



**STORMSHIELD**



TECHNICAL NOTE

**STORMSHIELD NETWORK SECURITY**

# BASIC COMMAND LINE INTERFACE CONFIGURATIONS

Product concerned: SNS 3.x, SNS 4.x

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Reference: [sns-en-basic\\_cli\\_configuration\\_technical\\_note](#)



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## Getting started

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Stormshield Network Security Firewalls provide a command line interface (CLI), composed of a proprietary set of commands. The commands are available via a shell and allows configuring and monitoring all firewall features.

This document describes the CLI commands required to configure the basic firewall features. For details about all commands and their arguments, refer to [Stormshield Network Security - CLI Serverd commands reference guide](#).

### Using the command line interface

The CLI shell is accessed via a secured protocol (NETASQ Secure Remote Procedure Call):

- Locally on the firewall (command line and web interface),
- From a remote host, using dedicated executables on Windows and Linux.

You can write several CLI commands in a text file to create a CLI script that will then be run either locally or remotely.

#### **i** NOTE

For details on how to access the CLI shell and how to write and run scripts, refer to the [E-learning module CLI ACCESS & SCRIPTS](#).



## Firewall administration

---

### Displaying help for commands and arguments

```
HELP
```

Use HELP as an argument for another command to display help about all its arguments.

### Getting write access

```
MODIFY ON FORCE
```

### Resetting factory settings

```
SYSTEM DEFAULTCONFIG
```

This command does not reset the password of the *admin* user.

### Importing a license

#### Console syntax

```
SYSTEM LICENCE UPLOAD < U70SXA02J2681A7.licence
```

#### Script syntax

```
SYSTEM LICENCE UPLOAD $FROM_DATA_FILE ("U70SXA02J2681A7.licence")
```

### Backing up the whole configuration

#### Console syntax

```
CONFIG BACKUP list=all [password=mot_de_passe]> mybackup.na
```

#### Script syntax

```
CONFIG BACKUP list=all [password=mot_de_passe] $SAVE_TO_DATA_FILE  
("mybackup.na")
```

### Restoring the whole configuration

#### Console syntax

```
CONFIG RESTORE list=all [password=mot_de_passe]< mybackup.na
```



## Script syntax

```
CONFIG RESTORE list=all [password=mot_de_passe] $FROM_DATA_FILE  
("mybackup.na")
```

## Updating the firmware

### Console syntax

```
SYSTEM UPDATE UPLOAD < fwupd-2.2.0-NETASQ-amd64-M-VM-NETASQ.maj  
SYSTEM UPDATE ACTIVATE
```

### Script syntax

```
SYSTEM UPDATE UPLOAD $FROM_DATA_FILE ("fwupd-2.2.0-NETASQ-amd64-M-VM-  
NETASQ.maj")  
SYSTEM UPDATE ACTIVATE
```

## Enabling SSH access using a password

```
CONFIG CONSOLE SSH state=1 userpass=1 port=ssh  
CONFIG CONSOLE ACTIVATE
```

## Disabling SSH access

```
CONFIG CONSOLE SSH state=0  
CONFIG CONSOLE ACTIVATE
```

## Allowing a public IP address to access the web interface

```
CONFIG WEBADMIN ACCESS ADD PUBLIC_IP  
CONFIG WEBADMIN ACTIVATE
```

*PUBLIC\_IP* is a Host object, but it can also be a Network object, an IP address range, or the *any* object.



## Managing Network objects

This section describes how to create and remove objects.

To modify an object, use the same commands as to create it, and add the *update=1* parameter:

Example to modify a Host object:

```
CONFIG OBJECT HOST NEW name=DNS_SRV comment="DNS Server"  
ip="192.168.250.152" resolve=static mac="" update=1  
CONFIG OBJECT ACTIVATE
```

### Host object

#### Creating a Host object

- Name: DNS\_SRV,
- Comment: DNS Server,
- IP Address: 192.168.250.150,
- MAC Address: 0A:00:27:00:00:28.

```
CONFIG OBJECT HOST NEW name=DNS_SRV comment="DNS Server"  
ip="192.168.250.150" resolve=static mac="0A:00:27:00:00:28"  
CONFIG OBJECT ACTIVATE
```

