



Installation de PfSense 2.6.0

24 octobre 2022

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1 Introduction

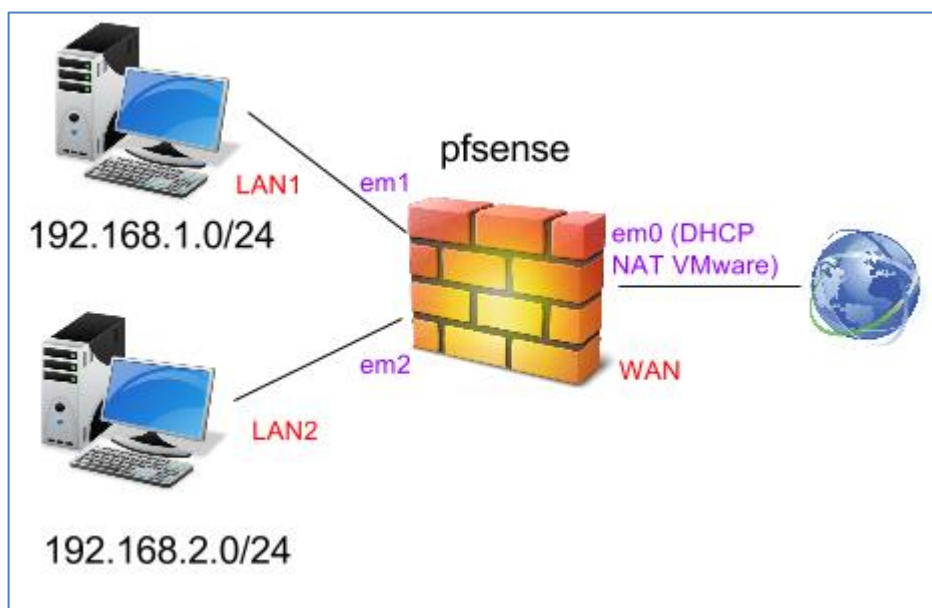
PfSense est une distribution open-source basé sur FreeBSD (License BSD) utilisé principalement comme routeur et pare-feu.

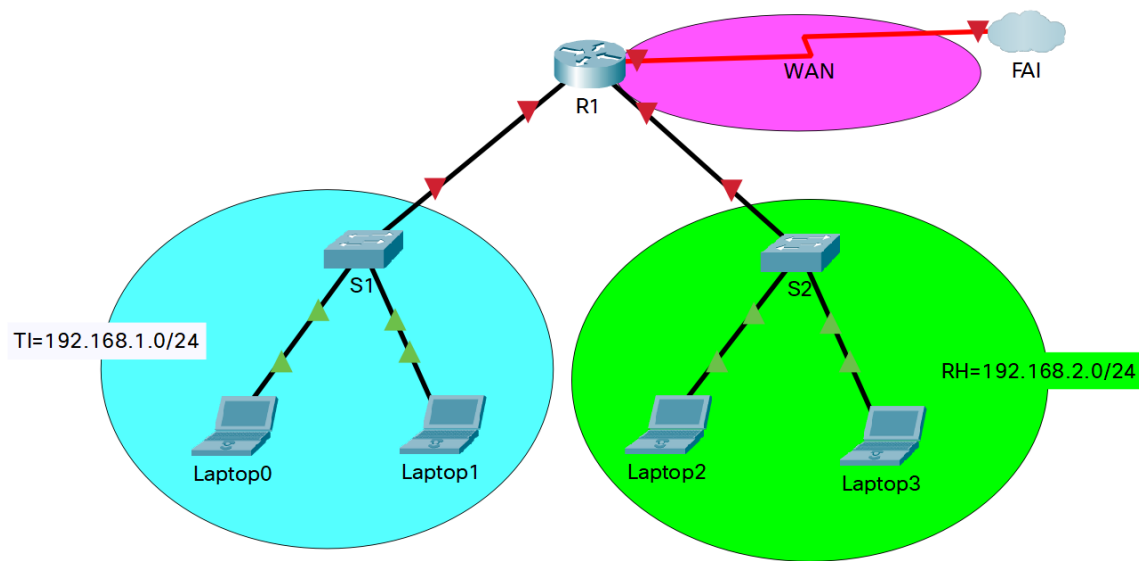
PfSense offre plusieurs fonctionnalités intéressantes comme :

- **Routage**
- **Pare-feu**
- **Traduction d'adresses réseaux (NAT)**
- **VPN**
- **Serveur DHCP**
- **Serveur DNS**
- **La redirection de ports**

Dans ce module, on va procéder à l'installation de PfSense. Ce système d'exploitation basé sur FreeBSD permet de transformer un ordinateur en puissant pare-feu, possédant sensiblement les mêmes fonctionnalités qu'une solution commerciale.

Dans ce guide, nous allons configurer PfSense à titre de routeur et pare-feu destiné à protéger deux réseaux locaux.





2 Télécharger PfSense

<https://www.pfsense.org/download/>

Select Image To Download

Version: 2.6.0


Architecture: 1 AMD64 (64-bit) ▾ ?

Installer: 2 DVD Image (ISO) Installer ▾

Mirror: 3 Austin, TX USA ▾

4 ⬇️ DOWNLOAD

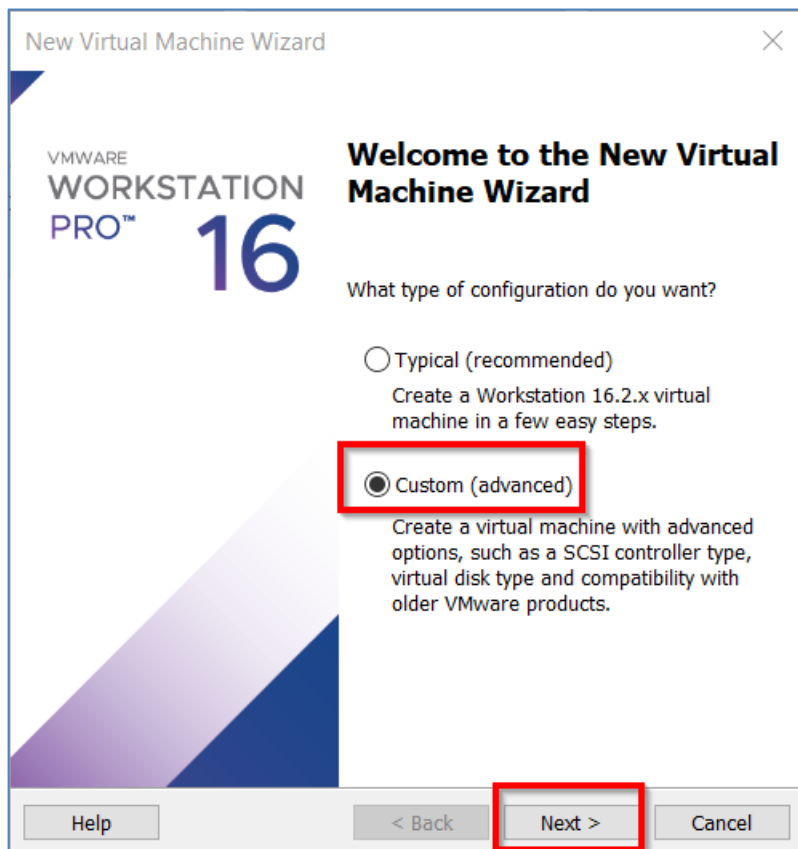
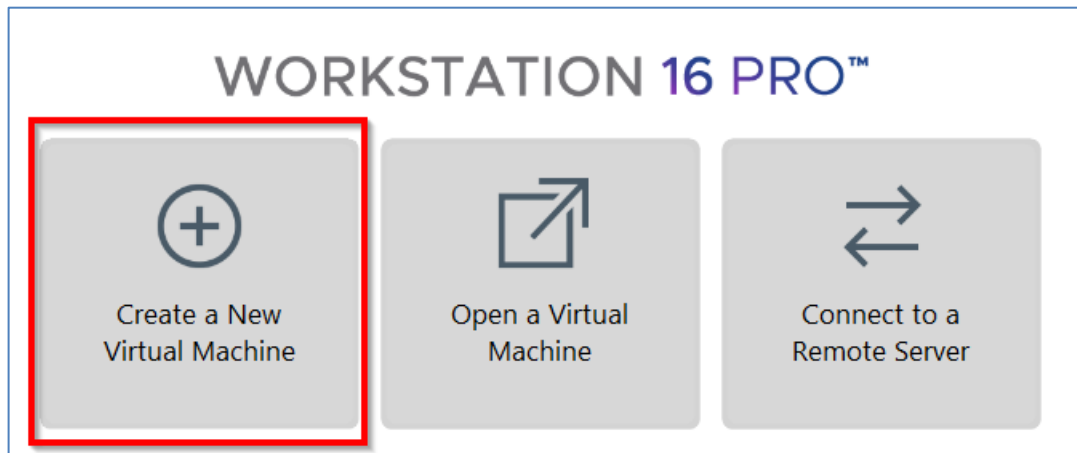
Supported by



