operating and system-specific data of machine tools or individual machine components for production, service and maintenance. This increases the transparency of the machine tools connected in Insights Hub.

The following functions are possible:

- Administration and display of machines distributed around the world
- Visualization of relevant information in the overview page
- Intuitive creation of rules and queries
- Simple installation using the integrated SINUMERIK Integrate client
- Critical machine data can be combined to provide an informative analysis
- You can create your own digital service portfolio based on the Manage MyMachines for Industrial Operations X Cloud

The data that you provide is exclusively variables from the NC, the PLC or from the drives. This data enables conclusions to be drawn with regard to:

- Availability
- Operating times
- Operating state, state duration
- Maintenance, wait times
- Technical state

The corresponding data is either preconfigured or can be defined centrally by the user and configured with appropriate warning limits. It is also possible to identify trends with the aid of measuring series.

Data processing and visualization are realized on the Insights Hub platform.

Overview

"Manage MyMachines" visualizes the data that you have transferred and offers the following:

- Overview of the created machines **More information** is provided in Chapter: Machine overview (Page 220).
- Overview of the operating data of an asset More information is provided in Chapter: Dashboard (Page 226)
- Filter and display alarms **More information** is provided in Chapter: Displaying machine alarms (Page 238)

8.1 Overview

- Analyses based on Aspects defined by the user and critical machine data **More information** is provided in Chapter: Aspects (Page 244)
- Displaying the machine events More information is provided in Chapter: Events (Page 281)
- Export of data points of an Aspect More information is provided in Chapter: Exporting (Page 284)
- Display Weiss spindle data More information is provided in Chapter: Manage MyMachines /Spindle Monitor (Page 308)
- Displaying the machine location **More information** is provided in Chapter: Machine location (Page 316)
- Displaying the motor temperature **More information** is provided in Chapter: Motor temperature (Page 319)
- Files in Insights Hub **More information** is provided in Chapter: Files (Page 321)
- Creating the dashboard user interface More information is provided in Chapter: My Dashboards (Page 286)
- Machine snapshot More information can be found in Chapter: Machine snapshot (Page 323).

8.2 Selecting a language

8.2 Selecting a language

You have the option of displaying the user interface in various languages. The switchover is immediate.

Parameter

Parameter	Description
\$	Opens the "User Settings" window in tab "Language", and lists the following languages that can be selected: English Corman
	German Simplified Chinese

Procedure

- 1. Click in the top right-hand section of the window on the "Settings" icon.
- 2. Window "User Settings" opens.
- 3. Select the required language. The user interface is immediately displayed in this language.

User Settings
⊕Language
English
O Deutsch
○ 简体中文

4. To close the menu, click on the "Settings" icon again.

8.3 Using the calendar function

8.3 Using the calendar function

Some Manage MyMachines pages offer the option of adapting the display to address your specific requirements by allowing you to set the time range and time zone using the calendar function.

Button / parameter

Button/parameter	Description
05/12/2020 → 06/16/2020 urc	Displays the time range and the time zone used.
	Opens the calendar function.
Absolute	Manually entering a fixed time range
Relative	Selecting a relative time range:
	Last 60 minutes
	Last 24 hours
	• Last 7 days
	• Last 30 days
	• Last 90 days
	• Today
	• Yesterday
	Last week
	• Last month
	Last quarter
Time zone	Selecting the time zone used
	Local: Local time at the machine location
	UTC: World time

8.3 Using the calendar function

Procedure

- 1. Click on the time range display. The calendar window opens.
- 2. To use a fixed time range:
 - Open the "Absolute" tab.
 - Click on the required start date.
 - Click on the required end date.
 - Enter a precise time in format hh:mm:ss.
 OR Activate the checkbox "All Day".

 Absolute
 July =
 2019 =
 August =
 2019

 Quick Range
 Su
 Mo
 Tu
 We
 Th
 Fr
 Sa
 Su
 Mo
 Tu
 We

 1
 2
 3
 4
 5
 6
 7
 Time Zone
 7
 8
 9
 10
 11
 12
 13
 4
 5
 6
 7

	Add ti	me													
	28	29	30	31				25	26	27	28	29	30	31	
					25	26	27				21		23		
Local	14	15	16	17	18	19	20	11	12	13	14	15	16	17	
Time Zone	7	8	9	10	11	12	13	4	5	6	7	8	9	10	
Custom			-	-	-	5	0						2		

-

Th

Fr Sa

- 3. To use a relative time range:
 - Open the "Quick Range" tab.
 - Click on the required time range.

Absolute	Last 60 minutes	Today		
Quick Range	Last 24 hours	Yesterday		
Last week	Last 7 days	Last week \checkmark		
Time Zone	Last 30 days	Last month		
	Last 90 days	Last quarter		
			Cancel	OK

8.3 Using the calendar function

- 4. Open the "Time zone" tab, and select the required time zone.
- 5. Click on "OK".

The calendar window is closed. The new time range and the time zone used are displayed on the button.

8.4 Configuring a machine overview

8.4 Configuring a machine overview

You have the possibility of adapting the data displayed in the machine overview to address your specific requirements.

In area "Customize Fields", you select up to 20 variables to be displayed, and define the associated names. After saving, this data is displayed in the machine overview for all assets.

Note

User-dependent settings

Customized fields are user-dependent settings; this means that other users are not affected by the changes.

Customized fields utilize browser-based functions. This is the reason that the configurations are not displayed for the following cases:

- After clearing the browser cache
- When starting Manage MyMachines in the incognito window

Parameter

Parameter	Description
Ċ	Opens window "User Settings" with the following tabs:
-	• Language
	Customize Fields
+	Selects the variable for display in the machine overview
1	Releases the display names of the variables for processing
Ô	Deletes the variable in the machine overview
8	Selection is applied
Ð	Restores the default setting

Procedure

- 1. Click in the top right-hand section of the window on the "Settings" icon.
- 2. Window "User Settings" opens.

8.4 Configuring a machine overview

- 3. Open tab "Customize Fields".
- 4. In column "Asset Selection", select an asset for which the required variable was defined. All variables of the asset are displayed in column "Available Variables".
 - To reduce the number of displayed variables, in field "Filter", enter the variable name you are searching for, or parts of it.
 - Click on icon "+" in front of the required variables to add these to column "Selected Variables".
 - You can also drag & drop the variables, and therefore arrange them in any order.
 - Click on icon "Edit" to enter the name for the variable in the machine overview.
 - Click on the "Recycle bin" icon behind the variables to clear these from the display.
 - Click on "Restore to Default" to restore the default settings.
 - Click on "Apply" to accept the changes.

SIEMENS Manage MyMachine				powered by SIEMENS Xcelera	tor 🔎
	Ì	Machine Overview			✿ ▼ ~
7 03 2023 DoNotDelete	AMP_RTP_DoNotDelete	Langua	ge	Customize Fields	1
		Asset Selection	Available Variables	Selected Variables	"
		070323_mabe_test_DoN	Filter	Filter	-
Alarms Unknown	Alarms	27_03_2023_DoNotDelete	Alarms	Alarms Alas: Alarms	*
Tenant ID mmmdev	Tenant ID mmmdev	mmmdev.MMMTestType	Assetinio	Innantid	-
HMI UI Type HMI Version	HMI UI Type HMI Version	30_03_2023_DoNotDelete mmmdev TestDemoType_DoNotD	+ subTenant	Alias: Tonant ID 🖍	su
NC Program _N_HELIX_MPF	NC Program _N_AMPWP2	minimoey resilvemo type_boworb	+ timezone	Alias: Location	10
		AlarmandFile_DoNotDelete	+ twinType	hmiTypeText	
	(<u>"ze</u>	AlarmAutoMA DcNotDel	+ typeId	Alias: HMI UI Type 🖌	-
		mmmdev TestType	(Mimb)	Alias: HMI Version 🖌	
5 NCU ONE 81 DoNotDel	MabeAlarm21_DoNotDelete	AMP_NBT1_DoNotDelete		NCProgram Alias: NC Program	
		mmmdev.AMP_NBT_DeNotDelete	+ Feedoverride	Pinas no riogram	
		AMP_NBT3_DoNotDelete mmmdev AMP_NBT_DoNotDelete	+ NCProgramStatus		÷.,
Alarms 0 pending	Alarms Unknown	AMP_NBT4_DoNotDelete	Restore To Default 🕄	Apply	
Tenant ID mmmdev	Tenant ID mmmdev	Tenant ID mmmdev Location Istanbul cou			_

Implementations

Due to new requirements, model data of a machine can be analyzed:

- SI client version
- Device type
- HMI version
- NCK type
- NCK version
- PLC type
- PLC version
- HMI UI type (already possible)
- PCU base name
- OS version

8.4 Configuring a machine overview

The logic behind the overview tiles is that an empty value is displayed if no data have been specified for an asset on the overview page.

MyMachines					j.	SIEMENS X	celerator 🗛 [->
		Machine Ove	rview				⇔ ▼∨
AMP RTP DON		AraAsset DoNot		DB5 GK test DoM	NotDelete	DB5 NCU 200 D	
		Alarms Tenant ID Location HMI UI Type HMI Version NC Program	Unknown mmmdev Istanbul cou	Alarms Tenant ID Location HMI UType HMI Version NC Program	Unknown mmmdev Istanbul cou	Alarms Tenant ID Location HMI UI Type HMI Version NC Program	Unknown mmmdev Istanbul cou SINUMERIK O 04.95.03.00 _N_MPFD
		E		E		E	
🔗 <u>MabeAlarm21</u>	DoNotDelete	MMMEvents_Dot	NotDelete				
Alarms	Unknown	Alarms	Unknown				
	AMP RTP Dob Alarms Transit D Holl U Fyse Holl U Fyse H	MP RTP DoNotDelete	Machine Ove	Machine Overview	Machine Overview Addressed DohotoBelete Addressed Do	Machine Overview AMP_RTP_DokotDelete AaAsset DokotDelete Atarms Makasea Texast D mmmdw Sotion Makasea Texast D mmmdw Sotion Makasea Net Ultype Makasea Net Ultype Makasea Net Ultype Makasea Net Ultype Makasea Material Unitype Makasea Notion Makasea MakeAlarm21 DokotDelete MMMEvents DokotDelete MakeAlarm21 DokotDelete MMMEvents DokotDelete	Machine Overview

Restrictions

- The maximum number of selected variables is 20
- "Customized fields" is a browser-based function that does not influence other users. The changes cannot be seen if the cache memory was cleared, and the user logs on again or uses an incognito mode.
- If users cannot save their own settings, and an error message is output this means that the web browser cache is full and the cache should be cleared.
- If a user cannot see the NCK type, then the NC program should be shifted into "Available variables" so that the user can see the NCK type.
- If users cannot see the HMI UI type, then hmiTypeText is not in an alias form of the HMI UI type.

8.5 Filtering machines

8.5 Filtering machines

When you open Manage MyMachines, the "Machine Overview" window opens and all of the available machines are listed together with the associated data. You can apply a filter to reduce the number of displayed machines.

If you save a filter as default, the "Machine overview" window is displayed filtered the next time that it is opened.

Parameters

Parameter	Description
▼ ∨	Opens the "My Filters" window with the following search and filter options:
	Hierarchy
	Asset ID
	Asset name
	Asset type
	Online status
	– Online
	– Offline
	– Unknown
	Machine status
	– Production
	– Techn. Disturbance
	– Org. Disturbance
	– No Disturbance
	Alarm status
	– Active alarm
	– No alarms
	Variables
+	Adds additional criteria to the current filter.
Ô	Removes the selected filter criterion from the current filter.

Procedure

- 1. Click in the top right-hand section of the window on the "Filter" icon. The "My Filters" window opens.
- 2. In the "Filter option" drop-down list, select the criterion for which the machines should be filtered.
- 3. Enter the text being searched for in the input field.
- Click on icon "+" to add the filter criterion to the current filter. Remove the corresponding filter criterion using the "Delete" icon. The available machines are displayed in alphabetical order under the filter criteria.

- Click on "Save as Default" to always display the "Machine overview" window filtered. Filter criteria that belong to the standard are shown in blue. Filter criteria that are only being currently used are shown in black.
- 6. To display all machines, click on the "Reset Filter" function to display all machines.

My Filters		Save As Default	Reset Filters
Please choose filter option	•		+
Applied Filter			
Asset ID	05		Î
Asset Name	AMP		ī
AMP			
AMPAssetChild 11 19			
AMPAssetParent 10 27			
AMPAssetParent 10 29			

Note

You can also filter subtenants.

8.6 Machine overview

When you open Manage MyMachines for Industrial Operations X Cloud "Manage MyMachines", the "Machine Overview" window opens and all of the available machines are listed together with the associated data.

Parameters

	Description
Underlined asset name	Displays the machine names
	By clicking on the underscored machine name, the "Machine Dashboard" window opens and additional machine information is displayed.
	Displays the status of the machine:
	• Online
16 ¹⁹	• Offline
200	Unknown
Status of the remote sessio	n
	You have no rights to start the remote session.
(0)	 The rights for Manage MyMachines /Remote were not assigned to the user or were removed.
	 Manage MyMachines /Remote was not purchased for the tenant
	- OR -
	Manage MyMachines /Remote is not activated.
	 The subscription is not activated or has expired.
.	You can start a new remote session
<u>.</u>	You can join an existing remote session
Note:	
	k when starting a remote session via MMM Machine Overview and MMM Dashboard. Please note have online status information.
Machine status	
To the left of the machine inf	formation, you will see a bar that displays the machine status, color-coded.
	mouse, a tooltip is displayed showing some information:
• Unknown status (gray)	The machine status is not known if one of the following reasons exists:
	• "Manage MyMachines" was enabled for a machine and an "onboard.key" was created, but no onboarding was performed.
	• "AgentOnlineStatus" data was last transmitted more than 12 months ago.
	• Agentoninestatus data was last transmitted more than 12 months ago.
	 No transmission of "AgentOnlineStatus" data has taken place.
Production (green)	
• Production (green)	 No transmission of "AgentOnlineStatus" data has taken place. The operating mode is "AUTO", none of the stop conditions listed below apply, and the fol-

	Description
• Tech. Disturbance (red)	The machine status displays "Technical Disturbance".
	The operating mode is "AUTO", and one of the following stop conditions is active:
	NC not ready
	Mode group not ready
	Emergency stop active
	Alarm with stop function active
	Wait for position control
	Wait for Safe Operating Stop
	No channel ready
	Fast retraction activated
• Org. Disturbance (yellow)	The machine status displays "Organizational Disturbance".
	No other disturbances or conditions occur than are described under "Tech. Disturbance".
• No Disturbance (blue)	The operating mode is not "AUTO".
Information about the machi	ne
Alarms	Displays the number of active alarms.
	Window "Machine alarms" opens if you click on the underlined data.
	More information is provided in Chapter: Displaying machine alarms (Page 238).
HMI-UI type	Displays the operating software:
	HMI-Advanced
	SINUMERIK Operate
	• HMI Base
Location	Time at the machine location
NC program	Displays the NC program

	Description
Tenant ID	Displays the customer name.
	Opens an additional window:
	 Alarms: Opens the "Machine Alarms" window. More information is provided in Chapter: Displaying machine alarms (Page 238)
	 Dashboard: Opens the "Machine Dashboard" window. More information is provided in Chapter: Dashboard (Page 226)
	 Aspects: Opens the "Machine Aspects" window. More information is provided in Chapter: Aspects (Page 244)
	 Events: Opens the "Machine Events " window. More information is provided in Chapter: Events (Page 281)
	 Exporting: Opens the "Export " window. More information is provided in Chapter: Exporting (Page 284)
	 Spindle monitor: Opens the "Spindle Monitor" window. More information is provided in Chapter: Manage MyMachines /Spindle Monitor (Page 308)
	 Machine location: Opens the "Machine Location" window and displays where the machine is located on a world map. More information is provided in Chapter: Machine location (Page 316)
	 Motor temperature: Opens the "Motor Temperature" window. More information is provided in Chapter: Motor temperature (Page 319)
	 Files: Opens the "Files" window. More information is provided in Chapter: Files (Page 321)
	 My Dashboards: Opens the "My Dashboards" window. More information is provided in Chapter: My Dashboards (Page 286)
	 Machine Snapshot Opens the "Machine Snapshot" window More information can be found in Chapter Machine snapshot (Page 323)

Note

SINUMERIK Integrate Gateway

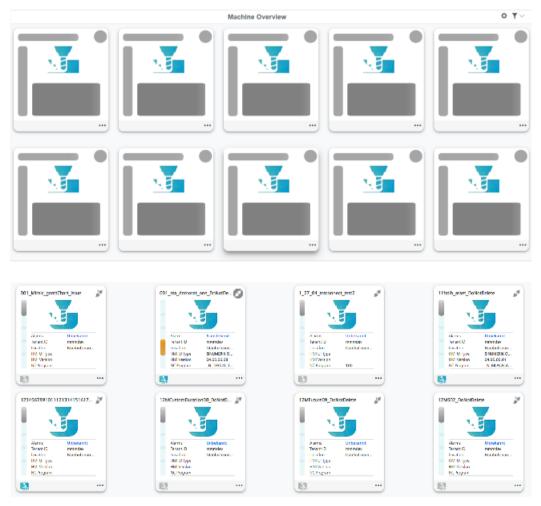
Machines connected to the SINUMERIK Integrate Gateway interface are displayed as being online. To do this, for at least one aspect of the particular machine, data should be uploaded in a time interval of less than five minutes. If this is not the case, then the machine can appear offline.

Procedure

1. In the launch pad, click on the "Manage MyMachines" icon.



- 2. The "Machine Overview" window opens.
 - The machines are loaded depending on the resolution of the screen and the degree of scaling of the settings in the web browser. Scroll down to display all of the machines.
 - You see a skeleton list view when loading data.
 The available machines are displayed as soon as the data has been loaded.



3. Click on the required machine. The "Machine Dashboard" window opens and you can view additional data. More information is provided in Chapter: Dashboard (Page 226). 8.7 Filtering according to static variables

8.7 Filtering according to static variables

When you have set the slider to "Manage MyMachines /Spindle Monitor" or "Manage MyMachines /Remote", the following four static variables are created:

- ChargingModel
- Renewal
- RenewalDate
- SubscriptionStartDate

You can configure the machine overview so that billing information is displayed in the machine field as static variable.

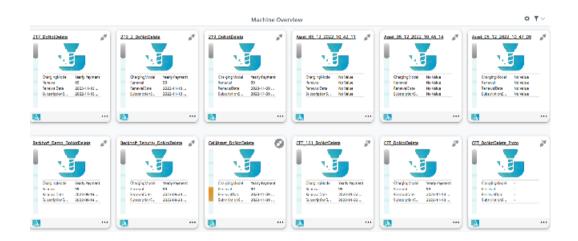
More information is provided in Chapter: Configuring a machine overview (Page 215)

You can filter variables in the machine overview.

NOTICE

Variable marking, "Manage MyMachines" and "Manage MyMachines /Remote"

The associated static variables are marked with "MMMR" if you have activated "Manage MyMachines /Remote".



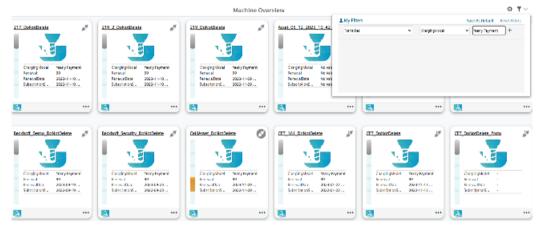
8.7 Filtering according to static variables

Procedure for filtering static variables

- You have the option of filtering machines according to a certain static variable. In the right-hand upper section of the window, click on the "Filter" icon. The "My filter" window opens.
- In the left-hand drop-down list, select "Variables".
 Open the right-hand drop-down list "Select variables" and select the variable.

My Filters			Save As Default	Reset Filters
Variables	~	Select variable	~	+
Hierarchy Asset ID Asset Name Asset Type Online Status Machine Status Alarm Status				
Variables				

You obtain an overview of the machine with the filter result. The second variable appears in the first line of the field.



8.8 Dashboard

8.8.1 Overview

The "Machine dashboard" view shows information about each CNC type.

The machine status, NC program status as well as the operating mode can be simultaneously displayed.

Note

SINUMERIK machines

The aspect of the machine status shown shows the status for channel 1

Parameters

Displaying machine data

Parameters	Description			
	Displays the status of the machine:			
S.	Online - with date and time			
# *	Offline - with date and time			
?	• Unknown			
Machine statusTo the left of the machine information, you will see a bar that displays the status, color-coded. When passing over with the mouse, a tooltip is display showing some information:				
	Unknown status (gray)			
	Production (green)			
	Tech. Disturbance (red)			
	Org. Disturbance (yellow)			
	No Disturbance (blue)			
More information about machine statuses can be found in this Chapt overview (Page 220).		be found in this Chapter: Machine		
Name:	Shows the machine name.			
State				
NC program	Displays the selected NC program.			
NC program status	Displays the last value of the NC program sta- tus.	The data is displayed as a bar chart in the right-hand section of the		
	You can find more information in the following paragraph "NC program status".	window.		
Operating mode	Displays the last value of the machine tool operating modes.	The data is displayed as a bar chart in the right-hand section of the window.		

Parameters	Description
Access protection	The access to functions and data areas is controlled via the access rights.
level	Access levels 0 to 7 are available, where 0 represents the highest level and 7 the lowest level.
	Access levels 0 to 3 are locked via a password and access levels 4 to 7 via a key switch.
	• 1 = Password - Machine manufacturer: Development
	• 2 = Password - Machine manufacturer: Commissioning engineer
	• 3 = Password - End user: Service
	• 4 = Keyswitch position 3 - Programmer, machine setter
	• 5 = Keyswitch position 2 - Qualified operator
	• 6 = Keyswitch position 1 - Trained operator
	• 7 = Keyswitch neutral position - Trainee operator
Stop condition	Displays the "StopCondition" NC variable that describes the cause of the NC program stop in more detail.
Time of the last val- ue change	Displays the date and time of the last recording.
Spindle override	Displays the last value of the spindle override in percent.
Feedrate override	Displays the last value of the feedrate override in percent.
Information	
Asset hierarchy	Displays the path.
Machine type	Displays the machine type or the operating software.
Location	Displays the location.
SINUMERIK version	Displays the operating software version.

Parameters	Description
	Switching to other windows:
	Overview: Opens the "Machine overview" window. More information is provided in Chapter: Machine overview (Page 220)
	Alarms: Opens the "Machine Alarms" window. More information is provided in Chapter: Displaying machine alarms (Page 238)
	Aspects: Opens the "Machine Aspects" window. More information is provided in Chapter: Aspects (Page 244)
	Events: Opens the "Machine Events " window. More information is provided in Chapter: Events (Page 281)
	• Exporting: Opens the "Export" window. More information is provided in Chapter: Exporting (Page 284)
	• Spindle monitor: Opens the "Spindle Monitor" window. More information is provided in Chapter: Manage MyMachines /Spindle Monitor (Page 308)
	 Machine location: Opens the "Machine Location" window and displays where the machine is located on a world map. More information is provided in Chapter: Machine location (Page 316)
	Motor temperature: Opens the "Motor Temperature" window. More information is provided in Chapter: Motor temperature (Page 319)
	• Files: Opens the "Files" window. More information is provided in Chapter: Files (Page 321)
	• My Dashboards: Opens the "My Dashboards" window. More information is provided in Chapter: My Dashboards (Page 286)
	 Machine Snapshot Opens the "Machine Snapshot" window More information can be found in Chapter Machine snapshot (Page 323)
<	Collapses the machine information display.
>	Expands the machine information display.
Variables	
Name	Shows the names of the variables
Value	Shows the value of the variables.
Q	Activates the search for names or the value of a variable.
•	Adds a new variable. Enter a name and a value for the new variable (it is not permissible that fields are left empty).
	If the asset already has 5 or more configured variables, the "+" icon is deactivated.
•	Saves the newly added variable.
1	Activates text box "Value" of the selected variable for editing.
Û	Deletes the selected variable.
×	Interrupts editing.
×	Saves what has been edited.
L	

Display	Description
Pending Alarms: > 15	Displays the number of active alarms.
Last 48 hours Local	Shows the selected time period. Opens the calendar function to set the time period.
Status of the remote sessi	on
There is no online status che	ck when starting a remote session via MMM Overview and MMM Dashboard
The IPC use cases do not ha	ve online status information.
	You have no rights to start the remote session.
	The rights for Manage MyMachines /Remote were not assigned to the user or were removed.
	Manage MyMachines /Remote was not purchased for the tenant
	- OR -
	Manage MyMachines /Remote is not activated.
	• The subscription is not activated or has expired.
	You can start a new remote session.
	You can join an existing remote session.
Status summary	Displays the machine information as bar chart:
	Machine status
	– Machine off
	– Unknown status
	– Production
	– Tech. Disturbance
	– Org. Disturbance
	– No error
	NC program status
	– Machine off
	– Unknown status
	– Interrupted
	– Stopped
	– In operation
	 In the wait position
	– Cancelled
	Operating mode
	 Machine off
	– Unknown status
	– JOG
	– MDA
	– AUTO
	More information is provided in Chapter: Status summary (Page 234)

Display	Description
v	Closes the drop-down list.
Pending alarms	Displays the pending alarms. More information is provided in Chapter: Pending alarms (Page 233)

Note

UTC time definition

Independent of the time zone settings, all variables are displayed with a UTC time stamp.