#### Removing a Host object

```
CONFIG OBJECT HOST DELETE name=DNS_SRV force=1
```

### Network object

#### Creating a Host object

- Name: VPN\_NET,
- Comment: VPN Network,
- Network address: 192.168.1.0/24.

```
CONFIG OBJECT NETWORK NEW name=VPN_NET comment="VPN Network"  
ip=192.168.1.0 mask=255.255.255.0  
CONFIG OBJECT ACTIVATE
```

#### Removing a Host object

```
CONFIG OBJECT NETWORK DELETE name=VPN_NET force=1
```



## IP address range object

### Creating an IP address range object

- Name: DHCP\_LAN\_RANGE,
- Comment: DHCP LAN RANGE,
- Start: 192.168.250.100,
- End: 192.168.250.200.

```
CONFIG OBJECT HOST NEW name=DHCP_LAN_RANGE comment="DHCP LAN RANGE"  
begin=192.168.250.100 end=192.168.250.200  
CONFIG OBJECT ACTIVATE
```

### Removing an IP address range object

```
CONFIG OBJECT HOST DELETE name=DHCP_LAN_RANGE force=1
```

## Port object

### Creating a Port object

- Name: SRV\_PORT,
- No comment,
- Port number: 2500,
- Protocol: TCP.

```
CONFIG OBJECT SERVICE NEW name=SRV_PORT comment="" port=2500 proto=TCP  
CONFIG OBJECT ACTIVATE
```

### Removing a Port object

```
CONFIG OBJECT SERVICE DELETE name=SRV_PORT force=1
```

## Port range object

### Creating a port range object

- Name: PORT\_RANGE,
- Comment: PORT RANGE,
- Start: 20000,
- End: 20500,
- Protocol: Any.

```
CONFIG OBJECT SERVICE NEW name=PORT_RANGE comment="PORT RANGE" port=20000  
toport=20500 proto=ANY  
CONFIG OBJECT ACTIVATE
```





## Removing a port range object

```
CONFIG OBJECT SERVICE DELETE name=PORT_RANGE force=1
```

## Router Object

### Creating a Router object

- Name: DEFAULT\_ROUTER,
- No comment,
- Load balancing: By connection,
- Enable backup gateways when all gateways cannot be reached,
- Not all backup gateways are enabled,
- If no gateways are available, apply the Default route.

#### Main gateway 1:

- Host object: MAIN\_GW1
- Device for testing availability: dns1.google.com
- Weight: 1

#### Main gateway 2:

- Host object: MAIN\_GW2
- Device for testing availability: dns1.google.com
- Weight: 1

#### Backup gateway:

- Host object: BACKUP\_GW
- Device for testing availability: dns1.google.com
- Weight: 1

```
CONFIG OBJECT ROUTER NEW name=DEFAULT_ROUTER comment="" tries=3 wait=2
frequency=15 onfailpolicy=Pass gatewaythreshold=1 activateallbackup=Off
loadbalancing=connhash
```

```
CONFIG OBJECT ROUTER GATEWAY ADD type=principalgateway name=DEFAULT_ROUTER
host=MAIN_GW1 check="dns1.google.com" weight=1 monitor=icmp comment=""
```

```
CONFIG OBJECT ROUTER GATEWAY ADD type=backupgateway name=DEFAULT_ROUTER
host=BACKUP_GW check="dns1.google.com" weight=1 monitor=icmp comment=""
```

```
CONFIG OBJECT ACTIVATE
```

### Removing a Router object

```
CONFIG OBJECT ROUTER DELETE name=DEFAULT_ROUTER force=1
```



## Group object

### Creating a Group object

- Name: SRV\_GRP,
- Comment: Server Group.

```
CONFIG OBJECT GROUP NEW name=SRV_GRP comment="Server Group"  
CONFIG OBJECT ACTIVATE
```

### Adding an object to the group

- Add the *srv\_web* Host object to the *SRV\_GRP* group.

```
CONFIG OBJECT GROUP ADDTO group=SRV_GRP node=srv_web  
CONFIG OBJECT ACTIVATE
```

