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Configuration Change with SINEMA Server for Network Devices with Command Line Interface (CLI)

SINEMA Server V13 / V14

<https://support.industry.siemens.com/cs/ww/en/view/109749379>

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1 Introduction

1.1 Overview

Requirement

Simple changes are to be made automatically in multiple network components, for example, IP address of a time master (NTP server).

Furthermore, during commissioning the basic settings are to be parameterized for multiple network devices; for example, iWLAN parameters (authentication, encryption, SSID, etc.).

In addition, time-controlled once a week, the configuration of all network components is to be stored on or downloaded from a TFTP server.

Possible solution

One possible solution for this requirement is to use SINEMA Server and Command Line Interface (CLI). SINEMA Server provides the option to run CLI scripts via SSH or Telnet on network components via a CLI. You can prepare the CLI scripts beforehand and then run them in planned time frames.

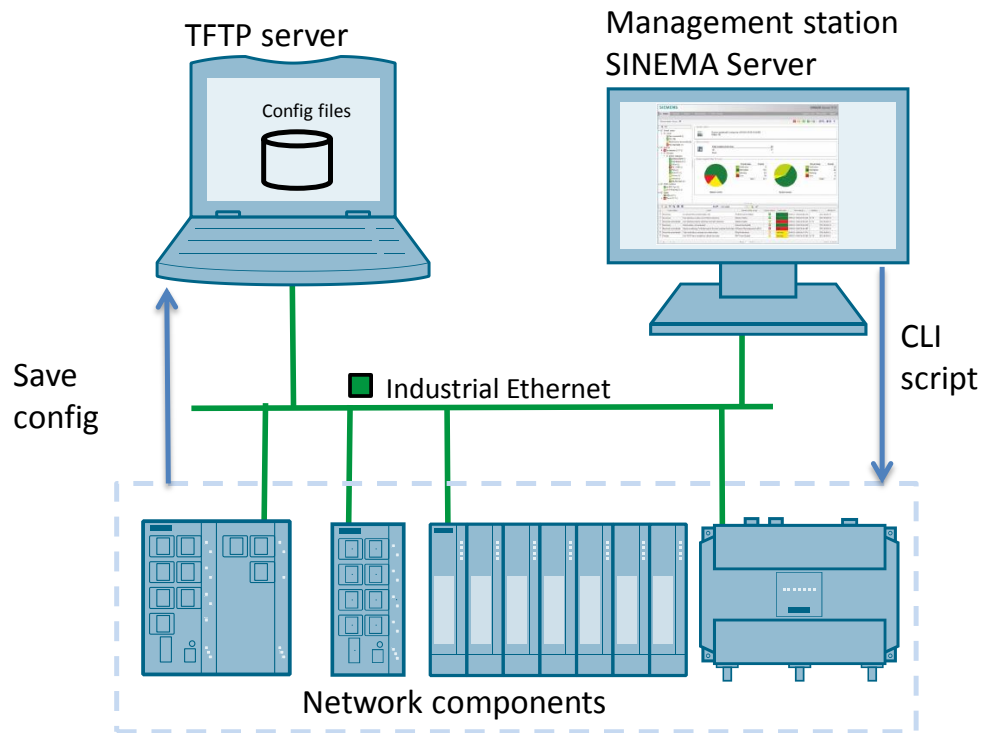
Implementation

This document shows you how to use the SINEMA server to store the configuration of all network components time-controlled once a week on a TFTP server. The MAC address of the corresponding network components is written in the file name to ensure that the file name is unique.

1.2 Function

The figure below shows the basic principles of the solution.

Figure 1-1



1.3 Components Used

Compatible devices

This collection of CLI scripts is valid for all MSPS-based network components (see [section 2.2.1](#)) that support at least one of the following protocols:

- "SSH" (standard port 22, encrypted)
- "Telnet" (standard port 23, encrypted)

In addition, the devices must have a command line interface (CLI).

Software used

The following software is required for this solution:

Table 1-1

Software	Article number / Designation
SINEMA Server V14	<p><u>DVD:</u></p> <p>6GK1781-1BA14-0AA0 [50 nodes] 6GK1781-1DA14-0AA0 [100 nodes] 6GK1781-1JA14-0AA0 [250 nodes] 6GK1781-1TA14-0AA0 [500 nodes]</p> <p><u>Download (Online Support):</u></p> <p>6GK1781-1BA14-0AK0 [50 nodes] 6GK1781-1DA14-0AK0 [100 nodes] 6GK1781-1JA14-0AK0 [250 nodes] 6GK1781-1TA14-0AK0 [500 nodes]</p>
SINEMA Server V13 SP1/SP2	<p><u>DVD:</u></p> <p>6GK1781-1BA13-0AA0 [50 nodes] 6GK1781-1DA13-0AA0 [100 nodes] 6GK1781-1JA13-0AA0 [250 nodes] 6GK1781-1TA13-0AA0 [500 nodes]</p> <p><u>Download (Online Support):</u></p> <p>6GK1781-1BA13-0AK0 [50 nodes] 6GK1781-1DA13-0AK0 [100 nodes] 6GK1781-1JA13-0AK0 [250 nodes] 6GK1781-1TA13-0AK0 [500 nodes]</p>
- Internet Explorer 11.0 - Firefox 42.0	These browser versions are the minimum requirements. You can also use higher versions of the browsers.

Install this software on a PC/PG with

- SINEMA Server V13:
 - Windows 7 SP1 64 Bit (Prof, Ult., Ent)
 - Windows 2008 Server R2 SP1 64 Bit
- SINEMA Server V14:
 - Windows 7 SP1 64 Bit (Prof, Ult., Ent)
 - Windows 2008 Server R2 SP1 64 Bit
 - Windows 10 (Pro / Enterprise) Version 1607 / 1703 (64 Bit)

Devices used

In the following configuration instructions a CLI script is run on the network devices below:

- SCALANCE XM408-8C
- SCALANCE XF208
- SCALANCE XF208
- SCALANCE W774-1 RJ45
- SCALANCE W761-1 RJ45

The following IP parameters were assigned to the devices:

Table 1-2

Component	Article number	IP address	Subnet mask
SCALANCE XM408-8C	6GK5 408-8GS00-2AM2	172.16.9.40	255,255,255.0
SCALANCE XF208	6GK5 208-0BA00-2AF2	172.16.9.41	255,255,255.0
SCALANCE XF208	6GK5 208-0BA00-2AF2	172.16.9.42	255,255,255.0
SCALANCE W774-1 RJ45	6GK5 774-1FX00-0AA0	172.16.9.80	255,255,255.0
SCALANCE W761-1 RJ45	6GK5 761-1FC00-0AA0	172.16.9.81	255,255,255.0

Note

Both SCALANCE XF208 devices use a different syntax in the CLI to that of the MSPS devices. This is why the SCALANCE XF208 devices are not compatible with the CLI script created subsequently.

