

SIEMENS

Fundamental safety
instructions

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System requirements

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Product information/technical
update

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MindSphere

MindApp
Manage MyMachines

Readme

Valid for control:
SINUMERIK 840D sl
SINUMERIK 828D
Manage MyMachines Version 1.1 HF1

06/2018

Legal information

Warning notice system

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

 DANGER

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

 WARNING
--

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

 CAUTION
--

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

NOTICE

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

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

Qualified Personnel

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

Proper use of Siemens products

Note the following:

 WARNING
--

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

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

Disclaimer of Liability


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


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Fundamental safety instructions

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.
<ul style="list-style-type: none">• Observe the safety instructions given in the hardware documentation.• Consider the residual risks for the risk evaluation.

 WARNING
Malfunctions of the machine as a result of incorrect or changed parameter settings
As a result of incorrect or changed parameterization, machines can malfunction, which in turn can lead to injuries or death.
<ul style="list-style-type: none">• Protect the parameterization (parameter assignments) against unauthorized access.• Handle possible malfunctions by taking suitable measures, e.g. emergency stop or emergency off.

1.2 Warranty and liability for application examples

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

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

1.3 Industrial security

Note

Industrial security

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

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. 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 security measures that may be implemented, please visit:

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


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

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

Further information is provided on the Internet:

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

 WARNING
Unsafe operating states resulting from software manipulation
Software manipulations (e.g. viruses, trojans, malware or worms) can cause unsafe operating states in your system that may lead to death, serious injury, and property damage.
<ul style="list-style-type: none">• Keep the software up to date.• Incorporate the automation and drive components into a holistic, state-of-the-art industrial security concept for the installation or machine.• Make sure that you include all installed products into the holistic industrial security concept.• Protect files stored on exchangeable storage media from malicious software by with suitable protection measures, e.g. virus scanners.• Protect the drive against unauthorized changes by activating the "know-how protection" drive function.

System requirements

In order to use "Manage MyMachines", please observe the following system requirements.

Hardware and operating software

- SINUMERIK 840D sl with SINUMERIK Operate
- SINUMERIK 828D with SINUMERIK Operate
- PC with web browser or tablet with a minimum resolution of 1980 x 1080 pixel and Internet access to the World Wide Web

Note

Connection of SINUMERIK controls to MindSphere

The connection of SINUMERIK controls to MindSphere and Manage MyMachines must meet the highest security standards.

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

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

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

You can read about further actions in the application examples: Manage MyMachines – Installation in existing control environments.

Note

Note regarding the General Data Protection Regulation

Siemens respects the principles of data privacy, in particular the data minimization rules (privacy by design). This means the following for this product:

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

Table 2-1 SINUMERIK 840D sl

Operating software SINUMERIK Operate Version	SINUMERIK Integrate Client Software Version	Hardware version	Operating System
4.5 SP5 H F1, 3, 5	2.0.0.9 / 2.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.5 SP6 HF 1, 12	2.0.0.9 / 2.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
4.5 SP6 HF 3, 5, 7, 8, 10, 11, 13, 14	2.0.0.9 / 2.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.5 SP6 HF13	2.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.7 SP2 HF 1, 3, 4	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.7 SP3 HF 1, 2, 3, 4	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.7 SP4 HF 1, 2, 3	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.7 SP4 HF 1, 3, 4, 5, 6, 7	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.7 SP5 HF 1	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.7 SP6 HF 1	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7

Operating software SINUMERIK Operate Version	SINUMERIK Integrate Client Software Version	Hardware version	Operating System
4.7 SP4 HF 6	3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.8 SP1 HF 1, 2, 3	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.8 SP2 HF 1, 3	3.0.0.9 / 3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7
4.8 SP2 HF1	3.0.0.11	NCU 710.3 NCU 720.2 NCU 730.3 PN	Linux
		PCU 50.5	Windows 7