Procedure

- 1. Click in the machine overview on the underscored name of the required machine.
- 2. Window "Machine Dashboard", tab "Status" opens displaying additional machine data. All machine information is displayed in bar charts in the right-hand section of the window. Using the slider bar, you can scroll backwards and forwards in the lateral scroll bar.

			Machine Dashboard	٥ ۲
Online since 10.01.2023 16:26		O Pending A	ma) 🛃	Last 48 Novis une
			Status Summary Pending Alarms	
		¥ Machine State		
		No Distarba		
MMA: MMMANDMINR_LIVE	Automation_DoNotDelete	Machine Of		
\$1214	Information Variables	C Unknown St	hri in the second se	
NC Program	JN_DONALAIM_SH	T NC Program 5	aba	
NC Program Status	Cancelled	Cancelled		
	106			
Operation Mode				
Access Protection Level	Machine Manufacturer : Development	Machine Of		
Access Protection Level Step Condition	Machine Manufacturer : Development No Stop State	Machine Off		
Access Protection Level Step Condition Time of Lett Value Change	Machine Manufacturer : Development No Stop State		na (111)	
Access Protection Level Step Condition Time of Last Value Change	Machine Manufacturer i Development No Stop State 18 Jan 2023 13-27	Uninpain St	na (111)	
Access Protection Level Step Condition Time of Lett Value Change	Machine Manufacturer : Development No Stop State	Unknown St V Operation Mo	na (111)	

3. You obtain more information about the machine if you open tab "Information".



- 4. You obtain an overview of the variables configured for the machine if you open tab "Variables".
 - Click on the "+" icon to add a new variable.
 - Click on the "Recycle bin" icon to delete a variable.
 - Click on the "Edit" icon to edit the value of a variable. To edit variables, you need the user role mmm.admin

You cannot create empty variables.

The following names are blocked and may not be assigned:

- id
- name
- description
- tenant
- etag
- scope
- properties
- propertySets
- extends
- variables
- aspects
- parentTypeId
- timezone
- type
- parent

When the configuration is copied, the following applies:

- If a variable already exists in the target asset, the variable in the target asset is retained.
- If the variable does not exist yet, it will be added in the target asset.

For more information on copying configurations, see Chapter Copying configurations (Page 148).

	٩.			
e: Bilal_Last_As	set			Voriables
State	٩	Information	 ٩	0
Name	٩		٩	
Tarra test1	٩	Table	٩	0
Terre testi testi	٩	-	٩	0
Tame Cases Tast1 test2 test8 test4	٩		٩	0 /* /*

5. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The bar chart is displayed in the full-screen mode.

If the machine description is collapsed, the color display of the machine status remains at the left-hand edge of the window.

To exit the full-screen mode, click on the right-pointing arrow symbol on the left-hand edge of the window.

						Machi	ne Dash	board							Ø \Upsilon
() Presde	ing Alarmaci 1	, R													LAST 40 November
				Status Summ	ary			_				Pending A	larms		
			5.00	51.90	all	 	50	1100	13.00	THE	12.00			 .500	1200
T Machine	Satus														
No Con	turbance														
Machine	+ 011													11111	
URADA	un Status														
T NC Progr	am Status														
Cancell	ed.														
Machine	+ 011													1.000	
Unknow	un Status														
 Operation 	n Mode														
,00G															
Machine	+ 0/1													11111	
Unknow	we Status														

Setting the time range

You can set a time period of up to 2 days.

- 1. Click on the set time range. The calendar view opens.
- 2. You can select either a relative or an absolute time period.

- 3. Select one of the entries to select a relative time period.
 - Last 30 minutes
 - Last hour
 - Last 4 hours
 - Last 8 hours
 - Last 24 hours
 - Today
 - Last 48 hours

Click on "Custom" to select an absolute time period.

- Select the time zone, "Local" or "UTC".
- Select a start and end date in the calendar.
- 4. Confirm using the checkmark button.

Last 30 Min	<			6 Nov 3	2022 0	0:00	24	1	7 Nov 3	022 ;	3.59			>
Last hour							_							
Last 4 hours	5	M	Ť	W	Ŧ	÷.	5	\$	М	7	W	τ	3	5
Last 8 hours	NOV	r.						DEC				3	2	3
Last 24 hours			1	2	з	4	5	4	(5)	6	7	8	9	10
Today	6	7	8	9	10	11	12	11	12	13	14	15	16	17
Custom	13	14	15	16	17	18	19	18	19	20	21	22	23	24
	20	21	22	23	24	25	26	25	26	27	28	29	30	31
💽 Local 🔿 UTC	27	28	29	30										

Displaying details

You have the option of viewing more data in the following tabs:

- Pending alarms (Page 233)
- Status summary (Page 234)

8.8.2 Pending alarms

For the selected SINUMERIK control system, the "Machine Dashboard" view > "Pending Alarms" tab provides an overview of the alarms for a defined time interval.

Parameters

Parameters	Description	Description					
Туре	Displays the follo	isplays the following icons:					
	A	Notice					
	•	Note					
ID	Displays the alar	m identifier.					
Alarm text	Displays an alarr	n description.					
Start time	Shows the start	time with the date YYYY-MM-DD and time hh:mm:ss					
Duration	Displays the alar	m duration in days and hours.					

Procedure

 In the right-hand section of the window, open tab "Pending Alarms". The details of the pending alarms are displayed. In the right-hand section of the window, use the slider bar to scroll up and down in the lateral scroll bar.

nine since 10.01.2023 16:26	1	0	0	deng Alaeren 19] B1		Last #2 hours -
					tistus turnetey	Paneng Alama	
			Total		Aparts hart	They from	System
				0004	Netsol 1 of the test formal active remaining setse 150 h	2025-01-18 10-24-57	0 day - 00 03 49 304
1				200011	EKSEN KERKENE ON TVSU BASICI DEGK	2023-01-12 16-23:54	0.041-00.04152304
. MMMandMMR_Live	Automation_DoNotDener			200012	SPINOLA DONANA IZIN TUNU BADAJ DADIL	2023-01-18 19:23:54	0 day - 00.04.52,334
Blate	Information	100540048 C					
NC Program	N. EXNALABA SH						
NC Program Status	Cancelled						
Operation Mode	205						
Access Protection Level	Machine Manufacturer	Development					
Stop Condition	No Stop State						
Time of Last Value Change	18 Jan 2023 13:27						
	and the second se						

8.8.3 Status summary

For the selected SINUMERIK controller, the "Machine Dashboard" view > "Status summary" tab provides an overview of the machine statuses for a selected period.

Parameters

Status	Description
Machine status	
Machine off	The machine is switched off.
Unknown status	The machine status is not known.
Production	The machine is presently running.

Status	Description
Tech. Disturbance	Because of a technical disturbance, the machine was stopped or the op- erator exited the NC program.
Org. Disturbance	Because of a organizational disturbance, the machine was stopped or the operator exited the NC program.
No Disturbance	The machine operates disturbance-free.
NC program status	
Machine off	The NC program is not running as the machine is switched off.
Unknown status	The NC program is not running as the machine status is not known.
Interrupted	The NC program was stopped and is restarted by the operator.
Stopped	The NC program has been stopped and will be exited by the operator.
In operation	The NC program is currently running.
In the wait position	The NC program is waiting.
	For example, the program is waiting for the execution of an NC program in a different channel or the operator is changing a tool.
Cancelled	The NC program has been cancelled by the operator at the SINUMERIK controller.
Operating mode	
Machine off	The NC program is not running as the machine is switched off.
Unknown status	The NC program is not running as the machine status is not known.
JOG	The machine is running in the "JOG" operating mode.
MDA	The machine is running in the "MDA" operating mode.
AUTO	The machine is running in the "AUTO" operating mode.

Procedure

There are several drop-down lists in the right window area.

Machine status

- 1. In the right-hand section of the window, click on the down arrow in tab "Machine status".
- 2. The drop-down list with the machine status data opens. Details on the machine status are displayed in a bar chart.

	1	Blatus Summary				Per	nding Alanms	
	1.85 ⁵⁰	0.00	1059	51.80	12.50	1350	. wetter	 ≡
▼ Machine Status								
Unknown Status								
Machine Off			1					
No Disturbance								
Org. Disturbance								
▼ NC Program Status								

More information about the machine status is provided in Chapter: Machine overview (Page 220)

NC program status

- 1. In the right-hand section of the window, click on the down arrow in the tab "NC Program Status".
- 2. The drop-down list with NC program status data opens. Details on the NC program status are displayed in a bar chart.

¥ NC Program Status	
Unknown Status	
Machine Off	I
Cancelled	
Ranning	I. I.
Stopped	

Operating mode

- 1. In the right-hand section of the window, click on the down arrow in tab "Mode".
- 2. The drop-down list with the machine status data opens. Details on the machine status are displayed in a bar chart.

V NC Program Status	
Unknown Status	
Machine Off	I. Construction of the second s
Cancelled	
Ranning	
Stopped	

8.8.4 Failure analysis

Overview

In section "Failure analysis", error states that occur for a machine tool equipped with a SINUMERIK control system can be identified and evaluated. As a result of the higher transparency, all of the required service work can be executed more efficiently and machine downtimes can be reduced.

It is important that these errors are checked, and based on a combination comprising "Machine status", "NC program status" and "Operating mode", action is taken so that users can define the cause therefore avoiding that these errors are triggered.

The section contains a list of the technical errors and NC stops that occurred 60 seconds before and remain for an additional 60 seconds. Alarms +/- 60 seconds are listed for these technical errors and NC stops.

Parameters

Parameters	Description
Error type	
Technical error	Displays a technical error.
NC program error	Displays an NC program error

Parameters	Description
Alarms	
From	Displays the instant in time
Alarm number	Displays the alarm number
Deletion information	Displays the deletion information
Alarm text	Displays the alarm text
Source	Displays the source
From (client)	Displays the client

Procedure

- 1. Click on the dots in the "Machine description" area.
- 2. Select "Failure analysis".
 - The failure analysis is displayed in the lower right-hand window.

•					Brock a Deal-rate to							
Anne States and	_	0		er.							Sec.	
	-											
				1 1	1	1	 1	1 1	1.1	7	1	
No. of Concession,			10000									
-	1.788	1001										
5.7887	- 1,4,100		Children of the local division of the local									٠
at higher faller	Tergeri .		Real Procession									
January and			10.000				-					
100 00001.010	CONTRACTOR AND AND A		And Annual Processing									
1 p*+10	the state of the second second											
Rear of our other Partyr	11,0009	-										
			Reading to the second									
							_					2
							_					۰.
		-	10.00180									
			- FR									
							_					-
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- 3. Click on the diagram to select between:
 - Machine status: Technical error
 - NC program status: stops, freezes
- Select one of the dots to scroll there.
 All the associated technical errors are listed in the table.

8.9 Displaying machine alarms

The following data relating to alarms is displayed in the "Machine Alarms" window:

- Occurrence
- Duration
- List:
 - ID alarm ID
 - Service life
 - Duration
 - End time
- Alarm Filtering
 - Alarm number
 - Alarm range

Further, you can display alarms in various views:

- In a bar chart
- In a pie chart

Button / parameter

Button/parameter	Description
Pending Alarms: > 15	Displays the pending alarms:
	• != specifies the number
	Checkmark = no active alarms
	• ?= unknown
Refresh	You update the data that is located in the time interval by pressing the "Refresh" button.
05/12/2020 → 06/16/2020 utc	Displays the time range and the time zone in which alarms are captured.
	A calendar opens when if you click on the button.
	More information is provided in Chapter: Using the calendar function (Page 212).

Occurrence

Alarm display	Description		
Occurrence	Displays how often the alarm has occurred in the selected time interval.		
	All alarms have different alarm identifiers - the alarm ID.		
	The alarms are displayed with different colors.		
	How often the alarm has occurred is shown as a percentage in the pie chart.		
	If you move the mouse over the bar of the corresponding alarm, a tooltip is displayed indicating how often the alarm has occurred.		
ACTIVE	Displays the number of active alarms.		
TOTAL	Displays the number of all alarms.		

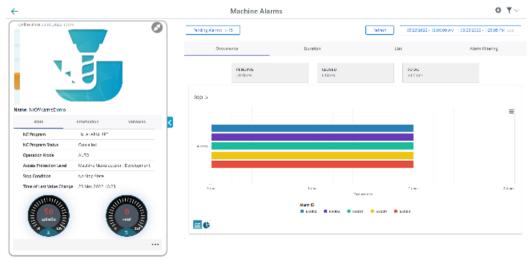
Note

Alarm display

5 alarms that occur most frequently are displayed.

Procedure

- 1. In the "Information" area, click on the button with dots.
- 2. Click on "Alarms". The "Machine alarms" window opens.
- 3. The machine description is shown in the left-hand section of the window.
- 4. Select a specific time period using the calendar function.
- 5. Click on "Apply".
- 6. Open the "Occurrence" tab.
- 7. The alarms are shown in a bar chart where you can see how often the alarms have occurred.



- 8. To collapse the machine information, click on the left-pointing arrow symbol on the right side of the frame.
 - The bar chart is displayed in the full-screen mode.



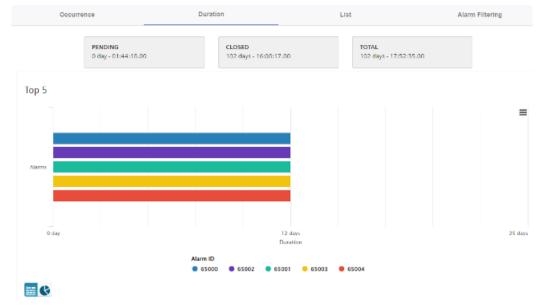
9. Click on the "Pie chart" icon to change the display type.

Alarm display	Description		
Duration	Displays the duration of the alarms within the defined time period in a chart. All alarms have different alarm identifiers.		
	The alarms are displayed with different colors.		
	The duration of the alarm is specified as a percentage.		
	The alarm identifier - the alarm ID - is displayed below the diagram.		
	If you move the mouse over the bar of the corresponding alarm, a tooltip is displayed, indicating the duration in days, hours, minutes and seconds.		
ACTIVE	Displays the duration of active alarms in days and time.		
CLOSED	Displays the duration of closed alarms in days and time.		
TOTAL	Displays the total duration of all alarms in days and time.		

Duration

Procedure

- 1. Select a certain time period using the calendar function.
- 2. Click on "Apply".
- 3. Open tab "Duration".



4. The alarms are displayed in a bar chart where you can see the duration of the alarms.

5. Click on the "Pie chart" icon to change the display type.

List

Parameters	Description			
ID	Displays the alarm identifier.			
Start time	Shows the start time with the date (YYYY-MM-DD) and time (hh:mm:ss)			
Duration	Displays the duration in days and time (hh:mm:ss)			
End time	Shows the start time with the date (YYYY-MM-DD) and time (hh:mm:ss)			
>	You can obtain more alarm information using the icon:			
	Alarm text			
	Machine type			
	• Sender			
	• Туре			
Buttons in the low	ver section of the window			
ltem per page	em per page From the drop-down list, select how many alarms should be displayed on one pag			
	• 5			
	• 10			
	• 25			
	• 100			
x - y of xy	Displays how many pages there are, with the corresponding number of alarms per page.			
1<	The first page is displayed.			
<	The previous page is displayed.			
>	The next page is displayed.			
>	The last page is displayed.			

Procedure

- 1. Select a certain time period using the calendar function.
- 2. Open tab "List".
- 3. The alarms are listed in a structured table form.

	Occurre	nce	Duration	List		Ak	ırm Filte	ring	
	D	Start Time		Duration		End Tim			
>	8084	2020-06-16 12:54:52		0 day - 00:06:00 hour					
>	8084	2020-06-16 11:54:56		0 day - 01:05:56 hour					
>	8084	2020-06-16 10:55:00		0 day - 02:05:52 hours		-			
>	8084	2020-06-16 09:55:03		0 day - 03:05:49 hours		-			
>	8084	2020-06-16 08:55:07		0 day - 04:05:45 hours		-			
>	8084	2020-06-16 07:55:11		0 day - 05:05:41 hours		-			
>	8084	2020-06-16 06:55:15		0 day - 06:05:37 hours		-			
>	8084	2020-06-16 05:55:19		0 day - 07:05:33 hours		-			
>	8084	2020-06-16 04:55:23		0 day - 08:05:29 hours		-			
>	8084	2020-06-16 03:55:26		0 day - 09:05:26 hours		-			
				items per page: 10 📼	1 - 10 of 12	2 1<	<	>	>1

- 4. Select an alarm from the list and click on icon ">".
- 5. A menu opens and you can see more information about the alarm.

	Occurrence		Duration		List	Alarm	Filtering
	D	Start Time		Duration		End Time	
•	8084	2020-06-	16 12:54:52	0 day - 00:0	6:00 hour	-	
	Alarm Te	d:	Period 1 of the test lic	ense active remaining	time 166 h		
	Machine	Type:	core.basicsinumerikas	sset			
	Sender:		/NCK				
	Type:		NC_CANCEL				

Alarm Filtering

Alarm display	Description
Туре	Select the alarm number or the alarm range from the drop-down list.
	In the overview you can alphabetically sort the alarm type (either in ascending or descending alphabetical order).
Alarm number/area	Enter the alarm number or the alarm range in the input field.
	In the overview, you can numerically sort the alarms (either in ascending or descending numerical order).

Alarm display	Description
0	Selected alarms are no longer saved in Insights Hub. The alarms are displayed in the overview.
9	Individually removing alarms or alarm ranges from the overview.

Procedure

- 1. Open tab "Alarm Filtering".
- 2. Select "Alarm Number" or "Alarm Range" from the drop-down list.
- 3. Enter the required alarms in the input field and click on the "Do not save" icon.

Occurrence	Duration	List	Alarm Filtering
Alarm Range 👻	600010	600015	0
Filtered Alarms			
Туре	Alarm Number / Range		
Alarm Number	60008	•	
Alarm Range	600010 - 600015	•	

8.10 Aspects

8.10 Aspects

User-defined aspects combine your selected data for a meaningful analysis.

All aspects are displayed in an overview. You can influence the view by applying different filter criteria.

For the individual parameters of an asset, you can create queries manually or controlled by variables.

Precondition

The configuration of the variables must be activated in the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application".

More information is provided in Chapter: Overview (Page 130).

Parameters and buttons

The following aspects are displayed as default setting. You also have the option of configuring your own aspects.

You can display variable data as diagram (diagram variables) or in a tabular form (table variables).

In the tabular view you can sort the data either alphabetically or numerically (either in ascending or descending order).

Parameters	Description
SpindleMonitorConfig	The following data is displayed:
	Time stamp with the date and time
	Variable - OnlineStatus
	Value
	– false
	– true
	Quality code
AgentOnlineStatus	The following data is displayed:
	Time stamp with the date and time
	Variable - OnlineStatus
	Value
	– false
	– true
	Quality code
Alarms	The following data is displayed:
	Time stamp with the date and time
	Variable
	Value
	Quality code

8.10 Aspects

Parameters	Description			
CH1_BasicConfig	SINUMERIK basic configuration			
	The following data is displayed:			
	Feed override			
	NCProgramStatus			
	NrOfAlarms			
	• Opmode			
	ProtectionLevel			
	Spindle override			
	StopCond			
CH1_MachineStatus	Time of the machine status in the selected time period.			
_	The machine status is displayed numerically:			
	0 Unknown status			
	1 Production			
	2 Technical Disturbance			
	3 Organizational Disturbance			
	4 No Disturbance			
MachineModel	The following data is displayed:			
	Time stamp with the date and time			
	• Variable			
	• Value			
	Quality code			
Startup	The following data is displayed:			
	Time stamp with the date and time			
	Variable			
	• Value			
	Quality code			

Mode	Description
Aggregate mode	Displays the first and last value, sorted according to units.
Unprocessed mode	Displays the last 256 values. If there are more values in the selected time range, then this is indicated by a dotted line.
Automatic mode	Automatically switches between the two modes depending on the time range.

Button	Description
05/12/2020 → 06/16/2020 utc	Displays the time range and the time zone used.
	Opens the calendar function.
~	Opens the detailed view of the data.
^	Closes the detailed view of the data.

8.10 Aspects

Procedure

- 1. In the "Information" area, click on the button with dots.
- 2. Click on "Aspects". The "Machine Aspects" window opens.
- 3. The machine description is shown in the left-hand section of the window.
- 4. In the right-hand section of the window, select the time range using the calendar function.

More information is provided in Chapter: Using the calendar function (Page 212)

5. To see the data recording, right-click on button \downarrow .

			Machine Aspects	\$ Y \
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NC Program	_N_BILALALARN_MIC			
NC Program Status	Cancellad		Statup	~
Operation Mode	AUTO			
Access Protection Level	Machine Manufacturer : Developme	nt.		
Stag Condition	No Stop State			
Time of Last Value Change	13 Apr 2022 12:15			

6. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The bar chart is displayed in the full-screen mode.

÷		Machine Aspects Ø	۳v
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	CH1_BeskConfg		v
	CH1_Machine@tatus		÷
.	Closed-Alarma		v
2	MadhiteModel		v
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8.11 Comparing machines

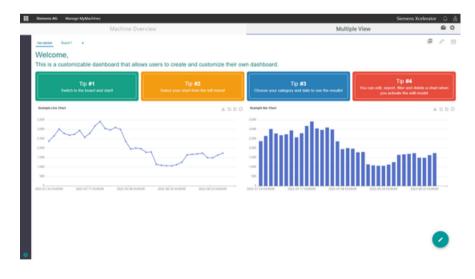
Overview

Using this function, several machines are visualized in a Dashy diagram. A similar option is provided on "My Dashboard". The data of an individual plant can be displayed on this page.

The function for the machine comparison was subdivided into tabs:

SIEWIENS	Machine Overview		Multiple Vi	Siemens Xcelerator
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Kert Jest Asset HML Adv. D	DigiCert_Vert_Asset_Scient_2.2.1	DigiGert_Test_Asset_Sinite_4_1-	Reputers, Test, Asset, WinXP, Do	Ensucinose 12, Dother Delters

The content of the machine comparison can be displayed by clicking on tab "Machine comparison". The start page and an empty machine comparison configuration are displayed:



8.11 Comparing machines

Add broken-line graphics

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	Siemens AG	Manage MyMachines	Siemens Xcelerator		
		Machine Overview	Multiple View	6	¢
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Example of a graphic:

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Once a variable for the plant was selected, an additional variable can be selected.

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A diagram is created by clicking on "Next". The new diagram is added to the current configuration for the machine comparison.

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- Materiti 10. NCProgramBatus		Do you want to save your co	figuration as a template?			
		Co not show again	Cancel Candem			

Saving the current configuration as template

- 1. Save the current machine comparison configuration under "My Dashboard".
- 2. Define the configuration.
- 3. Click on "Do not show again" to hide the pop-up.
- 4. Click on "Cancel" to save the configuration as user template.
- 5. Click on "Confirm" to open the template panel.

8.11 Comparing machines

6. Click on "+" to continue.

Machine Overview	Machine Comparison	6	0
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lick on "Confirm".		0	

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You can use the following templates:

• Default template for a tenant

In this case, the template is used as configuration, if there is a tenant user that does not have a machine confirmation for the Dashy configuration. Click on button:

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• Current configuration

In this case, an already defined template can be used for its current machine confirmation configuration.

Click on button:

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Delete an already defined template

An already defined template can be deleted by clicking on the following button:

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Update an already defined template

A customer can update an already defined template by their current template by clicking on the already defined template.

An already defined template can be replaced by a current template.

1. Click on the already defined template.

	Siemens AG Manage MyMachines			Siemens Xcelerator		8
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The configuration template is updated.

Note

An update has no effect on the configurations of other users, which are based on this template. If this template is reloaded then a new configuration is loaded.

The update acts on the default machine confirmation configuration of the tenant. A new configuration is loaded if a user without configuration opens of the page.

Using an already defined template

Templates that have already been defined can be used for a machine comparison.

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8.11 Comparing machines

- 1. Click on the template icon
- 2. Click on the already defined template.

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3. Click on "Confirm".

The template is loaded as Dashy configuration.