SHA256 Checksum for compressed (.gz) file:
941a68c7f20c4b635447cceda429a027f816bdb78d54b8252bb87abf1fc22ee3

3 Création de la machine virtuelle PfSense

Dans VMware Workstation, créez une nouvelle machine virtuelle nommée **PfSense** en réalisant les étapes suivantes.



New Virtual Machine Wizard

Choose the Virtual Machine Hardware Compatibility
Which hardware features are needed for this virtual machine?

Virtual machine hardware compatibility

Hardware: Workstation 16.2.x

Compatible: ☒ ESX Server

Compatible products:

- Fusion 12.2.x
- Workstation 16.2.x

Limitations:

- 128 GB memory
- 32 processors
- 10 network adapters
- 8 TB disk size
- 8 GB shared graphics memory

Help < Back **Next >** Cancel

New Virtual Machine Wizard

Guest Operating System Installation

A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?

Install from:

☐ Installer disc:

No drives available

☐ Installer disc image file (iso):

D:\ISO\CentOS\CentOS-7-x86_64-Minimal-2003.iso

Browse...

☒ I will install the operating system later.

The virtual machine will be created with a blank hard disk.

Help

< Back

Next >

Cancel

New Virtual Machine Wizard ✕

Select a Guest Operating System
Which operating system will be installed on this virtual machine?

Guest operating system

☐ Microsoft Windows
☐ Linux
☐ VMware ESX
☒ Other

Version

FreeBSD 12 64-bit

Help < Back **Next >** Cancel

New Virtual Machine Wizard ✕

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:

Location:

The default location can be changed at Edit > Preferences.

New Virtual Machine Wizard ✕

Processor Configuration
Specify the number of processors for this virtual machine.

Processors

Number of processors:	1	▼
Number of cores per processor:	1	▼
Total processor cores:	1	

Help < Back **Next >** Cancel

New Virtual Machine Wizard

Memory for the Virtual Machine
How much memory would you like to use for this virtual machine?

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: 1024 MB

64 GB -
32 GB -
16 GB -
8 GB -
4 GB -
2 GB -
1 GB -
512 MB -
256 MB -
128 MB -
64 MB -
32 MB -
16 MB -
8 MB -
4 MB -

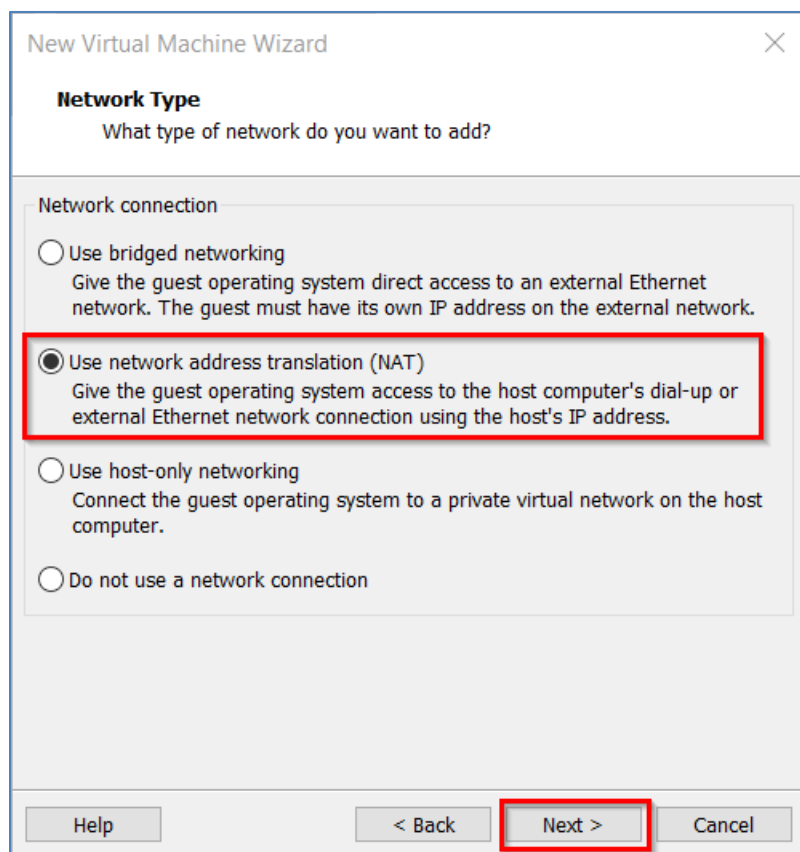
Maximum recommended memory:
13.4 GB

Recommended memory:
256 MB

Guest OS recommended minimum:
32 MB

Help < Back Next > Cancel

L'interface WAN de votre pare-feu doit **obligatoirement avoir une interface NAT** pour éviter les DHCP sur le réseau du Collège.



New Virtual Machine Wizard ✕

Select I/O Controller Types
Which SCSI controller type would you like to use?

I/O controller types

SCSI Controller:

☐ BusLogic (Not available for 64-bit guests)

☒ LSI Logic (Recommended)

☐ LSI Logic SAS

☐ Paravirtualized SCSI

Help < Back Next > Cancel

New Virtual Machine Wizard ✕

Select a Disk Type
What kind of disk do you want to create?

Virtual disk type

☐ IDE

☒ SCSI (Recommended)

☐ SATA

☐ NVMe

Help < Back Next > Cancel

New Virtual Machine Wizard

Select a Disk
Which disk do you want to use?

Disk

☒ Create a new virtual disk

A virtual disk is composed of one or more files on the host file system, which will appear as a single hard disk to the guest operating system. Virtual disks can easily be copied or moved on the same host or between hosts.

☐ Use an existing virtual disk
Choose this option to reuse a previously configured disk.

☐ Use a physical disk (for advanced users)
Choose this option to give the virtual machine direct access to a local hard disk. Requires administrator privileges.

Help < Back Next > Cancel

New Virtual Machine Wizard

×

Specify Disk Capacity
How large do you want this disk to be?

Maximum disk size (GB):

20.0

▲▼

Recommended size for FreeBSD 12 64-bit: 20 GB

☐ Allocate all disk space now.

Allocating the full capacity can enhance performance but requires all of the physical disk space to be available right now. If you do not allocate all the space now, the virtual disk starts small and grows as you add data to it.

