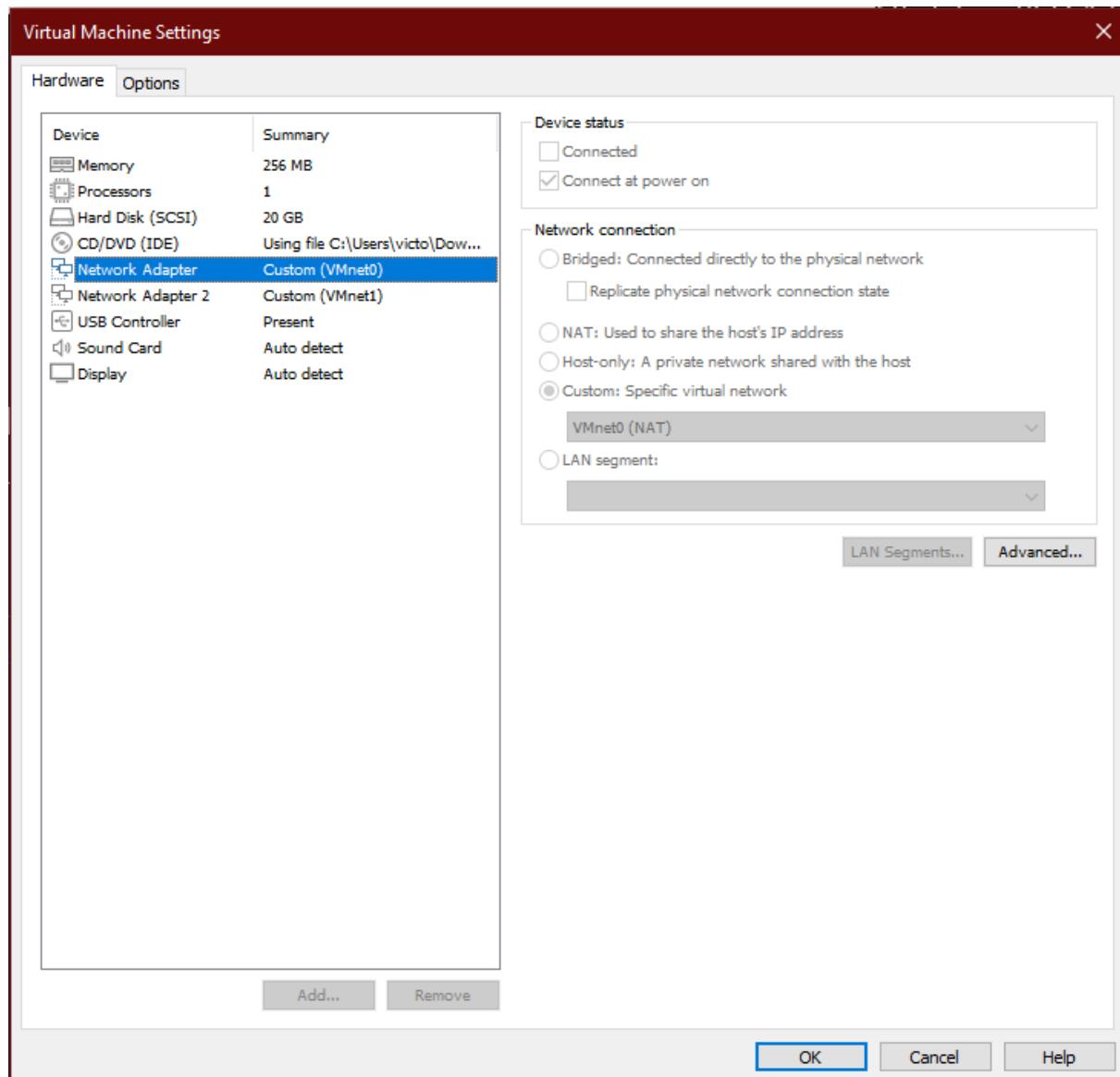


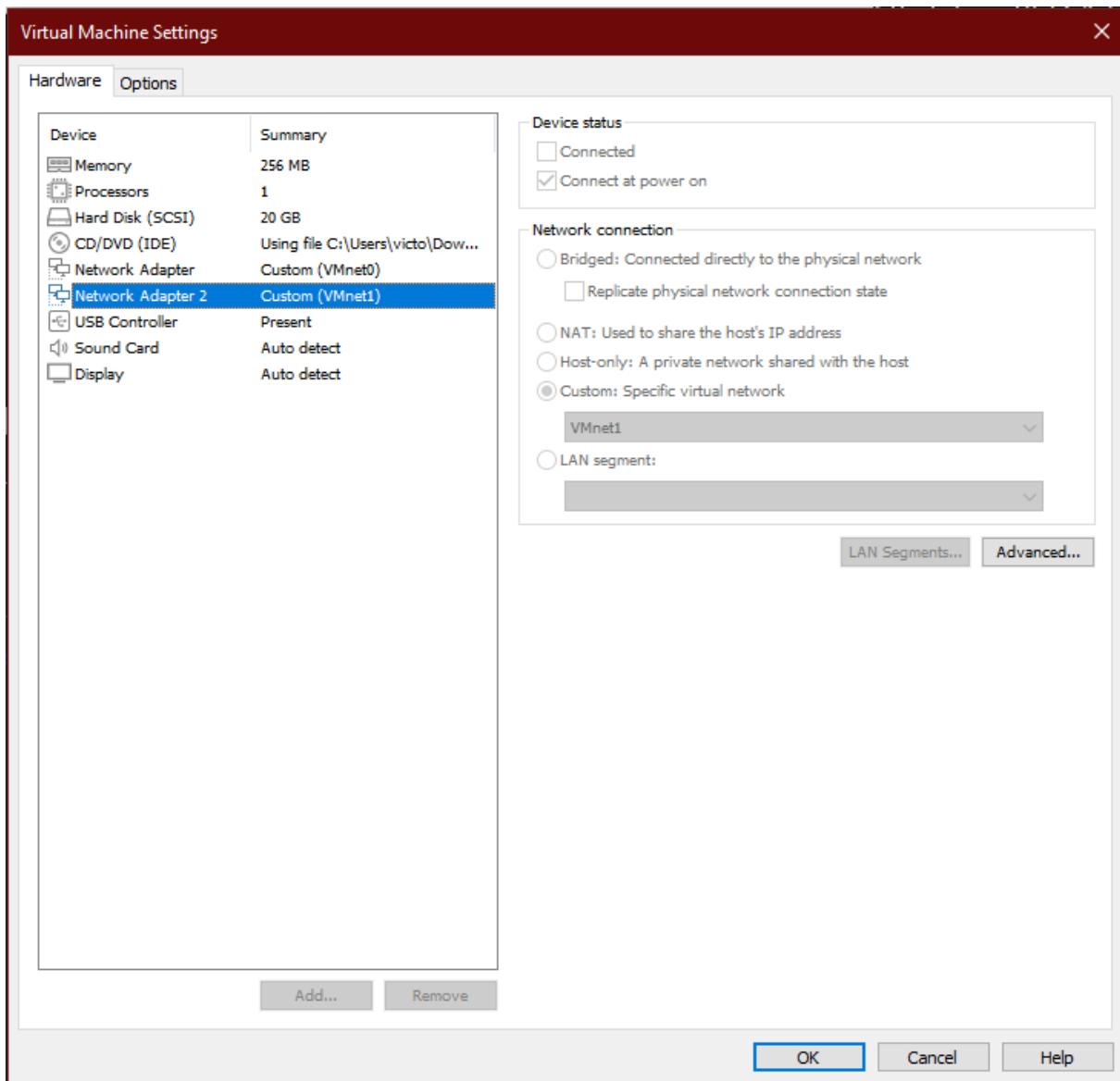
Configuration d'un FireWall avec PfSense

Dans cette documentation nous allons nous servir de PfSense pour restreindre l'accès au réseau à la machine Windows puis nous allons ouvrir seulement 3 ports pour lui donner l'accès à internet.

Configuration de PfSense

Après avoir créé un ISO avec l'image de PfSense nous allons attribuer deux cartes réseau à notre .iso PfSense qui seront configuré de la manière suivante.