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Update a diagram

1. Click on "Edit".

Diagrams and boards can be edited.

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2. Click on "Edit" to edit the diagram configuration.

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3. Click on "Save" if the diagram was updated.

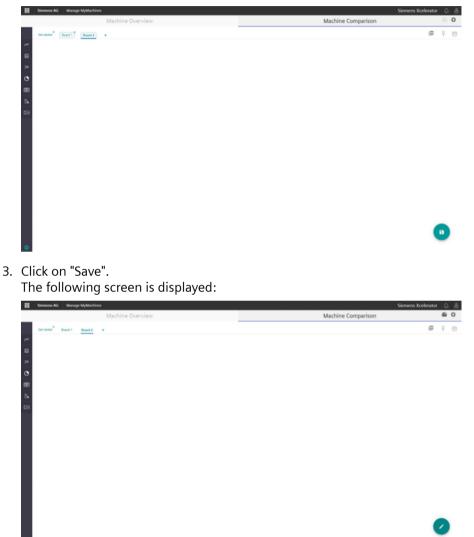
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When updating the configuration the template is not updated. Updating the template must be acknowledged.



Add and delete a new board

- 1. Click on "Edit".
- 2. Click on "+".



A customer can delete the board in the same way. Click on "Edit" and then delete the board from here;

Proceed in a similar way to delete a board:

- 1. Click on "Edit".
- 2. Delete the board.

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3. Confirm that the board will be deleted.

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4. Click on "Save".

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8.12.1 Machine status calculation

Requirement

Users must add a new calculation by switching from the Data Mapping List tab in the Shopfloor Management Application to the Machine Calculation tab.

The Shopfloor Admin or Shopfloor User role is required to view the sub-application for data mapping on the shopfloor side.

Overview

The new function to calculate the machine status allows different algorithms to be used. A new calculation must be added so that a new calculation can be applied.

List view of all calculations in clients:

5, 4	F .		Shopfloor Ma	agement Application			
geboor Q		Data Mapping List			Machine Status Calculation		
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T2	Calculation Name						
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1. Add a new calculation.

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Note Calculation name

The calculation name may not contain any special characters.

Do not use the following characters: ?, :, *, &, ", , |, , , , , +, !, [,]

3. Ensure that the name is unique.

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A.F		Catalogue Trans	Cata Mapping Selection	O variate be	Catualition Algorithms	w w w states in c > >
90 II		Status Sama Na Distantanta	Spindeovender 10-5843em++60000		•	
		Terrar State	-system freedowride++0		•	
Marura /		100.0 March 100.0	Springer Springer		•	
O ANK		Organitatoria 1				
		Frankelsen	NCProgram(Saluer+*_N		•	
					Gruit See	

4. From the assigned data, select up to 5 user-defined variables.

Siemens	AG She	gellaur Magent, App.			Siemens Xoelerator
-				Shopfloor Management Application	
			Date Magging List	Machine Total Calculation	
					0
	Canal	ation Name			
	Dana	Agasten		🕲 Catulates Name — 🖉 Data Magging Statedion — 🕘 Investo Sal — 🕘 Catulates Aporton	
	Dana	Calculation			
	-	n		Would you like to fit from an existing data mapping config?	
	-	nde		Salatan Tana Adhan	
	and a			Paulowski Oserel Sala hadi elejo 0.4/1	
	-			Standard Vise can define up to 5 suction	
	-			E KONG	
		Bulla harre			
		No Delutionce		Protection(and PhateConfiguretoriescence) Noticement Noticement Noticement Noticement	
		Technical Deluctorica		BroCont (DenvelSekelig/Condy)	
		Organizational Debuttance		InChaguen Chamal TraguenhordscipupLandpi.l.(
		Production		Core Las	
	-				
	24				
				New York, N. Y.	

5. From the assigned data, select the optional addresses of variables.

	Cara May	Trata Marca	ng Selection — 🙆 Venicle Int — 🔴 Caro	e Status Carculatio	
	0	Cara antito			0
Calculation Name	Would	d you like to fill from an exital	ing data mapping config? Default	· .	
calculation1	See See	Name	A001156		0
newCalculation	0	Feedovernide	(Charvel/State/NetdRatelpoCvr[jr1]		0
calculation2	0	Spindleovenide	(Channel/Spindle:topeedOv()/1.1)		0
calculationController1	•	NOProgramBlatus	(Channel State propfilation)/1)		0
editiev	0	Opmode	(Bag-Statio LpAkode(s-1)		0
edifiesi Asportuniticiz		ProtectionLevel	Aca/Configuration/access/Level		0
Marana .	•	NONams	Act (Sale humAlarms(v1)	_	0
na2104_52854_40j	0	StupCond	/Charner@tate.stopCont[u1]	_	0
calculation3	•	Nchigan	/chanechogranhomerprogram(u1,1)		0
			Careco	4 1 -10	(16 3C C 2 3E

6. Select the addresses.

+			Shopflo	or Management Application		
~	Dara Maj	© Carculator	Name 🕜 Data Mapp	ng Selection 🚱 Versitie Set 🕲 Calculation Algorithm	e Batus Carculation	_
	Calculation Name	Was	d you like to fill from an exist	Ing data mapping config? Default =		
	calculation1	brectus	Name	Addess	0	
	newCalculation	•	Feedoverride	(Channel/State/RestRate/poCiv()r1)	0	
	calculation2	•	Spindeovernde	/Channel/Spindle/speedCvr[jr1,1]	0	
	caculationController1	•	NCProgramBlatus	/Channel/StatepropStatus(pri)	0	
	eating		Cpriote	/bap/thilerigAkoleju/(0	
	Agorthruth'Z		ProtectionLevel	NorConfgurationaccessures	0	
	Mafanuc		frequencies	AcctoremunAarma(v1)	0	
	machine_status_alg		NOPropan	Channel ProgramPorterbrophane(u1.1)	0	
	Centeriano			(and the	0	
				Catal and	1-10416 IC C 3 31	

The selected addresses can be seen here:

Siemens AG	Shapfoor Mynt. App.									Siemens Xcelerator	Q 8
<u>s</u> ←			Shopfloor	Managem	ent Appli	cation					0
Dephar		Oata Mapping List					Mac	nine Status Cal	culation		
Q. Catencey										0	
-	Calculation Name	_							-		
ta Mapping	calculation1	Calculation Name	Carta Mapping Selection		🕗 Verabi	set.	•	iculation Algorithm		0	
	newCalculation	Variable Names and Addresses						0		0	
0	calculation2	Tune Feedowerride	Address /Channel/State/feedRa	Deligion DOUBLE		5		0		0	
HAR C	calculationController1									0	
30 III	eather	Spindleoverride	/Channel/Spindle/spee	DOUBLE		5		0		0	
0	edities.	None NCProgramStatus	Antern /Channel/State/progSt	DOUBLE		Unit		0		0	
MANA C	Algorithmatr2									0	
0	Maffanut						_ C#	or Next		0	
And wage (machine_status_alg									0	
	carculation3									0	
							Same par page	10 w	1 = 10 of 16	с э. н	

7. Add additional variables.

· +			Shopfloor	managen	ent Applic	Lation					
-		Data Mapping List					Mac	ine Status Calcul	2009		
~										0	
	Calculation Name	-									
	calculation1	Calculation Name	Cara Magang Selection		Ø Verable	Set	•	canon reportion		0	
	newCalculation	Variable Names and Addresses						0		0	
	Calculation2	Name Feedoverride	Attens /Channel/State/RedRa	Delition DOUBLE		0-1 %	. 6	di New Machine Date akadeter		0	
	calculationController1	Name	Attens	Deleter		Unit		0		0	
	office	Spindleoverride	/Channel/Spindle/spee	DOUBLE	-	5	-	0		0	
	edities!	NCProgramStatus	Antenn /Channel/State/progSt	DOUBLE	-	Unit	-	0		0	
	Algorithm3012						_			0	
	Mafanuc						Care	-		0	
	machine_status_alg									0	
	calculation3										
							theme per page.	10 * 1.	10-10-10 No. 11.C - C	> >1	

Note

String variables

If the data type of the variable is specified as a string, the expected text must be wrapped in single quotation marks (').

Calcula	tion Name	Variable Set	Calculation Algorithm
0	Please wrap expected text in single of	quotes (') for variables with STRING data type. i.e aStringVarible	'Expected Text Value'
Status N No Dis	ame turbance	Algorithm Feedoverride==0	\oplus
		Algorithm Feedoverride>140	\oplus
		Algorithm Spindleoverride==25	÷
		Algorithm NCProgram>>'_N'	\oplus
			Cancel Save

Note

Variable names

There must be no spaces between the variable names, for example:

- Feedrate
- NC program status
- Spindle override
- etc.

The following input fields can be seen:

6 (Shopfloo	r Managerr	ent Appli	cation			
2		Data Mapping List		_			Mac	nine Status Calculation	
-		_							0
-	Calculation Name	California Narra	Cata Inapprop Servicitor		Variable	e Set			
-	catculation 1		-		-		-		0
	newCalculation	Variable Names and Addresse						•	0
D	calculation2	Feedoverride	Channel/State/feedRa	DOUBLE		5	+	0	0
• 1	calculationController1	Spindleoverride	Aldress Channel Spindle spee	Double		011 94		0	0
	edition	None NCProgramStatus	Address	Detalspe				_	0
	editTest	NCProgramStatus	Channel State progSt	DOUBLE	•	Unit		0	0
	AlgorithmXYZ	Naria	Address	Datatype		Unit		0	0
>	Mafrance						_		0
and and a	machine_status_alg						C 40	-	0
	calculation3								0
								10 w 1 = 10 of 1	1 K K S SI

Example of a variable with string data type:

30 4	←		Shopfloor	Managem	ent Appli	cation					
hater		Data Mapping List					Mach	ine Status Ca	iculation		
Q. Galeriany										0	
172	Calculation Name	Consider Name	Carla Mapping Selection		👩 Variabi	e Set		utation Reporting			
-	calculation1		•							0	
- <u>1</u>	newCalculation	Variable Names and Addresses						0		0	
0	calculation2	Feedoverride	Channel State feedRa	DOUBLE		5	+	0		0	
AMP C	calculationController1	Spindleoverride	Address Channel/Spindle/spee	DOUBLE		5		0		0	
	edition	Nors NCProgramStatus	Address	Detulype		Unit		-		0	
13	edificat	NCProgramotatus	/Channel/State/progSt	DOUBLE		0.00		0		0	
unite -	AlgorithmXYZ	nyVariableName	myVariableAddress	STRING		Unit		0		0	
0	Mafanuc						_			0	
And Integral 2	machine_status_alg						Cano	d Real		0	
	calculation3									0	
							theme per page	10 -	1 = 10 af 16	< > >i	

Enter algorithm expressions for every condition

These conditions are permissible:

- No fault
- Technical fault
- Organizational fault
- Production

The calculation is realized in the sequence specified above from top to bottom. If expressions apply, then they are not evaluated any further.

For example, if expression "No fault" is true, then it is no longer evaluated and the machine status is set to "No fault" even if the other algorithms are also true.

The sequence is important.

For string variables, the expected text must be enclosed in single quotation marks (').

Condition "myStringVariable" should be the same as "myExpectedString". This means that the expression is written as follows: myStringVariable=='myExpectedString'.

The user can define a logical condition with alarm as follows:

For onboarded assets with SINUMERIK, i.e.:

- Alarm == [60000, 60001]
- Alarm == 60000

For onboard assets with Machine Agent:

- Alarm ==["/channel[1]/PS/0004", "/channel[1]/PS/0005"]
- Alarm == "/channel[1]/PS/0004"

+				nagement Application		
		Data Mapping List			Machine Status Calculation	
						0
	Calculation Name					
	calculation1	Calculation Name	Cara Mapping Selector	O vauce be:	Calculation Algorithm	0
	newCalculation	O Presse wrap expect	ind text in single quoties () for variables wit	n STRING data type. Le aStringiliarible	Tapected Text Value'	0
	calculation2	Notes Nerro No Disturbance		Algorithm		0
	calculationController1	Fortu Name			•	0
	edities	Sectorical Disturbance		Algorithm		0
	edt/fest	Organizational Disturb		Algorithm	•	0
	AquithinXYZ	Production		Algorithm	•	0
	Mal'anuc				Cancel Serve	0
	machine_status_alg					0
	catouterd					0
					There per page 10	< > >i

- Network AV
 Stender Management Application

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 Automation
 Automation

 <
- 1. Click on the plus icon to write the algorithm.

2. Select the variable or expression.

	Siemens AG	Shopfloor Mgmt. App.						Siemens Xcelerator	0.8
36					Shopfloor Man	nagement Application			
Papela									
오 canna								0	
ing.		Calculation Name							
Data Maga		Catculation 1	Calculation Nam	Add New V	tariable or Expression		X Eviation Algorithm		
		newCalculation	Status Name No. Dosturbart	Variable	breat second to a		۲		
0		calculation2	Satur Name Sectorical Dis	Athmetic	Feedoverride	1			
30		calculationController1	Bata Name Organization	Comparison	Spindeoverride	100 (C) (C) (C)			
554			Bate Name Production	Contains	NCProgramStatus				
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		carolatord							
						la r	1. per page 10 - 1 - 10 of 16	H () H	

5 ←			Shopfloor M	anagement Application		
phor .		Data Mapping List			Machine Status Calculation	
₽ maay						0
-	Calculation Name					
*	calculation1	Catouron Name		O values for	Calculation Algorithm	0
Sa .	newCalculation	Trans Serve	0	_		0
8	calculation2	No Disturbance		Feedovernde	•	0
	calculationController1	Technical Disturbance		Algorithm	•	0
a	others	Salas Rena Organizational Disturb		Algorithm	•	0
	editiest	Bratus Nama Production		Algorithm	•	0
ANA C	Algorithm XYZ					0
5	Maffanuci				Canal Save	0
and and a second se	machine_status_alg					0
	carculation3					0
					Палто раг ради. 10 w 1 - 10 of 16	к с э н

3. Click on "Save" once you have entered the algorithms.

6 4			Shopfloor M	anagement Application		
2		Data Mapping List			Machine Status Calculation	
st. National States						0
Ti.	Calculation Name	_				
M. 1	calculation1	Caluator Name	Carta Managera Managina	O version bet	Calculation Algorithm	0
5a ~~ /	newCalculation	The second secon		and a second sec	0	0
0	carculation2	No Defurbance		Feedoverride+=50		0
**	catulationControler1	Tota Name Rechnical Disturbance		Feedoverride+50&Spir	•	0
6	ether	Cripenizational Disturb		Feedovernder-50&Spir	•	0
	edi/Test	Production		Feedoverride-50&Spir	•	0
une c	ApprennicitZ				Cancel Save	0
5	Mafanuc .					0
int c	machine_status_alg					0
	calculation3					0
					10 mm page 10 mm 1 - 10 of 16	IC C > >I

The following information can be seen:

+		Shopfloor Manag	pement Application		
·	Data Mapping List			Machine Status Calculation	
					0
	Calculation Name				
	calculation1				0
	newCalculation				0
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	calculationControler1				0
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	Marfanuc				0
	nachini, jida jilij				0
	carolation3				0
				Палто раг ради. 10 — т 1 = 10 af 17	14 C 2 21

Further editing is possible; however, deletion is not possible.

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Aur		Onto Mapping List			Machine Status Calculation		
2						0	
1	Calculation Name						
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	newCalculation					1.00 (/	
	calculation2					0	
	calculationController1					0	
	edition					0	
	est/mt					0	
	Algorithm3/Y2					0	
	Maffanuc					0	
2.0	machine_status_alg					0	
	calculation3					0	
				Test I	а раграда 10 — н — 1 – 10-а	не с х н	

Applying a calculation to an asset value

III She	mens AG	Shopfoor Myrrt, App.							Siemens Xcelerator	08
-5	←			Sho	pfloor Mar	agement	Application			0
Suphor	Techina		Connectivity Data	Mappings	Application	Advanced				
Q Generaly	۲	Testform Asset_DoNotDelete records.tablefield.set_DofutDelete	teed a na	nine status car	outerton					
Data Magaing			Mach	ine Status C		Apply				
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%										
El Janes -										
O. And Versper.										

1. Select the algorithm.

<u>-5</u>	÷	Sho	pfloor Management Application	0
9uptur Q	Techese Techese Asser, DoAssDelete	needfully Data Mappings	Application Advanced	
Contension Data to the pairing List		Belecit a machine status care Machine Status Carculat DemoAlgorithm		
0 407.2		DemoCatculation Sest		
\$ 0				
ES Januar				
O Ante Marapar /				

2. Click on "Apply".

	Siemens N	Shepfoor Mynt. App.		Siemens Xcelerator	4 A
5	+		Shopfloor Management Application		0
Shapfloo	here	•	1110 Connectivity Bata Mappings Application Advanced		
Q. Geteray	6	NestNessAsset_DuNutDelete			
			Selected machine status catosistion : DemoCatosistion		
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-5	+			Sho	pfloor Man	agement	Application			0
States	Technes		Cannactivity	Data Mappings	Application	Advanced				
2		TestNessAsset_DoNotDelete								
-			5 etc	chel machine status ca	rovation : DemoCale	sulation				
Data Mapping				Machine Status Carcal DemoCalculation	nors.	A1174				
5				CHICCHCORCO						
0					porithm successfu	fy applied to a	hard			
AMP 2										
- 4					0	-				
13					_		- 11			
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And Strengt (

The result is displayed:

III See	mens MG	Shepfoor Mgmt. App.		Siemens Xcelerator 🗘 🔒
56	←		Shopfloor Management Application	0
Depher	hutten	1.40	Connectivity Bata Mappings Application Advanced	
Q. Getenny	۲	TestNew Asset_DuNotDelete removale. MMMTestinget_DuhasDelete	Selected machine status calculation : Generalization	
ing Data Maging List			Nachne State Gazantese DemoCalculation	
<u></u>				
© 				
\$a **				
ES Janua -				
O. Anne -				

If an algorithm has already been applied to an asset, then this is displayed at the top. A user can always change the applied algorithm.

III Sie	imens AG	Shopfoor Mgmt. App.	Siemens Xcelerator	r 4 8
<u> </u>	←		Shopfloor Management Application	0
Shepfoor			Connectivity Data Mappings Application Advanced	
Q. Galernay	۲	28_08_23_servlar_test intuitive.servlar_test_	Selected machine status calculation : DescGaldDevisible	
12) Data Mapping Uni	٠	Bila/TestAsset0910 mtoles/MechineCalculation	Machine Status Ca. +	
- 	۲	CellAmet. minimum		
	۲	CellAsset2ToBeDeleted intolecorit .		
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O Los	۲	Dashylfest modec.bedylestlype		
Manager (7	۲	DocumentationAsset missisconit:		

8.12.2 Machine status calculation with alarm

Overview

The user-defined machine status can be calculated using alarms. The calculation of the machine status can be applied to systems that are connected with SINUMERIK Machine Agent.

Users must add a new calculation:

1. In the Shopfloor app, go from "Data Mapping List" to "Machine Calculation". Roles "Shopfloor Admin" and "Shopfloor User" are required to see app "Data Mapping" on the Shopfloor page.

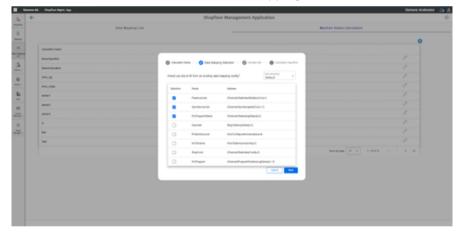
	Shopfloor Management	Application
	Data Mepping List	Machine Status Calculation
		0
Calculator Name		
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2. Add a new calculation.

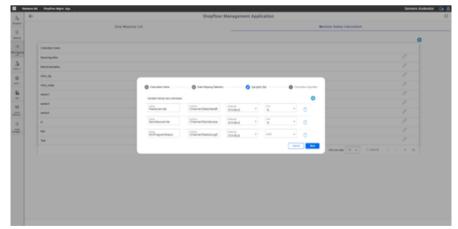
	Data Mapping Link	Wathins Holes Calculation
		0
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		Monray 0 x 1+040 X 1-0 X

- Image: Description
 Structure Registration
 Image: Description
 Image: De
- 3. Assign a configuration name.

4. Select the variable addresses of the data mapping.



The selected addresses appear:



Additional variables can be added.

_	6	Shaphar Mpril. San		Shopfloor	Jananen	ant Anali	cation					Semena Kolera	™ 0 8
		Data Museing	List							achina Matun Cate	wation		
1 10 10 10 10 10 10 10 10 10 10 10 10 10		Calata han Bangkapha Tana Saka Ana, Ata Ana, Ata	Constant from A	Des Tegens, Sander		•		•	0			* * *	
-		anteri anteri	Family-amon	Charrier State NextR	100.00 000.00		*	. 🖂	ter Barran bata	100			
o II		я м м	Non-spandarus	Chanachandarian Chanachandarian Chanachanachangh	Annual Builden Builden Builden	•	a a		0				
										inceres 1	x 1-868		

Currently, 4 conditions are permitted:

- No error
- Technical error
- Organizational error
- In production

1. Enter your algorithm.

٠			Shopfloor Man	agement Application			
	Data W	lappring Limit			Rection	Ratus Calculation	
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2. Click on "Save".

	Siemens AG	Shepfoor Mpnt, App.			Siemens Xcelerator	08
5	+			Shopfloor Management Application		0
Stephe			Data Mapping List	Machine Bratus Calculation		
2					0	
11		Caculation Name				
Data Maga	1	calculation1			0	
1		NEWCOCUMUM			0	
0		calculation2		Agortran successfully created	0	
140.		calculationController1		Agartes secondary course	0	
- 50		edities		(m)	0	
10		antical			0	
Anna		Algorithm (C) 2			0	
0		Mafanus			0	
Anna Anna		native, state, as			0	
		carouterd			0	
				аниче рат рада — 10 — т 10 <i>и</i> 17 — (1	()	

3. Apply a calculation to a system.

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- 11 o 11			

4. Select the algorithm.

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34	(Shopfloor Management Application	0
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2	()	benerie reptine entre (muniture freedune)	
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<u></u>		See .	
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Note

The calculation is realized in the sequence from top to bottom. No further evaluation takes place if an expression matches.

For example, if condition "No error" is true, then this is not evaluated any further. The machine status is set to "No error", even if the algorithms are true.

+		Shopfloor Mana	egement Application		
	Data Mapping List			Machine Status Calculation	
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	100	1921704	0		
	and the second se	Repair Salar C.N	•		
			Genation		

Users can define a logical condition with alarms, for example with SINUMERIK: Alarm=[60000, 60001] Alarm=60000 For onboard assets with Machine Agent: Alarm=["/channel[1]/PS/0004", "/channel[1]/PS/0005"] Alarm="/channel[1]/PS/0004"

Configuration panel - restrictions

A new configuration can be added and edited; however, it cannot be deleted.

÷			Shopfloor Ma	anagement Application		
-		Data Mapping List			Machine Status Calculation	
-						0
	Calculation Name					
***	CARLANDONT					0
	nowCalculation					9
	CARD-ARROND					0
	calculationController1					0
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	Agothexitiz					0
	Mafanac					0
40	machine_status_alg					0
	constance)					0
					тыла раг радаг — 16 — н — 16 об 17	к с ж м

Note

The name of a calculation may not contain any special characters.

Do not use the following characters: ?, : , *, &, ", \$, |, `,<,>, +, !, [,]

	Ø Data Mapping Selection	Variable Set	Calculation Algorith
Calculation Name test***			
			Cancel Next
	_	_	-
Calculation Name	Data Mapping Selection	Variable Set	Calculation Algorithm
Calculation Name	Data Mapping Selection Apportune Spindle override== 10	Variable Set	Calculation Algorithm
Status Name	Algorithm	ot valid.	
Status Name No Disturbance	Asporthm Spindleoverride==10 Asporthm The defined algorithms are n	ot valid.	•
Batus Name No Disturbance Batus Name Technical Distur	Apportion Spindleoverride==10 Apportion Spindleoverride=: Apportion Please enter a valid algorithm	ot valid.	•

1. Assign a unique name.

e -		Shopfloor Management Application	
	Data Waging List		
			0
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Padadan		Bulant	
**			

2. Under "Data Mapping Selection" select up to 5 user-defined variables.

n Ni Shiphan Myrit Ayp		Semens Korkra
	Shopfloor Management Application	
	Marine Salar Calculat	
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bracistate		
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and an	E NPW	
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The Distances	Store Asteriorismo (
Operations Debuters	D Record CheverSteiningCorp.(
	C Nilhigan (hanathiganfonkipiglani) (
-		
-		

If the data type of the variable is specified as a string, then the text is displayed in single quotation marks.

