

Opnsense firewall installation:

Opnsense virtual and min requirement:

Virtual

Type	Description
Processor	1 or more virtual cores
RAM	Minimum required RAM is 2 GB
Install method	ISO
Install target	Minimum recommended virtual disk size of 8GB

Minimum

The minimum specification to run all OPNsense standard features that do not need disk writes, means you can run all standard features, except for the ones that require disk writes, e.g. a caching proxy (cache) or intrusion detection and prevention (alert database).

Type	Description
Processor	1Ghz dual core cpu
RAM	2 GB
Install method	Serial console or video (vga)
Install target	SD or CF card with a minimum of 4GB, use nano images for installation.

download link and settings:

-<https://opnsense.org/download/>

Architecture

System architecture.

amd64

Select the image type:

- dvd: ISO installer image with live system capabilities running in VGA mode. On amd64, UEFI boot is supported as well.
- vga: USB installer image with live system capabilities running in VGA mode as GPT boot. On amd64, UEFI boot is supported as well.
- serial: USB installer image with live system capabilities running in serial console (115200) mode as MBR boot.
- nano: a preinstalled serial image for USB sticks, SD or CF cards as MBR boot. These images are 3G in size and automatically adapt to the installed media size after first boot.

dvd

Mirror Location

OPNsense can be downloaded from a large range of mirrors located in different countries, you may want to select the fastest options for your location.

Select a Mirror

Opnsense installation virtualbox:

-select the downloaded iso image

-select free bsd the 64-bit version as there is only one version of opnsense and that is the 64-bit version.

Name and Operating System

Name: Opnsense FW

Folder: C:\Users\flame1\VirtualBox VMs

ISO Image: C:\Users\flame1\Downloads\OPNsense-24.7-dvd-amd64.iso

Edition:

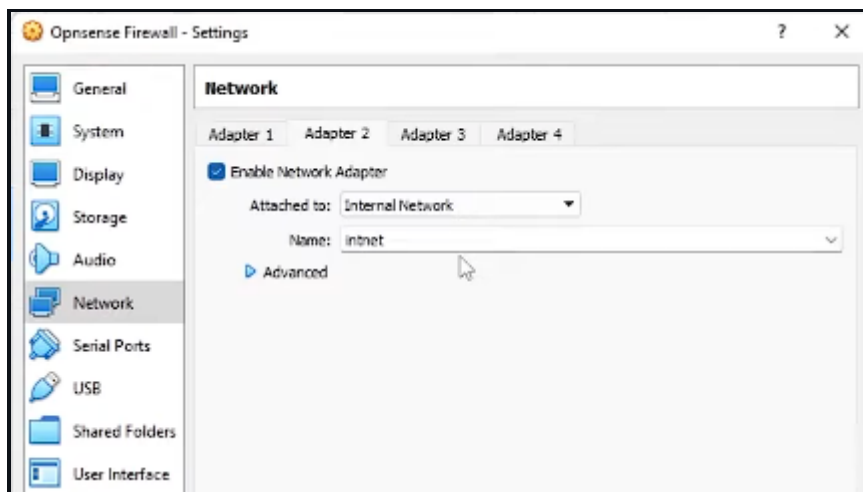
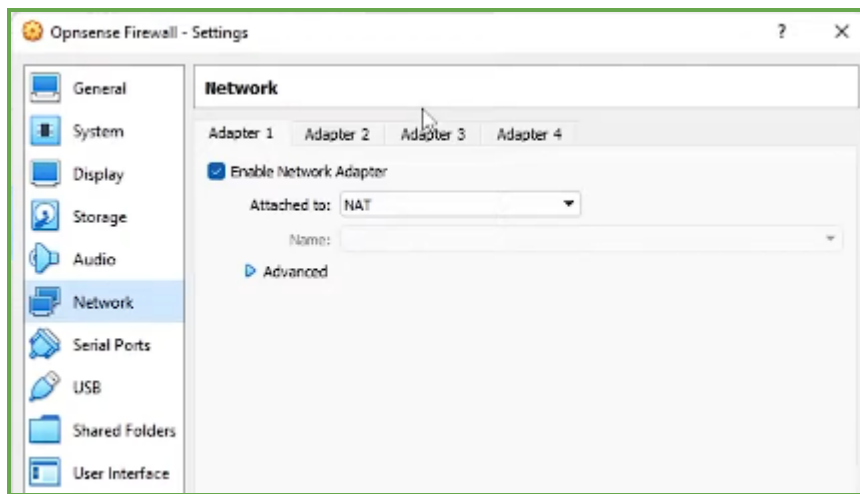
Type: BSD

