MINDA

MINDA remote support

Siemens SCALANCE S615
LAN-Router
for:
MINDA Systems

SINEMA Remote Connect – Management platform for Remote Networks

The management platform for remote networks, SINEMA Remote Connect, is a server application. With SINEMA Remote Connect, users can conveniently and securely maintain widely distributed systems or machines via remote access. Even if the machines are connected to external networks. For example, in the systems of end customers of machine builders. SINEMA Remote Connect ensures the secure management of tunnel connections (VPN) between the central office, the service technicians and the installed machines or systems. Communication between the participants is protocol-independent and IP-based. Direct access to the company network in which the system or machine is integrated is avoided. The service technician and the machine to be serviced establish a separate connection to SINEMA Remote Connect. There, the identity of the participants is determined via certificate exchange. Only then is remote access to the machine possible.
The connection to SINEMA Remote Connect can be established via various media such as mobile radio, DSL or existing private network infrastructures. For connection to remote networks, Siemens offers a broad portfolio of industrial routers of the SCALANCE family.
With the installation of the SINEMA Remote Connect Client, an address book function is available. All machines and systems can be uniquely identified and selected for management via SINEMA Remote Connect. This is a decisive advantage in series machine construction - with the same machines and IP addresses.

Remote maintenance via Siemens SCALANCE S615

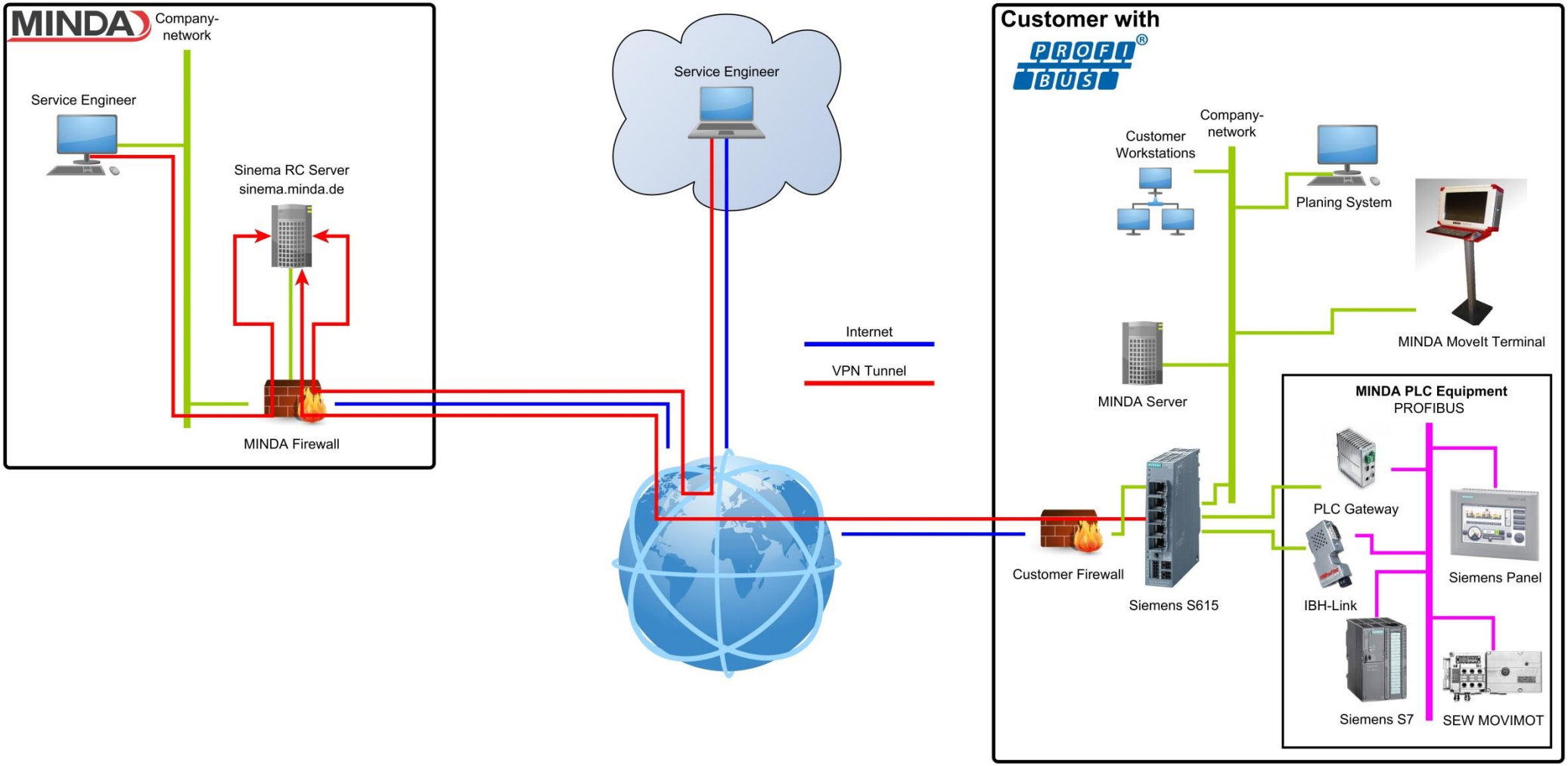
The S615 requires access to the Internet in order to connect to the SINEMA Remote Control Server at MINDA.