Calculation Name	Variable Set	Calculation	Algorithm
Please wrap expected text in site	ngle quotes (') for variables with STRING data type. i.e aStringVarible	'Expected Text Value'	
	Algorithm Feedoverride==0		Ð
	Algorithm Feedoverride>140		\oplus
	Algorithm Spindleoverride==25		\oplus
Status Name Production	Algorithm NCProgram>>'_N'		\oplus
		Cancel	Save

There must be no spaces between the variable names, for example feed rate, NC program status, spindle override etc.

-			Shopfloor N	lanagement Application			
		Exta Magging List			Wanting Datus C	nutation	
							,
	Calculator Name						
1							
	Enumeric sportment						
	and an		C Lete Trappen Laborator		Caluation Agentine		
		0 canada can	Constant press		and the second se	• • • • • • • •	
		An Distribution		Paul tractide == 10	•		
		Antonia Databarca		Aquition	•		
		Coperational Dataset		Algorithm	•		
		And a second sec		Algorithm	•		

The text box must not contain "Alarm". "Alarm" is reserved.

Example:

Alarm=='my expected alarm' results in an error.

8.13 Events

8.13 Events

All events of a machine are displayed in the "Machine Events" overview. You can influence the view by applying different filter criteria. You also have the opportunity of confirming events.

Under the list, you can find all details of the selected event.

Machine events in Operations Insight

With machine events, you log all machine incidents. In Insights Hub Monitor, you can create purely manual events as well as events for the regular acquisition of measured quantities with measuring series.

More information is provided in the Documentation Insights

Hub Monitor (<u>https://documentation.mindsphere.io/MindSphere/apps/insights-hub-monitor/introduction-events.html</u>).

Parameters

Parameters	Description		
05/12/2020 → 06/16/2020 utc	Displays the time range and the time zone used		
	Opens the calendar function		
	More information: Using the calendar function (Page 212)		
🕢 MindSphereStandardEvent 🗸	Shows the event type used		
	Opens the list to select the event type		
	The list can be filtered according to the following criteria:		
	• Relevant		
	• All		
	• Text filter in the search field		
✓ acknowledge	Sets the confirmation for the selected event to "True"		
C Refresh	Refreshes the displayed list		
\$\$	Opens a window to select the displayed columns. The following se- lection is offered:		
	Severity Level		
	Asset name		
	Time stamp		
	Description		
	Source		
	Confirmation		
	Relation		
	Event type		
	• Code		

8.13 Events

Filtering and sorting

Filter	Description	
Severity Level	The following filters are listed:	
γ	• Urgent	
	• Important	
	Information	
	Customized	
Confirmation	The following choices are offered:	
γ	• True	
	• False	
Y	A text filter is listed for all other columns.	
Sorting	Sorts the list according to the selected column, ascending or descending order.	
≣‡		

Procedure

- 1. Select the required machine in "Manage MyMachines".
- 2. Click on the button with dots and select function "Events". Window "Machine Events" opens.
- 3. If relevant, select the required time range.
- 4. Reduce the number of displayed events by setting specific filters:
 - Select the event type.
 - Activate the corresponding option of the filter criteria.
- 5. Click on the icon "Sort" in the column header to sort the list by column.

8.13 Events

To select an event, activate the checkbox in front of the event.
 Multiple selection is possible. To select all events, activate the checkbox in the table header.

←				Machine Events						≎ ▼~
Colores no. 08.08.0021540		0	SI - Martala Australian					31010001 12	n maal 5 maxwat of admontative	Reference
North Roll Industrie			О эк туу О Ф О Ф	Executing Conceptions Free Particles For Executions Free Particles For Executions Free Particles For	Ti Geolpice Teo Teo Teo	Source Roles Roles Roles	7- Y	Accessinged take take	÷.4	8
Scate HC Program	Information Werkeline	٢								
NC Program Status Operation Node Aures Protection Level Roy Condition	Cristeled AUTO We fire Minute inter of the Argentin Violang State									
Tentral Les Ware Design	114,7232 1141		< Tr Event Detail		hge 111					iame 10
to s					No selected Passe objects					

7. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The machine events are displayed in the full-screen mode.

							available 15 to a weight available	2010/07/04
V (eventeda engl							✓ stroeledpi	BO
w. S.Y	featury		description	hourse	nγ	Administration	⊃ Y	
0	C909(2)(22190(10.154 PM		Br	Pule .		nite .		
0	C90942122 1/20/23/20 N/		Ters	P. fe		fabe -		
0	C5006352 1:00:9373 N/		Br:	P./m		nite.		
								an .
			N P I I					
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8.14 Exporting

8.14 Exporting

You have the option of exporting the data points of an aspect.

You can export data of a specific time period and select between 2 export methods.

Note

Configuring the target directory for the download

Ensure that a target directory for the download has been configured in your browser.

The exported data is stored in several files depending on the data volume.

Parameter

Parameter	Description
0	Activates the automatic data refresh. When doing this, every 30 s the end of the time range is set to the current time and the data is refreshed.
	To stop the refresh operation, press the button again.
05/12/2020 → 06/16/2020 urc	Displays the time range and the time zone used.
	Opens the calendar function.
	More information: Using the calendar function (Page 212)
Aspect	Selects an individual aspect. All available aspects are listed in a drop-down list.
Select all	Selects all available aspects.
Export CSV	Data export in the CSV format.
Export JSON	Data export in the JSON format.

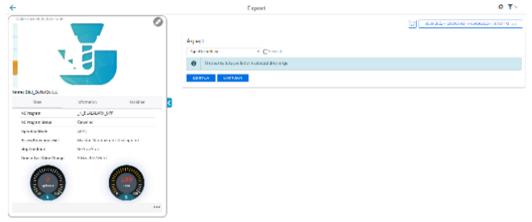
Procedure

- 1. Select the required machine in "Manage MyMachines".
- 2. Click on the button with dots and select function "Export".
- 3. Select the required time range.
- From the drop-down list, select the required aspect. To select all of the available aspects, activate the checkbox next to the list. The export buttons are only activated if data is available for the aspect in the selected time range.

8.14 Exporting

 Click the button of the desired export. The export is started.

The exported data is stored in several files depending on the data volume.



6. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The export is displayed in the full-screen mode.

÷	Export	Ф Т ∨
		(7) manufactor contractor contractor contractor
	Aspect	
	Agendriadhaa - Ealecal	
	In each dowlde is define any	
1	Example 2017 Constants	
-		
>		

- 7. The file is displayed in the lower left-hand section of the window, and you can make the following selection:
 - Open
 - Always open files of this type
 - Display in the folder (in the Downloads directory)

8.15 My Dashboards

8.15 My Dashboards

8.15.1 Overview

"My Dashboards" provides you with the opportunity of configuring new charts and using them for other assets in your tenant.

Parameters and icons

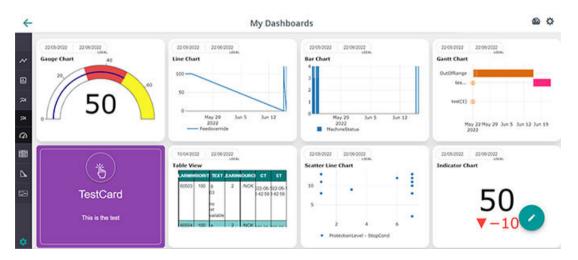
Parameters	Description
€2	Opens the "Dashboard Settings" template menu. This icon only appears in menu "My Dashboards". The icon is deactivated if you are in the edit mode. More information is provided in Chapter: Working with templates (Page 302)
Ξ	Fixes the pulled-down header. Move the mouse to the upper edge of the window. The header is pulled down.
(iii)	Opens the calendar function.
	More information can be found in Chapter Setting the dashboard display (Page 298)
Board 2	Opens the tab with your configured dashboard. You can save up to seven tabs.
	More information is provided in Chapter: Editing tabs (Page 305)
+	Creates an additional tab. More information is provided in Chapters:
	Editing tabs (Page 305)
	Working with templates (Page 302)
	The "Pen" icon activates the edit menu:
	Editing charts (Page 296)
	Editing tabs (Page 305)
•	The "Floppy disk" icon opens the dialog box to save as template. The icon only appears in the edit mode.
\$	Opens the menu for graphical chart design and tab editing:
	Dark Mode More information on the "Dark Mode" is provided in Chapter: Setting the dashboard display (Page 298)
	Grid Options More information on grid options is provided in Chapter: Generating charts (Page 288)
	Tabs More information on the tabs is provided in Chapter: Editing tabs (Page 305)
\sim	The "Line Charts" icon opens all available line charts.

8.15 My Dashboards

Param	ieters	Description
	N/ Line Chart	Opens the menu for creating a line chart.
	••• Line Dot Chart	Opens the menu for creating a line dot chart.
	Scatter Line Chart	Opens the menu for creating a scatter line chart.
	Filled Line Chart	Opens the menu for creating a filled line chart.
11.		Opens the menu for creating a bar chart.
\approx		The "Indicator Charts" icon opens all available indicator charts.
	pprox Indicator Chart	Opens the menu for creating an indicator chart.
	Gauge Chart	Opens the menu for creating a gauge chart.
		Opens the menu for creating a table overview.
2		Opens the menu for creating a Gantt chart.
; <u>,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Opens the menu to create a chart with a link.

Procedure

- 1. Select an asset in the machine overview. Click on the button with dots at the lower right on the asset. The drop-down list with the menu selection opens.
- 2. To open the "My Dashboards" window, select the "My Dashboards" entry.



You have the following options to continue editing:

- Generating charts (Page 288)
- Editing charts (Page 296)
- Setting the dashboard display (Page 298)

8.15 My Dashboards

- Working with templates (Page 302)
- Editing tabs (Page 305)

8.15.2 Generating charts

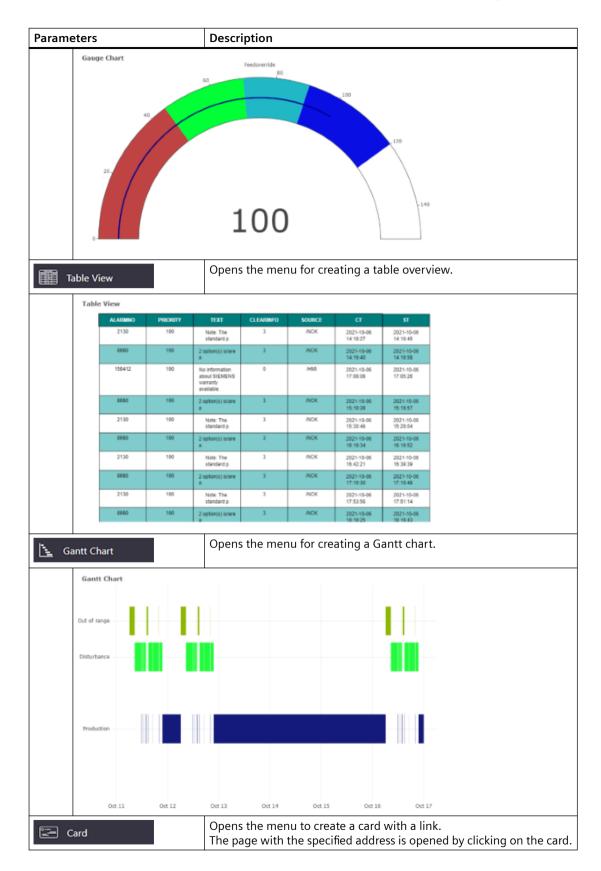
Using the "My Dashboards" function, you can create and edit line, bar, indicator and Gantt charts as well as table overviews.

Icons and buttons

Parameters	Description
	 The "Gear wheel" icon opens the menu for graphic chart layout and tab editing: Dark Mode More information on the "Dark Mode" is provided in Chapter: Setting the dashboard display (Page 298) Grid Options More information on grid options is provided in Chapter: Editing charts (Page 296) Tabs More information on the tabs is provided in Chapter: Editing tabs
	(Page 305)
Chart type	
📈 Line Charts 🗸 🗸	The "Line Charts" icon opens all available line charts.
𝔧⁄ Line Chart	Opens the menu for creating a line chart.
Line Chart 4 3.5 3 2.5 2 1.5 1 01:00 02:00 03:00 Nov 13, 2021 — MachineStatus	

ters	Description	
••• Line Dot Chart	Opens the menu for cr	reating a line dot chart.
Line Dot Chart		
150.5		
100		
99.5		
99 06:00 12:00 Oct 11, 2021	18:00 00:00 06:00 Oct 12, 2021	12:00 18:00
Scatter Line Chart	Opens the menu for cr	reating a scatter line chart.
Scatter Line Chart	<u> </u>	<u> </u>
12		
6 · · · ·	:	· · ·
2		
0	00:00 12:00 00:0	10 12:00





Parameters	Description			
Test Sie Siemens				
Parameters and functions				
New Chart				
Asset	Displays the asset selected in the machine overview. More information is provided in Chapters: Machine overview (Page 220) Asset Manager (Page 100)			
Aspect	Opens the drop-down list with the predefined aspects. More information is provided in Chapter:Aspects (Page 244)			
Variables	Opens the drop-down list with the predefined variables. More information is provided in Chapter: Configuring variables (Page 130)			
Add	Confirms and supplements the selected aspects and variables.			
Create a New KPI	 Opens the menu for creating a new KPI: KPI name Operators: + - - - - - - x Variable or value Create Number of variables per KPI: For Line Charts, Line Dot Charts, Scatter Line Charts and Bar Charts, you can select seven KPI variables for each chart. For Filled Line Charts, Indicator Charts, Gauge Charts, Gantt Charts and Table Views, you can select one KPI variable for each chart. 			
0	Deletes the selected parameter. The respective check box must be de- activated.			
•	Adds a new value range or task to line charts, gauge charts and Gantt charts.			
Û	Deletes the value ranges or tasks in line charts, gauge charts and Gantt charts.			
Label	The value of the label is entered in the chart and marked using a hor- izontal line. The name is displayed when the mouse hovers over the icon.			

Parameters	Description
Line Chart	
120 115 high () 105 100 95 85 opt () optimum 70	1 (80)
Date Time Range	
05/12/2020 ightarrow 06/16/2020 utt	Opens the calendar function to define a time period. Select a time period of up to 90 days.
	More information can be found in Chapter Setting the dashboard display (Page 298).
Chart name (optional)	Provides the option of entering a chart name.

Procedure

- 1. Move the mouse onto the bar at the lefthand edge of the window. The bar with the edit icons is pulled down.
- 2. Click on "Line Charts" or "Indicator Charts". Additional edit icons are displayed.
- 3. Click on the required chart type to create a new chart.
- 4. For "Card", a window opens to enter a name, description and URL.

Create Card	×
Name * Test Siemens	
Description * Siemens main url	
https://www.siemens.com	
	Save

- 5. For all other chart types, the window opens to select the aspect and variables. The name of the asset that you selected is automatically displayed in the "Asset" field.
 - Select the required entry from the "Aspect" drop-down list.
 - Select the required options from the "Variables" drop-down list.
 - Click on "Add".

LM_DemoAsset	•	Asset	Aspect	Variable	
Aspect					
CH1_BasicConfig	*				
Variables					
NCProgramStatus, NrOtAlarms	•				
Create New KPI Add					

6. The selection is displayed.

Activate the required check box and click the "Next" button.

Asset LM_DemoAsset	•		Asset	Aspect	Variable	
Aspect CH1 BasicConfig	•	0	LM_DemoAsset	CH1_BasicConfig	NCProgramStatus	0
Weisties NCProgramStatus, NrOtAlarr		۵	LM_DemoAsset	CH1_BasicConfig	Nr0fAlarms	0
Create New KPI Add	d					

- 7. For line charts and bar charts, a dialog is displayed to specify a label.
 - Click on the "+" icon to create a new label.
 - Enter the label name.
 - Enter the value.
 - Click on "Next".

New Chart		×	
• You can define allases for better unders	tanding of chart values. (optional)		
+ 1 Label Value *	Name *		
80	optimum	Û	
2 Label Value - 110	(high)	Û	
C Back	00	Next >	

- 8. The following window opens for the "Filled Line Chart":
 - Click the "+" icon to create a new value range.
 - Click in the Color text box to select a color.
 - Click on "Next".

New Chart			×
+			
Time Serie	es Value Color :		
Range 1 Min Value *	Max Volue *		Û
Range 2 Min Value *	Max Value *50		Û
K Back			Next

The following window opens for the "Gauge Chart":

- Click the "+" icon to create a new value range.
- Click in the Color text box to select a color.
- Click on "Next".

New Chart			×
Range 1 Bin Velue *	Mex Value * 50	Celor Nec4040	_
Range 2 Din Velue *	Max Value *	Celor #2889e9	Û
K Back			Next >

The following window opens for the "Gantt Chart":

- Enter a value and a machine name.
- Click on the "+" icon to enter another value and device name.
- Click on "Next".

New Chart			×	
Task 1 Volue*	Machine 1	Û		
Task 2 Volue *	Machine 2	Û		
< Back			Next >	

- 9. The "Date Time Range" window opens.
 - To open the calendar, click on the time range display.
 - Select a time period.
 - Optionally enter a chart name in the "Chart Name" text box.

Click on "Save" in the lower right part of the window. You return to the "My Dashboards" window.

New Chart	×
Date Time Range	
11/01/2021 → 11/30/2021 total	
Chart Name (Optional)	
C Back	 Save

8.15.3 Editing charts

You can edit the individual charts and change parameters.

Parameters and icons

lcon	Description
0	The "Pen" icon activates the edit menu.
B	The floppy disk icon exits the edit menu.

lcon	Description			
**	The "Tool" icon opens the menu for graphic chart layout and tab editing:			
	• Dark Mode More information on the "Dark Mode" is provided in Chapter: Setting the dashboard display (Page 298)			
	Grid Options			
	• Tabs More information on the tabs is provided in Chapter: Editing tabs (Page 305)			
0	Opens the chart menu to select additional aspects and variables.			
_	Opens the chart menu to set the filter.			
Û	Deletes the chart.			
Grid Options				
Grid Options	Displays the parameters for the grid:			
	Grid Type			
	– Fit			
	– Fixed			
	 HorizontalFixed 			
	– ScrollHorizontal			
	– ScrollVertical			
	 VerticalFixed 			
	Number of rows			
	Number of columns			
	You can define up to 4 rows and 12 columns.			

Procedure

To activate the edit mode in the "My Dashboards" window, click on the "Pen" icon in the lower right part of the window.

Edit the individual charts using the icons in the chart window. Additional options are provided in Chapter Setting the dashboard display (Page 298).

Changing aspects and variables

- 1. In the chart, click on the "Pen" icon at the lower right. The chart menu opens.
- Open the drop-down lists "Aspect" and "Variables". Change the required parameters. To confirm your selection, click on "Next". More information is provided in Chapter: Generating charts (Page 288)

Filtering

- 1. In the chart, click on the "Filter" icon. The filter menu opens.
- 2. Select the required variable.

- 3. Set the condition for the value of the variables. Use "And/Or" to logically link 2 conditions.
- 4. Only the values within this value range are displayed in the chart.

Filter Chart				×
1.Filter Variables Feedoverride Das	shy 👻	Condition Greater than	• Value*	٥
And/Or	•			
Clear filters				Ok

Changing the time range

- At the top left in the chart, click on the time range display. Enter another time range.
- More information on the calendar is provided in Chapter: Setting the dashboard display (Page 298)

Deleting a chart

To delete the chart, click on the "Recycle bin" icon at the bottom right in the chart.

8.15.4 Setting the dashboard display

You can change the position, the size and the display area of the charts on the dashboard display.

Icons and buttons

Parameters	Description
05/12/2020 ightarrow 06/16/2020 utc	Displays the time range and the time zone used.
Aggregated	Displays the aggregated data
Live	Displays the refreshed data starting at the time of activation.
Ō	Creates a snapshot in the "png" format.
e,	Activates the "Zoom" function.
÷	Activates the "Shift" of the display area function.
÷	Zooms into the display area.
	Zooms out of the display area.
[X]	Resets the complete display area
*	Resets the axis view

Parameters	Description
* -0	Switches over to a dotted line.
-	Displays the data when moving the mouse over the selected point in the chart.
=	Compares the data when moving the mouse over the selected point in the chart.
iiii	Connects to the plotly.com web page More information about third-party web pages is provided in Chapter: About this documentation (Page 10).

Procedure

Rearranging charts

- 1. The charts can only be rearranged in the edit mode. Click on the pen icon at the lower right. The edit mode is started.
- 2. Click on the chart that you wish to reposition on "My Dashboards".



3. Drag & drop it at the required position. You can arrange all charts in any sequence.



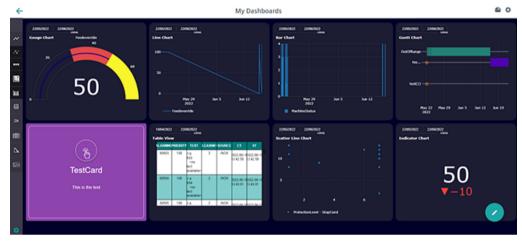
Changing the size of a chart

- 1. The chart size can only be changed in the edit mode. Click on the pen icon at the lower right. The edit mode is started.
- 2. Click on the zoom magnifying glass icon in the chart menu bar.

- 3. Move the mouse to one edge of the chart until the mouse pointer changes to an arrow with two points.
- 4. Stretch the window to the required size

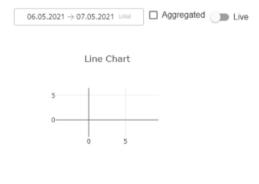
Dark Mode

- Open the setting menu using the "Tool" icon.
- Select the "Dark Mode". The background becomes dark and the writing light.

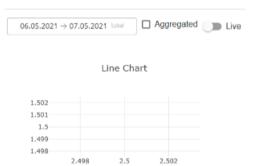


Changing the display area

- To display the menu bar, move the mouse cursor over the chart.
 - Click on "+" icon to zoom into the display area.
 OR -
 - Press and hold the left mouse button, and use the mouse to zoom into the required display area.



- Click on "-" in the bar to zoom out of the display area.
 OR -
- Press and hold the left mouse button, and use the mouse to zoom out of the required display area.



Setting the time range

You can set the time range for individual charts or for all charts at one tab.

- Click on the time range in an individual chart. Only set the time range for this chart.
- Click on the calendar icon at the top right. Set the time range for all charts at the tab.

- You can set a time period of 90 days.
- Select one of the upper entries to select a relative time period.
 - Today
 - Yesterday
 - Last 7 Days
 - Last 30 Days
 - This Month
 - Last Month
 - OR -
- Click on "Custom" to select an absolute time period. The calendar opens.
 - Select the time zone, "Local" or "UTC".
 - Select a start and end date in the calendar.
- Confirm using the checkmark button.

Today	<		2	3 June	2022	14:41	(24)	2	3 June	2022	14:41			>
Yesterday							0							
Last 7 Days	S	М	T	W	T	ç	s	S	М	T	W	Т	۶	S
Last 30 Days	MAY	r						JUN			1	2	3	4
This Month	1	2	3	4	5	6	7	5	6	7	8	9	10	11
Last Month	8	9	10	11	12	13	14	12	13	14	15	16	17	18
Custom	15	16	17	18	19	20	21	19	20	21	22	23	24	25
● Local ● UTC	22	23	24	25	26	27	28	26	27	28	29	30		
	29	30	31											
✓ ×														

8.15.5 Working with templates

You have the option of creating 10 templates.

The selected template and the default template are shown in different colors to clearly distinguish between them.

Requirements

As "Tenant" user, you can also access templates of a "Subtenant".

Icons and buttons

lcon	Description
	The "Dashboard Settings" icon opens the template menu. The icon is deactivated if you are in the edit mode.
B	The "Floppy disk" icon opens the dialog box to save as template.
\oplus	Opens a text box for the name of the new template.
\checkmark	Confirms the template name.
\times	Deletes the template name.
!	The "Floppy disk" icon defines the default template for the "Tenant" user.
0	The "Arrows" icon completes the template with your current settings.
Û	The "Recycle bin" icon deletes the template.

Procedure

1. Click the "Dashboard Settings" icon in the upper right-hand part of the window. - OR -

Click the "Floppy disk" icon in the lower right-hand part of the window.

- 2. Window "Dashboard Settings" > "Templates" with the template list of the user opens.
 - Click on the "+" icon in the upper part of the window to create a new template with the current chart settings.
 - In the lower part of the window in text box "New Template Name", enter a name and click on the "Checkmark" icon.

All other users of this tenant can now see and use your template.

- OR -

To delete the template name, click on the "X" icon.

Dashboard Settings			
Templates			
	\oplus		^ ^
TestTemplate1			800
test3			800
test4			ÐÛ
test7			•••
template1			ÐÐĴ
test45			ÐÕ
serdartest1			00
test2		MMM_SubTenent	800
New Template Name My Template			\times \checkmark ,

3. If you wish to use a template as default template, select a template from the list and click on the "Floppy disk" icon.