☐ Store virtual disk as a single file

☒ Split virtual disk into multiple files

Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

Help

< Back

Next >

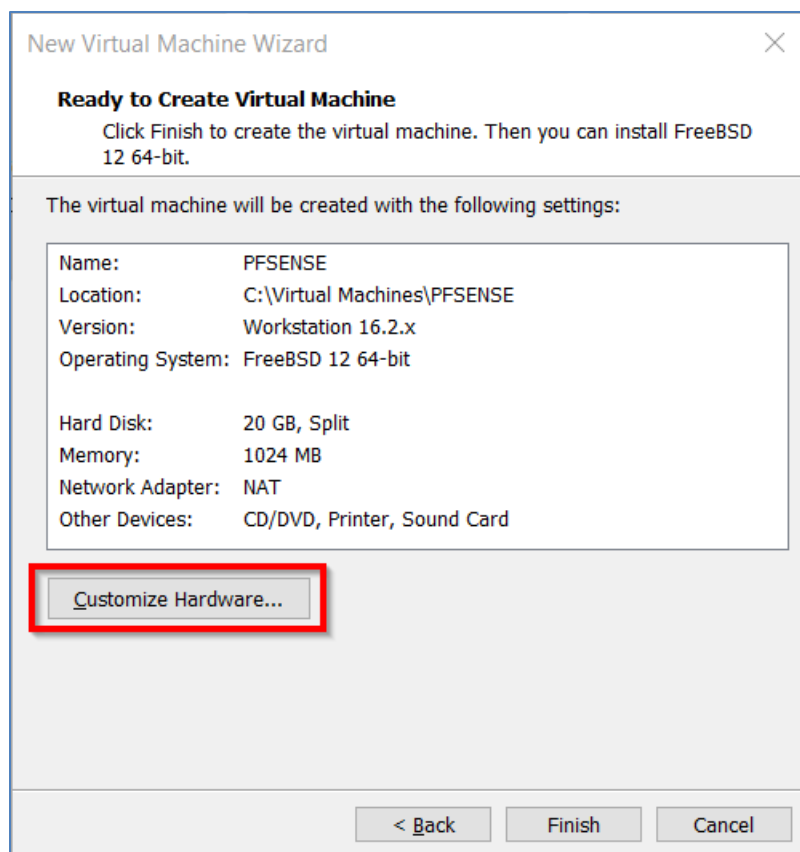
Cancel

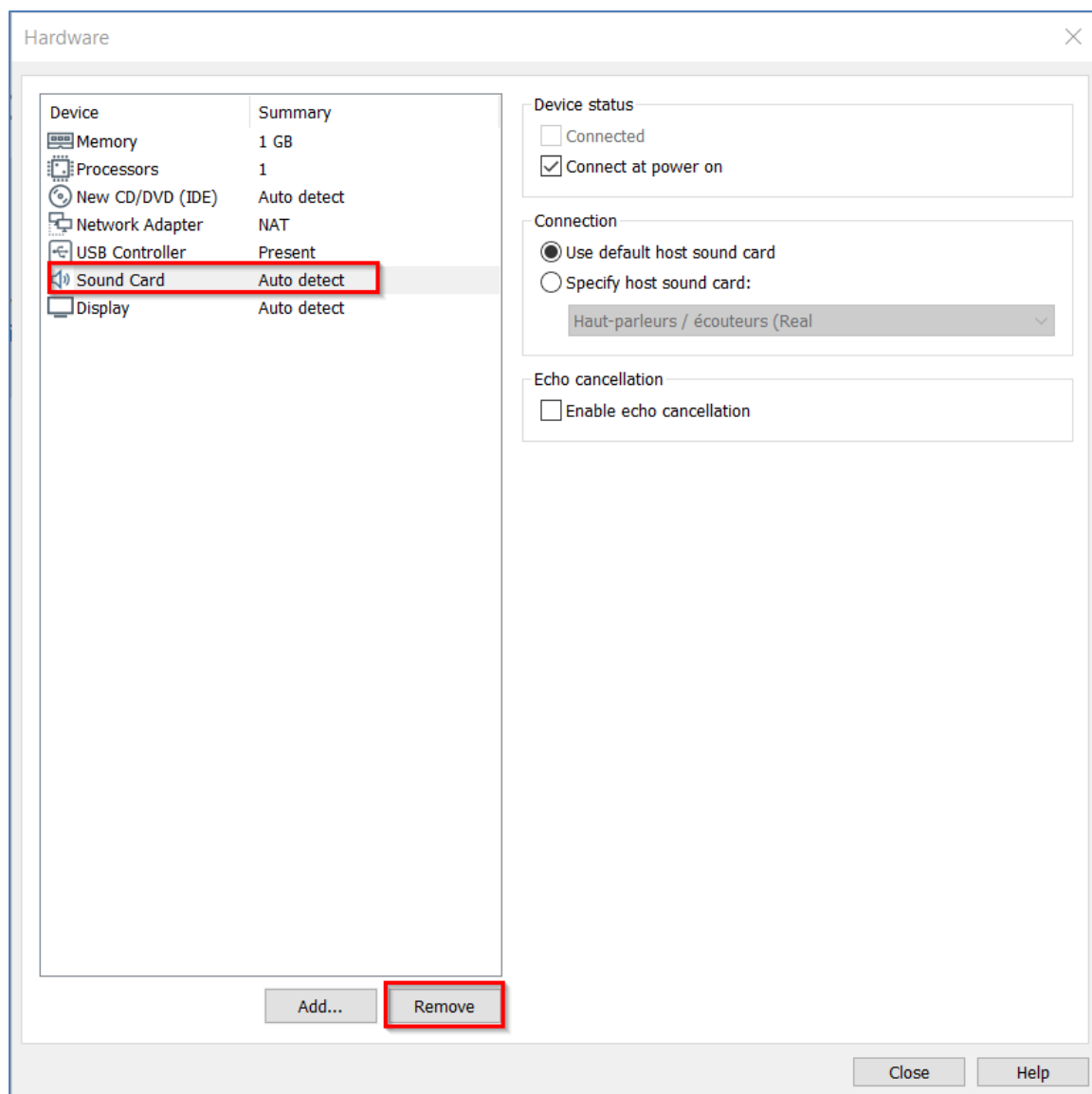
New Virtual Machine Wizard ✕

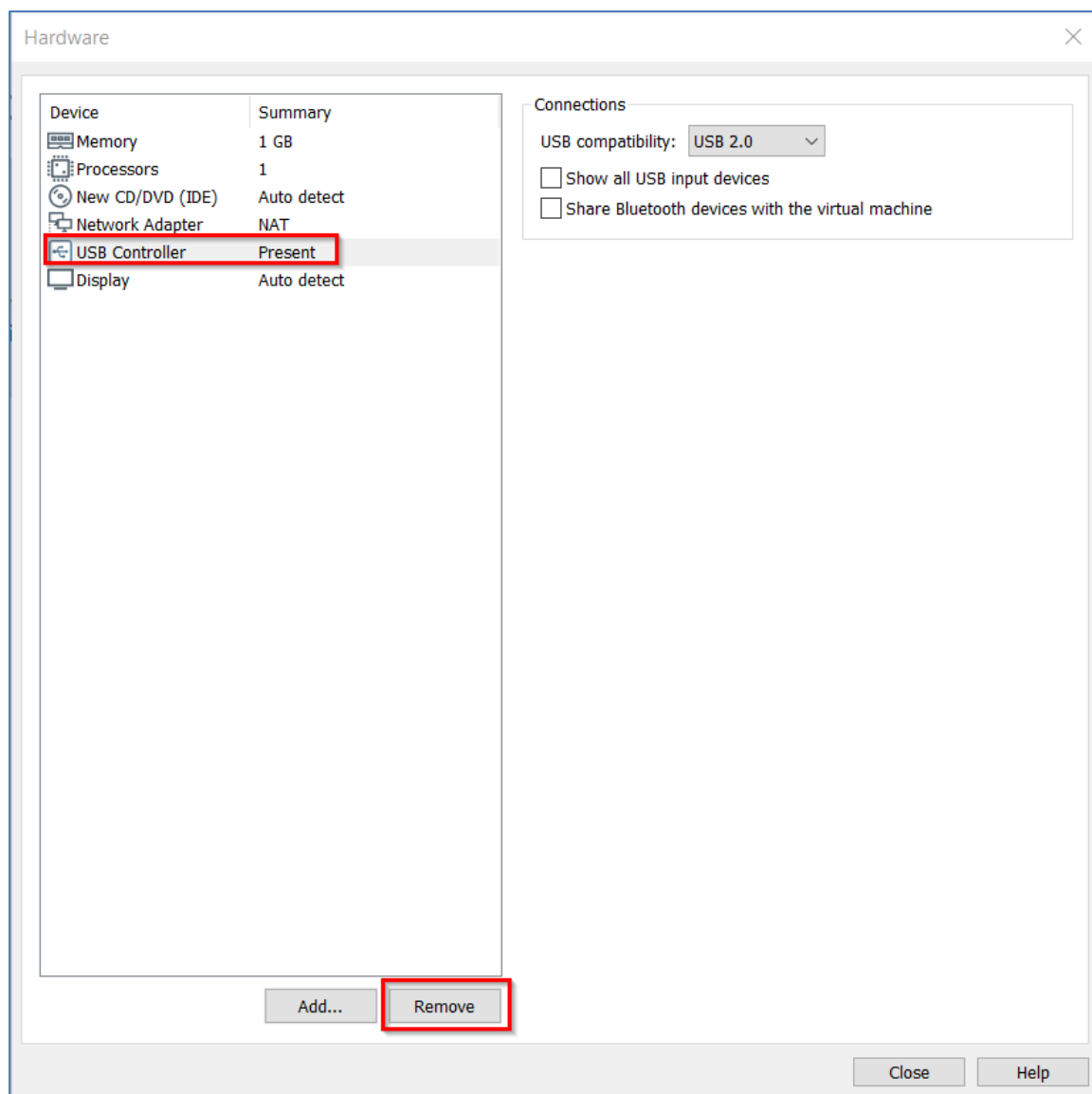
Specify Disk File
Where would you like to store the disk file?

