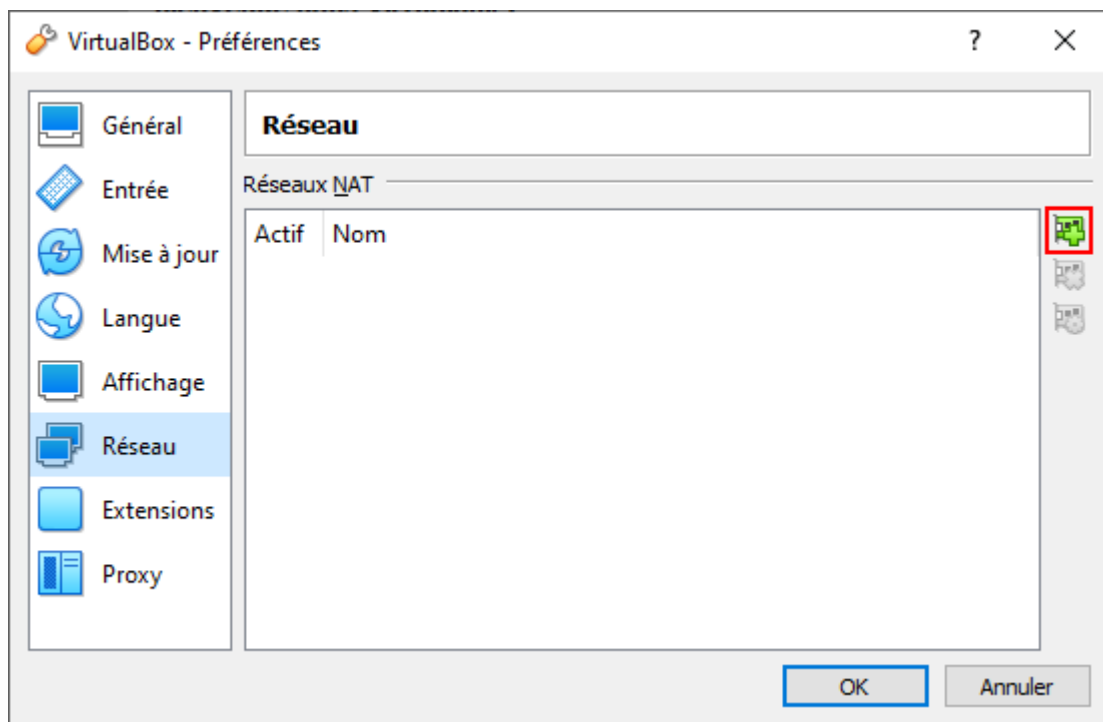
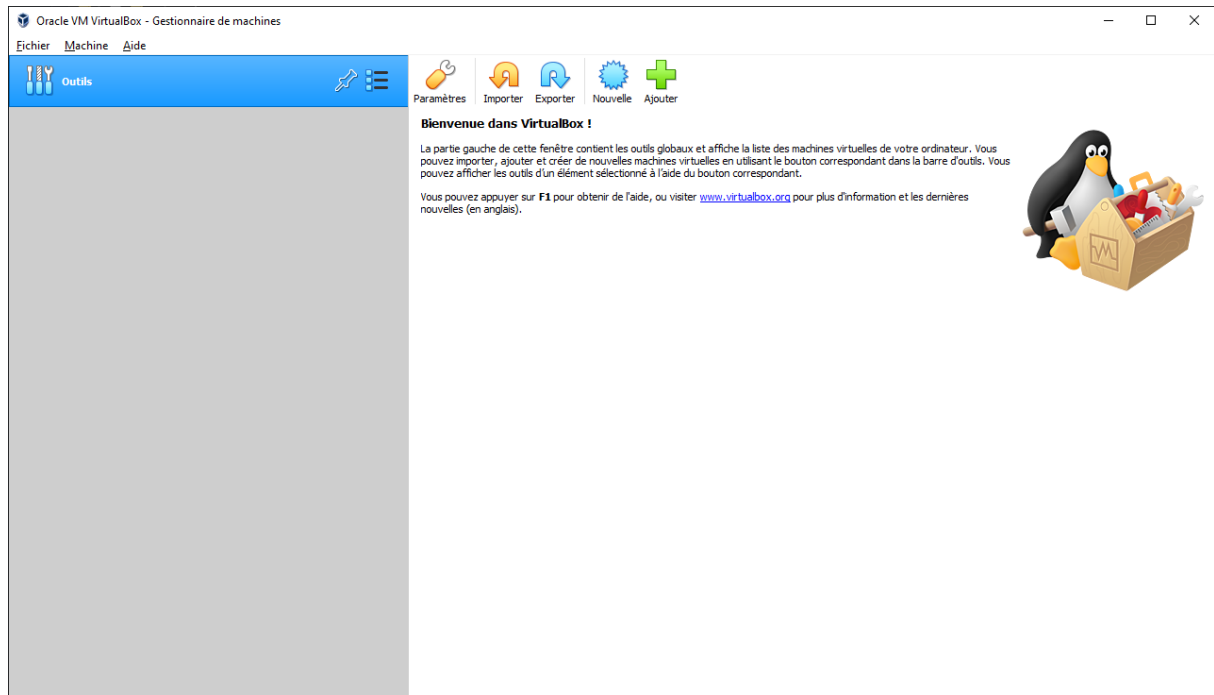


Document d'installation

Doc de l'installation et de la configuration pour la sécurisation du projet GIT, le doc est séparé en différentes parties.

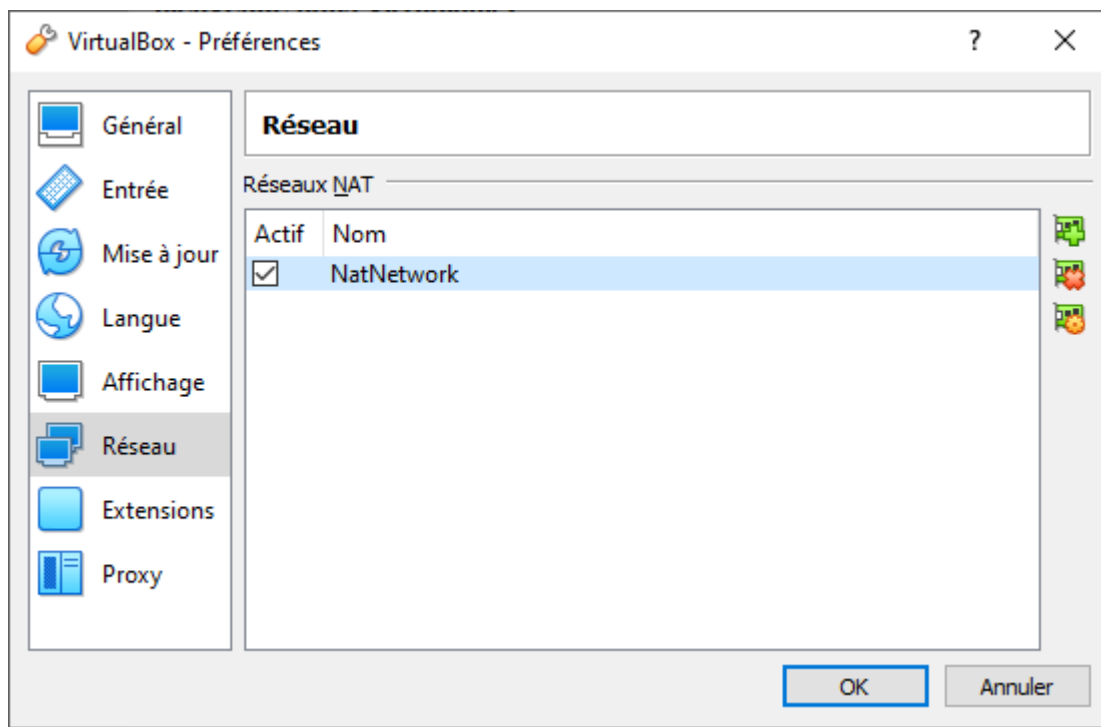
- Création de la carte réseau virtuel
- Installation PFSense sur la Vm
- Configuration de PFSense sur la VM
- Configuration Web PFSensesur la VM
- Installation de Git sur la VM

Création de la carte réseau virtuel

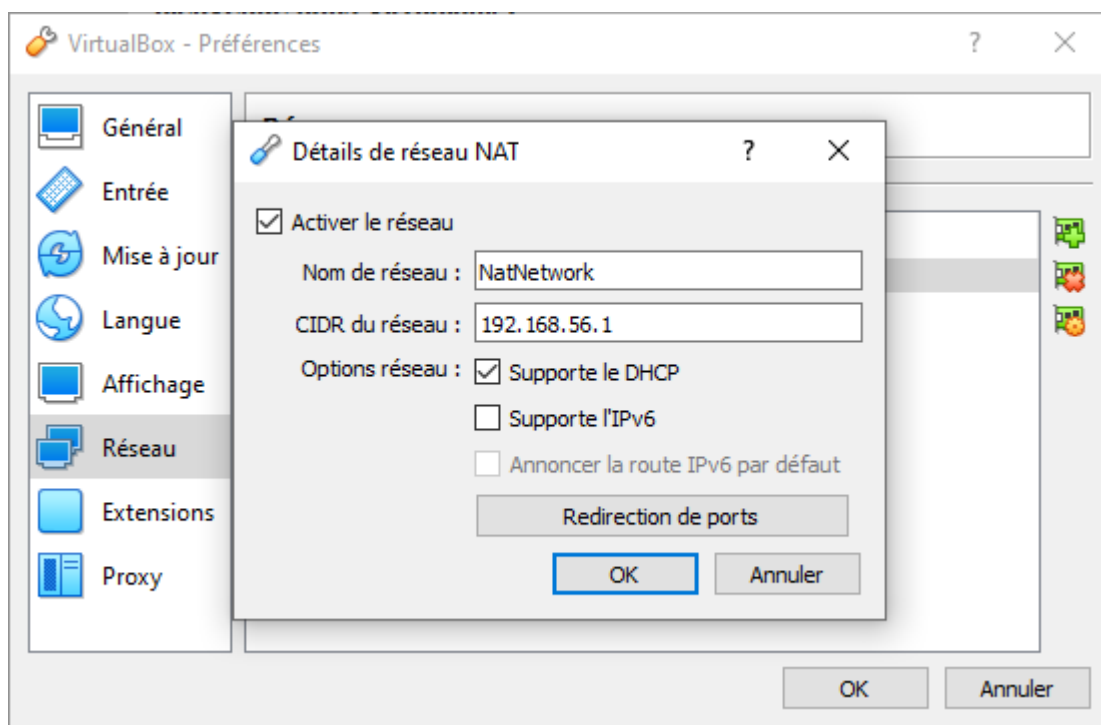


Pour ajouter une carte réseau il faut aller dans fichier > paramètres > réseau.

Cliquez sur ajouter un réseau NAT.

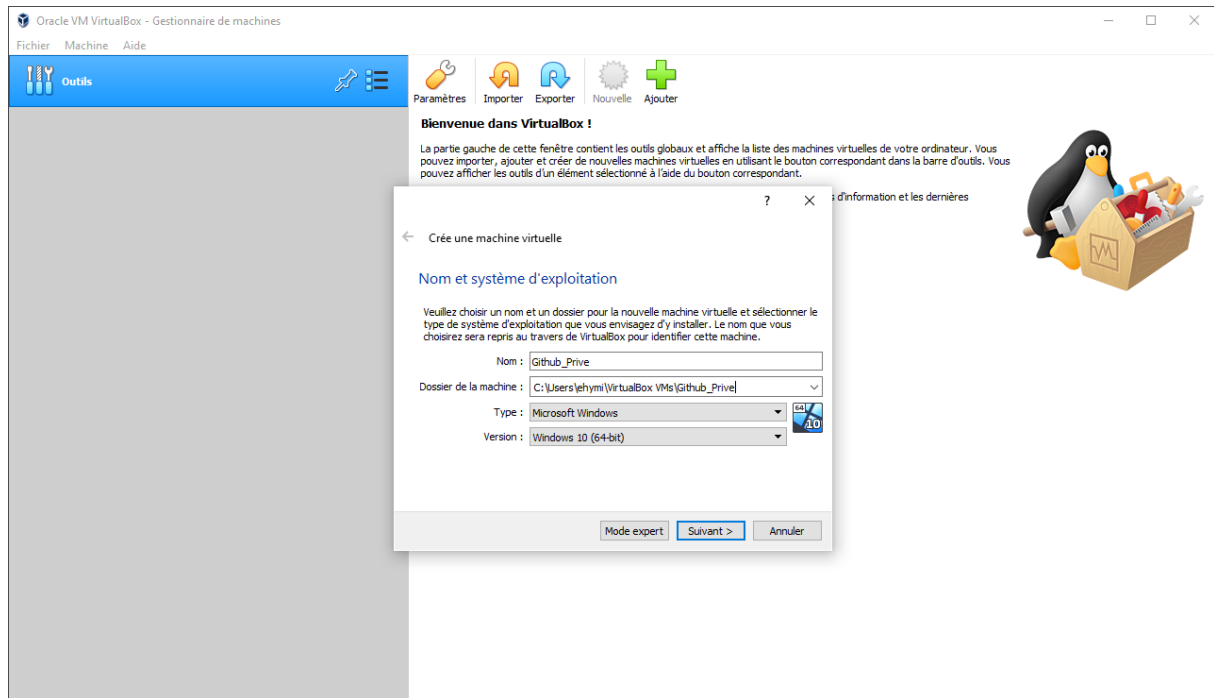


Cliquez sur édite le réseau NAT.

