Tutoriel :

- **Installation de pfSense sur Proxmox**

Table des matières

Introduction :

Objectifs :

Ce document fournit des instructions détaillées pour installer pfSense sur une machine virtuelle (VM) dans un environnement Proxmox.

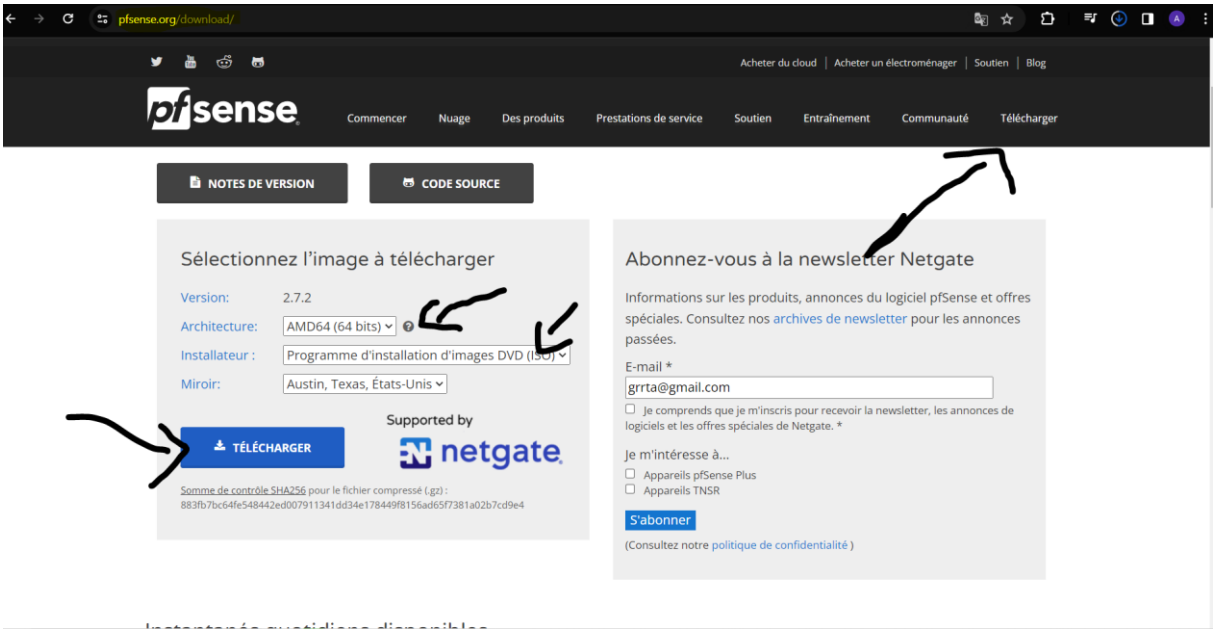
Prérequis :

- Serveur avec Proxmox VE installé.
- Connexion Internet.
- Connaissances de base en réseautage.

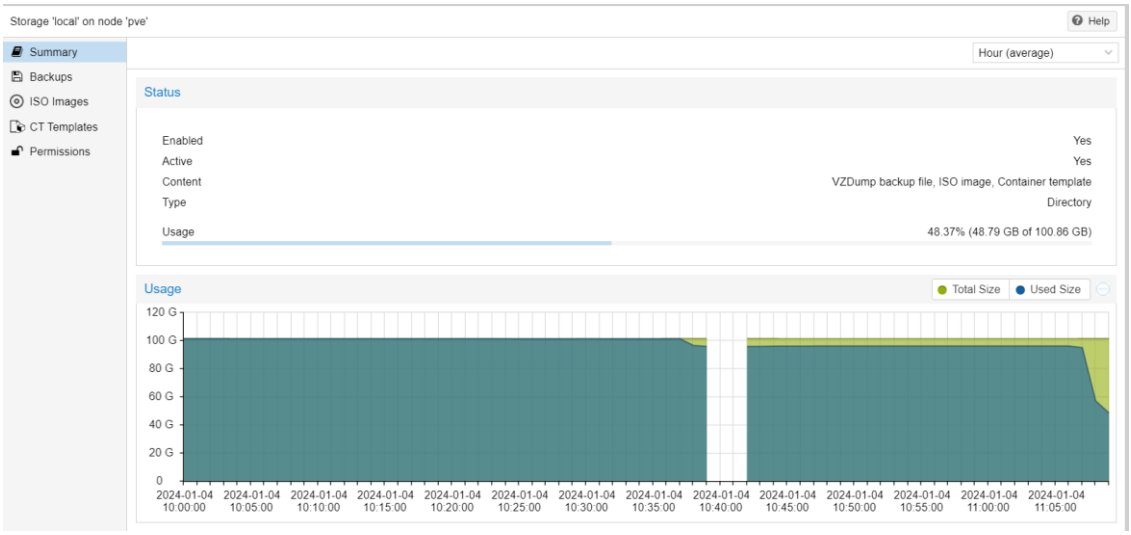
1- Téléchargement et Préparation :

Télécharger pfSense :

- Accédez à [pfSense Download](https://www.pfsense.org/download/).
- Sélectionnez l'image ISO adaptée à votre architecture :



- Vérifiez que vous avez suffisamment de ressources (CPU, RAM, espace disque) :

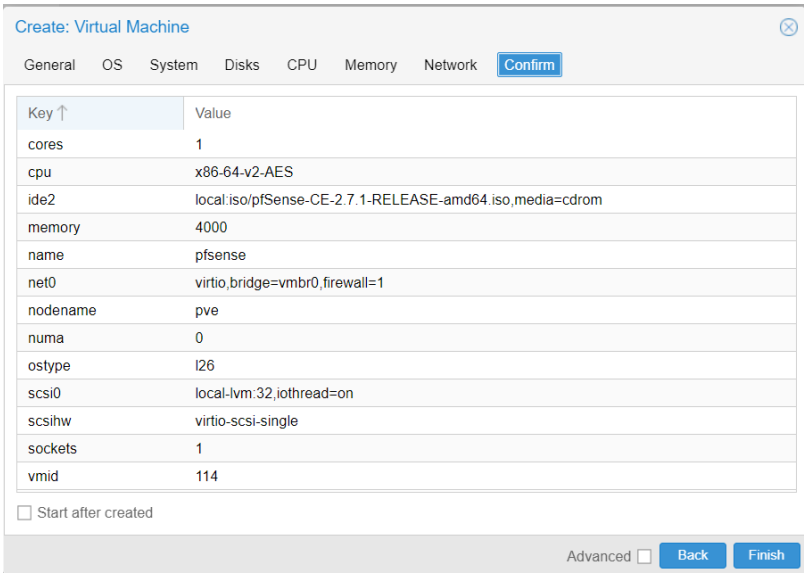


(On a donc plus de 50 GB de libre alors c'est tout bon)

2 - Création de la VM pfSense :

Étape par Étape :

- Dans Proxmox, sélectionnez "Créer une VM" :

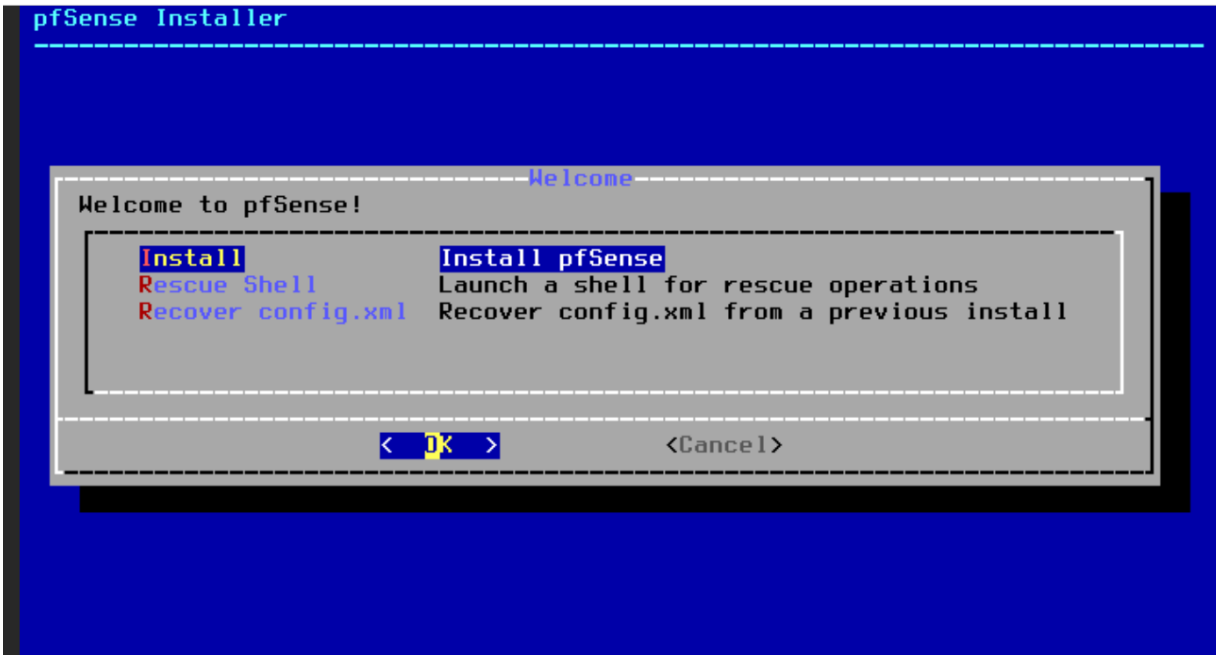


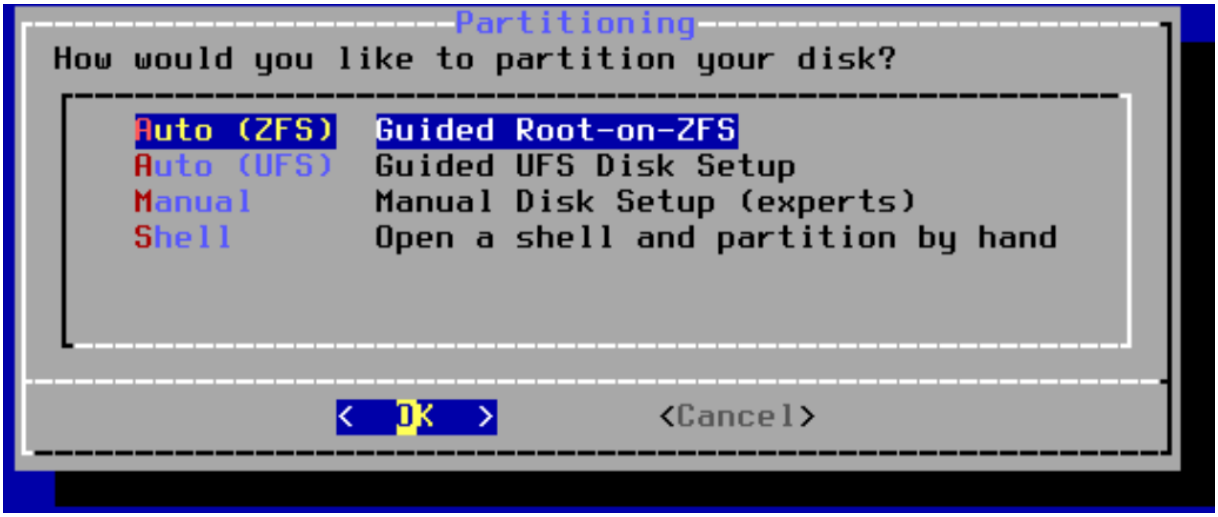
(Configurer selon vos besoins et confirmez la création.)

