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Faculté des Sciences et Technologie - FST

Niveau L3 Sciences Informatiques

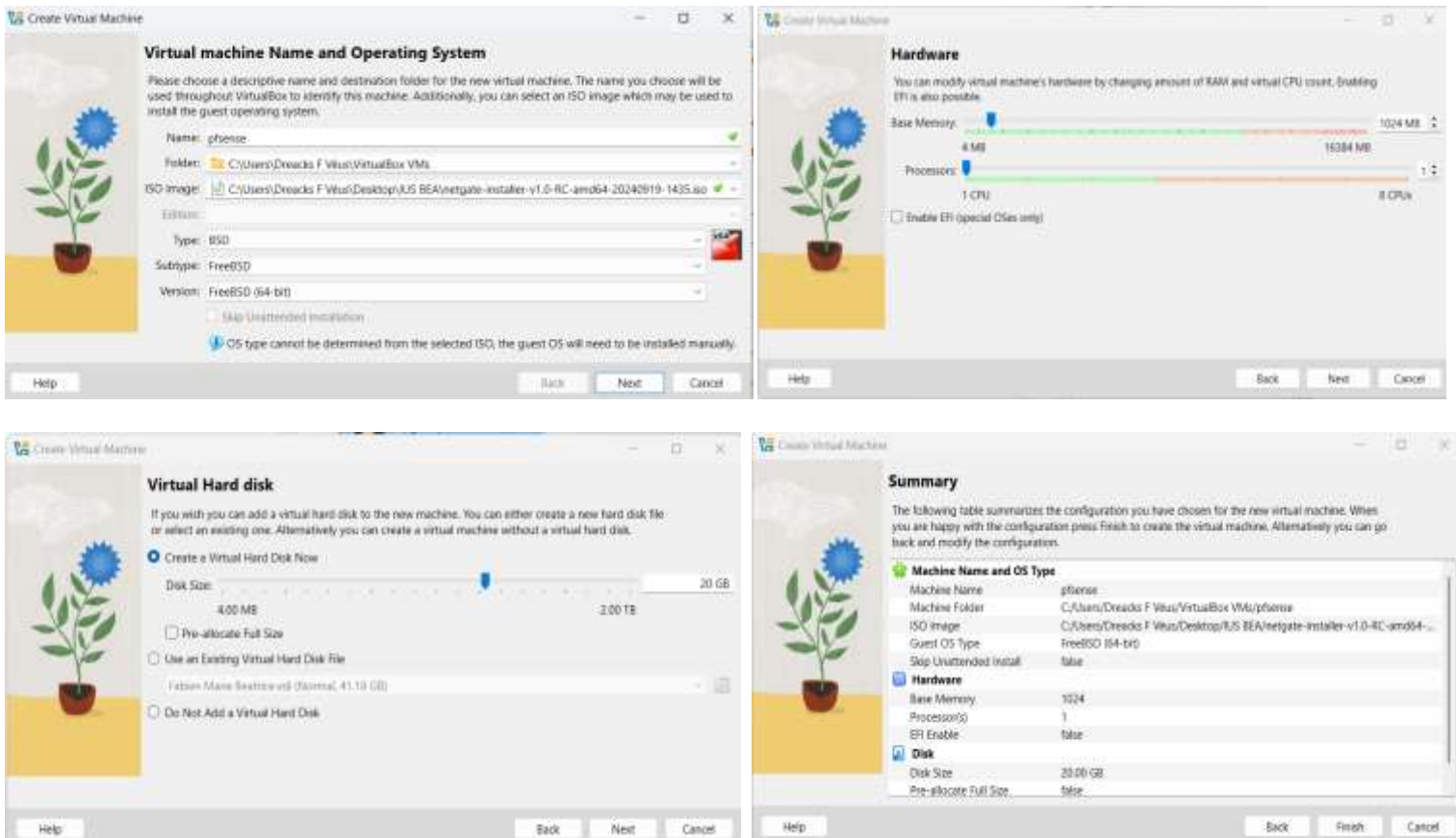
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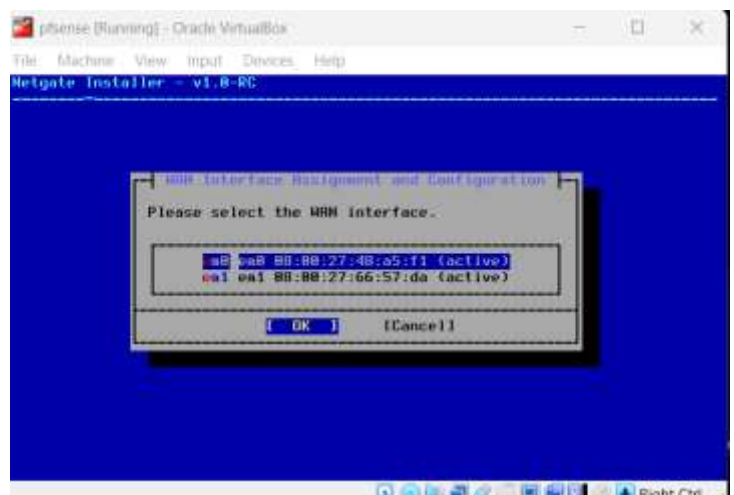
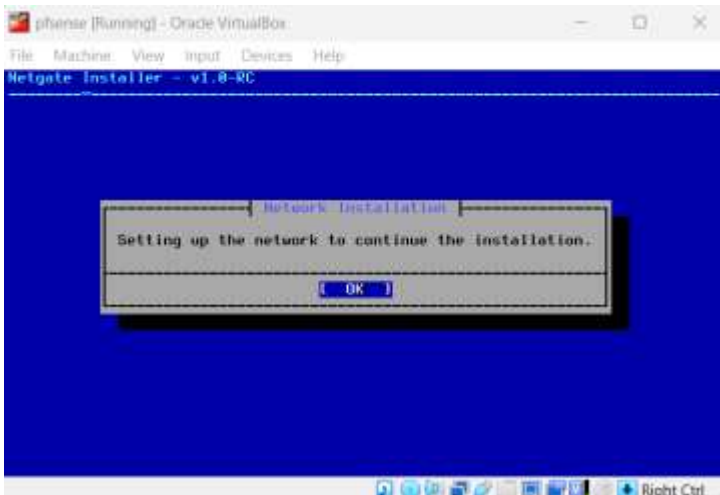
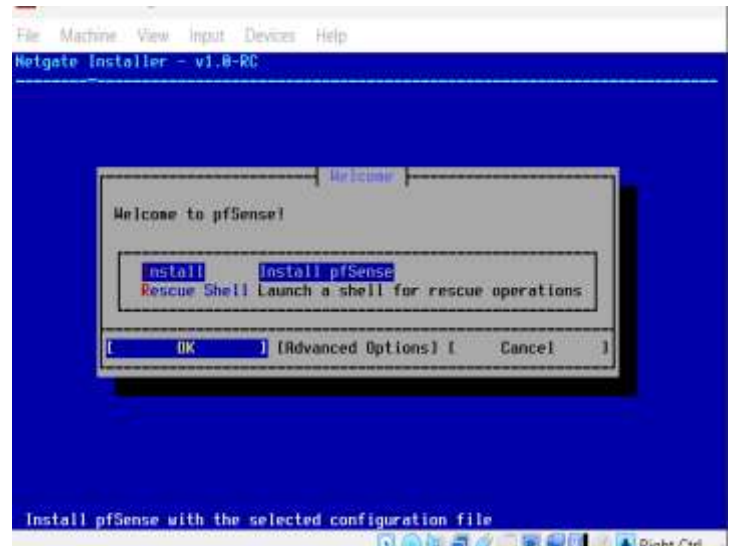
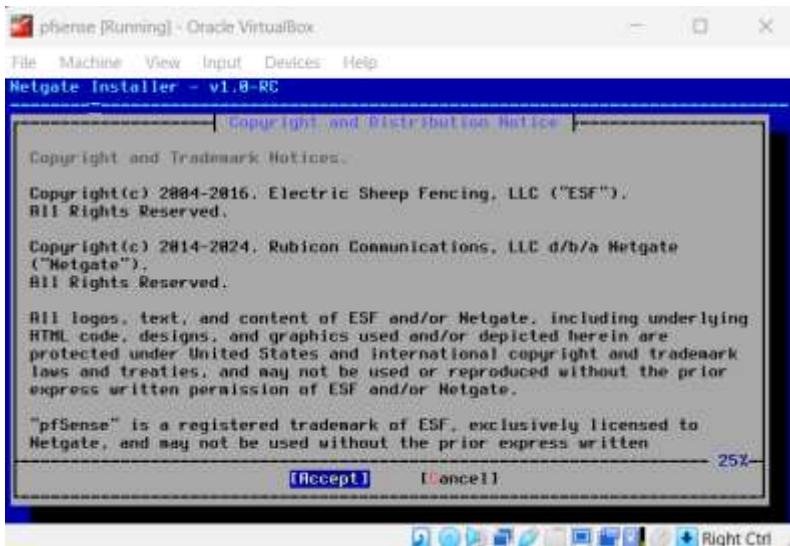
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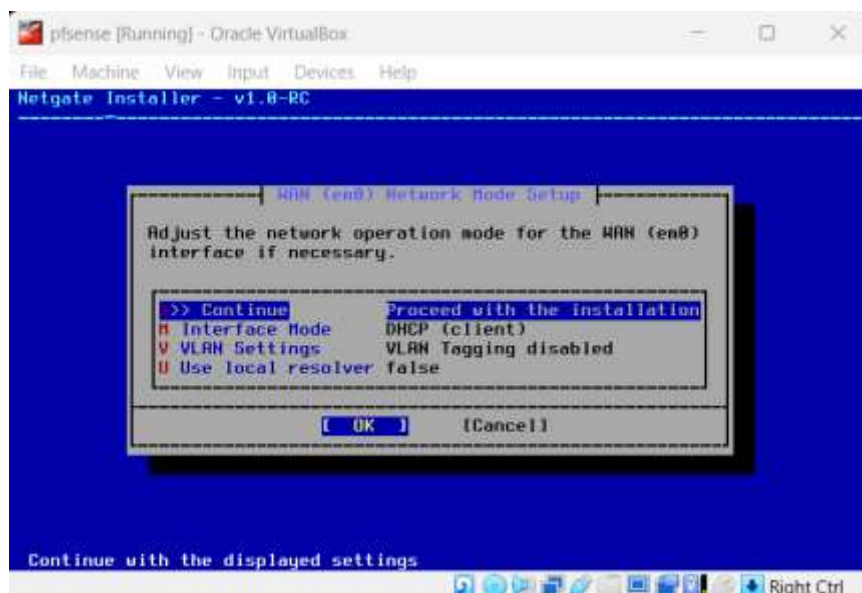
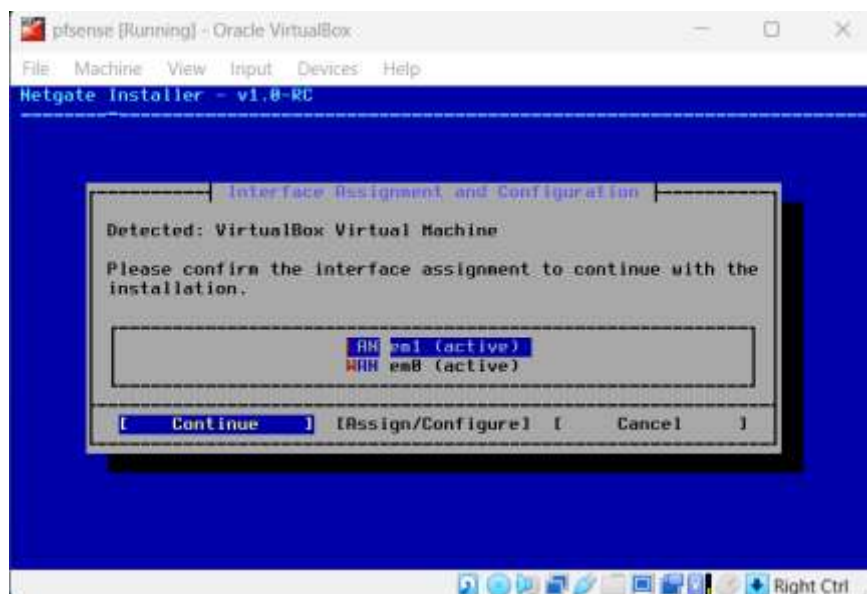
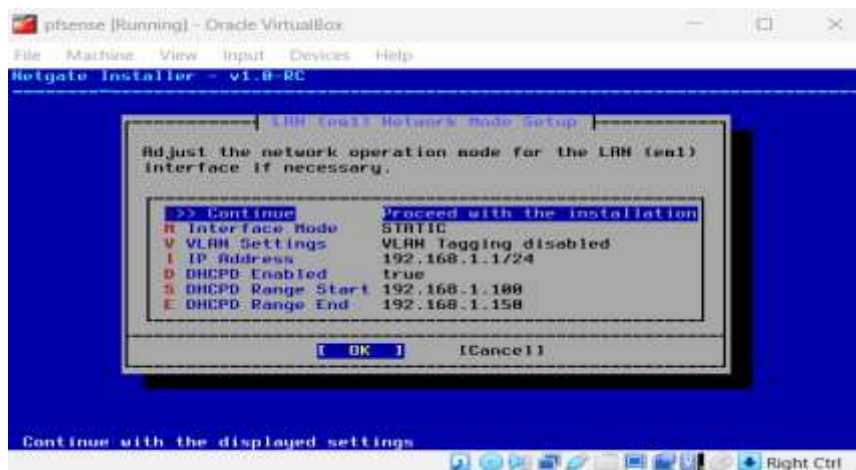
Soumis au chargé de cours Ismael SAINT AMOUR