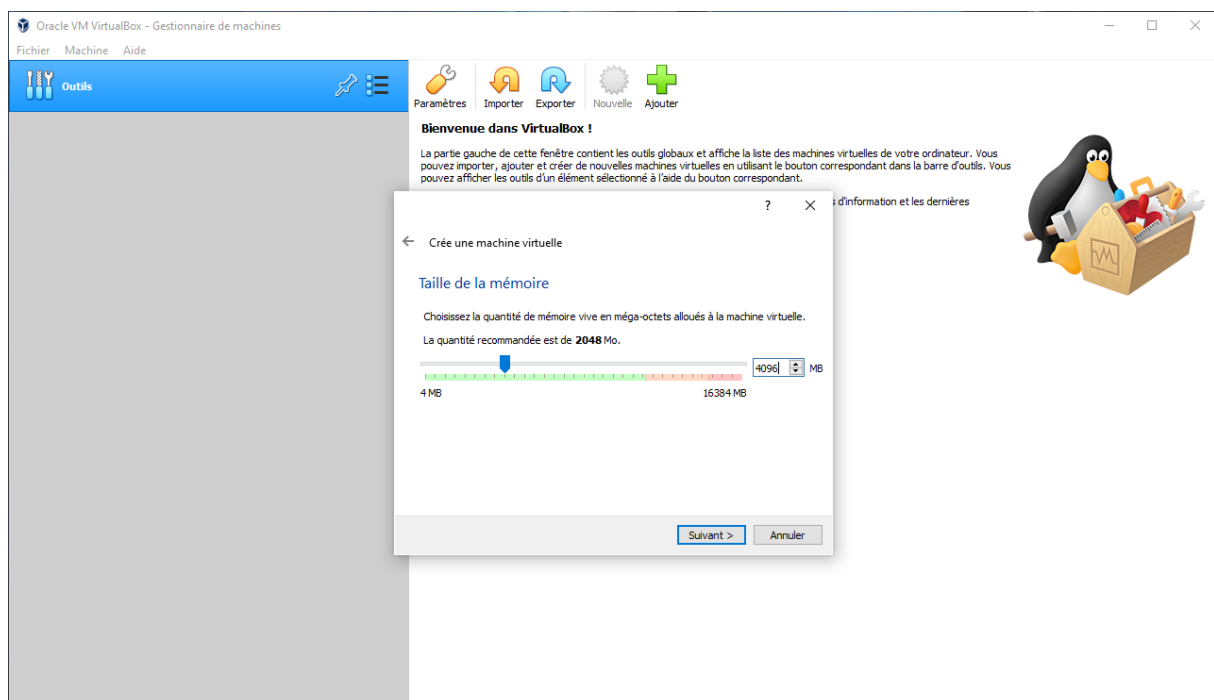


J'ai modifié le CIDR du réseau en : 192.168.56.1

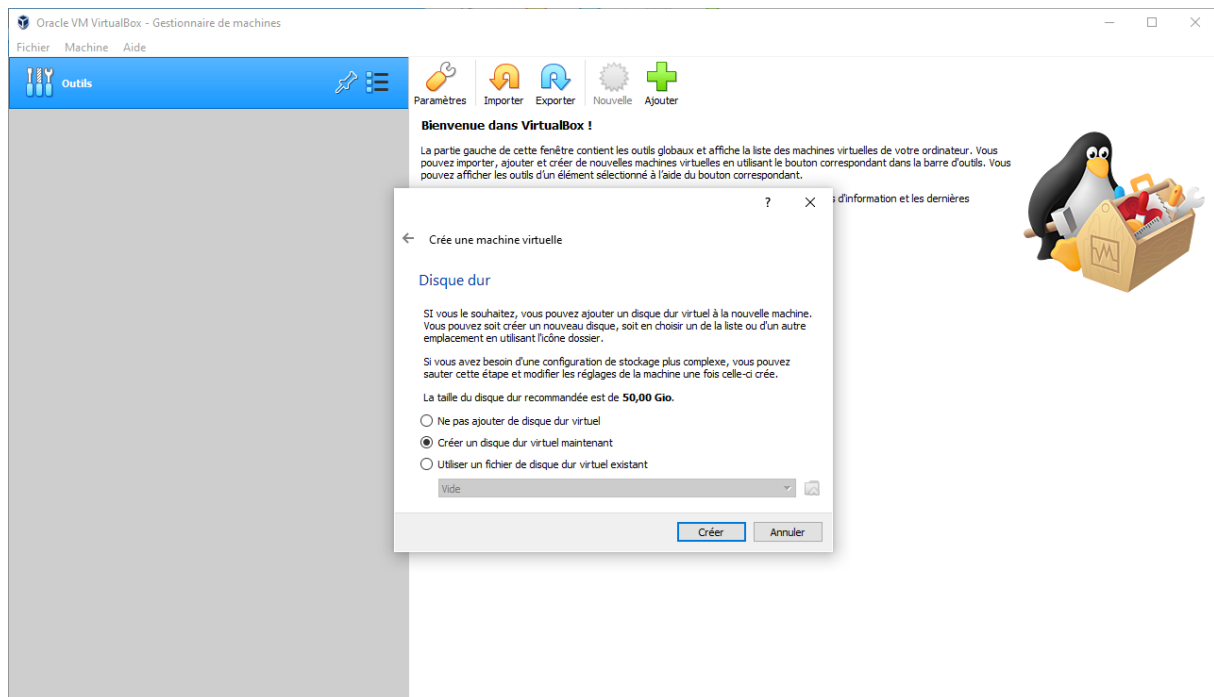
Installation de la machine virtuelle Windows 10



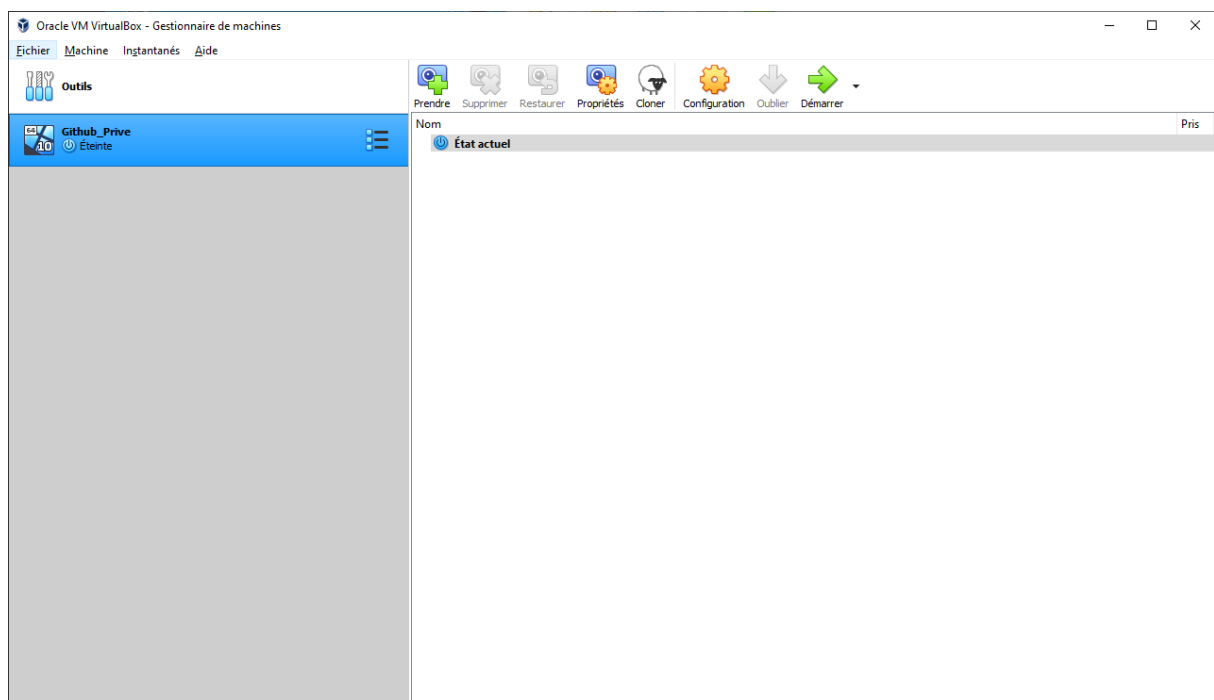
Pour créer une VM je clique sur « Nouvelle », J'ai choisi le nom de la VM « Github_Prive » ainsi que j'ai choisi le type et la version de la machine.



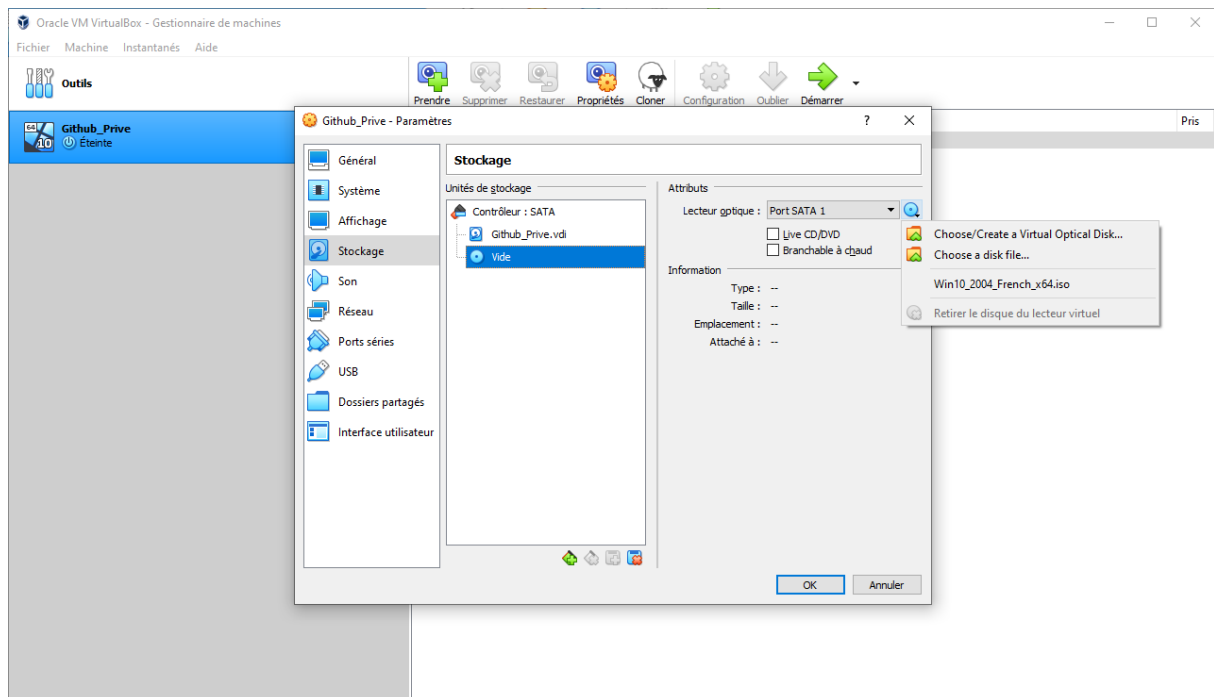
J'ai choisi de mettre 4 Go de ram sur la VM



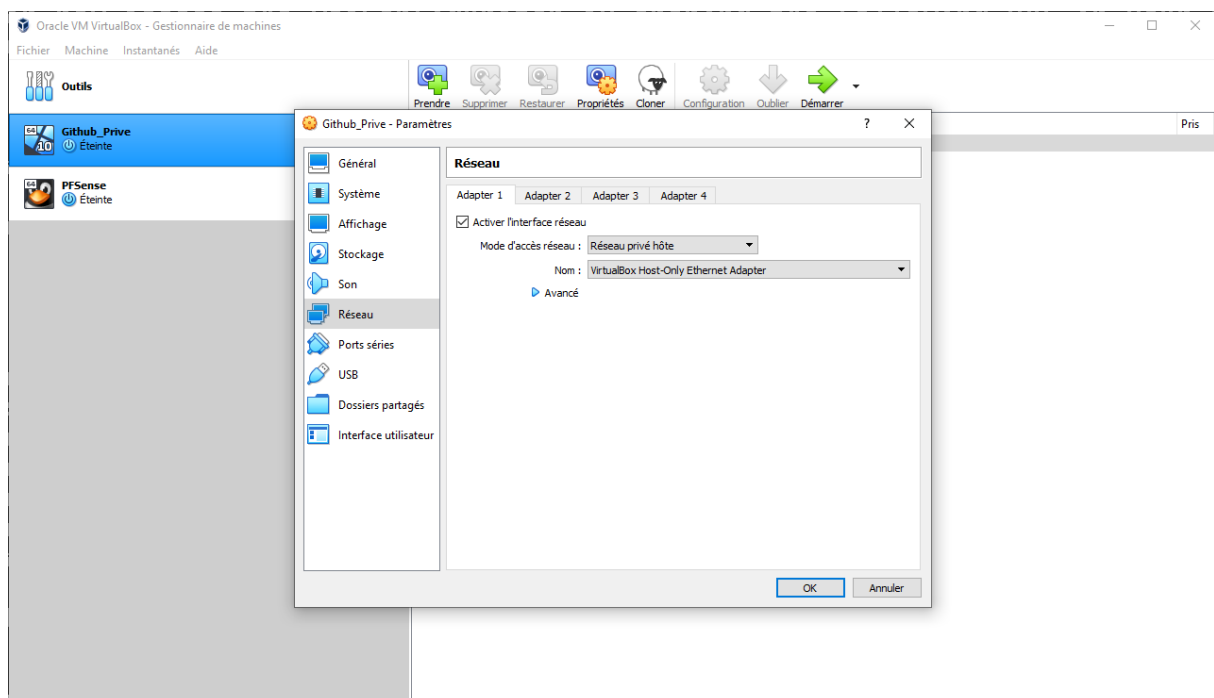
En stockage j'ai laissé la valeur par défaut qui est 50 Go.



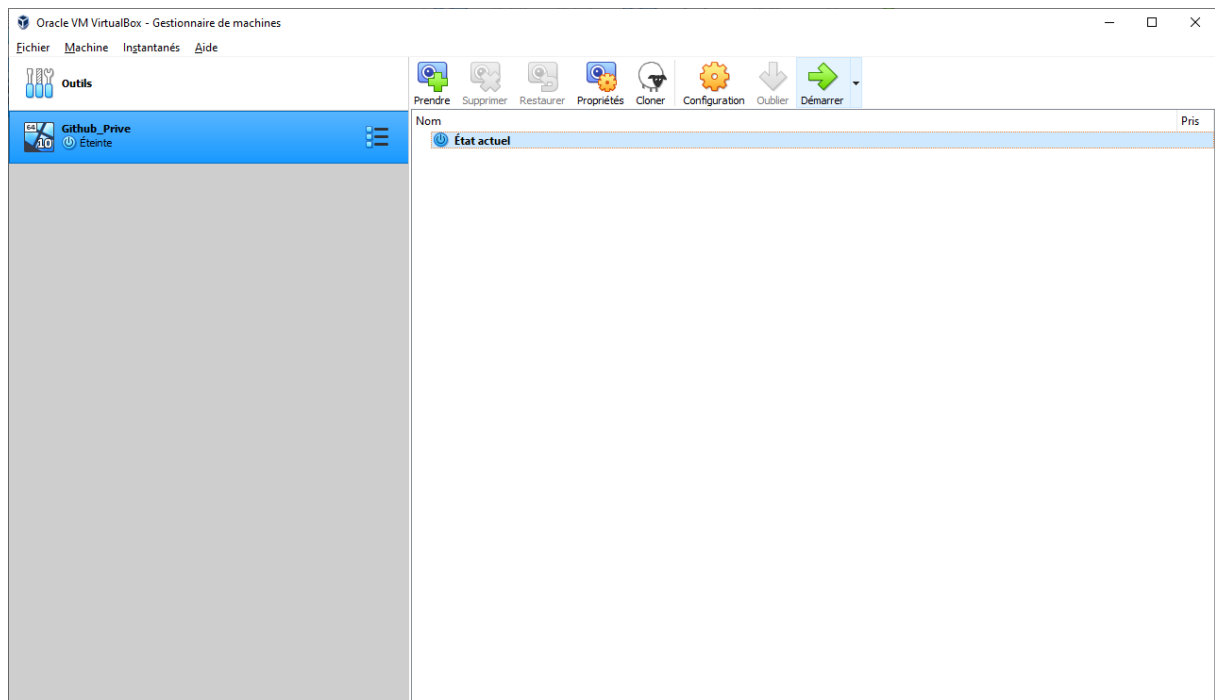
La machine est configurée il ne reste plus qu'à choisir iso de Windows 10.