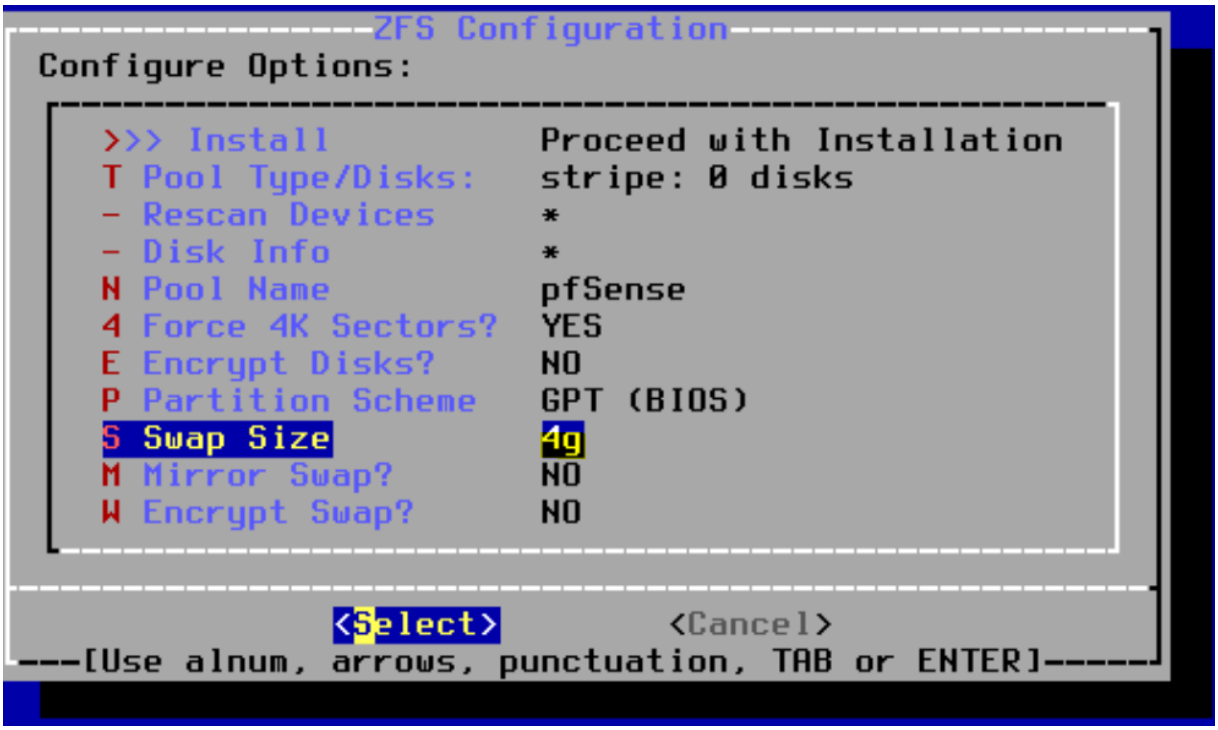
3 - Installation de pfSense :

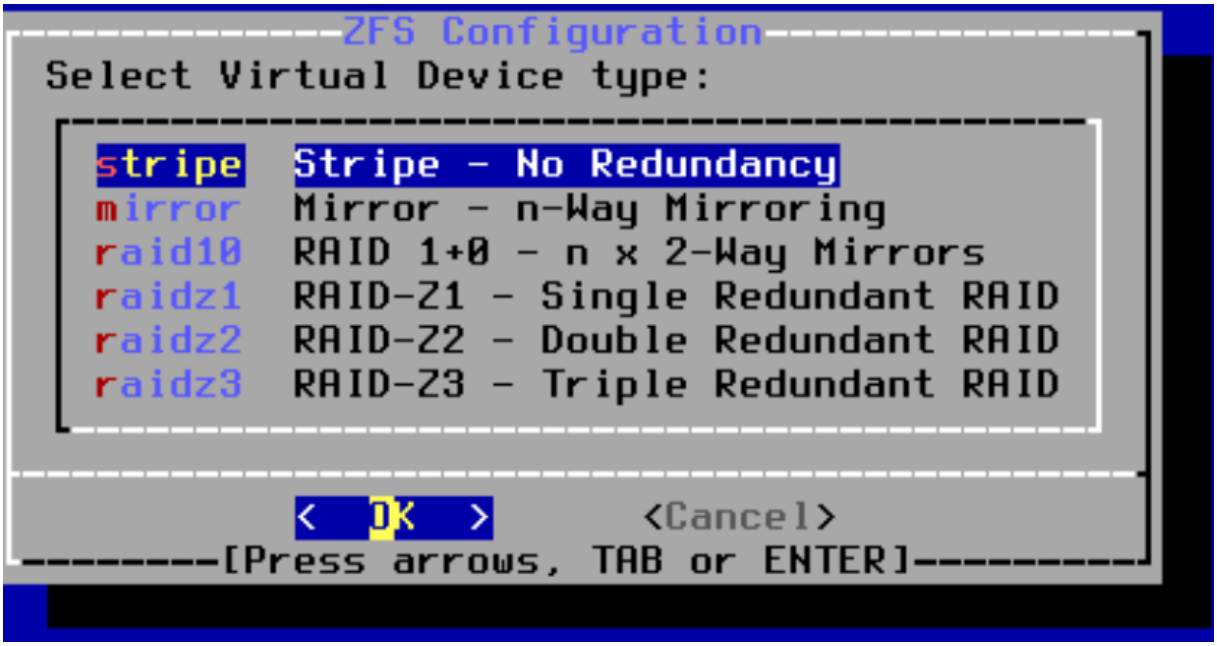
Processus d'Installation :

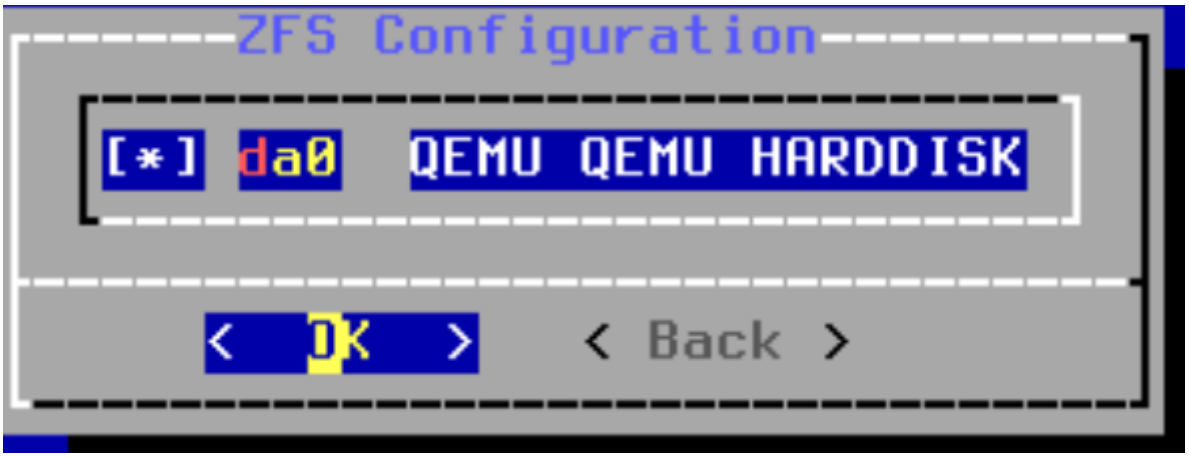
- Suivez les instructions à l'écran :