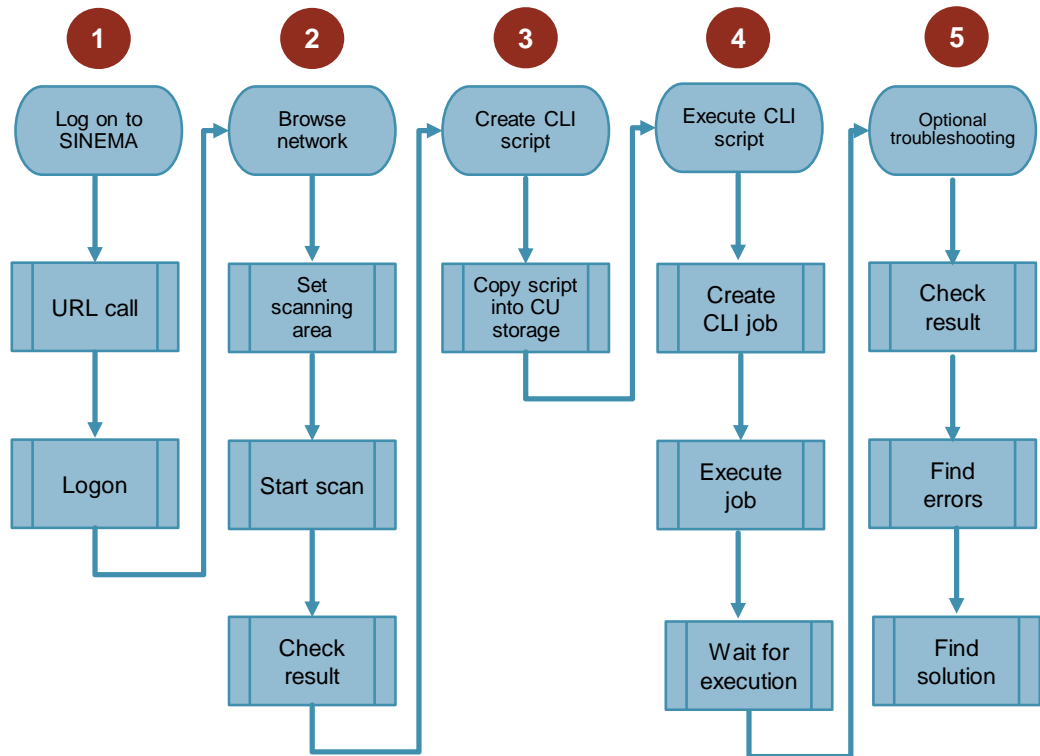
These two SCALANCE XF208 switches are for trouble shooting incorrectly executed CLI scripts later on.

2 Engineering

2.1 General Overview

The following diagram shows the general principle for implementing the task in five steps:

Figure 2-1



2.2 Configuration

2.2.1 Practical Tips

Network access

In order to run a CLI script you need access via the network to the corresponding network component(s).

Devices and functions

Not all devices support the features and CLI commands described in this document. This also depends on the firmware version used.

Generally there is a difference made between the following SCALANCE modules:

- SCALANCE X-200
- SCALANCE X-300
- MSPS-based devices.

Devices based on MSPS are:

- SCALANCE XB-200
- SCALANCE XC-200
- SCALANCE XP-200
- SCALANCE XM-400
- SCALANCE XR-500
- SCALANCE S615
- SCALANCE W-700 (802.11n device types)
- SCALANCE M800 (except M875 and M873)

The functions and CLI commands are normally identical or very similar on the MSPS-based devices.

Note This document gives you guidelines for executing CLI commands. The document does not claimed to be complete. We recommend that you refer to the CLI manual for details and restrictions of the separate features.

TFTP server

SINEMA Server does not include its own TFTP server.

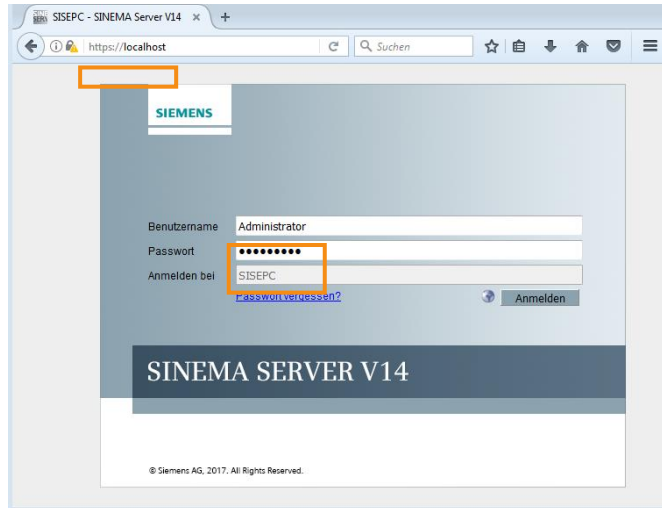
To be able to store the configuration files of the SCALANCE devices a separate TFTP server must be installed or it must be possible to access an existing TFTP server.

Note No specific TFTP server is named in the following. The settings are valid for all TFTP servers.

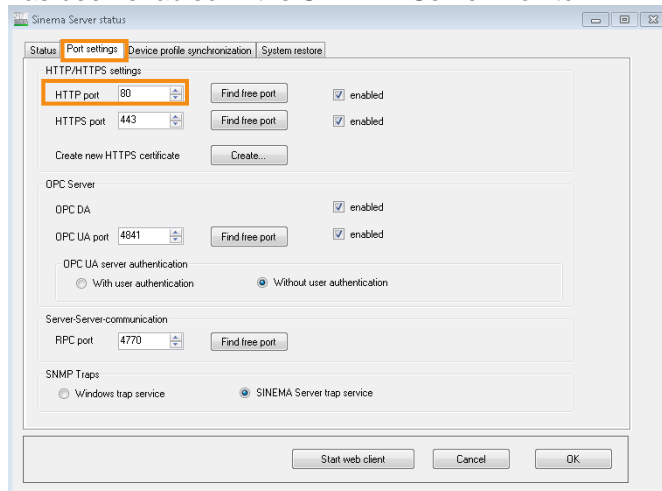
2.2.2 SINEMA Server Logon

URL call and logon

1. Start your browser and enter the SINEMA server URL in the address line. Use the default URL <https://localhost> if SINEMA is re-installed or a system restore has been made.



Use the user-specific URL, <http://localhost:80>, for example, if the HTTP Port 80 has been enabled in the SINEMA Server Monitor.



Note It is recommended to use the encrypted access via https.

2. Log on to the SINEMA Server with the following logon data.
Default logon data:

- User name: Administrator
- Password: SinemaA

User-specific logon data:

- User name: <...>
- Password: <...>

Result:
The home page of the SINEMA server is displayed.



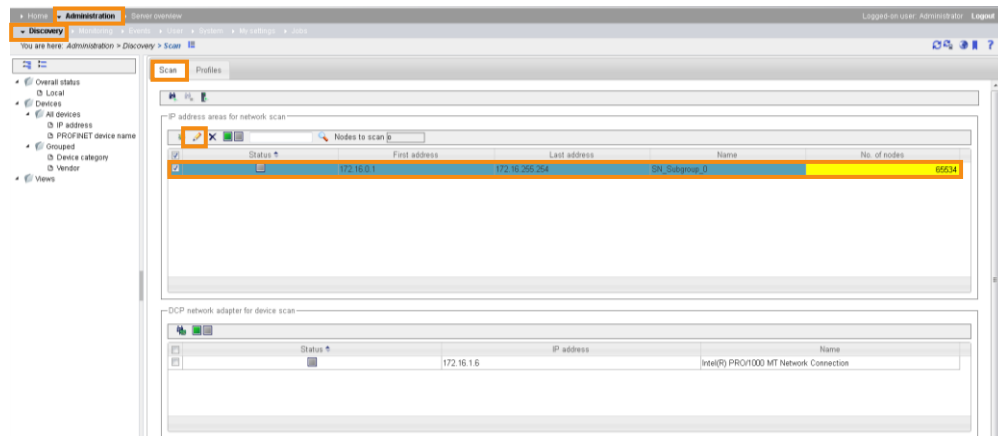
- ① Kopfbereich
- ② Navigationsleiste
- ③ Statuszeile
- ④ Gerätebaum
- ⑤ Hauptfenster
- ⑥ Ereignisliste

- 1 Header area
- 2 Navigation bar
- 3 Status line
- 4 Device tree
- 5 Main window
- 6 Results list

2.2.3 Browse Network

Set network scanning range

1. In the menu bar switch to the menu "Administration > Discovery > Scan".
2. In the "IP address areas for network scan" area you select the item with the name "SN_Subgroup_0".
3. Click the "Edit IP address area" button or double-click the selected item.