Subtype: FreeBSD

Version: FreeBSD (64-bit)

Skip Unattended Installation

adapter 1 can share our internet connection on our machines(**NAT**) and **adapter 2** for **internal network**



login for installation:

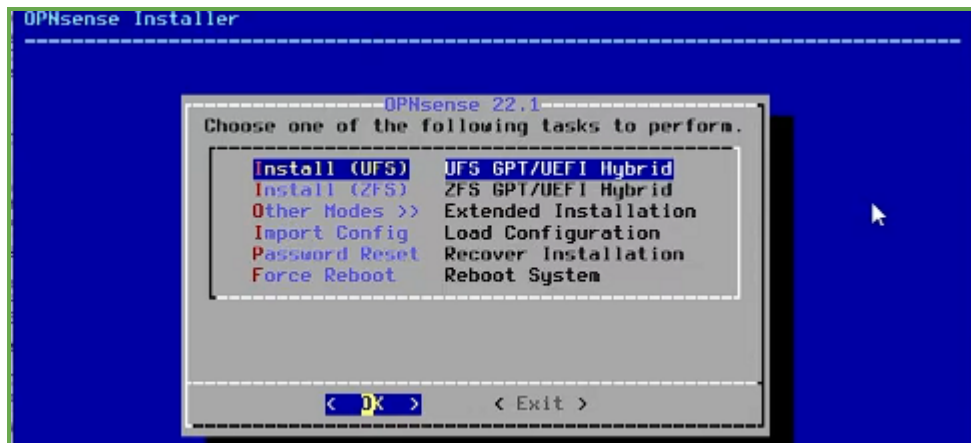
login: installer

password: opnsense

```
Welcome! OPNsense is running in live mode from install media. Please
login as 'root' to continue in live mode, or as 'installer' to start the
installation. Use the default or previously-imported root password for
both accounts. Remote login via SSH is also enabled.

FreeBSD/amd64 (OPNsense.localdomain) (ttyv0)
login: 
```

select UFS partition since it's stable and it will work well for our lab



after installation **reboot** and login with :

login: root

password: opnsense

```
FreeBSD/amd64 (OPNsense.localdomain) (ttyv0)
login: 
```

LAN (en0) -> v4: 192.168.1.1/24
WAN (en1) -> v4/DHCP4: 0.0.0.0/0

HTTPS: SHA256 48 51 7E 06 CC 64 21 02 AB 9D 64 4E 50 9F 40 CA
00 73 A9 3C B2 3D 7C 1E 10 12 40 AB 4C CB B9 54

network configuration:

```
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 10.200.200.254

Subnet masks are entered as bit counts (like CIDR notation).
e.g. 255.255.255.0 = 24
    255.255.0.0   = 16
    255.0.0.0     = 8

Enter the new LAN IPv4 subnet bit count (1 to 32):
> 24
```

now we can **login to the FW** from pc in **the internal network** by **web graphical interface**

<https://10.200.200.254/>

login: root

password: opnsense

OPNsense login page. Username: root, Password: [masked]. Login button.

Lobby: Dashboard

System Information

Name	OPNsense.localdomain
Versions	OPNsense 22.1-amd64 FreeBSD 13.0-STABLE OpenSSL 1.1.1m 14 Dec 2021
Updates	Click to check for updates.
CPU type	Intel(R) Core(TM) i7-10870H CPU @ 2.20GHz (2 cores, 2 threads)
CPU usage	100%
Load average	0.21, 0.29, 0.20
Uptime	00:22:11
Current date/time	Sat Feb 12 22:22:24 UTC 2022
Last config change	Sat Feb 12 22:18:09 UTC 2022
CPU usage	3%
State table size	0% (38/201000)
MBUF usage	3% (4572/125327)
Memory usage	13% (264/2010 MB)
Disk usage	26% / [ufs] (1.9G/7.7G) 1% /boot/efi [msdosfs] (1.7M/256M)

Services

Service	Description
configd	System Configuration Daemon
cron	Cron
login	Users and Groups
ntpd	Network Time Daemon
pf	Packet Filter
routing	System routing
sysctl	System tunables
syslog-ng	Syslog-ng Daemon
unbound	Unbound DNS
webgui	Web GUI

Gateways

Name	RTT	RTTd
WAN_DHCP6	-	-
WAN_DHCP	-	-

Interfaces

Interface	Speed
LAN	1000baseT <full-duplex>
WAN	1000baseT <full-duplex>