### Removing a Group object

```
CONFIG OBJECT GROUP DELETE name=SRV_GRP force=1
```

## IP protocol object

### Creating an IP protocol object

- Name: IP\_PROTO,
- Comment: OWNER IP PROTOCOLE,
- Protocol number: 200.

```
CONFIG OBJECT PROTOCOL NEW name=IP_PROTO comment="OWNER IP PROTOCOLE"  
protonumber=200  
CONFIG OBJECT ACTIVATE
```

### Removing an IP protocol object

```
CONFIG OBJECT PROTOCOL DELETE name=IP_PROTO force=1
```

## Port group object

### Creating a port group object

- Name: WEB\_PORT,
- Comment: WEB PORT.

```
CONFIG OBJECT SERVICEGROUP NEW name=WEB_PORT comment="WEB PORT"  
CONFIG OBJECT ACTIVATE
```



## Adding an object to the group

- Add the https protocol object to the WEB\_PORT group.

```
CONFIG OBJECT SERVICEGROUP ADDTO group=WEB_PORT node=https
CONFIG OBJECT ACTIVATE
```

## Removing a port group object

```
CONFIG OBJECT SERVICEGROUP DELETE name=WEB_PORT force=1
```

## Region group object

### Create a Region group object

- Name: PART\_LOC,
- Comment: Partners Location.

```
CONFIG OBJECT GEOGROUP NEW name=PART_LOC comment="Partners Location"
CONFIG OBJECT ACTIVATE
```

## Adding an object to the group

- Adding the eu:it country to the PART\_LOC group.

```
CONFIG OBJECT GEOGROUP ADDTO group=PART_LOC node=eu:it
CONFIG OBJECT ACTIVATE
```

## Removing a Region group object

```
CONFIG OBJECT GEOGROUP DELETE name=PART_LOC force=1
```

## Time object

### Creating a Time object

- Name: Working\_Time,
- Comment: Working Time,
- Week days: Monday, Tuesday, Wednesday, Thursday, and Friday,
- Time slot: 09:00 to 18:00.

```
CONFIG OBJECT TIME NEW name=working_time comment="Working Time"
time=09:00-18:00 weekday=1;2;3;4;5 yearday= date=
CONFIG OBJECT ACTIVATE
```

## Removing a Time object

```
CONFIG OBJECT TIME DELETE name=working_time force=1
```



# Network configuration

## Configuring an Ethernet interface

The names of the interfaces are:

- Ethernet0: *out*
- Ethernet1: *in*
- Ethernet2: *dmz1*
- Ethernet3: *dmz2*

### Static IP address

- Configure the *in* interface with static IP address 192.168.1.254/24.

```
CONFIG NETWORK INTERFACE ADDRESS ADD ifname=ethernet1
address=192.168.1.254 mask=24 addressComment=
CONFIG NETWORK INTERFACE ACTIVATE
```

### Dynamic IP address

- Configure the *out* interface via DHCP.

```
CONFIG NETWORK INTERFACE ADDRESS ADD ifname=ethernet0 address=DHCP
dhcpLeaseTime=0 requestDns=1
CONFIG NETWORK INTERFACE ACTIVATE
```

## Creating a bridge

### Static IP address

- Create a *BRIDGE LAN* bridge containing the *in* and *dmz1* interfaces, and configured with the static IP address 192.168.5.254/24.

```
CONFIG NETWORK INTERFACE CREATE mtu=1500 name=BRIDGE_LAN
interfaces=ethernet2,ethernet1 ifname=bridge1 address=192.168.5.254
mask=255.255.255.0 addressComment=
CONFIG NETWORK INTERFACE ACTIVATE
```

### Dynamic IP address

- Create a *BRIDGE LAN* bridge containing the *in* and *dmz1* interfaces, and configured via DHCP.

```
CONFIG NETWORK INTERFACE CREATE mtu=1500 name=BRIDGE_LAN
interfaces=ethernet1,ethernet2 ifname=bridge1 address=DHCP
dhcpLeaseTime=3600 dhcpHostname=
CONFIG NETWORK INTERFACE ACTIVATE
```



## Modifying a bridge

```
CONFIG NETWORK INTERFACE ADDRESS UPDATE ifname=bridge1
address=192.168.5.250 mask=255.255.255.0 addrnb=0 addressComment=

CONFIG NETWORK INTERFACE ACTIVATE
```

