



17/01/2024

# Pfsense



## Création de la VM

### Create: Virtual Machine

General OS System Disks CPU Memory Network Confirm

Node: Sukuku

VM ID: 104

Name: PfSense

Resource Pool:

Start at boot: ☐

Start/Shutdown order: any

Startup delay: default

Shutdown timeout: default

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### Create: Virtual Machine

General OS System Disks CPU Memory Network Confirm

☒ Use CD/DVD disc image file (iso)

Storage: local

ISO image: pfSense-CE-2.7.2-RELEASE-am

☐ Use physical CD/DVD Drive

☐ Do not use any media

Guest OS:

Type: Linux

Version: 6.x - 2.6 Kernel

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Create: Virtual Machine

General

OS

System

Disks

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Graphic card:

Default

SCSI Controller:

VirtIO SCSI single

Machine:

Default (i440fx)

Qemu Agent:

☐

Firmware

BIOS:

Default (SeaBIOS)

Add TPM:

☐

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Create: Virtual Machine

General

OS

System

Disks

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Confirm

scsi0

Disk

Bandwidth

Bus/Device:

SCSI

0

Cache:

Default (No cache)

SCSI Controller:

VirtIO SCSI single

Discard:

☐

Storage:

local-lvm

IO thread:

☒

Disk size (GiB):

32

Format:

Raw disk image (raw)

SSD emulation:

☐

Backup:

☒

Read-only:

☐

Skip replication:

☐

Async IO:

Default (io\_uring)

Add

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## Create: Virtual Machine

General OS System Disks **CPU** Memory Network Confirm

Sockets: 1 Type: Default (kvm64)  
Cores: 2 Total cores: 2

VCPUs: 2 CPU units: 100  
CPU limit: unlimited Enable NUMA: ☐  
CPU Affinity: All Cores

## Extra CPU Flags:

Default	-	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	+	md-clear	Required to let the guest OS know if MDS is mitigated correctly
Default	-	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	+	pcid	Meltdown fix cost reduction on Westmere, Sandy-, and IvyBridge Intel CPUs
Default	-	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	+	spec-ctrl	Allows improved Spectre mitigation with Intel CPUs
Default	-	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	+	ssbd	Protection for "Speculative Store Bypass" for Intel models
Default	-	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	+	ibpb	Allows improved Spectre mitigation with AMD CPUs
Default	-	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	+	virt ssbd	Basis for "Speculative Store Bypass" protection for AMD models

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## Create: Virtual Machine

General OS System Disks CPU **Memory** Network Confirm

Memory (MiB): 2048

Minimum memory (MiB): 2048

Shares: Default (1000)

Ballooning Device: ☒[? Help](#)Advanced ☒

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Si problème réseau changer le modèle Networking

Create: Virtual Machine

General

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☐ No network device

Bridge:vmbr0

Model:Intel E1000

VLAN Tag:no VLAN

MAC address:auto

Firewall:☒

Disconnect:☐

Rate limit (MB/s):unlimited

MTU:1500 (1 = bridge MTU)

Multiqueue:

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Create: Virtual Machine

General

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System

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Confirm

Key ↑	Value
cores	2
ide2	local:iso/pfSense-CE-2.7.2-RELEASE-amd64.iso,media=cdrom
memory	2048
name	Pfsense
net0	e1000,bridge=vmbr0,firewall=1
nodename	Sukuku
numa	0
ostype	l26
scsi0	local-lvm:32,iosthread=on
scsihw	virtio-scsi-single
sockets	1
vmid	104