Table 2-2 SINUMERIK 828D

Operating software SINUMERIK Operate Version	SINUMERIK Integrate Client Software Version	Hardware version	Operating System
4.5 SP4	2.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.5 SP5, HF 1, 2	2.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.5 SP6, HF 1, 2, 3, 4	2.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.7 SP2, HF1	3.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.7 SP2 HF4	3.0.0.11	PPU 241.3	Linux
4.7 SP2 HF4	3.0.0.11	PPU 241.3	Linux
4.7 SP3, HF1	3.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.7 SP4, HF1, 2	3.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.7 SP5	3.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.7 SP6	3.0.0.11	PPU 281.3	Linux
		PPU 241.3	Linux
4.8 SP2	3.0.0.11	PPU 281.3	Linux

Note

Parallel operation with SINUMERIK Integrate applications

Parallel operation with SINUMERIK Integrate applications is not possible.

NOTICE

Data misuse due to an unprotected Internet connection

An unrestricted Internet connection can lead to data misuse.

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

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

Note

PCU 50/ IPC

The necessary security measures (e.g. virus scanner, firewalls, OS patching, etc.) must be implemented on the PCUs/IPCs.

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

Note

End user PC

The necessary security measures (e.g. virus scanner, firewalls, OS patching, etc.) must be implemented on the PCs which are used to visualize and configure Manage MyMachines / Remote at the OEM or end user.

You will find further information on PCs in the industrial environment in the Configuration Manual: Industrial Security (<https://support.industry.siemens.com/cs/ww/en/view/108862708>).

Web browser

You can use the following web browsers:

- Chrome
Version from 65.0.3325.18 (64 bit) up to the current version
- Firefox
Version 59.0.2 (64 bit) up to the current version
- Safari for tablet
iOS and Android systems are supported for the current version and 10 inch tablet size

Delivery form

The SINUMERIK Integrate client as well as the latest updates and further information on the applications and products are stored on PridaNet and can be downloaded directly from there.

- OR -

You can contact your machine manufacturer.

- OR -

You can contact the Siemens Service & Support.

Additional references

- Further information on the "SINUMERIK Operate" operating software can be found in the following reference:
SINUMERIK Operate Commissioning Manual (IM9)
SINUMERIK 828D Commissioning Manual, Commissioning CNC
- For further information on "SINUMERIK Integrate", please refer to:
SINUMERIK Integrate MMP, MMT, AMC, AMP, AMM/E, AMD Commissioning Manual