## Removing a bridge

- Before removing a bridge, you must first remove the interfaces belonging to the bridge.

```
CONFIG NETWORK INTERFACE ADDRESS ADD ifname=ethernet1 address=DHCP
dhcpLeaseTime=0 requestDns=0

CONFIG NETWORK INTERFACE ADDRESS ADD ifname=ethernet2 address=DHCP
dhcpLeaseTime=0 requestDns=0

CONFIG NETWORK INTERFACE REMOVE ifname=bridge1

CONFIG NETWORK INTERFACE ACTIVATE
```

## Configuring the default gateway

- Configure the Host (or Router) object *DEFAULT\_GW* as the default gateway.

```
CONFIG NETWORK DEFAULTROUTE SET type=ipv4 name=DEFAULT_GW

CONFIG NETWORK DEFAULTROUTE ACTIVATE
```

## Configuring a static route

- Create the following static route:

STATIC ROUTES						
Searching...		+ Add		X Delete		
Status	Destination network (host, network or group object)	Interface	Address range	Protected	Gateway	Comments
<input checked="" type="checkbox"/> on	NET_A	dmz2	192.168.1.0/24		FW_A	

## Creating a static route

```
CONFIG NETWORK ROUTE ADD State=1 Remote=NET_A Interface=dmz2 Gateway=FW_A
Color=333399
CONFIG NETWORK ROUTE ACTIVATE
```

## Removing a static route

```
CONFIG NETWORK ROUTE REMOVE Remote=NET_A
CONFIG NETWORK ROUTE ACTIVATE
```



## Configuring the DNS servers used by the firewall

### Adding a DNS server

- Add the *DNS\_SRV* server to the list of the firewall DNS servers in the menu **Configuration > System > Configuration > Network Settings tab > DNS resolution**.

```
CONFIG DNS SERVER ADD DNS_SRV  
CONFIG DNS ACTIVATE
```

### Removing a DNS server

```
CONFIG DNS SERVER REMOVE DNS_SRV  
CONFIG DNS ACTIVATE
```



## Filter rules

### Enable a filter or NAT policy

- Enable the filter or NAT policy #5.

```
CONFIG SLOT ACTIVATE type=filter slot=5
```

### Adding a filter rule

- Create the following filter rule at the top of the Filter-NAT policy #9:

FILTERING		IPV4 NAT									
Searching...		+ New rule		X Delete		↑ ↓ ↶ ↷		Cut Copy Paste		Search in logs	
	Status	Action	Source	Destination	Dest. port	Protocol	Security inspection	Comments			
1	on	pass	Network_internals	Internet	http		IPS				

```
CONFIG FILTER RULE INSERT index=9 type=filter state=on action=pass  
srctarget=Network_internals dsttarget=internet dstport=http position=1  
loglevel=minor
```

```
CONFIG FILTER ACTIVATE
```

### Modifying a filter rule

- Modify the preceding rule as follows:

FILTERING		IPV4 NAT									
Searching...		+ New rule		X Delete		↑ ↓ ↶ ↷		Cut Copy Paste		Search in logs	
	Status	Action	Source	Destination	Dest. port	Protocol	Security inspection	Comments			
1	on	pass	Network_in interface: in	Internet	http https ftp ssh		IPS				

```
CONFIG FILTER RULE UPDATE srctarget=Network_in srcif=in  
dstport=http,https,ftp,ssh index=9 global=0 type=filter position=1
```

```
CONFIG FILTER ACTIVATE
```

### Disabling a filter rule

```
CONFIG FILTER RULE UPDATE state=off index=9 global=0 type=filter  
position=1
```

```
CONFIG FILTER ACTIVATE
```

### Removing a filter rule

```
CONFIG FILTER RULE REMOVE index=9 global=0 type=filter position=1
```

```
CONFIG FILTER ACTIVATE
```



# Translation rules

## Adding a translation rule

### Dynamic translation

- Create the following dynamic translation rule:

FILTERING		IPV4 NAT							
Searching...		Original traffic (before translation)				Traffic after translation			
	Status	Source	Destination	Dest. port	Source	Src. port	Destination	Dest. port	
1	<input checked="" type="checkbox"/> on	Network_in interface: in	Internet interface: out	* Any	Firewall_out	ephemeral_fw			

```
CONFIG FILTER RULE INSERT index=9 type=nat state=on action=nat
srctarget=Network_in srcif=in dsttarget=internet dstif=out
natsrctarget=Firewall_out natsrcport=ephemeral_fw natsrcportlb=random
position=1

CONFIG FILTER ACTIVATE
```

