

# SIEMENS

## SIMATIC NET

### Industrial Ethernet Security SCALANCE S615 Getting Started

Getting Started

Preface

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Connecting SCALANCE  
S615 to the WAN

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1

OpenVPN tunnel between  
SCALANCE S615 and  
SINEMA RC Server

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2




03/2015

C79000-G8900-C390-01

## Legal information

### Warning notice system

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 <b>DANGER</b>
indicates that death or severe personal injury <b>will</b> result if proper precautions are not taken.
 <b>WARNING</b>
indicates that death or severe personal injury <b>may</b> result if proper precautions are not taken.
 <b>CAUTION</b>
indicates that minor personal injury can result if proper precautions are not taken.
<b>NOTICE</b>
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# Preface

## Purpose

The configuration of the SCALANCE S615 is shown based on examples.

## IP settings for the examples

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### Note

The IP settings used in the examples were freely chosen.

In a real network, you would need to adapt these IP settings to avoid possible address conflicts.

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## General naming conventions

The designation . . . stands for . . .	
SINEMA RC	SINEMA Remote Connect
SINEMA RC Server	SINEMA Remote Connect server
S615	SCALANCE S615

## Further Information

Apart from the Configuration Manual you are currently reading, the following documentation is also available on the topic of Remote Network:

- "Industrial Ethernet Security - SCALANCE S615 Web Based Management" configuration manual

This document is intended to provide you with the information you require to install, commission and operate the device. It provides you with the information you require to configure the devices.

- "Industrial Remote Communication - TeleControl SINEMA Remote Connect Client" operating instructions

This manual supports you when installing, configuring and operating the application SINEMA RC Client.

- "Industrial Remote Communication - TeleControl SINEMA Remote Connect Server" operating instructions

This manual supports you when installing, configuring and operating the application SINEMA RC Server.

- Getting Started Industrial Remote Communication - TeleControl - SINEMA Remote Connect"

Based on examples, this document explains the configuration of SINEMA RC.

- The "SIMATIC NET Industrial Ethernet Network Manual" contains information on other SIMATIC NET products that you can operate along with the devices of this product line in an Industrial Ethernet network. There, you will find among other things optical performance data of the communications partners that you require for the installation.

You will find this document on the Internet under the following entry ID: 27069465

(<http://support.automation.siemens.com/WW/view/en/27069465>)

## SIMATIC NET manuals

You will find SIMATIC NET manuals on the Internet pages of Siemens Industry Online Support:

- Using the search function:

Link to Siemens Industry Online Support (<http://support.automation.siemens.com/>)

Enter the entry ID of the relevant manual as the search item.

- In the navigation panel on the left hand side in the area "Industrial Communication":

Link to the area "Industrial Communication"

(<http://support.automation.siemens.com/WW/view/en/10805878/133400>)

Go to the required product group and make the following settings:

"Entry list" tab, Entry type "Manuals"

## SIMATIC NET glossary

Explanations of many of the specialist terms used in this documentation can be found in the SIMATIC NET glossary.

You will find the SIMATIC NET glossary here:

- SIMATIC NET Manual Collection or product DVD

The DVD ships with certain SIMATIC NET products.

- On the Internet under the following entry ID:

50305045 (<http://support.automation.siemens.com/WW/view/en/50305045>)

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To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit <http://support.automation.siemens.com>.

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SINEMA, SCALANCE



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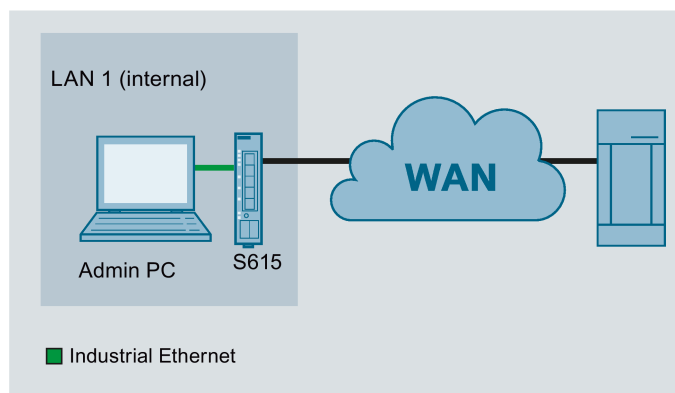


# Connecting SCALANCE S615 to the WAN

## 1.1 Procedure in principle

In this example the SCALANCE S615 that is in the factory settings status is assigned an IP address. Following this, the device will be configured using Web Based Management (WBM). Access to the WAN via the Ethernet interface P5 of the S615 will be connected.

### Structure



### Required devices/components

- 1 x S615 (additional option: a suitably installed standard rail with fittings)
- 1 x 24 V power supply with cable connector and terminal block plug
- 1 x PC for configuring the S615
- The required network cable, TP cable (twisted pair) complying with the IE FC RJ-45 standard for Industrial Ethernet

### Settings used

For the configuration example, the devices are given the following IP address settings:

		Interface	IP address
LAN1	S615	LAN port P1 (vlan1)	192.168.100.1 255.255.255.0
		WAN port P5 (vlan2)	192.168.50.1 255.255.255.0
	PC1	LAN port	192.168.100.20 255.255.255.0 Gateway: IP address vlan1

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#### Note

The IP settings used in the example were freely chosen.

In a real network, you would need to adapt these IP settings to avoid possible address conflicts.

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### Steps in configuration

1. Setting up SCALANCE S615 and network (Page 11)
2. Launching Web Based Management (Page 12)
3. Logging in to Web Based Management (Page 15)
4. Changing the IP settings of the SCALANCE S615 (Page 17)
5. Configuring SCALANCE S615
  - Specifying device information (Page 19)
  - Setting the time (Page 20)
  - Creating IP subnet (Page 22)

## 1.2 Setting up SCALANCE S615 and network

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### Note

Familiarize yourself with the security instructions before you commission the device. You will find the security instructions in the operating instructions.

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### Procedure

1. First unpack the S615 and check that it is undamaged.
2. Fit the power supply.

 <b>WARNING</b>
<b>Use safety extra-low voltage only</b>
The SCALANCE S615 is designed for operation with safety extra-low voltage. This means that only safety extra-low voltages (SELV) complying with IEC950/EN60950/VDE0805 can be connected to the power supply terminals.
The power supply unit for the SCALANCE S615 power supply must meet NEC Class 2, according to the National Electrical Code(r) (ANSI / NFPA 70).

3. Wire up the S615, see Setup (Page 9).
4. Connect the device to the local network via the Ethernet ports.
5. Turn the device on. After connecting up, the fault LED (F) is lit red.
6. Now, turn on the PC.