Product information/technical update

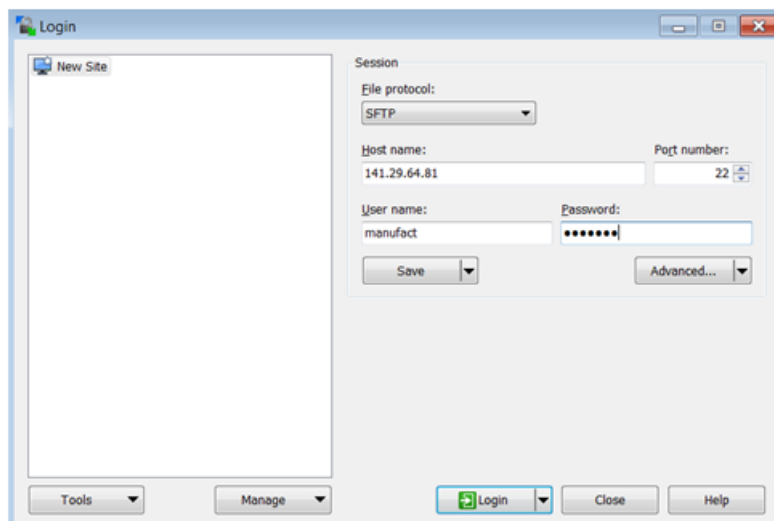
3.1 Activating log files

3.1.1 Activating log files NCU

Procedure

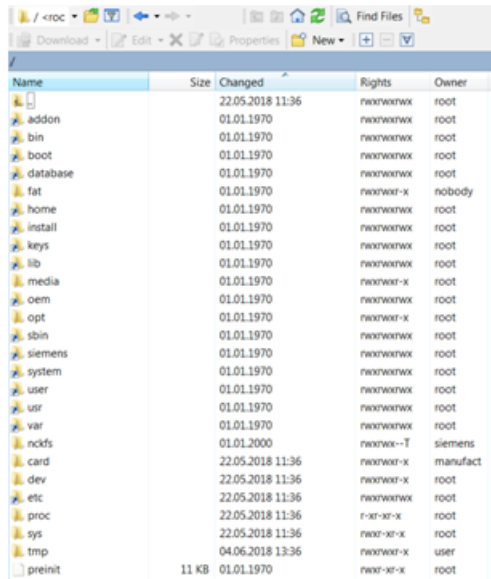
1. Open the log files, e.g. WinSCP.
2. Enter the following information:
 - Host name
 - Port number
 - User name
 - Password

Click the "Login" button.



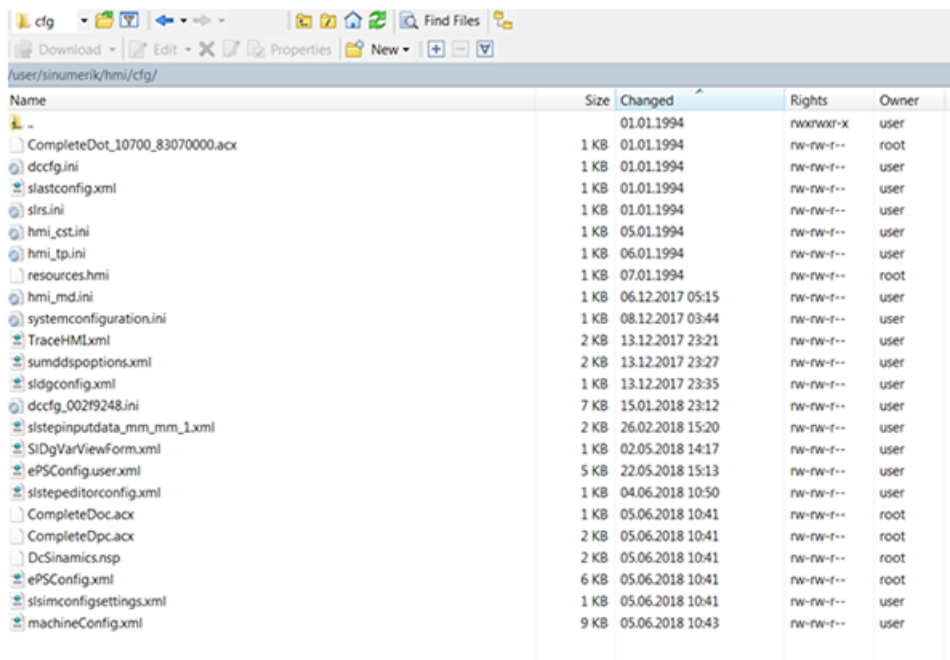
3.1 Activating log files

3. The following window opens:



4. Open the following directory: /<root>/user/sinumerik/hmi/cfg.

5. Open file "ePSConfig.user.xml".



Editing parameters

You can edit the following parameters:

Parameter	Function	Default setting	Input	Maximum value
scriptLogPath	Defines where the log files are to be saved.		Storage location	-
scriptLogSeverity	Indicates the system logging level.	2	2 to 8	8 (Debug3)
uiScriptLogSeverity			1	
MaxScriptLogSize	Indicates the maximum script log size.			10000
separateScriptLog			1	

Example:

```
<logging>
  <separateScriptLog active="1">1</separateScriptLog>
  <scriptLogPath active="1">/var/tmp/scriptLog</scriptLogPath>
  <scriptLogSeverity active="1">8</scriptLogSeverity>
  <uiScriptLogSeverity active="1">8</uiScriptLogSeverity>
  <maxScriptLogSize active="1">9999</maxScriptLogSize>
</logging>
```