Pour ajouter l'iso de Windows 10 que j'ai au préalable téléchargé, il suffit d'aller dans Configuration > stockage > disque vide > choisir Win10_2004.

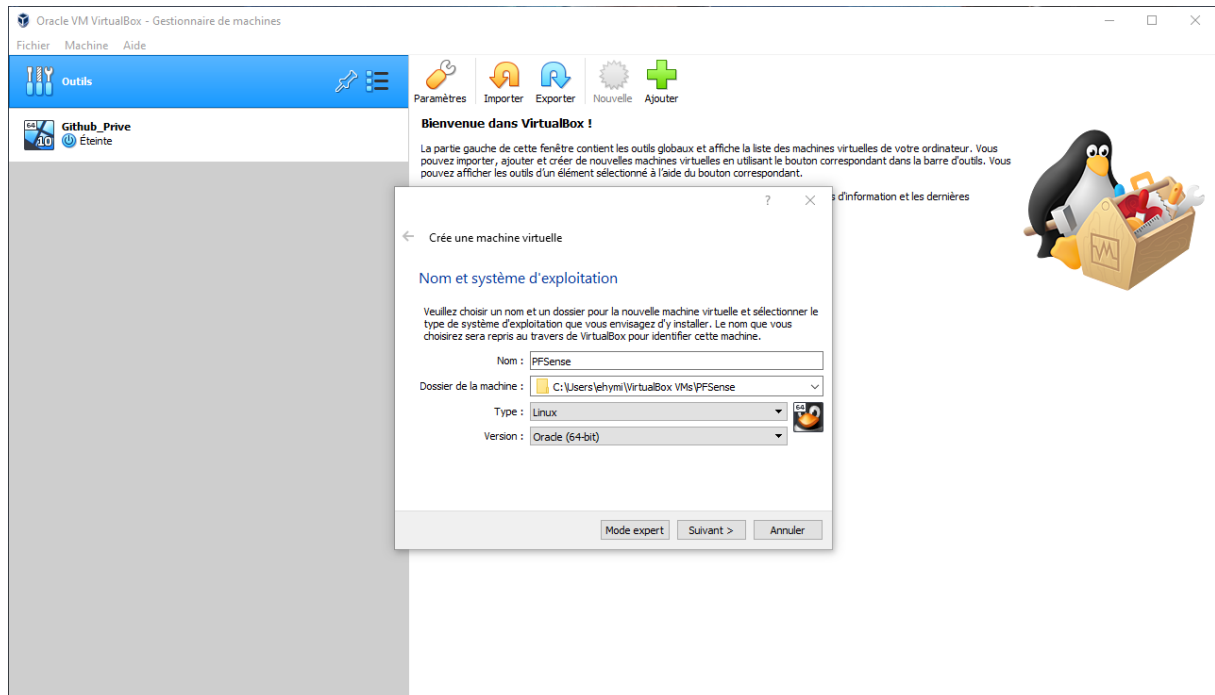


Il nous faut rajouter la carte réseau que l'on a créé juste avant.

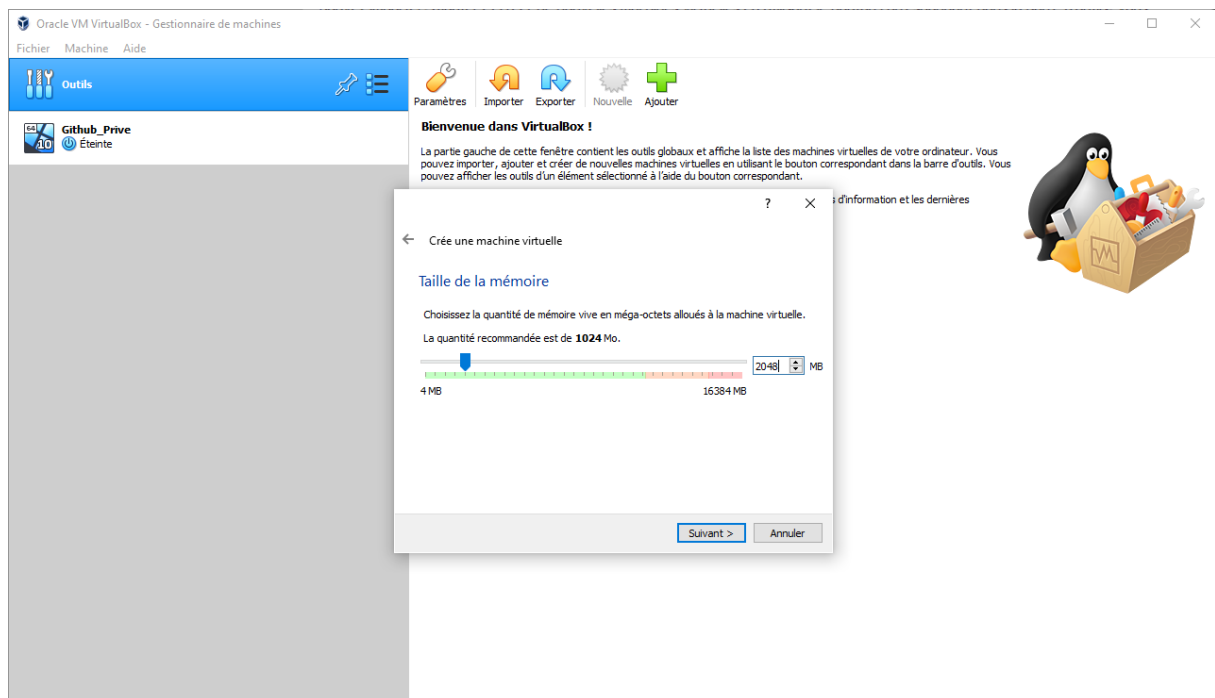


On peut lancer la machine virtuelle et commencer l'installation de Windows 10.

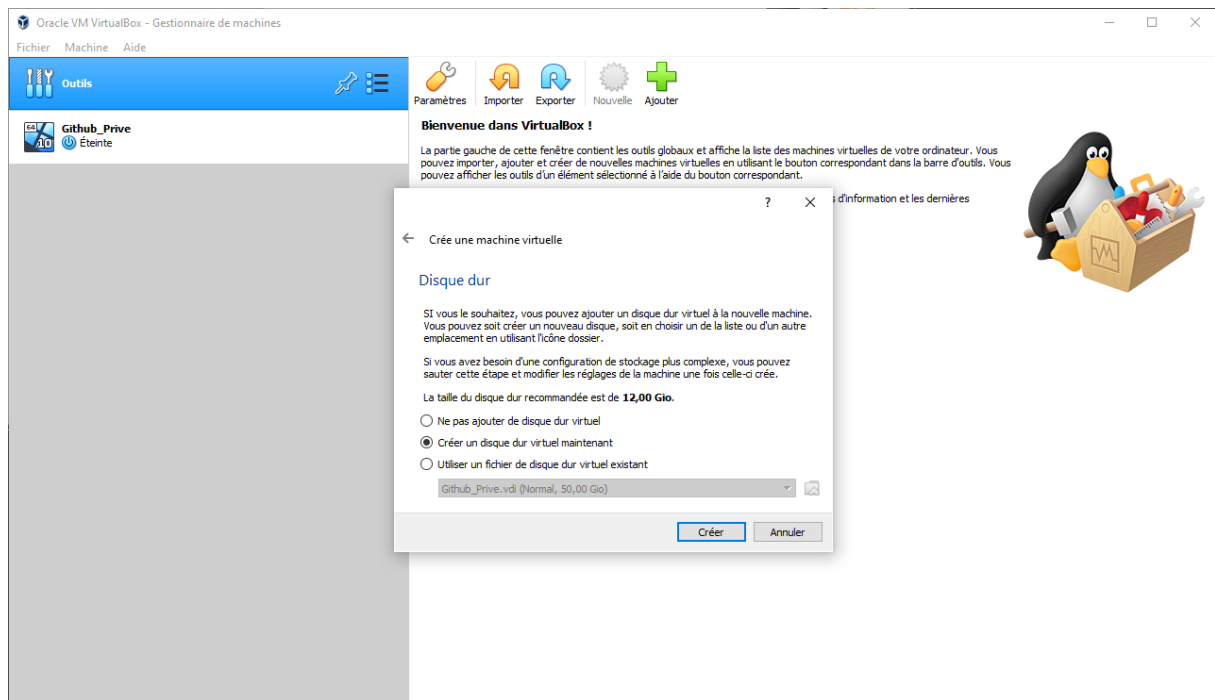
Installation de la machine virtuel PFSense



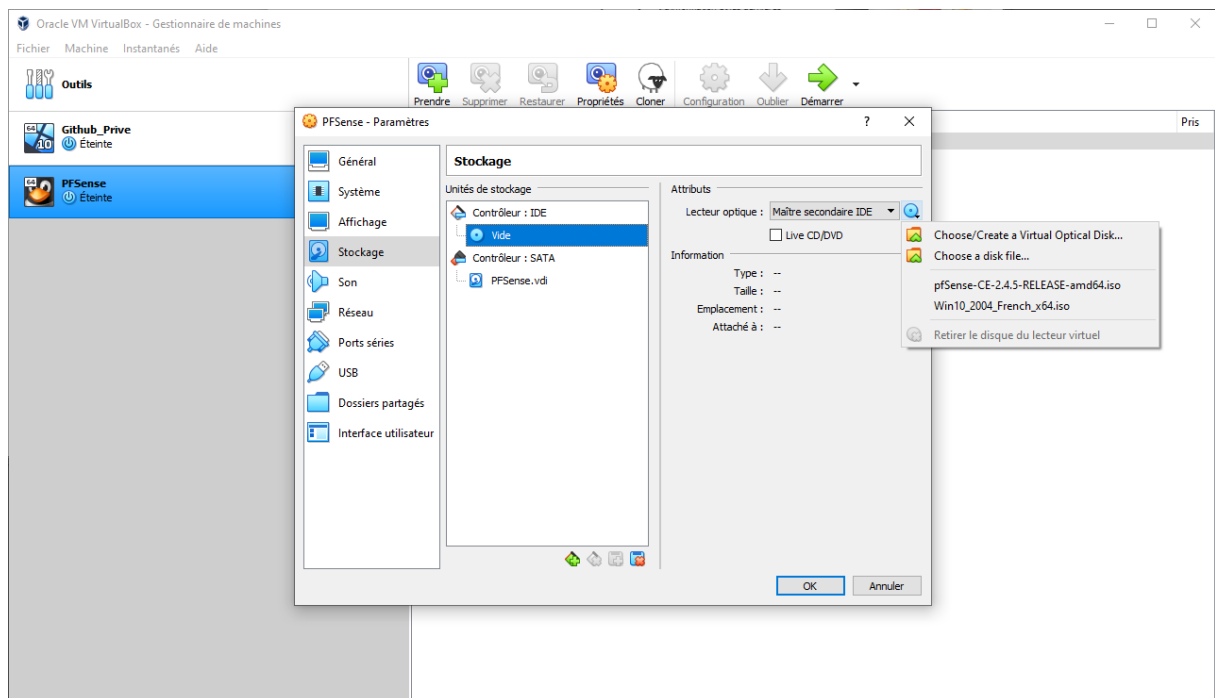
Comme pour la VM de Windows 10 je clique sur « Nouvelle », J'ai choisi le nom « PFSense » ainsi que j'ai choisi le type et la version de la machine.



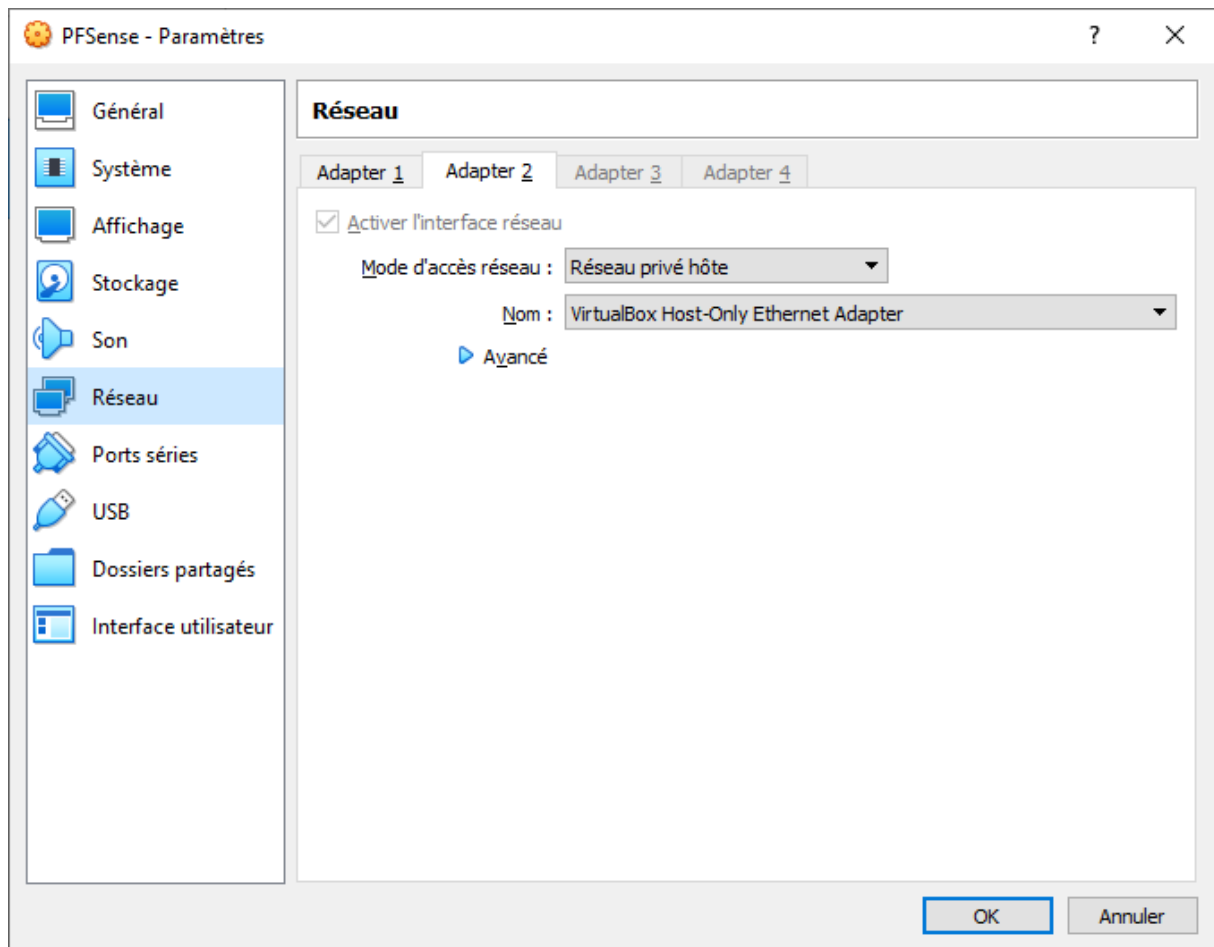
Je laisse par défaut les 2 Go de ram.