## 1.3 Launching Web Based Management

In the factory settings, the SCALANCE S615 can be reached at the following IP address:

- IP address: 192.168.1.1
- Subnet mask: 255.255.255.0

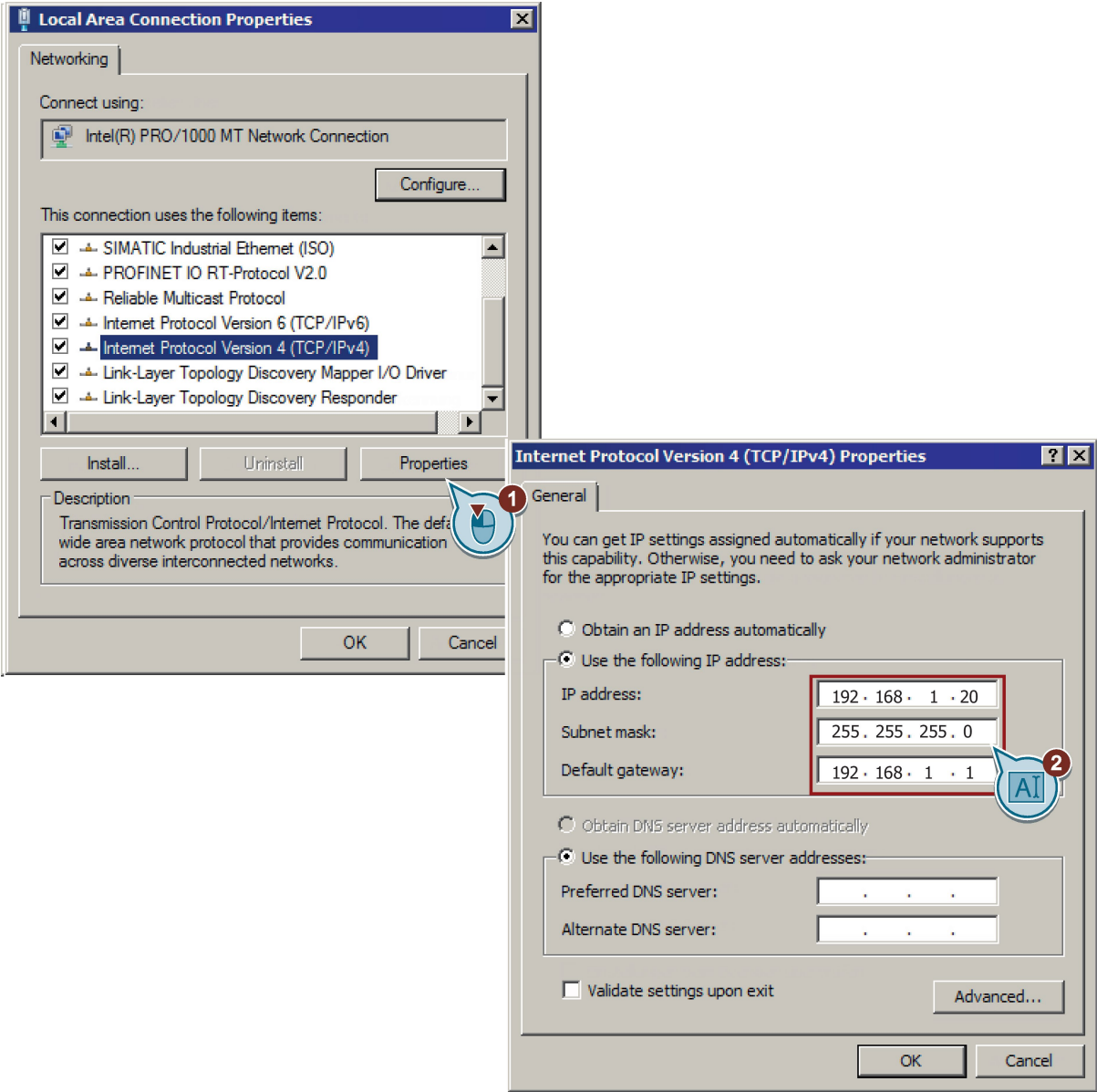
In this configuration example, the Admin PC has the following IP address setting to allow it to access the Web Based Management of the S615.

