Transfer of Raw Data to a PC

SIPLUS CMS2000 Basic Unit / V1.1

FAQ August 2012
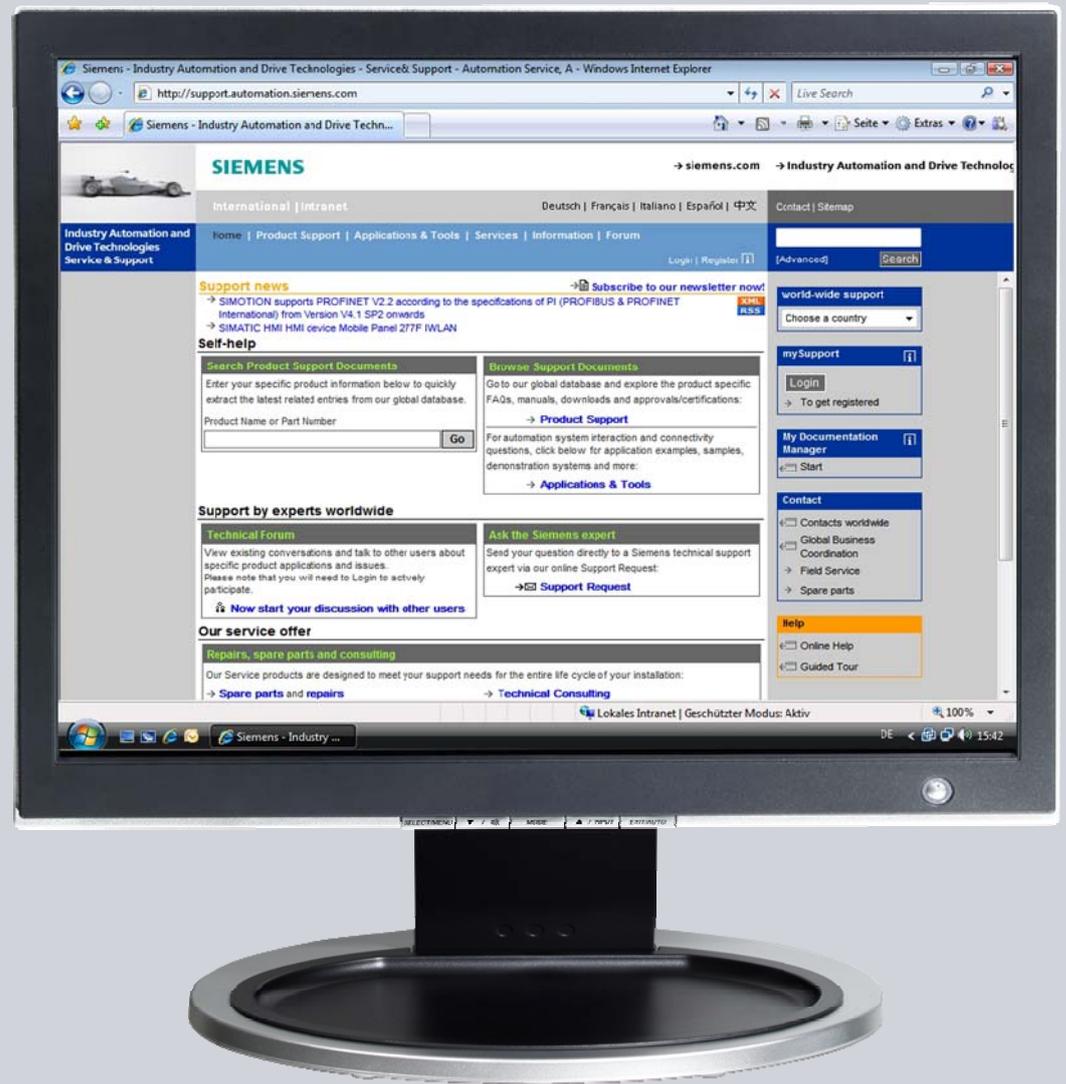
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Question

How can raw data recorded with SIPLUS CMS2000 be transferred from the device to a PC?

Answer

The answer to this question is described in the instructions and notes contained in this document.

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1 General

1.1 What are raw data?

The SIPLUS CMS2000 condition monitoring system facilitates the recording and internal saving of raw data in the form of WAV files. The term raw data refers to direct records pertaining to vibration inputs, analog inputs and speed. Up to five channels are thus written into every raw data file.

The parameterization determines the specific channels for recording. A channel is recorded when it is correctly configured (see operating instructions, chapter 8.13 "Hardware configuration" menu, page 125 et seqq.).

Raw data recording can be triggered by three events:

- when a parameterized limit exceeded
- User command
- Digital input TRIGGER

The recording duration amounts to one minute after the start event.