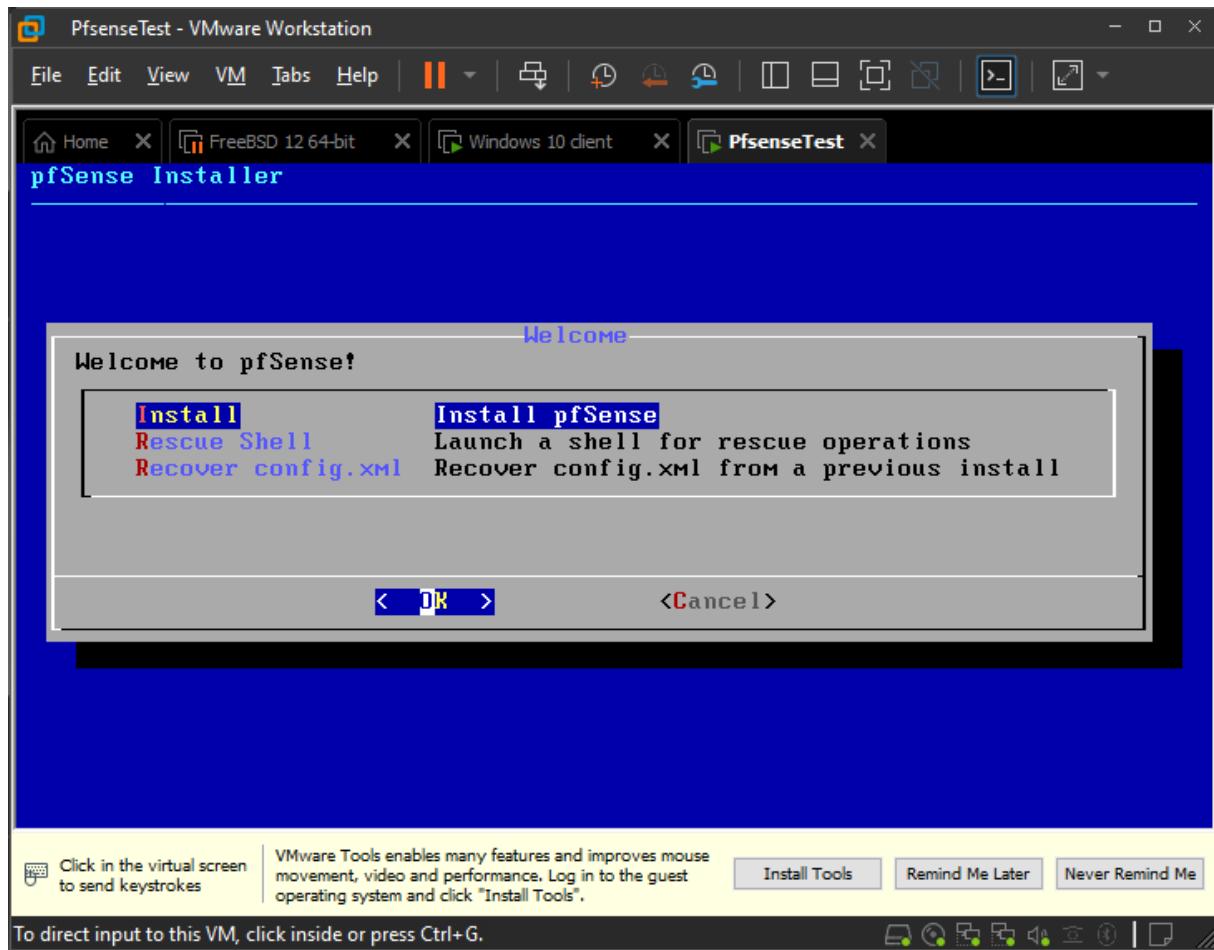
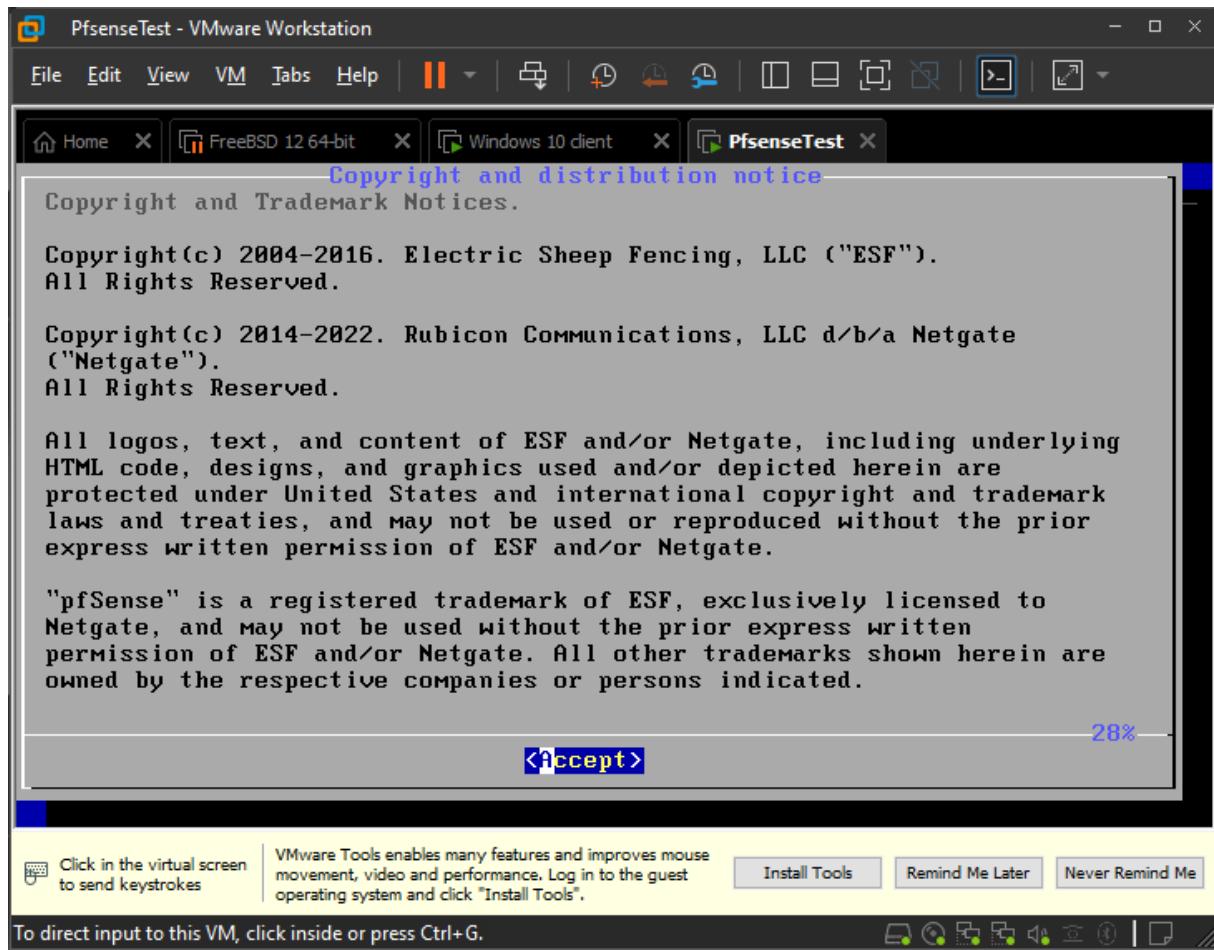


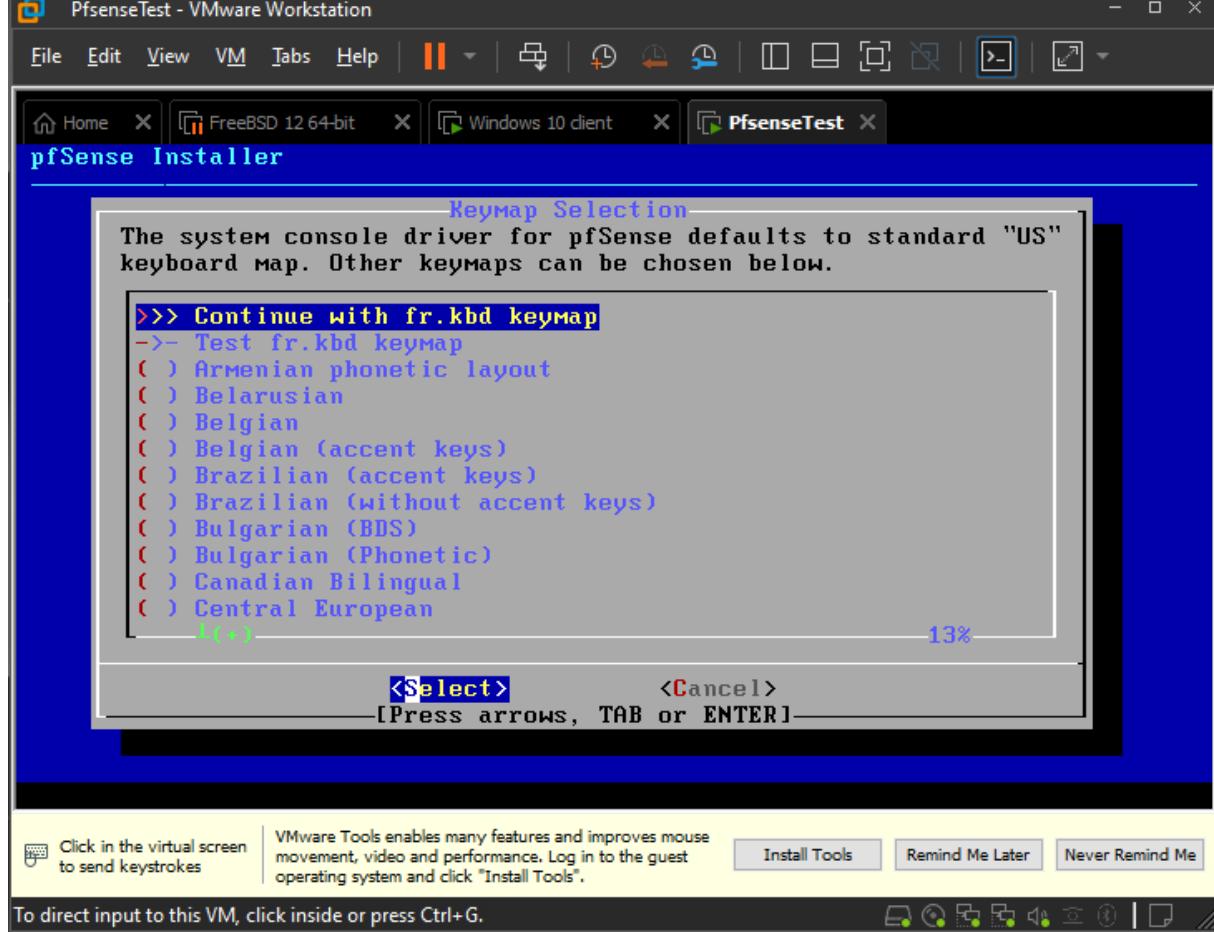
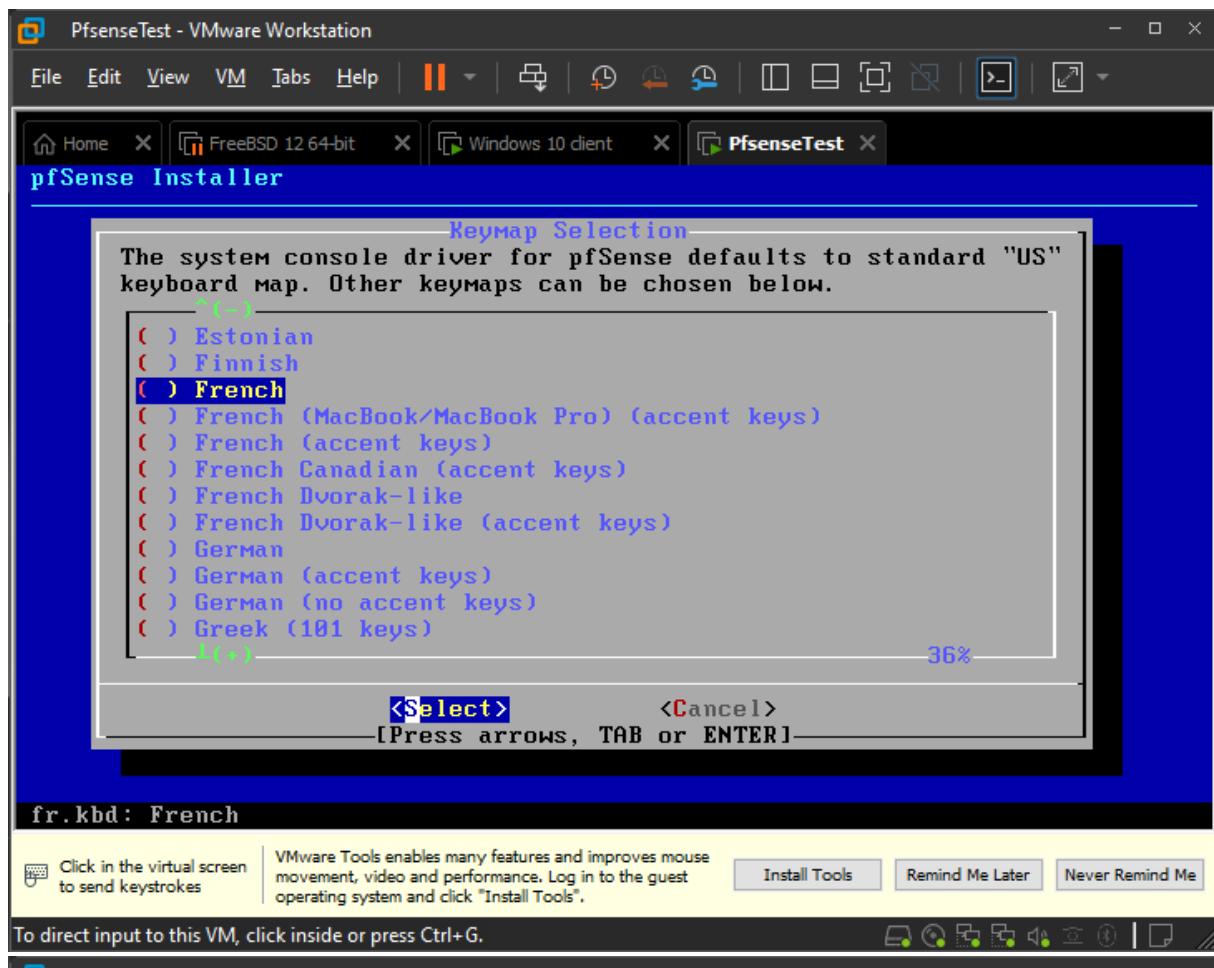


