

## Gaia WebUI and CLI

In this section, we will talk about managing the Operating System of Gaia based Check Point devices, finalize configuration of our Security Gateway, and introduce the Command Line Interface (CLI).

# Gaia Management Tools

To function properly, Check Point devices need some OS level settings: IP addresses, routing parameters, DNS, DHCP, SNMP, system updates, and backup settings. OS parameters can be managed either through WebUI or CLI.

## WebUI

We have already touched the Gaia WebUI during initialization of our lab machines. To access WebUI, open your web browser to `https://<device IP address>`.

The Gaia WebUI supports the following browsers:

- Internet Explorer 8 or higher (including IE11).
- Microsoft Edge
- Chrome 14 or higher
- Firefox 6 or higher
- Safari 5 or higher

You can always check if your browser is supported in [SK92668](#)

Let's connect to our Security Gateway. To do so, open **`https://192.168.1.x`** from your LAB PC or SmartConsole PC. After logging as ***admin*** you get to the Overview page.



The settings are broken down to the following categories:

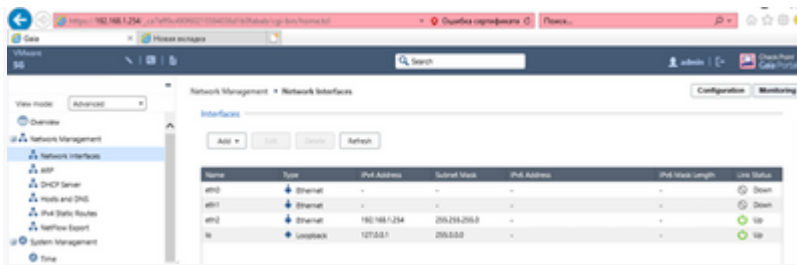
- Network Management
- System management
- Advanced Routing
- User Management
- High Availability
- Maintenance
- Upgrades (CPUSE)

For more details, refer to the [Gaia Administration Guide](#).

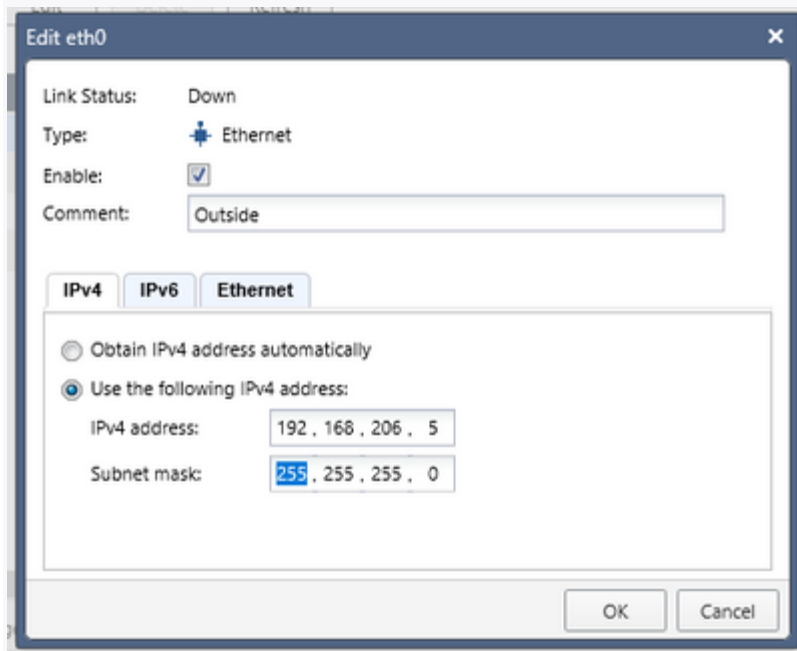
## Network Interface Setup

we have set up just one network interface of our Security Gateway, **eth2**. We need to set up two other interfaces.