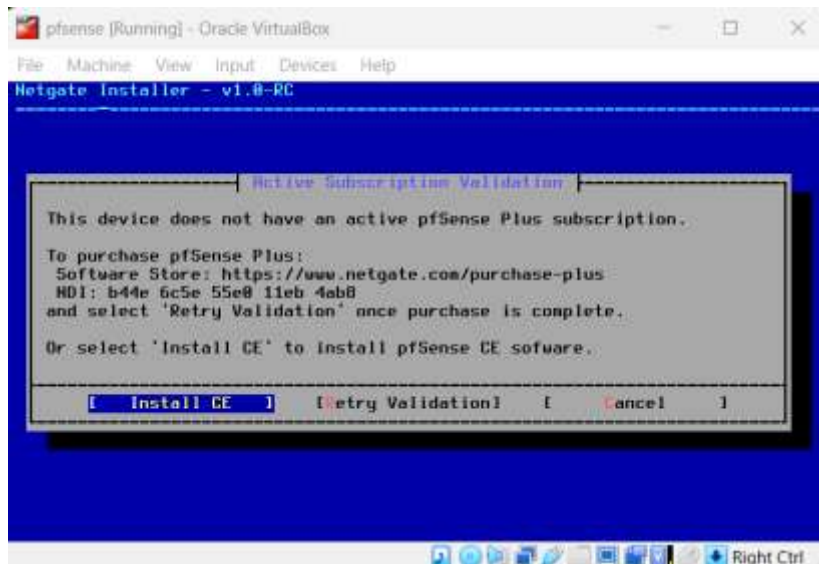
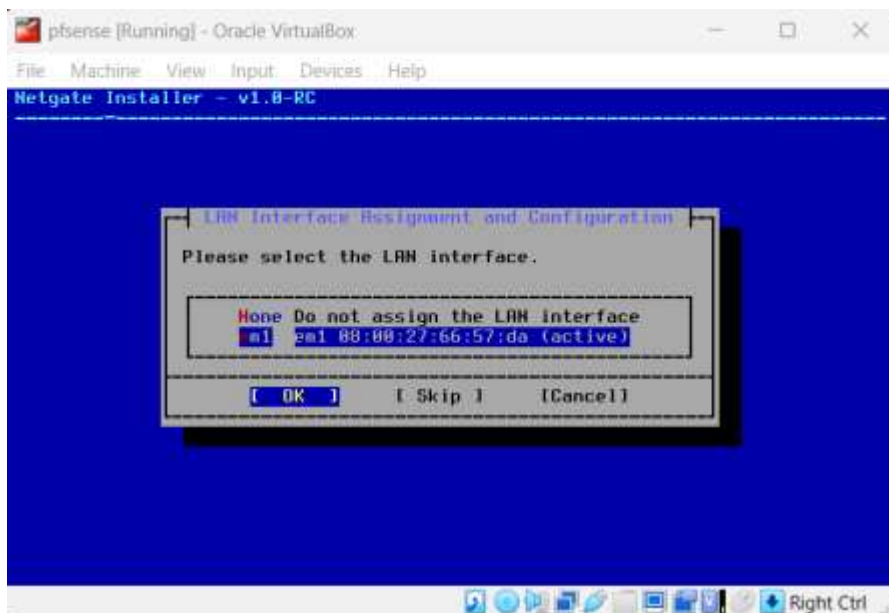
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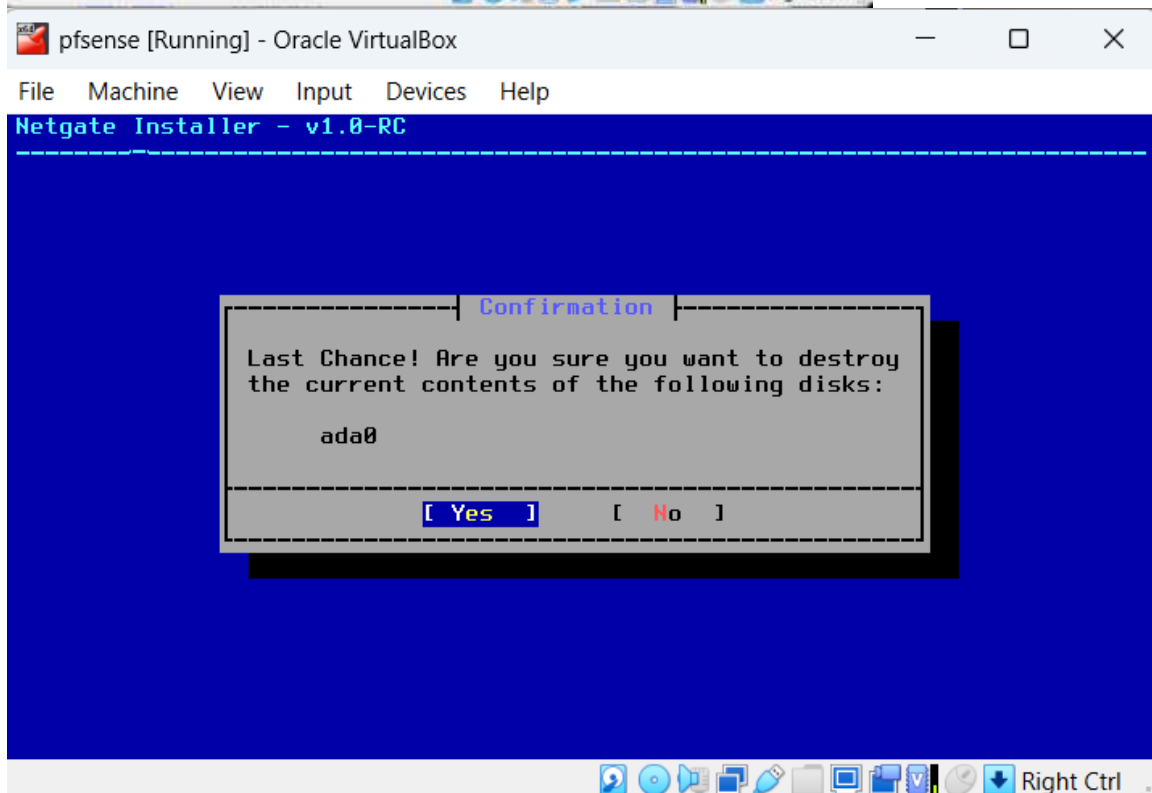
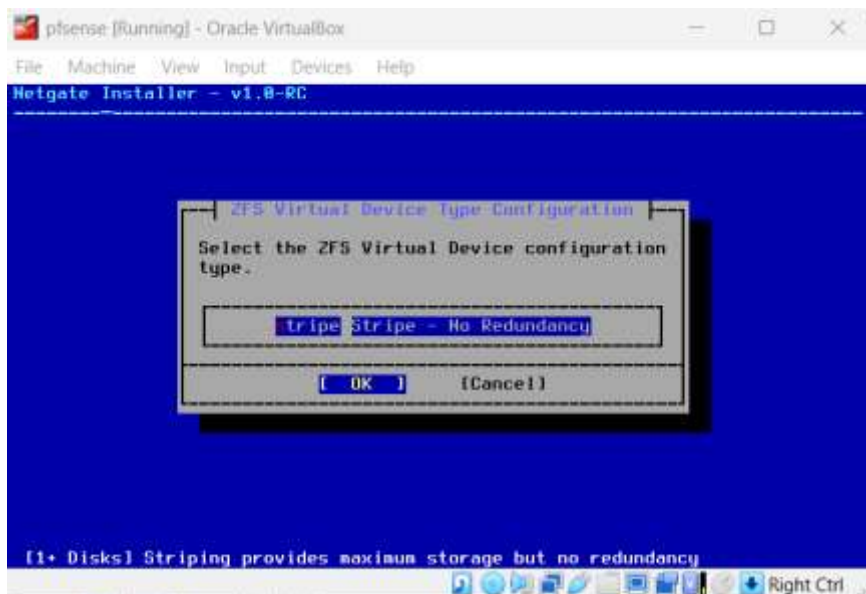
Installer et Configurer PfSense sur un VM