IP address	Subnet mask
192.168.1.20	255.255.255.0

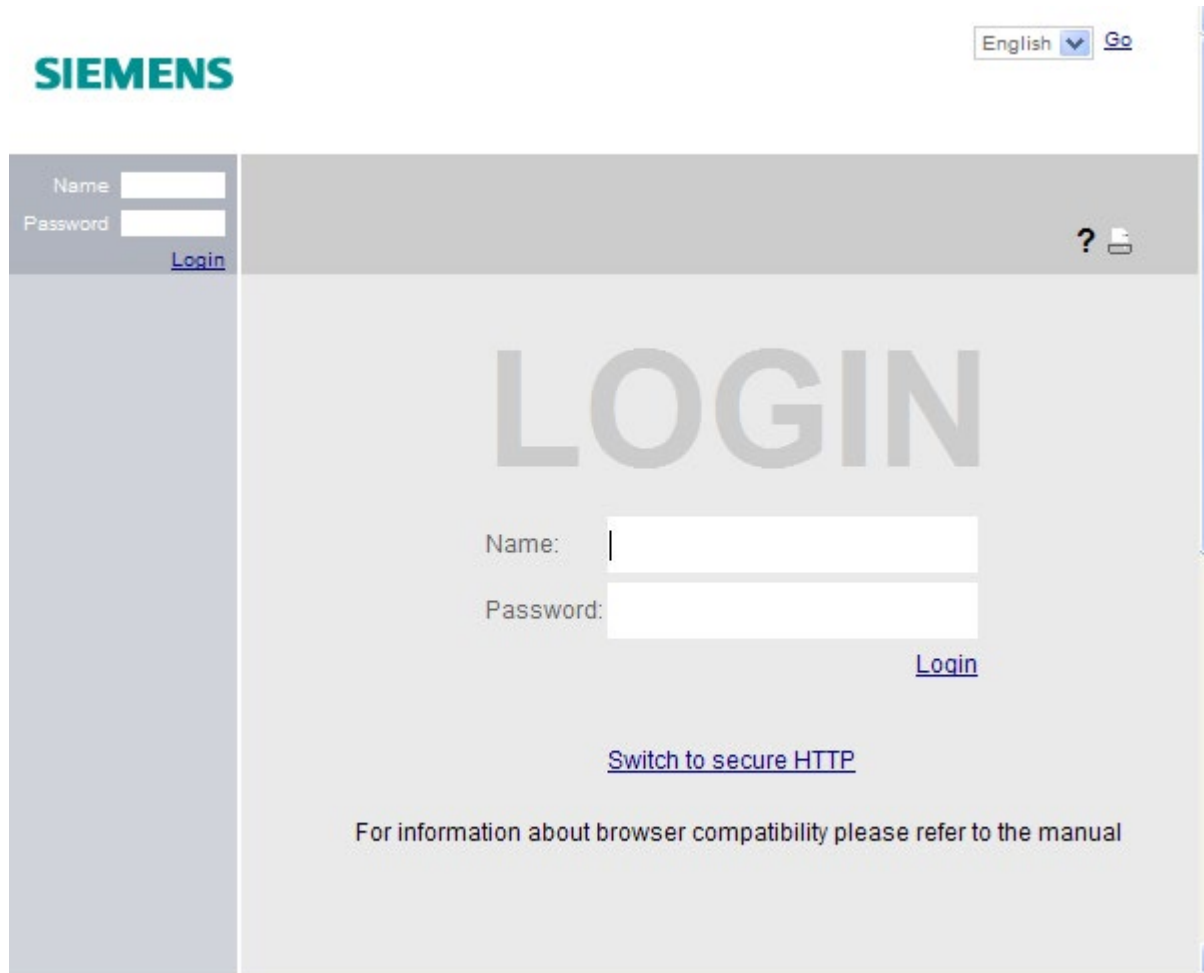
### Procedure

1. On the Admin PC, open the Control Panel with the menu command "Start" > "Control Panel".
2. Click "Network and Sharing Center" and select the "Change Adapter Settings" option in the navigation menu on the left.
3. Right-click on the "LAN Connection" symbol and select the "Properties" menu command.
4. In the "Local Area Connection Properties" dialog, enable the "Internet Protocol Version 4 (TCP/IPv4)" check box.

5. Enter the values in the table above.



6. Confirm the dialogs with "OK" and close the Control Panel.
7. Enter the IP address "192.168.1.1" in the address box of the Web browser. If there is a problem-free connection to the device, the login page of Web Based Management (WBM) is displayed.



## 1.4 Logging in to Web Based Management

### Procedure

1. Log in with the user name "admin" and the password "admin". You will be prompted to change the password.



2. Confirm the dialog. The "Password" WBM page is opened automatically.

The image shows the Siemens web management interface. At the top left is the "SIEMENS" logo. At the top right is a language dropdown menu set to "English" and a "Go" button. Below the logo is a login section with "Name" and "Password" input fields and a "Login" button. The main area is titled "Local Passwords" and contains a "Current Admin Password:" input field, a "Username:" dropdown menu with "admin" selected, a "New Password:" input field, and a "Password Confirmation:" input field. At the bottom of this section are "Get Values" and "Refresh" buttons. A help icon (?) and a printer icon are visible in the top right of the "Local Passwords" section.

3. In "Username", select the user "admin".
4. Enter the default password "admin" in "Current Admin Password".
5. Specify the new password in "New Password".

6. Repeat the password in "Password Confirmation" to confirm it. The entries must match.

The screenshot shows the Siemens logo in the top left and a language selection dropdown set to 'English' with a 'Go' button in the top right. On the left side, there is a login section with 'Name' and 'Password' input fields and a 'Login' button. The main content area is titled 'Local Passwords' and contains the following fields: 'Current Admin Password' (masked with dots), 'Username' (a dropdown menu currently showing 'admin'), 'New Password' (masked with dots), and 'Password Confirmation' (masked with dots). At the bottom of this section are two buttons: 'Set Values' and 'Refresh'. A help icon (?) is visible in the top right corner of the 'Local Passwords' section.

7. Click the "Set Values" button.

## Result

The password for the "admin" user is changed. The changes take immediate effect.



## 1.5 Changing the IP settings of the S615

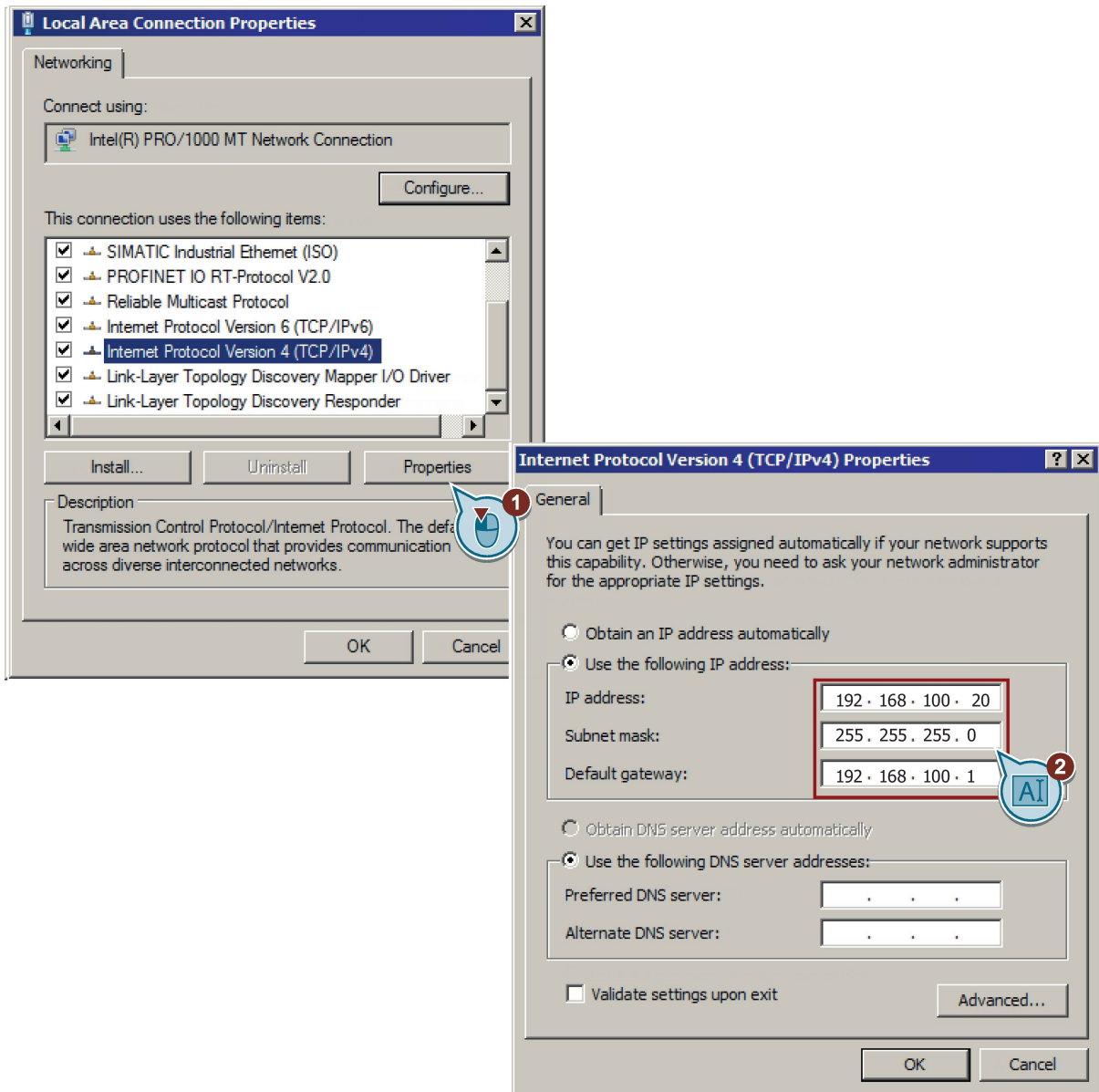
### Procedure

1. Click on "Layer 3" > "Subnet" in the navigation area and on the "Configuration" tab in the content area.
2. Enter the IP address for vlan1 according to the table "Settings used (Page 9)".
3. Click "Set Values".