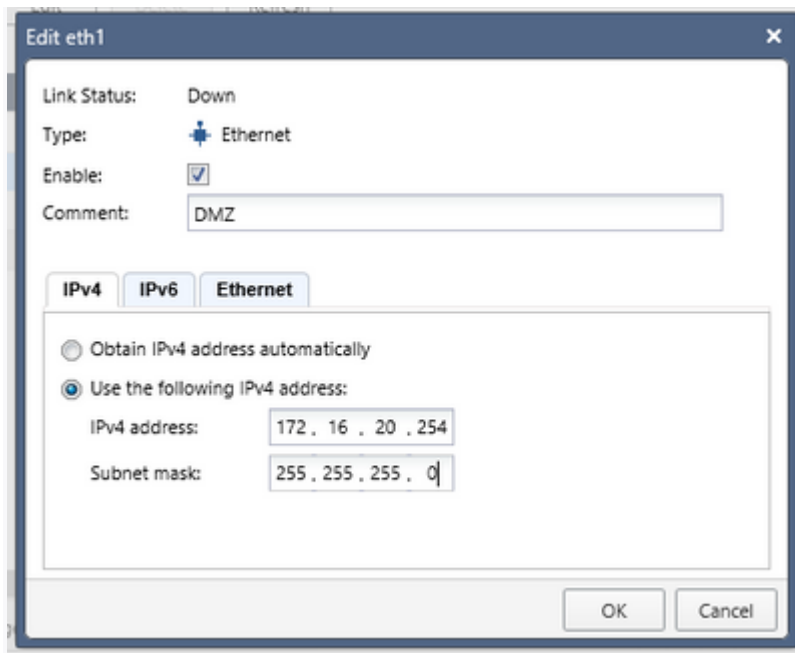
To do so, go to **Network Management > Network Interfaces**. All physical interfaces detected by the systems are listed there:



Double-click on **eth0**. In the popup window, mark enable checkbox to activate it. Write “Outside” in the comment field and finally, set up the IP address. Press OK to finish.



Set up **eth1** in the same manner:

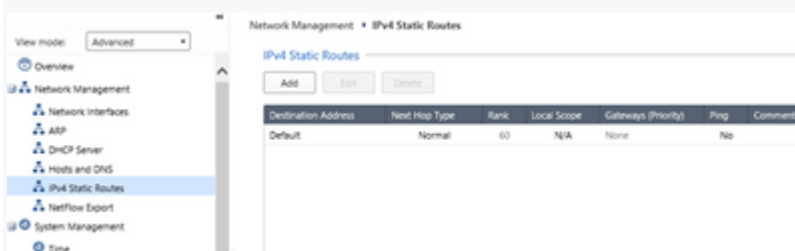


You can also add “Inside” to the **Comment** field of **eth2**. All interfaces should be shown **Up** at this point.

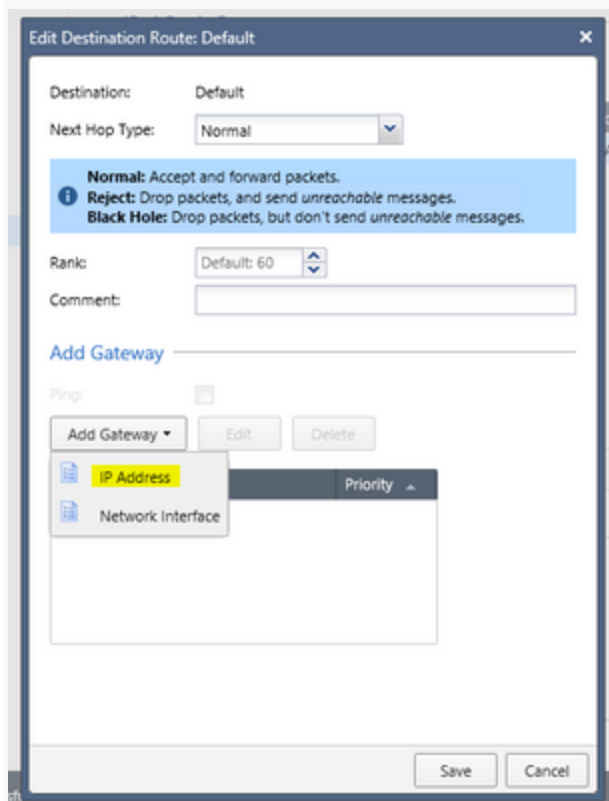
Name	Type	IPv4 Address	Subnet Mask	IPv6 Address	IPv6 Mask Length	Link Status	Comment
eth0	Ethernet	192.168.206.5	255.255.255.0	-	-	Up	Outside
eth1	Ethernet	172.16.20.254	255.255.255.0	-	-	Up	DMZ
eth2	Ethernet	192.168.1.254	255.255.255.0	-	-	Up	Inside
lo	Loopback	127.0.0.1	255.0.0.0	-	-	Up	

## Setting Default Gateway

Now, let’s set up default gateway. Go to **Network Management > IPv4 Static Routes**. The only entry there is Default.