For further information on raw data recording, please refer to the operating instructions, chapter 8.8 "Raw data recording", page 53.

1.2 How to access raw data?

For the recorded raw data's further processing, the files can be transferred from the SIPLUS CMS2000 Basic Unit to a local computer.

For this purpose, a TCP/IP connection has to be set up between the device and the computer. Configuration of this Ethernet connection and possible safety aspects for data transfer are not described in this article.

For further software and hardware requirements regarding connection and web browser, please refer to the operating instructions, chapter 8.2, page 40.

Two options are available for implementation of the copy process, which are described in detail in the following chapters.

- Copying via the SIPLUS CMS2000 web interface
- Data transfer via FTP, e.g. with the WinSCP FTP client software

2 Copying via the Web Interface

The recorded raw data can be manually copied to a local computer ("download") via the SIPLUS CMS2000 web interface.

Such download is subject to two prerequisites:

▪ A user has to be logged into the device

▪ The Basic Unit has to be in the stop state

The download process can be started via the download site *"Administration > Download"*. If the device comprises multiple raw data records, first select the desired file in the drop-down menu and then click the link *"Download selected file"*.
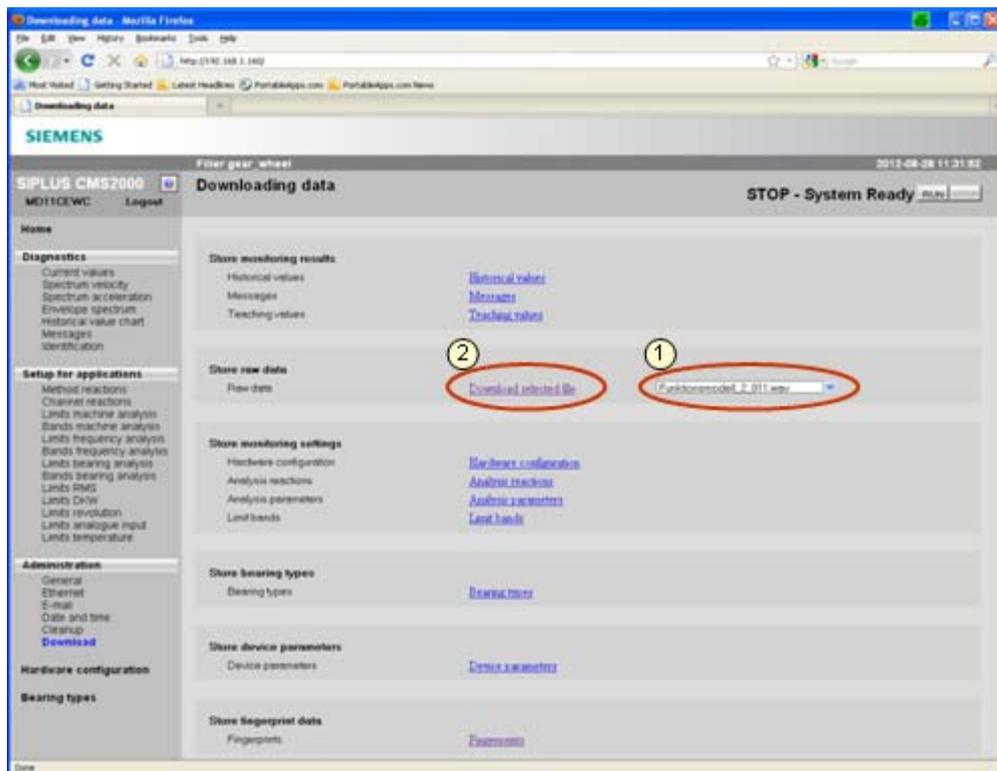
Figure 1: Download via the web interface

Depending on your browser's security settings, a dialog window opens in which you have to confirm the file's saving to your computer.
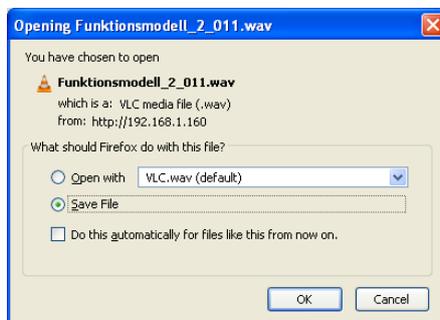
Figure 2: Security query of the browser

Confirm this security query with OK and select the desired storage location on your computer in the dialog window which opens next.

3 Data Transfer via FTP with the Help of WinSCP

3.1 What is WinSCP?

WinSCP is an open-source FTP client software which facilitates data exchange via the File Transfer Protocol (FTP). Besides FTP, WinSCP supports further protocol types such as SFTP and SCP. However, these are not supported by the SIPLUS CMS2000 Basic Unit V1.1. Data transfer can be implemented manually via a graphical user interface or automatically as command line call.