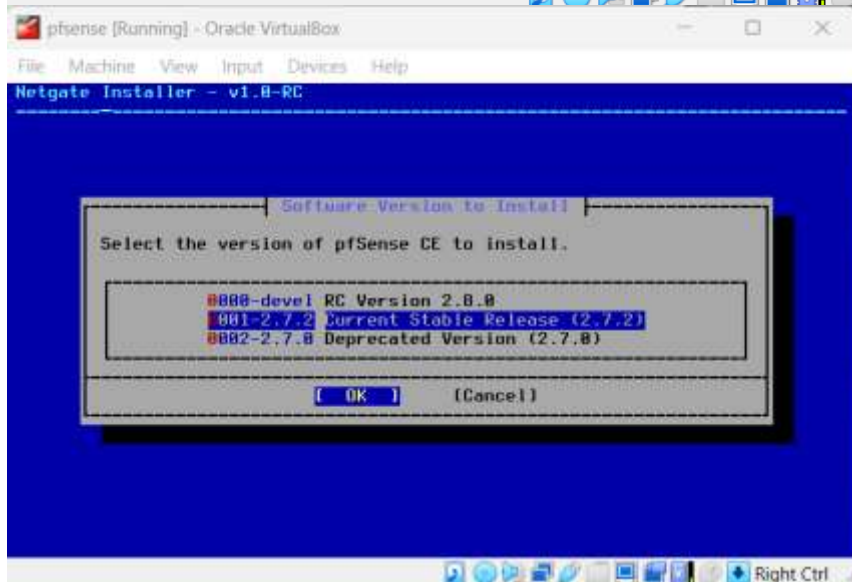
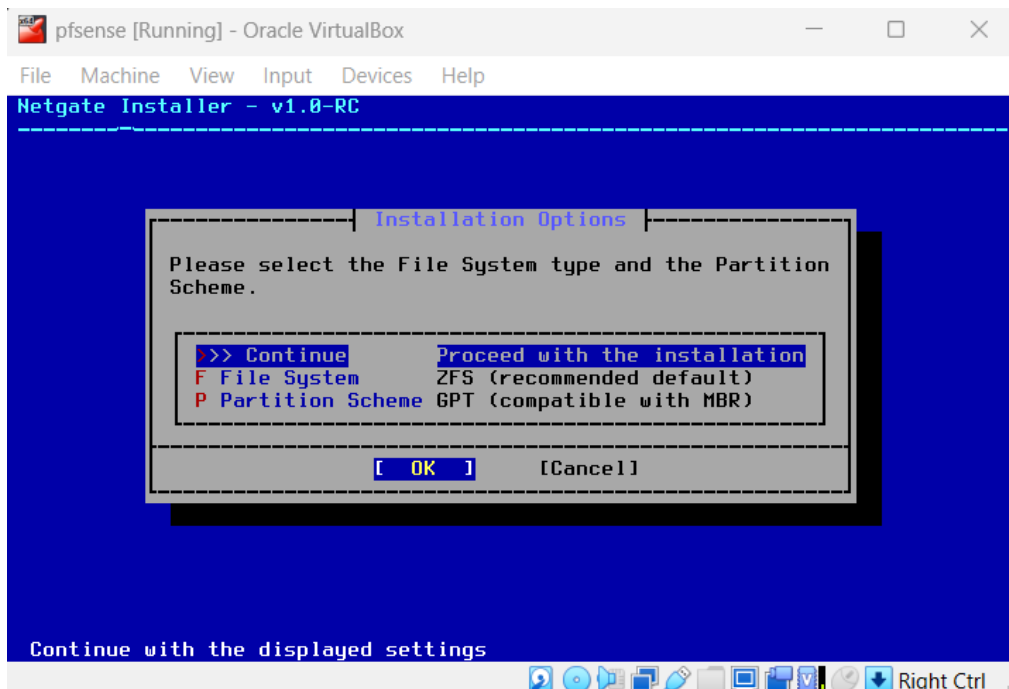













```
pfSense [Running] - Oracle VirtualBox
File Machine View Input Devices Help

*** Welcome to pfSense 2.7.2-RELEASE (amd64) on pfSense ***

WAN (wan)      -> en0      -> v4/DHCP4: 10.0.2.15/24
                v6/DHCP6: fd00::a00:27ff:fe40:a5f1/64
LAN (lan)       -> en1      -> v4: 192.168.1.1/24

0) Logout (SSH only)          9) pfTop
1) Assign Interfaces          10) Filter Logs
2) Set interface(s) IP address 11) Restart webConfigurator
3) Reset webConfigurator password 12) PHP shell + pfSense tools
4) Reset to factory defaults  13) Update from console
5) Reboot system              14) Enable Secure Shell (sshd)
6) Halt system                15) Restore recent configuration
7) Ping host                  16) Restart PHP-FPM
8) Shell

Enter an option: 2

Available interfaces:
1 - WAN (en0 - dhcp, dhcp6)
2 - LAN (en1 - static)

Enter the number of the interface you wish to configure: 
```

```
pfSense [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Starting CRON... done.
pfSense 2.7.2-RELEASE amd64 20240304-1953
Bootup complete

FreeBSD/amd64 (pfSense.home.arpa) (ttyv0)

VirtualBox Virtual Machine - Netgate Device ID: b44e6c5e55e011eb4ab8

*** Welcome to pfSense 2.7.2-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 10.0.2.15/24
                v6/DHCP6: fd00::a00:27ff:fe40:a5f1/64
LAN (lan)       -> em1      -> v4: 192.168.1.1/24

0) Logout (SSH only)          9) pfTop
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5) Reboot system              14) Enable Secure Shell (sshd)
6) Halt system                15) Restore recent configuration
7) Ping host                  16) Restart PHP-FPM
8) Shell

Enter an option: 
```

```
pfSense [Running] - Oracle VirtualBox
File Machine View Input Devices Help

Enter the number of the interface you wish to configure: 2
Configure IPv4 address LAN interface via DHCP? (y/n) n
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 192.168.2.1
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 255.255.255.0 =24
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 192.168.2.1
Subnet masks are entered as bit counts (as in CIDR notation) in pfSense.
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
For a WAN, enter the new LAN IPv4 upstream gateway address.
For a LAN, press <ENTER> for none:
>
```

```
fabien-marie-beatrice@Ben: ~
fabien-marie-beatrice@Ben:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.2.2 netmask 255.255.255.0 broadcast 192.168.2.255
    inet6 fe80::a00:27ff:fe65:b63c prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:65:b6:3c txqueuelen 1000 (Ethernet)
    RX packets 2650 bytes 159848 (159.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 2730 bytes 219856 (219.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Boucle locale)
    RX packets 5410 bytes 411812 (411.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5410 bytes 411812 (411.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

fabien-marie-beatrice@Ben:~$
```