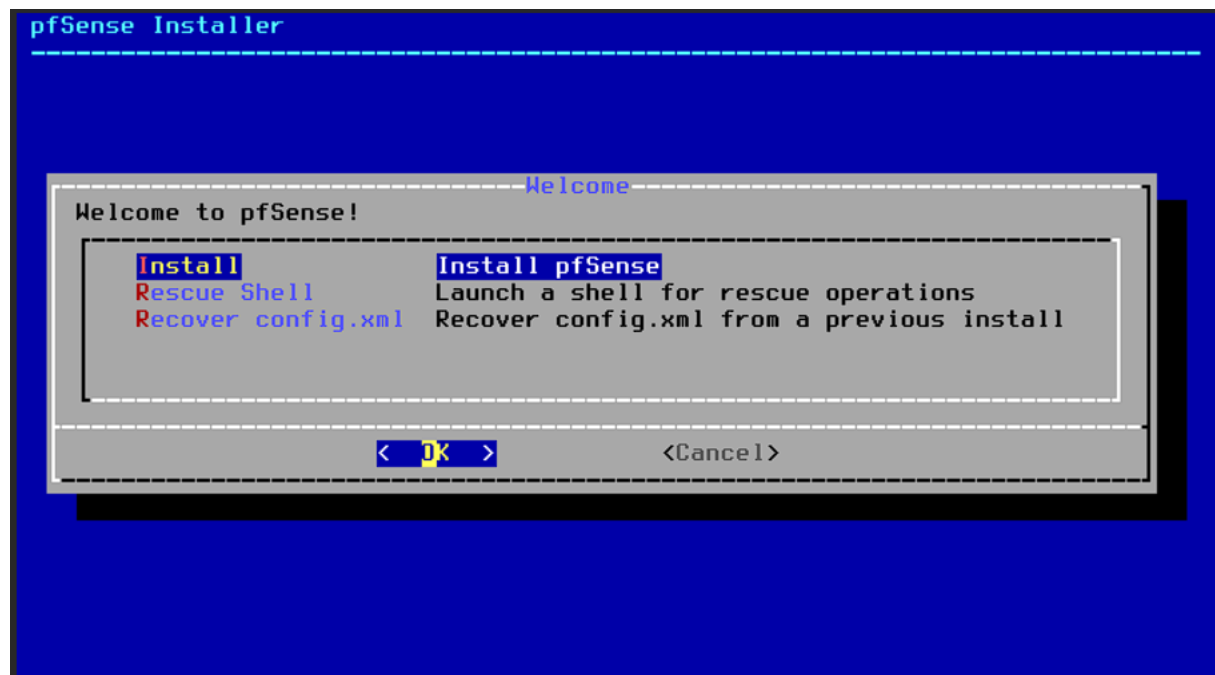
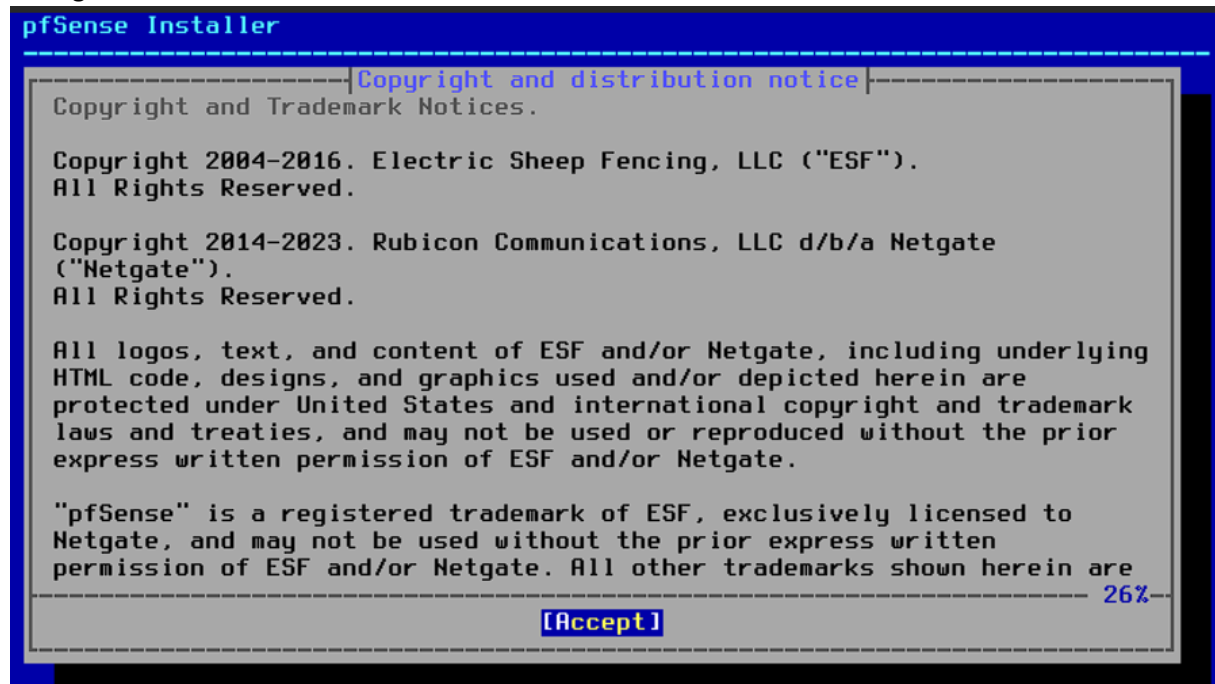
☐ Start after created

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Finish

## Configuration Pfsense



## pfSense Installer

### Partitioning

How would you like to partition your disk?