4. In the dialog that opens you enter the IP address area that includes your network devices to be monitored and check the "Active" check box to enable the specified IP address area.
5. Click the "Save" button to confirm the entries.

Start network scanning

Start scanning by clicking the "Start discovery" icon.

Note

If the following message dialog is displayed, confirm it with the "OK" button.

Check the scanning result

Check whether the required network components have been found by SINEMA Server. All the devices found are displayed in the device tree on the left under "Devices > All devices".

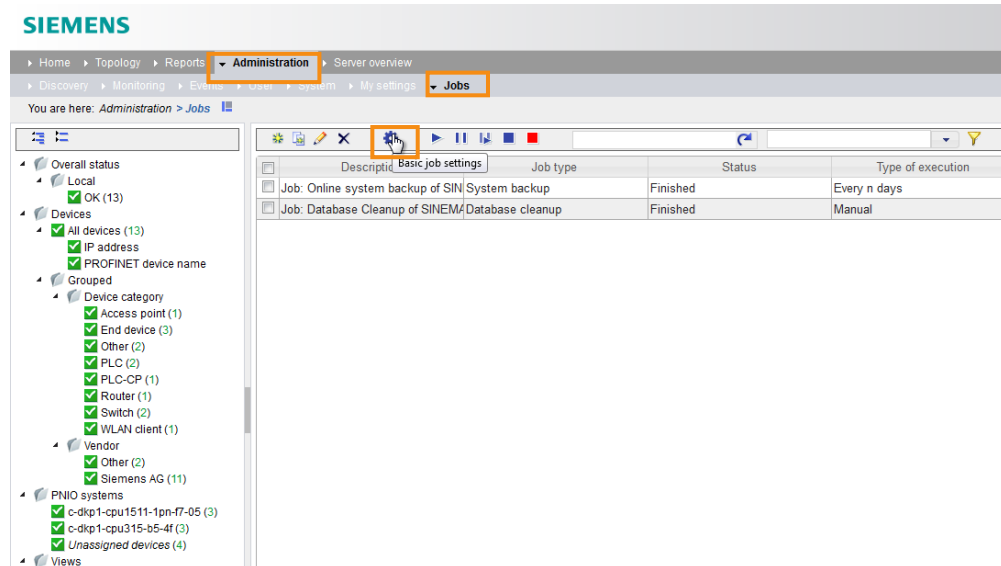
The screenshot shows the SINEMA Server interface. On the left, a tree view shows the navigation path: Home > Topology > Reports > Administration > Server overview > Devices > IP address > Devices. The 'All devices (13)' folder is selected and highlighted with an orange box. The main area displays a table of discovered devices with columns for Status, Device type, Article number, IP address, Subnet mask, MAC address, and Firmware version. Several rows are highlighted with orange boxes, including SCALANCE XM408-8C, SCALANCE XF208, SCALANCE W774-1 RJ45, and SCALANCE W761-1 RJ45.

Status	Device type	Article number	IP address	Subnet mask	MAC address	Firmware version
✓	Management Station		172.16.1.5		00:0C:29:7F:21:BC	
✓	CPU 315-2 PN/DP (2EH14-0AB0)	6ES7 315-2EH14-0AB0	172.16.9.20	255.255.0.0	28-63:36:56:B5:4F	V3.2.11
✓	CP 343-1 (1EX30-0XE0)	6GK7 343-1EX30-0XE0	172.16.9.21	255.255.0.0	00:0E:8C:96:74:4A	V3.1.1
✓	ET200ECO PN 8DI (6BF00-0AB0)	6ES7 141-6BF00-0AB0	172.16.9.23	255.255.0.0	08:00:06:99:2D:02	V 7.0.1
✓	CPU 1511-1 PN (1AK00-0AB0)	6ES7 511-1AK00-0AB0	172.16.9.30	255.255.0.0	00:1B:1B:70:F7:05	V1.8.4
✓	ET200MP IM155-5 ST (5AA00-0AB0)	6ES7 155-5AA00-0AB0	172.16.9.31	255.255.0.0	00:1B:1B:13:20:6B	V3.0.0
✓	ET 200SP IM155-6 PN ST (6AU00-0BN0)	6ES7 155-6AU00-0BN0	172.16.9.32	255.255.0.0	28:63:36:3E:6E:77	V 3.3.0
✓	SCALANCE XM408-8C (8GS00-2AM2)	6GK5 408-8GS00-2AM2	172.16.9.40	255.255.0.0	00:1B:1B:8A:01:00	V06.00.01
✓	SCALANCE XF208 (0BA00-2AF2)	6GK5 208-0BA00-2AF2	172.16.9.41	255.255.0.0	00:1B:1B:80:57:CA	V 5.0.1
✓	SCALANCE XF208 (0BA00-2AF2)	6GK5 208-0BA00-2AF2	172.16.9.42	255.255.0.0	00:1B:1B:80:56:FB	V 5.0.1
✓	SCALANCE W774-1 RJ45 (1FX00-0AA0)	6GK5 774-1FX00-0AA0	172.16.9.80	255.255.0.0	00:1B:1B:90:87:84	V 6.0.0
✓	SCALANCE W761-1 RJ45 (1FC00-0AA0)	6GK5 761-1FC00-0AA0	172.16.9.81	255.255.0.0	00:1B:1B:90:15:17	V 6.0.0
✓	DEFAULT_ICMP_Device		172.16.9.200		00:1B:1B:F6:8C:31	

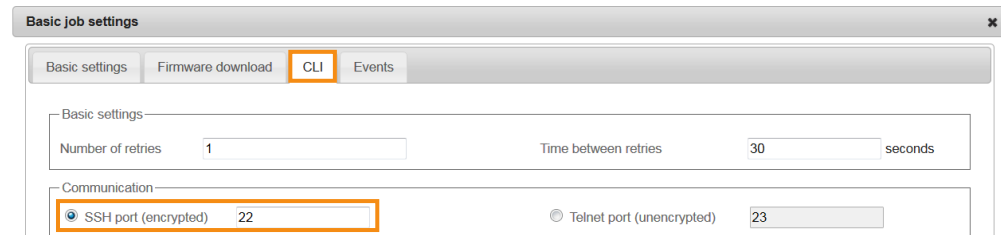
2.2.4 Create a CLI Script

Copy/load CLI- script(s) into the internal CLI script storage

1. In SINEMA Server you switch to the menu "Administration > Jobs". Click the "cogwheel" icon to get to the menu of the basic job settings.

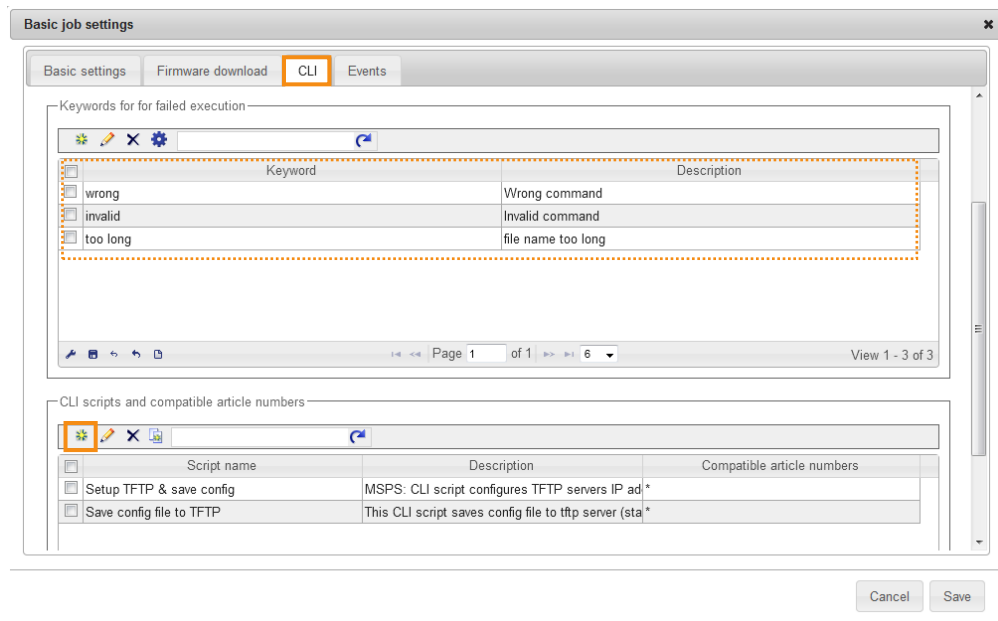


2. Go to the "CLI" tab and in the "Communication" area you select the desired communications protocol (in the example SSH Port 22 with encryption).