The IPv4 LAN address has been set to 192.168.2.1/24

The IPv6 LAN address has been set to dhcp6

Press <ENTER> to continue.

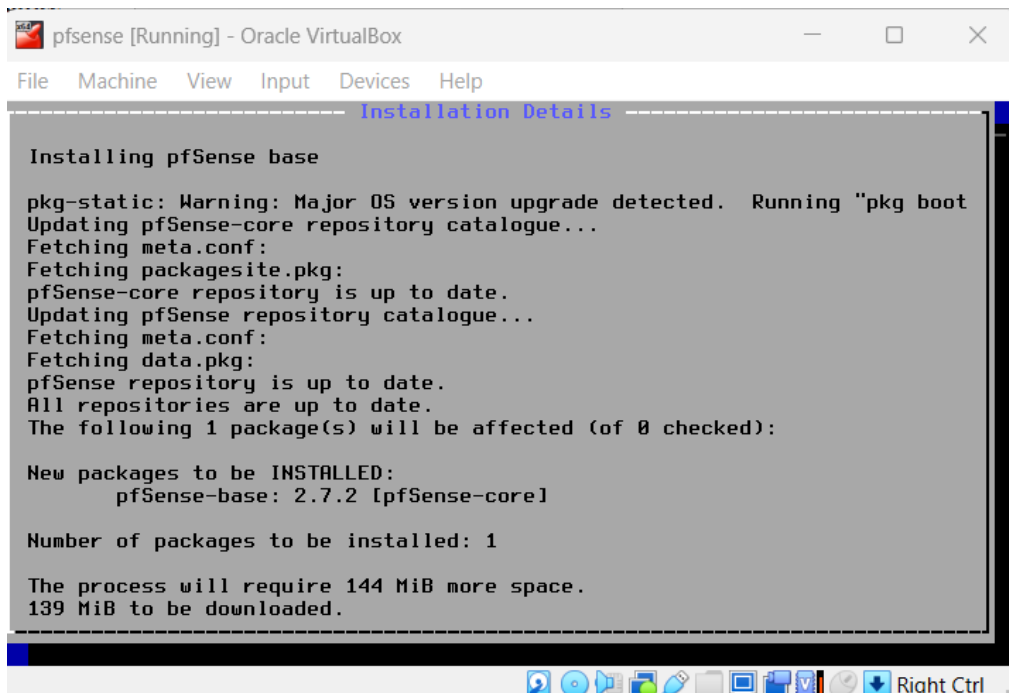
VirtualBox Virtual Machine - Netgate Device ID: 504553a9479ddc5cd5d0

*** Welcome to pfSense 2.7.2-RELEASE (amd64) on pfSense ***

WAN (wan) -> em0 -> v4/DHCP4: 10.0.2.15/24
 v6/DHCP6: fd00::a00:27ff:fe48:a5f1/64
LAN (lan) -> em1 -> v4: 192.168.2.1/24

- | | |
|-----------------------------------|----------------------------------|
| 0) Logout (SSH only) | 9) pfTop |
| 1) Assign Interfaces | 10) Filter Logs |
| 2) Set interface(s) IP address | 11) Restart webConfigurator |
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| 6) Halt system | 15) Restore recent configuration |
| 7) Ping host | 16) Restart PHP-FPM |
| 8) Shell | |

Enter an option:



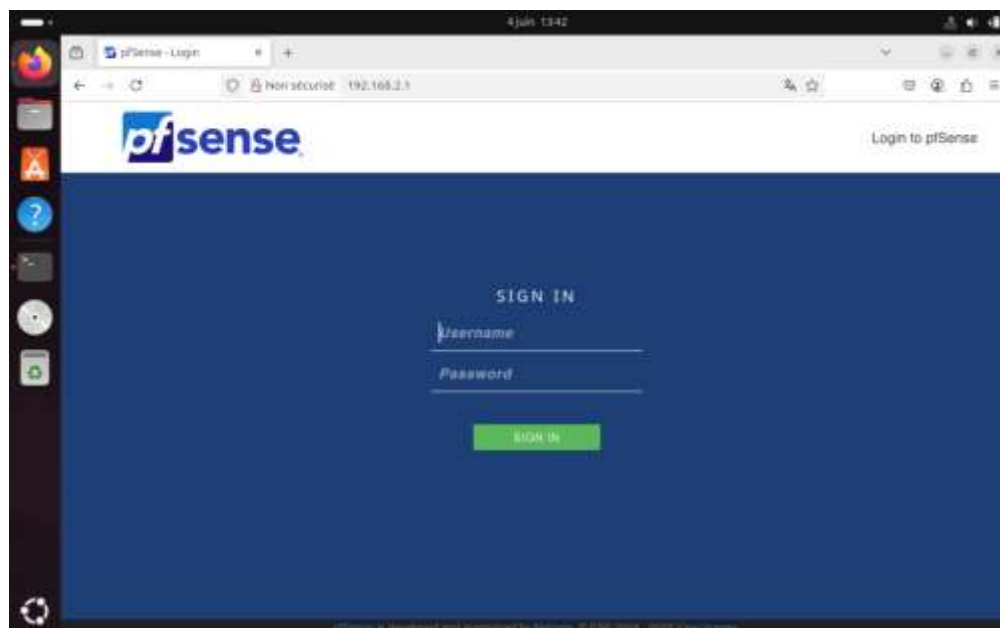
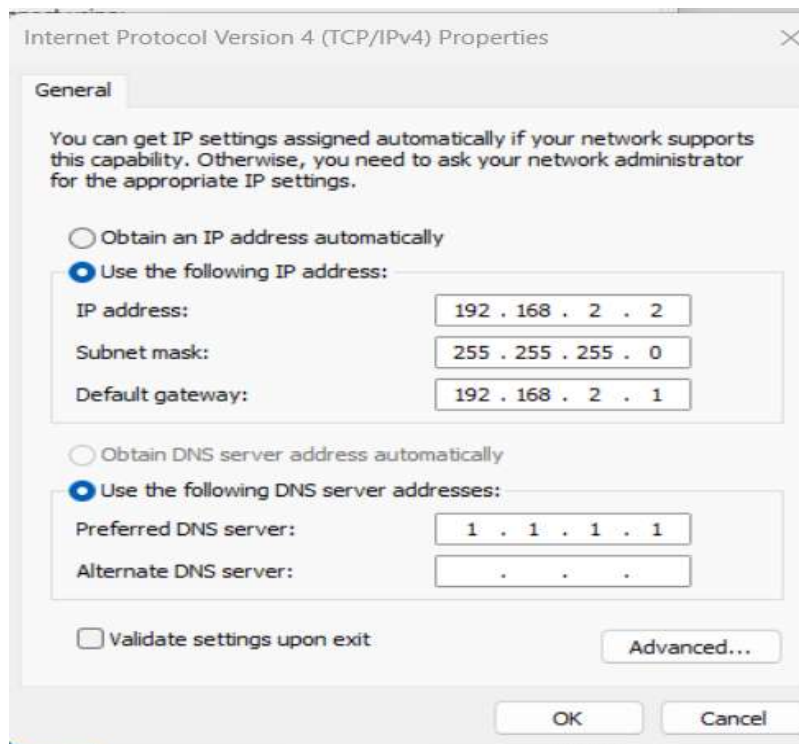
```
pfsense [Running] - Oracle VirtualBox
File Machine View Input Devices Help
----- Installation Details -----
Installing pfSense base

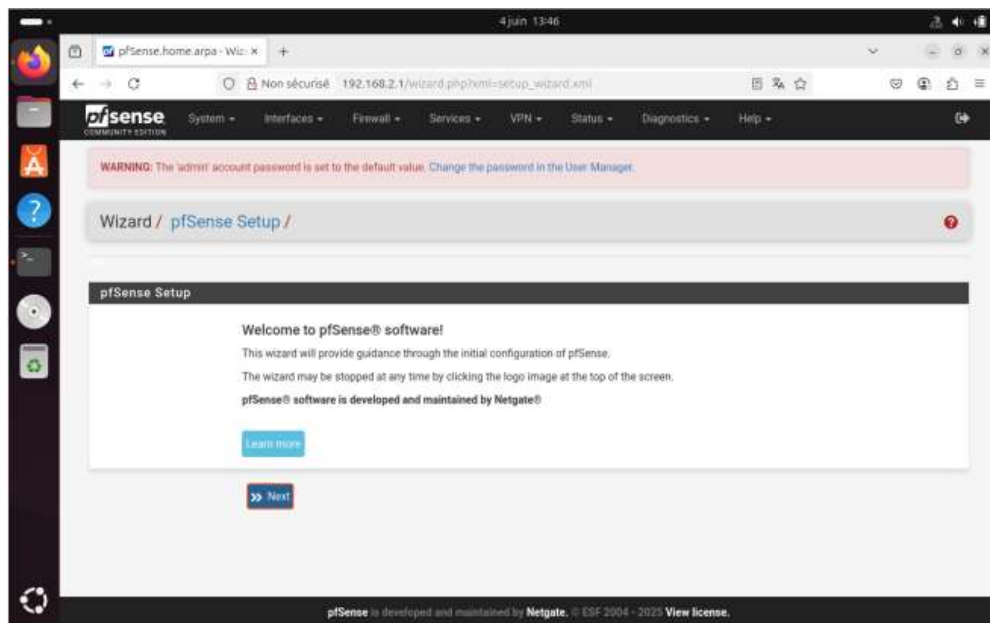
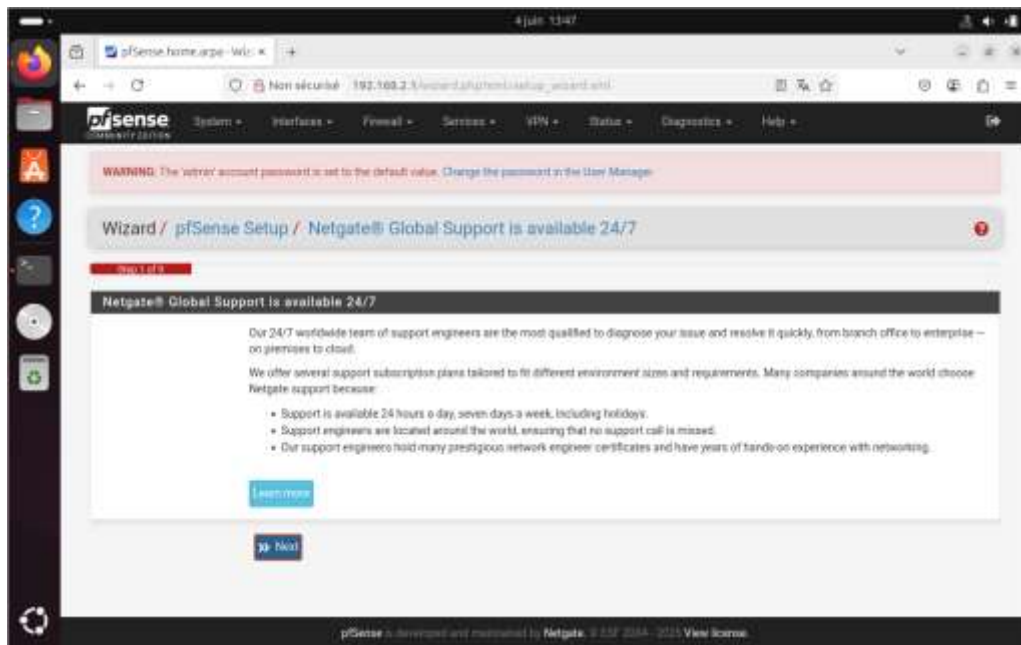
pkg-static: Warning: Major OS version upgrade detected. Running "pkg boot
Updating pfSense-core repository catalogue...
Fetching meta.conf:
Fetching packagesite.pkg:
pfSense-core repository is up to date.
Updating pfSense repository catalogue...
Fetching meta.conf:
Fetching data.pkg:
pfSense repository is up to date.
All repositories are up to date.
The following 1 package(s) will be affected (of 0 checked):

New packages to be INSTALLED:
  pfSense-base: 2.7.2 [pfSense-core]

Number of packages to be installed: 1

The process will require 144 MiB more space.
139 MiB to be downloaded.
```





4 Jun 13:50

pSense home arpa - WU

Non-secure 192.168.2.1/secure/pfsense/wizard/advanced_dns

Step 2 of 8

General Information

On this screen the general pSense parameters will be set.

Hostname
Name of the firewall host, without domain part.
Examples: pfSense, firewall, arglew

Domain
Domain name for the firewall.
Examples: home.arpa, example.com

Do not end the domain name with 'local' as the final part (Top Level Domain, TLD). The local TLD is widely used by mDNS (e.g. Avahi, Bonjour, Rendezvous, AirPrint, AirPlay) and some Windows systems and networked devices. These will not network connect if the router uses 'local' as its TLD. Alternatives such as 'home.arpa', 'local.lan' or 'mylocal' are safe.

The default behavior of the DNS Resolver will ignore manually configured DNS servers for client queries and query root DNS servers directly. To use the manually configured DNS servers below for client queries, visit Services > DNS Resolver and enable DNS Query Forwarding after completing the wizard.

Primary DNS Server

Secondary DNS Server

Override DNS ☒ Allow DNS servers to be overridden by DHCP/PPPoE/SLAAC

[Next](#)

4 Jun 14:03

pSense home arpa - WU

Non-secure 192.168.2.1/secure/pfsense/wizard/advanced_dns

If no qualifying outgoing packets are transmitted for the specified number of seconds, the connection is brought down. An idle timeout of zero disables this feature.

PPtP configuration

PPtP Username

PPtP Password

Show PPtP password ☐ Reveal password characters

PPtP Local IP Address

ppplocalsubnet

PPtP Remote IP Address

PPtP Dial on demand ☐ Enable Dial-On-Demand mode
This option causes the interface to operate in dial-on-demand mode, allowing a virtual full time connection. The interface is configured, but the actual connection of the link is delayed until qualifying outgoing traffic is detected.

PPtP idle timeout
If no qualifying outgoing packets are transmitted for the specified number of seconds, the connection is brought down. An idle timeout of zero disables this feature.

RFC1918 Networks

Block RFC1918 Private Networks ☒ Block private networks from entering via WAN
When set, this option blocks traffic from IP addresses that are reserved for private networks as per RFC 1918 (10/8, 172.16/12, 192.168/16) as well as loopback addresses (127/8). This option should generally be left turned on, unless the WAN network lies in such a private address space, too.