Disk file

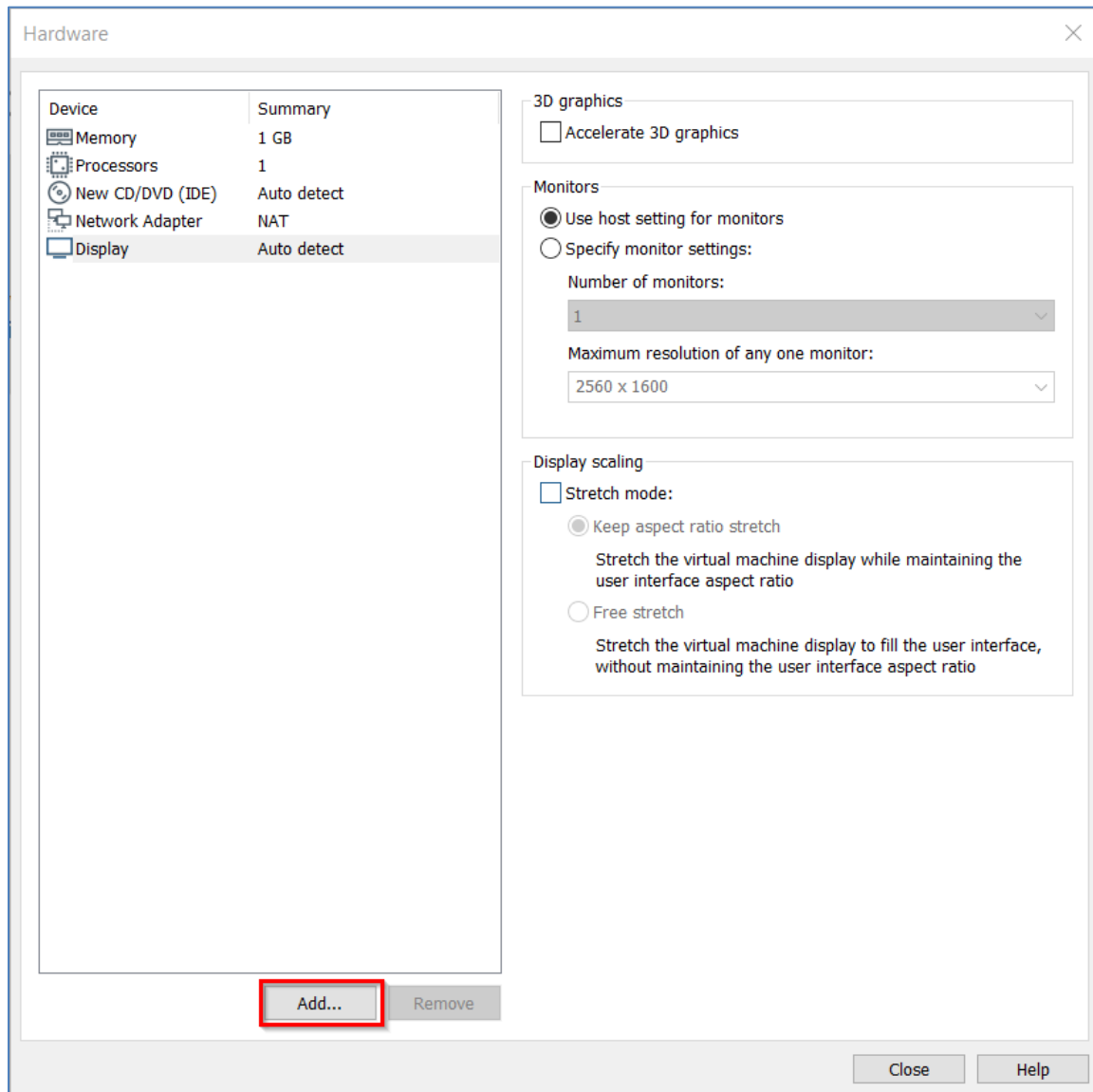
A 20 GB virtual disk be created using multiple disk files. The disk files will be automatically named based on this file name.