Note Communication between SSH client and SSH server is encrypted. So use the SSH protocol.

3. Still in the "CLI" tab, scroll down and click the "Add new CLI script" icon.



Note

In the "Keywords for failed execution" area you can specify a keyword like "wrong", "invalid" or "too long". If this keyword is found completely during execution of the script, then the executed script receives the status "Failed". This can cancel the processing of other devices.

Checking for keywords is not case sensitive.

The permissible character length for keywords ranges from 4 to 30 characters. You can define a maximum of 10 keywords.

4. In the CLI script editor that opens, under "Basic settings" you enter the basic settings for the CLI script to be created.
- Name: User-definable name of the CLI script (max. 25 characters)
 - Description: User-definable description of the CLI script (max. 128 characters)
 - Waiting time for reply: Waiting time for reply from device (1 - 180sec)
 - Compatibility:
 - Universal: CLI script is usable/valid for all devices
 - Restricted: CLI script is valid only for those devices whose article numbers have been inserted via the "Article numbers" button

5. You enter the corresponding CLI commands in the "CLI commands" field. Click the "OK" button to close this dialog.

Note

You can use the following parameters as wildcards. These wildcards are filled in automatically with the data of the device as soon as the script is executed:

- "\$i" for the IP address of the device
- "\$M" for the MAC address of the device
- "\$N" for the name of the device

If the MAC address or the device name is not known, the relevant parameter is filled in by the IP address of the device.

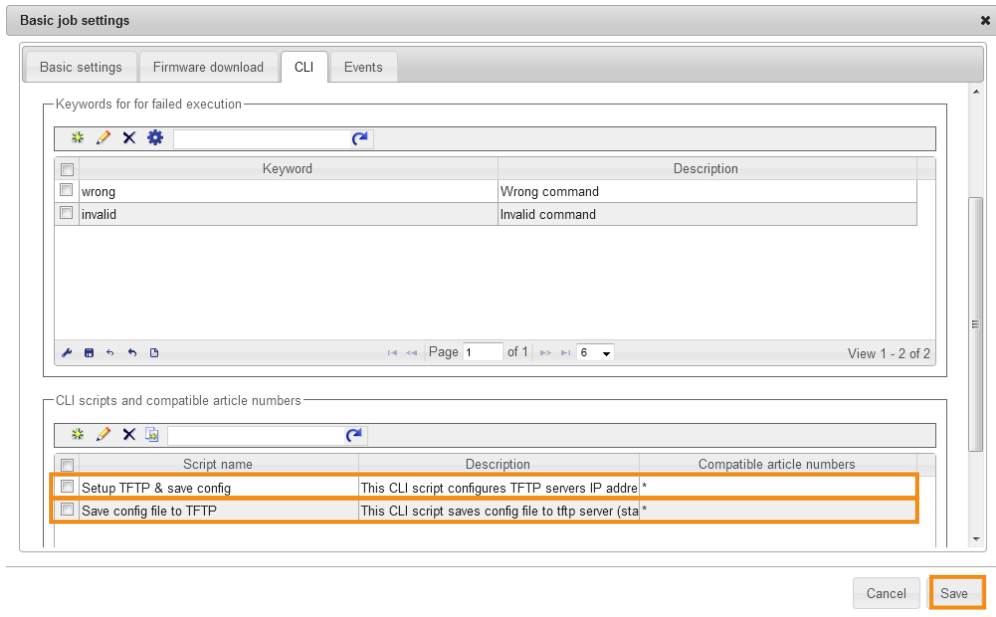
Parameter notation is not case sensitive.

Note

Please note the following rule:

- The syntax of CLI commands is not validated.
Recommendation: To eliminate errors in the script you should test each CLI command beforehand on the network device, with an SSH client, for example.
- Each line is treated as a CLI command.
- You can add a maximum of 50 CLI commands.

- Repeat steps 1 to 5 above for each additional CLI script. Click the "Save" button to complete the procedure.



Note

If a device has not responded to the execution of a script, you use the "Number of retries" parameter to define the number of times the device can try to execute the CLI script again.

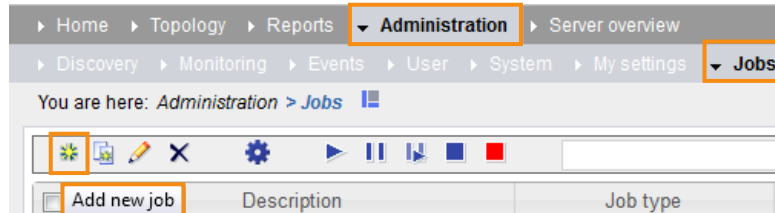
If there is no response from the device, the complete CLI script is executed again.

The minimum value for the "Number of retries" parameter is one, the maximum value is three.

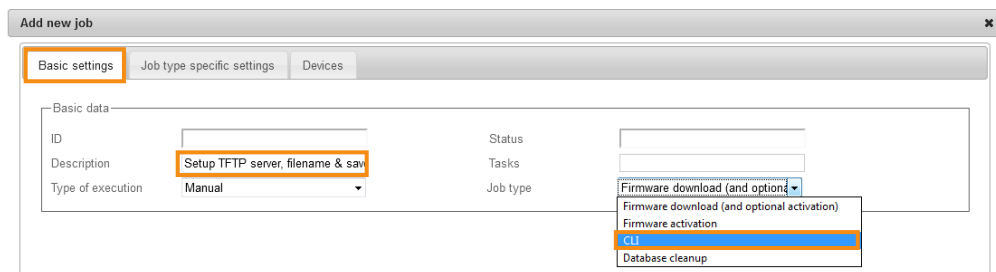
2.2.5 Execute CLI Script on the Network Device

Configure CLI Job

1. In SINEMA Server you navigate to the menu item "Administration > Jobs". Click the "Add new job" icon.



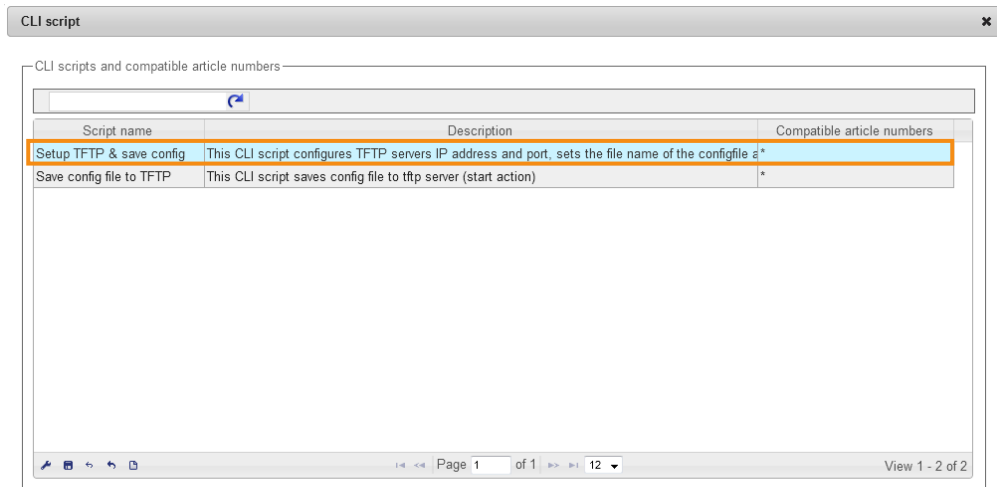
2. Navigate to the "Basic settings" tab. In the "Description" field you specify a name for the job, "Setup TFTP server, filename & save to TFTP server", for example. Select "CLI" as the "Job type".