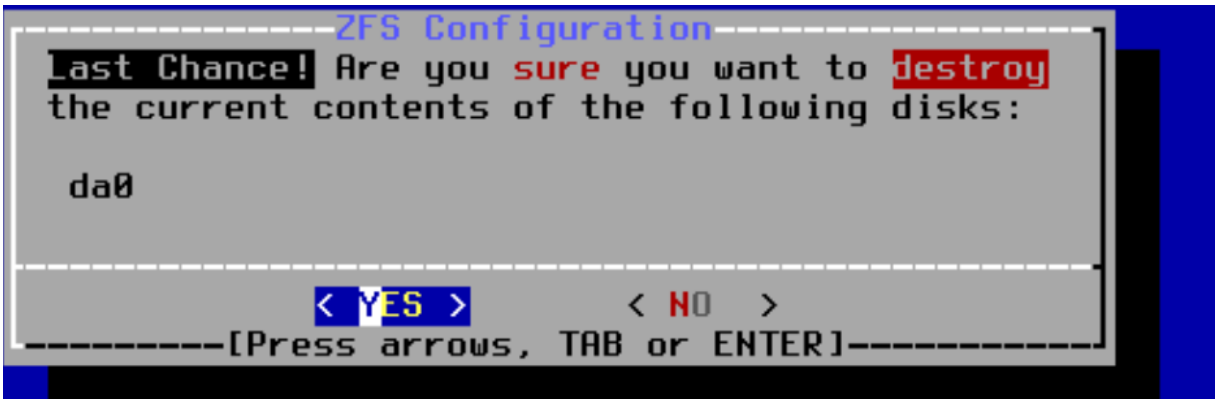


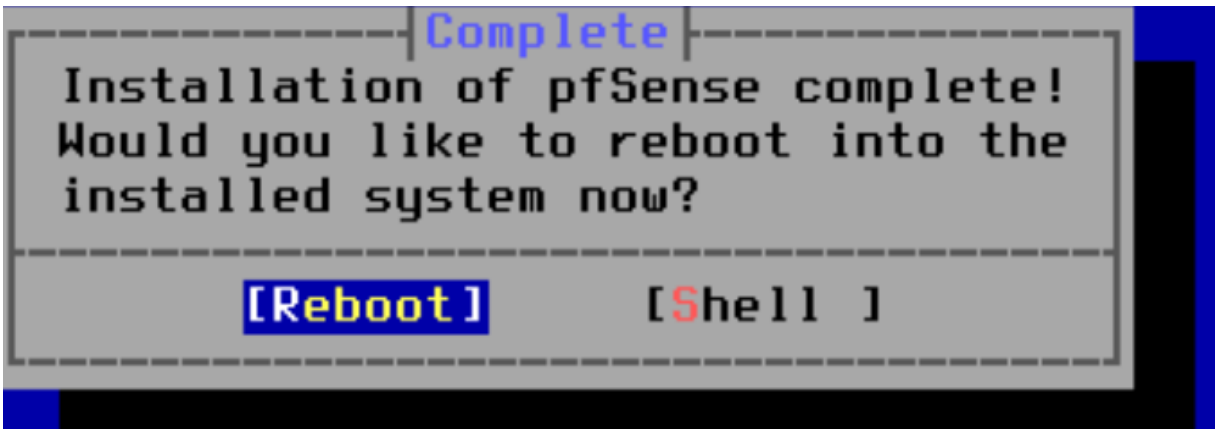



ZFS Configuration
Configure Options:
>>> Install Proceed with Installation
T Pool Type/Disks: stripe: 0 disks
- Rescan Devices *
- Disk Info *
N Pool Name pfSense
4 Force 4K Sectors? YES
E Encrypt Disks? NO
P Partition Scheme GPT (BIOS)
S Swap Size 4g
M Mirror Swap? NO
W Encrypt Swap? NO
<Select> <Cancel>
[Use alnum, arrows, punctuation, TAB or ENTER]


ZFS Configuration
Select Virtual Device type:
stripe Stripe - No Redundancy
mirror Mirror - n-Way Mirroring
raid10 RAID 1+0 - n x 2-Way Mirrors
raidz1 RAID-Z1 - Single Redundant RAID
raidz2 RAID-Z2 - Double Redundant RAID
raidz3 RAID-Z3 - Triple Redundant RAID
< OK > <Cancel>
[Press arrows, TAB or ENTER]


ZFS Configuration
[*] da0 QEMU QEMU HARDDISK
< OK >
< Back >


ZFS Configuration
Last Chance! Are you sure you want to destroy
the current contents of the following disks:
da0
< YES > < NO >
[Press arrows, TAB or ENTER]


Complete
Installation of pfSense complete!
Would you like to reboot into the
installed system now?
[Reboot] [Shell]

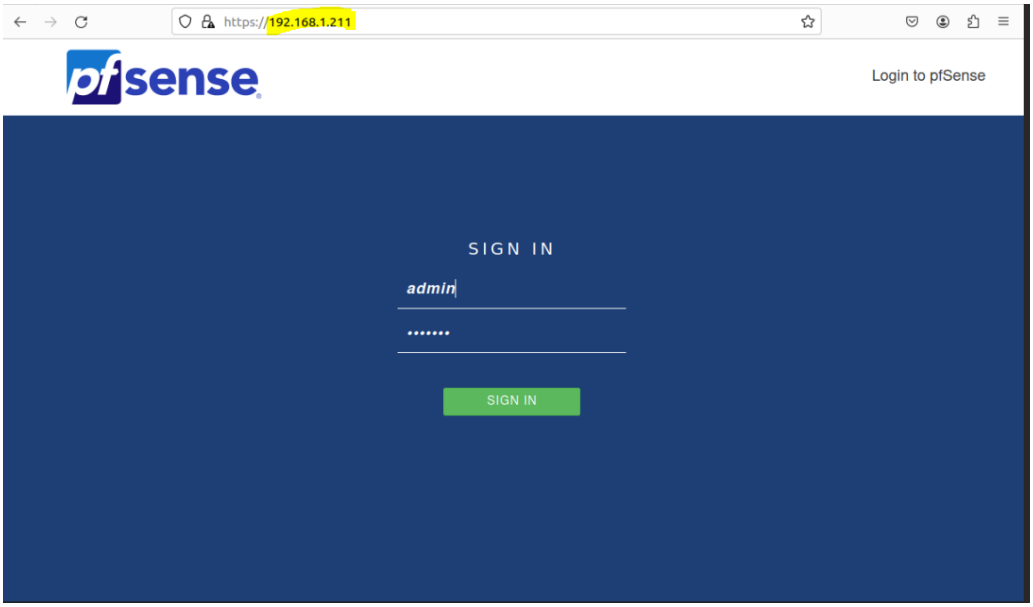
```
php-fpm[391]: /index.php: Successful login for user 'admin' from: 192.168.1.19
Local Database)


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

QEMU Guest - Netgate Device ID: 17a727fb90ee9f41095d

*** Welcome to pfSense 2.7.1-RELEASE (amd64) on pfSense ***

 WAN (wan)       -> vtnet0     -> v4/DHCP4: 192.168.1.211/24


 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:
```

(On configure le Wan avec l'ip 192.168.1.211)

4 - Configuration de pfSense :

Configuration de Base :

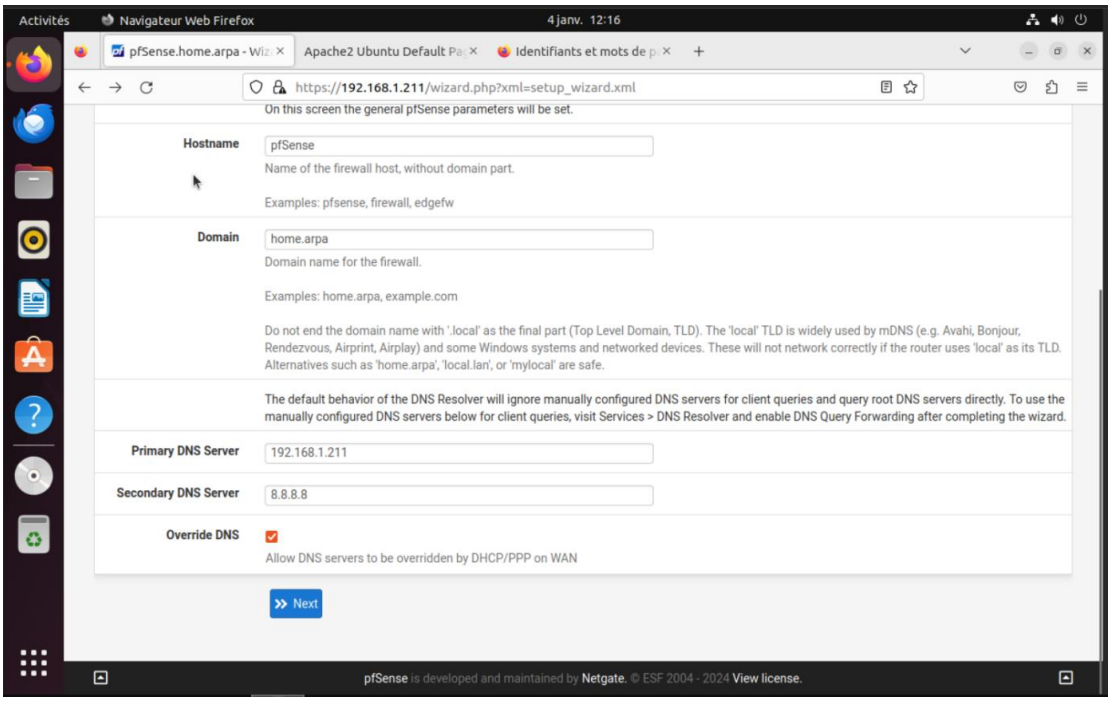
- Après l'installation, accédez à l'interface Web de pfSense :