WinSCP is available via http://winscp.net/eng/download.php or as portable application via http://portableapps.com/apps/internet/winscp_portable.

3.2 Manual data transfer via the user interface

Following installation or copying, WinSCP is called up from the installation directory via the file "WinSCP.exe" or "WinSCPProtable.exe".

WinSCP refers to the communication connection between the local PC and a remote device as session. Amongst others, a session contains all session parameters relevant for connection establishment.

The following connection parameters have to be used for a session with the SIPLUS CMS2000 Basic Unit:

Parameter	Description	Value
Host name	IP address of the SIPLUS CMS2000 Basic Unit; also the device name can be used with DNS name resolution in the network	192.168.1.160 [*)]
Port number	Port address for communication	21
User name	User name	admin
Password	Assigned password	0000 [*)]
File protocol	Transfer protocol to be used	FTP

*) Value may vary depending on the SIPLUS CMS2000 Basic Unit's parameterization
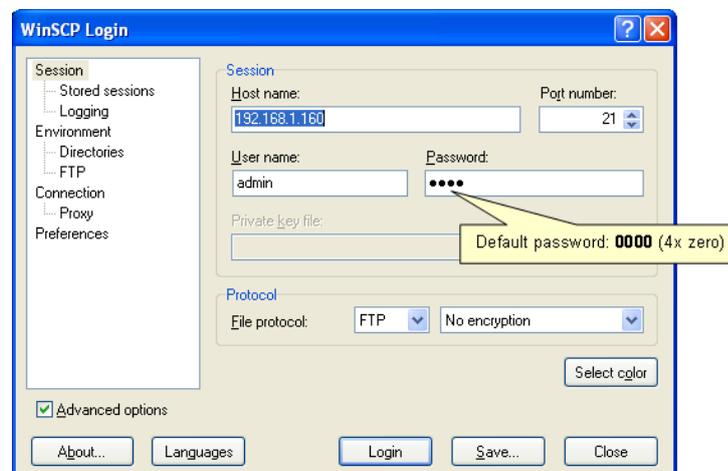
Figure 3: Configuration of connection parameters for a session

Connection to the selected session is established via the button *"Login"*.

A session can be saved via the button *"Save…"*.
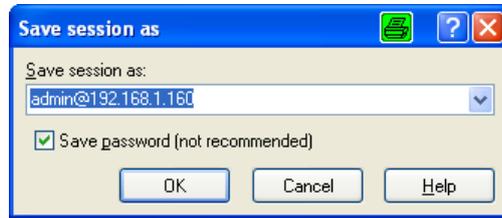
Figure 4: Saving a session

Saved sessions can be directly opened in the *"WinSCP Login"* window under *"Session > Stored sessions"* for future use.
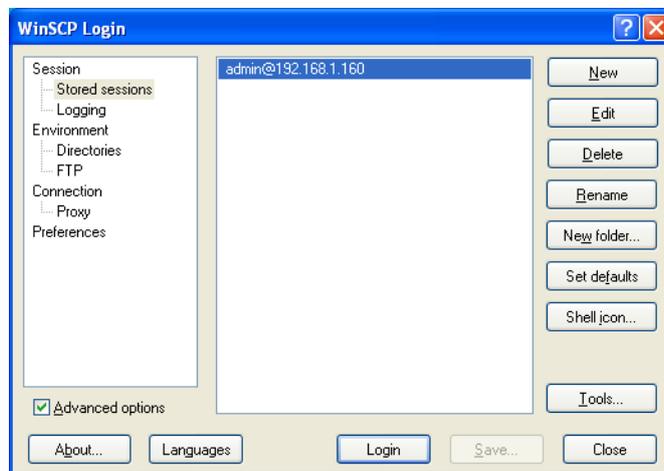
Figure 5: Creating or changing a session

Once connection to a SIPLUS CMS2000 Basic Unit has been established via the button *"Login"*, the raw data can be transferred from the device to the local computer.

In the main window of the WinSCP interface, the left section shows the local directory structure, while the right section shows that of the remote partner.

In the left section, navigate to the desired directory on your computer. In the remote section, navigate from the root directory to the sub-directory "**/Storage Card3/raw**" and select the desired raw data records.

Amongst others, the copy process is started via drag & drop by dragging the selected raw data from the right section to the target folder in the left section.