3. Navigate to the "Job type specific settings" tab. To select a previously created CLI script, in the "CLI script" area you click the "Select" button.

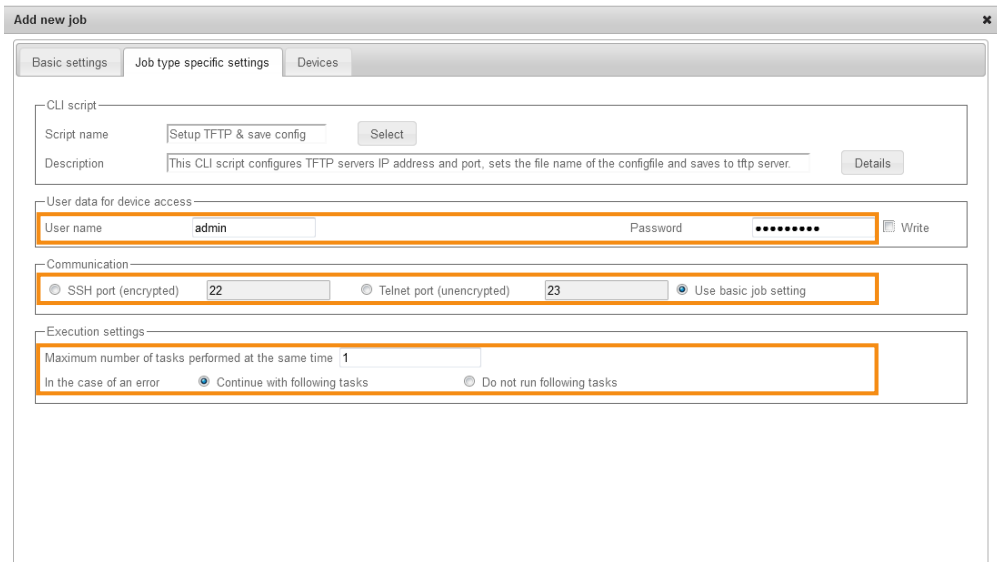


4. Select a script that created previously in step 3.2 "Copy/load CLI- script(s) into the internal CLI script storage". Click the "Save" button to close the selection dialog.



Cancel Save

5. In the "User data for device access" area you enter the user data. This user data is used for logging on to the desired network device.
6. In the "Communication" area you select the required protocol (SSH or Telnet or you use the settings from "Basic job settings").
7. Then you define the number of jobs that can be performed at the same time and the behavior in the case of an error.

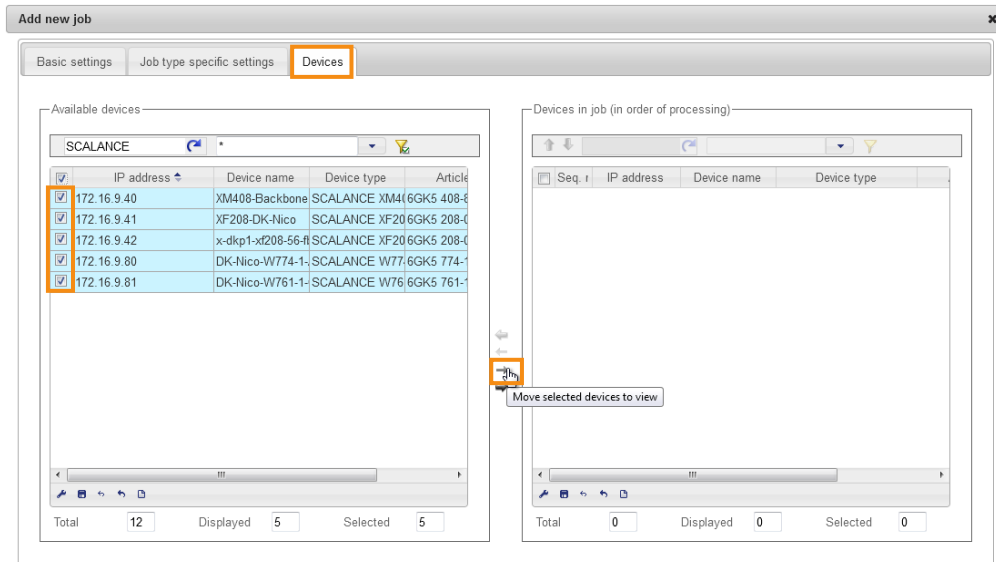


Cancel Save and execute Save

Note

If the network devices to be configured have different user data, a separate job has to be created and executed for each user data pair.

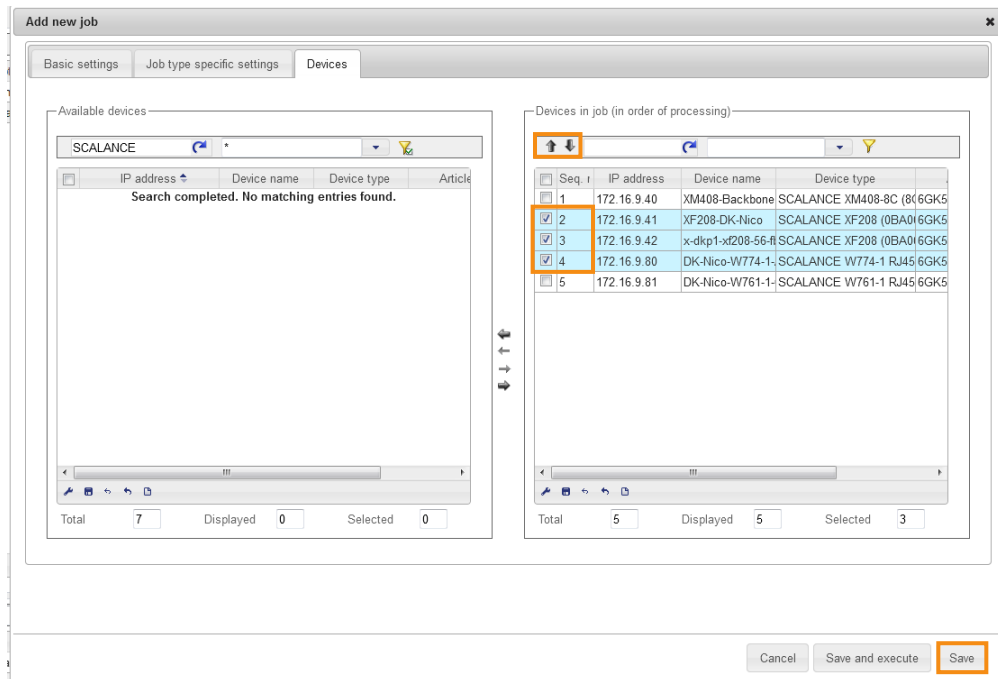
8. Go to the "Devices" tab. From the list of available devices (left side) you select the network devices on which the CLI script is to be executed. Add these to the job by clicking the "Move selected devices to view" button.



Note To select multiple devices you press and hold the CTRL key and select the devices with a mouse-click.

Note If you are using a 21-day trial license, you can execute CLI scripts on one device only.