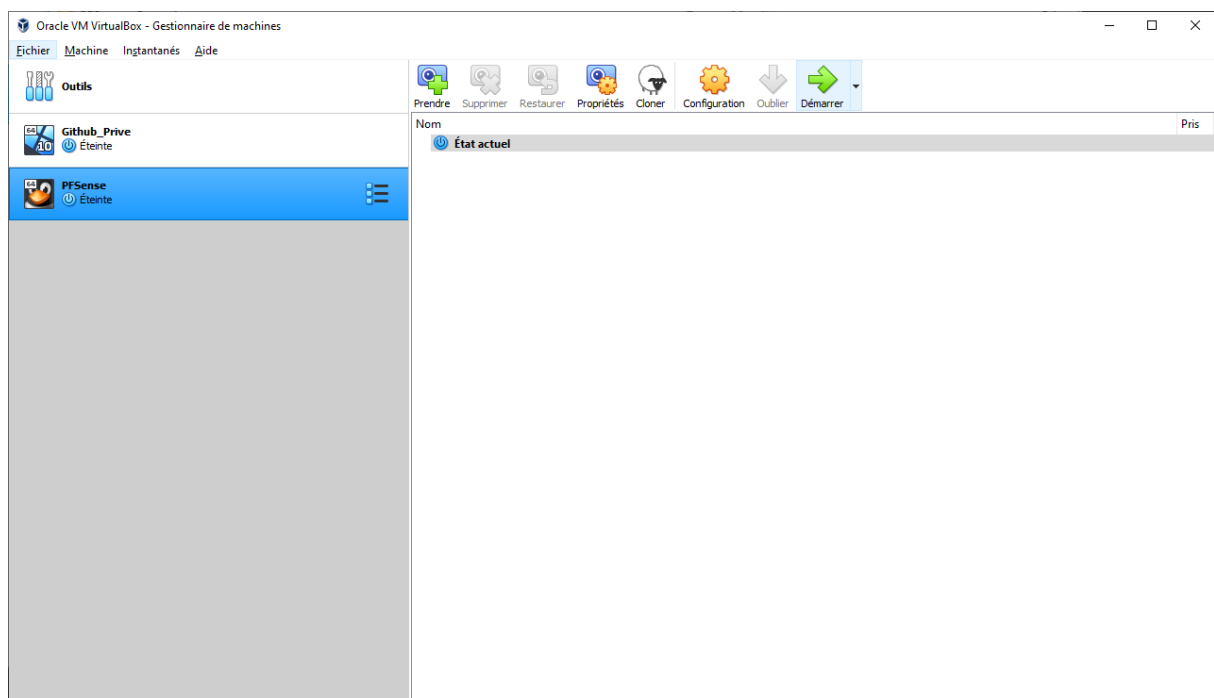
Ainsi que par défaut la taille de stockage.



Je rajoute comme tout à l'heure iso de démarrage.

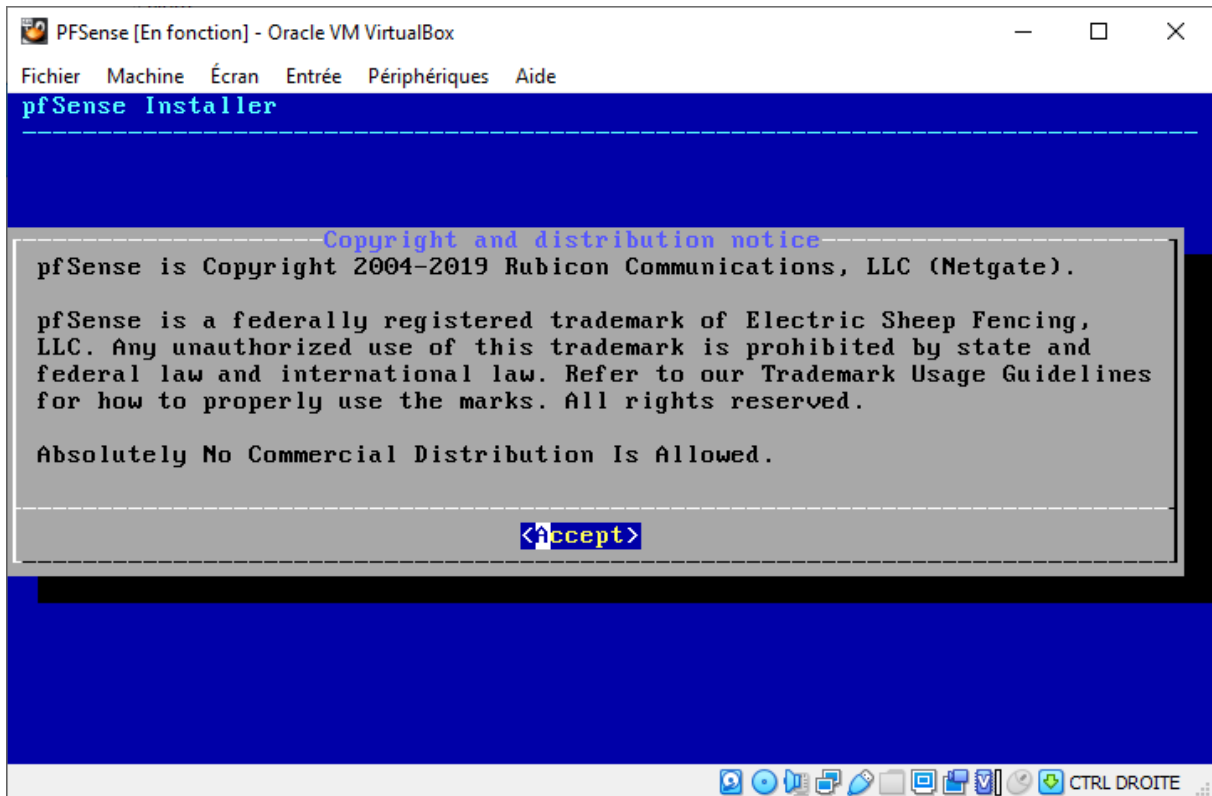


Je rajoute aussi la carte réseau virtuel.

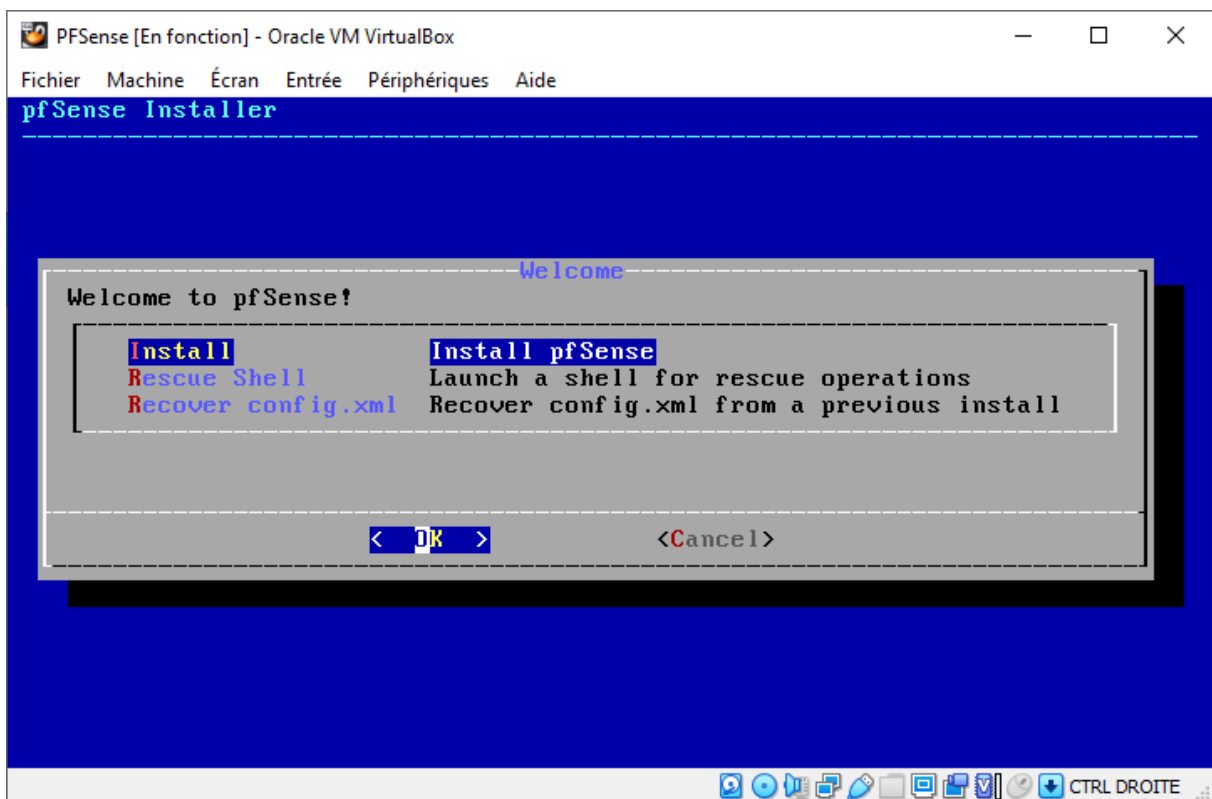


Et je peux démarrer la VM.