4 jun 14:17

pfSense.localdomain1 - 5 x

Non sécurisé 192.168.2.1

Thank you!

Netgate, as well as many community members, work hard to make pfSense CE software an excellent secure networking solution. As well, Netgate strives to deliver even greater value through our product, pfSense Plus software. Would you take a moment to answer this brief (and anonymous) survey to help us guide those efforts?

[User Survey](#)

Close

Status / Dashboard

System Information

Name	
User	
System	Netgate Device ID: w4d0517887c52a3164e3
BIOS	Vendor: innatek GmbH Version: VirtualBox Release Date: Fri Dec 1 2006
Version	2.7.2-RELEASE (amd64) Built on Mon Mar 4 14:53:00 EST 2024 FreeBSD 14.0-CURRENT <small>The system is on the latest version. Version information updated at Wed Jun 4 13:22:02 EDT 2025</small>
CPU Type	Intel(R) Core(TM) i7-6565U CPU @ 1.80GHz AES-NI CPU Crypto: Yes (inactive) QAT Crypto: No
Hardware crypto	Inactive
Kernel PTI	Enabled
MD5 Mitigation	Inactive

NETGATE AND pfsense COMMUNITY SUPPORT RESOURCES

If you purchased your pfSense gateway firewall appliance from Netgate and elected **Community Support** at the point of sale or installed pfSense on your own hardware, you have access to various community support resources. This includes the **NETGATE RESOURCE LIBRARY**.

You also may upgrade to a Netgate Global Technical Assistance Center (TAC) Support subscription. We're always on Our team is staffed 24x7x365 and committed to delivering enterprise-class, worldwide support at a price point that is more than competitive when compared to others in our space.

- Upgrade Your Support
- Netgate Global Support FAQ
- Netgate Professional Services
- Community Support Resources
- Official pfSense Training by Netgate
- Visit Netgate.com

If you decide to purchase a Netgate Global TAC Support subscription, you **MUST** have your Netgate Device ID (NDI) from your firewall in order to