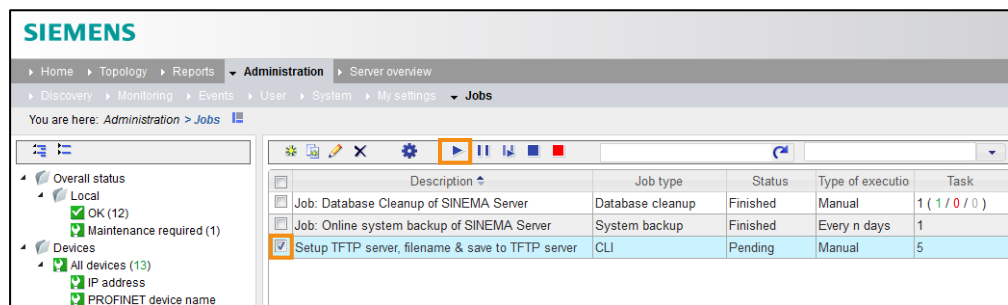
- As soon as you have added the desired network devices to the job (visible on the right) you can define the order of processing. Use the two arrows for this. Click the "Save" button to save the job.



Execute job

Select the job just created, "Setup TFTP server and filename of configuration file & ConfigPack", for example.

To start the job you click the "Play" ("Run selected jobs") button.



Note

In the example, there are five tasks in the job because the CLI script is executed on five devices.

Wait for/monitor execution

When a job has been executed the status of all the tasks is displayed:

- 1. The first figure is the total number of tasks in the job
- 2. The second figure (green) is the number of tasks successfully executed
- 3. The third figure (red) is the number of failed tasks (if able to be determined)
- 4. The fourth figure (gray) is the number of tasks with unknown result (no feedback)

Description	Job type	Status	Type of execution	Task	Started on	Finished on
Job: Database Cleanup of SINEMA Server	Database cleanup	Finished	Manual	1 (1 / 0 / 0)	2016-11-04 14:33:19	2016-11-04 14:33:35
Job: Online system backup of SINEMA Server	System backup	Finished	Every n days	1	2017-02-17 14:16:24	2017-02-17 14:28:04
Setup TFTP server, filename & save to TFTP server	CLI	Failed partly	Manual	5 (3 / 2 / 0)	2017-02-17 14:28:01	2017-02-17 14:28:58

Result:

In this example, three of the five tasks (CLI scripts) were successfully executed. The sample script was executed on five devices:

- Three devices based on MSPS. The job was executed successfully on these devices.
- Two devices that are not based on MSPS. The execution failed on these devices (see [section 1.3](#)).

Therefore only three configuration files with dynamically created file names are in the corresponding folder of the TFTP server.

Name	Date modified	Type	Size
Application (2)			
tftpd32.exe	28.11.2013 22:18	Application	211 KB
uninstall.exe	09.10.2015 15:34	Application	36 KB
Compiled HTML Help file (1)			
tftpd32.chm	28.11.2013 22:21	Compiled HTML ...	330 KB
CONF File (3)			
config_SCALANCE_W700_001B188A0100_172016009040_XM408-Backbone.conf	17.02.2017 14:28	CONF File	632 KB
config_SCALANCE_W700_001B18901517_172016009081_DK-Nico-W761-1-CL.conf	17.02.2017 14:29	CONF File	121 KB
config_SCALANCE_W700_001B18908784_172016009080_DK-Nico-W774-1-AP.conf	17.02.2017 14:28	CONF File	189 KB

How to execute the two failed tasks is described below in [chapter 3](#).

Note

Further information on the topic of "CLI Scripts in SINEMA Server" is available in the SINEMA Server Operating Instructions (page 260 onwards) (see \3\ in [section Fehler! Verweisquelle konnte nicht gefunden werden.](#)).

3 Troubleshooting in CLI Scripts of SINEMA Server

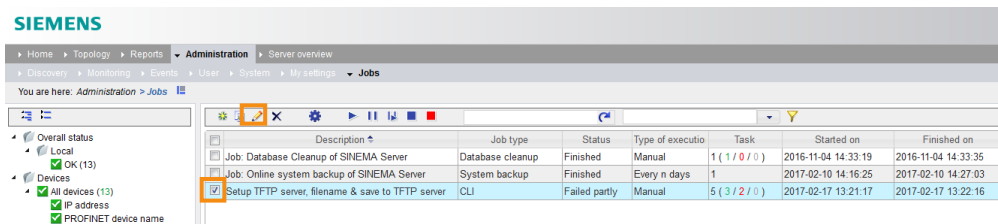
3.1 Checking the Execution Results of a Script

Wait for/monitor execution

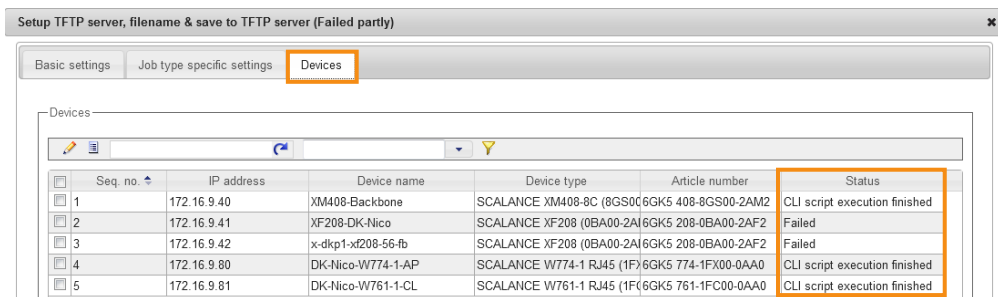
A sample script has been executed on two non-compatible SCALANCE X-200 devices to demonstrate troubleshooting. These two scripts had to result in the failed execution of two tasks.

The execution result of each job can be displayed per device.

1. Select the "Setup TFTP server, filename & save to TFTP server" job, then click "Edit selected job" or double-click the job.

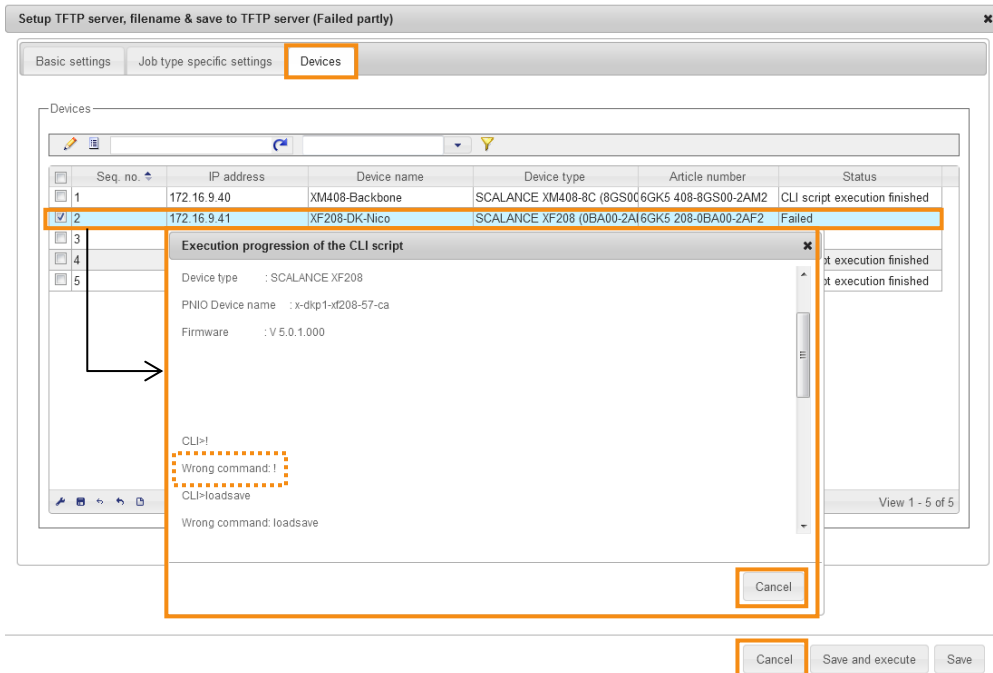


2. In the selected job "Setup TFTP server, filename & save to TFTP server" you switch to the "Devices" tab. In the "Status" column you can see the results of the job for each device.