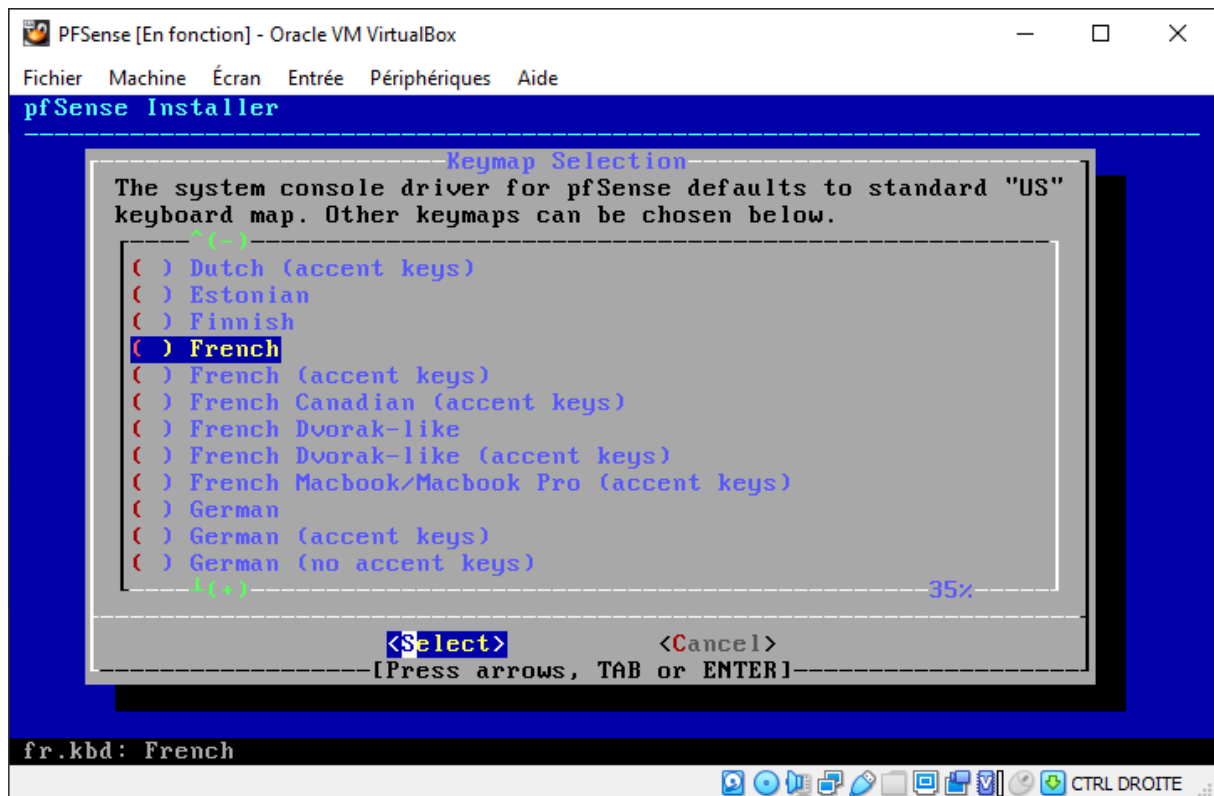
Installation PFSense sur la VM



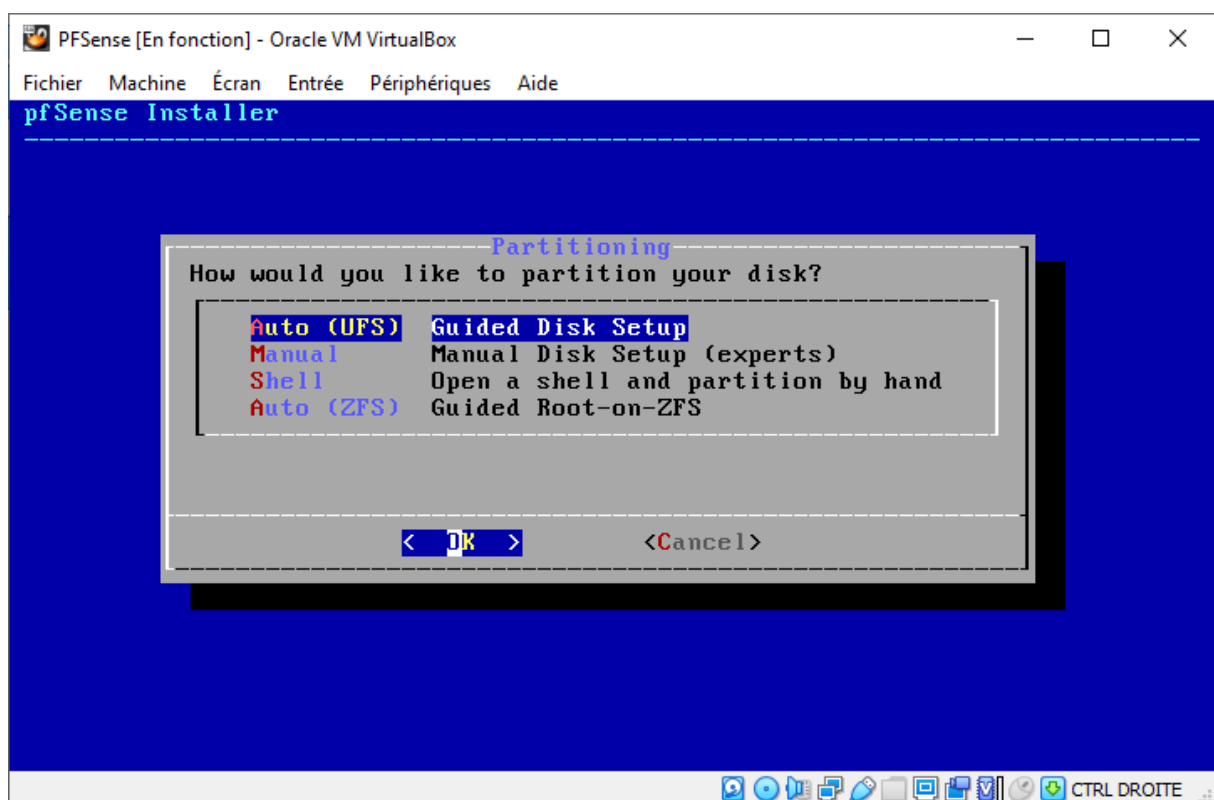
Je clique sur « Accept ».



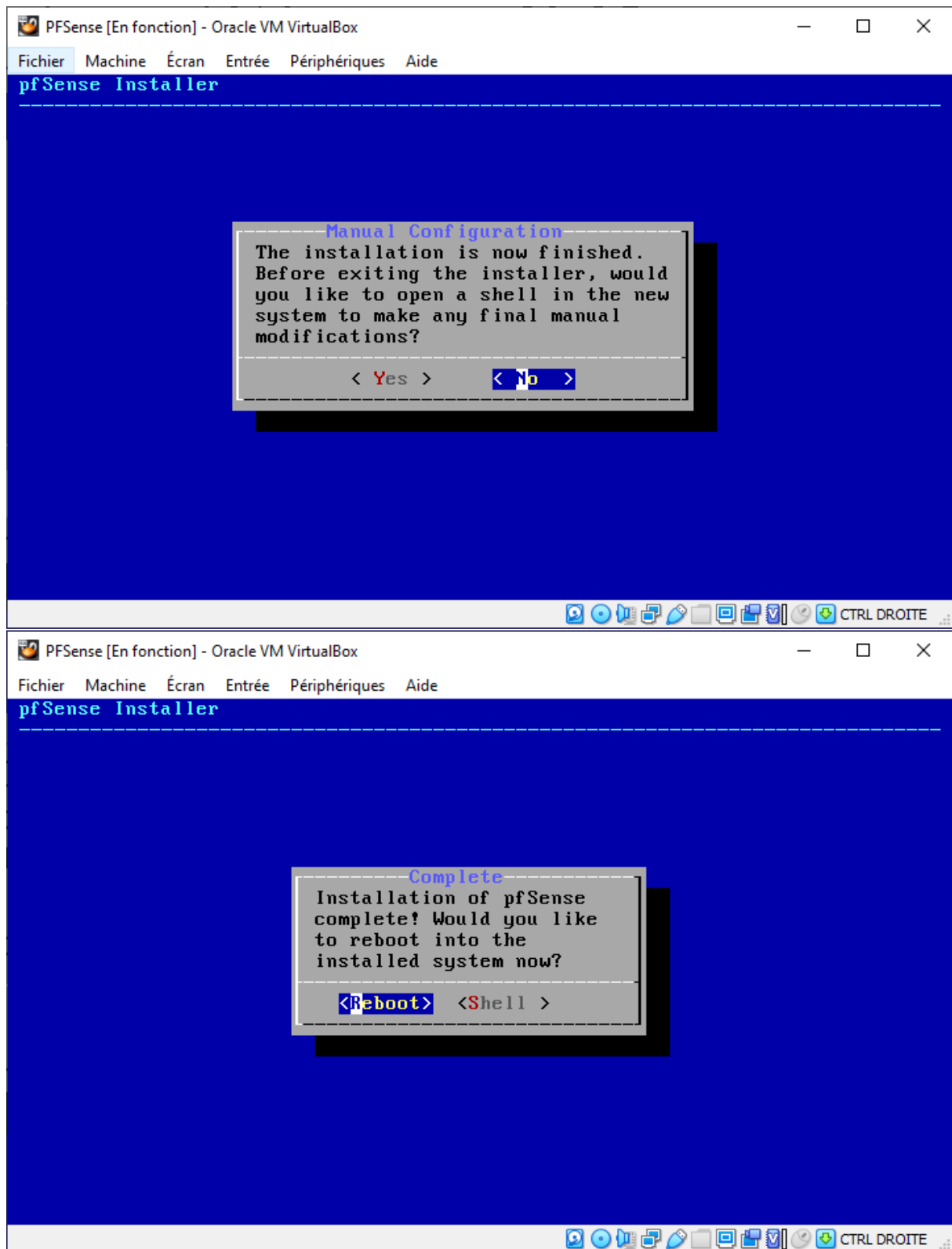
Puis sur « Ok » Pour débuter l'installation.



Je choisis la langue française.



Je clique sur « auto »



Je clique sur « no » puis sur « reboot » pour relancer l'os.

Configuration de PFSense sur la VM

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier Machine Écran Entrée Périphériques Aide
Starting syslog...done.
Starting CRON... done.
pfSense 2.4.5-RELEASE amd64 Tue Mar 24 15:25:50 EDT 2020
Bootup complete

FreeBSD/amd64 (pfSense.localdomain) (ttyv0)

VirtualBox Virtual Machine - Netgate Device ID: 1b84df8e9170a14b27bf

*** Welcome to pfSense 2.4.5-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 10.0.2.15/24
LAN (lan)      -> em1      -> 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: 1
```

Je rentre dans l'interface pour assigner mes ip.

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier Machine Écran Entrée Périphériques Aide
LAN (lan)      -> em1      -> 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: 1

Valid interfaces are:

em0      08:00:27:bb:d5:4a   (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em1      08:00:27:fd:6a:08   (up) Intel(R) PRO/1000 Legacy Network Connection 1.

Do VLANs need to be set up first?
If VLANs will not be used, or only for optional interfaces, it is typical to
say no here and use the webConfigurator to configure VLANs later, if required.

Should VLANs be set up now [y/n]? n
```

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide

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: 1

Valid interfaces are:

em0      08:00:27:bb:d5:4a  (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em1      08:00:27:fd:6a:08  (up) Intel(R) PRO/1000 Legacy Network Connection 1.

Do VLANs need to be set up first?
If VLANs will not be used, or only for optional interfaces, it is typical to
say no here and use the webConfigurator to configure VLANs later, if required.

Should VLANs be set up now [y/n]? n

If the names of the interfaces are not known, auto-detection can
be used instead. To use auto-detection, please disconnect all
interfaces before pressing 'a' to begin the process.

Enter the WAN interface name or 'a' for auto-detection
(em0 em1 or a): em0
```

J'assigne ma carte réseau pour lui donner internet car c'est ma carte physique.

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide

Enter an option: 1

Valid interfaces are:

em0      08:00:27:bb:d5:4a  (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em1      08:00:27:fd:6a:08  (up) Intel(R) PRO/1000 Legacy Network Connection 1.

Do VLANs need to be set up first?
If VLANs will not be used, or only for optional interfaces, it is typical to
say no here and use the webConfigurator to configure VLANs later, if required.

Should VLANs be set up now [y/n]? n

If the names of the interfaces are not known, auto-detection can
be used instead. To use auto-detection, please disconnect all
interfaces before pressing 'a' to begin the process.

Enter the WAN interface name or 'a' for auto-detection
(em0 em1 or a): em0

Enter the LAN interface name or 'a' for auto-detection
NOTE: this enables full Firewalling/NAT mode.
(em1 a or nothing if finished): em1
```

Puis j'assigne la deuxième carte réseau que l'on a créé tout à l'heure qui elle va servir à relier ma VM Windows.

```
PfSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide
em1      08:00:27:fd:6a:08  (up) Intel(R) PRO/1000 Legacy Network Connection 1.

Do VLANs need to be set up first?
If VLANs will not be used, or only for optional interfaces, it is typical to
say no here and use the webConfigurator to configure VLANs later, if required.

Should VLANs be set up now [y/n]? n

If the names of the interfaces are not known, auto-detection can
be used instead. To use auto-detection, please disconnect all
interfaces before pressing 'a' to begin the process.

Enter the WAN interface name or 'a' for auto-detection
(em0 em1 or a): em0

Enter the LAN interface name or 'a' for auto-detection
NOTE: this enables full Firewalling/NAT mode.
(em1 a or nothing if finished): em1

The interfaces will be assigned as follows:

WAN  -> em0
LAN  -> em1

Do you want to proceed [y/n]? y
```

Je valide la configuration de mes deux cartes réseaux.

```
PfSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide
7) Ping host          16) Restart PHP-FPM
8) Shell

Enter an option:

FreeBSD/amd64 (pfSense.localdomain) (ttyv0)

VirtualBox Virtual Machine - Netgate Device ID: 1b84df8e9170a14b27bf

*** Welcome to pfSense 2.4.5-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 10.0.2.15/24
LAN (lan)      -> em1      -> 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
```

Je vais maintenant assigner une ip à mes cartes réseaux.


```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier Machine Écran Entrée Périphériques Aide
VirtualBox Virtual Machine - Netgate Device ID: 1b84df8e9170a14b27bf

*** Welcome to pfSense 2.4.5-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 10.0.2.15/24
LAN (lan)      -> em1      -> 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 (em0 - dhcp, dhcp6)
2 - LAN (em1 - static)

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

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier Machine Écran Entrée Périphériques Aide

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 (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:
> 192.168.56.1

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 31):
> 24
```

J'ai rentré l'ip ainsi que mon masque pour mon réseau (LAN).

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide
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 31):
> 255.255.255.0

Enter the new LAN IPv4 subnet bit count (1 to 31):
> 24

For a WAN, enter the new LAN IPv4 upstream gateway address.
For a LAN, press <ENTER> for none:
>

Enter the new LAN IPv6 address. Press <ENTER> for none:
>

Do you want to enable the DHCP server on LAN? (y/n) y
Enter the start address of the IPv4 client address range: 192.168.58.10
This IP address must be in the interface's subnet
Enter the start address of the IPv4 client address range: 192.168.56.1
Enter the end address of the IPv4 client address range: 192.168.56.100
Disabling IPv6 DHCPD...
Do you want to revert to HTTP as the webConfigurator protocol? (y/n) y
```

```
PFSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide
>

Enter the new LAN IPv6 address. Press <ENTER> for none:
>

Do you want to enable the DHCP server on LAN? (y/n) y
Enter the start address of the IPv4 client address range: 192.168.58.10
This IP address must be in the interface's subnet
Enter the start address of the IPv4 client address range: 192.168.56.1
Enter the end address of the IPv4 client address range: 192.168.56.100
Disabling IPv6 DHCPD...
Do you want to revert to HTTP as the webConfigurator protocol? (y/n) y

Please wait while the changes are saved to LAN...
Reloading filter...
Reloading routing configuration...
DHCPD...
Restarting webConfigurator...

The IPv4 LAN address has been set to 192.168.56.1/24
You can now access the webConfigurator by opening the following URL in your web
browser:
      http://192.168.56.1/

Press <ENTER> to continue.
```

J'ai configuré mon accès web c'est avec cette ip que je vais pouvoir accéder à mon panel.