4 jun 14:11

pfSense.localdomain1 - 5 x

Non sécurisé 192.168.2.1

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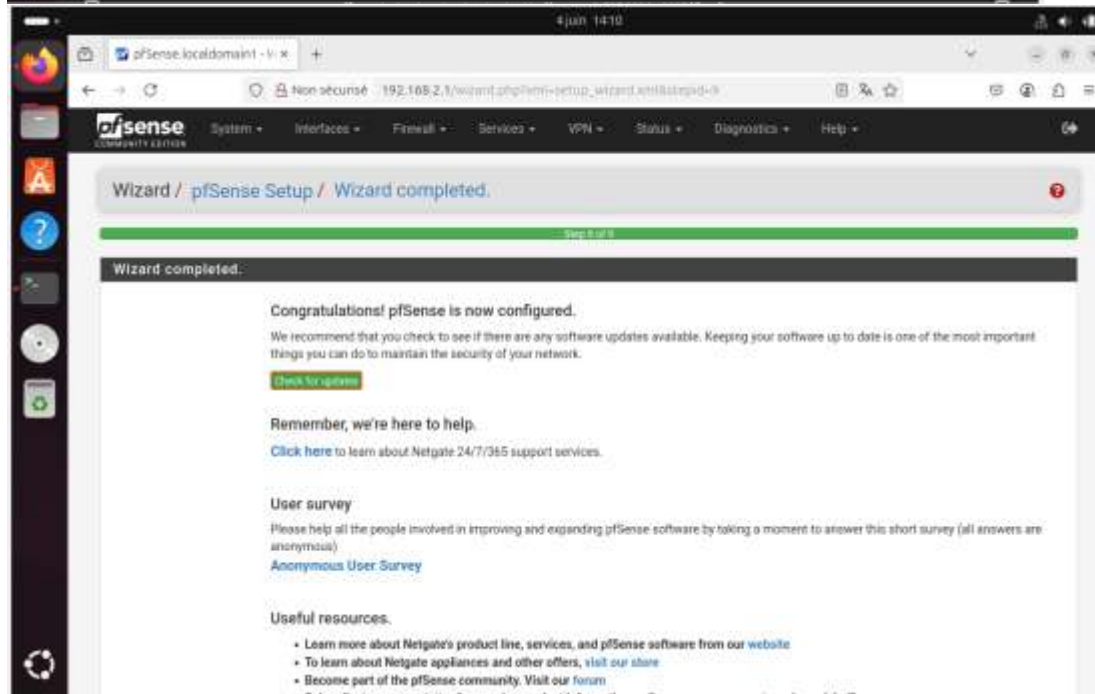
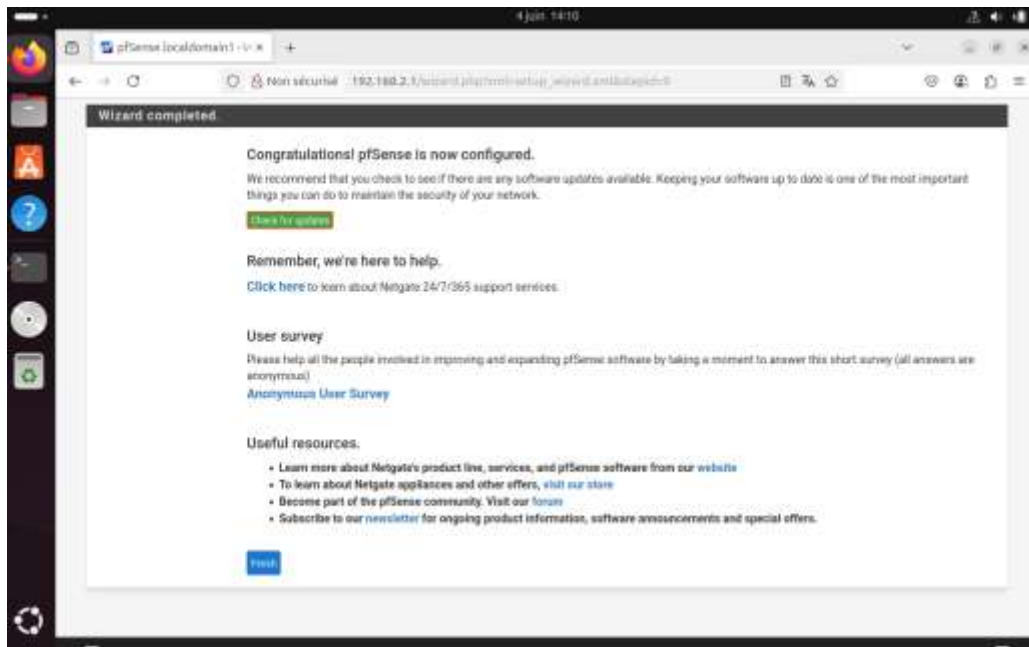
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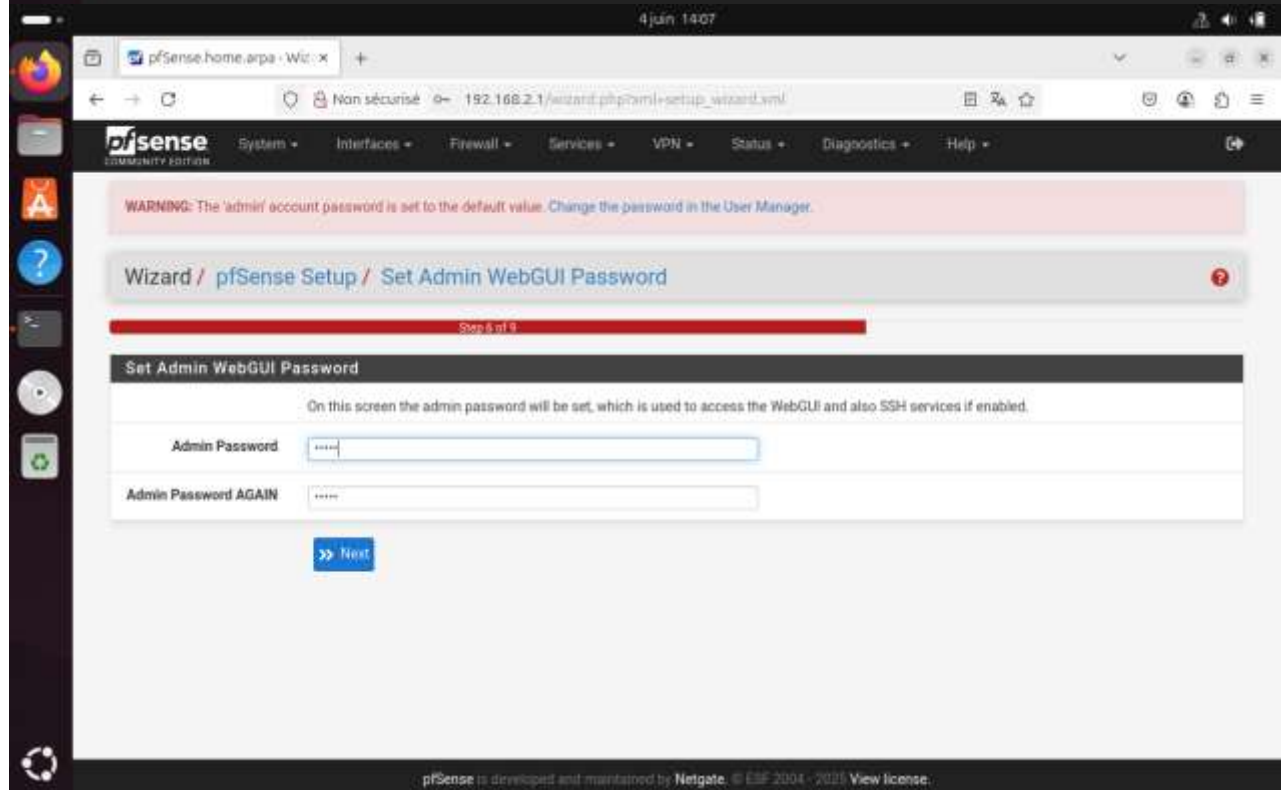
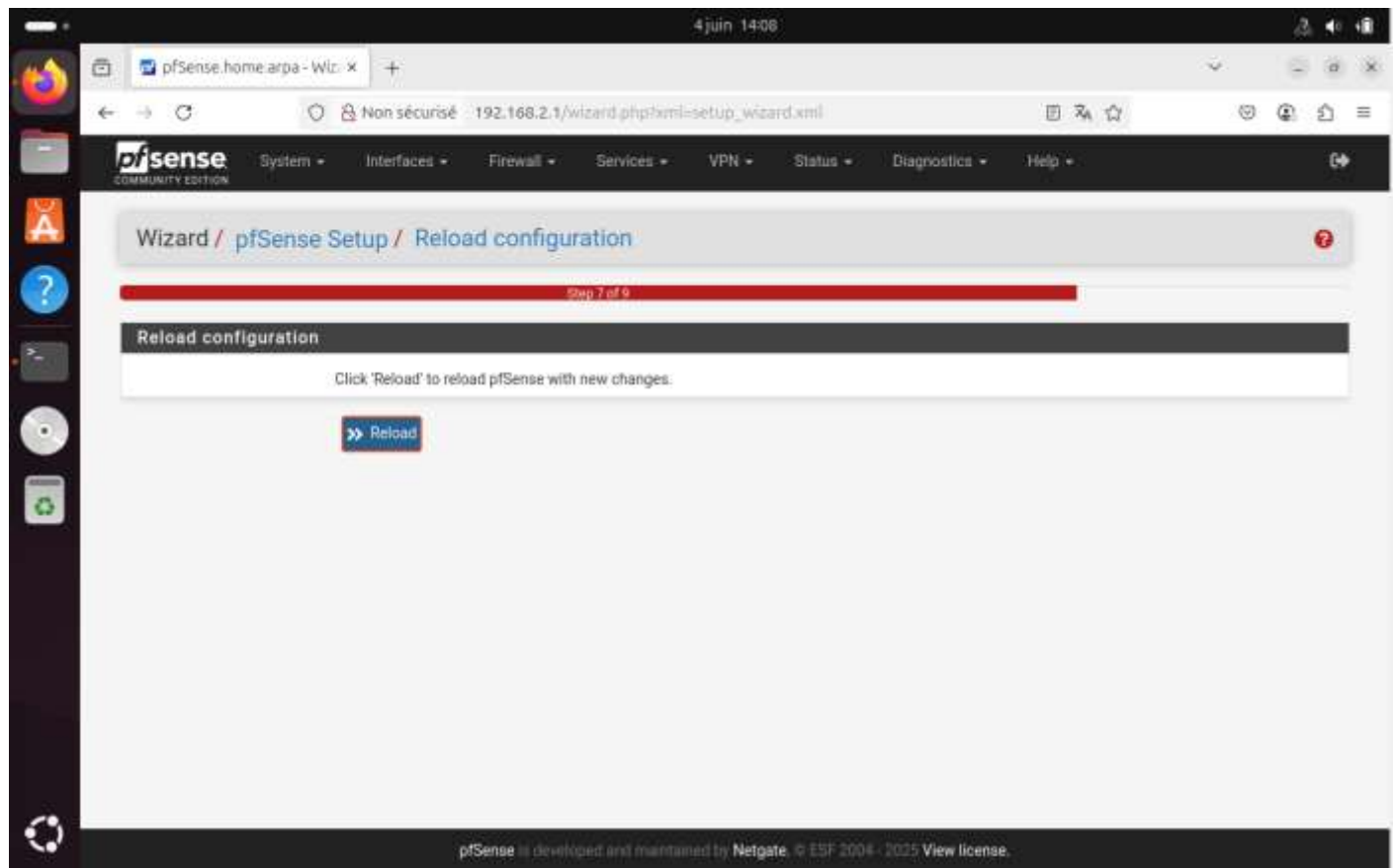