### Static translation by port

- Create the following static translation rule by port:

FILTERING		IPV4 NAT							
Searching...		Original traffic (before translation)				Traffic after translation			
	Status	Source	Destination	Dest. port	Source	Src. port	Destination	Dest. port	
1	<input checked="" type="checkbox"/> on	Internet interface: out	Firewall_out interface: out	http			web_srv	http	

```
CONFIG FILTER RULE INSERT index=9 type=nat state=on action=nat
srctarget=internet srcif=out dsttarget=Firewall_out dstport=http
natdsttarget=web_srv natdstport=http position=2 loglevel=minor

CONFIG FILTER ACTIVATE
```

### Static translation

- Add the two following static translation rules:

FILTERING		IPV4 NAT							
Searching...		Original traffic (before translation)				Traffic after translation			
	Status	Source	Destination	Dest. port	Source	Src. port	Destination	Dest. port	
3	<input checked="" type="checkbox"/> on	srv_ftp interface: in	Internet interface: out	* Any	ARP		srv_ftp_pub		
4	<input checked="" type="checkbox"/> on	Internet interface: out	ARP	srv_ftp_pub	* Any		srv_ftp		

```
CONFIG FILTER RULE INSERT index=9 type=nat state=on action=nat
srctarget=srv_ftp srcif=in dsttarget=internet dstif=out natsrctarget=srv_
```





```
ftp_pub natsrcarp=on natsrcport=any position=3

CONFIG FILTER RULE INSERT index=9 type=nat state=on action=nat
srctarget=internet srcif=out dsttarget=srv_ftp_pub natdstarp=on
dstport=any natdsttarget=srv_ftp natdstport=any position=4 loglevel=minor

CONFIG FILTER ACTIVATE
```

## Modifying a translation rule

- Modify the dynamic translation rule as follows:

FILTERING		IPV4 NAT						
Searching...		+ New rule   X Delete   ↑ ↓   ↶ ↷   ✂ Cut   📄 Copy   📄 Paste   🔍 Search in logs   🔍 Search in monitoring						
	Status	Original traffic (before translation)			Traffic after translation			
		Source	Destination	Dest. port	Source	Src. port	Destination	Dest. port
1	<input checked="" type="checkbox"/> on	Network_in Network_dmz1	Internet interface: out	* Any	→ Firewall_out	↔ ephemeral_fw		

```
CONFIG FILTER RULE update srctarget=Network_in,Network_dmz2 srcif=any
index=9 global=0 type=nat position=1

CONFIG FILTER ACTIVATE
```

## Disabling a translation rule

```
CONFIG FILTER RULE UPDATE state=off index=9 type=nat global=0 position=1

CONFIG FILTER ACTIVATE
```

## Removing a translation rule

```
CONFIG FILTER RULE REMOVE index=9 global=0 type=nat position=1

CONFIG FILTER ACTIVATE
```



## Managing users in the internal LDAP database

### Creating an internal LDAP database

- Create an internal LDAP database,
- Directory name: institute.com,
- Organization: institute,
- Domain: com,
- Directory password: P@ssw0rd.

```
CONFIG LDAP INITIALIZE domainname=institute.com o=institute dc=com  
password=P@ssw0rd  
CONFIG LDAP ACTIVATE
```

### Creating a user

- Create the *Jean Doe* user with the *adminadmin* password in the directory.

```
USER CREATE uid=jdoe name=doe gname=jean  
USER PASSWORD dn=jdoe password=adminadmin
```

### Removing a user

```
USER REMOVE "cn=jean doe,ou=users,o=institute,dc=madrid.institute.com"
```

### Creating a user group

- Create the *Marketing* user group.

```
USER GROUP CREATE "Marketing"
```

### Adding a user to a group

- Add the *Jean Doe* user to the *Marketing* group.

```
USER GROUP ADDUSER "cn=test,ou=groups,o=institute,dc=madrid.institute.com"  
"jdoe"
```



**STORMSHIELD**

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