3 Troubleshooting in CLI Scripts of SINEMA Server

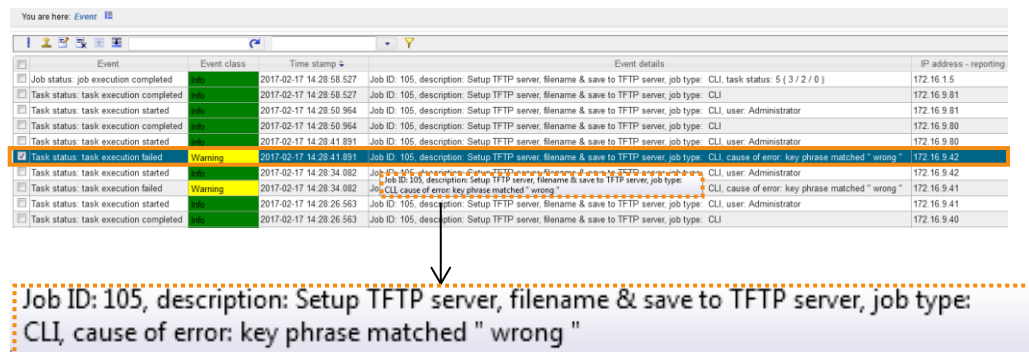
To see the execution result for each CLI command, just double-click a device. This can be very useful when troubleshooting wrongly executed scripts.



3. The results list of SINEMA Server shows detailed results for each job and each task. This list is located in the lower area of the SINEMA Server screen.

Noted	Event	Event class	Time stamp	Event details	IP address - reporting
No	Job status: job execution completed	Info	2017-02-17 13:22:17.044	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, task status: 5 (3 / 2 / 0)	172.16.1.5
No	Task status: task execution completed	Info	2017-02-17 13:22:17.044	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI	172.16.9.81
No	Task status: task execution started	Info	2017-02-17 13:22:09.344	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, user: Administrator	172.16.9.81
No	Task status: task execution started	Info	2017-02-17 13:22:09.344	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI	172.16.9.80
No	Task status: task execution started	Info	2017-02-17 13:21:59.832	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, user: Administrator	172.16.9.80
No	Task status: task execution failed	Warning	2017-02-17 13:21:59.832	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, cause of error: key phrase matched	172.16.9.42
No	Task status: task execution started	Info	2017-02-17 13:21:52.120	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, user: Administrator	172.16.9.42
No	Task status: task execution failed	Warning	2017-02-17 13:21:52.120	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, cause of error: key phrase matched	172.16.9.41
No	Task status: task execution started	Info	2017-02-17 13:21:44.675	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, user: Administrator	172.16.9.41
No	Task status: task execution started	Info	2017-02-17 13:21:44.675	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI	172.16.9.40
No	Task status: task execution started	Info	2017-02-17 13:21:17.445	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, user: Administrator	172.16.9.40
No	Task status: task execution started	Info	2017-02-17 13:21:17.445	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI	172.16.1.5
No	Job status: job execution started	Info	2017-02-17 13:21:17.445	Job ID: 105, description: Setup TFTP server, filename & save to TFTP server, job type: CLI, user: Administrator	172.16.1.5

4. The "Event details" column provides useful information about the execution status. In our example two Warning events have been generated with the message that the keyword "wrong" has been discovered.



Find explanation of error

Explanation of error cause: Key phrase matched "wrong"

A sample script has been executed purposely on two non-compatible SCALANCE X-200 devices to demonstrate troubleshooting. These two scripts had to result in the failed execution of two tasks.

Based on the keyword "wrong" SINEMA Server could recognize the defective execution and then set the script status to "Failed".

Find solution for error

The SCALANCE X-200 and SCALANCE X-300 device families support a different set of CLI commands. You can take this set of CLI commands from the corresponding configuration manuals.

For example, the set of CLI commands for the SCALANCE X-200 device family at the end of the section in each case in the menus in the web-based management (WBM) (see \4\ in [section Fehler! Verweisquelle konnte nicht gefunden werden.](#)).

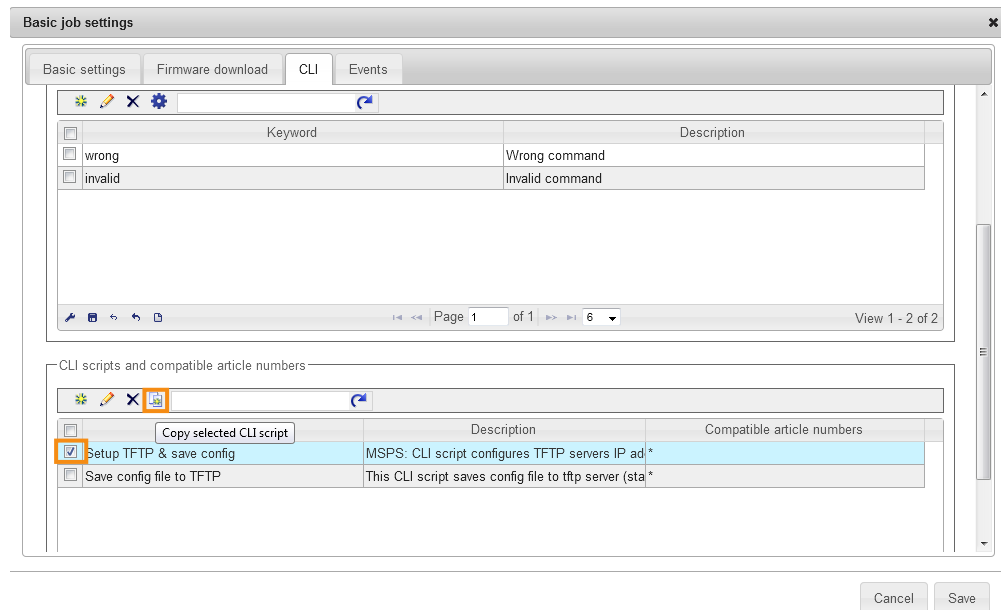
Instructions for creating a CLI script for SCALANCE X-200 network devices are given in the section below.

3.2 CLI Script for SCALANCE X-200

Below we present by way of example a CLI script that has the following properties:

- Executable on the SCALANCE X-200 device family with firmware version V5.2.1.
- Job to set the TFTP server parameters
- Job to set the file name of the configuration file
- Job to store the configuration file on the TFTP server

1. Copy the CLI script previously created for the MSPS-based devices by selecting the CLI script and clicking the "Copy selected CLI script" icon.



2. Create the new CLI script with the following content:

Edit CLI script

Basic settings

Name: X200 Set TFTP&save config

Description: X200: CLI script configures TFTP servers IP adress, port sets filename of configuration file and save to TFTP

Waiting time for reply: 30 seconds

Compatibility: Universal Restricted

CLI commands

1. system
2. loadsave
3. server 172.16.8.200:69
4. cfgname config_SM.cfg
5. cfsave
6. exit

3. Go to the menu "Administration > Jobs". To copy the job that has already been executed you click the "Copy selected job" icon.