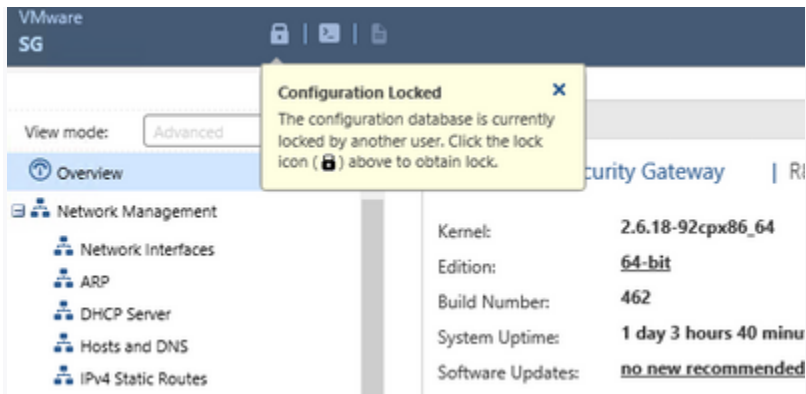


Double-click on it and chose **Add Gateway > IP Address**:



Type in the IP address of the default gateway. In our case it is **192.168.206.2** (Vmware Workstation has .2 for NAT Adapter gateway).

**Note:** Gaia OS allows only a single admin session in write mode. If you close your browser window without logging off first, or the session times out due to inactivity, you will see the system configuration locked on the next entry to WebUI.



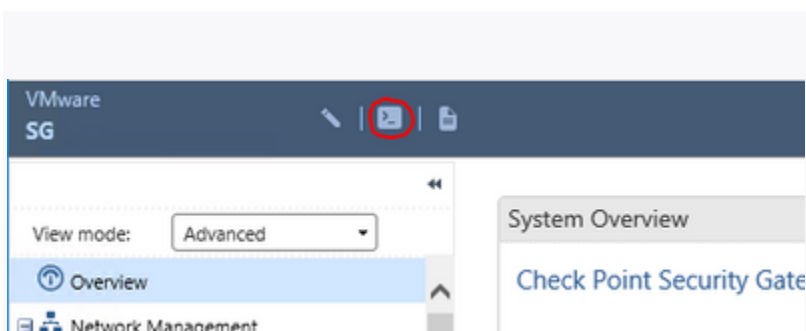
To unlock the settings, just click on the lock icon.

## Gaia command line interface (CLI)

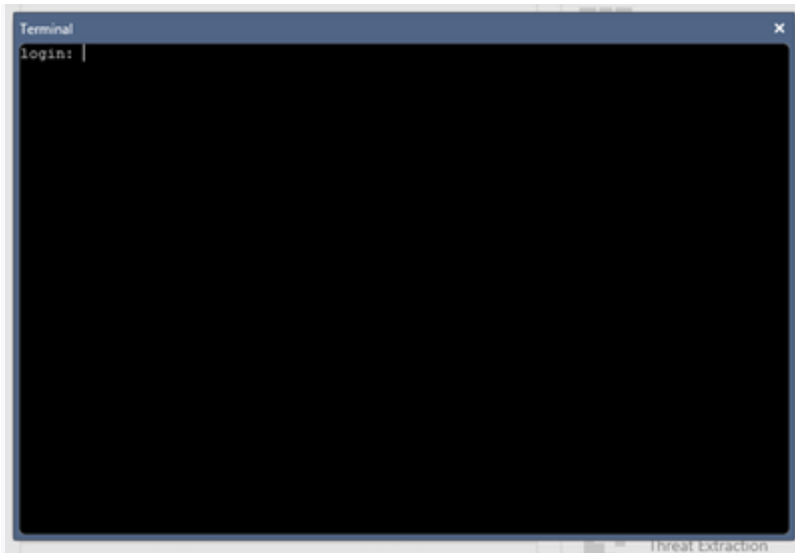
Gaia OS settings and also some parameters of installed Check Point products can be managed through CLI.

There are several different way to invoke Command Line Interface:

1. From WebUI, click on “Open Terminal” icon at the top of the screen:

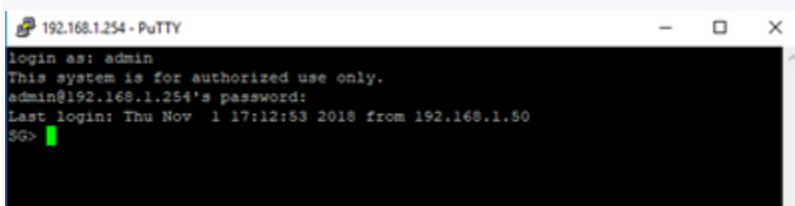


Terminal Window with a login prompt pops up:



2. Console port terminal connection
3. SSH connection
4. CLI option in SmartConsole

Let's try SSH option. We are using Putty SSH client. Connect to the SG IP address (192.168.1.x). Log in as admin. You will see the following:



Command line ending with > symbol means you are in Clish – Command Line Shell. This is the default shell on Gaia OS, which has commands for managing OS parameters: IP addresses, interfaces, routing, DNS settings, etc. Although Gaia OS based on RedHat Linux, the syntax for commands in clish is different from bash.

If you want to access Linux bash, you need to enter Expert mode. Entering Expert mode require “expert” password which is different from the user password.