Checking log files

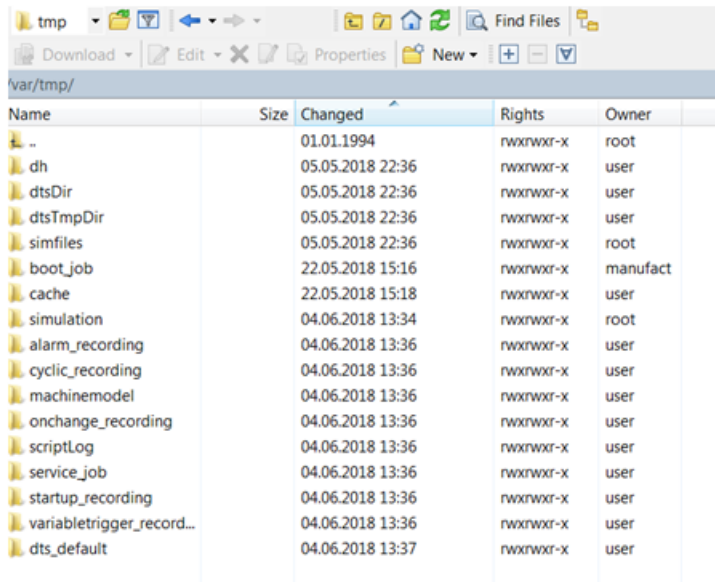
There are 9 different log file types:

- alarm_recording_script
- cyclic_recording_script
- dts_script.js
- machinemodel_script.js
- onchange_recording_script.js
- service_script.js
- startup_recording.js
- variabletrigger_recording_script.js
- boot_script.js

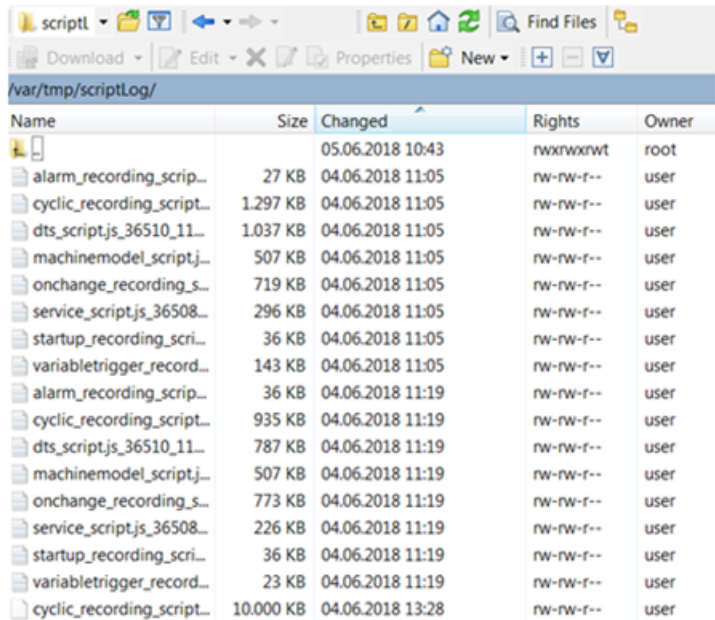
3.1 Activating log files

Procedure

- 1. Open the following directory: /<root>/var/tmp/



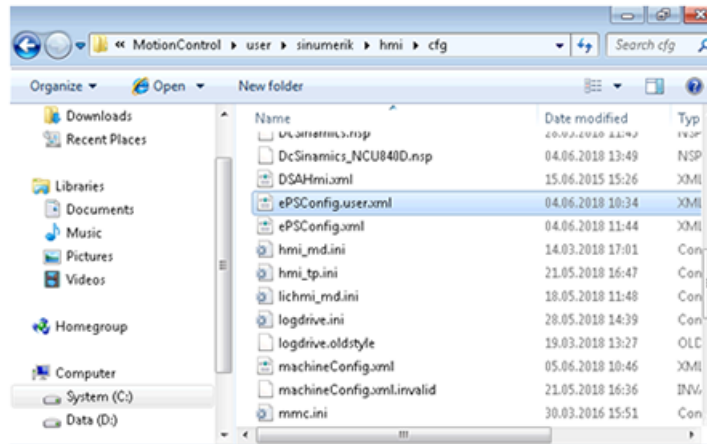
- 2. Select file "scriptLog".