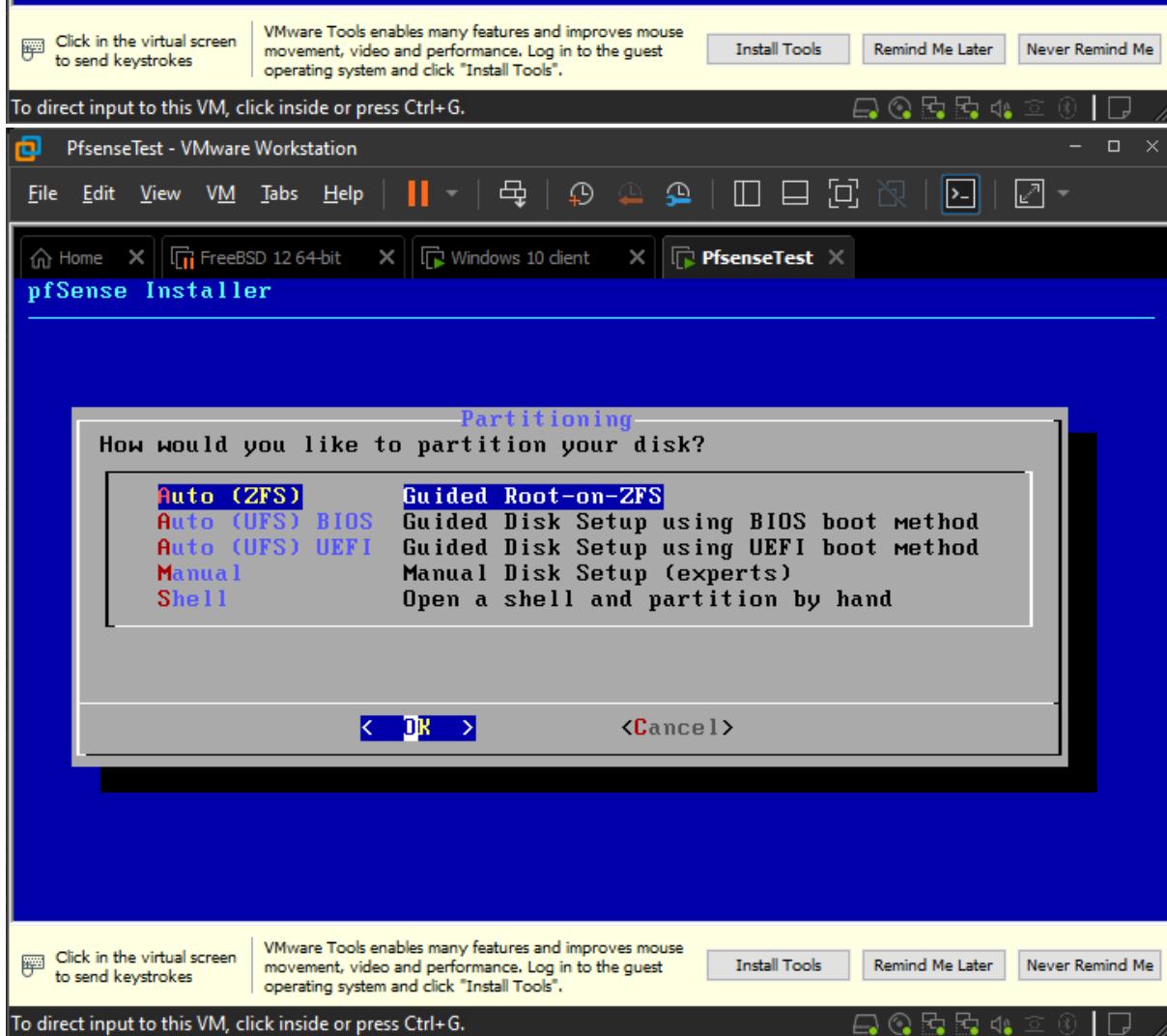
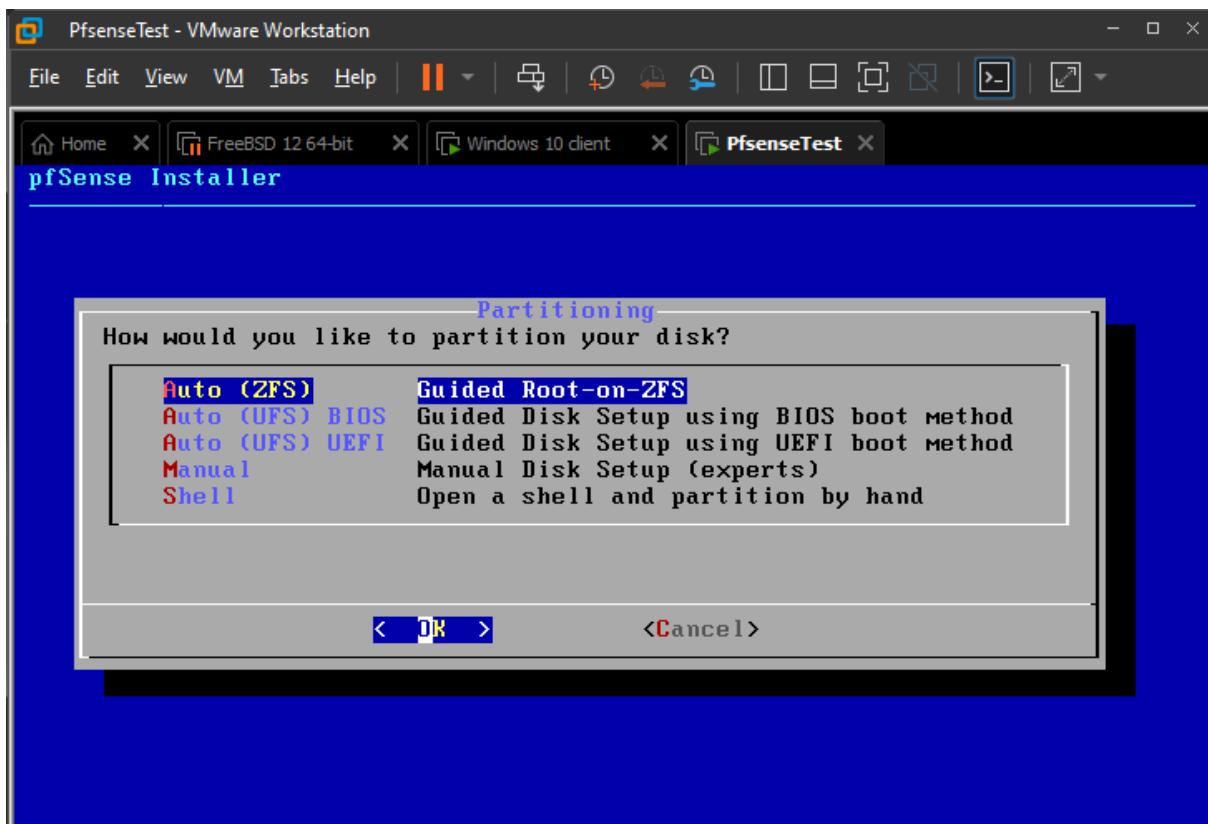
Name	Type	External Connection	Host Connection	DHCP	Subnet Address
VMnet0	NAT	NAT	Connected	Enabled	192.168.21.0
VMnet1	Custom	-	-	-	192.168.234.0