The template is saved as default template and the "Floppy disk" icon is no longer displayed for this template.

You can only define ONE default template.

The default template is displayed in the "My Dashboards" window.

Dashboard Settings	
Templates	
	•
TestTemplate1	
test3	
test4	
test7	
template1	00
test45	E • 1
serdartest1	
->test2	MMM_tablement 📙 🔂 📋

- 4. If you wish to update a template with your new configuration, click the "Arrows" icon.
- 5. If you wish to delete a template, select the template and click on the "Recycle bin" icon. You receive a confirmation prompt: "Are you sure you want to delete this template?".
 - Click "Confirm" to delete to the template.
 - OR -

Click "Cancel" to cancel the operation.

Are you sure you want to delete this	template?	
	Cancel	Confirm

Note

Deleting the default template

If you delete your default template, then the default template is also no longer available to another tenant. A blank page is displayed.

- 6. Message "You will no longer receive updates on changes to the template" is displayed if you have selected a template, and you change the chart or board.
 - Click "Confirm" to confirm the message.

```
- OR -
```

Click the "Cancel" button to cancel the operation.

You will no longer receive updates o	n changes to t	the template.
	Cancel	Confirm

- 7. Message "Do you want to continue to override your current chart configurations?" is displayed if you have configured charts without a template, and you click on a template from "Dashboard Settings".
 - Click "Confirm" to overwrite your configured charts.

Click "Cancel" to cancel the operation.

Do you want to continue to override configurations?	your current	chart
	Cancel	Confirm

8.15.6 Editing tabs

You have the option of creating additional tabs and deleting tabs. You can create up to seven tabs.

Icons and buttons

Parameters	Description			
Board 2	Opens the tab with your configured dashboard. You can save up to seven tabs.			
	More information is provided in Chapters:			
	Generating charts (Page 288)			
	Editing charts (Page 296)			
	Setting the dashboard display (Page 298)			
	Working with templates (Page 302)			
+	Creates a new tab.			
Tabs	Opens the menu with your list of tabs.			
Dashboard name	Displays the particular tab.			
	The "Pen" icon activates the edit menu.			

⁻ OR -

Procedure

Creating a tab

1. To create a new tab, in the upper window bar click on the "+" icon to the right of the Board tab.

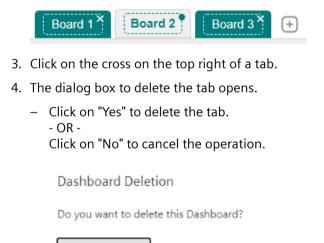


- 2. Message "Do you want to save your configuration as a template" is displayed.
 - Click on "Confirm" to save the settings as template.
 The "Dashboard Settings" menu with the template menu opens.
 More information is provided in Chapter: Working with templates (Page 302).
 OR -
 - Click on "Cancel" to cancel the operation.

Do you want to save your configuration as a template?			
Do not show again	Cancel	Confirm	

Deleting a tab

- 1. Tabs are deleted in the edit mode. Click on the "Pen" icon to activate the edit mode.
- 2. You can see the tabs in the edit mode.



5. Click on the "Save" button to save the setting.

No

Yes

Renaming a tab

- 1. In "My Dashboards", click the "Gear wheel" icon in the lower left window section.
- 2. The edit window opens. Click on "Tabs".

Dark mode 🔘	
Grid Options	
Grid Type	
Fit	•)
Number of rows	
Number of columns	
4	

3. The menu with your list of tabs opens. Select the tab that you wish to rename. Enter the new tab name.

Dark mode	
Grid Options	
Tabs	
Dashboard Name Board 1	
Dashboard Name Board 2	
Dashboard Name Board 3	

4. Click on the "Save" button to save the setting. - OR -

Click "Cancel" to cancel the operation.

8.16 Manage MyMachines /Spindle Monitor

8.16.1 Overview

You can display the following data of the Weiss spindle:

- Display of the operating data (Page 310)
- Analysis of the clamping system (Page 311)
- Display of the occasions (Page 312)
- Display of the spindle operating diagram (Page 313)
- Display of the operating time (Page 314)
- Display of the tool clamping cycles (Page 314)

Precondition

The "Spindle Monitor" function is activated under SINUMERIK defaults.

Further information on this can be found in Chapter: Activating Manage MyMachines / Spindle Monitor (Page 113)

Procedure

- 1. In the "Machine Description" area, click on the button with dots. The list of the other pages is displayed.
- 2. Select "Spindle monitor". The "Spindle monitor" page opens.

3. The machine description is shown in the left-hand section of the window. You can see the spindle data in the right-hand section of the window.

÷		Spindle Monitor	Ф.Т.~
		mentalise terminal provider on other ca	PRESENT ALTERNATION OF STREET, SALVE RELATION
two county table to as		Periodia (MLD) Headline (MLD)	
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		Tread Company Tread (All Inc.)	
		Low- Day 9000 Blatt Mig 9000 St 41 Sets	
		Last 27 No. 10520 KOM	
		WHICH INVERTED LODIN HOLDS BOAR	

4. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The spindle monitor is displayed in the full-screen mode.

				Spindle Monitor
			200	00000-04044-500000-0403170-040
Spindle				
Drawing Remine	135125			
Send No.	0001			
Production Sale	06.04.0000			
Metor Rendered Inc.	253C			
Reading Temperature Front	31470			
Operating Data				
		Lateral		
Operation Planes Under Control		140-15		
Constant Report Frein Speed		10.05.435		
Number of Genorio Groce		70112		
Number of Hully Clanoing System	*1	5		
Analysis Clamping Sys				
Relevance Clamping Tana path root	8			
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Average.	22.56			
Masteries	11. m			
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8.16.2 Displaying spindle data

Weiss spindle data

Display	Description
Drawing Number	The drawing number is comprised of at least 6 digits. The number can also contain the following combinations of letters and digits. The drawing number defines the technical design of the spindle.
Serial No	The serial number is a consecutive number comprised of 4 digits. The drawing number and the serial number precisely define a built spindle.

Display	Description
Date of manufacture	The production date shows the date of manufacture of the spindle.
Motor Temperature	The motor temperature shows the last measured value of the motor winding temperature in °C before the transfer to Insights Hub.
	The second temperature display stands for an additional measured temperature. The additional temperature is only displayed if a corresponding temperature sensor is installed in the respective spindle. It displays the last measured value before the transfer to Insights Hub.

Spindle

Drawing Number	178225
Serial No	0001
Production Date	06.06.2020
Motor Temperature	25.3 °C
Bearing Temperature Front	23.4 °C

8.16.3 Display of the operating data

The following operating data is displayed for the Weiss spindle.

Display	Description
Operation Hours Under Control	Shows the operating period of the spindle under control in hours and minutes.
Operation Hours Under Speed	Shows the operating period of the spindle under speed in hours and minutes.
Number Of Clamping Cycles	Shows the total number of clamping cycle operations.
	"Clamping state released" \rightarrow "Clamped with tool" or "Clamped without tool"
Number of incorrect clamping cy-	Shows the accumulated number of the following procedures:
cles	Incorrect execution:
	No completed cycle
	"Clamping state released" \rightarrow "Clamped with/without tool" \rightarrow "Clamping state released"

Operating Data				
	Latest	Mar 29 2022 09:37	Mar 29 2022 09:55	Delta
Operation Hours Under Control	1440h 13m	1440h 13m	1440h 13m	NO DATA
Operation Hours Linder Speed	116th-Shm	116th-Out	116th 41m	NO DATA
Number of Clamping Cycles	158220	158770	198770	ND DATA
Number Of Faulty Clamping Cycles	5	5	5	NO DATA

8.16.4 Analysis of the clamping system

Display	Description				
Reference Clamping Time (with tool)	Shows the values of the first 100 clamping procedures that were measured during the commis- sioning phase of the spindle by the SMI24.				
	Minimum	The shortest determined reference clamping time from the first to the last measured time, with a maximum of 100. Clamping procedure: Clamping state "Released" \rightarrow "Clamped with tool"			
	Average	The average, determined reference clamping time from the first to the last measured, with a maximum of 100. Clamping procedure: Clamping state "Released" \rightarrow "Clamped with tool"			
	Maximum	The longest determined reference clamping time from the first to the last measured, with a maximum of 100. Clamping procedure: Clamping state "Released" \rightarrow "Clamped with tool"			
Trend Clamping Time	Shows the values that were measured in the corresponding time periods by the SMI24.				
(with tool)	Latest	The last determined reference clamping time			
	Average Of The Last 24 Hours	The average reference clamping time determined over the last 24 hours from the clamping procedures that took place during that time: Clamping state "Released" \rightarrow "Clamped with tool"			
	Average Of The Last 240 Hours	The average reference clamping time determined over the last 240 hours from the clamping procedures that took place during that time: Clamping state "Released" \rightarrow "Clamped with tool"			
	Average Of The Last 2400 Hours	The average reference clamping time determined over the last 2400 hours from the clamping procedures that took place during that time: Clamping state "Released" \rightarrow "Clamped with tool"			
Number Clamping Opera- tions Tolerance	Shows the time within "Clamped without tool	a clamping procedure between the clamping state "Tool released" and "			
	Number of clamping cycles within the clamping time toler- ance (without tool)	Accumulated number of clamping cycles without tool, which were within the clamping time tolerance			
	Number of clamping cycles outside the clamping time toler- ance (without tool)	Accumulated number of clamping cycles without tool, which were outside the clamping time tolerance			
	Reference clamping time (without tool)	Factory specification of the time for the clamping operation without tool			
	Actual clamping time (without tool)	Measured time for the last performed clamping operation without tool			

The following analysis data is displayed for the Weiss spindle.

Reference Clamping Time (with tool)				
Minimum	28 ms			
Average	29 ms			
Maximum	44 ms			
Trend Clamping Time (with tool)				
	Latest	Mar 29 2022 09:37	Mar 29 2022 09:55	Delta
Latest	27 ms	27 ms	27 ms	
Average Of The Last 24 Hours		28 ms	28 ms	-0 ms
Average Of The Last 240 Hours		28 ms	28 ms	-0 ms
Average Of The Last 2400 Hours		28 ms	28 ms	0 ms
Number Clamping Operations Toleran	ce			
	Latest	Mar 29 2022 09:37	Mar 29 2022 09:55	Delta
Number of clamping cycles within clamping time tolerance (w/o tool)	9991	9991	9991	0
Number of clamping cycles outside clamping time tolerance (w/o tool)	0	0	0	0
Clamping reference time (w/o tool)	180000			
Clamping actual time (w/o tool)	44625			

8.16.5 Display of the occasions

The following occasions are displayed for the Weiss spindle.

Display	Description
Upper limit violation type	PTC motor temperature
	Alarm motor temperature
	Incorrect motor temperature
	Alarm KTY2 temperature
	Incorrect KTY2 temperature
Occurrence	Display of the accumulated number of upper limit violations
Total duration	Display of the accumulated time during which a violation of the limit value existed
Last point in time	Display of the time stamp of the exceedance of the limit value: date, time
Δ Occurrence	Display of the accumulated number of the upper limit violations during a predefined time period
Δ Total duration	Display of the accumulated time during which upper limit violations existed during a predefined time period

(Occasions						
	Exceedance Type	Occurrence	Total Duration	Last Time	∆ Occurrence Mar 29 2022 09:37 Mar 29 2022 09:55	∆ Total Duration Mar 29 2022 09:37 Mar 29 2022 09:55	
	PTC Motor Temperature	0	0 5	01.01.1970	0	0 s	
	Warning Motor Temperature	80	4450 s	20.01.2018	0	0 s	
	Faulty Motor Temperature	28	3680 s	20.01.2018	0	0 s	
	Warning KTY2 Temperature	0	0 s	01.01.1970	0	0 s	
	Faulty KTY2 Temperature	0	0 s	01.01.1970	0	0 s	

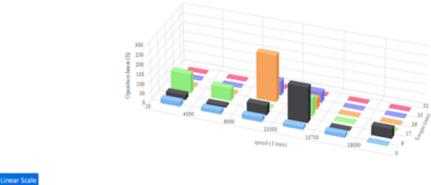
8.16.6 Display of the spindle operating diagram

The heights of the individual bars correspond to the percentage time shares, the dwell time, relative to the operating hours under speed.

The widths of the bars correspond to the evaluated speed or torque range.

Position the cursor on the respective bar to also display the number of accumulated operating hours under speed.

Spindle Operation Chart

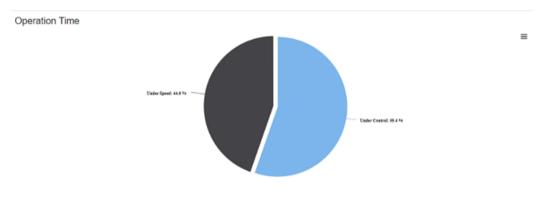




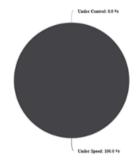
8.16.7 Display of the operating time

The runtime diagram shows the ratio of measured runtime under control and the measured runtime under speed.

If the operating time of the spindle under speed was exactly as long as it was under control, the time shares are displayed with 50% respectively.



Operation Time between 29 Mar 2022 09:37 and 29 Mar 2022 09:55

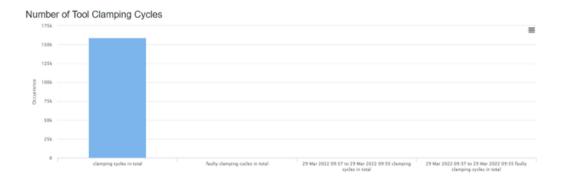


8.16.8 Display of the tool clamping cycles

The following tool clamping cycles are displayed in the bar diagram for the Weiss spindle:

Display	Description
Total clamping cycles	The height of the bar "Total clamping cycles" shows the number of all cycles
	"Clamping state released" $ ightarrow$ "Clamped with tool"
Total erroneous clamp- ing cycles	The height of the bar "Total erroneous clamping cycles" shows the number of clamping cycles that fulfilled the following criteria:
	Incorrect execution
	No completed cycle
	"Clamping state released" \rightarrow "Clamped with/without tool" \rightarrow "Clamping state released"

≡



8.17 Machine location

8.17 Machine location

In the "Machine Location" view, you can view the locations of your assets in different environments:

- Global assets are shown on a world map
- Street assets are shown on a street map
- Shopfloor assets are shown in the machine hall

Parameter

Tabs/buttons	Description	Description		
Global	Displays the machin	Displays the machine locations on a map of the world		
Street	Displays the machin	Displays the machine location with precise address.		
Shopfloor	Displays the machin	e location on the shopfloor.		
Search	Enter the name of t	he asset in the input field.		
	You obtain a selection	on of your assets after entering just a few letters.		
Tab "Global" / "Street	t" / "Shopfloor"			
+ -	You can zoom in or	out of the map view using "+" and "-".		
Tab "Shopfloor"				
1	Adapting to the view	Adapting to the view.		
+	Returning to the pre	evious level.		
💿 Edit	You can edit the hal	I layout if the machine location changes in the machine hall.		
	V Apply	Save changes		
	× Cancel	Do not apply changes		
ப் Upload	Opens the Explorer to open and upload the required hall plan.			
	Additional options			
	🗍 Delete	Deletes the saved hall plan.		

Procedure

- 1. In the machine overview, select the required machine and click on the button with dots.
- 2. Click on "Machine Location".
- 3. The "Machine Location" window opens. The selected machine is displayed in a map of the world.

8.17 Machine location

- 4. Zoom in or out of the map using the "+" or "-" buttons. - OR -
 - Image: Section (Section 1)

 Image: Section 1)
 </t
 - Zoom using the mouse wheel.

5. Click on "Street".

The machine location is displayed on a street map.



8.17 Machine location

6. Click on "Shopfloor".

The location of the machine on the shopfloor is shown.

- Click on "Upload".
 The Explorer opens. Navigate in the directory to select a hall plan.
- You can edit the hall layout if the machine location changes in the machine hall. Click on "Edit".



- 7. Message "Level diagram not found" is displayed if a hall layout has not been assigned to a machine.
 - Click on "Back" if you do not wish to create a hall layout.
 - Click on "Upload" to save a hall layout.

8.18 Motor temperature

8.18 Motor temperature

"Motor temperatures" is a user-defined view to monitor the motor temperatures of a machine.

The temperature characteristics of all configured axes are displayed in an overview. A separate chart is displayed for each axis. You can influence the view based on different criteria.

Precondition

- The motor temperature variable must be configured. **More information** is provided in Chapter: Configuring variables (Page 130) and Configuration example for the motor temperature (Page 379).
- The name of the motor temperature variable must start with "mmm_mt" so that the data sets are displayed on the "Motor Temperature" page.

Parameters

Button	Description
05/12/2020 → 06/16/2020 utc	Displays the time range and the time zone used.
	Opens the calendar function.
ltem per page	From the drop-down list, select how many charts should be displayed on one page: • 4
	• 8
	• 20
	• 40
x - y of z	Indicates which charts are displayed from a total number.
Mode	The following modes can be selected:
	• Aggregate mode: Displays the first and last values, sorted by time stamp for each unit.
	• Raw mode: Displays the last 256 values. If there are more data points in the selected time range, this is indicated by a dotted line.
	• Auto mode: Switches automatically between both modes depending on the time range.
K	Scrolls to the first page.
<	Scrolls to the previous page.
>	Scrolls to the next page.
>1	Scrolls to the last page.

Procedure

- 1. In the "Machine Description" area, click on the button with dots. The list of the other pages is displayed.
- 2. Select "Motor Temperature". The "Motor Temperatures" page opens.

8.18 Motor temperature

- 3. The machine description is shown in the left-hand section of the window.
- 4. In the right-hand section of the window, select the time range using the calendar function.

More information is provided in Chapter: Using the calendar function (Page 212)

- 5. The underlying data are displayed when you move the mouse over the chart.
 - The charts show a line chart of the aggregated or raw time series data for the motor temperature aspect variables during a specific date/time range.
 - You can select Aggregate, Raw, or Auto mode.

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6. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The motor temperature is displayed in the full-screen mode.



8.19 Files

8.19 Files

You have the option of saving files for an asset in Insights Hub. Manage MyMachines provides the following functions:

- Listing files
- Upload
- Download
- Deleting

Note

Configuring the target directory for the download

Ensure that a target directory for the download has been configured in your browser.

The exported data is stored in several files depending on the data volume.

Parameters

Parameters	Description
All time 💶	Switch to select the time:
	Activated - all files are displayed
	Deactivated - only files of the selected time range are displayed
05/12/2020 → 06/16/2020 utc	Displays the time range and the time zone used
	Opens the calendar function
	More information: Using the calendar function (Page 212)
: =	Opens a window with switches to select the displayed columns:
-	Name
	• Path
	• Туре
	• Size
	Date of creation
	Date of change
	Description
🗍 Delete	Deletes the selected file in Insights Hub after a confirmation prompt
+ Upload	Loads a file to Insights Hub
⊥ Download	Creates a local copy of the file

Procedure

- 1. Select the required machine in "Manage MyMachines".
- 2. Click on the button with dots and select function "Files".

8.19 Files

- 3. Select the required time range to reduce the number of files that are displayed.
- 4. Enter names or parts of names into the search fields to filter the list more specifically.
- 5. Click on the column header to sort the list by column.
- 6. To load a file to Insights Hub:
 - Click the "Upload" button.
 - Navigate to the required file and click on "Open".

The upload is started. Depending on the data quantity, the file is split up into several files.

- 7. To save a local copy:
 - Activate the checkbox in front of the file.
 Multiple selection is possible. To select all files, activate the checkbox in the table header.
 - Click on "Download".



8. To collapse the machine description, click on the left-pointing arrow symbol on the right side of the frame.

The files are displayed in the full-screen mode.

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-	MARKAR (CONSISTED AND NOT AND	in parts. The	0100 UR 00 1401 54
		line or real March 1997	(4 - 4 - 5

- 9. The file is displayed in the lower left-hand section of the window, and you can make the following selection:
 - Open
 - Always open files of this type
 - Display in the folder (in the Downloads directory)

8.20 Machine snapshot

Overview

Machine Snapshot allows information about hardware components and software versions, which are used in a SINUMERIK control system for machine tools, to be automatically retrieved. Based on the transparency regarding the components that the user installed, expert support can be offered for handling hardware and software.

Section "Change Protocol" contains information to identify changes, which are important for experts and other users that operate a machine.

Important information can be saved, for instance information on the machine and address information for every machine, which uses identSNAPSHOT.xml files.

Creating an identSnapshot.xml only applies to SINUMERIK Operate.

Additional information is provided at Generating the identSNAPSHOT file on the SINUMERIK controller (Page 333)

Basic information

The "Basic information" displays details about the controller and user. User data are divided into 3 groups:

- User data This section contains information about the end user/purchaser of the controller
- Manufacturer data This section contains information about the controller manufacturer.
- Dealer data

This section contains information about the OEM/purchaser of the controller.

ш	Siemens AG	Manage MyMachines				Siemens Xcelerator	4 0 8
÷			Mach	ne Snapshot		0	▼ ~
		Basic Information	Hardware Components	Software Components	Logbook and Licenses	Change Protocol	
	User						~
	Manu	facturer					~
	Deale	r					~
>							

8.20 Machine snapshot

÷		Ma	achine Snapshot		0	▼ ~
	Basic Information	Hardware Components	Software Components	Logbook and Licenses	Change Protocol	
	User					
	Customer-Id		Street			
	Name		Zip-Code			
	Contact		- Location			
	- Phone		Country			
	Рак		State			
	- E-mail		URL			
	-					
	Manufacturer					`
	Dealer					

The "Basic Information" section displays the dataset that was created on the machine via the "Diagnostics" > "Version" > "Logbook" > "Change" path.

2		>
8084 🗸 😝 Period 1 of the test license	active remaining time 158 h	
identSNAPSHOT	Serial number of CF card: SPG2019052401985	
Machine name/no. Machine type		data
Customer number Manufacturer's name		Manu- facturer
Street and house number Post code / ZIP code Place		Dealer
Country State/county Contact	Please select: 👻	End user
Phone number Fax E-mail address		× Cancel
E-mail address Website	5	ок
Alarm Mes- list Sages Alarr	n VC/PLC Remote RCS diag.	Vi Version

Machine	logbook		Serial number of CF card: S4Y9G8JD41M8647N		
No.	Date Time	Name Company/department	Error diagnostics/measure		
Machine n	ame/no.				U
Machine t	ype			i	
Manufactu	irer				-
Dealer				Char	nae
End user					
				Ne	
				ent	ry
				Sear	ch
				Start	
				Mach	
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Hardware components

Section "Hardware components" shows information about the controller hardware. The following views can be selected:

- Tree view
- List view

Tree view

The tree view in Section "Hardware components" shows all of the information in a hierarchic structure. In the tree, a hardware component can be selected, for instance NCU. The relevant data can be seen to the right.

÷			Machine S	napshot			0	T ~
	Basic Information	Hardware Components		Software C	imponents	Lopbook and Licenses	Change Protocol	
	Tree View List View							
	Q, Search		:	:			🗸 A0	knowledge
	- Ahardware				Property	Value		Status
	- ANOUPLO				Name	SIEMENS SINUMERIK 6400 el NOU 710.38 PN with PLC 317-3PN/DP		
	- ANCUPLC				Version	c		
	- Anout				Httl:Kannung	1.6.0.0		
	 Asiemens sinumeriik 6400 al NCU 	710.38 PN with PLC 317-3PN/DP			SRM-Version	1.1.0.2		
	A Operator Panel A Operator Panel				FW-Version	V12.00.00.00		
	A TOUI				MLF8	6FC5371-0AA30-0AB0		
	ASINUMERIK TOP 2200				Seriennz.	ST-LD0114496		
	APLC - peripheral devices				Change Protocol			
	Drive/Motor				Change Protocol			

List view

The list view in Section "Hardware components" shows all of the relevant data of the hardware components in a table. The table can be filtered and a search made for specific data. Further, the table can be exported as Excel file (*.xls) using "Export as XLS".

				Mad	chine Snapshot	0							
Bes	ic Information		Hardware Components		Software Comp	onen	ta	Le	gbook and Licenses		Change Proto	cel	
Tree View	List View			_									
												Ω.	kport to 7
		Name		τ	MUFB	Ŧ	HW Version	Ŧ	PW Version	Ŧ	Serial No	Ŧ	Info
Q,					q.		a,		a,		q.		
	SIEMENS SINUMER	IK 840D sl NCU 710.38 I	N with PLC 317-3PM/DP		6FC5371-0AA30-0A80				V12.00.00.00		ST-LO6114496		Detail
		OF Card									SPG2011121901523		Detail
		SINUMERIK TOP 220	0		SEC5303-DAE20-DAAD				V16.00.00.00		LBL3443223		Detail
	540	KENS SINUMERIK MOP	HIDC PN		@FC5303-04/22-0AA1				V02.02.14		5T-L96079001		Detail
		Control Unit, 1			6FC5371-0AA30-0AB0		c		5207341		ST-LO0116496		Detail

Note

Exported hardware components

Note that the .xls file is downloaded and saved in a standard file folder, as was made in the web browser settings.