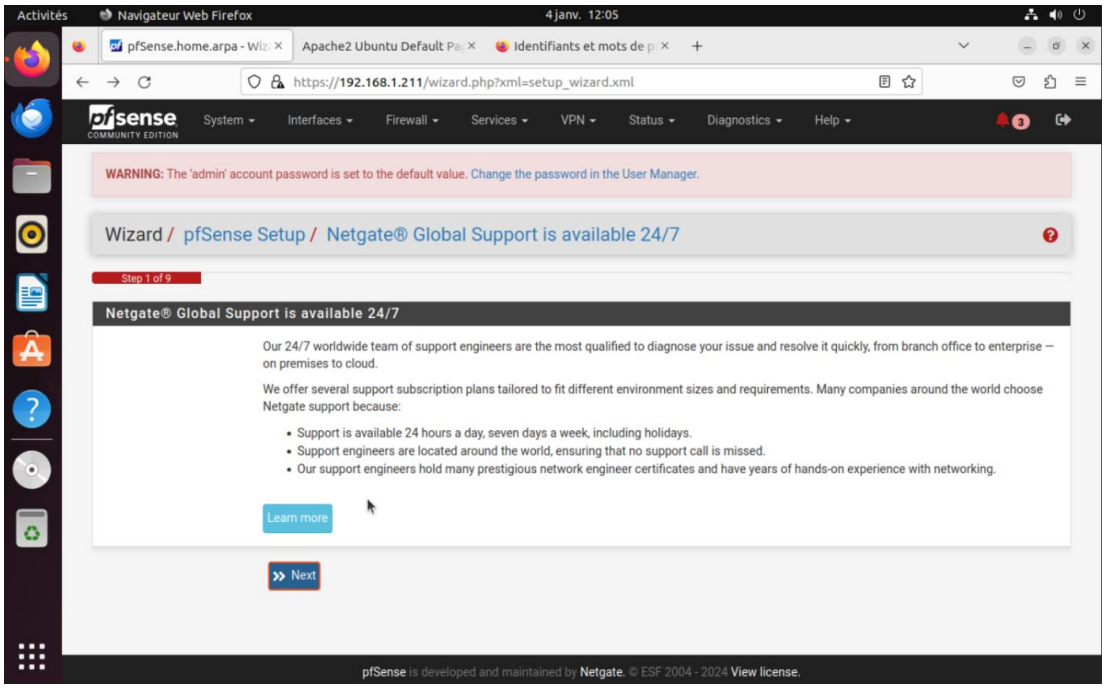


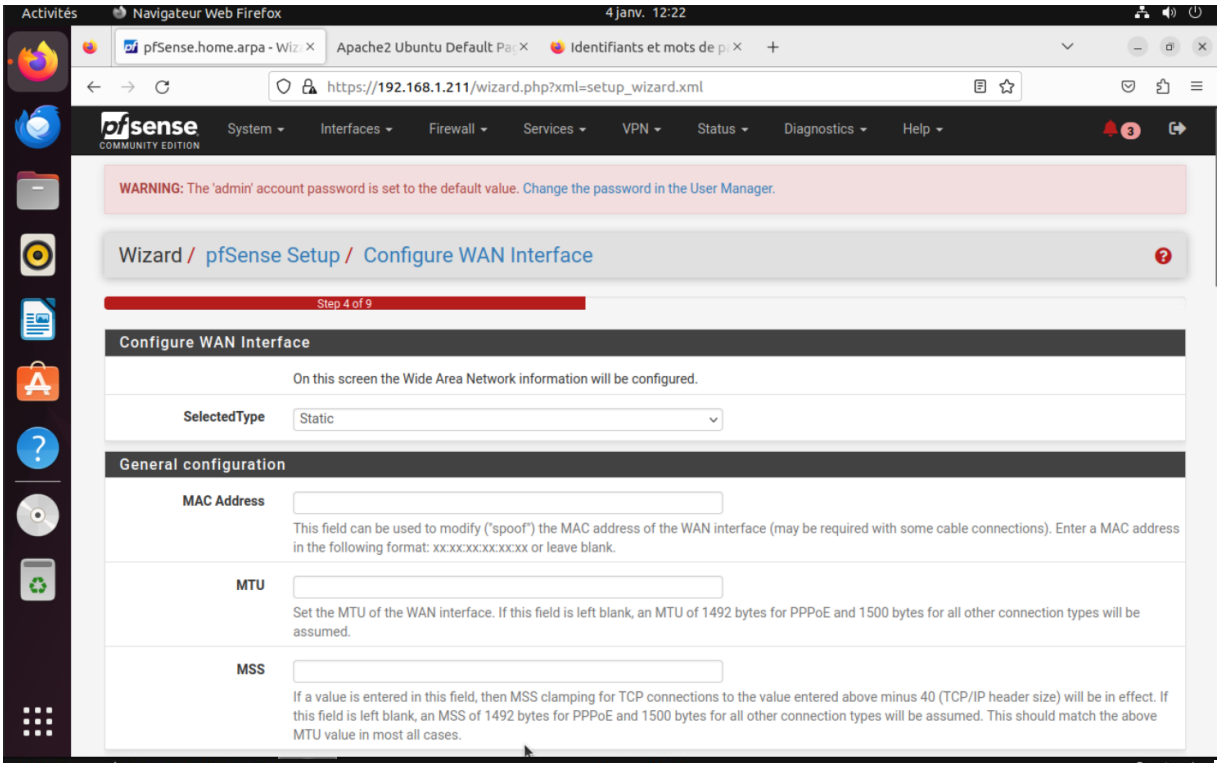
Identifiant : admin

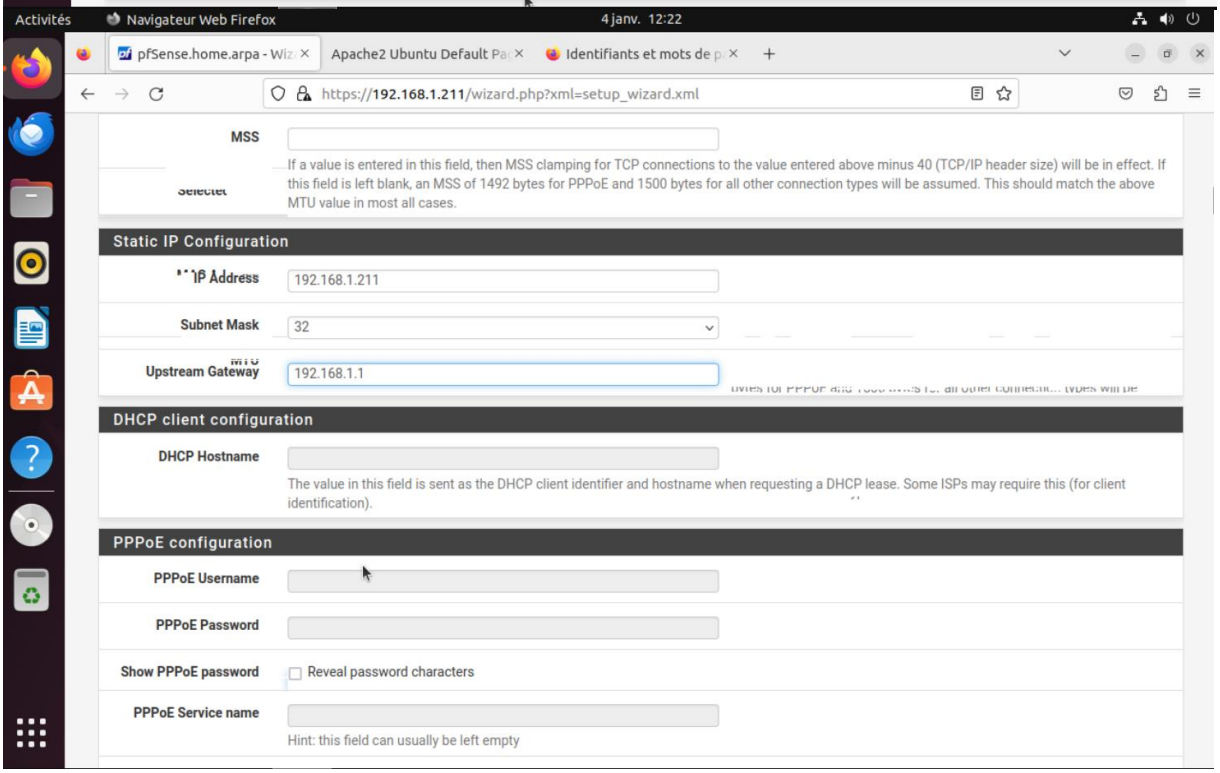
Mot de passe : pfsense

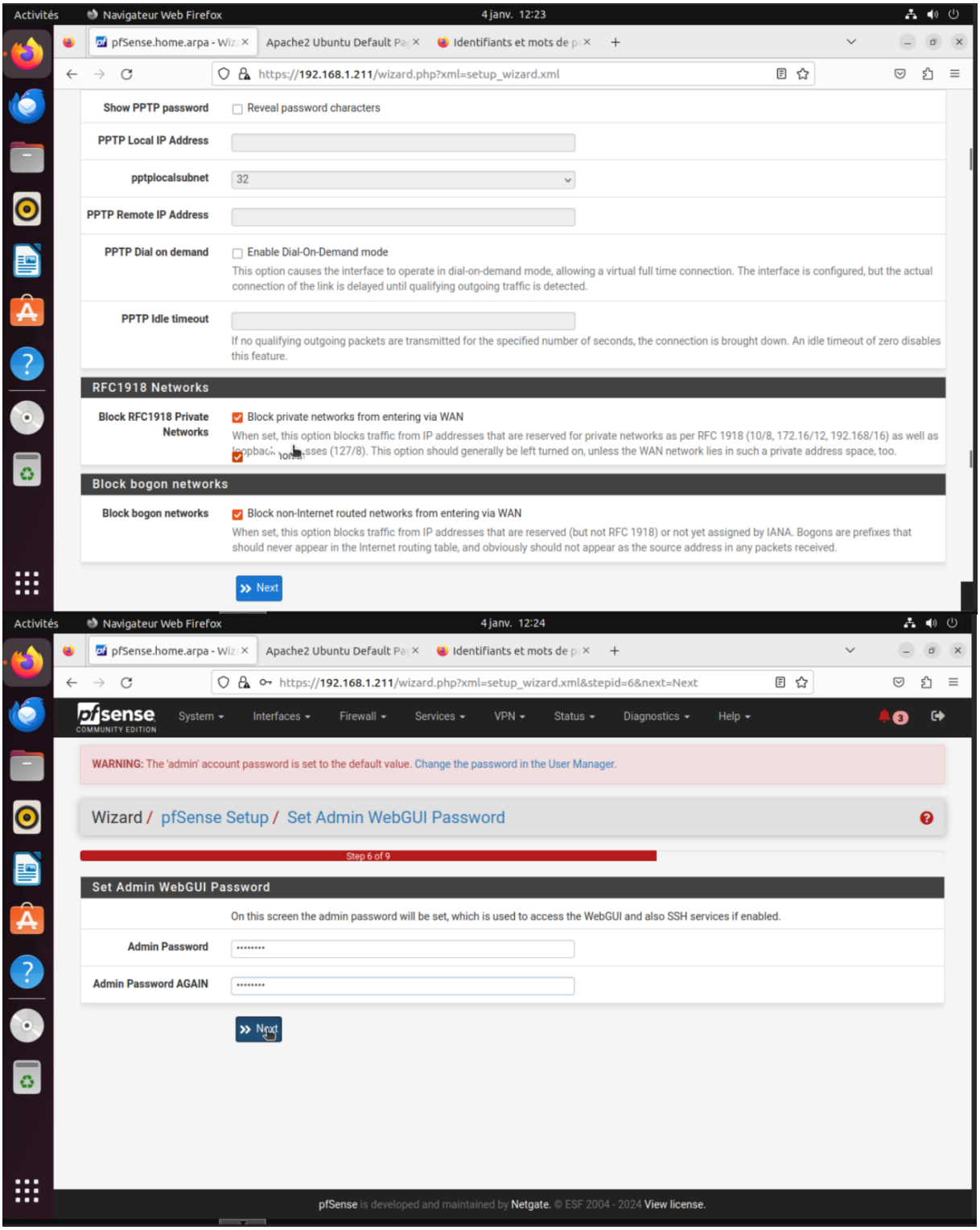
- Utilisez l'assistant pour la configuration initiale :






Activités
Navigateur Web Firefox
4 janv. 12:22
pfSense.home.arpa - Wiz
Apache2 Ubuntu Default Pa
Identifiants et mots de p
https://192.168.1.211/wizard.php?xml=setup_wizard.xml
pfsense
COMMUNITY EDITION
System
Interfaces
Firewall
Services
VPN
Status
Diagnostics
Help
WARNING: The 'admin' account password is set to the default value. Change the password in the User Manager.
Wizard / pfSense Setup / Configure WAN Interface
Step 4 of 9
Configure WAN Interface
On this screen the Wide Area Network information will be configured.
SelectedType
Static
General configuration
MAC Address
This field can be used to modify ("spoof") the MAC address of the WAN interface (may be required with some cable connections). Enter a MAC address in the following format: xx:xx:xx:xx:xx:xx or leave blank.
MTU
Set the MTU of the WAN interface. If this field is left blank, an MTU of 1492 bytes for PPPoE and 1500 bytes for all other connection types will be assumed.
MSS
If a value is entered in this field, then MSS clamping for TCP connections to the value entered above minus 40 (TCP/IP header size) will be in effect. If this field is left blank, an MSS of 1492 bytes for PPPoE and 1500 bytes for all other connection types will be assumed. This should match the above MTU value in most all cases.