<b>Auto (ZFS)</b>	<b>Guided Root-on-ZFS</b>
Auto (UFS)	Guided UFS Disk Setup
Manual	Manual Disk Setup (experts)
Shell	Open a shell and partition by hand

< **OK** >

<Cancel>

To use ZFS with less than 8GB RAM, see <https://wiki.freebsd.org/ZFSTuningGuide>

## pfSense Installer

### ZFS Configuration

Configure Options:

<b>&gt;&gt;&gt; Install</b>	<b>Proceed with Installation</b>
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	1g
M Mirror Swap?	NO
W Encrypt Swap?	NO

<**Select**>

<Cancel>

---[Use alnum, arrows, punctuation, TAB or ENTER]---

Create ZFS boot pool with displayed options

pfSense Installer

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]

[1+ Disks] Striping provides maximum storage but no redundancy

pfSense Installer

ZFS Configuration

[\*] da0 QEMU QEMU HARDDISK

< OK > < Back >



pfSense Installer

---

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]

pfSense Installer

---

Complete

Installation of pfSense complete!  
Would you like to reboot into the  
installed system now?

[**Reboot**]

[**S**hell ]

```

done.
Initializing..... done.
Starting device manager (devd)...done.
Loading configuration...done.
Updating configuration...done.
Warning: Configuration references interfaces that do not exist: em1

Network interface mismatch -- Running interface assignment option.

Valid interfaces are:

em0      0e:e6:c7:7f:23:d5 (down) Intel(R) Legacy PRO/1000 MT 82540EM

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]? em0: link state changed to UP
2024-01-17T08:50:21.145800+00:00 - php-fpm 394 - - /rc.linkup: DHCP Client not r
unning on wan (em0), reconfiguring dhclient.
2024-01-17T08:50:26.631910+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: In
fo: starting on em0.
2024-01-17T08:50:26.632035+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: on
(IP address: 10.74.0.137) (interface: WAN[wan]) (real interface: em0).

```

## Configuration du WAN

```

Network interface mismatch -- Running interface assignment option.

Valid interfaces are:

em0      0e:e6:c7:7f:23:d5 (down) Intel(R) Legacy PRO/1000 MT 82540EM

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]? em0: link state changed to UP
2024-01-17T08:50:21.145800+00:00 - php-fpm 394 - - /rc.linkup: DHCP Client not r
unning on wan (em0), reconfiguring dhclient.
2024-01-17T08:50:26.631910+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: In
fo: starting on em0.
2024-01-17T08:50:26.632035+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: on
(IP address: 10.74.0.137) (interface: WAN[wan]) (real interface: em0).

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 or a): em0

```

```
em0      0e:e6:c7:7f:23:d5 (down) Intel(R) Legacy PRO/1000 MT 82540EM
```

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]? em0: link state changed to UP

```
2024-01-17T08:50:21.145800+00:00 - php-fpm 394 - - /rc.linkup: DHCP Client not running on wan (em0), reconfiguring dhclient.
```

```
2024-01-17T08:50:26.631910+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: Info: starting on em0.
```

```
2024-01-17T08:50:26.632035+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: on (IP address: 10.74.0.137) (interface: WAN[wan]) (real interface: em0).
```

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 or a): em0

Enter the LAN interface name or 'a' for auto-detection

NOTE: this enables full Firewalling/NAT mode.

( a or nothing if finished):

Should VLANs be set up now [y/n]? em0: link state changed to UP

```
2024-01-17T08:50:21.145800+00:00 - php-fpm 394 - - /rc.linkup: DHCP Client not running on wan (em0), reconfiguring dhclient.
```

```
2024-01-17T08:50:26.631910+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: Info: starting on em0.
```

```
2024-01-17T08:50:26.632035+00:00 - php-fpm 394 - - /rc.newwanip: rc.newwanip: on (IP address: 10.74.0.137) (interface: WAN[wan]) (real interface: em0).
```

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 or a): em0

Enter the LAN interface name or 'a' for auto-detection

NOTE: this enables full Firewalling/NAT mode.

( a or nothing if finished):

The interfaces will be assigned as follows:

WAN -> em0

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

```

Starting syslog...done.
Trimming the zpool... done.
Starting CRON... done.
pfSense 2.7.2-RELEASE amd64 20231206-2010
Bootup complete

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

QEMU Guest - Netgate Device ID: 99a8673ebe6c71dcff7a

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

WAN (wan)      -> em0      -> v4/DHCP4: 10.74.0.137/22

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: █

```

Vérifier accès interface WEB et si la machine ping internet

```

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

WAN (wan)      -> em0      -> v4/DHCP4: 10.74.0.137/22

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: 8

[2.7.2-RELEASE][root@pfSense.home.arp]/root: ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8): 56 data bytes
64 bytes from 8.8.8.8: icmp_seq=0 ttl=118 time=3.271 ms
64 bytes from 8.8.8.8: icmp_seq=1 ttl=118 time=2.692 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=118 time=3.416 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=118 time=2.749 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=118 time=3.335 ms
█

```

Connexion interface WEB

login admin

Mdp : pfsense

## Ajout de la règle de firewall

Firewall / Rules / Edit

Edit Firewall Rule

Action

Pass

Choose what to do with packets that match the criteria specified below.  
Hint: the difference between block and reject is that with reject, a packet (TCP RST or ICMP port unreachable for UDP) is returned to the sender, whereas with block the packet is dropped silently. In either case, the original packet is discarded.