3.1.2 Activating log files PCU

Procedure

1. Open the following directory: C:\ProgramData\Siemens\MotionControl\user\sinumerik\hmi\cfg
2. Open the file: ePSConfig.user.xml.



Editing parameters

You can edit the following parameters:

Parameter	Function	Default setting	Input	Maximum value
scriptLogPath	Defines where the log files are to be saved.		Storage location	-
scriptLogSeverity	Indicates the system logging level.	2	2 to 8	8 (Debug3)
uiScriptLogSeverity			1	
MaxScriptLogSize	Indicates the maximum script log size.			10000
separateScriptLog			1	

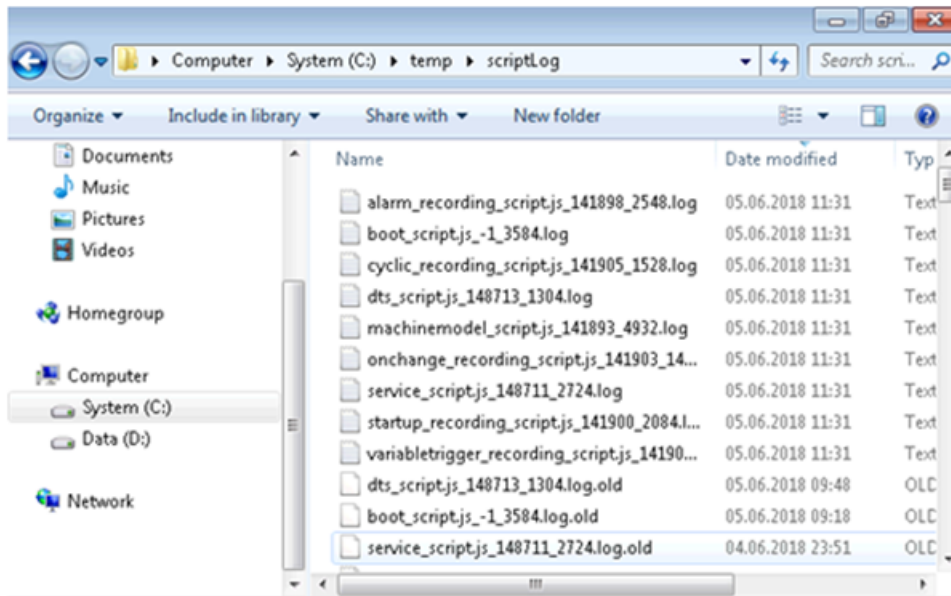
Example:

```
<logging>
<separateScriptLog active="1">1</separateScriptLog>
<scriptLogPath active="1">C:\temp\scriptLog\</scriptLogPath>
<scriptLogSeverity active="1">8</scriptLogSeverity>
<uiScriptLogSeverity active="1">8</uiScriptLogSeverity>
<maxScriptLogSize active="1">10000</maxScriptLogSize>
<maxLogLifeTimeDays active="1">30</maxLogLifeTimeDays>
</logging>
```

3.1 Activating log files

Checking log files

1. Open the following directory: C:\temp\scriptLog



2. Check the corresponding log files.

3.2 Supplementary conditions

"boot_job" folder

If the "boot_job" folder is not generated automatically, restart the control and create the directory manually under: /var/tmp

The "last value recording" status

Information:

The indication of the last value change in the MMM Dashboard display refers in each case to the last uploaded value of the variables that are necessary for the display on this page and not to the data points that can be freely configured. This values in this display are recorded if changed.

Occurrence of an error message if no activity takes place for an extended period after login

Error description:

After an extended period of inactivity (4 h) of the application, the authorizations for communication via the user interface expire. The message "Authentication required" appears.

Remedy:

Log on to MindSphere again.