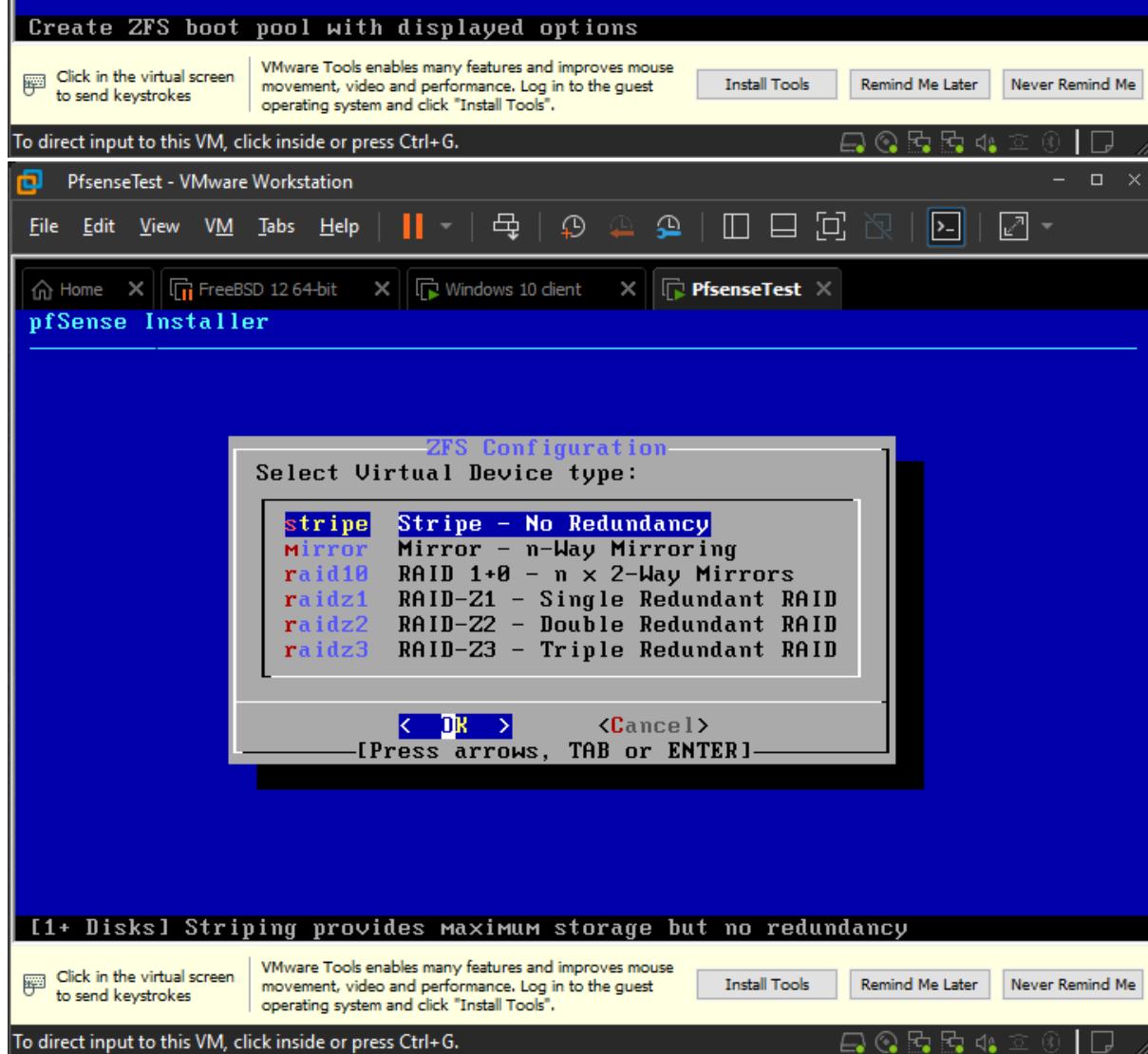
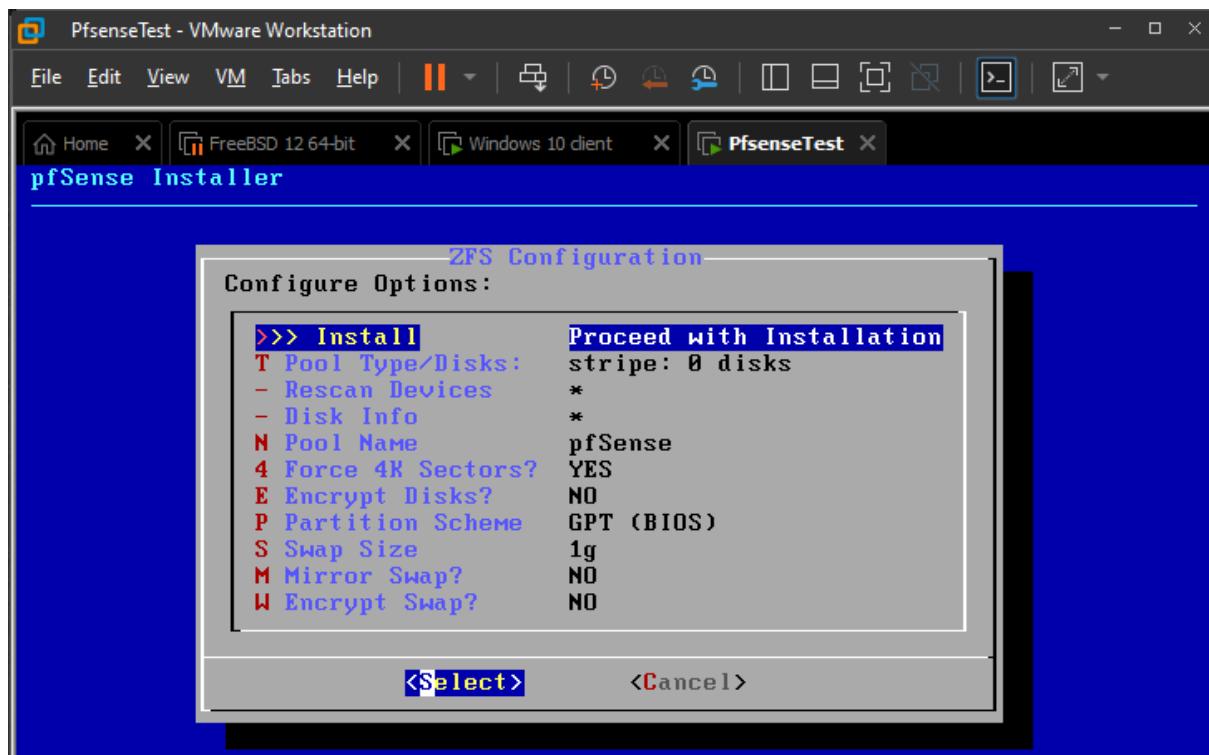
Maintenant nous allons lancer la VM avec l'.iso PfSense et configuration PfSense avant son lancement

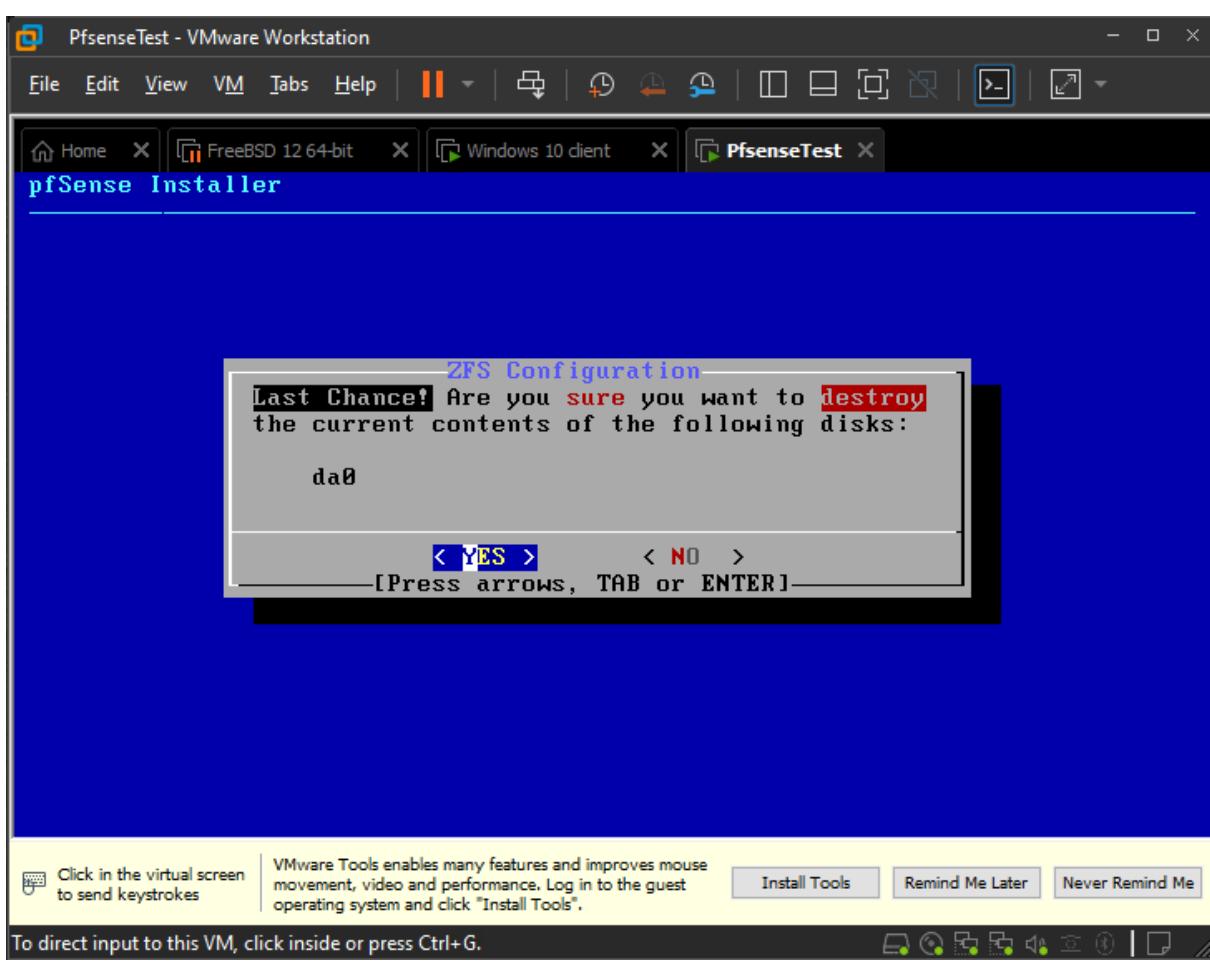
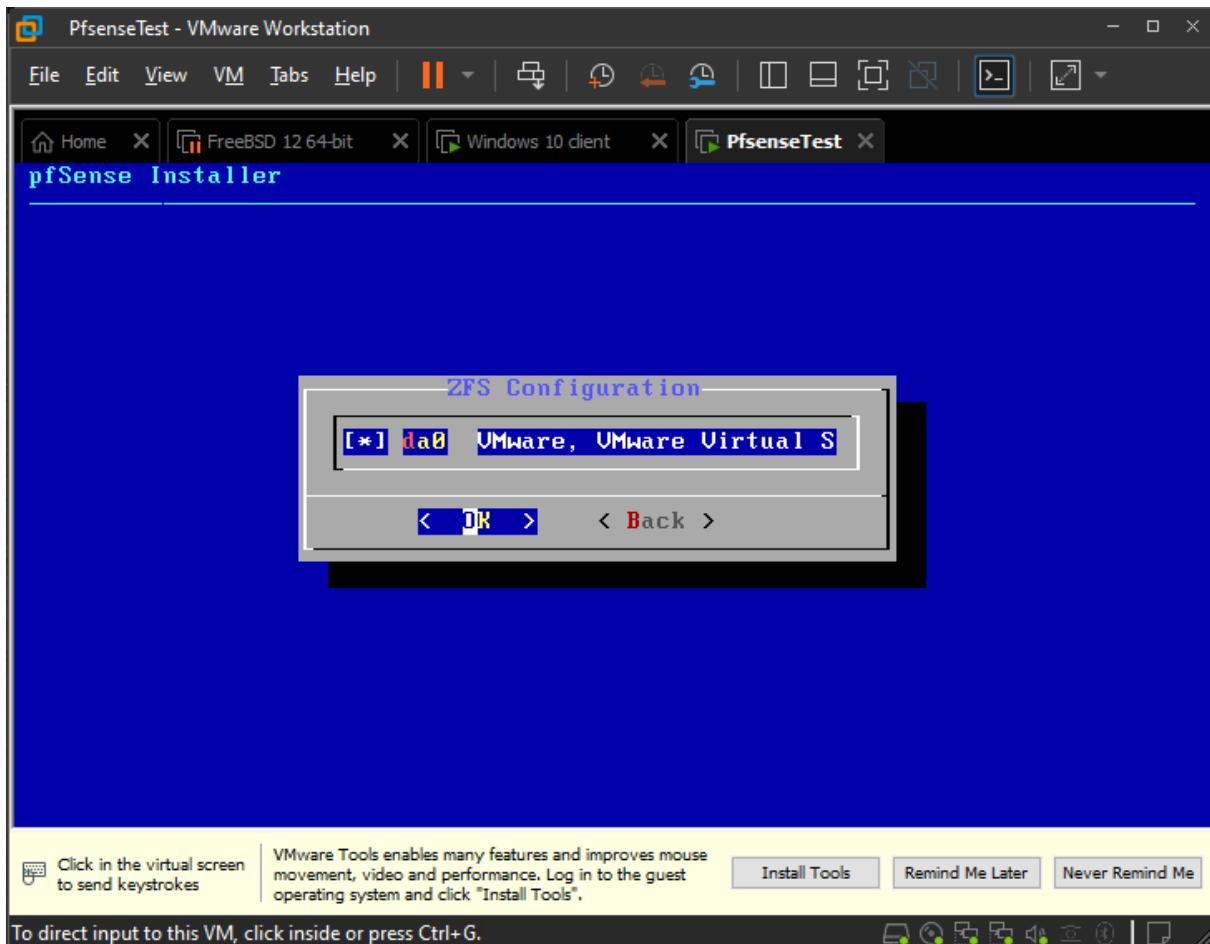
Il faudra appuyer sur "Espace" pour sélectionner et "Entrée" pour valider