Alternatively, the copy process can be started via the key F5 "Copy" or via the menu "*Files > Copy*". In the subsequent copy dialog, please observe the direction of file transfer.
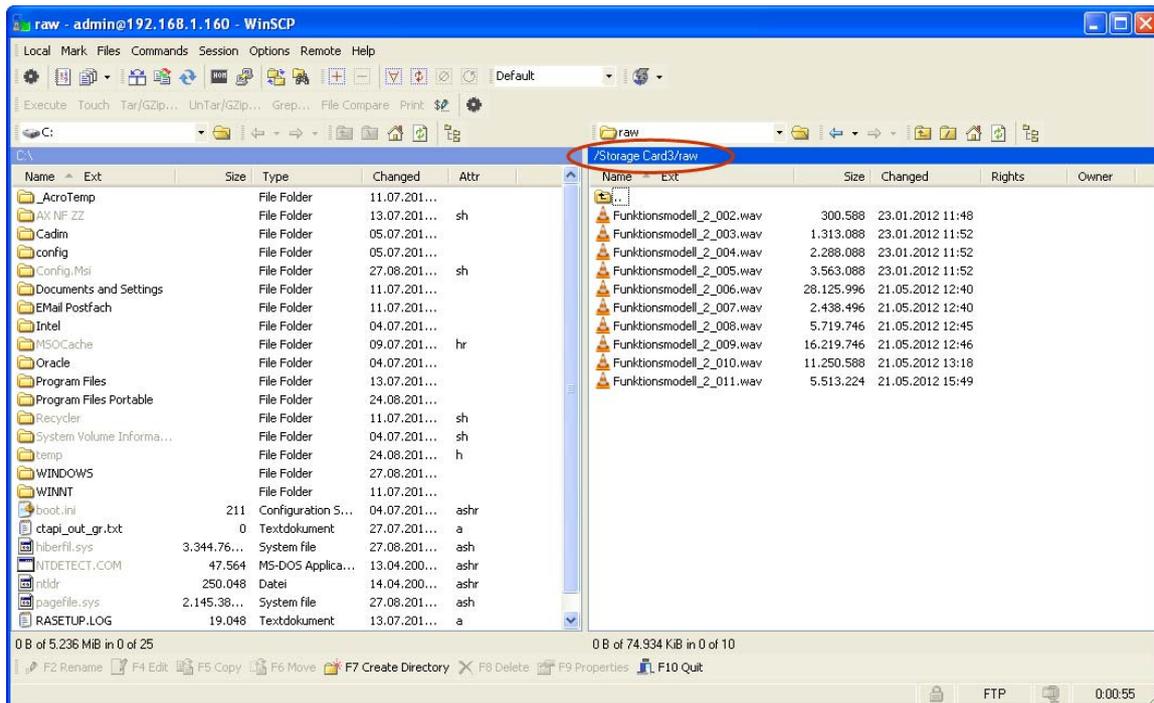
Figure 6: WinSCP interface in the commander view

The session with the SIPLUS CMS2000 is terminated when the application is closed.

3.3 Automatic data transfer via WinSCP script

Besides manual data transfer via the graphical user interface, WinSCP also supports automatic transfer. This process is controlled via a WinSCP script.

The WinSCP script is created via a text editor and saved as .txt file in the directory "***<Installation_directory>/App/winscp***".

The following script example "***datatransfer_script.txt***" uses the same session parameters as described in chapter 3.2.

Following connection establishment, all raw data are transferred from the SIPLUS CMS2000 Basic Unit to the directory *"D:\SIPLUS_CMS2000_RAWDATA\"* on the local PC. Already existing files with identical names are overwritten without prompting. If an error occurs during script processing, the script is terminated. If a connection error occurs, a new connection establishment is automatically initiated after 5 seconds.

```
# Automatically terminate script in case of error
option batch abort

# Overwrite existing files without prompting
option confirm off

# Connection establishment
open ftp://admin:0000@192.168.1.160

# Use binary data transfer
option transfer binary

# Data transfer to local directory
get "/Storage Card3/raw/*.*" "d:\SIPLUS_CMS2000_RAWDATA\*.*"

# Disconnection
close

# Exit WinSCP
exit
```

Figure 7: WinSCP script "*datatransfer_script.txt*"

The WinSCP script is called up via the command line with the following command:

winscp.com /script=datatransfer_script.txt

In the example below, this command line call is integrated in a batch program "run_script.bat".

```
@ECHO OFF

REM Run WinSCP script datatransfer_script.txt

ECHO Run WinSCP script...
ECHO.

winscp.com /script=datatransfer_script.txt

ECHO.
ECHO ...  WinSCP script completed

PAUSE
EXIT
```

Figure 8: Batch program "run_script.bat"

Also the batch program has to be saved to the directory
"**<Installation_directory>/App/winscp**".

After start-up of the batch program, the following message is output in a console window:

Figure 9: Console output after successful data transfer

Figure 10: Console output after connection interruption