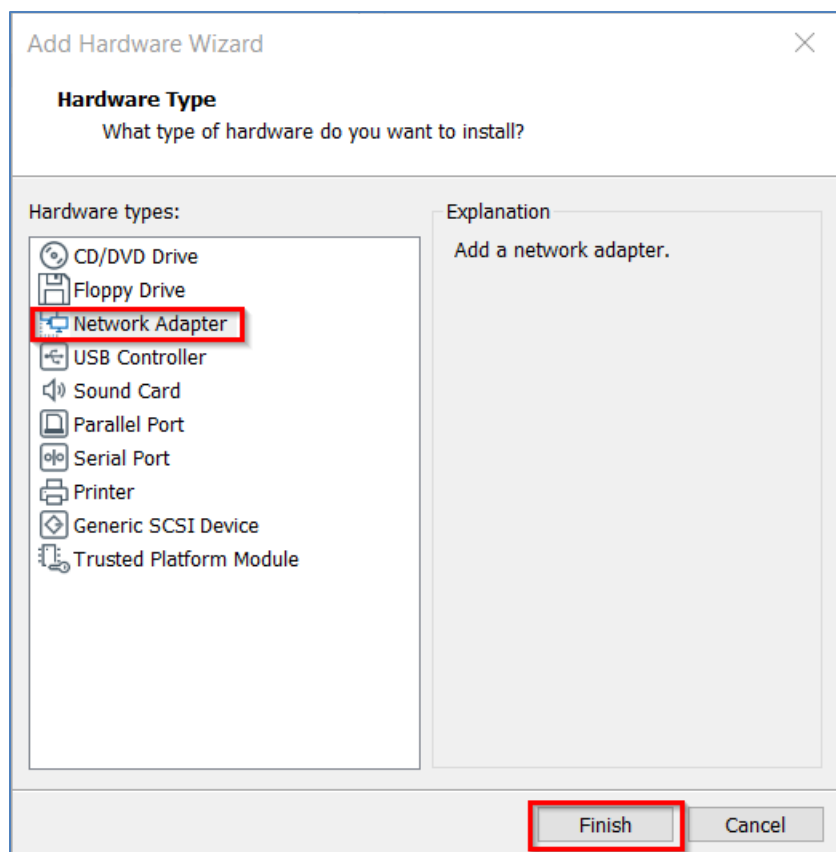


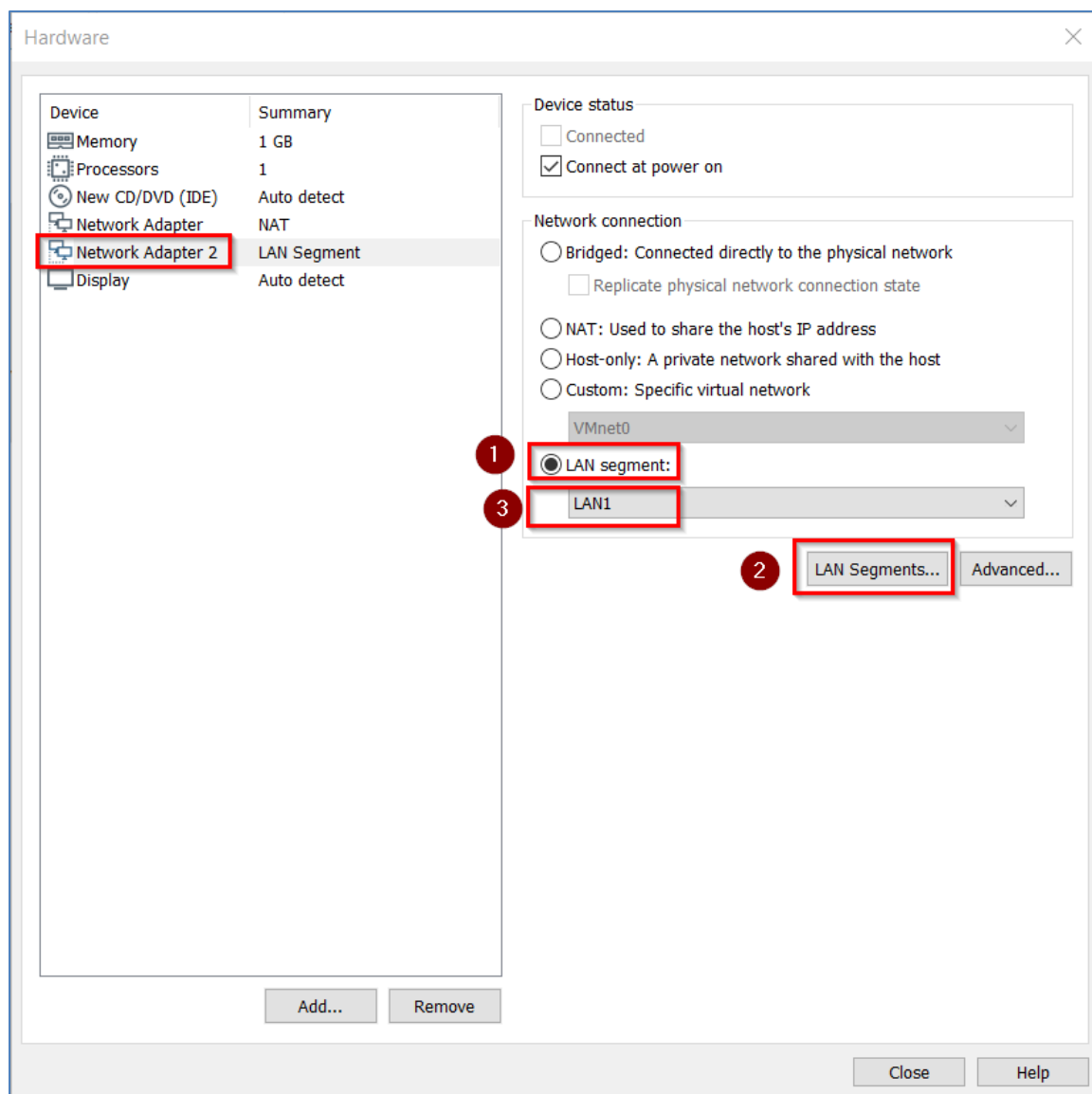




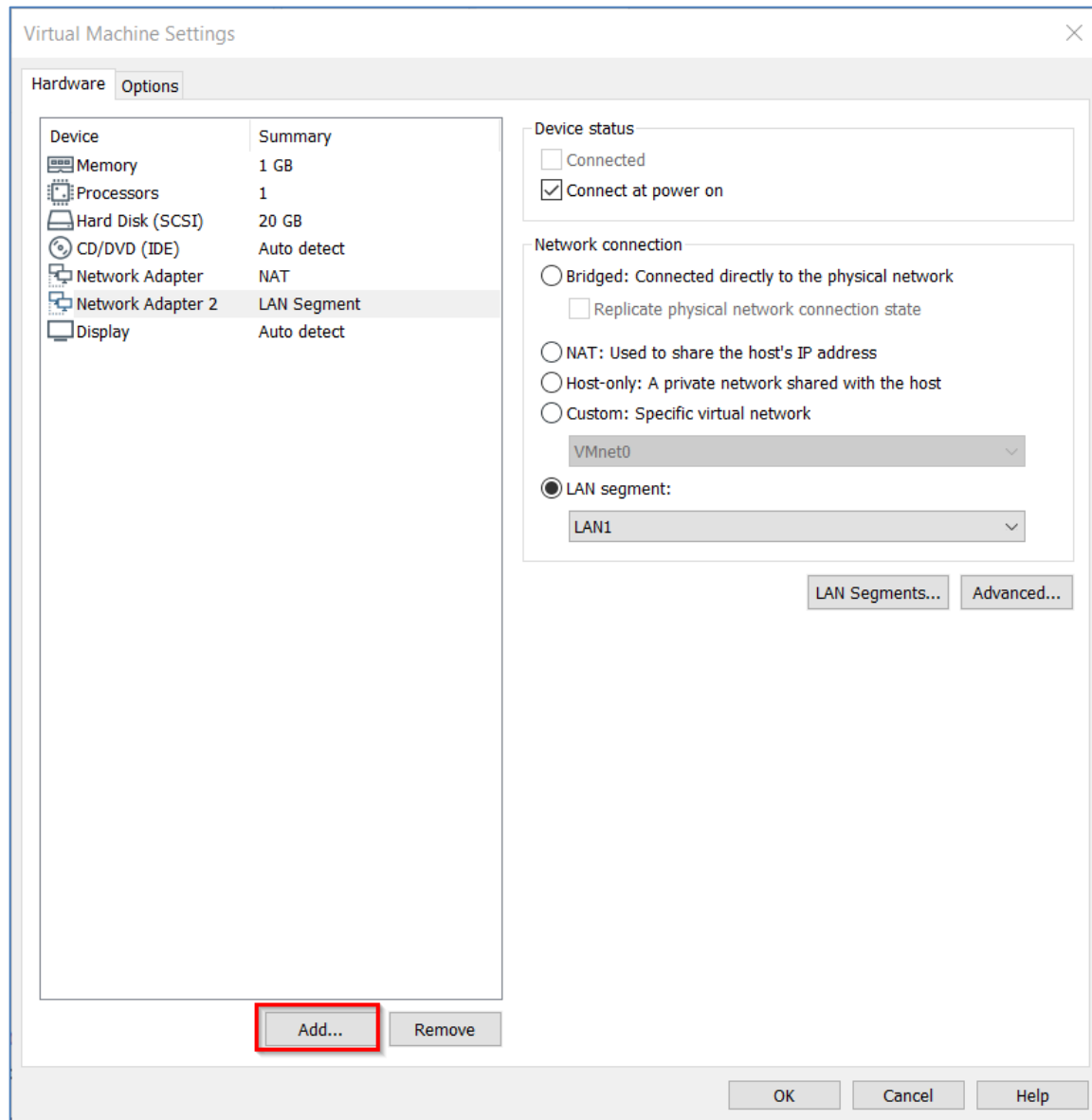
Ajouter une deuxième interface réseau pour **LAN1**