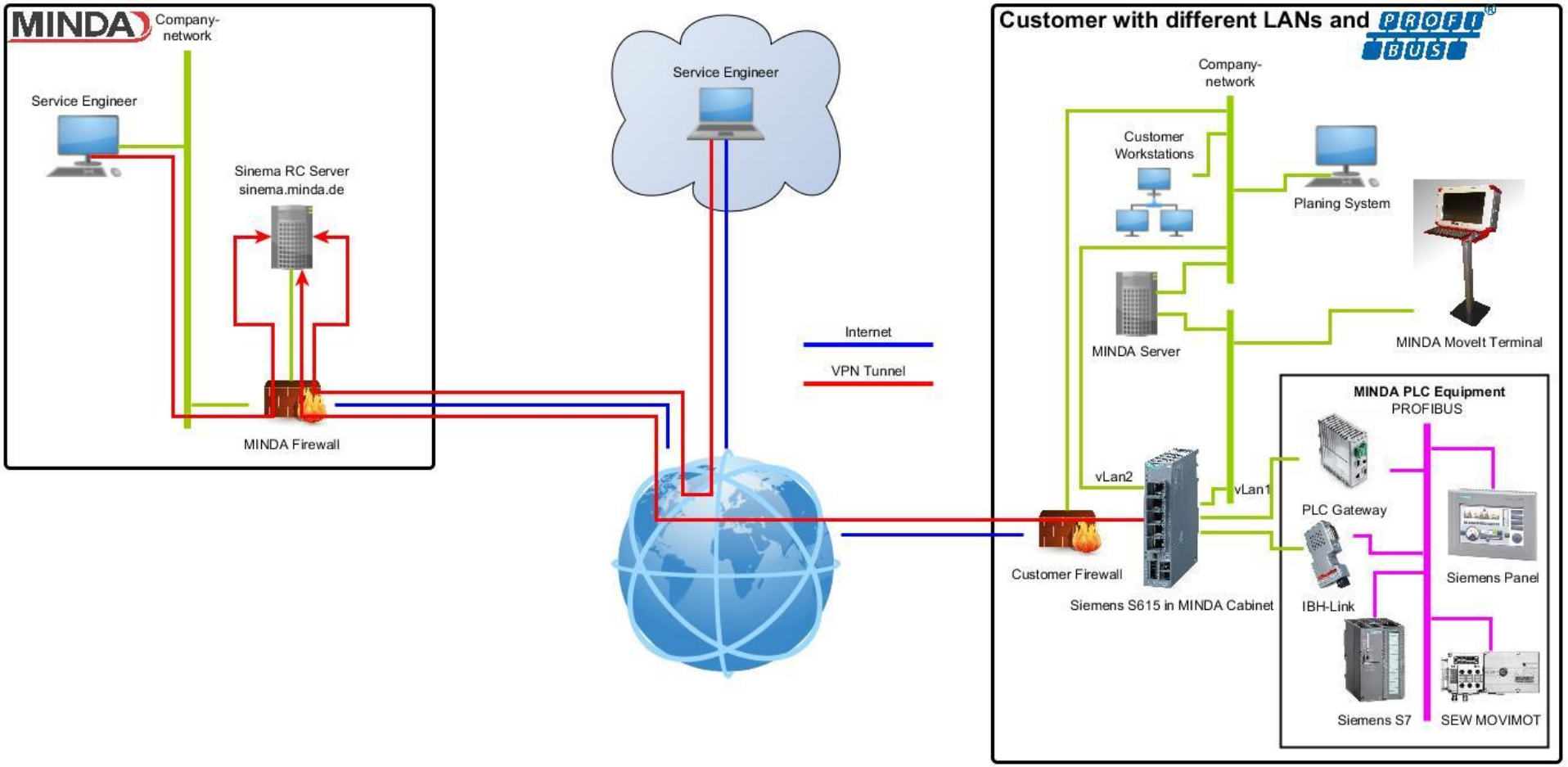
Destination: https://sinema.minda.de (217.89.43.245) with outgoing ports:
TCP 443
TCP 5443 for OpenVPN
UDP 1194 for OpenVPN
TCP 6220 for certificate exchange
UDP 123 for NTP

Via the 2-pole signal in- and outputs, remote maintenance can optionally be activated / deactivated via key switch and an active connection is signaled.