Disabled

☐ Disable this rule

Set this option to disable this rule without removing it from the list.

Interface

WAN

Choose the interface from which packets must come to match this rule.

Address Family

IPv4

Select the Internet Protocol version this rule applies to.

Protocol

TCP

Choose which IP protocol this rule should match.

Source

Source

☐ Invert match

Any

Source Address

/

Display Advanced

The Source Port Range for a connection is typically random and almost never equal to the destination port. In most cases this setting must remain at its default value, any.

Destination

Destination

☐ Invert match

Any

Destination Address

/

Destination Port Range

(other)

From

Custom

To

(other)

Custom

Specify the destination port or port range for this rule. The "To" field may be left empty if only filtering a single port.

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

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

Save

## Ajout 2 ème interface réseau

bridge-fd 0  
hwaddress 6c:2b:59:af:55:3b

## Add vmbr1 sur machine pfSense dans hardware

bridge-fd 0  
hwaddress 6c:2b:59:af:55:3b

Reboot la machine pfsense

```
QEMU Guest - Netgate Device ID: 99a8673ebe6c71dcff7a
*** Welcome to pfSense 2.7.2-RELEASE (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 10.74.0.137/22

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: 8

[2.7.2-RELEASE][root@pfSense.home.arpal]/root: em1: <Intel(R) Legacy PRO/1000 MT
82540EM> at device 19.0 on pci0
em1: Using 1024 TX descriptors and 1024 RX descriptors

[2.7.2-RELEASE][root@pfSense.home.arpal]/root: reboot
pflog0: promiscuous mode disabled
```

Après reboot sélectionner 1 pour configurer le WAN et le LAN

```
WAN (wan)      -> em0      -> v4/DHCP4: 10.74.0.137/22

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      0e:e6:c7:7f:23:d5   (up) Intel(R) Legacy PRO/1000 MT 82540EM
em1      5e:0b:7e:78:17:51 (down) Intel(R) Legacy PRO/1000 MT 82540EM

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
```

```

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

Writing configuration...done.
One moment while the settings are reloading... done!

```

#### Conf WAN

```

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)

Enter the number of the interface you wish to configure: 1

Configure IPv4 address WAN interface via DHCP? (y/n) n

Enter the new WAN IPv4 address. Press <ENTER> for none:
> 10.74.0.137

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 WAN IPv4 subnet bit count (1 to 32):
> 22

```



```
For a LAN, press <ENTER> for none:
>

Configure IPv6 address WAN interface via DHCP6? (y/n) n

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

Do you want to enable the DHCP server on WAN? (y/n) n
Disabling IPv4 DHCPD...
Disabling IPv6 DHCPD...

Do you want to revert to HTTP as the webConfigurator protocol? (y/n) n

Please wait while the changes are saved to WAN...
Reloading filter...
Reloading routing configuration...
DHCPD...

The IPv4 WAN address has been set to 10.74.0.137/22
You can now access the webConfigurator by opening the following URL in your web
browser:
        https://10.74.0.137/

Press <ENTER> to continue.█
```

#### Conf LAN

```
Enter an option: 2

Available interfaces:

1 - WAN (em0 - static)
2 - LAN (em1)

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:
> 192.168.0.1

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:
> █
```

## Conf DHCP range

```
>
Configure IPv6 address LAN interface via DHCP6? (y/n) n
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: 192.168.0.50
Enter the end address of the IPv4 client address range: 192.168.0.100
Disabling IPv6 DHCPD...

Do you want to revert to HTTP as the webConfigurator protocol? (y/n) n

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

The IPv4 LAN address has been set to 192.168.0.1/24
You can now access the webConfigurator by opening the following URL in your web
browser:
        https://192.168.0.1/
Press <ENTER> to continue.█
```

## Vérification :

Vérifier si le pfsense a internet

vérifier sur une machine qui est sur le LAN quelle est bien sur la bonne plage DHCP

Vérifier sur la machine sur le LAN a bien internet

Vérifier si la machine dans le LAN accède au pfsense en /24