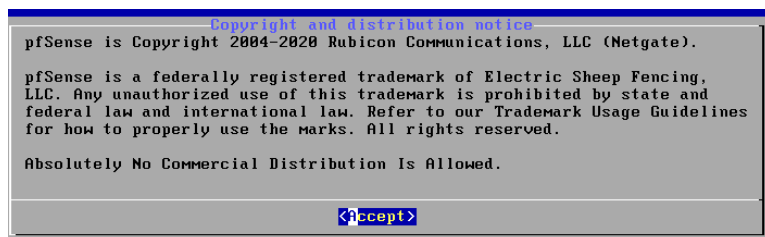


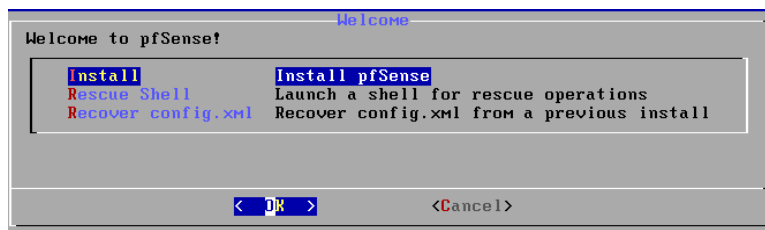
PFsense

Installation PFSense + Configuration

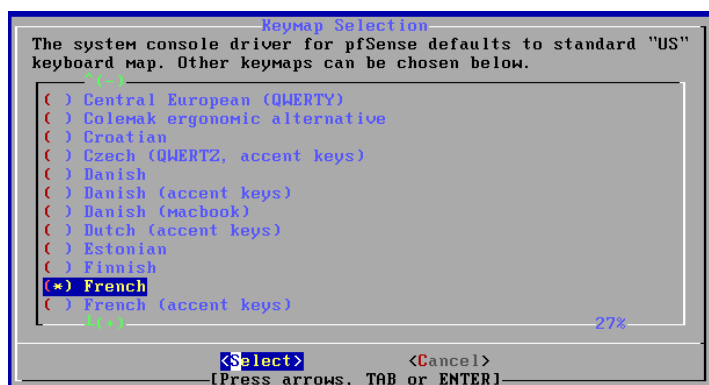
Acceptez la licence de PFSense pour continuer :



Sélectionnez Install pfSense puis ok :



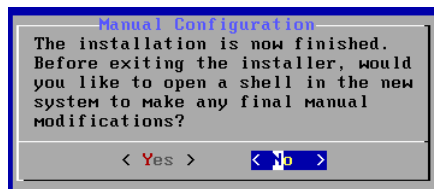
Sélectionnez la langue que vous souhaitez puis ok :



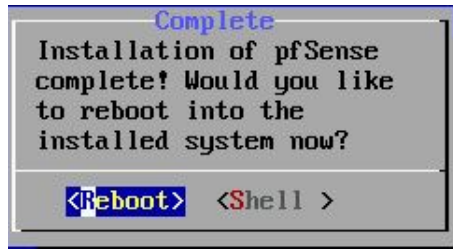
Choisissez votre mode de partitionnement de disque mais il est préférable de faire en automatique :



On sélectionne ok :



On reboot la machine :



On ne veut pas mettre en place de VLAN donc on met n :

```
Structured Extended Features3=0xc0000000<RD_CLEAR,IBPB,STIBP,L1DFL,ARCH_CAP,SS
BD>
XSAVE Features=0xf<XSAVEOPT,XSAVEC,XINUSE,XSAVES>
IA32_ARCH_CAPS=0xc<RSBA,SKIP_L1DFL_UME>
TSC: P-state invariant
Hypervisor: Origin = "UMwareUMware"
done.
..... 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      08:0c:29:ee:68:04   (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
```

Au départ on choisit l'option pour voir les différentes cartes réseau présentes :
Puis on choisit la carte réseau pour aller vers l'extérieur c'est-à-dire le NAT (ici em0):

```
6) Halt system                15) Restore recent configuration
7) Ping host                  16) Restart PHP-FPM
8) Shell

Enter an option: 1

Valid interfaces are:

em0      08:0c:29:ee:68:04   (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em1      08:0c:29:ee:68:18   (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em2      08:0c:29:ee:68:0e   (down) 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 em2 or a): em0
```