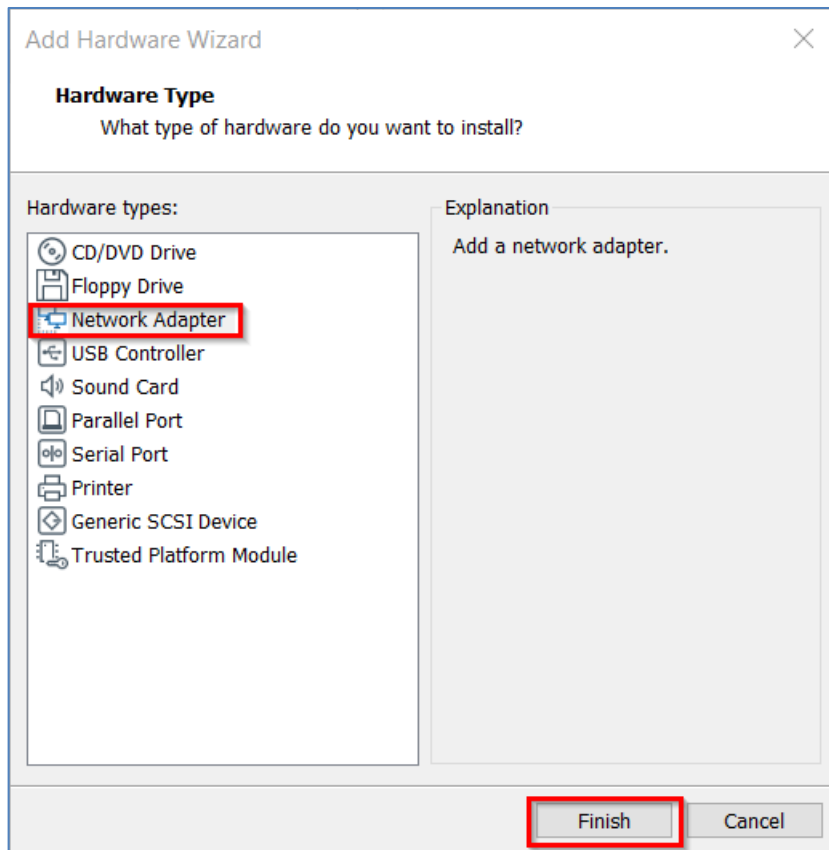


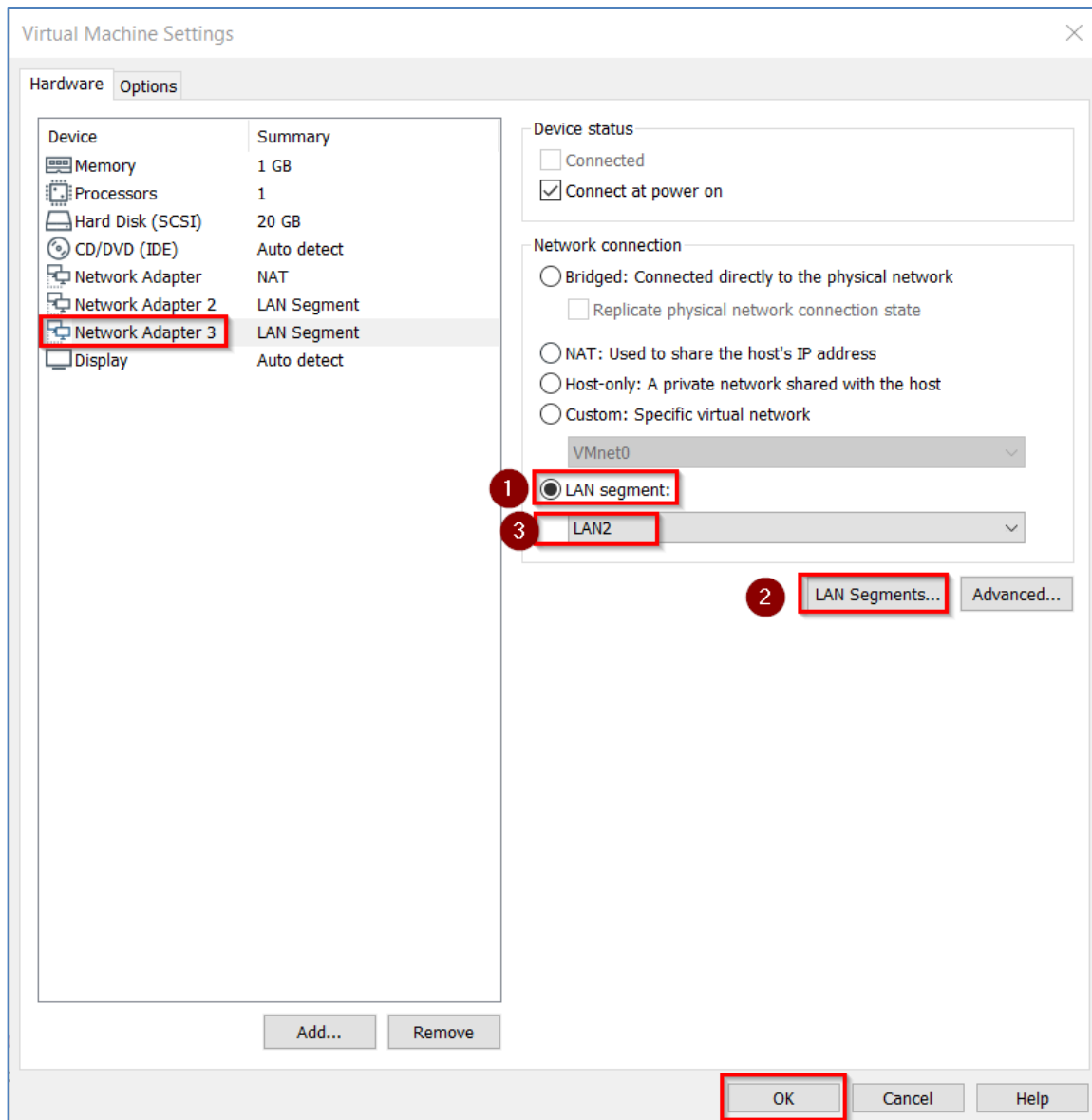




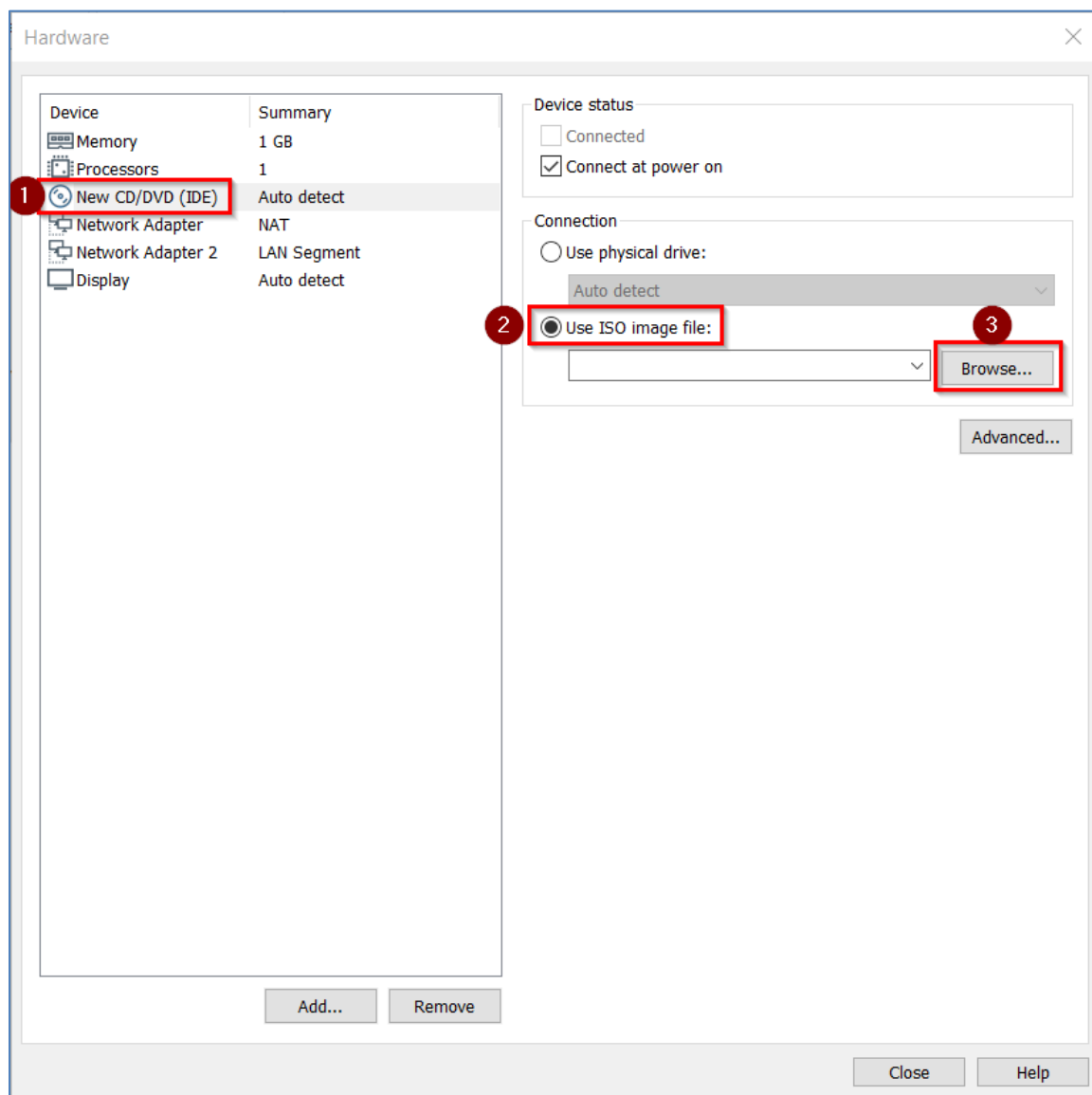
Ajouter une troisième interface réseau pour LAN2







Indiquer l'emplacement de l'image iso d'installation de PfSense.



Device status

☐ Connected

☒ Connect at power on

Connection

☐ Use physical drive:

Auto detect

☒ Use ISO image file:

C:\Users\Snoopy\OneDrive\ISO\pfSense-CE-2.6.0-RE

Browse...

Advanced...

PFSENSE - VMware Workstation

File Edit View VM Tabs Help

PFSENSE

Power on this virtual machine

Edit virtual machine settings