Activités
Navigateur Web Firefox
4 janv. 12:22
pfSense.home.arpa - Wiz
Apache2 Ubuntu Default Pa
Identifiants et mots de p
https://192.168.1.211/wizard.php?xml=setup_wizard.xml
MSS
If a value is entered in this field, then MSS clamping for TCP connections to the value entered above minus 40 (TCP/IP header size) will be in effect. If this field is left blank, an MSS of 1492 bytes for PPPoE and 1500 bytes for all other connection types will be assumed. This should match the above MTU value in most all cases.
Static IP Configuration
IP Address
192.168.1.211
Subnet Mask
32
Upstream Gateway
192.168.1.1
DHCP client configuration
DHCP Hostname
The value in this field is sent as the DHCP client identifier and hostname when requesting a DHCP lease. Some ISPs may require this (for client identification).
PPPoE configuration
PPPoE Username
PPPoE Password
Show PPPoE password
Reveal password characters
PPPoE Service name
Hint: this field can usually be left empty


Activités
Navigateur Web Firefox
4 janv. 12:23
pfSense.home.arpa - Wiz
Apache2 Ubuntu Default Pa
Identifiants et mots de p
https://192.168.1.211/wizard.php?xml=setup_wizard.xml
Show PPTP password
Reveal password characters
PPTP Local IP Address
pptplocalsubnet
32
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
sses (127/8). This option should generally be left turned on, unless the WAN network lies in such a private address space, too.
Block bogon networks
Block bogon networks
Block non-Internet routed networks from entering via WAN
When set, this option blocks traffic from IP addresses that are reserved (but not RFC 1918) or not yet assigned by IANA. Bogons are prefixes that should never appear in the Internet routing table, and obviously should not appear as the source address in any packets received.
Next
Activités
Navigateur Web Firefox
4 janv. 12:24
pfSense.home.arpa - Wiz
Apache2 Ubuntu Default Pa
Identifiants et mots de p
https://192.168.1.211/wizard.php?xml=setup_wizard.xml&stepid=6&next=Next
pfsense
COMMUNITY EDITION
System
Interfaces
Firewall
Services
VPN
Status
Diagnostics
Help
WARNING: The 'admin' account password is set to the default value. Change the password in the User Manager.
Wizard / pfSense Setup / Set Admin WebGUI Password
Step 6 of 9
Set Admin WebGUI Password
On this screen the admin password will be set, which is used to access the WebGUI and also SSH services if enabled.
Admin Password
Admin Password AGAIN
Next
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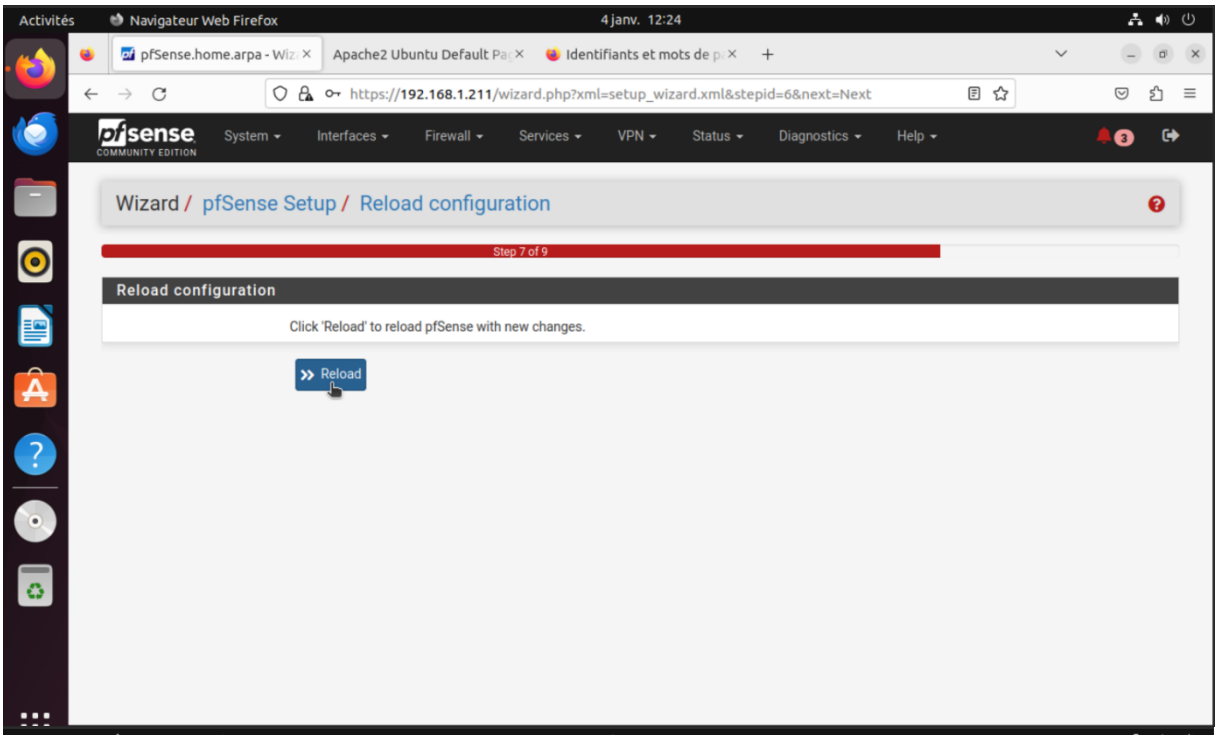
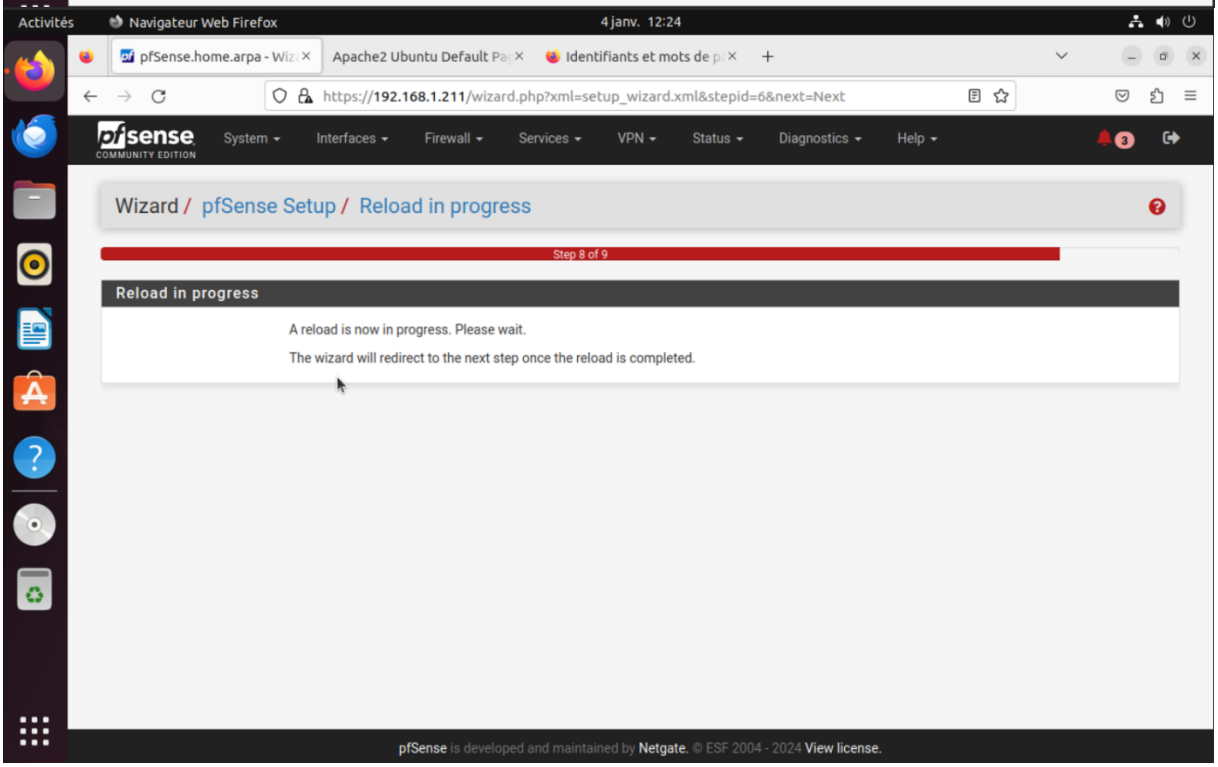

Activités
Navigateur Web Firefox
4 janv. 12:24
pfSense.home.arpa - Wiz
Apache2 Ubuntu Default Pa
Identifiants et mots de p
https://192.168.1.211/wizard.php?xml=setup_wizard.xml&stepid=6&next=Next
pfsense COMMUNITY EDITION
System
Interfaces
Firewall
Services
VPN
Status
Diagnostics
Help
Wizard / pfSense Setup / Reload configuration
Step 7 of 9
Reload configuration
Click 'Reload' to reload pfSense with new changes.
Reload