The IP address is adjusted automatically in the address bar of the Web browser. The Web browser on the Admin PC can no longer access Web Based Management because its IP settings no longer match.

4. On the Admin PC, open the Control Panel with the menu command "Start" > "Control Panel".
5. Click "Network and Sharing Center" and select the "Change Adapter Settings" option in the navigation menu on the left.
6. In the "Local Area Connection Properties" dialog, enable the "Internet Protocol Version 4 (TCP/IPv4)" check box.

7. Enter the values for the PC from the "Settings used (Page 9)" table.



8. Confirm the dialogs with "OK" and close the Control Panel.

9. In the address box of the Web browser, enter the IP address for vlan1, see table "Settings used (Page 9)". If there is a problem-free connection to the device, the login page of Web Based Management (WBM) is displayed.

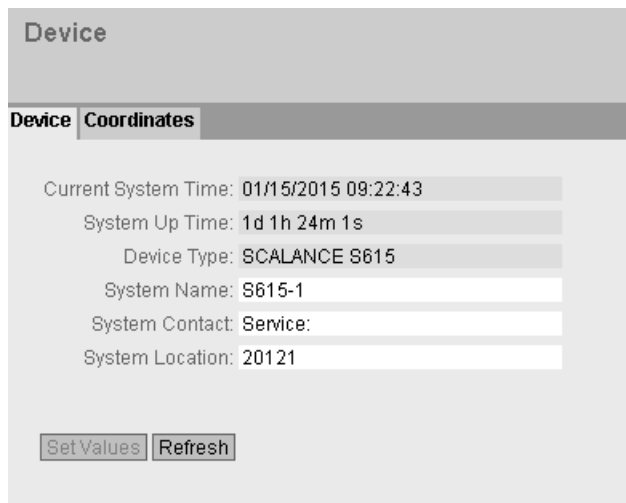
10. Log in with the user name "admin" and the modified password.

## 1.6 Specifying device information

To allow better identification of the SCALANCE S615, specify general device information.

### Procedure

1. Click "System" > "General" in the navigation panel and on the "Device" tab in the content area.
2. In "System Name", enter a system name for the device, e.g. "S615-1".
3. Enter the contact person responsible for the device in "System Contact".
4. Enter the identifier for the location at which the device is installed in "System Location", for example the room number.



**Device**

**Device** **Coordinates**

Current System Time: 01/15/2015 09:22:43

System Up Time: 1d 1h 24m 1s

Device Type: SCALANCE S615

System Name: S615-1

System Contact: Service

System Location: 20121

5. Click the "Set Values" button.

### Result

The general device information for the SCALANCE S615 has been specified.

## 1.7 Setting the time

The date and time are kept on the SCALANCE S615 to check the validity (time) of certificates and for the time stamps of log entries. You can set the system time yourself manually or have it synchronized automatically with a time server. For this example, the time server is configured using NTP.

---

### Note

#### Manual time setting - reaction after interrupting the power supply

Note that the time is reset to the factory setting if the power supply is interrupted. On return of the power, you need to set the system time again. As result, certificates can lose their validity.

#### Synchronization using a time server

Synchronization of the system time using a public time server creates additional data traffic on the connection. This may result in additional costs, depending on your subscriber contract.

---

### Requirement

- An NTP server can be reached in the local network.
- The IP address of the NTP server is known.  
For this example, a local time server with the IP address 192.168.100.87 is used.

### Procedure

1. Click on "System" > "System Time" in the navigation area and on the "NTP Client" tab in the content area.

Network Time Protocol (NTP) Client

Manual Setting | SNTP Client | NTP Client | SIMATIC Time Client

NTP Client

Current System Time: 05/22/2013 06:07:58

Last Synchronization Time: Date/time not set

Last Synchronization Mechanism: Not set

Time Zone: +00:00

NTP Server IP Address: 0.0.0.0

NTP Server Port: 123

Poll Interval(s): 64

Set Values Refresh

2. In "Time Zone", enter the local time difference to world time (UTC). For Central European Summer time (CEST) +02:00.

3. In "NTP Server IP Address", enter the IP address 192.168.100.87. It is not possible to enter the NTP address as a host name.
4. If necessary, change the port in "NTP Server Port". As default, 123 is set.
5. In "Poll Interval (s)", enter the interval for synchronization. As default, 64 is set.
6. Select "NTP Client".
7. Click "Set Values".

## Result

System time using NTP is set. Click "Refresh" to refresh the WBM page.

### Network Time Protocol (NTP) Client

Manual Setting	Sntp Client	NTP Client	SIMATIC Time Client
<input checked="" type="checkbox"/> NTP Client			
Current System Time: 07/01/2014 13:33:19			
Last Synchronization Time: 07/01/2014 13:30:31			
Last Synchronization Mechanism: Manual			
Time Zone: +02:00			
NTP Server IP Address: 192.168.100.87			
NTP Server Port: 123			
Poll Interval[s]: 64			
<input type="button" value="Set Values"/> <input type="button" value="Refresh"/>			

## 1.8 Creating IP subnet

The interfaces are handled differently.

- Ethernet interface P1 (vlan1): Connection to LAN
- Ethernet interface P5 (vlan2): Connection to WAN

For this configuration example, only the IP subnet for the Ethernet interface P5 needs to be configured. The IP subnet for the Ethernet interface P1 is already configured.

### Procedure

1. Click on "Layer 3" > "Subnets" in the navigation area and on the "Configuration" tab in the content area.
2. For "Interface" select "vlan2".
3. For "Interface Name" you can enter a name.
4. Enter the IP address for vlan2, see table "Settings used (Page 9)"
5. Click "Set Values".

The screenshot shows a web interface titled "Connected Subnets Configuration". It has two tabs: "Overview" and "Configuration", with "Configuration" selected. The configuration fields are as follows:

- Interface (Name):  (dropdown menu)
- Interface Name:
- MAC Address:
- DHCP
- IP Address:
- Subnet Mask:
- Address Type:
- TIA Interface

At the bottom, there are two buttons: "Set Values" and "Refresh".

## Result

The IP subnets have been created. The IP subnets are displayed in the "Overview" tab.

Connected Subnets Overview ? 📄

**Overview** **Configuration**

Interface: VLAN1 ▼

Select	Interface	TIA Interface	Interface Name	MAC Address	IP Address	Subnet Mask	Address Type	IP Assgn. Method	Address Collision Detection Status
	vlan1	yes	vlan1	00-1b-1b-b6-32-79	192.168.100.1	255.255.255.0	Primary	Static	Not supported
<input type="checkbox"/>	vlan2	-	vlan2	00-1b-1b-b6-32-7b	192.168.50.1	255.255.255.0	Primary	Static	Not supported
	loopback0	-	loopback0	00-00-00-00-00-00	127.0.0.1	255.0.0.0	Primary	Static	Not supported

3 entries.