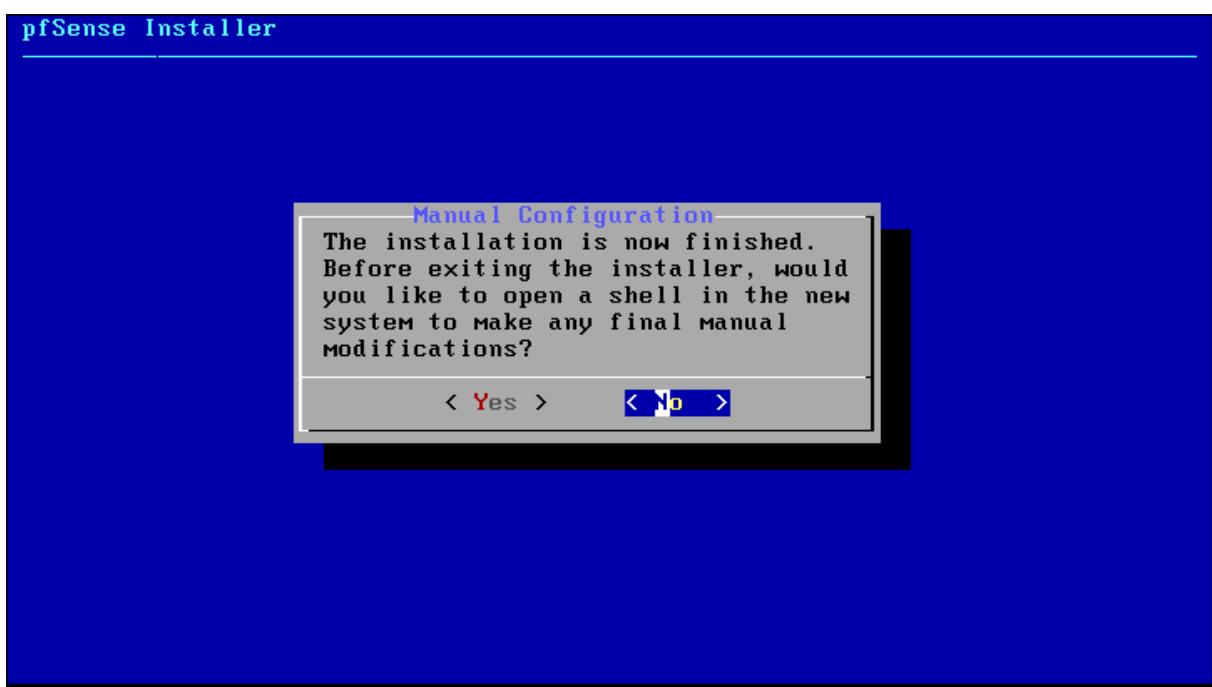
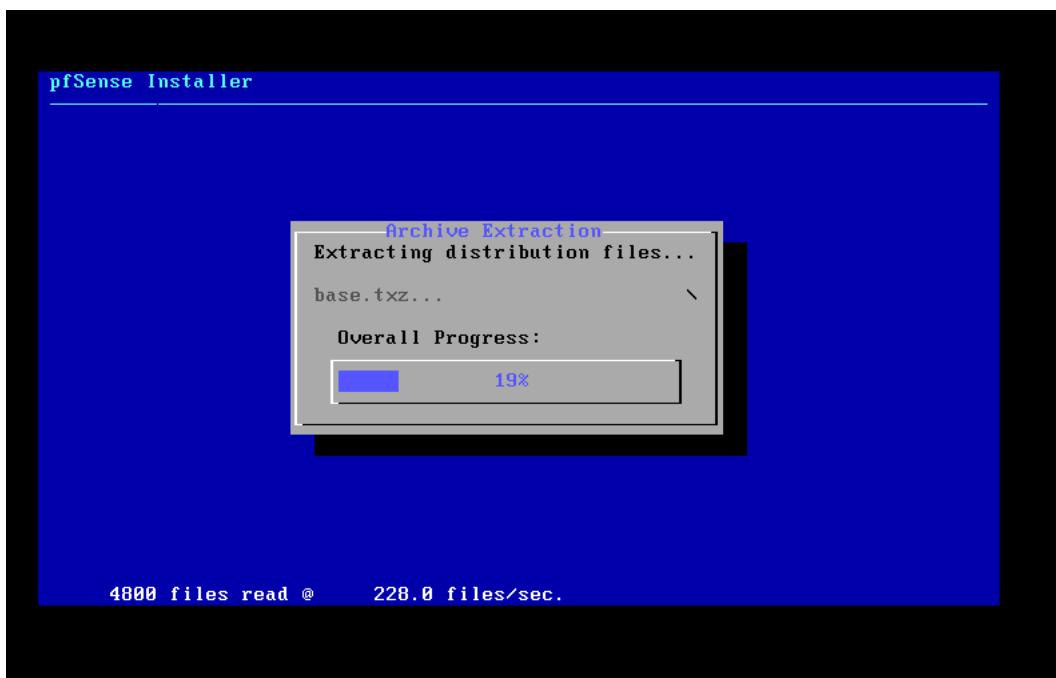