```
PfSense [En fonction] - Oracle VM VirtualBox
Fichier  Machine  Écran  Entrée  Périphériques  Aide

The IPv4 LAN address has been set to 192.168.56.1/24
You can now access the webConfigurator by opening the following URL in your web
browser:
    http://192.168.56.1/

Press <ENTER> to continue.
VirtualBox Virtual Machine - Netgate Device ID: 1b84df8e9170a14b27bf

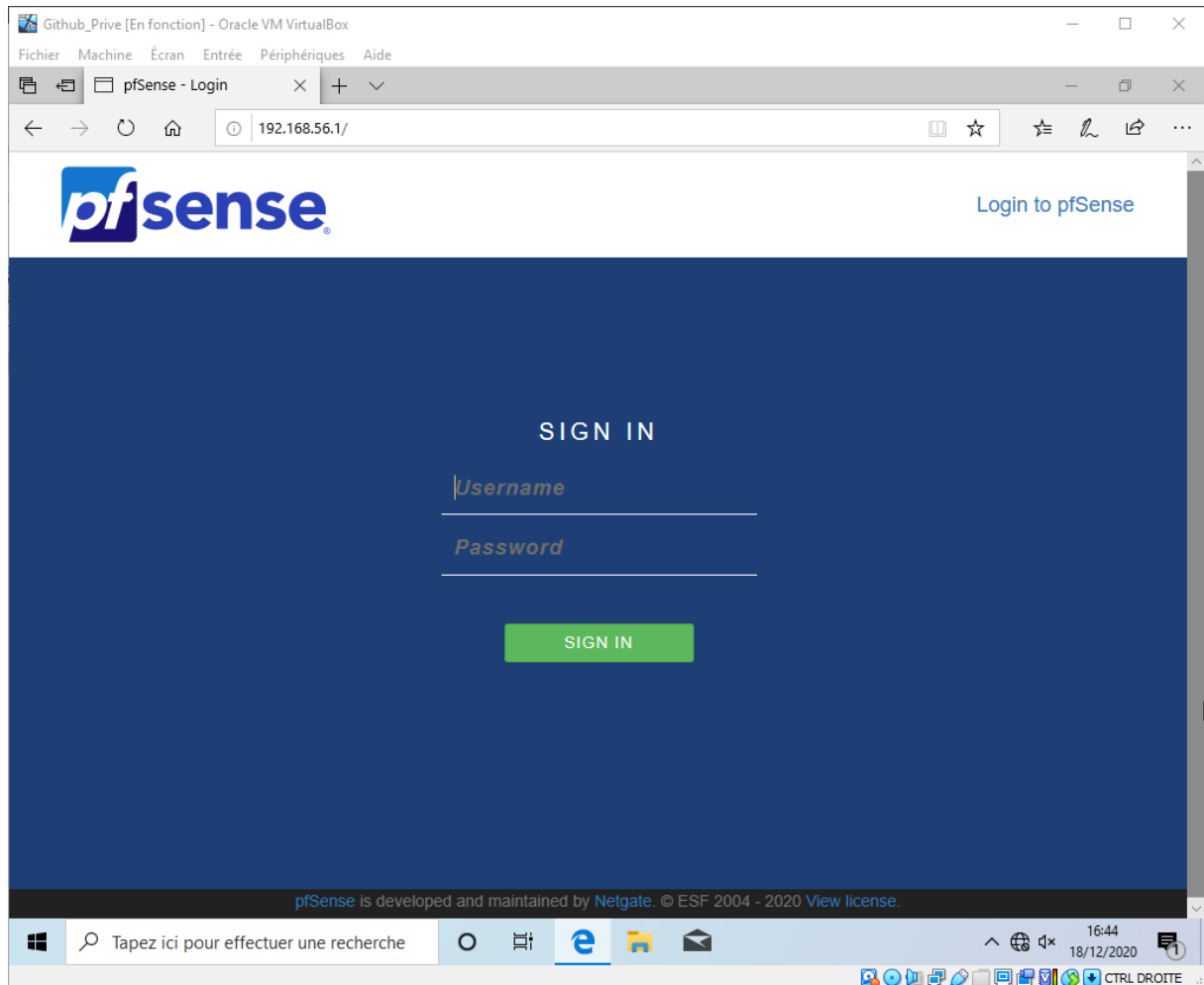
*** Welcome to pfSense 2.4.5-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 10.0.2.15/24
LAN (lan)      -> em1      -> v4: 192.168.56.1/24

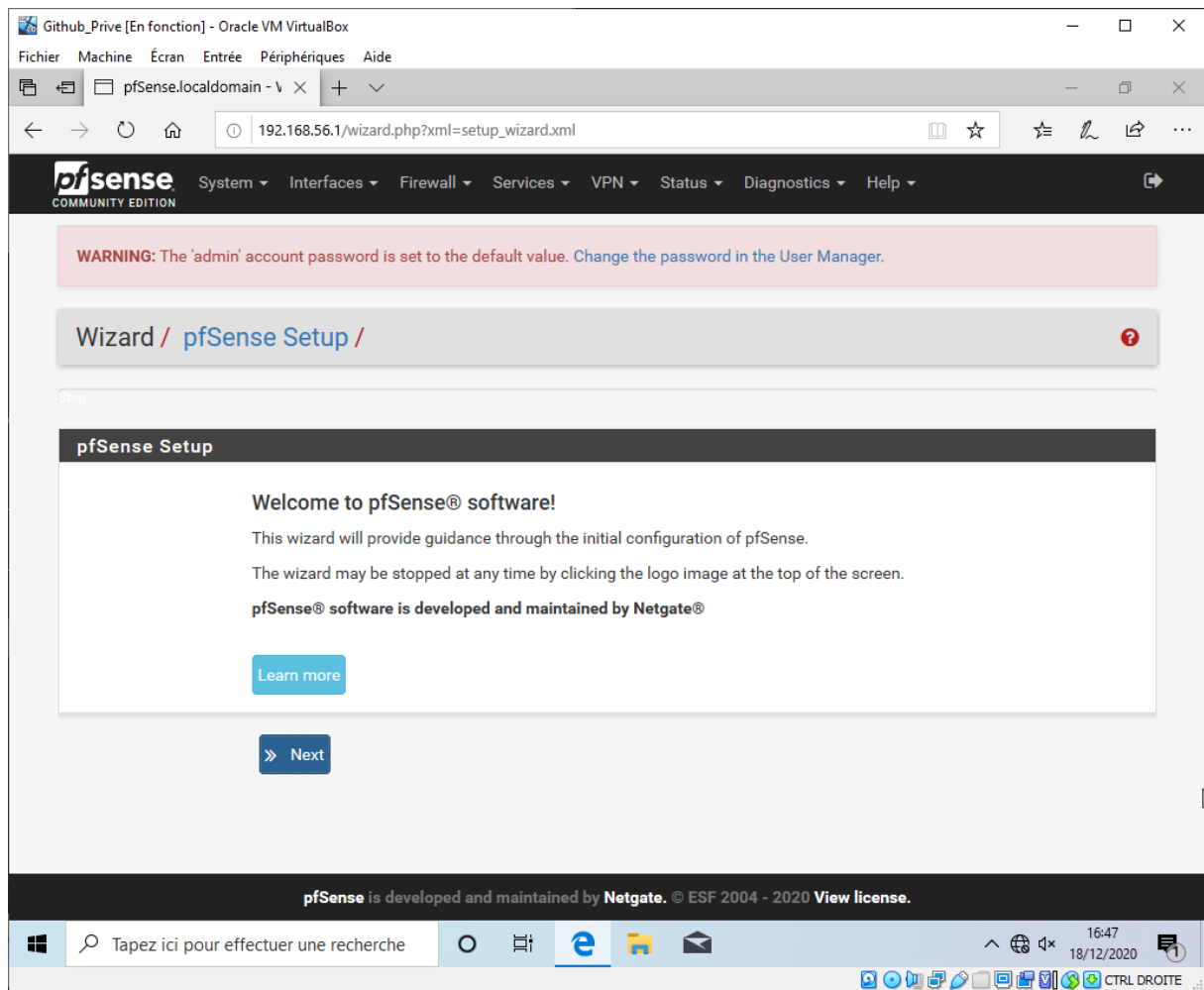
0) Logout (SSH only)          9) pfTop
1) Assign Interfaces          10) Filter Logs
2) Set interface(s) IP address 11) Restart webConfigurator
3) Reset webConfigurator password 12) PHP shell + pfSense tools
4) Reset to factory defaults  13) Update from console
5) Reboot system              14) Enable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