Devices

Memory	1 GB
Processors	1
Hard Disk (SCSI)	20 GB
CD/DVD (IDE)	Using file C:\Use...
Network Adapter	NAT
Network Adapter 2	LAN Segment
Network Adapter 3	LAN Segment
Display	Auto detect

Description

Type here to enter a description of this virtual machine.

Virtual Machine Details

State: Powered off

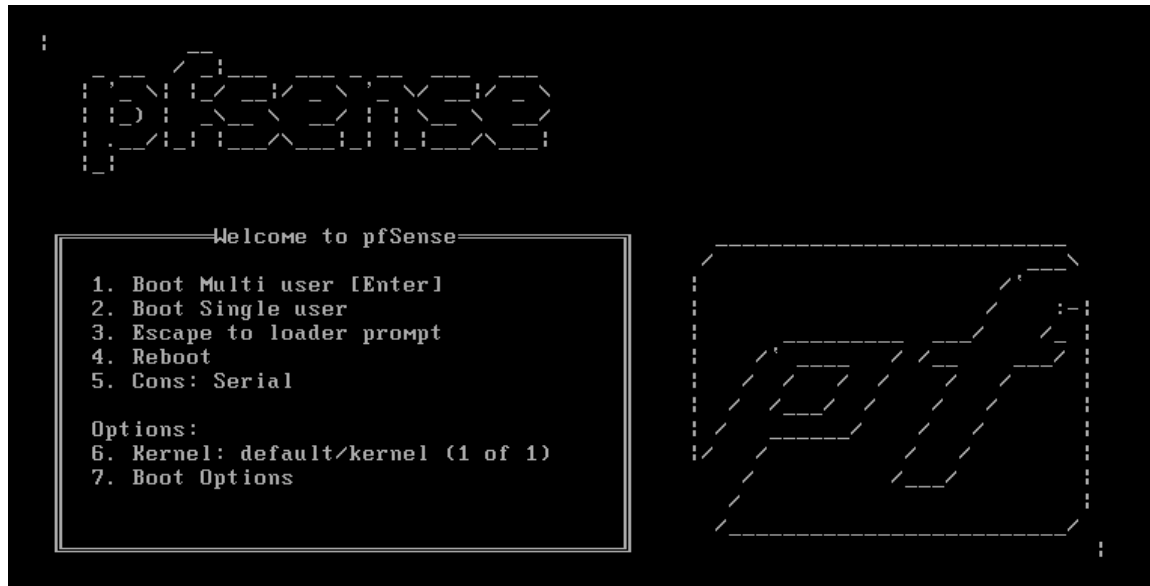
Configuration file: C:\Virtual Machines\PFSENSE\PFSENSE.vmx

Hardware compatibility: Workstation 16.2.x virtual machine

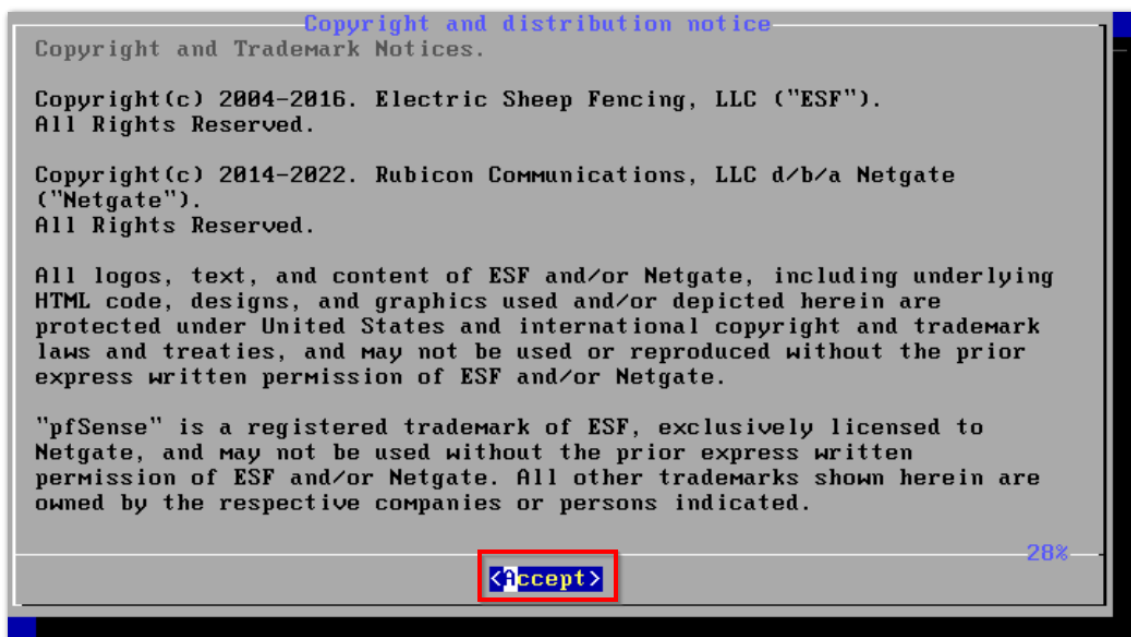
Primary IP address: Network information is not available