Activités
Navigateur Web Firefox
4 janv. 12:24
pfSense.home.arpa - Wiz
Apache2 Ubuntu Default Pa
Identifiants et mots de p
https://192.168.1.211/wizard.php?xml=setup_wizard.xml&stepid=6&next=Next
pfsense COMMUNITY EDITION
System
Interfaces
Firewall
Services
VPN
Status
Diagnostics
Help
Wizard / pfSense Setup / Reload in progress
Step 8 of 9
Reload in progress
A reload is now in progress. Please wait.
The wizard will redirect to the next step once the reload is completed.
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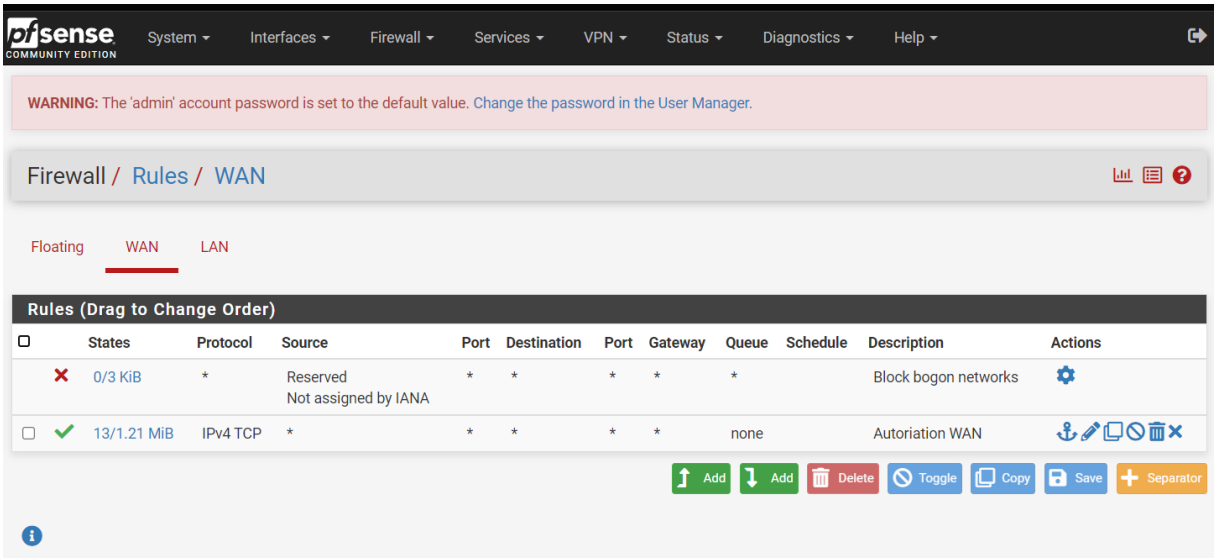
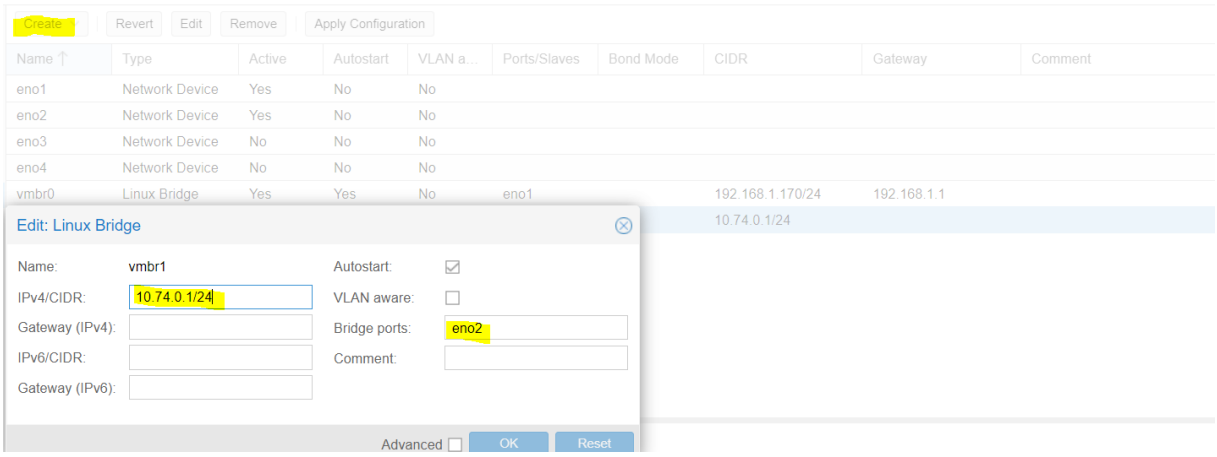
- Création de la règle du réseau WAN autorisant l'accès au Pfsense depuis le WAN(cette règle sera modifiée dans le futur) :



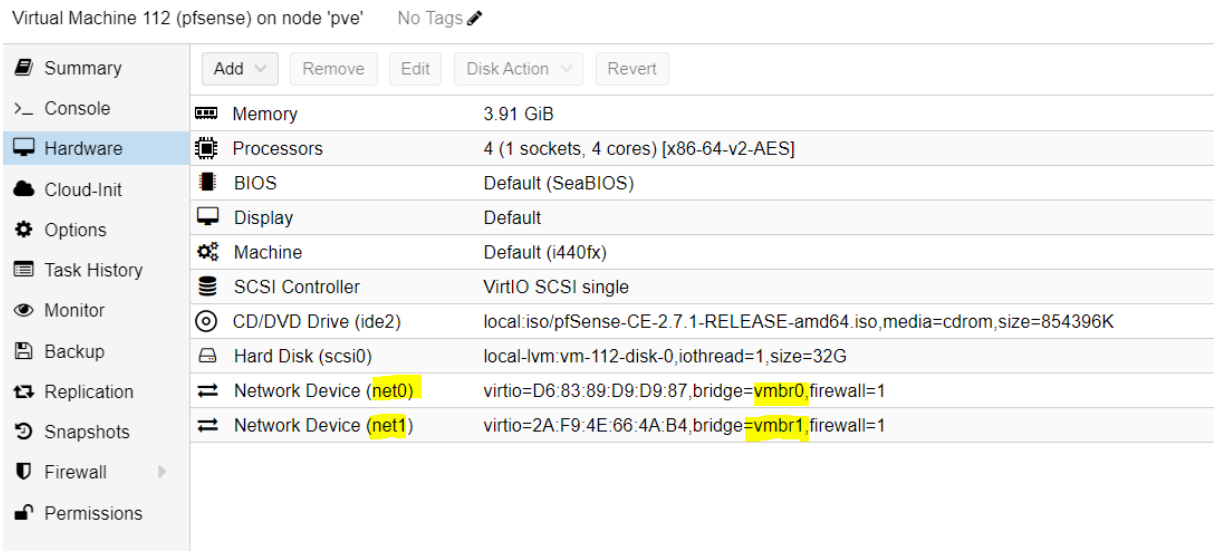
Configuration des Interfaces Réseau :

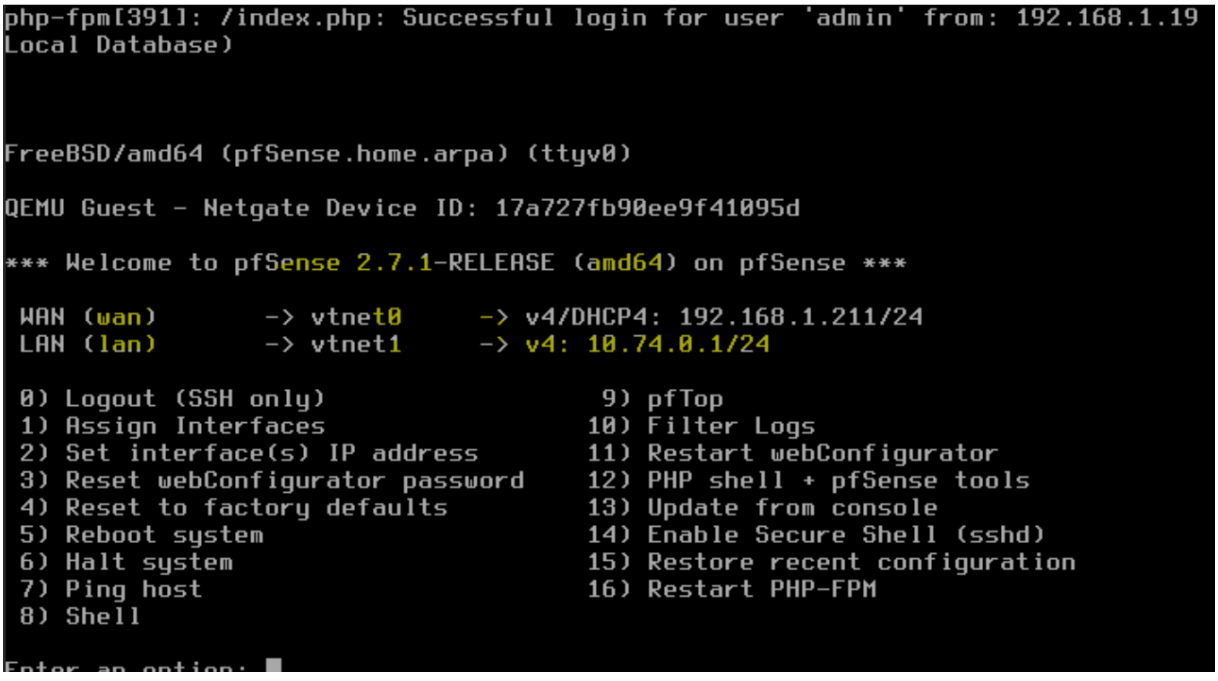
Nous allons Configurez les interfaces LAN :

- On va créer une deuxième interface vmbr1 avec ces paramètres :