Enter an option: 
```

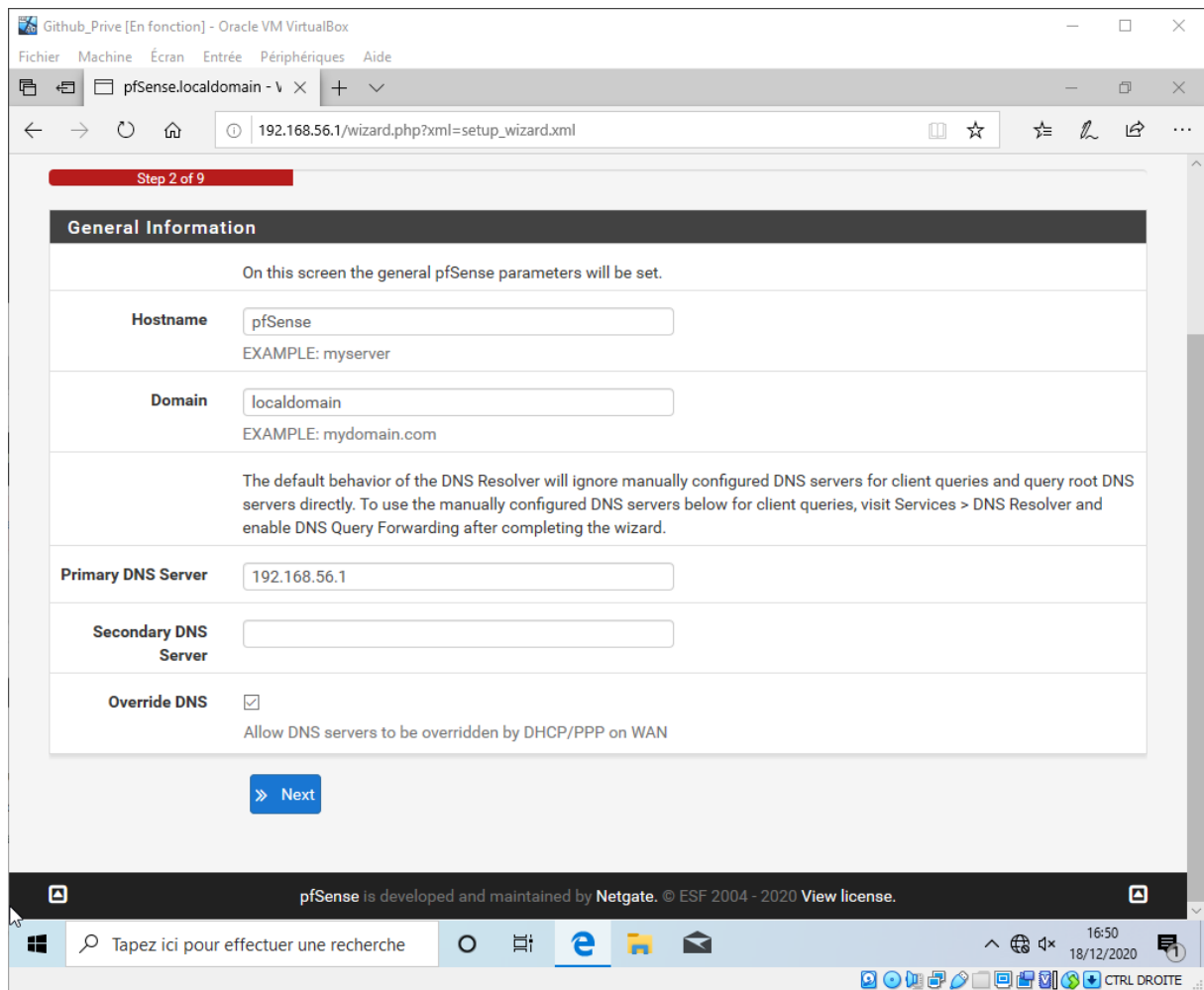
Configuration web PFSense sur la VM



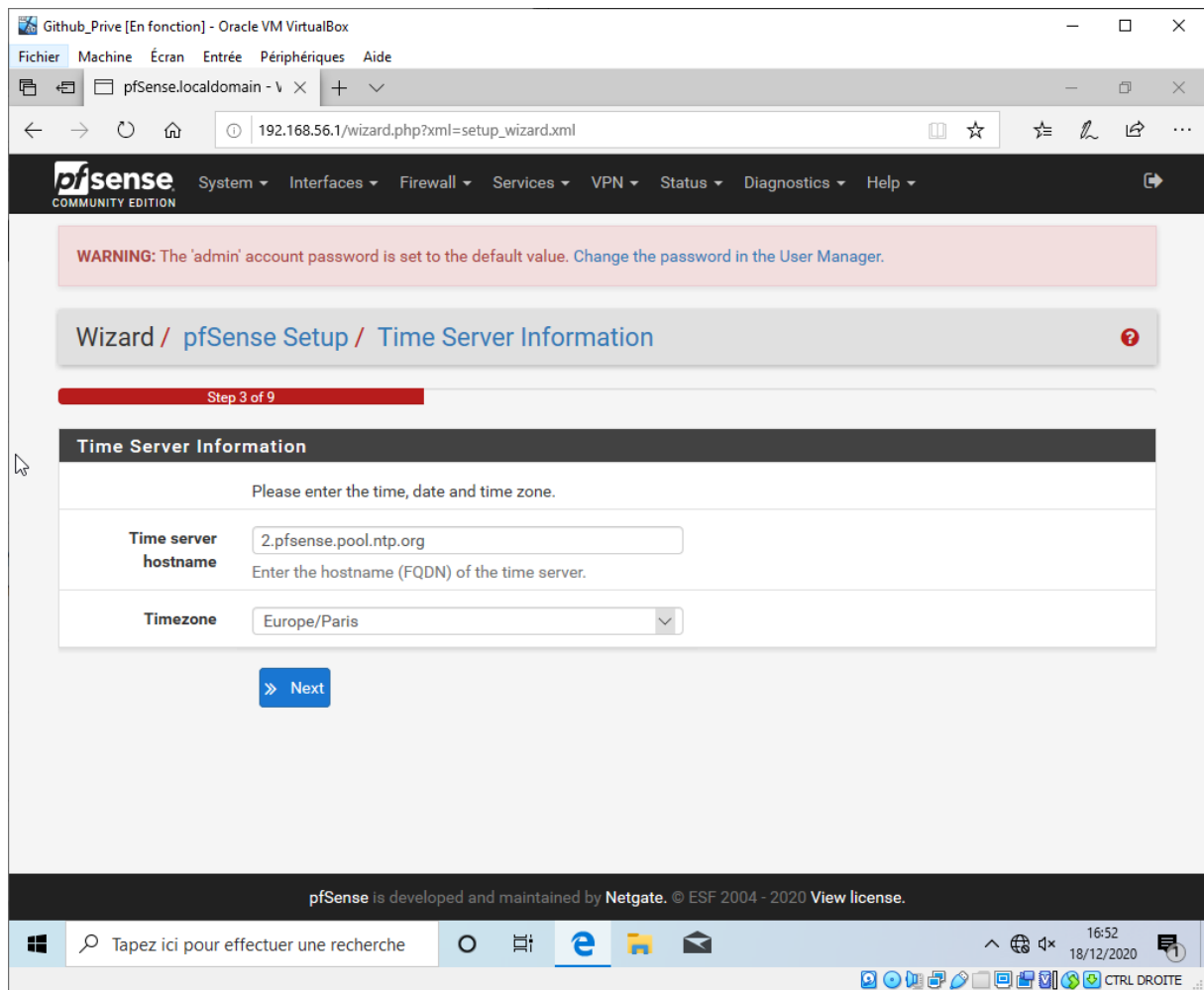
Je suis allé sur ma VM Windows j'ai rentré l'ip que j'ai rentré au paravent, ce qui m'a affiché le panel PFSense. Je rentre les identifiant par défaut.



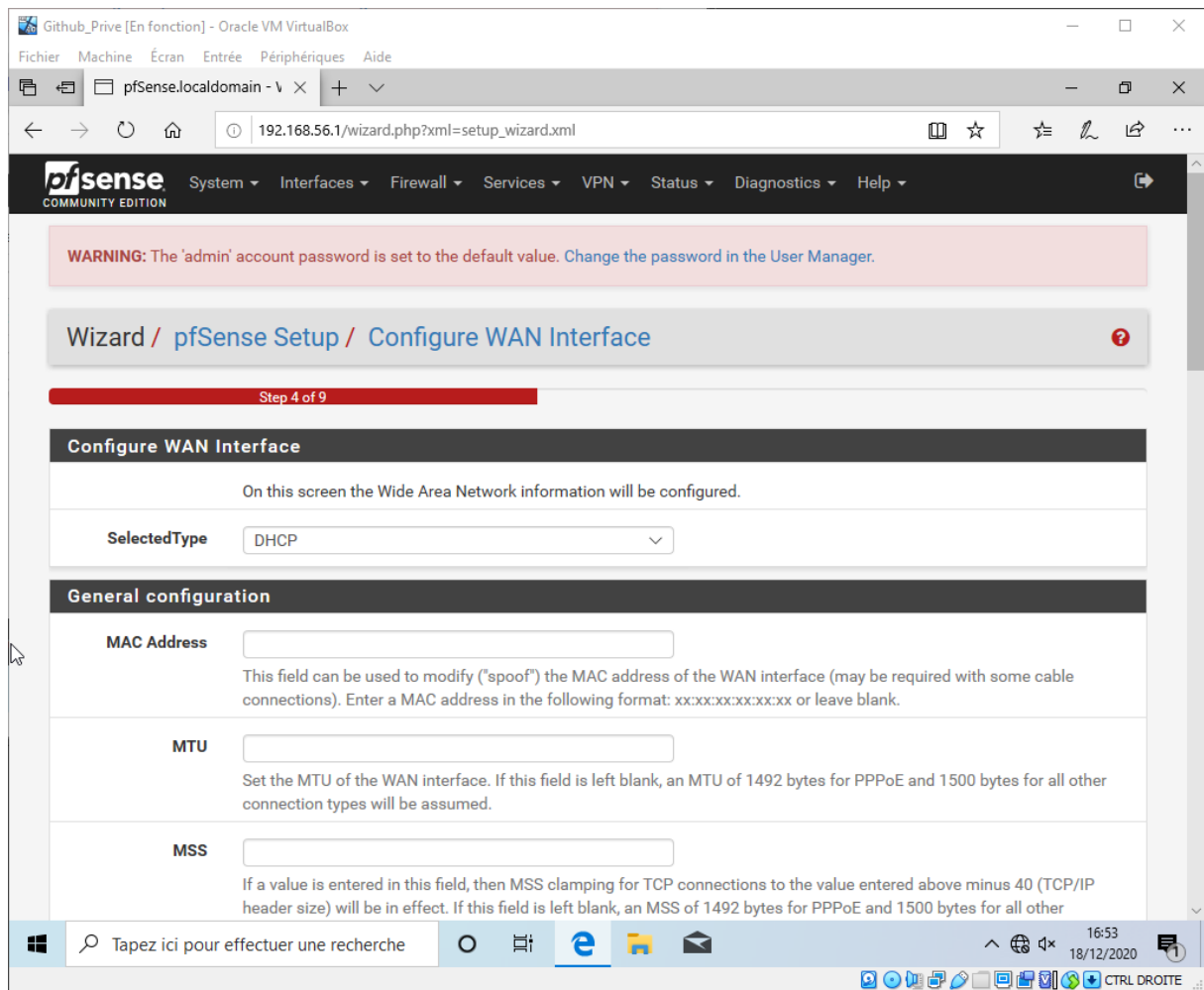
Je clique sur « Next » pour commencer la configuration.



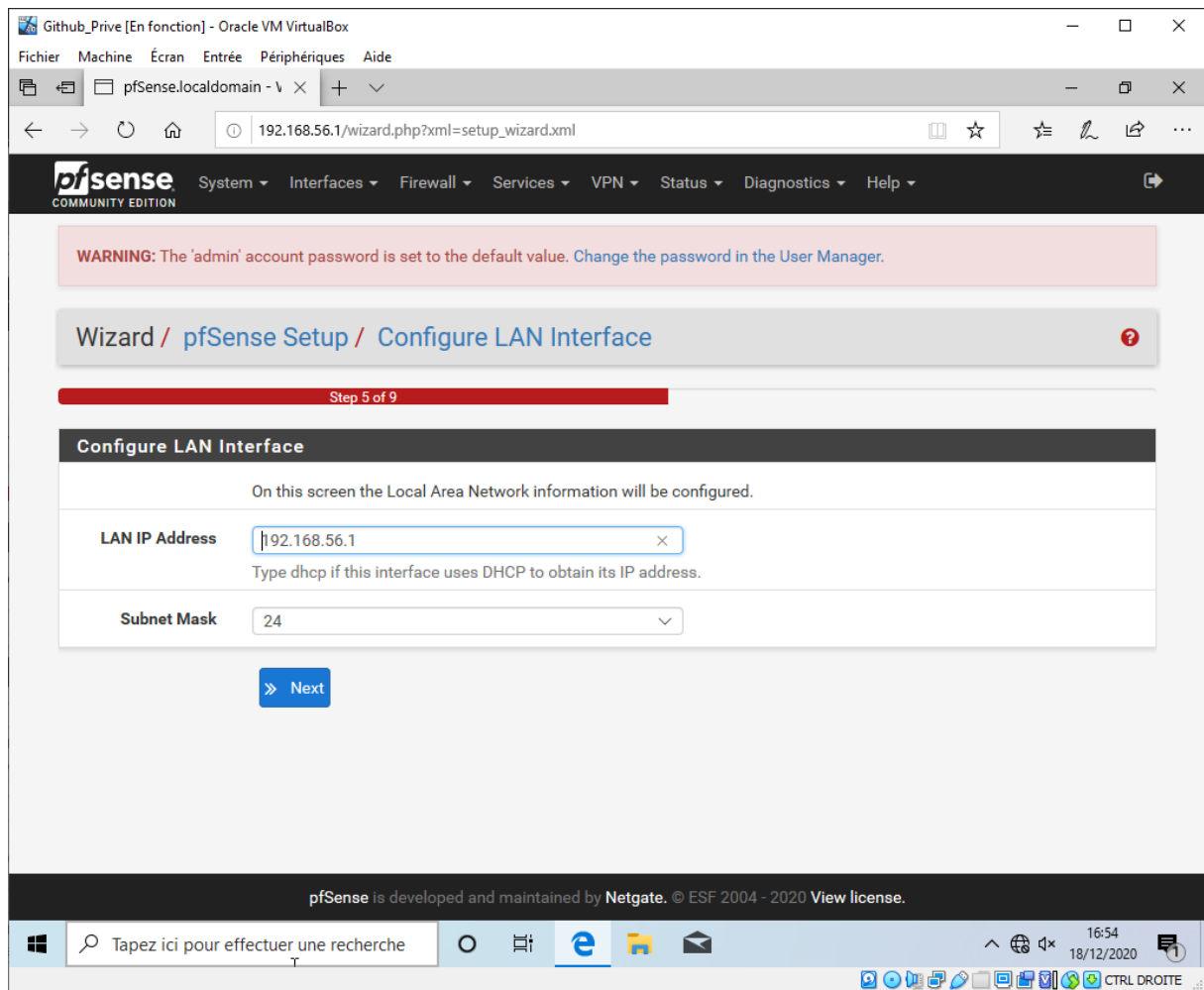
Je donne le nom « FPSense » ainsi que la même ip de connexion.



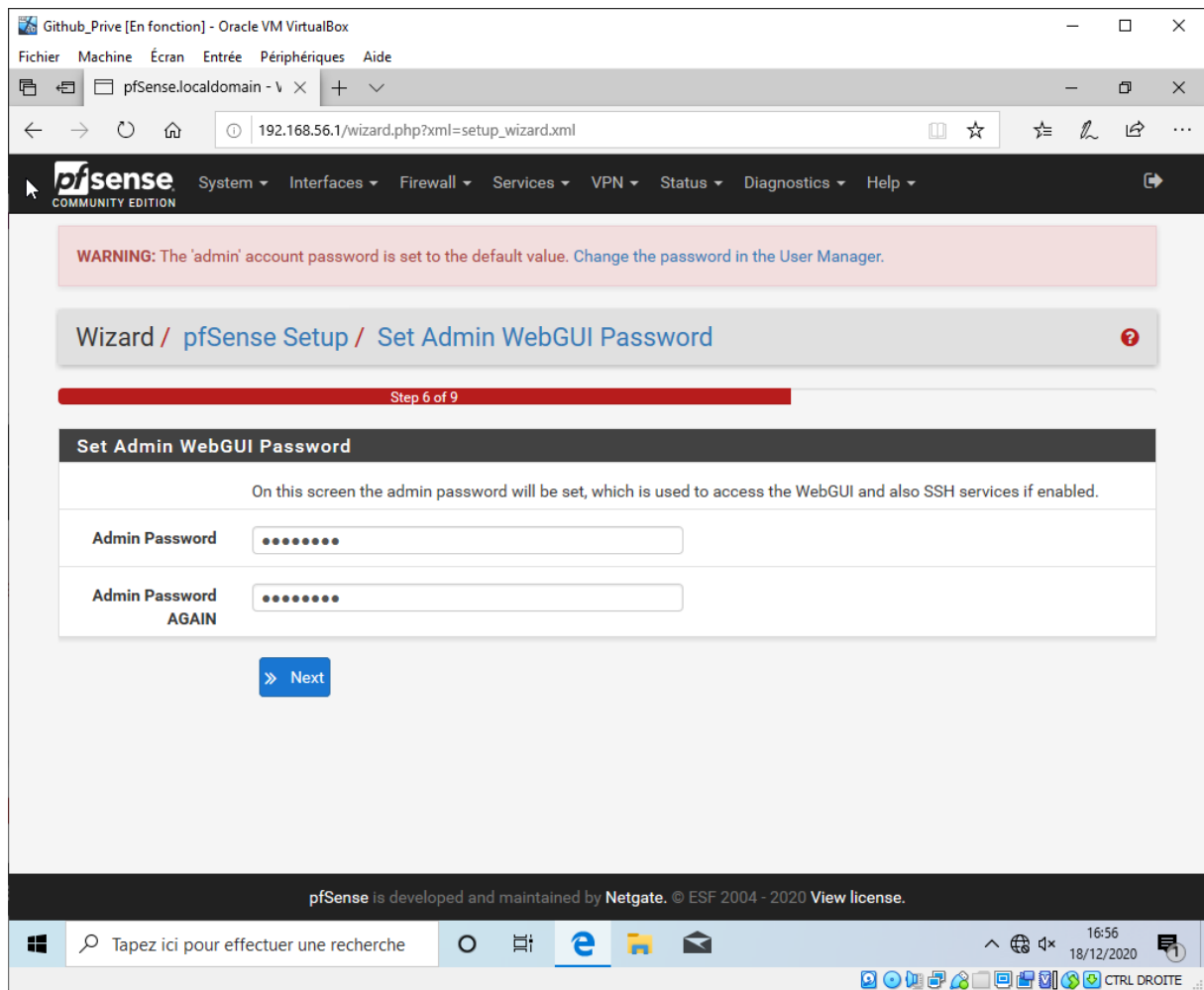
Je choisi le fuseau horaires de paris.



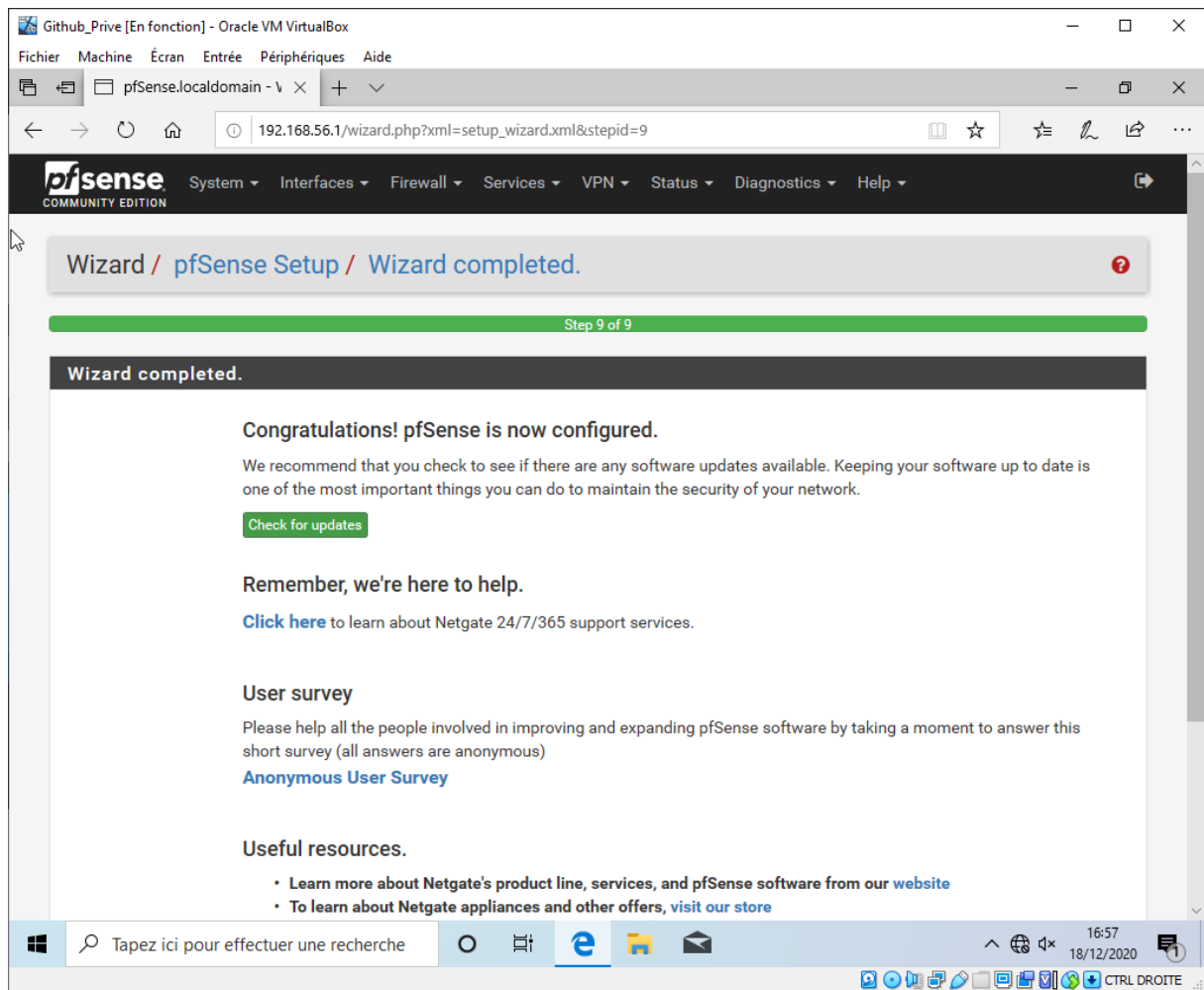
Je laisse les paramètres par défaut.



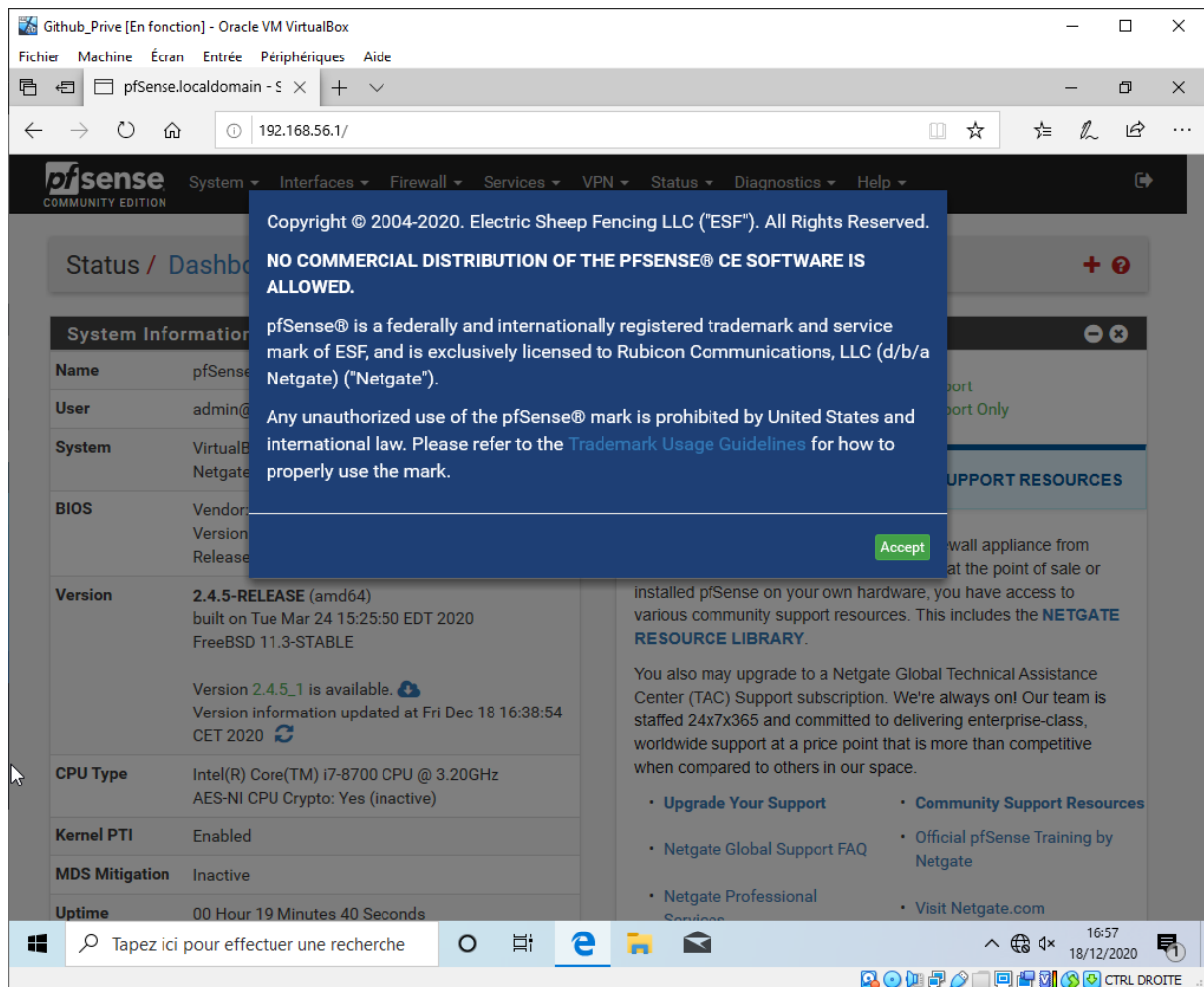
Je mets l'ip de ma carte réseau LAN avec le masque.



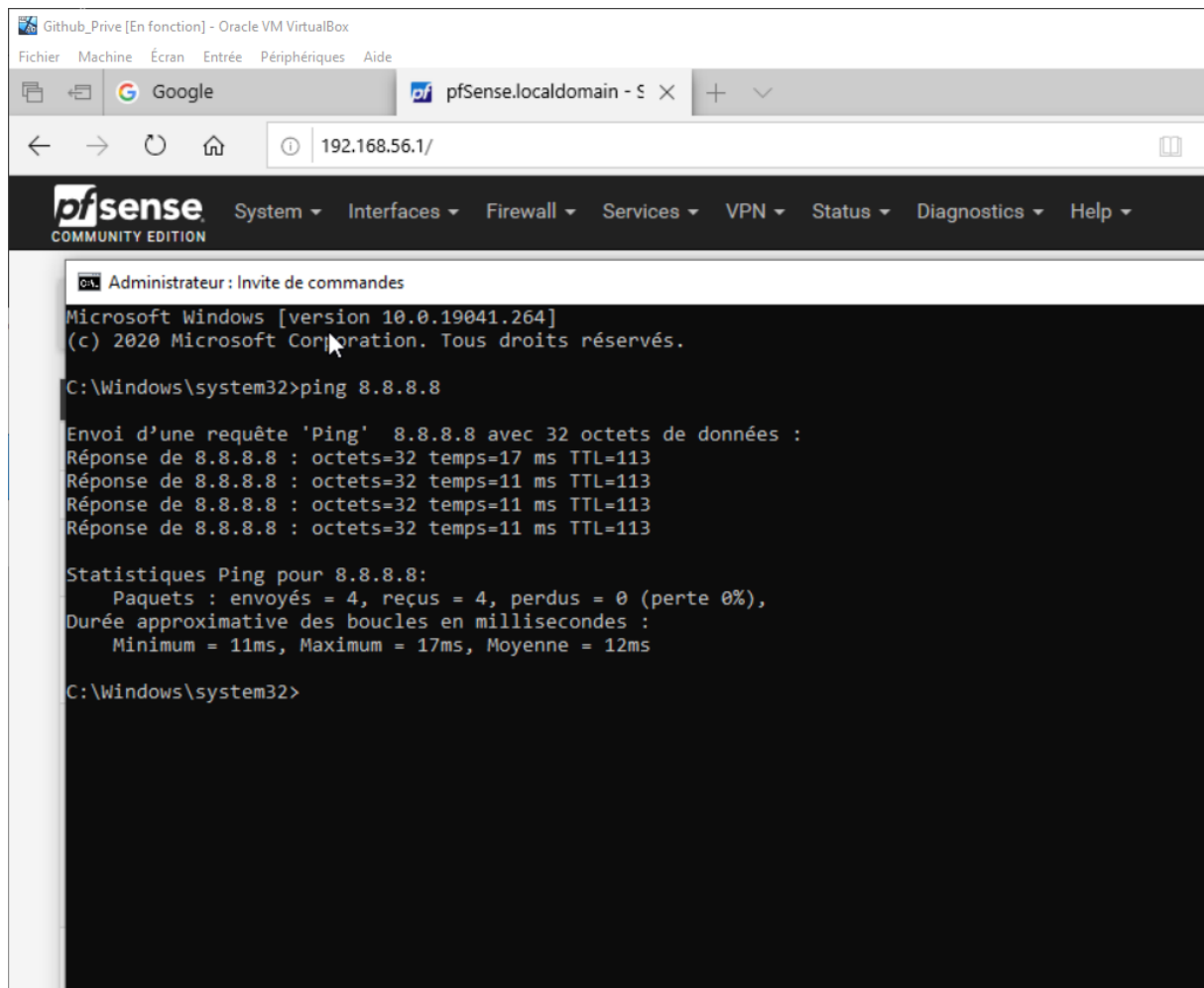
Je rentre le mot de passe Admin



Je clique sur « Finish »

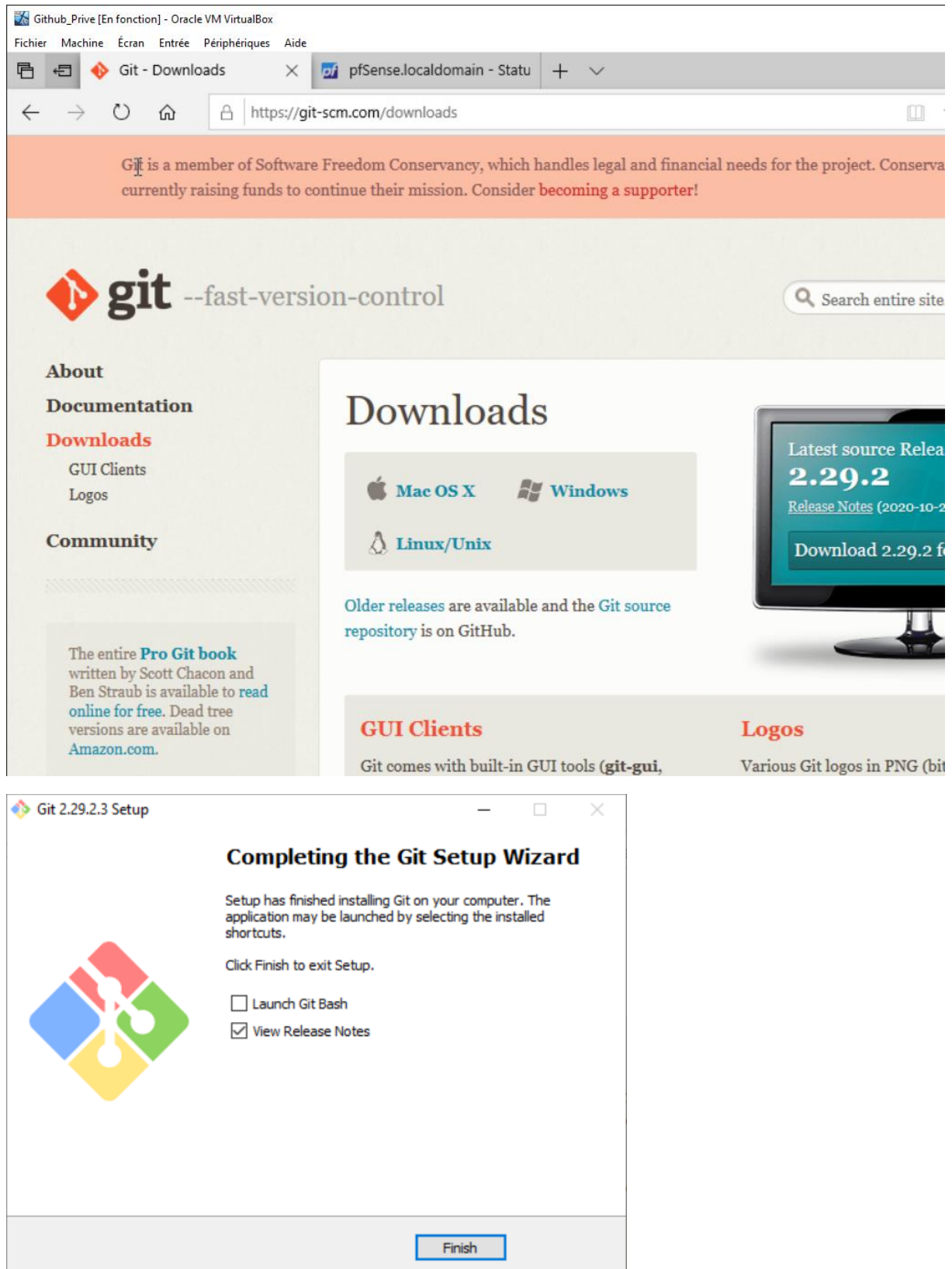


L'installation est terminée



Je ping une adresse pour confirmer que je suis bien connecté à internet.

Installation Git sur la VM



Je télécharge Git et je l'installe.

Mise en ligne du code sur GitHub