Note

SIOS link

The Siemens Industry Online Support (SIOS) page can be directly called by clicking on the MLFB number. The associated instructions and manuals or technical manuals for hardware components are saved.

Acknowledgment function

Machine Snapshot provides an acknowledgment function to identify changes that may harm the machine or to clarify important changes on the machine side.

The following hardware changes to the system can be made using this function:

- Hardware components that were replaced by new ones
- Hardware components that were removed or are missing

A warning is not displayed if an identSNAPSHOT file was uploaded for the first time to an asset. A warning is displayed if an additional identSNAPSHOT file is uploaded to the asset and additional changes were made between the current and the previous file. But when another identSNAPSHOT file is uploaded to the asset and if there are any changes between the current and previous file, you will be warned with an unacknowledged sign on the component name and corresponding items' status section.

The differences between the current value and the last acknowledged value of the component item is shown.

Tree View	List View					
Q, Search		: :			🗸 Adax	owledge
+ AHardware			Property	Value		Status
 ANCU/PLC 			Name	Control_Unit_1		~
 ANCU/PL 			Component No	1		~
Aneu1			FW Version	4743508		~
 APLC - peri ADrive/Mo 			HW Version	A		~
 A Sinamic 			Serial No	P-P30050000		~
	SLAVE3.Control_Unit_1		Acknowledged into			
	ntrol Unit_1		Property	Value		
	Control_Unit_1		FW Version	5104005 [2021-04-22700:06:39:79]		
			HW Version	H [2021-04-22700:06/39.79]		

- 1. To acknowledge a component, select the component in the tree view.
- 2. Click on "Acknowledge".

You can navigate directly to the change report via "Change protocol".

Software components

The "Software components" view shows information about the controller software that has been installed.

The following views can be selected:

- Tree view
- List view

Tree view

The tree view in Section "Software components" shows all of the information in a hierarchic structure. In the tree, a software component can be selected, for instance NCU. The relevant data can be seen to the right.

		N	Aachine S	Snapshot			¢	۳v
Basic	Information	Hardware Components		Software C	omponents	Logbook and Licenses	Change Protocol	
Tree View	List View					-		
Q, Search			:	:				
· SINUMERIK Ope	erate				Property	Value		Statu
· Basesystem					Name	Basesystem		~
 Basesystem 	1 () () () () () () () () () (Version	04.05.03.08		~
cp_840dL					Internal Version	04.05.03.08.004		~
dbghelp.(
libourt.dll					Change Protocol			
	_							
libeay32.4								
libexslt.d								
libensit.d								
Recolution Recolution								
ibensit.d iberri2.d ibesit.di pink.ese								
libensit.d libensit.dl plink.exe pscp.exe								
libensit.d libensit.dl plink.exe pscp.exe salesy32.								
Ibeast.d Ibeavi2.d pink.saa pscp.exe saleay02. satmin.c								

List view

The list view in Section "Software components" shows all of the relevant data of the software components in a table. The table can be filtered and a search made for specific data. Further, the table can be exported as Excel file (*.xls) using "Export as XLS".

				Mac	hine Snapshot					0	
	Basic Information		Hardware Components		Software Components		Logbook and Licenses		Change Pr	otocol	
Tree	View List View										
										œ	Depe
	Name	T	Link Name	T	Wersion	Υ	Internal Version	Τ	Source	т	
۹.			a,		Q,		Q,		a,		
	Systemsoftware NCU				V04.95 = SP 03 = HF 02						De
	SINUMERIK CNC-SW 31-3 Export				V04.95 + 5P 03 + HF 02		04.95.00.02.003				De
	PLC				04.95.00.06						De
	PLG				04.95.00.06		04.95.00.06				De
	317-3PWDP				32.04.14				opu017.bin		D
	318-3PWDP				32.84.14				opu319.bin		De
	BootCode				00.02.05				BootCode-SOC1.bin		De
	PLC_F_COPY				01.06.00				PloFCopyTool		De
	PLC017_3-F815				04.95.01				\$15,317,3.plc		De
	PLC017_3-FB15-SI				04.07.25				fb15_317_3.plc		De

Note

Exported software components

Note that the .xls file is downloaded and saved in a standard file folder, as was made in the web browser settings.

Logbook and licenses

Information about the controller logbook and the active installed licenses is shown in Section "Logbook and licenses".

The following views can be selected:

- Logbook
- Licenses

Logbook view

The logbook view shows all of the relevant information about the controller logbook.

III Sien	nens AG Manag	e MyMachines						Siemens Xcelerator	48
←				M	lachine Sna	apshot		0	▼ ~
1	Bas	is information	Handwa	re Components		Software Components	Logbook and Licenses	Change Protocol	
	License Key								
	Hardware Id		SPG201112190152	3					
	Product Group		SINUMERIK BADD	4					
	Logbook	Licenses							
	No	Date	Name	Company	Text				
>						No data			
	10 20 30							Page 1 of	1 (Diterre)
D	10 20 30					No data		Page 1 of	

Note

Change logbook

If the logbook is manually changed at the controller, then the identSNAPSHOT file must be saved. Otherwise, changes in the logbook view are not shown.

Licenses view

The licenses view lists all relevant automation about active installed licenses of the machine in a table The table can be filtered and a search made for specific data. Further, the table can be exported as Excel file (*.xls) using "Export as XLS".

←				Machine	Snapshot				¢	▼~		
	Basi	c Information		Hardware Components	Software Con	sponents .	Logbook and Licenses	Change Protocol				
	License Key		VP	Q44A2KA9B6LTXBVK2HBBF61TAD6Q23B5K6FU9ECX2	SCSPEYUHHBB2DES	7025						
	Hardware Id		87	P120_H06T								
	Product Group		58	NUMERIK \$40D sl								
	Logbook	Licenses										
									(C)	Export to X		
	No	MLFB	T	Description	T	Serial No	T	Active Licenses T	7 Installed Licenses			
		Q,		۵,		۵,		۹,	Q,			
	1	6FC5800-0AA0	0-01/190	Additionally 1 axis/spindle		LIOp#000006		0	255			
	2	6FC5800-GAB0	0-01/80	Additional 1 positioning axis/auxiliary spi	1 positioning axis/auxiliary spindle			0	255			
	3	6FC5800-GAC0	0-0480	Additional 1 operation mode modul (B/	NG)	LiOp#000002		0	255			
	4	6FC5800-0AC1	0-01/80	Additional 1 machining channel		LIOp#000003		0	255			
	5	6FC5800-0AC7	0-0480	Si axis/spindle, add. 1 axis/spindle		LIOp#000088		0	255			
	6	6FC5800-GAD0	0-01/80	Add. 2 Moyte CNC user memory		LIOp#000004		0	255			
	7	6FC5800-GAD1	0-0100	Add. 128 KB PLC user memory		LIOp#000056		0	255			
		GFC5800-0AM0	1-0YB0	Travel to a fixed stop with force contri	pi .	LIOp#000010		0	1			
		6FC5800-0AM0	2-oviRp	Synchronous axes pair (GANTRY)		LiOp#000011		0	1			

Note

SIOS link

The *Siemens Industry Online Support* (SIOS) page can be directly called by clicking on the MLFB number. The associated instructions and manuals or technical manuals for hardware components are saved.

Change protocol

The "Change Protocol" view shows information to identify changes which are important for experts or other users which monitor the actual machine status.

This function allows the system to recognize the following hardware changes:

- Software changes
 - Software that was upgraded/downgraded
 - New software that was added/removed
- Hardware changes
 - New hardware that was added
 - Hardware that was removed or is missing
- License changes
 - Licenses that were newly added
 - Licenses that are missing

The "Change Protocol" view shows changes to software, hardware and licenses for identSNAPSHOT files. The items of the change protocol are marked with "Hardware", "Software" and "Licenses". The table of the change protocol can be filtered for "Item Name", "Change Date", "Path", "Current value" and "Acknowledge status".

A search can be made for items based on name, change date, path and the current value.

								Machine Snapshot				0	₹
		Basi	ic Information			Hardware C	omp	onents Software Components		Logbook an	d License	s Change Protocol	
C	Lices	585						Software		() н	ardware		
		Ŧ	Item Name	Ŧ	Change	Date	Τ	Path	Τ	Current Value T	Τ		
			Q,		9,		۵	Q,		0,			
		9	ertSwCoun		2024/03/14,	12:01 PM		almPgErt/almPgErtLicense/3D simulation 1 (Inished part/lertSwCount			•		
		٢	ppCount		2024/03/14,	12:01 PM		almPg/Ert/almPg/ErtLicense/3D simulation 1 (finished part)/ppCount					
		٩	ppDispNam		2024/03/14,	12:01 PM		almPgErt/almPgiErtLicense/3D simulation 1 (finished part/)ppDispNam	•				
		٩	ppMifb		2024/03/14,	12:01 PM		almPgErt/almPgErtLicense/3D simulation 1 (Inished part)/ppM/b					
		٢	ppSeriaNe		2024/03/14,	12:01 PM		almPg/Ert/almPg/ErtLicense/3D simulation 1 (Inished part/)ppSerialNo					
		٢	ert5wCoun		2024/03/14,	12:01 PM		almPgErtValmPgIErtLicense/3D simulation 2 (Inished part and working ana)/ertSwCount					
		٢	ppCount		2024/03/14,	12:01 PM		almPgErt/almPgiErtLicense/3D simulation 2 (finished part and working ana)/ppCount					
		٩	ppDispNam	•	2024/03/14,	12:01 PM		almPg/Ert/almPg/ErtLicense/3D simulation 2 (finished part and working ansi/ppDispName					
		9	ppMitb		2024/03/14,	12:01 PM		almPgErt/almPgiErtLicense/3D simulation 2 (finished part and working ana)/ppMfb					
		٩	ppSerialNo		2024/03/14,	12:01 PM		almPgErt/almPgiErtLicense/3D simulation 2 (Inished part and working ama)/ppSerialNo					
		6	ertSwCourt	1	2024/03/14,	12:01 PM		almPgErt/almPgiErtLicense/3D Tool radius compensation/ertSwCount					

Change history

A detailed history of each component item can be viewed.

1. Click on the list to view a detailed history of every component item. The change item history is shown on the right-hand side of the list.

Changed Item His	tory 🗙
Current Version at 2020/04/0	1, 4:36 PM
Item Name	Value
name	CYCLES
version	04.10.83.00
Previous Version at 2020/04/	01. 4:18 PM
Item Name	Value
name	CYCLES
version	04.09.83.00
Previous Version at 2020/04/	01 4.05 PM
Item Name	Value
name	CYCLES
version	04.08.83.00
Previous Version at 2020/04/	01 3-53 PM
Item Name	Value
name	CYCLES
version	04.05.83.00

Acknowledge changed items

The "Page Summary" window shows the last date when a identSNAPSHOT file was uploaded, the number of acknowledged hardware and software items and license changes as summary.

1. Select changes that have not been acknowledged but that should be acknowledged. All items that are not acknowledged are marked using the following symbol:



- 2. Activate the check box in the table.
- 3. Click on "Acknowledge Changes".

4. Acknowledge by clicking on "Confirm".

12

Selected changelog items will be acknowledged:

- · almPgiErt/almPgiErtLicense/3D simulation 1 (finished part)/ppSerialNo
- almPgiErt/almPgiErtLicense/3D simulation 2 (finished part and working area)/ertSwCount
- almPgiErt/almPgiErtLicense/3D simulation 2 (finished part and working area)/ppCount
- · almPgiErt/almPgiErtLicense/3D simulation 2 (finished part and working area)/ppDispName
- · almPgiErt/almPgiErtLicense/3D simulation 2 (finished part and working area)/ppMlfb
- almPgiErt/almPgiErtLicense/3D simulation 2 (finished part and working area)/ppSerialNo

|--|

The selected entries are marked as "Acknowledged".



ь.

5. Click on "Acknowledge all changes" to acknowledge all items at once, without selecting these.

Overview

A single XML file of the controller generates all the information in the Machine Snapshot page. The file is called "identSNAPSHOT". This file is imported into Manage MyMachines once the identSNAPSHOT file was generated manually on the controller.

Generating and uploading the identSNAPSHOT file is described in this chapter.

Note

The identSNAPSHOT file must be manually regenerated each time a change was made to the machine (hardware and/or software).

Generating the identSNAPSHOT file on the SINUMERIK controller

- 1. Open SINUMERIK Operate.
- 2. Select "Diagnostics".



3. Click on "Version".

Vig Version

It can take some time to display the version. An appropriate message is displayed while the data are being determined.

4. Click on "Save".



Window "Save version information: Select Archive" opens. Depending on the configuration, the following storage locations are:

- Local drive
- Network drive
- USB
- Version data (archive: Data tree in directory "HMI data")
- 5. Click on "New directory" if you wish to create your own directory:



6. Click on "OK".



The directory was created.

7. Click on "OK" again to acknowledge the storage location.



Window "Save version information: Select Archive" opens.

- 8. Make the required settings.
 - Name input field
 The file name is already assigned with <Machine name/no.>+<CF-cardnumber>.
 " config.xml" or " version.txt" is automatically assigned to the file names.
 - Comment input field
 A comment can be entered, which is stored with the configuration data.
 - Version data (.txt)
 The checkbox can be deactivated.
 - Configuration data (.xml)
 The checkbox can be activated.
- 9. Click on "OK" to start file transfer.



Default path for identSNAPSHOT files on the NCU/PCU

Location	Path
NCU	/user/sinumerik/hmi/data/version/
PCU	C:\Program Files (x86)\Siemens\MotionControl\user\sinumerik\hmi\data\version\

Result

Once the process has been completed, the identSNAPSHOT file appears under path:

/user/sinumerik/hmi/data/version

Name	Size	Changed	Rights
t		15.12.2017	rwxrwxr-x
hardware		14.05.2019 16:45	rwxrwxr-
2 000060132087B10000A9_config.xml	245 KB	14.05.2019 16:45	rw-rw-r

Uploading the identSNAPSHOT file to MindSphere

- 1. Connect with InsightsHub and open the "Shopfloor Management" app.
- 2. Select your asset name.

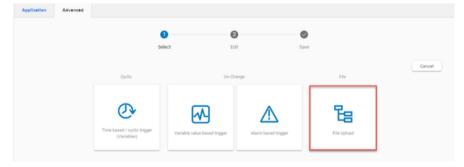
3. Ensure that the following options are shown in the "Manage MyMachines" view:

Manage MyMachines
Manage MyMachines
Enable / Disable access for Manage MyMachines application
Manage MyMachines /Spindle-Monitor
Enable / Disable access for Manage MyMachines /Spindle-Monitor application

4. Click on "Advanced". The following view appears:

	EMENS Shepheer Mynt. App.		MindSphere
3	(Shopfloor Management Application	0
-	[\$54,00	Application Advanced	
2	0 001 tax demoset over DeVictOviere metallicities (normality) over	() ()	
5	© SSA demo anat Innon.ac,ient,tan	Time based / cytile trigger	
2		CRIM, AND	20
		CHALAND	
		CSM_BPOT	20
,		CBM_ANDE	20
74 ×		Breadber, CSRAII	20
5		CBM_ANDI	20
÷.,		Cdire, General, Into	20
		CBM, ARD	20
		Variable value based trigger	
		BHAMDIK, CBAARMEACTON	20
		Alarm based trigger	

- 5. Click on "Add".
- 6. Select "File Upload".



7. Click on "Add file upload item".

Upload the identSNAPSHOT file

- 1. Enter the path of the identSNAPSHOT file under "File Directories".
- 2. Enter the file name or use a term such as ""*_config.xml". All "_config.xml" files are loaded in the input field under "Files".
- 3. Select "On Change" (recommended) or "Cyclic".
- 4. Enter a configuration name and click on "Save".

	0	0		0	
	Select	Edit		Save	
		Eg File U	pload		
					Save Cano
					1/5
Configuration name Configuration name File_path					
Cyclic O on Change Hour(s)					
1 Hour(s) •		NC-Status		Machine D	
1 Hour(s) + Add trace files to trigger			iles:	Machine D	

5. Wait for acknowledgment that the data was successfully saved.

Application	Advanced				
		0	0	0	
		Select	Edit	Save	
0	Recording saved succ	essfullyl			
					ок

- 6. Click on "OK".
- 7. Check whether the path was entered as expected.

Application	Advanced	
		⊕ `
Time based /	cyclic trigger	A
Variable value	e based trigger	٨
Alarm based	ripger	۸
File Upload		^
File_path		

Note

Limitations when uploading files

Check the readme of the Manage MyMachines.

MMM readme (<u>https://documentation.mindsphere.io/resources/html/manage-my-machine-readme/en-US/index.html</u>)

8.22 Remote sessions with Manage MyMachines

You can also start or enter remote sessions via Manage MyMachines.

Precondition

- You have purchased Manage MyMachines and Manage MyMachines /Remote for the particular tenant.
- You are logged in as user and have Manage MyMachines and Manage MyMachines /Remote rights.
- Access to Manage MyMachines and Manage MyMachines /Remote for the required asset is activated.
 More information can be found in Chapter: Activating Manage MyMachines (Page 112).

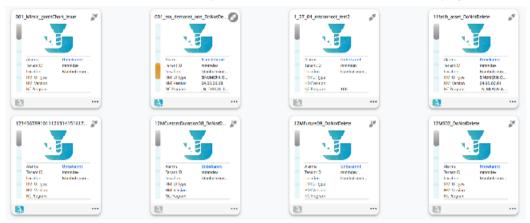
Parameters

lcon	Description
M.	You have no rights to start the remote session.
	 The rights for Manage MyMachines /Remote were not assigned to the user or were removed.
	 Manage MyMachines /Remote was not purchased for the tenant
	- OR -
	Manage MyMachines /Remote is not activated.
	 The subscription is not activated or has expired.
	You can start a new remote session.
<u> </u>	You can join an existing remote session.

8.22.1 Start new remote session

Procedure

- 1. In the launch pad, click on the "Manage MyMachines for Industrial Operations X Cloud" icon.
- 2. The "Machine Overview" window opens and the available machines are displayed.



3. Click on the blue "MMM /R" icon "Start new remote session" 🔜 of the required asset. - OR -

Click on the underscored name of the required machine. The "Machine Dashboard" window opens. Click on the blue "MMM /R" icon next to the "Pending Alarms" display.

- OR -

Click on the ******* icon of the required machine and click on "Dashboard". The "Machine Dashboard" window opens.

Click on the blue "MMM /R" icon next to the "Pending Alarms" display.

		Machine Da	shboard	1									♀ ₹∨
0	Pending Alarms:	1										Last 48	hours toor
		Start New Remote Session	Summary						Per	ding Alarms			
		1000	2000	22.10	ox op	OF OP	1200	190 B	19 ⁴⁹	The Mar	oxen	and a	1200
	▼ Machine Status												
	No Disturbance			IN AN AN AN AN AN AN	A HARING A MA					O)AA XAA MAANA			
	Machine Off						001.00000				i Manada		
<	Unknown Status												

4. The "Manage MyMachines /Remote Service Client" session window opens.



5. A new remote session is started and the log details for the selected asset are displayed.

Home > Section Overview > Section log	of OTLSinumerikOne_DeVerDelete_20/04/2022_08/22											
¢				Sessio	n log of	CFT_Sin	umerik	One_DoM	lotDele	te_20/	04/20	022_08:22
Logs								Motes				
Session		Manage N	AyMachines /Remote Servic	e Client					-		\times	
Session number:	62-465-360-47		tings Languages Window	Help								
	62 405 300 47 20-04-2022 08:22:58		2 - 465 - 960 - 47	Status: Connects	нd							10/04/2022_08:22
Start time:	20-04-2022 08:22:56	Machine ID:		Tenant:								
End time:		Perticipents			Desktop	File	Remote	Promote				CFT_SinumerikOne CFT_SinumerikOne
Duration:	00:00:01	Name	Status	Tenant	Sharing	Transfer	Step7	Owner	VPN			
		Gokhan Bilk	2 Leading service engineer	mmmdev								
Participants												
Initiator:	gokhan.billid)siemens.com											
PLC access												
Remote Step7 used:	No											hine in Production?
VPN Connections												
VPN used:	No											
Recordings												
There is no data												
File transfer												
There is no data												
											11	

8.22.2 Joining a remote session

Precondition

- The session is active.
- The service engineer and machine operator have already joined the session. The following warning message is output if there are no active owners in the session: "Terminated: There is no owner SE or MO yet".
- It is not permissible that a desktop is continually shared and/or files transferred. The following warning message is output if the desktop is shared and/or files transferred. "Aborted: Joining is not allowed during ongoing desktop sharing or file transfer".

Procedure

- 1. In the launch pad, click on the "Manage MyMachines for Industrial Operations X Cloud" icon.
- 2. The "Machine Overview" window opens and the available machines are displayed.



3. Click on the blue "MMM /R" icon "Join remote session" 🛄 of the required asset. - OR -

Click on the underscored name of the required machine.

The "Machine Dashboard" window opens.

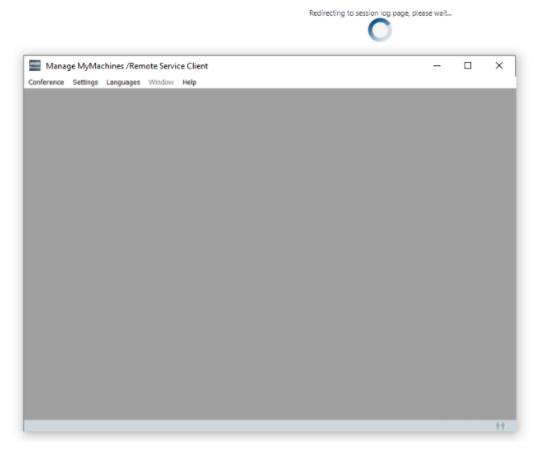
Click on the green "MMM /R" icon next to the "Pending Alarms" display. - OR -

Click on the **••••** icon of the required machine and click on "Dashboard". The "Machine Dashboard" window opens.

Click on the green "MMM /R" icon next to the "Pending Alarms" display.

	Machir	ne Dashboa	rd						\$₹~
***	Pending Alarms: Unknown] 🝕						u	ist 48 hours total
		Join Remote Session 113	iry		_		Pending Alarms		
		1×00	27.100	deal	200	1,200	24.100	Ch.CP	12.00
	▼ Machine Status								
	Unknown Status								
	♥ NC Program Status								
<	Unknown Status								

4. The "Manage MyMachines /Remote Service Client" session window opens.



5. You join the remote session and the log details for the selected asset are displayed.

Home > Section Overview > Section log-	of MMMRemateLiveManitoring_DoNatDelete_20(04/2022_1109		
÷		Session log of MMMRemoteLiveMonitoring_DoNotDelete_20/0	4/2022_11:0
Logs		Notes:	
Session		Session name *	
Session number:	25-153-636-85	Manage MyMachines /Remote Service Client -	□ × 22
Start time:	20-04-2022 11:09:46	Conference Settings Languages Window Help	
End time:		Jessiennumber: 25 - 153 - 636 - 65 Statusi Conference host server: Machine Operator	
Duration	00:01:43	Machine ID: LiveMonitoring_DoliotDelete Tenant: mmmdev	
		Participants	
Participants		Name Status Innert Sharing Transfer Step7 Owner VPH	
Initiator:	goldan,bilk@siemens.com	mmmrastomation & Observing service engineer mmmdev	
Machine Operator:	Machine Operator	Machine Operator Machine operator mmmdev	
Service Engineer:	mmmrautomation@gmail.com	Good and A cleany server express memory	
Service organical			
PLC access			
Remote Step7 used:	No		
Rentice anger terres.			
VPN Connections			12
VPN used:	No		
Recordings			
There is no data			
File transfer			
There is no data			
			11

Disconnecting controls from Insights Hub

9.1 Disconnecting other controls from Insights Hub

Disconnect SINUMERIK controls or other controls from Insights Hub using the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".

More information about roles within Insights Hub and on configuring assets is provided in: Documentation Insights Hub (<u>https://documentation.mindsphere.io/MindSphere/index.html</u>)

Precondition

In Insights Hub, you require the role "shopfloormgmtapp" as standard user or administrator.

Procedure

- 1. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".
- 2. Select the required asset in the left-hand side of the window.
- 3. Open the "Connectivity" tab in the right-hand section of the window.

9.1 Disconnecting other controls from Insights Hub

- 4. Under the "Connectivity" tab, you can see the connection status, e.g. "Onboarded with Machine Agent".
 - Click the "Disconnect from Machine Agent" button to disconnect the asset from Insights Hub.