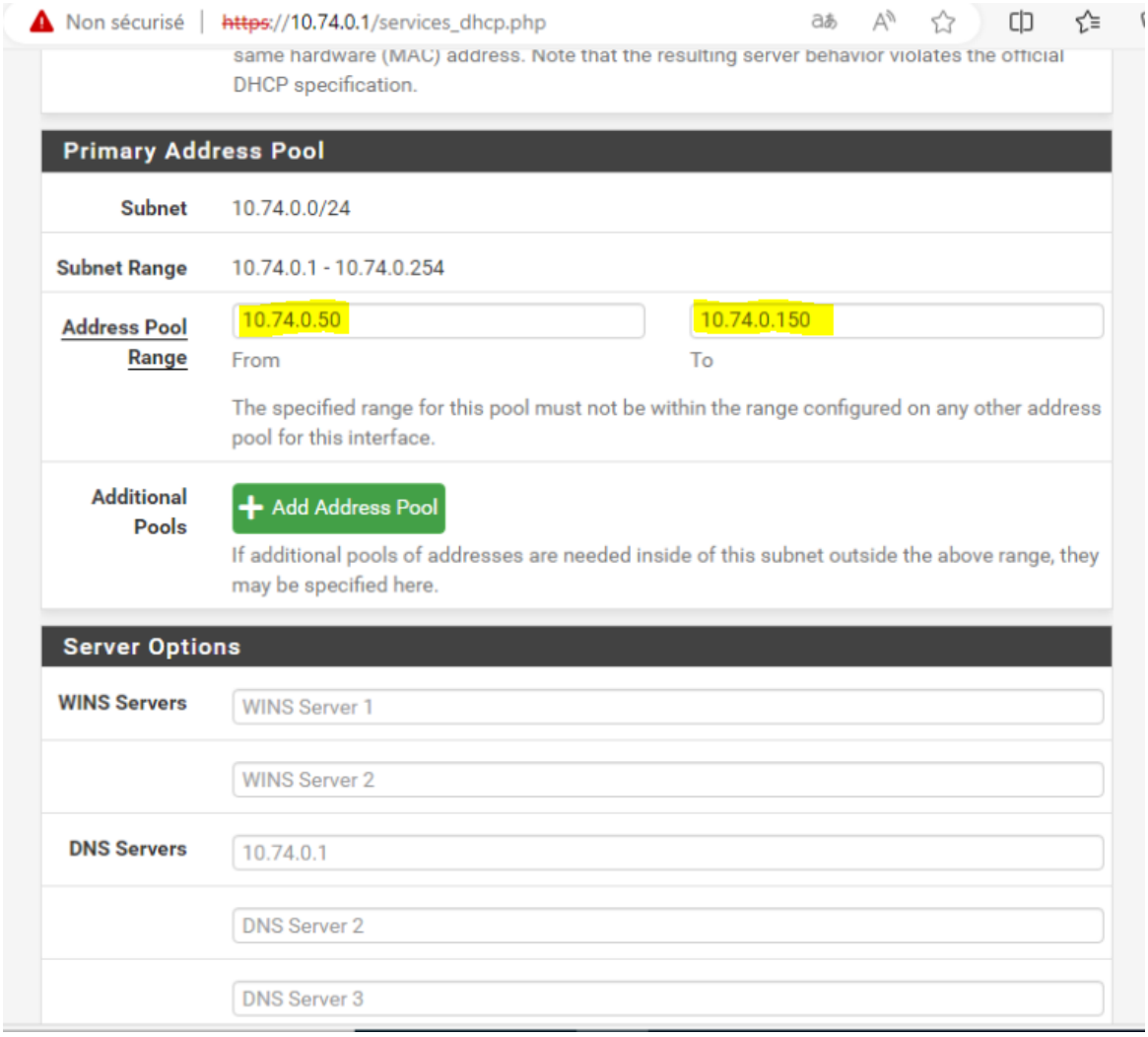


- On va à présent rajouter la deuxième interface vmbr1 à la vm pfsense (l'interface vmbr0 est prise en compte par défaut).
- On va donc configurer notre WAN sur l'interface vmbr0 et le LAN sur l'interface vmbr1

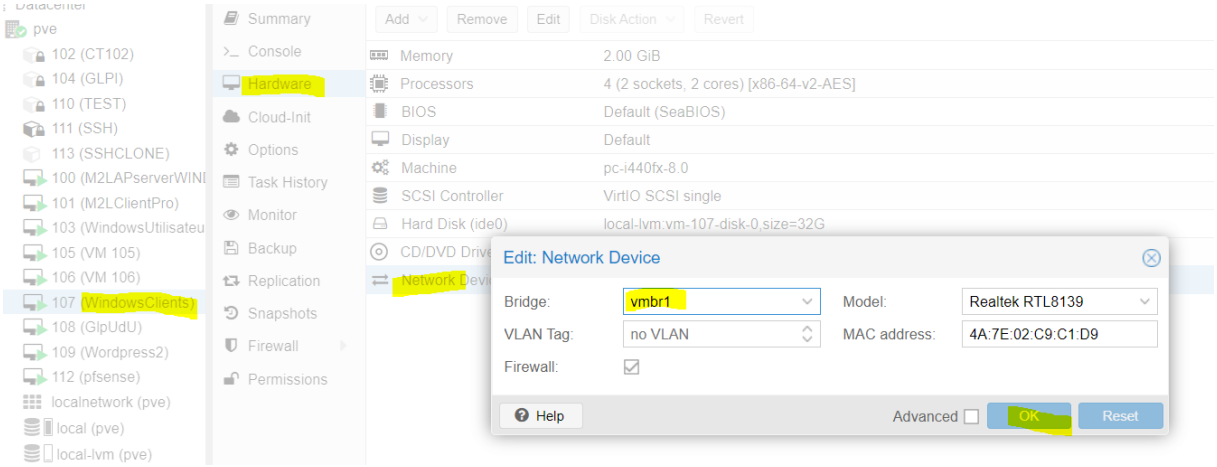

Virtual Machine 112 (pfsense) on node 'pve'
No Tags
Summary
Console
Hardware
Cloud-Init
Options
Task History
Monitor
Backup
Replication
Snapshots
Firewall
Permissions
Add
Remove
Edit
Disk Action
Revert
Memory 3.91 GiB
Processors 4 (1 sockets, 4 cores) [x86-64-v2-AES]
BIOS Default (SeaBIOS)
Display Default
Machine Default (i440fx)
SCSI Controller VirtIO SCSI single
CD/DVD Drive (ide2) local:iso/pfSense-CE-2.7.1-RELEASE-amd64.iso,media=cdrom,size=854396K
Hard Disk (scsi0) local-lvm:vm-112-disk-0,iothread=1,size=32G
Network Device (net0) virtio=D6:83:89:D9:D9:87,bridge=vmbr0,firewall=1
Network Device (net1) virtio=2A:F9:4E:66:4A:B4,bridge=vmbr1,firewall=1


php-fpm[391]: /index.php: Successful login for user 'admin' from: 192.168.1.19
Local Database)
FreeBSD/amd64 (pfSense.home.arpa) (ttyv0)
QEMU Guest - Netgate Device ID: 17a727fb90ee9f41095d
*** Welcome to pfSense 2.7.1-RELEASE (amd64) on pfSense ***
WAN (wan) -> vtnet0 -> v4/DHCP4: 192.168.1.211/24
LAN (lan) -> vtnet1 -> v4: 10.74.0.1/24
0) Logout (SSH only)
1) Assign Interfaces
2) Set interface(s) IP address
3) Reset webConfigurator password
4) Reset to factory defaults
5) Reboot system
6) Halt system
7) Ping host
8) Shell
9) pfTop
10) Filter Logs
11) Restart webConfigurator
12) PHP shell + pfSense tools
13) Update from console
14) Enable Secure Shell (sshd)
15) Restore recent configuration
16) Restart PHP-FPM
Enter an option:

5 - Réservation d'une place d'adresse avec DHCP Server :

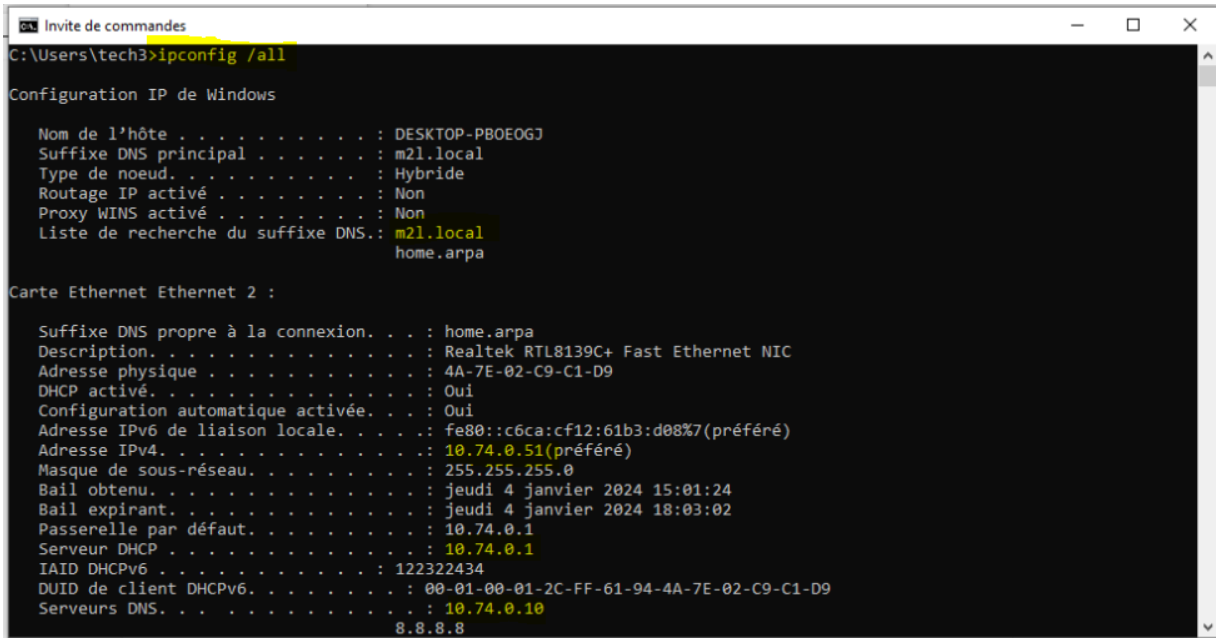


- Pour qu'une vm client windows soit dans le LAN du pfsense, elle doit être connectée sur l'interface vmbr1 :



- En tapant la commande Ipconfig /all, on voit que le client Windows a obtenu une adresse ip se trouvant dans la plage d'adresse qu'on a définit avec le DHCP Server :