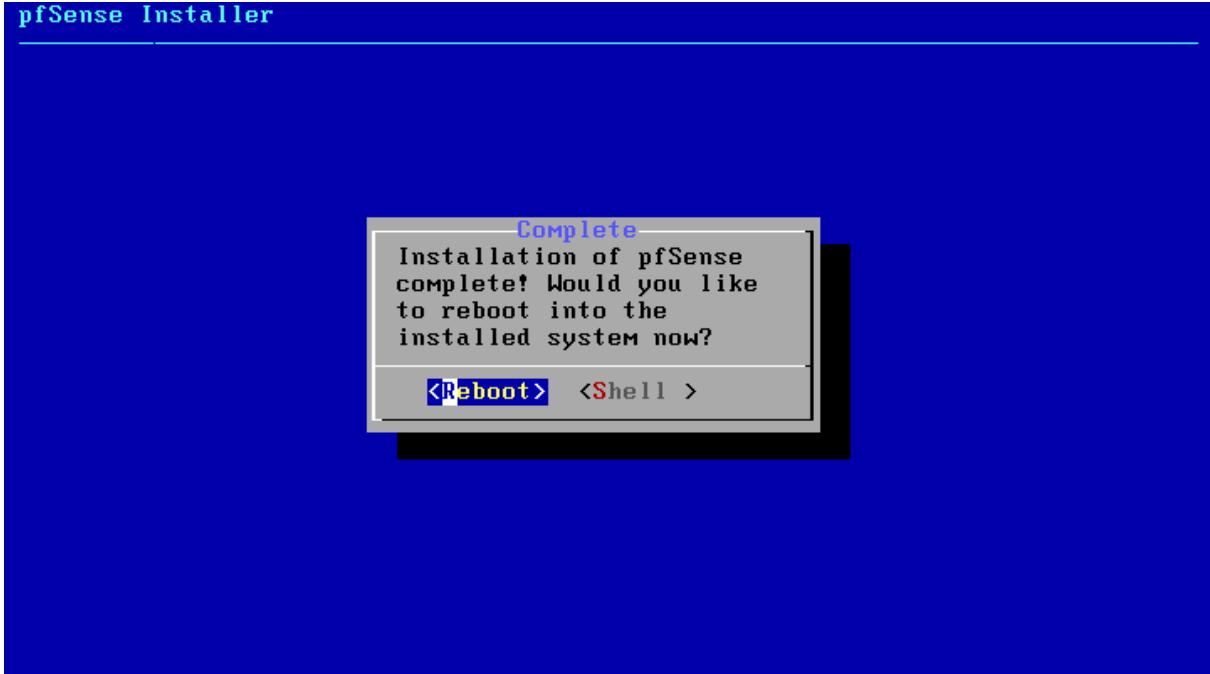


Choix langue

Puis choix par défaut

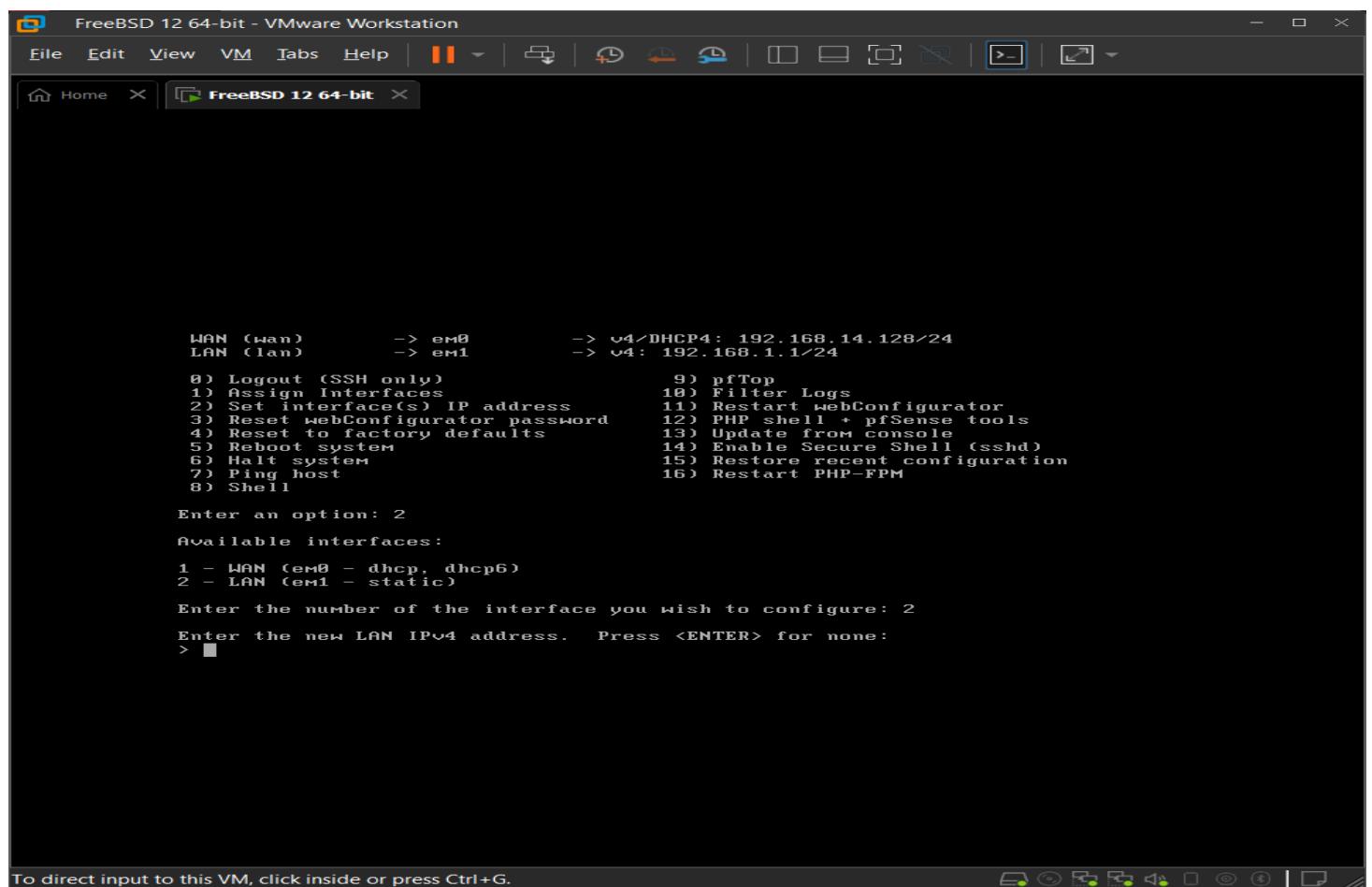


pfSense Installer



L'option 1) Assigne interfaces (Dire par exemple ma carte vmnet8 va correspondre à)

Mais nous allons choisir l'option 2 assigner adresse IP



FreeBSD 12 64-bit - VMware Workstation

File Edit View VM Tabs Help | || | | | | | | | | | | | | | | | |

Home FreeBSD 12 64-bit

```
WAN (wan)      -> em0      -> v4/DHCP4: 192.168.14.128/24
LAN (lan)      -> em1      -> v4: 192.168.1.1/24

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: 2

Available interfaces:
1 - WAN (em0 - dhcp, dhcp6)
2 - LAN (em1 - static)

Enter the number of the interface you wish to configure: 2

Enter the new LAN IPv4 address. Press <ENTER> for none:
> 192.168.1.254
```

To direct input to this VM, click inside or press Ctrl+G.

Je le mets en adresse de fin

FreeBSD 12 64-bit - VMware Workstation

File Edit View VM Tabs Help | || | | | | | | | | | | | |

Home FreeBSD 12 64-bit

8) Shell

```
Enter an option: 2
Available interfaces:
1 - WAN (em0 - dhcp, dhcp6)
2 - LAN (em1 - static)

Enter the number of the interface you wish to configure: 2
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 192.168.1.254

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:
> 
```

To direct input to this VM, click inside or press Ctrl+G.

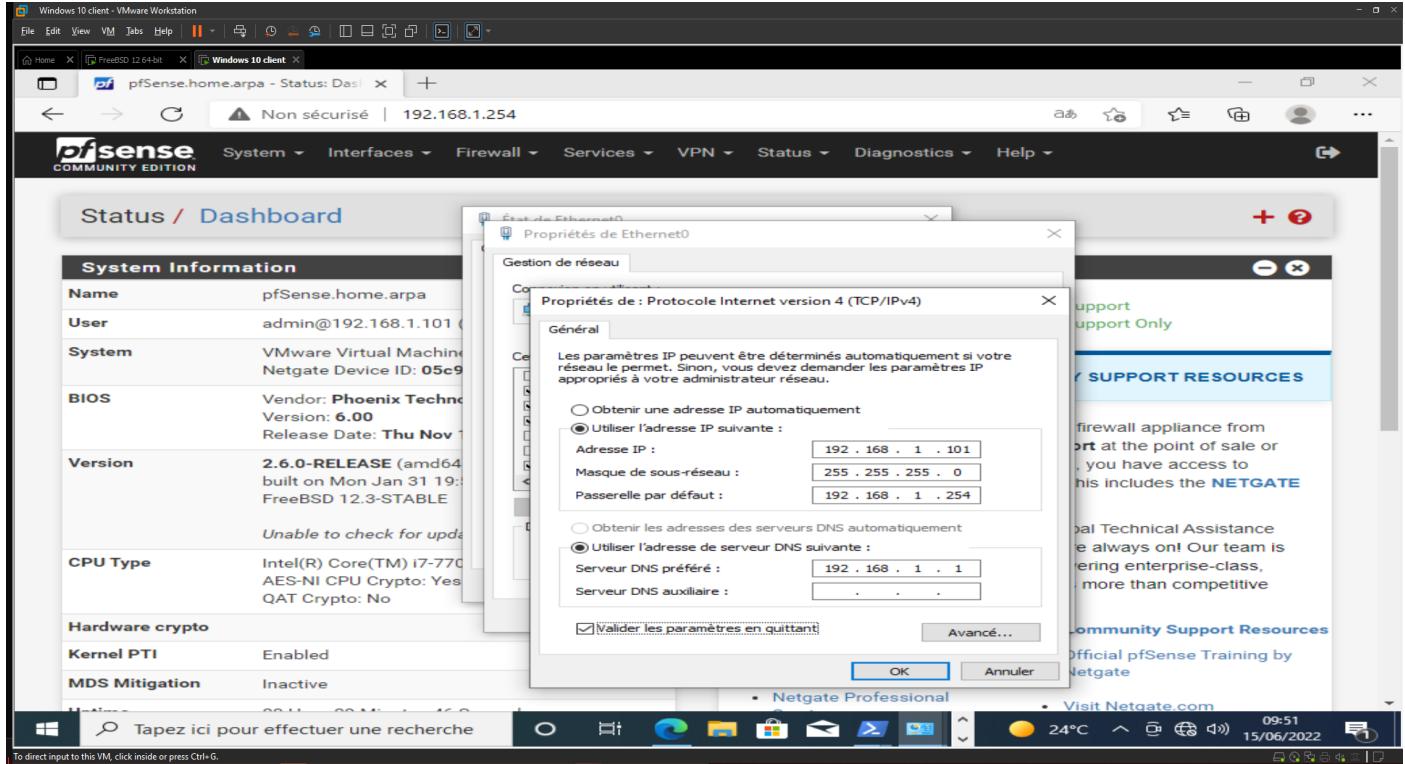
Puis Entrée

On voit bien que l'adresse IP (Lan) en haut correspond à celle configuré

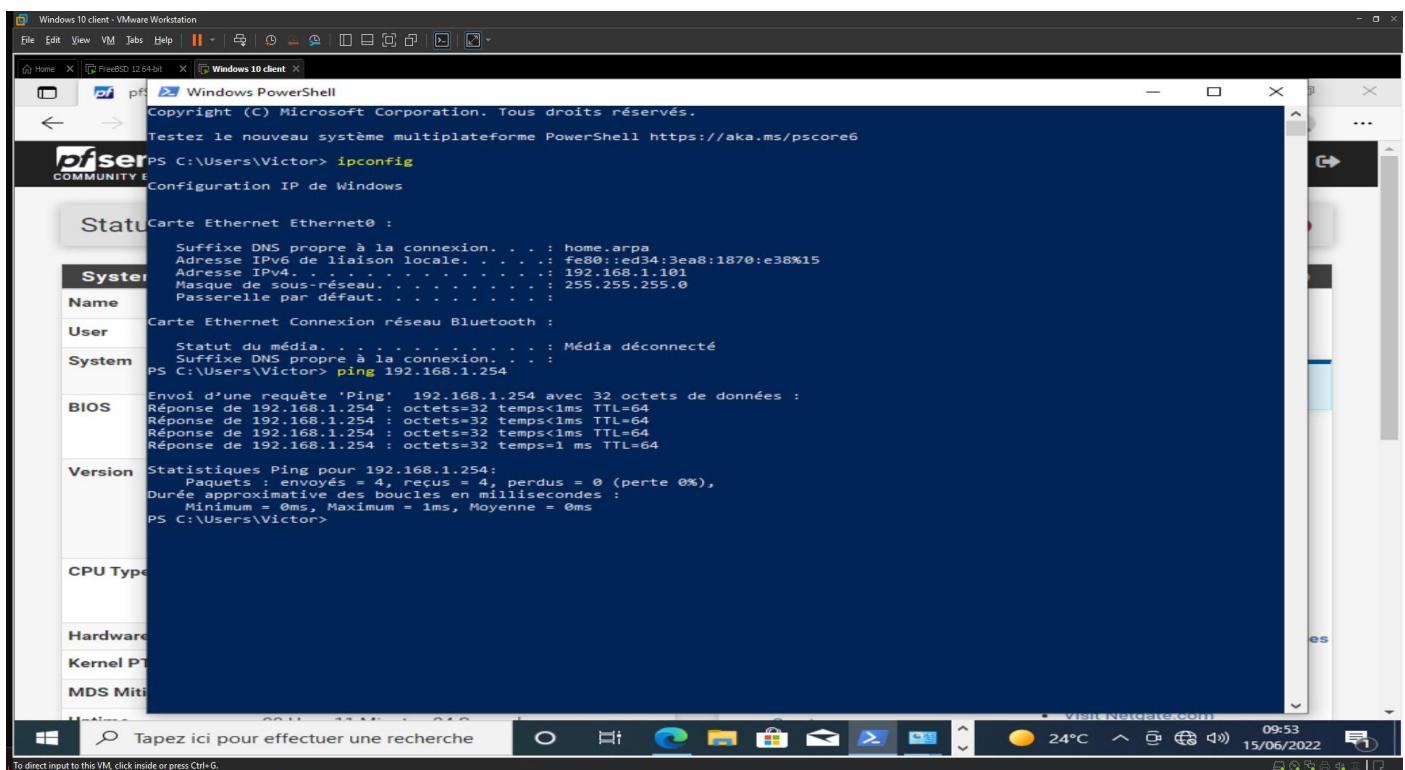
Maintenant nous allons passer à la création de l'.iso Windows 10

Pour la première connexion à l'interface du serveur PfSense Nous allons configurer en IP fix la carte réseau de la VM Windows dans le paramètre de "Connexions réseau". Par la suite nous pourrons y accéder en DHCP après des configuration sur l'interface Web de PfSense.