Connectivity	Data Mappings	Application		
Or	nboarded with Ma	hine Agent		
Ass	et is onboarded. You can	disconnect your assi	et by clicking disconnect button	
	Disconnect from M	fachine Agent	•	
Pro	oxy Address	Reconr	nect with Machine Agent ①	
			Reconnection can only be done in case of proxy change	

- 5. You receive a confirmation prompt: "Are you sure to disconnect the machine?".
 - Click on the "Confirm" button to disconnect the connection.
 -OR -
 - Click "Cancel" to abort the operation.

Warning			
	Are you sure to discon	nect the machin	e?
		Cancel	Confirm

Note

After Insights Hub and the machine tool have been disconnected, we recommend deleting the following files from your SINUMERIK control:

- All files in the "boot_job" folder
- All files in the "cache" folder
- All files in the "service_job" folder

You will find the files:

- If you use PCU/IPC under: C:\temp
- If you use NCU under: /var/tmp

Introduction

If you no longer wish to use the Manage MyMachines for Industrial Operations X Cloud on your SINUMERIK control, proceed as follows:

- 1. Lock SINUMERIK Integrate: Deactivating use of SINUMERIK Integrate (Page 347)
- 2. In the "Shopfloor Management App", disconnect the machine tool system from Insights Hub: Disconnecting a SINUMERIK control from Insights Hub (Page 348)

9.2.1 Deactivating use of SINUMERIK Integrate

Procedure

- 1. Press the "SINUMERIK Integrate" softkey. The "SINUMERIK Integrate" welcome window opens.
- 2. Press the "Settings" softkey. The "Settings" window opens displaying the system status "Use ACTIVATED".
 - Press the "Deactivate use" softkey.

Settings - System status				
SINUMERIK Integrate	Use ACTIVATED			Deactivate use
-Manage MyPrograms -Manage MyTools -Access MyMachine -Access MyBackup				Proxies
-Analyze MyPerformance -Analyze MyCondition				URLs
				Basic installation
				App installation
~		 		R
Settings			Teleservice	Online services

- 3. You obtain the confirmation prompt "Do you really want to deactivate the use of the SINUMERIK Integrate applications?".
 - Press the "OK" softkey to confirm the prompt.
 The use of SINUMERIK Integrate applications is deactivated.

9.2.2 Disconnecting a SINUMERIK control from Insights Hub

Disconnect SINUMERIK controls or other controls from Insights Hub using the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".

More information about roles within Insights Hub and on configuring assets is provided in: Documentation Insights Hub (<u>https://documentation.mindsphere.io/MindSphere/index.html</u>)

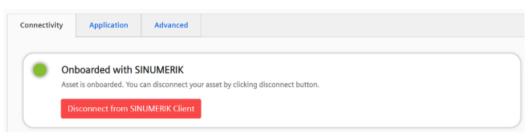
Precondition

In Insights Hub, you require the role "shopfloormgmtapp" as standard user or administrator.

Procedure

- 1. In the launch pad, open the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management App".
- 2. Select the required asset in the left-hand side of the window.
- 3. Open the "Connectivity" tab in the right-hand section of the window.

- 4. Under the "Connectivity" tab, you can see the connection status, e.g. "Onboarded with SINUMERIK".
 - Click the "Disconnect from SINUMERIK client" button to disconnect the asset from Insights Hub.



- 5. You receive a confirmation prompt: "Are you sure to disconnect the machine?".
 - Click on the "Confirm" button to disconnect the connection.
 -OR -
 - Click "Cancel" to abort the operation.

Warning		
	Are you sure to disconnect the machine?	
	Cancel	onfirm
		-

Note

After Insights Hub and the machine tool have been disconnected, we recommend deleting the following files from your SINUMERIK control:

- All files in the "boot_job" folder
- All files in the "cache" folder
- All files in the "service_job" folder

You will find the files:

- If you use PCU/IPC under: C:\temp
- If you use NCU under: /var/tmp

Troubleshooting when onboarding

These troubleshooting instructions help you to find and resolve faults when onboarding. Ensure that all preconditions are satisfied before you start onboarding.

10.1 SINUMERIK controls

10.1.1 Preconditions

10.1.1.1 Checking the network configuration

Procedure

1. Press "F10" on the HMI operator panel.

8	NC/MPF/BILALALAF	IM							_	AU	9 10
•	MCS X1			Position					Feed/override 0.000 mm/min 105%	MC MC) M
	Y1 Z1			0.0 0.0					0.000 mm/min 105% 0.000 mm/min	\$	č G
2	21			0.0	.00				105%	REP	
MMR										REF.P	
AREA_										TEAC	
•											
		М	ĮO	\supset	G		2	IN Task			
		Machine	Parameter	Program	Program manager	Diag- nostics	Setup	MMR /Tools	AREA_NAME_MM	>	1 2

2. Select "Setup".

8	Machine of	configuration								5	C
	Machine	e axis		Drive			Motor				_
۲	Index	Name	Туре	No.	Identifier		Туре	Channel			
	1	X1	Linear					CHAN1		i	\boxdot
	2	Y1	Linear					CHAN1		Clean.	
۳D:	3	Z1	Linear					CHAN1		for pi	inel
\bigtriangleup											
2										Char langu	ige age ▶
MMR /											
AREA_										Res (po	
•										Pas	
										Deta	ils
	Current a	ccess level: Manu	facturer								
		MD Mach data			Drive system	нмі	System data		Optim test	' >	1 2

- 3. Select the right-hand arrow.
- 4. Select "Network".

	Network se	ttings overview					5	C4
-9	NCU							
۲	Adapter		IP address	Subnet mask	MAC address			
	X120 Syst						i	Ō
-		assigned						
G	Alia	address					Overv	iew
	netv	VOLK	t 10.10.10 .				Syste	
2	X127 Serv						Comp	
MMR I							OPC	UA ▶
AREA_							Save I settir	
×								
							Char	-
							≪ Bac	
		Setup archive	Censes	Net- work	OPs Safety		>	1 2

5. Check that the correct IP has been entered for x130.

10.1.1.2 Checking that SINUMERIK Integrate has been enabled

Procedure

1. Press "F10" on the HMI operator panel.

8	NC/MPF/BILALA	LARM								AUTO	
•	MCS X1			Position					Feed/override 0.000 mm/min 105%	MDA	
 ©	Y1			0.0					0.000 mm/min 105% 0.000 mm/min	₩ JOG	
	Z1			0.0	00				105%	REPOS	
MMR I										REF.POIN	
AREA_										TEACH I	
•											
		57	10		R	A\$	4	1			
		Machine	L_ Parameter	Program	Program manager	Diag- nostics	Setup	MMR /Tools	AREA_NAME_MM	> 1	1 2

2. Select "Setup".

2. 3	ciect	Setup .									
	Machine o	configuration								5	C
~	Machine	e axis		Drive			Motor				_
۲	Index	Name	Туре	No.	Identifier		Туре	Channel			
	1	X1	Linear					CHAN1		i	0
-	2	Y1	Linear					CHAN1		Clean.	
۳D:	3	Z1	Linear					CHAN1		for p	inel
\bigtriangleup											
2										Char langu	ige iage ⊧
MMR /											
AREA_										Res (po	
•										Pas wo	
										Deta	iils
	Current a	ccess level: Ma	anufacturer								
			Mach. data NC		Drive ystem	ни ни	System data		Optim./ test	>	1 2

Group	All 👻 F	ilters		*	
9009	\$MM_KEYBOARD_STATE		0	ро	
9032	\$MM_HMI_MONITOR			ро	i
9056	\$MM_ALARM_ROTATION_CYCLE		0 ms	ро	1
9057	\$MM_ENABLE_CHANNEL_MSG_FILTER		1	ро	
9100	\$MM_CHANGE_LANGUAGE_MODE		1	im	
9102	\$MM_SHOW_TOOLTIP		1	im	
9103	\$MM_TOOLTIP_TIME_DELAY		1 s	im 🍦	
9104	\$MM_ANIMATION_TIME_DELAY		10 s	im	
9105	\$MM_HMI_WIDE_SCREEN		0	ро	
9106	\$MM_SERVE_EXTCALL_PROGRAMS		1	ро	
9107	\$MM_DRV_DIAG_DO_AND_COMP_NAMES		3H	im	
9108	\$MM_SINUMERIK_INTEGRATE		0	im	
9110	\$MM_ACCESS_HMI_EXIT		1	ро	
9111	\$MM_HMI_MEM_LIMIT_USER		0	ро	Da
9112	\$MM_HMI_SKIN		2	ро	adr
9113	\$MM_EASY_XML_DIAGNOSE		OH	im	Disp
9114	\$MM_SIDESCREEN		2	ро	opti
Activating	SINUMERIK Integrate products				

3. Select "Machine data".

4. Select the right-hand arrow.

5. Select "Display MD".

Group	All					*			
9009	\$MM_KEYBOARD_STATE				0	ро		Ľ	1
9032	\$MM_HMI_MONITOR				-	ро	;	C	
9056	\$MM_ALARM_ROTATION_CYCLE				0 ms	ро	<u> </u>		Î
9057	\$MM_ENABLE_CHANNEL_MSG_FILTER				1	ро			
9100	\$MM_CHANGE_LANGUAGE_MODE				1	im			
9102	\$MM_SHOW_TOOLTIP				1	im			
9103	\$MM_TOOLTIP_TIME_DELAY				1 s	im			
9104	\$MM_ANIMATION_TIME_DELAY				10 s	im			
9105	\$MM_HMI_WIDE_SCREEN				0	ро			
9106	\$MM_SERVE_EXTCALL_PROGRAMS				1	ро			
9107	\$MM_DRV_DIAG_DO_AND_COMP_NAMES				3H	im			
9108	\$MM_SINUMERIK_INTEGRATE				0	im		set	
9110	\$MM_ACCESS_HMI_EXIT				1	ро	(p))	
9111	\$MM_HMI_MEM_LIMIT_USER				0	ро	Sec	arch	
9112	\$MM_HMI_SKIN				2	ро	-	iren	
9113	\$MM_EASY_XML_DIAGNOSE				OH	im		lter	
9114	\$MM_SIDESCREEN				2	ро			
Activating	SINUMERIK Integrate products								
		General SD	Channel SD	Axis SD	Display MD		>	1	

6. Check whether "9108 MM_SINUMERIK_INTEGRATE" is equal to "1".

7. If "9108 MM_SINUMERIK_INTEGRATE" is not equal to "1": Then set "9108 MM_SINUMERIK_INTEGRATE" equal to "1".

10.1.1.3 Checking that SINUMERIK Integrate has been activated

Procedure

1. Press "F10" on the HMI operator panel.

8	NC/MPF/BILALA	LARM								AUTO
•	мся X1			Position					Feed/override 0.000 mm/min 105%	MDA
	Y1 Z1			0.0					0.000 mm/min 105% 0.000 mm/min	XX JOG
	21			0.0	00				105%	REPOS
MMR (REF.POINT
AREA_										TEACH IN
•										
		М	[O		G		4			
		Machine	Parameter	Program	Program manager	Diag- nostics	Setup	MMR /Tools	AREA_NAME_MM	> 1 2

2. Select the right-hand arrow.

NC/MPF/BILALALARM		_	_	_	_		AUTO
X1 Y1 Z1		Position [mm] 0.000 0.000 0.000				Feed/override 0.000 mm/min 105% 0.000 mm/min 105% 0.000 mm/min 105%	MDA MDA NG REPOS REPOS REFOONT REF.POINT
	SINUMERIK Integrate					Reboot HMI	> 1 2

3. Select "SINUMERIK Integrate".

		SIEMENS SINUMEI	EGRATE				· · · · · · · · · · · · · · · · · · ·	
	Settings			MMM /Remote	Teleservice	Online services		

4. Select "Settings".

	Settings					2	C
-9	System status						
۲							
-	SINUMERIK Integrate	Use DEACTIVATED			- 1	i	0
	-Access MyMachine					-	
R	Analyze MyCondition Analyze MyPerformance						
~	-Manage MyPrograms -Manage MyTools					Activa	ate
	-Manage MyMachines /Rer	note				use	
2						Proxi	es ≯
MMR						URL	s ⊧
SINU					1	Basic insta	allation
•						App insta	llation
	Settings			Teleservice Onli servi			

- 5. Check whether "SINUMERIK Integrate" is enabled.
- 6. If SINUMERIK Integrate is locked
 - Select "Activate use".
 - Confirm the activation

10.1.1.4 Checking proxy settings

Check that the proxy settings are correct if the machine accesses a network via a proxy.

Procedure

1. Press "F10" on the HMI operator panel.

8	NC/MPF/BILALA	LARM								→ AUT) TO
•	мся X1			Position					Feed/override 0.000 mm/min 105%	MD) A
	Y1		0.000 0.000 mm/min 105% 0.000 0.000 mm/min 105%								
	21	Z1 0.0000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0									
MMR I										REF.PC	
AREA_										TEACH	
•											
		М	ĹŌ		6		2				
		Machine	Parameter	Program	Program manager	Diag- nostics	Setup	MMR /Tools	AREA_NAME_MM	>	1 2

2. Select the right-hand arrow.

3	NC/MPF/BILALALARM						_	
۲	MCS X1		Position [mm]				Feed/override 0.000 mm/min 105%	MDA
	• Y1 Z1	0.000 0.000 mm/min 105% 0.000 0.000 mm/min						
	21		0.000				105%	Prepos
MMR /								REF.POINT
SINU	(TEACH IN
•								
		SINUMERIK					Reboot HMI	> 1 2

3. Select "SINUMERIK Integrate".

		SIEMENS SINUME	EGRATE					
Setting	gs			MMM /Remote	Teleservio	e	Online services	

4. Select "Settings".

	Settings				5	C
-0	System status					
۲					(sum	
-	SINUMERIK Integrate	Use ACTIVATED			i	Ō
	-Access MyMachine -Analyze MyCondition					
R	-Analyze MyPerformance					
2	-Manage MyPrograms				Dead	tivate
	-Manage MyTools -Manage MyMachines /Remo	te			U	
2					Pro	xies ▶
MMR					UR	RLs ⊧
EINI						
5INL INTE					Basic ins	tallation
•					App inst	tallation
-						
	Settings			Teleservice Online services		
				Services		

5. Select "Proxies".

8									5 6
۲	Automatic								
	Use proxy scrip	t							i 🗔
G	URL (proxy script)								Edit
\bigtriangleup	Use fix proxy								Credentials
×									
MMR I	Proxy 1								
SINU	Proxy 2								
•	Proxy 3								
	Direct								
		_	 -	_	_	_	_	_	K Back
	~	settings					Teleservice	Online services	

- 6. Check the proxy information.
- 7. If the proxy settings are not correct
 - Select "Edit".
 - For the proxy settings, select "Overwrite here"
 - Enter the correct settings
 - Select "OK"
 - Restart the machine.

										5	
۲	Directories:				Use	r		-	l i		
	Automatic								✓Overwrite here	i	Ō
G	Use proxy script								✓Overwrite here		
	URL (proxy script)										
×	Use fix proxy								✓ Overwrite here		
MMR /	Proxy 1	<u></u>	01.1								
SINU	Proxy 2										
•	Proxy 3										
	Direct								Overwrite here	Can	
		_	_	_	_	_	_	_	_	20	
	<u>^ ×</u>	ttings						Teleser	vice Online services		

10.1.1.5 Checking the SINUMERIK Integrate URL

Procedure

1. Press "F10" on the HMI operator panel.

8	NC/MPF/BILAL/	ALARM	_	_	_	_	_	_			
•	MCS X1			Position	[mm])00				Feed/override 0.000 mm/min 105%	MDA	
	Y1 Z1				000 000				0.000 mm/min 105% 0.000 mm/min	XX JOG	
	21			0.0	00				105%	≁ REPOS	
MMR I										REF.POINT	
AREA_										TEACH IN	
×											
		М	LO		G		2				
		Machine	Parameter	Program	Program manager	Diag- nostics	Setup	MMR /Tools	AREA_NAME_MM	> 1	2

2. Select the right-hand arrow.

	NC/MPF/BILALALARM				AUTO
	// Reset MCS	Posi	tion [mm]	 Feed/override	AUTO
•	X1		0.000	0.000 mm/min 105%	MDA
	Y1 Z1).000).000	0.000 mm/min 105% 0.000 mm/min	XXX JOG
\bigtriangleup	21	L.		105%	REPOS
MMR (REF.POINT
SINU INTE					TEACH IN
•					
		SINU		Reboot HMI	> 1 2
		SINUMERIK Integrate			

10.1 SINUMERIK controls

3. Select "SINUMERIK Integrate".

	SI	IMENS NUMERIK INTEGRATE				*> i	
E Setti	ngs		MMM /Remote	Teleservice	Online services		

4. Select "Settings".

	Settings							2	
-9	System status								
۲								1000	
-	SINUMERIK Integrate	Use ACTIVATED						i	Ō
=	-Access MyMachine -Analyze MyCondition								
G	-Analyze MyPerformance -Manage MyPrograms								
	-Manage MyTools -Manage MyMachines /Remo	te						Deacti	
×								Prox	ies 🕨
MMR								URI	ls ≯
SINU								Basic inst	allation
•								App insta	allation
		_	_	_	_	_	_		
	▲ Settings					Teleservice	Online services		

5. Select "URLs".

		5	C
-° •	Display home page		
	RenderService	Edit	
SINU	URL Web service		
•	https://gateway.eu1.mindsphere.io/api/agentcom-mtsdev/v3/ws11/ Send timeout in seconds 200 Reception timeout in seconds 200		
	Reception timeout in seconds 200	≪ Back	
	Settings Teleservice Online services		

- 6. Check whether the specified URL information is correct.
- 7. If the URL is not correct
 - Select "Edit".
 - For the web service, select "Overwrite here"
 - Enter the correct URL.
 - Select "OK".
 - Perform an "sc reboot".

							5	
•	Directories:			User		×		
	Display home page					Overwrite here	i	Ō
G								
\bigtriangleup	RenderService					Overwrite here		
s,								
MMR /	URL Web service					✓ Overwrite here		
SINU	https://gateway.eu1.mindsphe	ere.io/api/agentcom-mr	nmops/v3/ws11					
•	Send timeout in seconds	200				✓ Overwrite here		
	Reception timeout in seconds	200				Overwrite here	X Can	
		_	_	_	_		v or	ĸ
	Settings					Teleservice Online services		

10.1 SINUMERIK controls

10.1.1.6 Checking the network connection

Procedure

Check whether there is an Internet connection at the machine. Onboarding does not start correctly if there is no Internet connection.

10.1.1.7 Checking directory "boot_job"

Procedure

- 1. Check whether the following folders exist:
 - On the PCU: C.\Temp\boot_job
 - On the NCU: var/tmp/boot_job
- 2. If the folders do not exist, even though the previous preconditions have been satisfied, check the network connection.

10.1.1.8 Checking the asset type in Insights Hub

Procedure

Assets must be created as asset type under "BasicSinumericAsset".

- 1. Select: "BasicDevice > BasicSinumerikAsset > YourAssetType"
- 2. Create a new asset if the asset type does not exist there.

10.1.1.9 Checking the existence of onboard.key

Procedure

File onboard.key must exist in directory "boot_job". Onboarding does not start if onboard.key does not exist.

10.1.2 Resolving known faults

10.1.2.1 Onboard key exists but onboarding does not start

- "onboard key" exists in directory "boot_job".
- Onboarding does not start.

Cause

- There are problems with the network connection.
- The date or time set at the HMI is incorrect.

Remedy

- Check the network connection.
- Check whether the date and time settings are correct.
- If the date or time is incorrect
 - Select "Settings > HMI > DateTime".
 - Enter the correct date and time.
 - Select "OK".
 - Restart the HMI.

10.1.2.2 Onboarding starts, cert.key is created; however, onboard.key does not disappear

- Onboarding starts.
- "cert.key" exists.
- "onboard.key" does not disappear.

/var/tmp/boot_job/		
Name	Size	Changed
t		21.09.2022 15:20:39
onboard.key	2 KB	21.09.2022 16:01:44
onboardClientId.dat	1 KB	21.09.2022 15:20:39
cert.key	2 KB	21.09.2022 15:20:39
A shutdown.json	1 KB	21.09.2012 15:10:02
limesync.json	1 KB	21.09.2012 15:09:32

Cause

The SINUMERIK Integrate URL is incorrect.

Remedy

- Check whether the SINUMERIK Integrate URL has been correctly specified.
- Check whether "onboard.key" has expired. The expiration time is 30 minutes.
 - Clean all the files in the "boot_job" folder.
 - Create a new onboard.key and save it.
 - Perform an "sc reboot". It is not sufficient to just restart the HMI.

10.1 SINUMERIK controls

10.1.2.3 No boot script available

An error message indicating that a boot script is not available is displayed at the HMI.

Vinc				
IM:	149001 🗸	No boot script available		
	IC/MPF/BILALALAR	м		
	∕ Reset MCS		Position [mm]	
e	X1		0.000	
R	Y1		0.000	
4	Z1		0.000	
2				

Cause

- Problems with the network connection have occurred.
- There is a problem with the date or time setting.
- The SINUMERIK Integrate URL is incorrect.

Remedy

- Check the network connection to the machine. Also check the proxy settings.
- Check whether the date and time settings at the HMI are correct.
- Check whether the SINUMERIK Integrate URL is correct.

10.1.3 More information

Running "sc reboot"

You can use WinSCP.

- 1. Open WinSCP.
- 2. Log on with the user name and password of the device.
- 3. Open the console using "Open Terminal".
- 4. Enter "sc reboot".
- 5. Click on "Execute".

Executing an HMI reboot

- 1. Press "F10" on the HMI panel.
- 2. Select the right-hand arrow.
- 3. Select "HMI reboot".

Updating SINUMERIK Operate causes problems relating to date and time

If HMI date and time are not current, the directories have the following creation dates and times.

/var/tmp/		
Name	Size	Changed
E		19.05.2022 16:45:09
simulation		21.09.2012 15:12:44
dtsTmpDir		21.09.2012 15:12:34
dtsDir		21.09.2012 15:12:34
📴 dh		21.09.2012 15:12:34
boot_job		21.09.2012 15:09:32

Check whether the HMI date and time are current.

Machin	Nar		Drive	Identifie	-	Motor	Channel	
Index	Nar	ne Type	No.	Identine	r	Туре	Channel	
1	X1			Set o	date and time			
2	Y1							
3	Z1	Use time server						_
		Name / IP					0	
		✓Use time zone						-
		Time zone		Eu	rope/Berlin (UTC+	1:00)	*	
		current	(09/21/	12	3: 13: 31 PM		_
		Format		MM/dd/yy		h:mm:ss AP		1
		New	(09/21/	12	3:13:31 PM		
								_
Current a	ccess	level: Manufacturer						

Onboarding duration

If you have saved onboard.key, then onboarding is completed within between 2 and 3 minutes. The duration depends on the SINUMERIK device that is used for onboarding.

Directory {TempDir}/boot_job

The value of {TempDir} refers to the following entry from file "/user/Sinumerik/hmi/cfg/ ePSConfig.xml":

<global><stations><station name="NCU840D"><tempDir>

The default value of {TempDir} is "/var/tmp".

10.2 Machine Agent

10.2 Machine Agent

10.2.1 Preconditions

10.2.1.1 Checking the core installation of the machine agent on the IPC

Procedure

- 1. Open the task manager.
- 2. Switch to "Services".
- 3. Search for "MachineAgentLauncher".
- 4. Check whether "MachineAgentLauncher" is running.

Processes Performance App his	story Sta	artup Users Details Services			
Name	PID	Description	Status	Group	
MachineAgentLauncher	6856	MachineAgentLauncher	Running		
MapsBroker		Downloaded Maps Manager	Stopped	NetworkService	
MBAMAgent	2800	BitLocker Management Client Service	Running		
McpManagementService		McpManagementService	Stopped	McpManagem	
MessagingService		MessagingService	Stopped	UnistackSvcGro	
MessagingService_4cdc39		MessagingService_4cdc39	Stopped	UnistackSvcGro	
MicrosoftEdgeElevationServ		Microsoft Edge Elevation Service (MicrosoftEdgeElevationService)	Stopped		
MicrosoftSearchInBing	7192	Microsoft Search in Bing	Running		
MixedRealityOpenXRSvc		Windows Mixed Reality OpenXR Service	Stopped	LocalSystemNe	
C. MozillaMaintenance		Mozilla Maintenance Service	Stopped		
, mpssvc	3628	Windows Defender Firewall	Running	LocalServiceNo	
C. MSDTC	19172	Distributed Transaction Coordinator	Running		
S. MSISCSI		Microsoft iSCSI Initiator Service	Stopped	netsvcs	
C. msiserver		Windows Installer	Stopped		
MsKeyboardFilter		Microsoft Keyboard Filter	Stopped	netsycs	
Natural Authentication		Natural Authentication	Stopped	netsvcs	
NcaSvc		Network Connectivity Assistant	Stopped	NetSvcs	
NcbService	2680	Network Connection Broker	Running	LocalSystemNe	
NcdAutoSetup		Network Connected Devices Auto-Setup	Stopped	LocalServiceNo	
C Netlogon	1728	Netlogon	Running		
🔍 Netman		Network Connections	Stopped	LocalSystemNe	
a) netprofm	3868	Network List Service	Running	LocalService	
NetSetupSvc		Network Setup Service	Stopped	netsvcs	
NetTcpPortSharing		Net.Tcp Port Sharing Service	Stopped		
NocCtorSwe	3772	Microsoft Passnort Container	Running	LocalSenriceNe	

10.2.1.2 Checking directory "commands"

Procedure

Open directory "C:\".