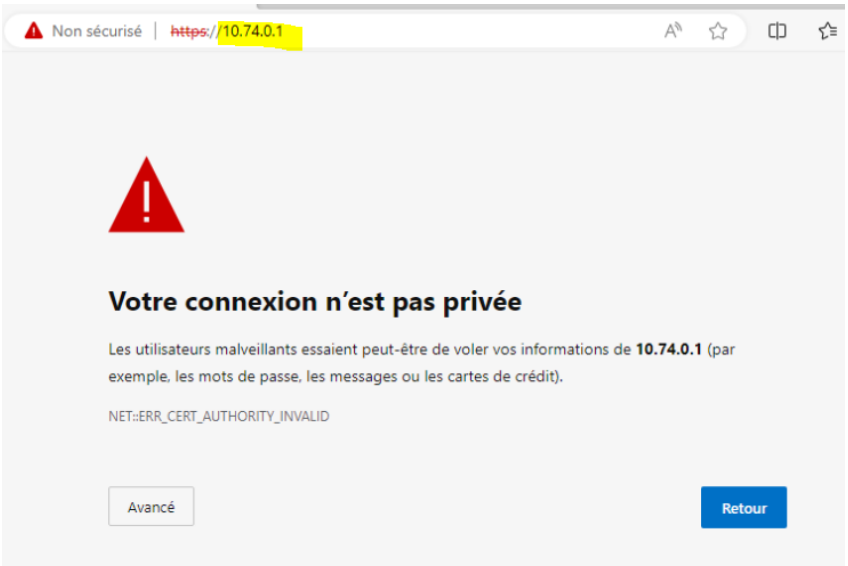
-

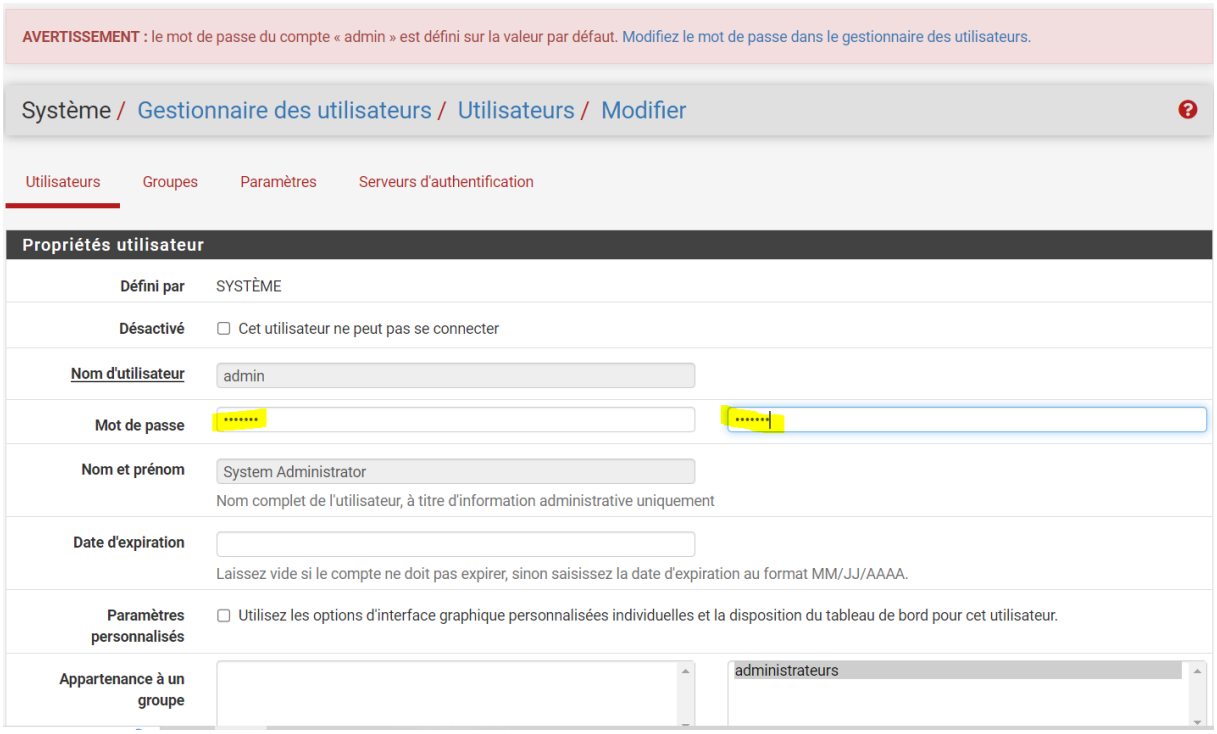


6 - Post-Installation :

Sécurité et Maintenance :

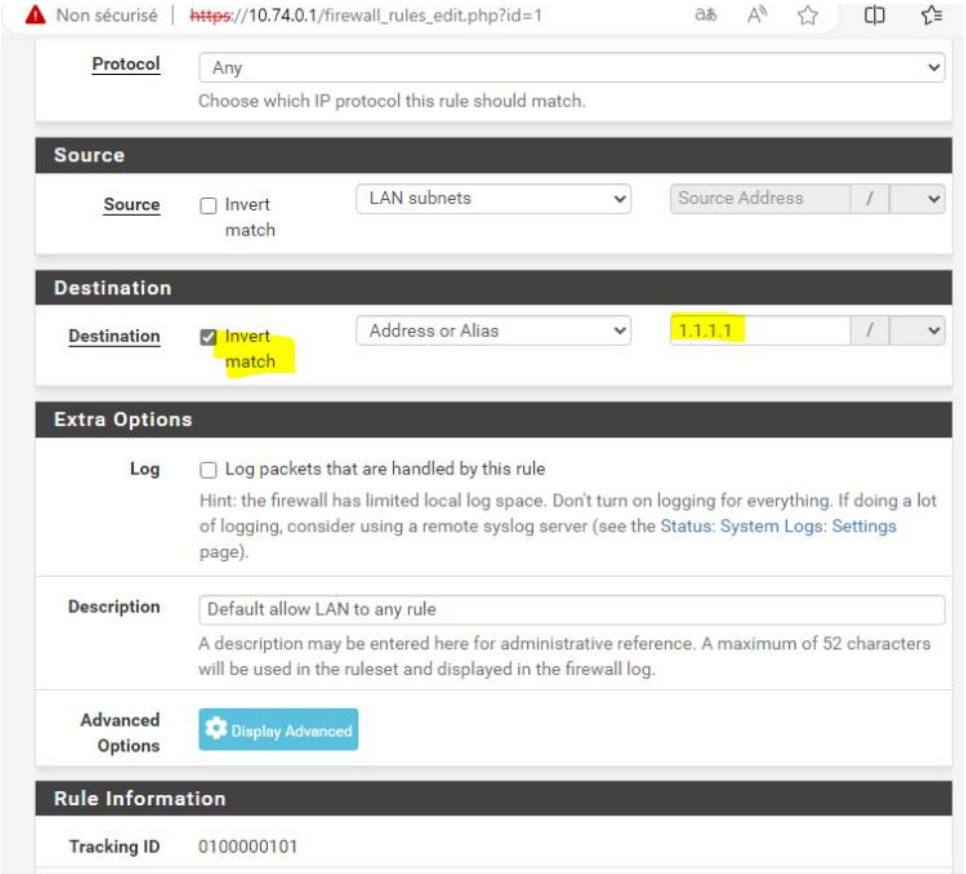
- Changez les mots de passe par défaut :

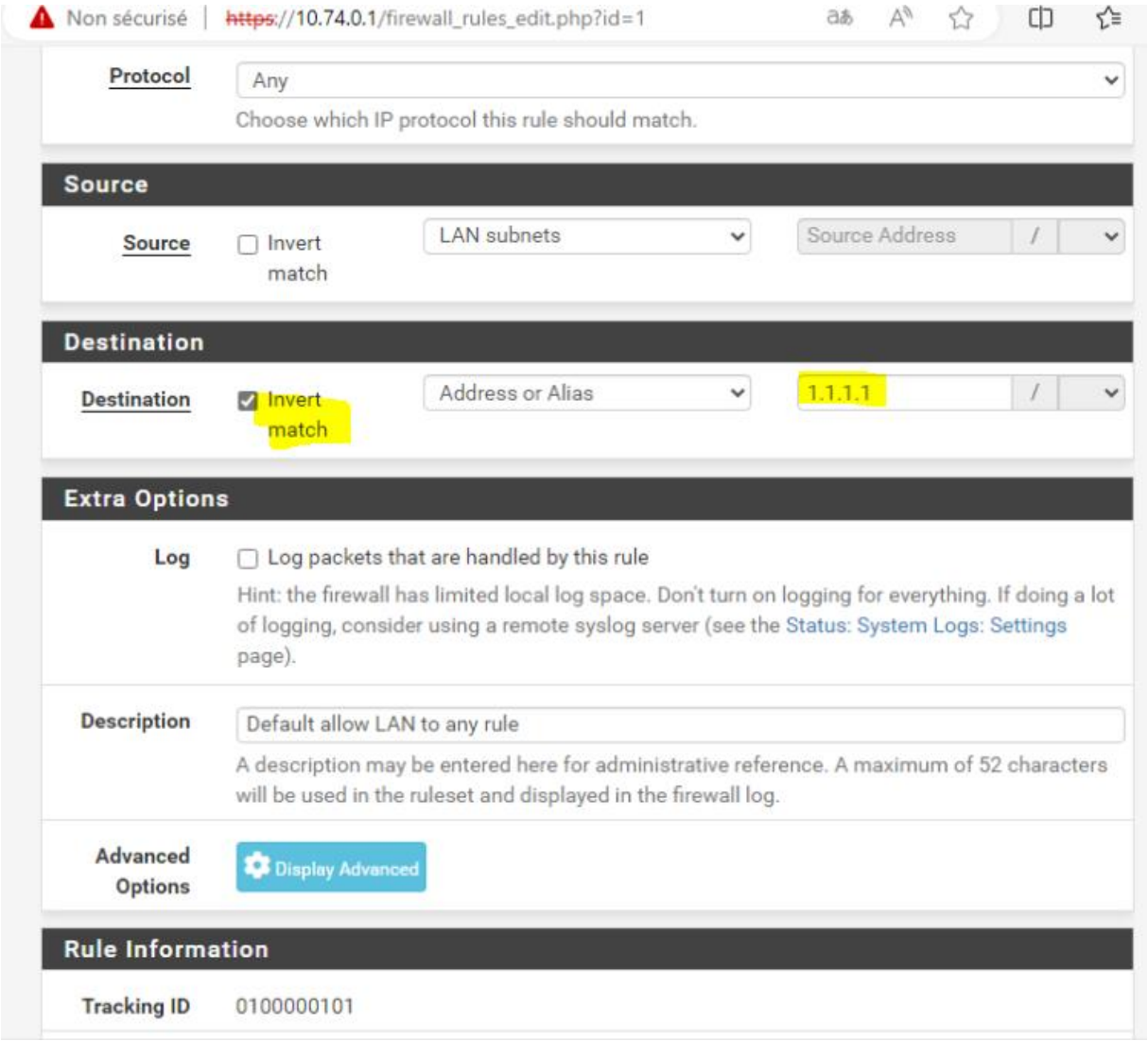




Configurez les règles de pare-feu :

- On modifier une règle du LAN par défaut pour qu'elle autorise que l'accès au 1.1.1.1 :





On se connecte à l'interface depuis un client Windows ayant l'interface réseau vmbr1 .

Conclusion :

Cette structure vous offre un cadre pour développer une documentation complète. Vous pouvez l'élargir avec des captures d'écran, des conseils spécifiques, et des détails plus approfondis pour chaque section.

Pour autoriser le traffic provenant du WAN vers le PFSense .