Create Delete Refresh





# OpenVPN tunnel between SCALANCE S615 and SINEMA RC Server

# 2

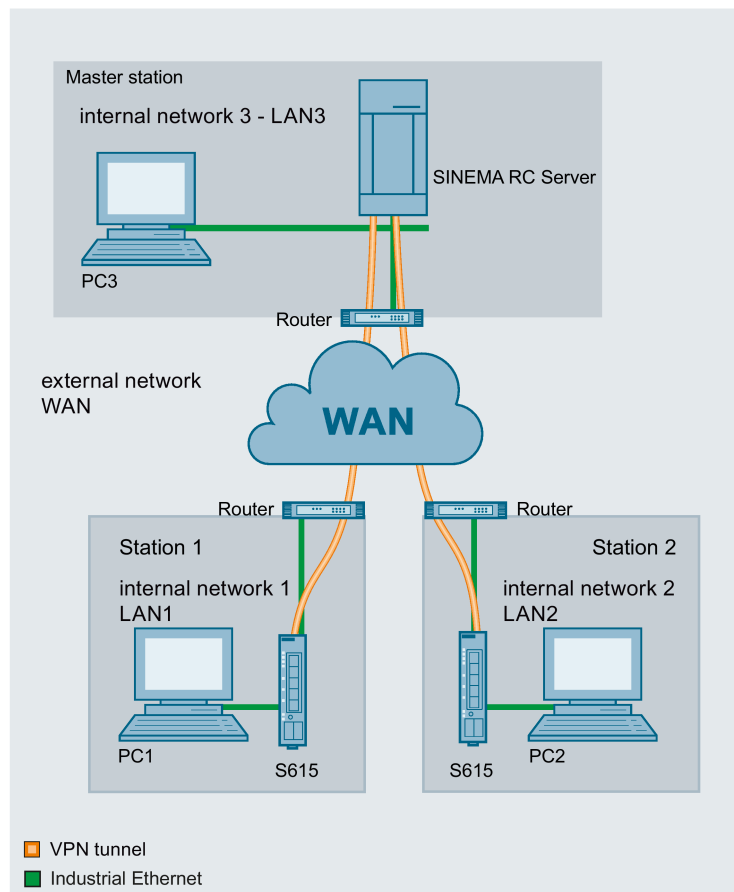
## 2.1 Procedure in principle

In this sample configuration two distributed stations are connected using a SCALANCE S615. The devices communicate via the SINEMA RC Server located in the master station.

A KEY-PLUG SINEMA Remote Connect is required for each SCALANCE S615 device. The KEY-PLUG enables the connection from SCALANCE S615 to SINEMA RC.

To do this, the devices need to logon to the SINEMA RC Server. The VPN tunnel between the device and the SINEMA RC Server is established only after successful authentication. Depending on the configured communication relations and the security settings, the SINEMA RC server connects the individual VPN tunnels.

### Structure



*2.1 Procedure in principle*

**Master station - connection to SINEMA RC Server**

- In the test setup in the internal network, a network node is implemented by a PC connected to the LAN port of the SINEMA RC Server.
  - PC: represents a participant in internal network 3
  - SINEMA RC Server
- Connection to the external network via a router  
Access to the external network is via a router connected to the WAN port of the SINEMA RC Server.

**Station 1 / 2 - Connection to SCALANCE S615**

- In the test setup in the internal network, a network node is implemented by a PC connected to the Ethernet interface P1 of the S615.
  - PC: represents a participant in internal network 1/2
  - S615: SCALANCE S module for protection of the internal network 1/2
- Connection to the external network via a router  
Access to the external network is via a router connected to the Ethernet interface P5 of the S615.

**Required devices/components**

Use the following components for setup:

- 2 x S615 (additional option: a suitably installed standard rail with fittings)
- 2 x KEY-PLUG SINEMA RC
- 2 x 24 V power supply with cable connector and terminal block plug
- 2 x PC each connected to a SCALANCE S615.
- 1 x PC on which the SINEMA RC Server is installed.
- 1 x PC that is connected to the SINEMA RC Server.
- 3 x router
- The required network cable, TP cable (twisted pair) complying with the IE FC RJ-45 standard for Industrial Ethernet

## Settings used

For the configuration example, the devices are given the following IP address settings:

	Name	Interface	IP address
Station -1 LAN1	S615-1	LAN port P1 (vlan1)	192.168.100.1 255.255.255.0
		WAN port P5 (vlan2)	192.168.50.1 255.255.255.0 Default gateway is the LAN IP address of the router 192.168.50.2
	PC1	LAN port	192.168.100.20 255.255.255.0
	Router1	LAN port	192.168.50.2 255.255.255.0
Station-2 LAN2	S615-2	LAN port P1 (vlan1)	192.168.10.1 255.255.255.0
		WAN port P5 (vlan2)	192.168.40.1 255.255.255.0 Default gateway is the LAN IP address of the router 192.168.40.2
	PC2	Ethernet (LAN 2)	192.168.10.20 255.255.255.0
	Router 2	LAN port	192.168.40.2 255.255.255.0
Master station LAN3	SINEMA RC Server	WAN port	192.168.20.250 255.255.255.0 The WAN IP address via which the SINEMA RC Server can be reached is the WAN IP address of the router in this example. 192.168.184.20 Default gateway is the LAN IP address of the router 192.168.20.2
		PC3	Ethernet (LAN3)
	Router 3	LAN port	192.168.20.2 255.255.255.0
		WAN port	192.168.184.20

### Note

The IP settings used in the configuration example were freely chosen.

In a real network, you would need to adapt these IP settings to avoid possible address conflicts.

## Requirement

### SINEMA RC Server

- The SINEMA RC server is connected to the WAN. You will find the configuration steps in the Getting Started "SINEMA Remote Connect".

### SCALANCE S615

- The S615 is connected to the WAN , refer to "Connecting SCALANCE S615 to the WAN (Page 9)".  
The steps in configuration are the same for all devices, the only difference being the settings, see table "Settings used (Page 25)".
- The S615 can be reached via PC1 or PC2 and you are logged in to the WBM as "admin".
- A valid KEY-PLUG SINEMA Remote Connect is inserted in the SCALANCE S.

## Steps in configuration

### Configuring access to SINEMA RC server

To allow a VPN connection to the SINEMA RC server, a route must be created on the S615:

1. Configuring a route (Page 29)

For the PC to be able to access the WBM of the SINEMA RC server via S615 as well, the following steps are necessary on the S615:

1. Activate Basic NAT (Page 30)
2. Allow access (Page 31)

### Configure a remote connection on the SINEMA RC server

1. Creating participant groups (Page 32)
2. Create devices (Page 34)
3. Configure communication relations (Page 36)

### Configure a remote connection on the S615

- Secure OpenVPN connection with fingerprint (Page 38)
- Secure OpenVPN connection with CA certificate
  - Loading a certificate (Page 41)
  - Configure an OpenVPN connection to the SINEMA RC server (Page 42)

## 2.2 Configuring access to the SINEMA RC Server

### 2.2.1 Configuring a route

The stations and master station are in different IP subnets. So that the stations can communicate with the master station, the appropriate default route is created on the S615.