Check whether folder "commands" exists.

10.2.1.3 Checking the asset type in Insights Hub

Procedure

Assets must be created as asset type under "BasicSinumericAsset".

- 1. Select: "BasicDevice > BasicSinumerikAsset > YourAssetType"
- 2. Create a new asset if the asset type does not exist there.

10.2.1.4 Checking the proxy

Procedure

Check the proxy if one is being used at your workplace. If a proxy is not being used, then you do not require one.

Shopfloor Management Application

	I hereby accept the conditions which can be downloaded under the following link. <u>Conditions</u>	
•	Connect SINUMERIK (with Integrate Client) to Insights Hub	
	By clicking onboard button, onboard key will be downloaded and onboarding steps will be shown.	
	Onboard	
	Connect Controller with Machine Agent to Insights Hub	
-	By clicking onboard button, onboard key will be downloaded and onboarding steps will be shown.	
	Mac Address Proxy Address AA-BB-CC-DD-EE-FF 0.0.0.0000	

10.2.2 Resolving known faults

10.2.2.1 Command file does not disappear

Cause

- Problems with the network connection have occurred.
- A problem has occurred with the machine agent core installation.

10.2 Machine Agent

Remedy	
	Check the network connection of the machine.
	Check whether the machine agent core installation was successful.
10.2.2.2	The command file disappears; however, the status is not onboarded
	File "command" has disappeared.
	Files "command.exec" and "command.results" exist.
	The status is not "onboarded".
Cause	
Cause	Problems relating to core access to the machine agents has occurred.
Remedy	
	Run Telnet with the IP of the appropriate machine.
10.2.2.3	Mac address has been entered; however, the command file is not downloaded
10.2.2.5	wae address has been entered, nowever, the command me is not downloaded
Cause	
	The Mac address is not unique.
Remedy	Lies the unique Mas addresses for the asset
	Use the unique Mac addresses for the asset.

10.2.3 Machine agent connectivity with the IPC

For the machine agent connectivity, direct communication with the machines is not possible. An IPC communicates with the machine. The machine agent must be installed on the IPC.

Secure product disposal

Secure deletion of the product

The product does not store any personal data.

More information can be found at: General Data Protection Regulation (Page 17)

To ensure the product disposal of data related to you as a customer (e.g. machine data, configurations in InsightsHub Datamodel), please contact SIEMENS (via Support request). More information can be found at: Service and Support (Page 14)

For additional information please check the available SIEMENS documentation on Industrial Security.

Appendix

A.1 Determining the address of the spindles (only for 828D)

The address of a spindle with Sensor Module SMI24 is defined during commissioning. It depends on the position of the spindle in the SINAMICS topology and on the identifiers used.

You can subsequently determine the address in SINUMERIK Operate.

Determining machine axes of type Spindle

- 1. In SINUMERIK Operate, select operating area "Startup" The "Machine Configuration" list opens.
- 2. Look for the rows whose machine axes are of type Spindle and note down their drive numbers and identifiers.

_	SIEME	NS						SINUMERIK OPERATE	04/17/19 🛃 4:09 PM	2	AUTO
Μ	achine o	configurati	on							5	C
	Machine	axis		Drive			Moto	r			
	Index	Name	Туре	No.	Identifier		Туре	Channel			
	1	MX1	Linear					CHAN1		i	ē,
	2	MY1	Linear					CHAN1			
	3	MZ1	Linear					CHAN1			
	- 4	MSP1	Spindle	1	SPINDLE		ARM	CHAN1			
	5	MSP2	Spindle	5	SERVO 4		ARM	CHAN1		Cha langi	
										Dru w NC as	
										Re: (p	set)
										Pa: wo	
										Det	ails
0	urrent ou	soone louel	: Manufacturer							Sa	
	urrent a	ccess level	. Fianuracturer	_	_	_	_			ua	La
		MD	Mach. data		Drive Ustem	PLC	HMI 🔡	System data	Optim./ test	>	

Check whether Sensor Module SMI24 is connected

- 1. Press softkey "Masch. Data" and "Drive Parameters" to show the drive parameters.
- 2. Press the "Select Drive" softkey and select the drive that you noted down.
- 3. Press the "Search" softkey and enter "p4100" as the search form. If parameter "p4100" is found, this means that a SMI24 is connected to the drive that you selected.
- 4. If parameter "p4100" is not found, check the parameter of the next spindle.

A.1 Determining the address of the spindles (only for 828D)

SIEMENS						51110	MERIK OPERA	4,1	0 PM	-	AUTO
Drive parame	ters						AX4:MSP1	/3.3:3/9	SPINDLE	5	C
Group		All		 Filter: 	5				Ŧ	-	
r3925[0]	Identification	final display					21H		М		
p3940[0]	Motor/contro	ller data calcul:	ation			[8]	No calculation		М	i	
p3981	Acknowledge	drive object fai	ults				8		М		
p3985	Master control	ol mode selectio	n			[0] Change ma	aster contro		М	Uric	ve +
r3986	Number of pa	arameters					1333		М	Driv	ve -
r3996[0]	Parameter w	rite inhibit statu	s:Progress cal	culations			0		М	Cal	lect)
r3996[1]	Parameter w	rite inhibit statu	s:Cause				0		М		lrive
r3998[0]	First drive co	mmissioning					2		М	Car	and D
p4100	Spindle suppl	ementary temp	erature sensor	type			[2] KTY84		М	588	arch
p4102[0]	Spindle suppl	ementary temp	erature fault ti	nreshold/alarn	n thresh.:Alarm		60.0	°C	М		
p4102[1]	Spindle suppl	ementary temp	erature fault ti	nreshold/alarn	n thresh.:Fault		70.0	°C	М		
p4103	Spindle suppl	ementary temp	erature delay t	ime			0.000	2	М		
r4184	Spindle suppl	ementary temp	erature status				0H		М	>	×
r4105	Spindle suppl	ementary temp	erature actual	value			29.3	°C	М	Car	ncel
r4187 Spindle suppl	Spindle suppl lementary tempe	ementaru temn erature sensor t		920		121 Bearing te	moerature f		м		tinue arch
Search term i	no longer found.										
~	General	Channel MD	Axis MD	User views		Control Unit parameter	Infeed parameter		rive meter	>	

Determining the address of the SMI24

You can read off the position of the spindle in the SINAMICS topology on the title bar of the drive parameter. The information is displayed as follows:

<number of machine axis>:<name of machine axis>/<bus number>.<slave number>:<DO number>/<identifier of machine axis>

 Note down the "Bus number" and "Slave number" of the spindle. In the following example, the "Bus number = 3" and the "Slave number = 3":

AX4:MSP1/3.3:3/SPINDLE

2. In the "SINUMERIK presets" window of the Asset Manager, you require both of these values as well as the drive number from the "Machine Configuration" list.

A.2 Determining the address of the spindles (only for 840D sl)

The address of a spindle with Sensor Module SMI24 is defined during commissioning. It depends on the position of the spindle in the SINAMICS topology and on the identifiers used.

You can subsequently determine the address in SINUMERIK Operate.

Determining machine axes of type Spindle

- 1. In SINUMERIK Operate, select operating area "Startup" The "Machine Configuration" list opens.
- 2. Look for the rows whose machine axes are of type Spindle and note down their drive numbers and identifiers.

		IENS					SIN	NUMERIK	OPERATE	04/17/19 3:39 PM	~	₩ 300
Mad	chin	e configurati	ion									
Ma	achi	ne axis			Drive		M	lotor			-	
Ind	lex	Name	Туре		No.	Identifier	Ty	ype	Channel			
	1	X1	Linear						Chan1			
	2	Y1	Linear						Chan1		Cha	
	3	Z1	Linear						CHAN1		langi	uage
	4	SP1	Spindle	e	4	SERV0_3.3:3	A	RM	CHAN1			
	5	SP2	Spindle	e	5	SERV0_3.3:4	A	RM	CHAN1			
											Re: (p	
											Pa: wo	
											Det	ails
Curi	rent	access leve	I: Manuf	acture	er					>		
MD		lach. Jata	NC		Drive system		HMI	P Syst		~	1 ,0	ptim./ test

Check whether Sensor Module SMI24 is connected

- 1. Press softkey "Masch. Data" and "Drive Parameters" to show the drive parameters.
- 2. Press the "Select Drive" softkey and select the drive that you noted down.
- 3. Press the "Search" softkey and enter "p4100" as the search form. If parameter "p4100" is found, this means that a SMI24 is connected to the drive that you selected.
- 4. If parameter "p4100" is not found, check the parameter of the next spindle.

A.2 Determining the address of the spindles (only for 840D sl)

SIEMENS					SINUMERIK OPE	RATE 04/17/19 3:40 PM	2	₩ 306
Drive parame	ters				AX4:SP1	/SERV0_3.3:3	Driv	10 L
r3927[0]	Motor data id	entification in	duction motor	data det)H 🔼	Driv	e +
r3928[0]	Motor data id	entification sy	nchronous ma	otor data	()H		
p3940[0]	Motor/contro	ller data calcu	lation		[0] No calculati	on	Driv	
r3979	BICO counter				240	H	Driv	- ve
p3981	Acknowledge	drive object fa	aults			0		
p3985	Master contro	ol mode select	ion		[0] Change mast		Sel	ect 🔪
r3986	Number of pa	rameters			13	57	a dr	rive
r3996[0]	Parameter w	rite inhibit stat	us:Progress c	alculations		0		
r3996[1]	Parameter w	ite inhibit stat	us:Cause			0		
r3998[0]	First drive con	nmissioning				2		
p4100	Spindle supple	ementary tem	perature sens	or type	[2] KTY	B4		
p4102[0]	Spindle suppl	ementary tem	perature fault	threshol	55	.0 °C	Sav	e / N
p4102[1]	Spindle suppl	ementary tem	perature fault	threshol	68	0°C	Res	
p4103	Spindle suppl	ementary tem	perature delay	y time	0.0	90 s		
r4104	Spindle suppl	ementary tem	perature statu	15		ЭН		
r4105	Spindle suppl	ementary tem	perature actu	al value	21	.3 °C 📒	Sea	rch
r4107	Spindle suppl	ementary tem	perature sens	or use	[2] Bearing tem			
p4600[0]	Motor temper	ature sensor	1 sensor type		[0] No sens	or		_
p4601[0]	Motor temper	ature sensor 3	2 sensor type		[0] No sens	or	Filt	ter
p4602[0]	Motor temper	ature sensor 3	3 sensor type		[0] No sens	or		
p4603[0]	Motor temper	ature sensor	4 sensor type		[0] No sens	or 🔽		
Spindle supple	ementary tem	perature sense	or type					≣►
^						>		-
General	Channel	Axis	User		Control Unit	Infeed	Dri	ive
MD	MD	MD	views		parameter	parameter	paran	neter

Determining the address of the SMI24

You can read off the position of the spindle in the SINAMICS topology on the title bar of the drive parameter. The information is displayed as follows:

<number of machine axis>:<name of machine axis>/<identifier of machine axis>

The <identifier of machine axis> comprises

<string>_<bus number>.<slave number>:<DO number>

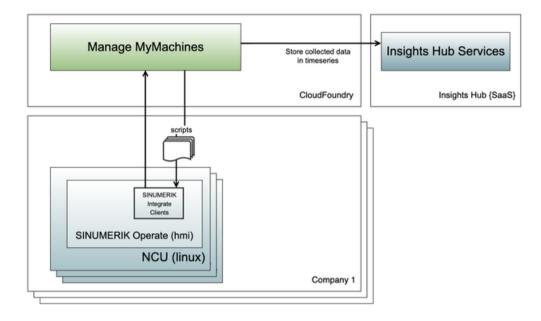
 Note down the "Bus number" and "Slave number" of the spindle. In the following example, the "Bus number = 3" and the "Slave number = 3":



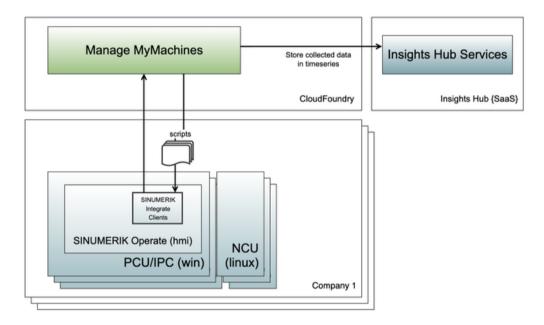
2. In the "SINUMERIK presets" window of the Asset Manager, you require both of these values as well as the drive number from the "Machine Configuration" list.

A.3 Preconditions for the Shopfloor Management Application

NCU



PCU/IPC



Precondition

The system on which "SINUMERIK Integrate" or "HMI Advanced" is installed has access to the internal network and to the Internet.

A.3 Preconditions for the Shopfloor Management Application

Connections required

Connections with SINUMERIK Integrate

The SINUMERIK Integrate client is installed and activated in SINUMERIK Operate or HMI Advanced.

Configure the MMM Machine Communication URL in the SINUMERIK Integrate client. If a proxy is installed in the network, configure the proxy in the SINUMERIK Integrate client. More information is provided in Chapters "Configuring URL and proxy" for

- SINUMERIK ONE and SINUMERIK 840D sl (Page 47)
- SINUMERIK 828D (Page 55).

The SINUMERIK Integrate client is connected with the Internet and has access to the address Gateway client based (<u>https://gateway.eu1.mindsphere.io/api/agentcom-mmmops/v3/ws11</u>).

Connections to the machine agents

The machine agent is installed there where also SINUMERIK Operate or HMI Advanced is installed.

If a proxy is installed in the network, configure the proxy while you generate the "onboard.key".

The machine agent is connected to the Internet, and can access address Gateway machine agent based (<u>https://gateway.eu1.mindsphere.io/api/mabackend-mmmops/v1/south</u>).

Internal links required

To access machines at the "MMM Machine Communication" URL:

• Access *.mindsphere.io (<u>https://mindsphere.io</u>) is permitted within the firewall of the internal network.

To register machines in the MMM connection:

- Call the following page: Shopfloor Management Application (<u>https://yourtenant-shopfloormgmtapp-mmmops.eu1.mindsphere.io/shopfloor/connectivity?assetId=yourassetid</u>).
 "yourtenant" must be replaced by the name of your tenant.
 "yourassetid" must be replaced by the name of your asset ID.
- Download the "onboard.key".

Summary

- Devices in the factory have access via the Internet to *.mindsphere.io (<u>https://mindsphere.io</u>).
- The proxy and MAC address configuration for the machine agents is correct. If the internet connection is interrupted, then data are backed up encrypted and locally in the buffer of the client/agent.

A.4 Configuration example for the motor temperature

Overview

To be able to use the motor temperature function, motor temperature variables with the prefix "mmm_mt" must be configured in the Shopfloor Management App. This allows the Manage MyMachines App to find the associated configuration and display it in the motor temperature UI.

Example for using a prefix:

- mmm_mt_demo
- mmm_mt_s120

Configuration example

The points and variables are configured as follows:

35	3	1	3
(r data from drive)	(subordinate No.)	(drive No.)	(bus No.)

mektivität	Anwendung	Advanced						
			0	0	0			
			Anvählen	Bearbeiten	Speicher			
				🕑 Zeitbasierter Trigg	ger			
							Speichern	Abbrechen
								5/100
Aspekt erstell 2,456,000 August mmm_mt_M	brame							٩
Verwendeter Zytics Inset 5 Second(s)								٩
Zyhtus lasan								0
2yttus linen 5 Second(s)			Martine Martine	Double		Const. Na e	0	
2yttus insen 5 Second(s)	*				_		6	
2,Max lines 5 Second(s)	* 8_809 10_809		35.3,5,3 35.3,4,3	DOUBLE	•	S +	0	
2,Max lines 5 Second(s)	• 8_805		35.3.5.3 Advenue	DoubLE		s •	_	
2,Max lines 5 Second(s)	v 8,203 10,205 10,205 10,205		35.3.5.3 35.3.4.3 35.3.1.3			S +	0	
2,Max lines 5 Second(s)	* 3_805 9_205		35,3,5,3 35,3,4,3 Admini 35,3,1,3	DOUBLE Double DOUBLE		S + S + Drivet S +	0	

The drives are configured in an 828 device, which is integrated in an \$120 module.

To obtain the following view, use menu > Drive System:

Appendix

A.4 Configuration example for the motor temperature

2						12/09/19 1:89 PM
Drive Sys	stem Overvie	ω				Hardware
Axis	Bus	Address	Drive object Name		Number	replacement Activate
	3	3	CU_I_3.3:1		1	drives
			ALM_3.3:2		2	Factory
MX1			SERUO_3.3:3		3	setting
MY1			SERU0_3.3:4		4	
MZ1			SERV0_3.3:5		5	
MSP1			SERV0_3.3:6	13	6	Reset
MA1			SERUO_3.3:7		7	(po)
~	-	Manufacturer			1	ldentify via LED
Drive device		ly Drive	s		Topology display	

After the configuration is set and the machine sends the motor temperature data to the MMM, then the data is listed on the tables of the motor temperature page.

A.5 Restrictions when uploading files

Directory paths

The following directories are available for the file upload:

- /card/user/sinumerik/hmi/appl/
- /card/oem/sinumerik/hmi/appl/
- /card/oem/sinumerik/hmi/OMATIVE_ACM/data/
- C:\ProgramData\Siemens\MotionControl\oem\sinumerik\hmi\appl\
- C:\ProgramData\Siemens\MotionControl\user\sinumerik\hmi\appl\
- /card/user/sinumerik/hmi/cfg/
- /card/oem/sinumerik/hmi/cfg/
- /card/user/sinumerik/hmi/log/
- /card/user/sinumerik/hmi/trace
- /card/oem/sinumerik/data/archive/
- /card/system/tmp/
- <temp>\ You can create multiple subdirectories in this directory.
- /var/user/
- C:\temp\datatransfer\ On PCU WIN NT
- C:\ProgramData\Siemens\MotionControl\oem\sinumerik\hmi\OMATIVE_ACM\data\
- C:\temp\datatransfer\ On PCU WIN XP
- var\tmp\datatransfer\ For Linux
- /user/sinumerik/hmi/data/version/
- /card/user/sinumerik/hmi/data/trace/CM
- C:\Program Files (x86)\Siemens\MotionControl\user\sinumerik\hmi\data\version\

SINUMERIK Operate also supports the following directories:

- D:\backups\
- D:\description\

HMI-Advanced also supports the following directories:

- F:\dh\
- F:\privatesyncdata\
- F:\oem\
- F:\user\

Appendix

A.5 Restrictions when uploading files

- F:\mmc2\
- f:\hmisl\oem\sinumerik\hmi\OMATIVE_ACM\data\
- F:\hmisl\siemens\sinumerik\hmi\trace
- F:\\hmisl\\siemens\\simumerik\\hmi\\data\\trace\\CM

A.6 List of abbreviations

Admin	Administrator (user role)
AMC	Analyze MyCondition
AMP	Analyze MyPerformance
CNC	Computerized Numerical Control
СОМ	Communication
DIR	Directory
FAQ	Frequently Asked Questions
h	Hour
НТТР	Hypertext Transfer Protocol
HTTPS	HyperText Transfer Protocol Secure
IB	Commissioning engineer (user role)
ID	Identification number
IFC	Interface Client
IoT	Internet of Things
IPC	Industrial PC
КРІ	Key Performance Indicator
MB	Megabyte
MLFB	Machine-Readable Product Code
MMM	Manage MyMachines
MSTT	Machine control panel
NC	Numerical Control
NCU	Numerical Control Unit, NC hardware unit
OEE	Overall Equipment Efficiency
OEM	Original Equipment Manufacturer
OP	Operation Panel
OSS	Open Source Software
РВ	Package Builder
PC	Personal Computer
PCU	PC Unit, computing unit
PLC	Programmable Logic Control: PLC
SI	SINUMERIK Integrate
SK	Softkey
SW	Software
URL	Uniform Resource Locator
UTC	Universal Time Coordinated, coordinated global time
UTS	Usage Transparency Service

Appendix

A.6 List of abbreviations

Glossary

Alarms can be configured using variables. Certain alarms also have alarm numbers that are assigned to machine functions for machine diagnostics. When certain alarms occur, you can upload user-defined files to Insights Hub.
Aspects or variable sets are a group of the same data points / variables and describe the context of the imported data, e.g. wear.
For Insights Hub, an asset is each connected element that provides data. This can be a machine or an individual component. In conjunction with this documentation, an "asset" is a machine tool with SINUMERIK 840D sl.
The "Asset Manager" is a Manage MyMachines for Industrial Operations X Cloud. The assets of a machine are created and configured in the "Asset Manager". The application is also used for the management of customers, users and shop floors.
A certificate must be regularly updated to achieve comprehensive security.
Using function "My Dashboards", you can create and edit various diagrams and table overviews. The individual diagrams can be edited using icons in the diagram window and parameters changed.
SINUMERIK offers various functions that can be applied in various configurations. Individual adaptations can be made.
You have the option of releasing assets for other tenants using the "Cross Tenancy" function. Insights Hub functions, such as data associated with time series, asset information, aspects etc. are then visible for these end users. Any data shared requires an active authorization or rejection by the receiving tenant.

Data points or variables

For "Manage MyMachines", data points or variables are all the values that can be acquired from the NC, the PLC and from the drives, e.g. sampling rate, temperature, jerk. They must be defined and configured in the asset configuration as data points. The data is combined into aspects. The captured values are then displayed as time series in "Manage MyMachines" under "Aspects". There are also preconfigured data sets, such as the SINUMERIK basic configuration and the machine availability. Details can be found in the relevant sections.

Export

You have the option of exporting data points of an aspect. Data in a certain time range can be exported in two ways. The exported data is stored in several files depending on the data volume.

Failure analysis

You have the option of displaying a failure analysis on the machine dashboard. All assets, which have a matching configuration, are checked using the failure analysis function.

Insights Hub - Industrial IoT ecosystem from Siemens

Insights Hub – the open cloud platform from Siemens – is the core component of a highperformance IoT operating system. It offers data analysis, comprehensive connectivity, tools for developers, applications and services. Insights Hub supports you in the analysis and utilization of your data in order to obtain new insights. In this way, you can optimize your resources for maximum availability.

Machine agent

Using machine agents, you have the option of connecting other controls (not SINUMERIK controls) with Insights Hub. The machine agent shows an overview of all available agents in the machine agent backend and the following parameters in "Machine Agent Details".

Machine dashboard

The "Machine Dashboard" view provides a summary of the SINUMERIK basic configuration and machine availability for the selected SINUMERIK control. The machine status, NC program status as well as the operating mode can be simultaneously displayed.

Main entry

In the status summary, you can view various parameters for the machine, the NC program and the operating mode. These parameters are created as drop-down list.

onboard.key

onboard-key is a file that is used to onboard assets. The file contains safety-relevant information for establishing a connection between a SINUMERIK control and Insights Hub.

The file can be temporarily saved on the end device. The onboard.key is no longer relevant if the connection between the SINUMERIK control and Insights Hub has been fully established.

Proxy

A proxy is a communication interface within a network. This proxy acts as an intermediary between various computers or networks. The communication partner addresses remain hidden; however, a connection between them can still be established.

Shopfloor Management Application

Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application" has buttons in the left-hand section of the window which make it possible for you to use various applications. You require user role shopfloormgmtapp to use the Manage MyMachines for Industrial Operations X Cloud "Shopfloor Management Application"

Spindle monitor

You can display information and recorded operating conditions from the SMI24 Sensor Module of a spindle. The precondition for this is the Manage MyMachines for Industrial Operations X Cloud "Manage MyMachines /Spindle Monitor".

Time range

Some Manage MyMachines pages offer the option of adapting the display to address your specific requirements by allowing you to set the time range and time zone using the calendar function.

User settings

For example, under "User settings" you can change the language and the machine overview

Variables

The software uses different variables that you can set.

For example, variables can be set to define when a specific alarm occurs.

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