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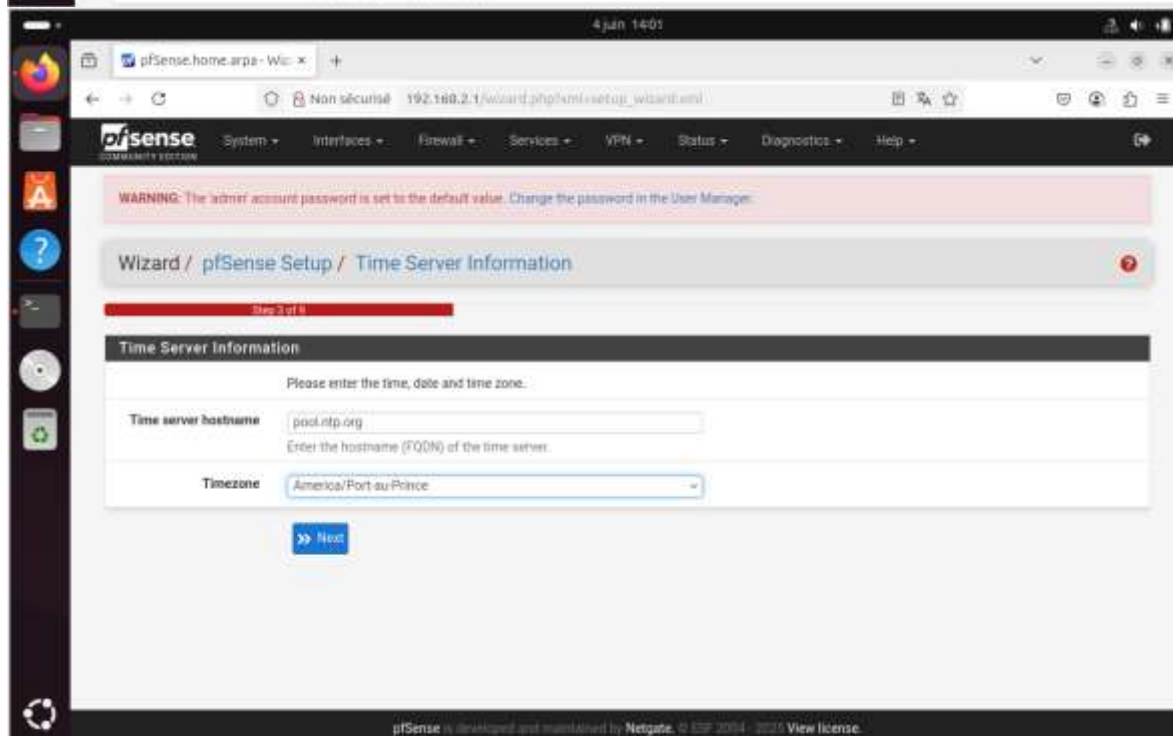
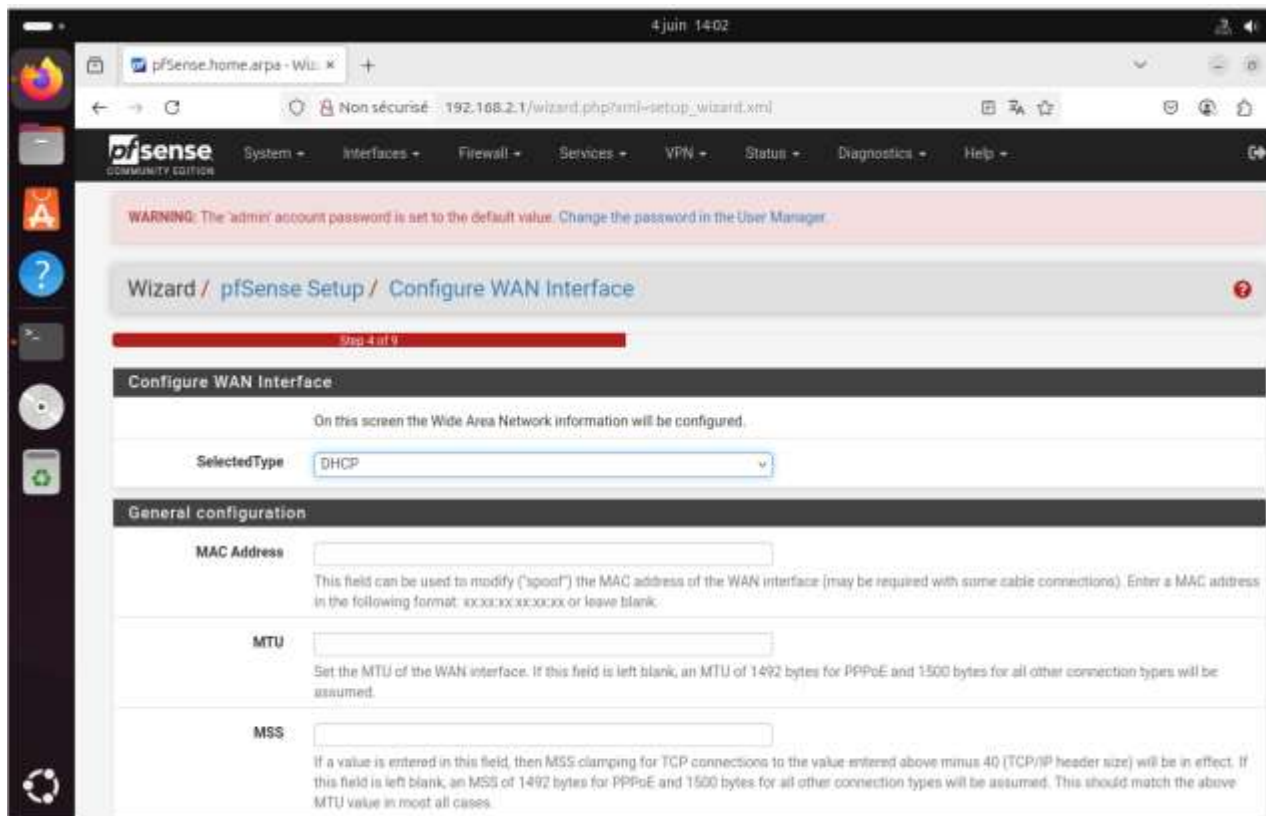
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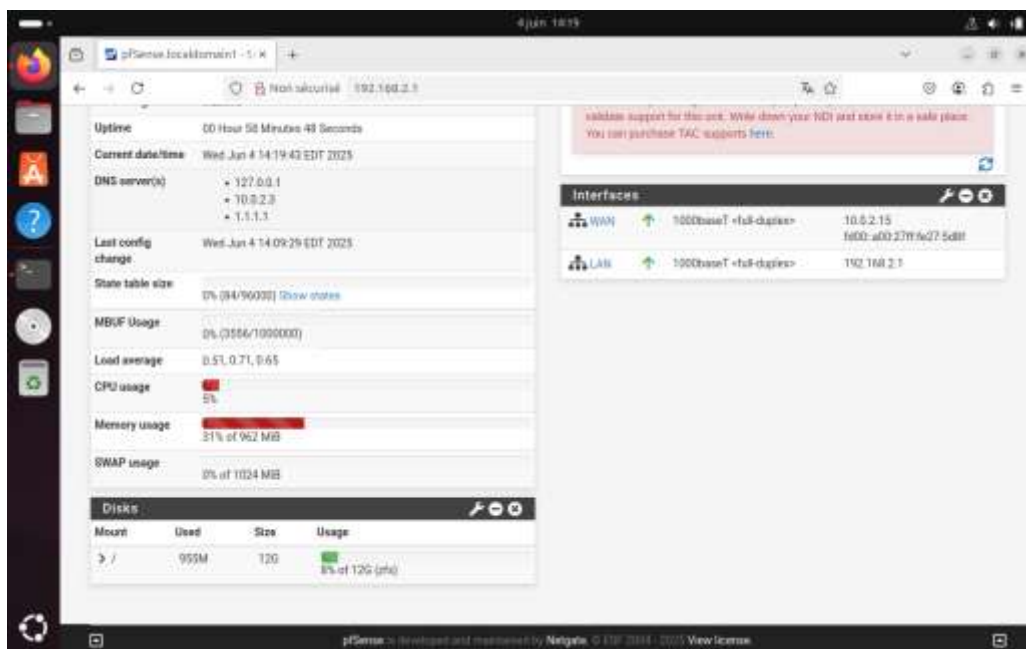
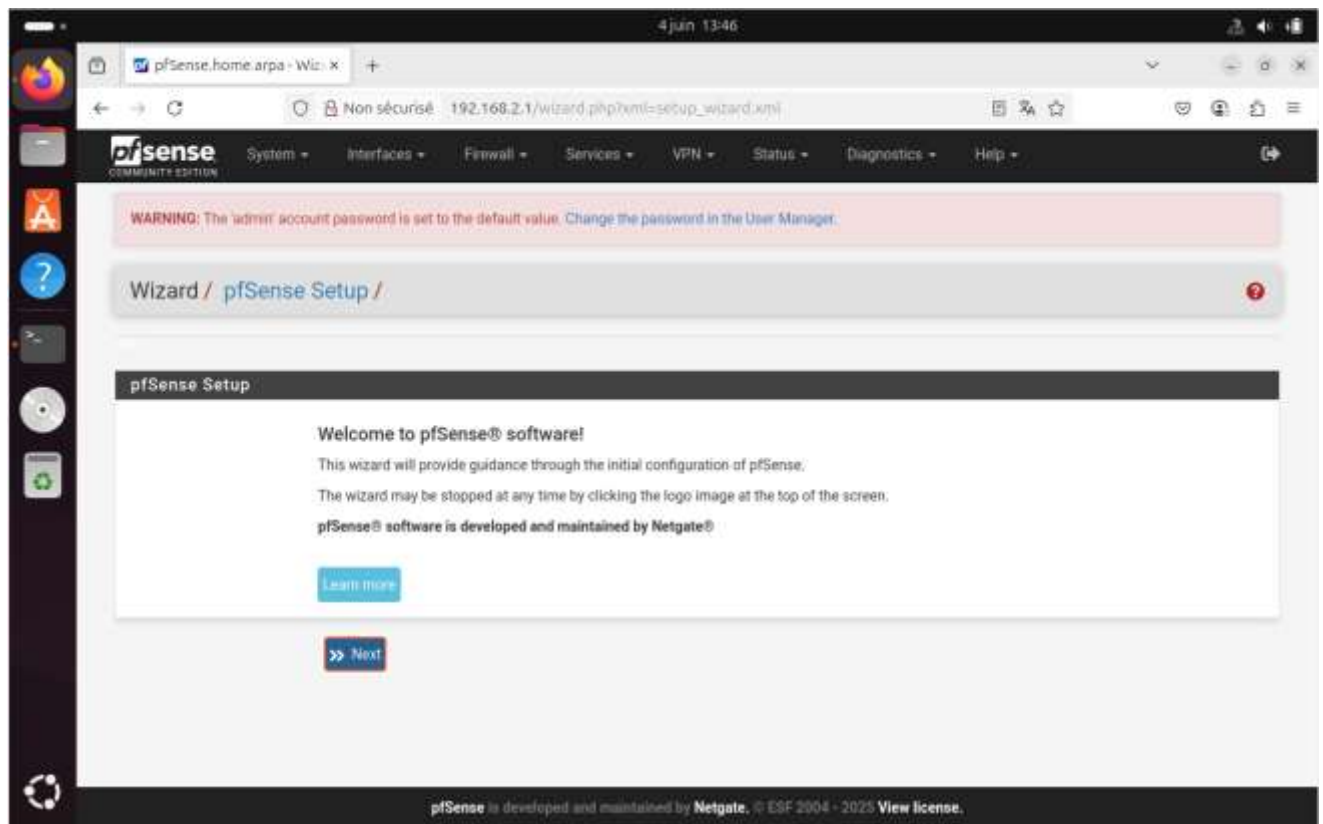
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Conclusion

Ce TD me montre comment installer et configurer Pfsense sur une machine virtuelle.