#### Procedure

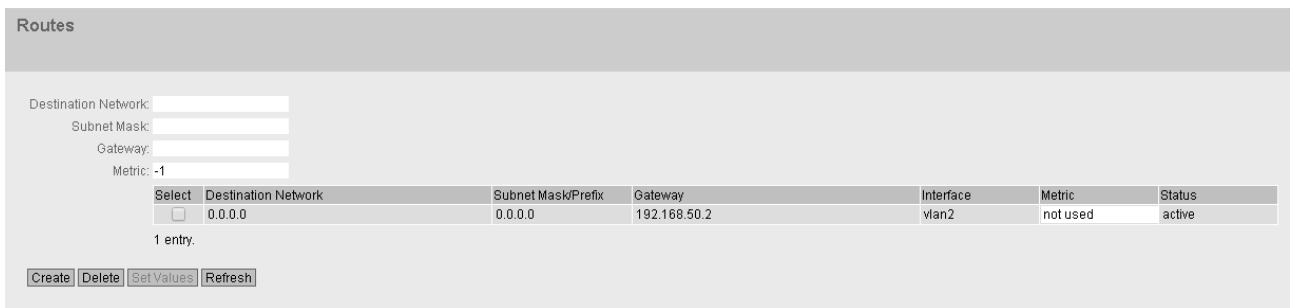
1. In the address box of the Web browser, enter the LAN IP address of the S615, see table "Settings used (Page 9)".
2. Log in as the "admin" user and the corresponding password.
3. Click "Layer 3" > "Routes" in the navigation area.
4. Configure the route to the router with the following settings:

Destination Network	0.0.0.0 (all IP addresses)
Subnetmask	0.0.0.0
Gateway	LAN IP address of the router according to the table "Settings used (Page 9)"
Metric	-1

5. When you have entered the values, click "Create".
6. To update the display, click "Refresh".

#### Result

The route is created.



## **2.2.2 Activating IP masquerading**

IP masquerading is used so that the internal IP addresses are not forwarded to external. In addition to this, no further routing settings are necessary on the router.

### **Procedure**

1. Click on "Layer 3" > "NAT" in the navigation area and on the "Masquerading" tab in the content area.
2. Select "Enable Masquerading" for vlan2.
3. Click "Set Values"

### **Result**

Masquerading is activated on the WAN port vlan2. When a packet is sent via this interface, the source address is translated to the IP address assigned to vlan2.

### 2.2.3 Allow access

So that the PC can access the SINEMA RC Server, access from vlan1 to vlan2 is enabled on the device.

#### Procedure

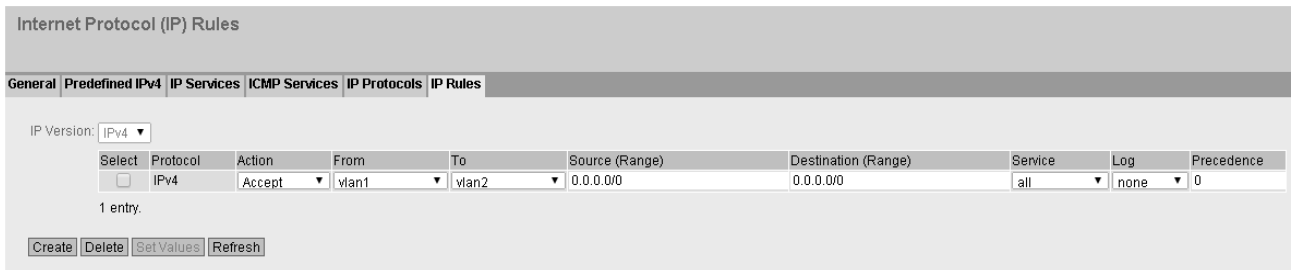
1. Click on "Security" > "Firewall" in the navigation area and on the "IP Rules" tab in the content area.
2. Click "Create". A new entry is created in the table.
3. Configure the firewall rule with the following settings:

Action	Accept
From	vlan1 (internal)
To	vlan2 (external)
Source (Range)	0.0.0.0 (all IP addresses)
Destination (Range)	0.0.0.0 (all IP addresses)
Service	all As default, the service is always available

4. Click "Set Values".

#### Result

Due to this firewall rule, all services between vlan1 and vlan2 are possible without restrictions, e.g. HTTPS



## 2.3 Configure a remote connection on the SINEMA RC Server

### 2.3.1 Creating node groups

Users and devices can be put together in participant groups. You can also specify whether the communication between the participants of an individual group is permitted or forbidden.

For this sample configuration, the following groups are created.

- Station -1
- Station-2
- Service

#### Requirement

- The SINEMA RC Server is connected to the WAN.

#### Procedure

1. In the address box of the Web browser, enter the WAN IP address of the SINEMA RC Server "https://<WAN IP address>", see table "Settings used (Page 25)".
2. Log in as the "admin" user and with the corresponding password.
3. In the navigation area, click "Remote connections" > "Participant groups". The participant groups that have already been created are listed in the content area.
4. Click "Create". The page "New participant group" is opened.
5. Enter "Station 1" for group name and click "Exit".
6. Repeat steps 1 - 3 for the groups "Station-2" and "Service"



## Result

The participant groups have been created.

### Participant Groups

**i** No Filter active

 Exact match

<input type="checkbox"/>	Group Name	Members may Communicate	Number of Users	Number of Devices	Actions
<input type="checkbox"/>	Service	no	<a href="#">1</a>	0	
<input type="checkbox"/>	Station-1	no	0	<a href="#">1</a>	
<input type="checkbox"/>	Station-2	yes	0	<a href="#">1</a>	

### 2.3.2 Create devices

#### Procedure

1. In the navigation area, click "Remote connections" > "Devices". The devices that have already been created are listed in the content area.
2. Click "Create" button to create a new device.
3. Enter the device name for the device e.g. "S615-1" for station 1 and "S615-2" for station 2.
4. Click "Continue".
5. Enable the option "Connect local subnet"
6. Configure the devices with the following settings:


Local LAN IP address	IP address for vlan1 according to the table "Settings used".
Network mask	255.255.255.0

7. Click "Continue". The "Group memberships" tab is displayed.
8. Enable the appropriate group.  
For the "S615-1" device, the group "Station 1"  
For the "S615-2" device, the group "Station 2"
9. Click "Continue". The "Password" tab is displayed.
10. Specify the password for access e.g. An:t\_010 for S615-1 and An:t\_020 for S615-2.  
The password must be made up of uppercase and lowercase letters, numbers and special characters.
11. Click "Exit".