4 Installation de PfSense

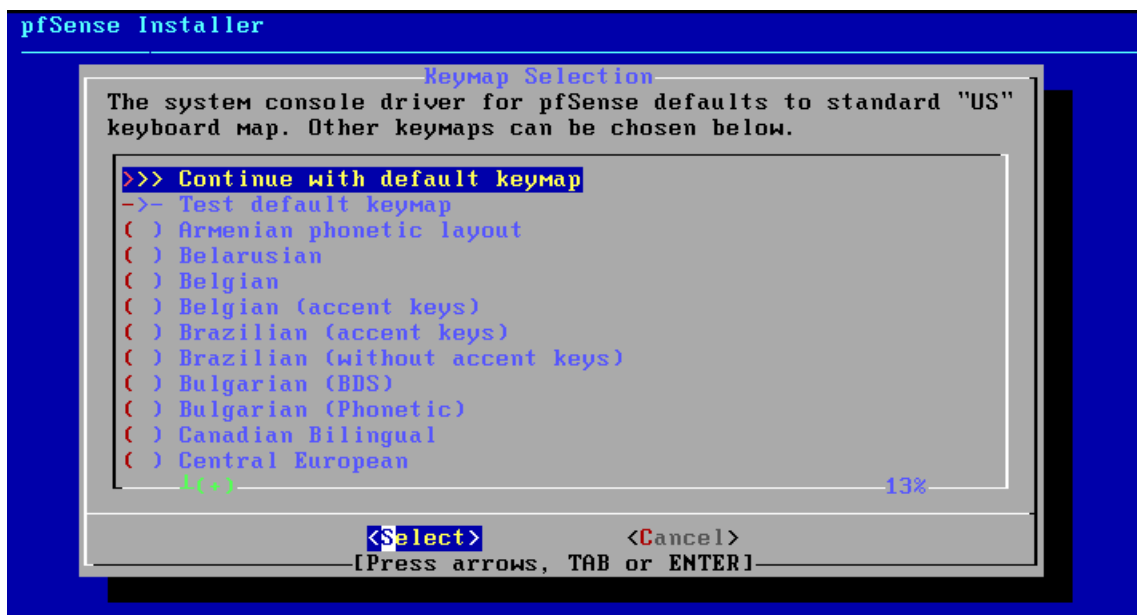
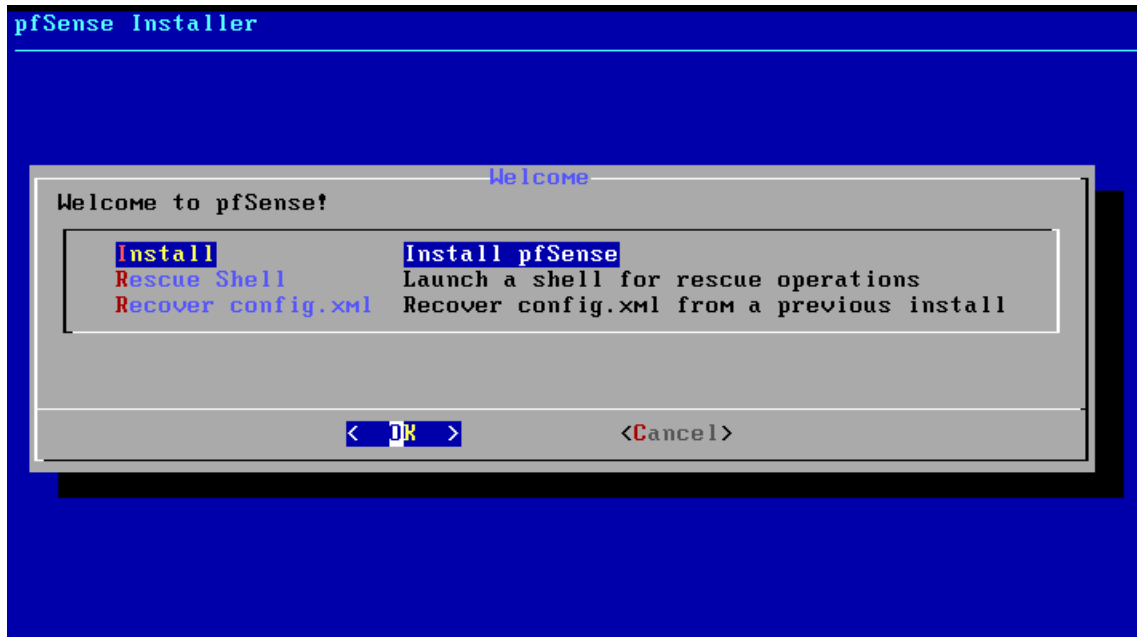
Démarrer la machine virtuelle. Elle devrait s'amorcer automatiquement depuis le CDRom. Nous allons conserver les paramètres par défaut de PfSense.



Sur ce premier écran, sélectionner **Accept**.



Choisir **Install PfSense**.



pfSense Installer

Partitioning

How would you like to partition your disk?

Auto (ZFS)	Guided Root-on-ZFS
Auto (UFS) BIOS	Guided Disk Setup using BIOS boot method
Auto (UFS) UEFI	Guided Disk Setup using UEFI boot method
Manual	Manual Disk Setup (experts)
Shell	Open a shell and partition by hand

< OK > <Cancel>

pfSense Installer

Archive Extraction

Extracting distribution files...

base.txz...

Overall Progress:

10%

2298 files read @ 2298.0 files/sec.

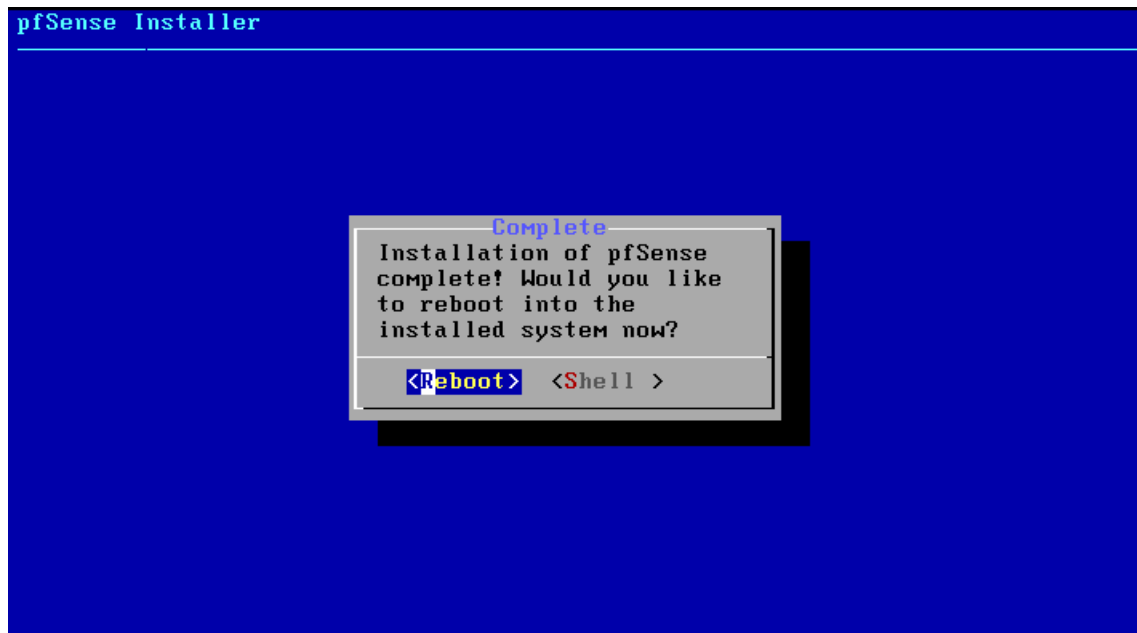
Manual Configuration

The installation is now finished.
Before exiting the installer, would
you like to open a shell in the new
system to make any final manual
modifications?

< Yes >

< No >

L'installation est maintenant terminée. Vous devez redémarrer la machine virtuelle pour lancer PfSense.



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

VMware Virtual Machine - Netgate Device ID: 2e96dfcc80d07c262aea

*** Welcome to pfSense 2.6.0-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 192.168.99.146/24
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: █
```