No e-mail notification after setting up a user

Error description:

If an e-mail address is used for the registration of a user who has already been registered previously with the same e-mail address, the registration of the user will fail.

Remedy:

Enter an alternative e-mail address.

An online script update during ongoing operation can result in loss of data

Error description:

During the update of scripts that contain the execution logic on the control, it cannot be guaranteed that the data will be recorded continuously over the stopping and restarting period of the scripts.

Remedy:

No remedy is possible.

Variables of the type "STRING" are not visualized in the aspect view

Error description:

When freely configuring variables, defined variables of the data type "STRING" are not displayed in one aspect. The display shows "No Data available".

Remedy:

No remedy is possible.

Crash of SINUMERIK Operate caused by update of the application logic

Error description:

Updating the application logic by means of an update of the system at the server end can very occasionally cause SINUMERIK Operate to crash.

Remedy:

Restart SINUMERIK Operate.

Display of the "operational performance monitors"

Error description:

An additional license is required for the recording of the axis-specific operational performance monitors: path length evaluation, 6FC5800-0AM53-0YB0.

Remedy:

Contact your sales representative to obtain the additional license.

Buffering of data if no Internet connection is available

Information:

If your control has no Internet connection or if MindSphere is not accessible (e.g. due to an Internet failure), the data is buffered on the control.

The size of this buffer is limited to 50 MB.

The length of period during which data can be buffered without loss of data depends on the number and type of variables, frequency of changes, and the recording rhythms.

Occurrence of sporadic faulty behavior on the user interface

Error description:

After the MindSphere or one of the components in the user interface has been updated, the user interface may behave incorrectly.

Remedy:

Delete your browser cache, e.g. with the key combination <Shift> + <F5>.

Changing the file "ePSConfig.user.xml"

Information:

Changes to the file "ePSConfig.user.xml" may only be performed after consultation with the Hotline, Service, Development, or PM.

No 1:n connections released to the SINUMERIK Integrate client

Information:

The SINUMERIK Integrate client does not support any 1:n connections. That is to say, no access to a further control is possible via the SINUMERIK Integrate client.

IoT Data Modeler only supports German and English

Error description:

If a language other than German or English is set, loading of the IoT Data Modeler pages will not be completed.

Remedy:

Use only German or English as browser languages.

Deleted users will continue to be displayed in the IoT Data Modeler

Error description:

Deleted users will continue to be displayed in the IoT Data Modeler and cannot be deleted there.

Remedy:

Reload the page. The information is displayed in the correct status.

It is not possible to delete aspects and variables

Error description:

Deleting aspects via the user interface is no longer possible due to an existing error in MindSphere.

Remedy:

Delete aspects and variables via the web service interface of MindSphere.

The online script is updated in the event of data loss

Error description:

When updating scripts for the execution logic on the controller, it cannot be ensured that the data will be continuously saved during the time in which the scripts are stopped and restarted.

Remedy:

No remedy is possible.

Connection to MindSphere must be established via TLS 1.2

Error description:

For security reasons, MindSphere requests a connection that satisfies the TLS 1.2 standard. For the versions of SINUMERIK Integrate client that do not support TLS 1.2, a reverse proxy that supports TLS 1.2 is required.

The connection of SINUMERIK controls to MindSphere and Manage MyMachines must meet 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.

Customers are solely responsible for preventing unauthorized access to their plants, systems, machines and networks. 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.

Remedy:

The machines can be integrated with the aid of a reverse proxy between the company network and the Internet.

You can read about further actions in the application examples: Manage MyMachines – Installation in existing control environments.

System crash when etc/host file is changed

Error description:

The use of the SINUMERIK Integrate client with a changed etc/host file leads to unexpected system crashes.

Remedy:

No remedy is possible.

Deleted users will continue to be displayed in the IoT Data Modeler

Error description:

Deleted users will continue to be displayed in the IoT Data Modeler and cannot be deleted there.

Remedy:

Reload the page to ensure that the information is displayed with the correct status.

Display problems on tablet devices

Error description:

The display in portrait format is not supported for tablets. Display problems can also occur when the landscape format is used.