Mettre la VM Windows en IP fixe



Faire un ping vers le serveur afin de voir si les machines communiquent

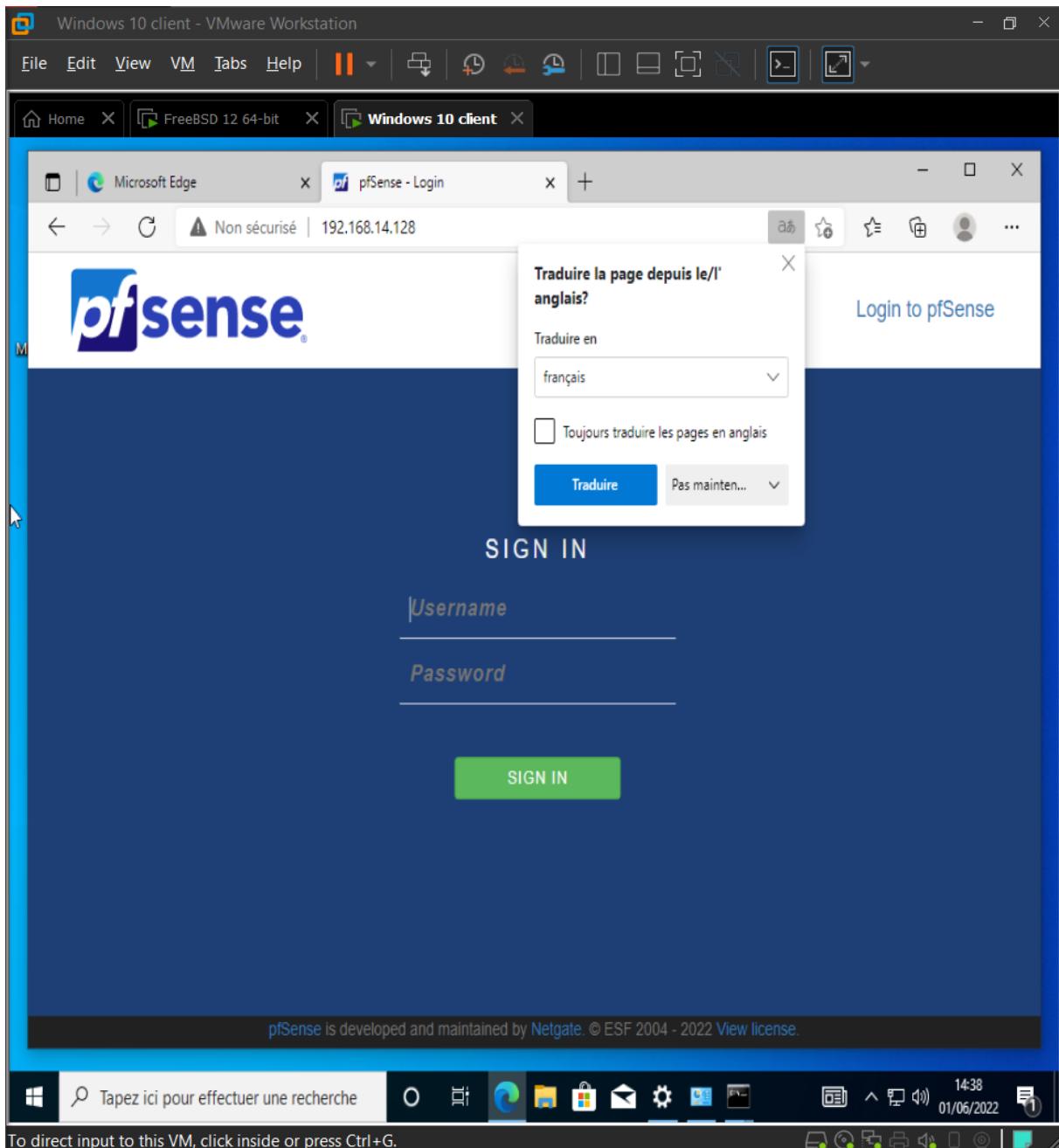


Par défaut l'Id et le Mtp de Pfsence sont les suivants. Nous pourrons les reconfigurer par la suite.

Login : admin

MdP : pfSense

New mtp pfSense



Maintenant nous allons configurer le serveur PfSense à fin d'y accéder avec la machine Windows même en DHCP

Dans les paramètres système sélectionner "General Setup"

The screenshot shows a Microsoft Edge browser window with the URL `192.168.14.128/wizard.php`. The page title is "pfSense Set". On the left, there's a sidebar with a "WARNING: The system is set to the default configuration" message. The main content area has a "System" dropdown menu open, listing various setup options: Advanced, Cert. Manager, General Setup, High Avail. Sync, Logout (admin), Package Manager, Register, Routing, Setup Wizard, Update, and User Manager. A large text block on the right discusses pfSense software and its development. At the bottom, there are "Learn more" and "» Next" buttons.

Microsoft Edge

Non sécurisé | 192.168.14.128/wizard.php

pfSense MUNITY EDITION

System ▾

Interfaces ▾

Firewall ▾

Servi

WARNING: The system is set to the default configuration

Wizard /

pfSense Set

Advanced

Cert. Manager

General Setup

High Avail. Sync

Logout (admin)

Package Manager

Register

Routing

Setup Wizard

Update

User Manager

pfSense® software provides guidance throughout the process. You can stop at any time. pfSense is developed and i

Learn more

» Next

Non sécurisé | 192.168.14.128/wizard.php?xml=setup_wizard.xml

Step 2 of 9

General Information

On this screen the general pfSense parameters will be set.

Hostname pfSense
EXAMPLE: myserver

Domain home.arpa
EXAMPLE: mydomain.com

The default behavior of the DNS Resolver will ignore manually configured DNS servers f servers directly. To use the manually configured DNS servers below for client queries, vi enable DNS Query Forwarding after completing the wizard.

Primary DNS Server 8.8.8.8

Secondary DNS Server

Override DNS Allow DNS servers to be overridden by DHCP/PPP on WAN

>> Next

A cette étape je configure juste le DNS 8.8.8.8 et le MTP

WINS servers

WINS Server 1

WINS Server 2

DNS servers

8.8.8.8

DNS Server 2

DNS Server 3

DNS Server 4

Leave blank to use the system default DNS servers: this interface's IP if DNS Forwarder or Res System / General Setup page.

API

OMAPI Port OMAPI Port
Set the port that OMAPI will listen on. The default port is 7911, leave blank to disable. Only the

OMAPI Key OMAPI Key Generate New
Enter a key matching the selected algorithm to secure connections to the OMAPI endpoint. Generate a new on the selected

Key Algorithm HMAC-SHA256 (current bind9 default)
Set the algorithm that OMAPI key will use.

Router Options

Gateway

Puis il faut se rendre dans Services / DHCP Serve / LAN et configurer de la manière suivante

The screenshot shows the LAN configuration interface. In the General Options section, 'Enable' is checked, and 'Allow all clients' is selected under 'Deny unknown clients'. The subnet is set to 192.168.1.0 with a mask of 255.255.255.0, and the available range is 192.168.1.1 - 192.168.1.254. In the Additional Pools section, there is a green 'Add pool' button.

Puis il faut relancer la machine Diagnostics / Reboot option (normal reboot)

The screenshot shows the LAN configuration interface. In the General Options section, 'Enable' is checked, and 'Allow all clients' is selected under 'Deny unknown clients'. The subnet is set to 192.168.1.0 with a mask of 255.255.255.0, and the available range is 192.168.1.1 - 192.168.1.254. In the Additional Pools section, there is a green 'Add pool' button. A vertical sidebar on the right lists various services: DNS Resolver, Filter Reload, Gateways, Interfaces, IPsec, Monitoring, NTP, OpenVPN, Queues, Services (with a small arrow pointing to it), System Logs, Traffic Graph, and UPnP & NAT-PMP.

Maintenant on peut se remettre en DHCP et se reconnecter à la machine Pfsense.

Si on arrive à aller sur Pfsense sur google avec l'IP de la machine Pfsense alors que je suis en DHCP alors ça fonctionne.