#### Result

The devices are listed with the devices that have already been created.

- Device password
- Device ID
- Fingerprint

You will find the device ID and the fingerprint in the device information. Click on the  symbol to open the device information.

**Devices / S615-1**

**Device Details**
**Network Settings**
**Group Memberships**
**Change Password**
**Device Summary**

**Device Information:**

Device ID: 2

Fingerprint: 6D:78:25:86:46:5C:86:5A:D6:A4:A4:0B:3E:45:28:E5:77:A9:04:FF

Device Name: S615-1

	Local Subnet	Network GW
Local LAN IP Address:	192.168.10.1/24	Yes

	Virtual Local LAN	Local Subnet	Network GW
Virtual Local LAN IP Address:			

Virtual local LAN device specific

	Virtual Local LAN	Destination IP	Network GW

Type:

Vendor:

Location:

Connection Type:

Comment:

Groups:

### 2.3.3 Configure communications relations

So that participant groups can communicate with each other, communication relations are necessary. A communication relation can be created for every direction.



For this sample configuration, the following communication relations are created:

from group	to the destination group
Service	Station -1
	Station-2
Station -1	Station-2

In this configuration example, communication is only from the group "Station 1" to the group "Station 2". In the opposite direction, no communication is possible. For the communication from the group "Station 2" to the group "Station 1" another communication relation is necessary.

The group "Service" can also communicate with the groups "Station 1" and "Station 2" but not the other way round.

#### Procedure

1. In the navigation area, click "Remote connections" > "Participant groups". The participant groups that have already been created are listed in the content area.
2. For "Station 1", click the symbol  in the "Actions" column. The page "Destination group" is opened.
3. Enable "Station 2" and click on "Save".
4. Click "Exit dialog".
5. For "Service", click the symbol  in the "Actions" column. The page "Destination group" is opened.
6. Enable "Station 1" and "Station 2". Click "Save".
7. Click "Exit dialog".

#### Result

The communication relations have been created.

Click "Remote connections" > "Communication relations" in the navigation area. The created relations are listed in the content area.

### Communication Relationships

**i** No Filter active

Search Filter: Source Group ▾   Exact match

Source Group	Destination Groups	Actions
Station-1	Station-2	
Station-2	Station-1 Station-2	


## 2.4 Configure a remote connection on the S615

### 2.4.1 Secure OpenVPN connection with fingerprint

#### Requirement

- On PC1/2 there are two Web browser windows open.
- Web browser 1:  
You are logged on to the WBM of the S615 as "admin".
- Web browser 2:  
You are logged on to the WBM of the SINEMA RC Server as user "service" or "admin".
- A valid KEY-PLUG is inserted in the S615.

#### Procedure

1. Change to Web browser 1.
  - In the address box of the Web browser, enter the LAN IP address of the S615, see table "Settings used (Page 25)".
  - Log in as the "admin" user and with the corresponding password.
  - Click "System" > "SINEMA RC" in the navigation area.
  - For "SINEMA RC Address", enter the WAN IP address of the SINEMA RC Server, see table "Settings used (Page 25)".
2. Change to Web browser 2.
  - In the address box of the Web browser, enter the WAN IP address of the SINEMA RC Server, see table "Settings used (Page 25)".
  - Log in as the "admin" user and the corresponding password.
  - In the navigation area, click "Remote connections" > "Devices".
  - Click on the symbol  in "Actions" to open the device information.
  - Holding down the left mouse button, select the entry for device ID.
  - Right-click on the selection and in the shortcut menu, select the copy command.

3. Change to Web browser 1.
  - Right click in the input box of "Device ID".
  - In the shortcut menu, select the menu command for inserting.
  - In "Device Password", enter the password you have configured for access, An:t\_010 for S615-1 and An:t\_020 for S615-2.
  - Enable "Auto Firewall / NAT Rules".

When enabled, the suitable NAT and firewall rules are created automatically.

For "Verification Type" select "Fingerprint".
4. Change to Web browser 2.
  - Holding down the left mouse button, select the entry for fingerprint.
  - Right-click on the selection and in the shortcut menu, select the copy command.
5. Change to Web browser 1.
  - Right click in the input box of "Fingerprint".
  - In the shortcut menu, select the menu command for inserting.
  - Select "Enable SINEMA RC" and click on "Set Values".

**SINEMA Remote Connect (SINEMA RC)**

Enable SINEMA RC

SINEMA RC Address: 192.168.184.20

SINEMA RC Port: 443

Device ID: 6

Device Password: \*\*\*\*\*

Auto Firewall/NAT Rules

Use Proxy: none

Verification Type: Fingerprint

Fingerprint: 87:3B:54:8F:A6:A5:F6:39:E0:8A:CA:D3:69:2A:09:06:7A:FB:F4:93

CA Certificate: -

2.4 Configure a remote connection on the S615

Result

The device establishes an OpenVPN tunnel to the SINEMA RC Server.

You can check in the WBM to see whether the connection was successful.

Web browser 1: In the navigation area, click "Information" > "SINEMA RC".

**SINEMA Remote Connect (SINEMA RC) Information**

Status: **established**

Remote Address: 172.31.254.127

Tunnel Interface Address: 10.8.1.2

Connected Local Subnet(s): 192.168.1.1/24 translated to 10.100.1.1/24

Connected Remote Subnet(s): 10.8.1.2/24  
10.8.0.0/24  
192.168.104.0/24  
192.168.105.0/24  
192.168.109.0/24  
192.168.108.0/24  
192.168.111.0/24  
192.168.107.0/24  
192.168.110.0/24  
192.168.103.0/24  
192.168.2.0/24  
192.168.106.0/24  
192.168.102.0/24

Fingerprint: 87:3B:54:8F:A6:A5:F6:39:E0:8A:CA:D3:69:2A:09:06:7A:FB:F4:93

Web browser 2: Click "Remote connections" > "Devices" in the navigation area.

**Devices**

**No Filter active**

Search Filter: All   Exact match

<input type="checkbox"/>	Device Name ^	VPN Address ⇅	Remote Subnet ⇅	Virtual Local LAN ⇅	Status ⇅	Location ⇅	Connection Type ⇅	Actions
<input type="checkbox"/>	S615-1	10.8.1.3	192.168.100.0/24	None	online	Station 1	PERMANENT	
<input type="checkbox"/>	S615-2	10.8.0.2	192.168.10.0/24	None	online	Station 2	PERMANENT	




## 2.4.2 Secure OpenVPN connection with CA certificate

### 2.4.2.1 Loading a certificate

#### Requirement

- The correct time is set on the S615 and the SINEMA RC Server.
- On PC1/2 there are two Web browser windows open.
- Web browser 1:  
You are logged on to the WBM of the S615 as "admin".
- Web browser 2:  
You are logged on to the WBM of the SINEMA RC Server as the user "admin".