```
User@DESKTOP-3RDE3HU MINGW64 ~/Desktop/git
$ git clone https://github.com/mahelberbudeau/campus_contest
Cloning into 'campus_contest'...
remote: Enumerating objects: 218, done.
remote: Counting objects: 100% (218/218), done.
remote: Compressing objects: 100% (135/135), done.
remote: Total 218 (delta 97), reused 193 (delta 75), pack-reused 0
Receiving objects: 100% (218/218), 27.96 KiB | 954.00 KiB/s, done.
Resolving deltas: 100% (97/97), done.

User@DESKTOP-3RDE3HU MINGW64 ~/Desktop/git
$
```


J'ai cloné le dossier sur la VM

Create a new repository


A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Owner *

Repository name *

 SebastienSueur

 /


campus_contest_privé 

Great repository names are short and memorable. Need inspiration? How about [ubiquitous-train](#)?

Description (optional)


Campus Contest Privé

☐

 **Public**

Anyone on the internet can see this repository. You choose who can commit.

☒

 **Private**

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☒ **Add a README file**


This is where you can write a long description for your project. [Learn more.](#)

☐ **Add .gitignore**

Choose which files not to track from a list of templates. [Learn more.](#)

☐ **Choose a license**

A license tells others what they can and can't do with your code. [Learn more.](#)

This will set  **main** as the default branch. Change the default name in your [settings](#).

Create repository

J'ai créé un repository pour déposer le dossier.