Home > Topology > Reports > Administration > Server overview

Discovery > Monitoring > Events > User > System > My settings > Jobs

You are here: Administration > Jobs

Copy selected job

Job	Description	Job type	Status	Type of execution	Task
<input type="checkbox"/>	Job: Database Cleanup of SINEMA Server	Database cleanup	Finished	Manual	1 (1/0/0)
<input type="checkbox"/>	Job: Online system backup of SINEMA Server	System backup	Finished	Every n days	1
<input checked="" type="checkbox"/>	Setup TFTP server, filename & save to TFTP server	CLI	Failed partly	Manual	5 (3/2/0)

4. Go to the "Basic settings" tab and assign a unique name.

Copy of Setup TFTP server, filename & save to TFTP server

Basic settings | Job type specific settings | Devices

Basic data

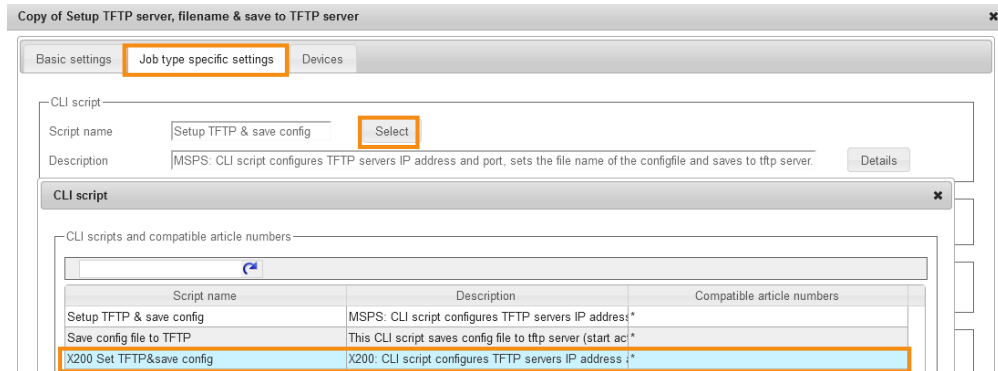
ID: [] Status: Pending

Description: X200: Setup TFTP server, filename Tasks: 5

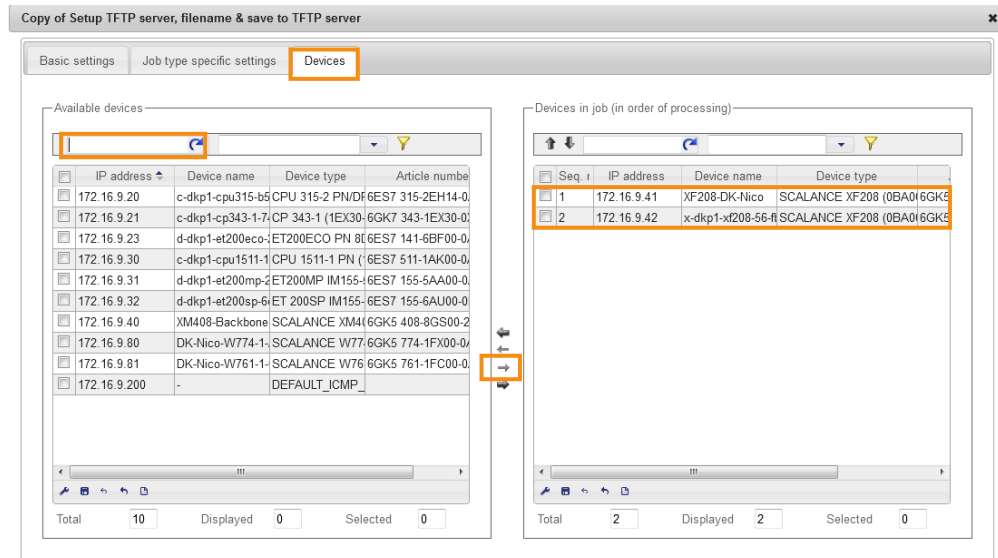
Type of execution: Manual Job type: CLI

3 Troubleshooting in CLI Scripts of SINEMA Server

- In the "Job type specific settings" tab you select the newly created CLI script for the X200.



- In the "Devices" tab you select the compatible SCALANCE X-200 device. To start the job directly you then click the "Save and execute" button.

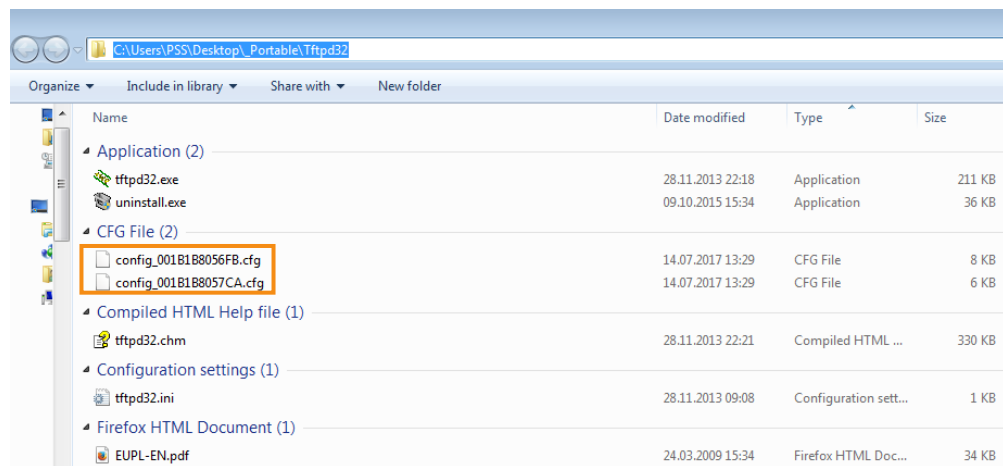


7. The created job "X200: Setup TFTP server, filename & save to TFTP server" includes a total of two tasks for the two SCALANCE X-200 devices.

Description	Job type	Status	Type of execution	Task	Started on	Finished on
Job: Database Cleanup of SINEMA Server	Database cleanup	Finished	Manual	1 (1 / 0 / 0)	2016-11-04 14:33:19	2016-11-04 14:33:36
Job: Online system backup of SINEMA Server	System backup	Finished	Every n days	1	2017-02-17 14:16:24	2017-02-17 14:28:04
Setup TFTP server, filename & save to TFTP server	CLI	Failed partly	Manual	5 (3 / 2 / 0)	2017-02-17 14:28:01	2017-02-17 14:28:58
X200: Setup TFTP server, filename & save to TFTP server	CLI	Finished	Manual	2 (2 / 0 / 0)	2017-02-17 16:26:33	2017-02-17 16:26:47

Result:

If the job has been executed successfully, the configuration files are stored in the configured TFTP server directory:



4 Appendix

4.1 Service and Support

Industry Online Support

Do you have any questions or need assistance?

Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

Product information, manuals, downloads, FAQs, application examples and videos – all information is accessible with just a few mouse clicks at:

<https://support.industry.siemens.com>

Technical Support

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers – ranging from basic support to individual support contracts. You send queries to Technical Support via Web form:

www.siemens.com/industry/supportrequest

Service offer

Our range of services includes, inter alia, the following:

- Product training courses
- Plant data services
- Spare parts services
- Repair services
- On-site and maintenance services
- Retrofitting and modernization services
- Service programs and contracts

You can find detailed information on our range of services in the service catalog:

<https://support.industry.siemens.com/cs/sc>

Industry Online Support app

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for Apple iOS, Android and Windows Phone:

<https://support.industry.siemens.com/cs/ww/en/sc/2067>

4.2 Links and Literature

Table 4-1

No.	Topic
\1\	Siemens Industry Online Support https://support.industry.siemens.com
\2\	Link to the entry page of the application example https://support.industry.siemens.com/cs/ww/en/view/109749379
\3\	SINEMA Server Operating Instructions https://support.industry.siemens.com/cs/en/en/view/109741758
\4\	SCALANCE X-200 Configuration Manual https://support.industry.siemens.com/cs/en/en/view/102051962

4.3 Change Documentation

Table 4-2

Version	Date	Modifications
V1.0	08/2017	First version