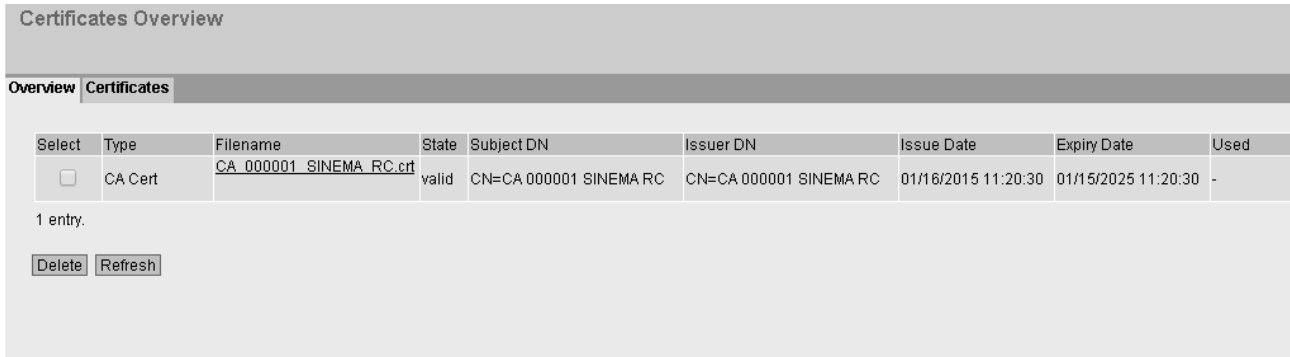
#### Procedure

1. Change to Web browser 2.
  - In the address box of the Web browser, enter the WAN IP address of the SINEMA RC Server, see table "Settings used (Page 25)".
  - Log in as the "admin" user and the corresponding password.
  - Click "Security" > "Certificates" in the navigation area.
  - Click on the  symbol in "Actions" to export the certificate.
2. Change to Web browser 1.
  - In the address box of the Web browser, enter the LAN IP address of the S615, see table "Settings used (Page 25)".
  - Log in as the "admin" user and with the corresponding password.
  - Click on "System" > "Load & Save" in the navigation area and on the "HTTP" tab in the content area.
  - Click the "Load" button next to "X509Cert". The dialog for loading a file is opened.
  - Navigate to the exported server certificate. Click the "Open" button in the dialog.  
The file is now loaded on the device. After loading successfully, confirm the next dialog with "OK".

2.4 Configure a remote connection on the S615

Result

The certificates are loaded. With "Security" > "Certificates", you can display the certificates. The loaded certificates must have the status "valid".



The screenshot shows a web interface titled "Certificates Overview". It has two tabs: "Overview" and "Certificates", with "Certificates" selected. Below the tabs is a table with the following columns: Select, Type, Filename, State, Subject DN, Issuer DN, Issue Date, Expiry Date, and Used. There is one row of data: a checkbox in the "Select" column, "CA Cert" in the "Type" column, "CA\_000001\_SINEMA\_RC.crt" in the "Filename" column, "valid" in the "State" column, "CN=CA 000001 SINEMA RC" in the "Subject DN" column, "CN=CA 000001 SINEMA RC" in the "Issuer DN" column, "01/16/2015 11:20:30" in the "Issue Date" column, "01/15/2025 11:20:30" in the "Expiry Date" column, and "-" in the "Used" column. Below the table, it says "1 entry." and there are "Delete" and "Refresh" buttons.


Select	Type	Filename	State	Subject DN	Issuer DN	Issue Date	Expiry Date	Used
<input type="checkbox"/>	CA Cert	CA_000001_SINEMA_RC.crt	valid	CN=CA 000001 SINEMA RC	CN=CA 000001 SINEMA RC	01/16/2015 11:20:30	01/15/2025 11:20:30	-

2.4.2.2 Configure an OpenVPN connection to the SINEMA RC Server

Requirement

- A valid KEY-PLUG is inserted in the S615.

Procedure

1. Change to Web browser 1.
  - Click "System" > "SINEMA RC" in the navigation area.
  - For "SINEMA RC Address", enter the WAN IP address of the SINEMA RC Server, see table "Settings used (Page 25)".
2. Change to Web browser 2.
  - In the navigation area, click "Remote connections" > "Devices".
  - Click on the symbol  in "Actions" to open the device information.
  - Holding down the left mouse button, select the entry for device ID.
  - Right-click on the selection and in the shortcut menu, select the copy command.

3. Change to Web browser 1.

- Right click in the input box of "Device ID".
- In the shortcut menu, select the menu command for inserting.
- In "Device Password", enter the password you have configured for access, An:t\_010 for S615-1 and An:t\_020 for S615-2.
- Enable "Auto Firewall / NAT Rules".  
When enabled, the suitable NAT and firewall rules are created automatically.
- In "Verification Type", select "CA Certificate".
- In "CA Certificate" select the server certificate. Only loaded certificates can be selected.

SINEMA Remote Connect (SINEMA RC)

Enable SINEMA RC

SINEMA RC Address: 192.168.184.20

SINEMA RC Port: 443

Device ID: 6

Device Password: \*\*\*\*\*

Auto Firewall/NAT Rules

Use Proxy: none

Verification Type: CA Certificate

Fingerprint:

CA Certificate: CA\_000001\_SINEMA\_RC.crt

Set Values Refresh

- Select "Enable SINEMA RC" and click on "Set Values".

## Result

The device establishes an OpenVPN tunnel to the SINEMA RC Server.

You can check in the WBM to see whether the connection was successful.

Web browser 1: In the navigation area, click "Information" > "SINEMA RC".

2.4 Configure a remote connection on the S615

### SINEMA Remote Connect (SINEMA RC) Information

Status: **established**

Remote Address: 172.31.254.127

Tunnel Interface Address: 10.8.1.2

Connected Local Subnet(s): 192.168.1.1/24 translated to 10.100.1.1/24

Connected Remote Subnet(s): 10.8.1.2/24  
10.8.0.0/24  
192.168.104.0/24  
192.168.105.0/24  
192.168.109.0/24  
192.168.108.0/24  
192.168.111.0/24  
192.168.107.0/24  
192.168.110.0/24  
192.168.103.0/24  
192.168.2.0/24  
192.168.106.0/24  
192.168.102.0/24

Fingerprint: 87:3B:54:8F:A6:A5:F6:39:E0:8A:CA:D3:69:2A:09:06:7A:FB:F4:93

Web browser 2: Click "Remote connections" > "Devices" in the navigation area.

### Devices

**No Filter active**

Search Filter:    Exact match

<input type="checkbox"/>	Device Name ^	VPN Address ⇅	Remote Subnet ⇅	Virtual Local LAN ⇅	Status ⇅	Location ⇅	Connection Type ⇅	Actions
<input type="checkbox"/>	S615-1	10.8.1.3	192.168.100.0/24	None	online	Station 1	PERMANENT	
<input type="checkbox"/>	S615-2	10.8.0.2	192.168.10.0/24	None	online	Station 2	PERMANENT	