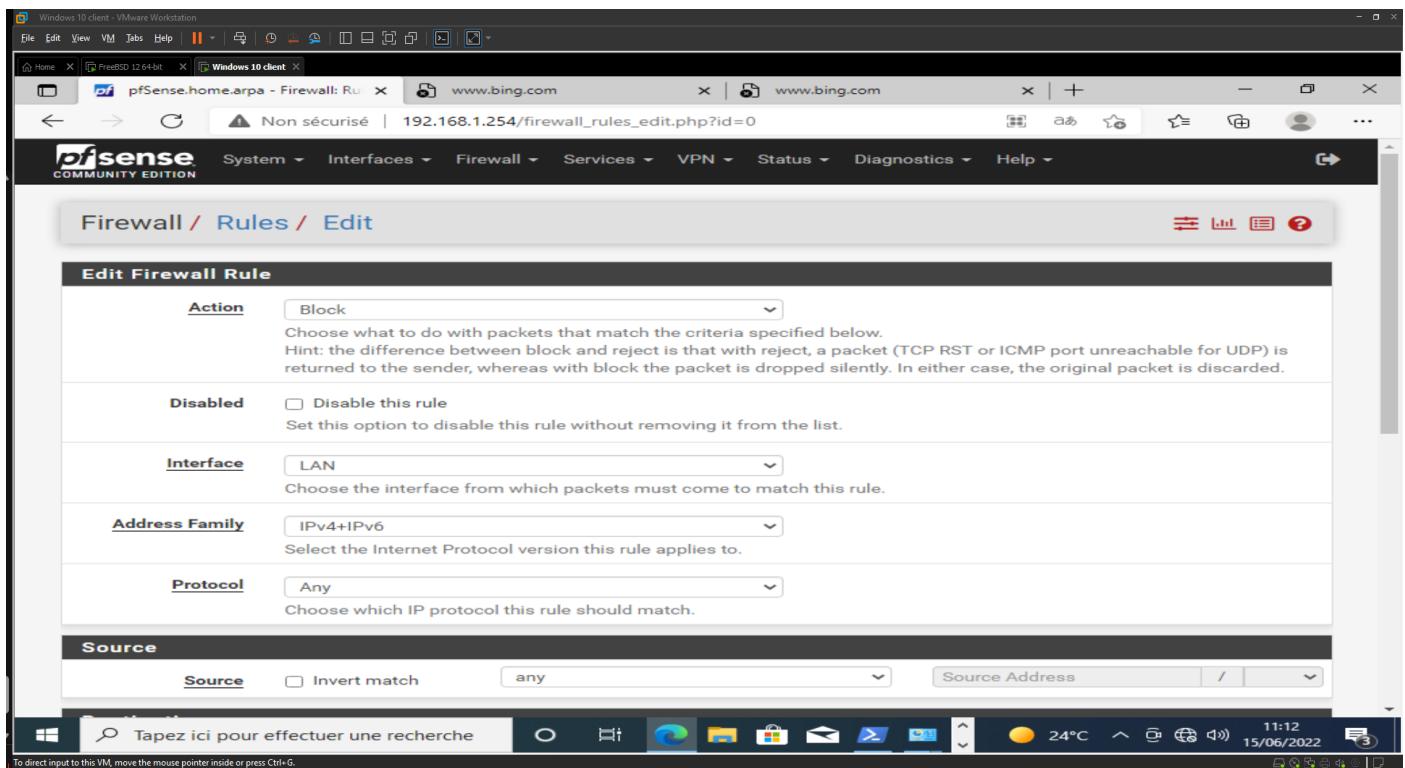
Maintenant nous allons empêcher mettre un firewall qui empêche notre PC d'accéder à internet

Filtrage : “Deny all”

Rendez-vous



Puis entrez les paramètres suivants



Windows 10 client - VMware Workstation

File Edit View VM Help || |

Windows 10 client

Non sécurisé | 192.168.1.254/firewall_rules_edit.php?id=0

Protocol Any

Choose which IP protocol this rule should match.

Source

Source Invert match any Source Address /

Destination

Destination Invert match any Destination Address /

Extra Options

Log Log packets that are handled by this rule
Hint: the firewall has limited local log space. Don't turn on logging for everything. If doing a lot of logging, consider using a remote syslog server (see the Status: System Logs: Settings page).

Description deny all rule
A description may be entered here for administrative reference. A maximum of 52 characters will be used in the ruleset and displayed in the firewall log.

Advanced Options [Display Advanced](#)

Rule Information

Tracking ID	1655282943
Created	6/15/22 10:49:03 by admin@192.168.1.101 (Local Database)
Updated	6/15/22 11:04:24 by admin@192.168.1.101 (Local Database)

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

Windows 10 client - VMware Workstation

File Edit View VM Help || |

Windows 10 client

Non sécurisé | 192.168.1.254/firewall_rules_edit.php?id=0

Destination

Destination Invert match any Destination Address /

Extra Options

Log Log packets that are handled by this rule
Hint: the firewall has limited local log space. Don't turn on logging for everything. If doing a lot of logging, consider using a remote syslog server (see the Status: System Logs: Settings page).

Description deny all rule
A description may be entered here for administrative reference. A maximum of 52 characters will be used in the ruleset and displayed in the firewall log.

Advanced Options [Display Advanced](#)

Rule Information

Tracking ID	1655282943
Created	6/15/22 10:49:03 by admin@192.168.1.101 (Local Database)
Updated	6/15/22 11:04:24 by admin@192.168.1.101 (Local Database)

[Save](#)

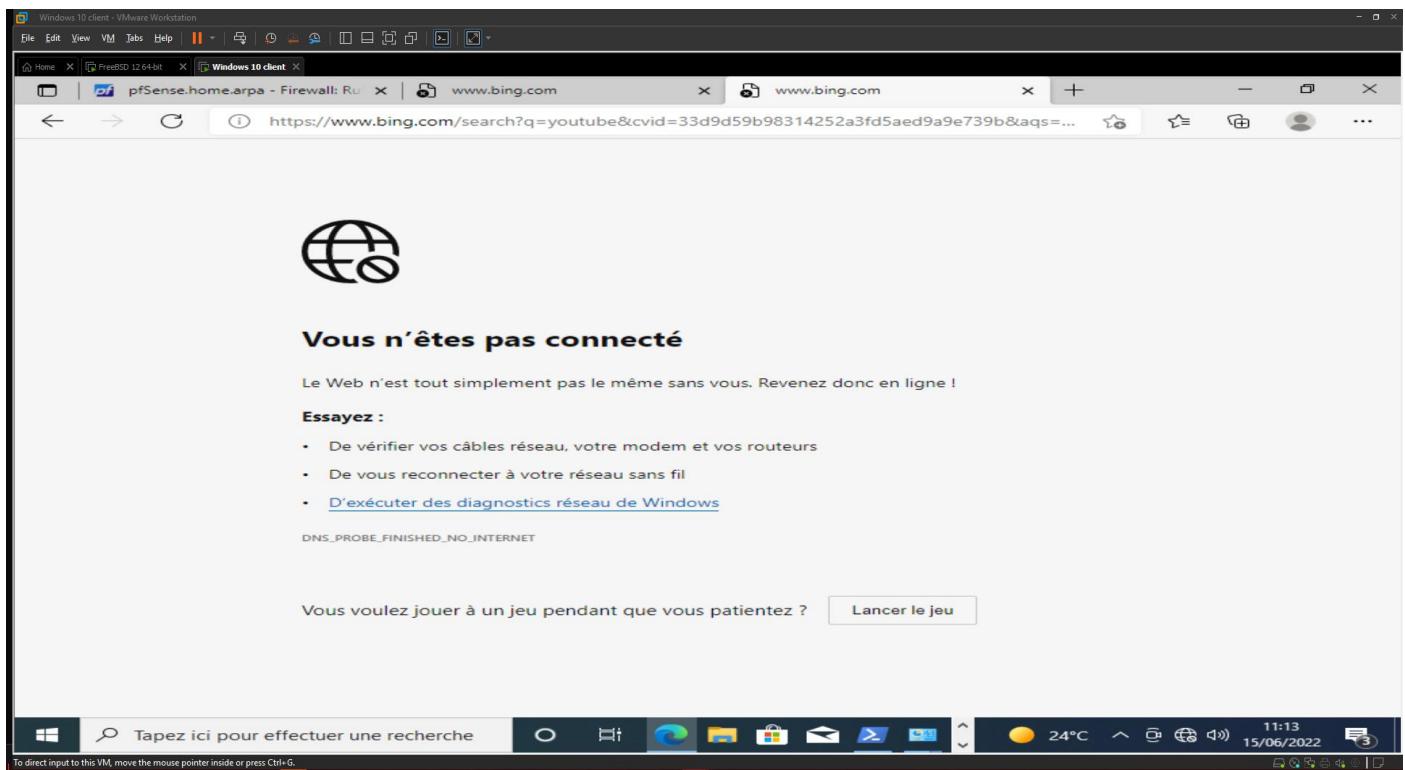
pfSense is developed and maintained by Netgate. © ESF 2004 - 2022 [View license](#).

Tapez ici pour effectuer une recherche

24°C 11:12 15/06/2022

Puis sauvegarder

Mainbtenant on peut relancer la machine et faire une recherche google si ça ne fonbctionne pas c'est que l'opération s'est bien déroulée



Filtrage : “Internet”

Dans cette partie nous allons faire une exception et permettre à Windows d'effectuer des recherches sur le web

Nous allons commencer par créer un Aliases des ports qui permettent d'accéder à internet

The screenshot shows the pfSense Firewall / Aliases / Ports configuration page. The interface includes a navigation bar with links for System, Interfaces, Firewall, Services, VPN, Status, Diagnostics, and Help. The main content area is titled "Firewall / Aliases / Ports" and shows a table of aliases:

Name	Values	Description	Actions
DenyPortInternet	80, 53, 443		

Below the table are buttons for "Add" and "Import". The pfSense footer at the bottom of the screen indicates it is developed and maintained by Netgate, with a copyright notice from 2004-2022 and a link to the View license. The Windows taskbar at the very bottom is identical to the one in the first screenshot.

The screenshot shows the pfSense Firewall Aliases Edit page. The alias 'DenyPortInternet' is selected. The 'Properties' section includes fields for Name (DenyPortInternet), Description (empty), and Type (Port(s)). The 'Port(s)' section lists ports 80, 53, and 443 with their respective entry dates. At the bottom are Save, Export to file, and Add Port buttons.

Port	Entry added	Action
80	Wed, 15 Jun 2022 13:38:07 +0200	Delete
53	Wed, 15 Jun 2022 13:38:08 +0200	Delete
443	Wed, 15 Jun 2022 13:38:08 +0200	Delete

The screenshot shows the pfSense Firewall: Aliases / Ports configuration page. At the top, there is a message: "The alias list has been changed. The changes must be applied for them to take effect." with a green "Apply Changes" button. Below this, there are tabs for IP, Ports (which is selected), URLs, and All. A table lists a single port alias: DenyPortInternet with values 80, 53, 443. At the bottom, there are "Add" and "Import" buttons.

Name	Values	Description	Actions
DenyPortInternet	80, 53, 443		Edit Import Delete

Affichage de la page d'accueil de YouTube dans un navigateur web. Le menu latéral gauche montre les options Accueil, Explorer, Shorts, Abonnements et Bibliothèque. La barre d'outils comprend une recherche, un microphone, un filtre et un bouton "SE CONNECTER".

Le contenu principal affiche une offre pour YouTube Music avec le titre "Une écoute sans pub avec Music Premium" et un bouton "S'ABONNER".

En bas à gauche, une fenêtre pop-up informe sur l'utilisation de Google Chrome pour regarder des vidéos YouTube, avec des boutons "FERMER" et "ESSAYER".

À droite, une vidéo en cours de lecture montre trois personnes tenant des pancartes avec les chiffres 4, 2 et "COMBIEN JE VEUX D'ENFANTS ?" avec une durée de 14:24.