Remedy:

Use the display in landscape format display with your tablet device if problems occur in the portrait format display. If problems also occur in the landscape format, use your PC browser for this operating step.

E-mails cannot be sent if a rule is initiated

Error description:

For a configured rule, use the extended rule described below in the Fleet Manager:

- Condition either as string data or float data for a change
- Create result as request and send as e-mail

After the configured variable on the SINUMERIK and on the SINUMERIK Integrate Client has been changed and the changed data has been sent to MindSphere via Manage MyMachines, the request is automatically created via the request extension. But the user cannot receive an e-mail.

Remedy:

No remedy is possible.

Blank e-mail entries are not validated

Error description:

When the user selects the option "Send e-mail" and leaves the e-mail address field blank, there is no check of whether or not the e-mail is entered.

Remedy:

Enter a valid e-mail address.

An error occurs when integrating an asset under an undefined organization

Error description:

Assets that do not belong to an organization cannot be integrated under an undefined organization, i.e. if the option "No organization selected!" is selected.

Remedy:

Only integrate assets under pre-defined organizations.

Incorrect asset storage location on the card

Error description:

The storage location of an asset is not correctly displayed on the card.

Remedy:

If the asset storage location on the card appears to be incorrect, change the storage location directly in the Fleet Manager. Click on the "Edit" icon and specify the correct storage location.

There must be sufficient memory for the buffering of data

Error description:

If there is not sufficient memory space on the CF card, the data will no longer be written to the CF card and the entire data recording process will be stopped.

Remedy:

Ensure that there is sufficient memory space. If this problem arises, delete the buffer on the 2nd level.

Aspects and variables cannot be deleted

Error description:

Due to an error in MindSphere, components can no longer be deleted via the user interface.

Remedy:

Delete the components and variables via the service interface of MindSphere.

The machine cannot be reconnected using the "cert.key" file

Error description:

When the machine tries to reconnect to MindSphere using the existing "cert.key" file, it can no longer establish a connection.

Remedy:

If you want to connect the machine to MindSphere, delete the existing "cert.key" file and insert a new "onboard.key" file.

There is no e-mail notification after a user is set up

Error description:

If you use an e-mail address for the login of a user who has already registered with the same e-mail address, the login of this user will fail.

Remedy:

Enter an alternative e-mail address.

Images of the type "bmp" are not supported on the asset configuration page

Error description:

Uploading images of the type "bmp" is not supported on the asset configuration page.

Remedy:

Upload images of the type "png" or "jpeg" to the asset configuration page.

Warning messages are not displayed if a more cost-effective configuration is selected

Error description:

You receive a warning if the MSU configuration is changed and it receives a less cost-effective setting. However, no message/information is displayed if you switch to a more cost-effective MSU configuration.

Remedy:

If no warning regarding the MSU calculation is displayed, consider when you are changing the configuration that the updated configuration is more cost-effective compared to the previous configuration.

The file name "onboard.key" should not contain any numbers

Error description:

If the user downloads the file multiple times during a download process, the browser provides them with successive incremental numbers. The name of the copied "onboard.key" file under the machine (/var/tmp/boot_job) should not contain any numbers. For example: The file name should not be "onboard (1).key".

Remedy:

Make sure that an "onboard.key" file copied under the machine (/var/tmp/boot_job) does not contain any numbers. Ensure that the file name is "onboard.key".

Partial support for Internet Explorer

Error description:

Internet Explorer is only partially supported.

Remedy:

Use the latest version of the Chrome or Firefox browser.

An update of the time zone is not automatically visible in the alarm time

Error description:

If the time zone is changed (UTC or +X), this is not automatically visible in the alarm time.

Remedy:

Reload the file. After this, the updated time values for the new time zone are displayed on the page.

Variables of the type "BOOLEAN" are not displayed in the component expansion

Error description:

If variables are freely configured, defined variables of the data type "BOOLEAN" are not displayed in a component. The message "No data available" is displayed.

Remedy:

No remedy is possible