Clish CLI syntax is simple and can be vewed as Operation > Feature > Parameter.

Let’s take a look at some examples:

- **show commands** - To view all commands that the user has permissions to run;
- **show commands feature <TAB>** - To view a list of all features;
- **show commands feature VALUE** - To show all commands for a specific feature;
- **show commands op <SPACE> <TAB>** - To show all possible operations;
- **show commands [op VALUE] [feature VALUE]** - To show all commands per operation, per feature.

Here are the four operation commands that are most frequently used: **show, set, add, delete**. You can get more details about Clish in [R80.10 Gaia Administration Guide](#).

## Practicing CLISH

Open an SSH session to the Security Gateway and login as admin. Type **show** command and then press **Tab** twice. You will see all available features:

```

SG> show
aaa - Authentication authorization and accounting
allowed-client - Show allowed client
arp - Display the parameters related to ARP
as - Show Autonomous System Number
asset - Display hardware information
backup - Show the status of the latest backup/restore
backup-scheduled - Show the scheduling of backup defined in the system
backups - List of local backups
bgp - Show Border Gateway Protocol (BGP) configuration
bonding - Display summary of bonding interfaces
bootp - Show BOOTP/DHCP Relay status and configuration
bridging - Display summary of bridging interfaces
clienv - CLI environment variables.
clock - Show current date and time
cloning-group - Configure Gaia Cloning Group
command - Display extended command path and description.
commands - Show All Commands.
config-lock - Show exclusive access settings.
config-state - Show state of configuration
configuration - Show Configuration
core-dump - Show core dumps manager settings
cron - Show the scheduling of the commands defined in the system
date - Show current date
-- More --

```

There are a number of options here, but we will start with reviewing the configuration, which can be done by typing the command **show configuration**. You will see all Gaia configuration settings in the output, including the ones related to the network interfaces:

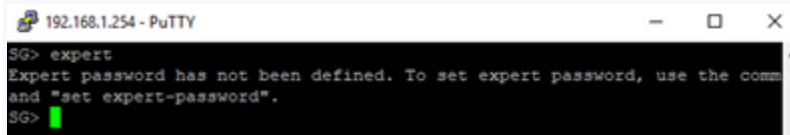
```

set interface eth0 comments "Outside"
set interface eth0 link-speed 1000M/full
set interface eth0 state on
set interface eth0 auto-negotiation on
set interface eth0 mtu 1500
set interface eth0 ipv4-address 192.168.206.5 mask-length 24
set interface eth1 comments "DMZ"
set interface eth1 link-speed 1000M/full
set interface eth1 state on
set interface eth1 auto-negotiation on
set interface eth1 mtu 1500
set interface eth1 ipv4-address 172.16.20.254 mask-length 24
set interface eth2 comments "Inside"
set interface eth2 link-speed 1000M/full
set interface eth2 state on
set interface eth2 auto-negotiation on
set interface eth2 mtu 1500
set interface eth2 ipv4-address 192.168.1.254 mask-length 24
set interface lo state on
set interface lo ipv4-address 127.0.0.1 mask-length 8

```

Never try setting any Gaia OS parameter with standard Linux tools. These settings will not survive reboot and will be get overridden by clish or WebUI configuration changes.

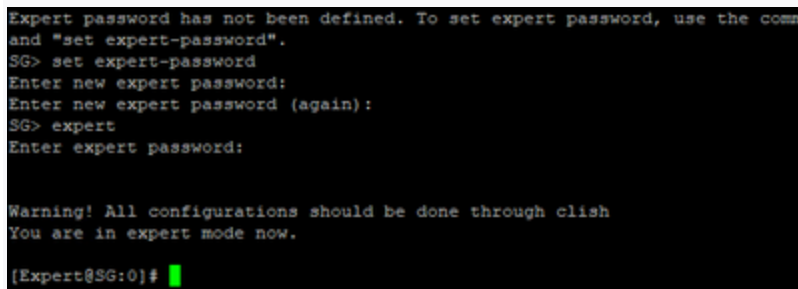
To access bash, you need to enter expert mode, which you do by typing the command **expert**. You will be asked to set the expert password with **set expert-password** command:



```
192.168.1.254 - PuTTY
SG> expert
Expert password has not been defined. To set expert password, use the command "set expert-password".
SG>
```

Set the expert password and type in expert again, then enter the configured password.

CLI prompt sign will change from > to #:



```
Expert password has not been defined. To set expert password, use the command "set expert-password".
SG> set expert-password
Enter new expert password:
Enter new expert password (again):
SG> expert
Enter expert password:

Warning! All configurations should be done through clish
You are in expert mode now.

[Expert@SG:0]#
```

Standard Linux tools and commands are now fully available.