- No leakages in the firewall required (incoming rules)
- Only one type of connection for MCS and PLC remote maintenance
- Server is at MINDA, thus no dependence on third parties
- No system maintenance customer-supplied
- Sharing of individual IP addresses or entire network segments possible

Following you will find a few configuration examples.


MINDA
Company-
network
Service Engineer
Sinema RC Server
sinema.minda.de
MINDA Firewall
Service Engineer
Internet
VPN Tunnel
Customer with
PROFIBUS
Company-
network
Customer
Workstations
Planing System
MINDA MoveIt Terminal
MINDA Server
MINDA PLC Equipment
PROFIBUS
PLC Gateway
Siemens Panel
Customer Firewall
Siemens S615
IBH-Link
Siemens S7
SEW MOVIMOT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Customer with different LANs and PROFIBUS
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MINDA MoveIt Terminal
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PROFIBUS
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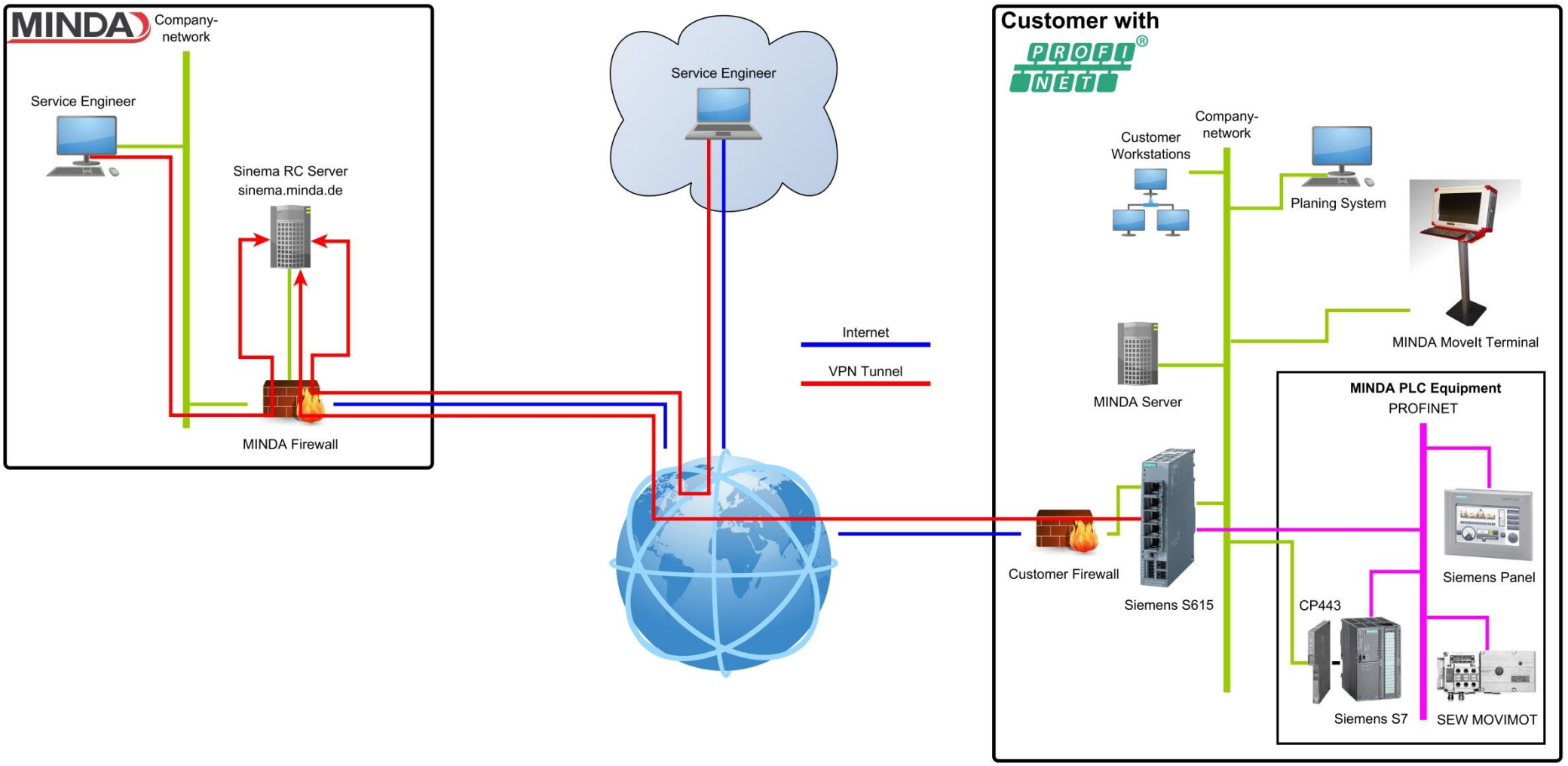
Customer Firewall
Siemens S615 in MINDA Cabinet
IBH-Link
Siemens Panel
Siemens S7
SEW MOVIMOT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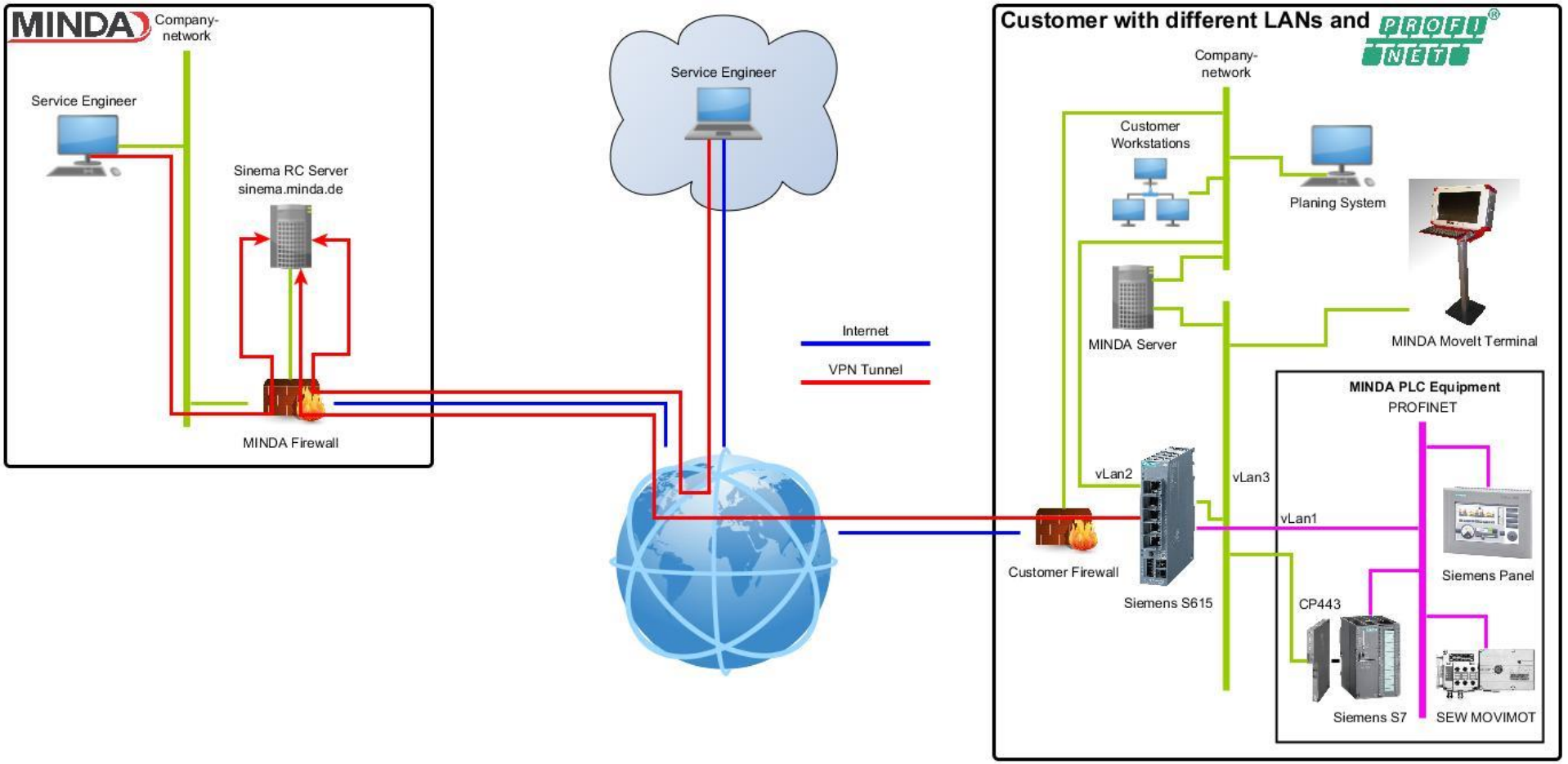
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Technical specifications:

Transmission rate	
Transfer rate	10 Mbit/s, 100 Mbit/s
Interfaces	
Number of electrical/optical connections / for network components or terminal equipment / maximum	5
Number of electrical connections	
● for power supply	1
● for redundant voltage supply	1
Type of electrical connection	
● for internal network	RJ45 port
● for external network	RJ45 port
● for power supply	5-pole terminal block
design of the removable storage / C-PLUG	Yes
Signal-Inputs/outputs	
Number of electrical connections	
● for digital input signals	1
● for digital output signals	1
Type of electrical connection	
● for digital input signals	2-pole terminal block
● for digital output signals	2-pole terminal block
Supply voltage, current consumption, power loss	
Supply voltage / external	24 V
Supply voltage / external	10.8 ... 28.2 V
Type of voltage / of the supply voltage	DC
Consumed current / maximum	0.2 A
Product component / fusing at power supply input	Yes
Fuse protection type / at input for supply voltage	Non-replaceable melting fuse (F 2 A5 / 32 V)
Power loss [W]	
● at DC / at 24 V / typical	4 W
Permitted ambient conditions	
Ambient temperature	
● during operation	-40 ... +70 °C
● during storage	-40 ... +80 °C
● during transport	-40 ... +80 °C
Relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
Protection class IP	IP20
Design, dimensions and weight	
Design	compact
Width	35 mm
Height	147 mm
Depth	127 mm
Net weight	0.4 kg
Mounting type	
● 35 mm DIN rail mounting	Yes
● S7-300 rail mounting	Yes
● S7-1500 rail mounting	Yes
Product functions / management, configuration	
Product function	
● CLI	Yes
● web-based management	Yes

● MIB support	Yes
Protocol / is supported	
● HTTP	Yes
● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v3	Yes
Type of configuration	Web Based Management, CLI, SNMP, SCT (Configuration support for certificate generation)

Product functions / Diagnosis

Product function	
● SysLog	Yes
● Packet Filter Log	Yes
● Audit Log	Yes
● System log	Yes

Product functions / DHCP

Product function	
● DHCP client	Yes
● DHCP server - internal network	Yes

Product functions / Routing

Product function / Static IP routing	Yes

Product functions / Security

Firewall version	stateful inspection
Product function / with VPN connection	IPSec, OpenVPN (as Client for SINEMA RC)
Type of encryption algorithms / with VPN connection	AES-256, AES-192, AES-128, 3DES-168, DES-56
Type of authentication procedure / with VPN connection	Preshared key (PSK), X.509v3 certificates
Type of hashing algorithms / with VPN connection	MD5, SHA-1
Number of possible connections / with VPN connection	20
Product function	
● Password protection	Yes
● Bandwidth limiting	No
● NAT/NAPT	Yes

Product functions / Time

Protocol / is supported / NTP	Yes
Product component / Hardware real-time clock	Yes
Product feature / Hardware real-time clock w. battery backup	No

Standards, specifications, approvals

Standard	
● for FM	FM-CoC 3021712
● for hazardous zone	EN 60079-15, EN 60079-0, II 3 G Ex nA IIC T4 Gc, KEMA 07ATEX0145 X
● for safety / from CSA and UL	UL E115352 (NWGQ, NGWQ7)
● for emitted interference	EN 61000-6-4
● for interference immunity	EN 61000-6-2
Certificate of suitability	ATEX, EMV, RoHS, Marine classification in preparation
Certificate of suitability	
● CE marking	Yes
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	No
● Bureau Veritas (BV)	No
● Det Norske Veritas (DNV)	No
● Germanische Lloyd (GL)	No
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (NK)	No

● Polski Rejestr Statkow (PRS)	Yes
● Royal Institution of Naval Architects (RINA)	No
MTBF / at 40 °C	55 y

Accessories

Product extension / optional / C-PLUG	Yes
Product extension / optional / KEY-PLUG	Yes
accessories	KEY-PLUG