Ici on choisit la carte réseau qui permet de se connecter au serveur donc au réseau :

```

Enter an option: 1

Valid interfaces are:

em0      00:0c:29:ee:60:04   (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em1      00:0c:29:ee:60:18   (up) Intel(R) PRO/1000 Legacy Network Connection 1.
em2      00:0c:29:ee:60:0e   (down) 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 em2 or a): em0

Enter the LAN interface name or 'a' for auto-detection
NOTE: this enables full Firewalling/NAT mode.
(em1 em2 a or nothing if finished): em1

```

On fait y et entrée :

```

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 em2 or a): em0

Enter the LAN interface name or 'a' for auto-detection
NOTE: this enables full Firewalling/NAT mode.
(em1 em2 a or nothing if finished): em1

Enter the Optional 1 interface name or 'a' for auto-detection
(em2 a or nothing if finished):

The interfaces will be assigned as follows:

WAN   -> em0
LAN   -> em1

Do you want to proceed [y!n]?

```

On choisit l'option 2 pour configurer les adresses IP. On choisit l'option 1 pour configurer notre première carte réseau et on ne souhaite pas le configurer via le DHCP donc on fait n et entrée :

```

*** Welcome to pfSense 2.4.5-RELEASE-p1 (amd64) on pfSense ***

WAN (wan)      -> em0      -> v4/DHCP4: 192.168.79.150/24
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: 1

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

```

On lui attribue donc l'adresse IP en fonction de son contexte et masque correspondant :

```

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: 1

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

Enter the new WAN IPv4 address. Press <ENTER> for none:
> 192.168.79.112

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 31):
> 24

```

On configure maintenant la deuxième carte réseau on tape donc 2 puis entrée. On entre l'adresse IP en fonction de son contexte et par la suite son masque correspondant :

```

WAN (wan)      -> em0      -> v4: 192.168.79.112/24
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 - static)
2 - LAN (em1 - static)

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

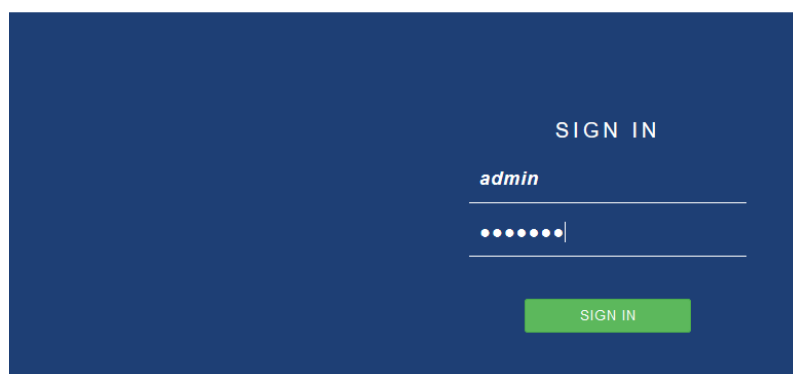
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 172.31.10.112

```

Partie client

Sur une machine windows on rentre l'adresse IP du serveur (de la 2ème carte réseau celle du réseau)

On se connecte grâce au mot de passe prédéfinie qui est : pfsense



On accède donc maintenant à l'interface :

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.](#)

Status / Dashboard

System Information

Name	pfSense.localdomain
User	admin@172.31.10.10 (Local Database)
System	VMware Virtual Machine Netgate Device ID: 5032b053afd48e388f8e
BIOS	Vendor: Phoenix Technologies LTD Version: 6.00 Release Date: Wed Jul 22 2020
Version	2.4.5-RELEASE-p1 (amd64) built on Tue Jun 02 17:51:17 EDT 2020 FreeBSD 11.3-STABLE The system is on the latest version.
CPU Type	Intel(R) Core(TM) i3-8100 CPU @ 3.60GHz 2 CPU(s): 1 package(s) x 2 core(s)

Netgate Services And Support

Retrieving support information

Interfaces

WAN	1000baseT <full-duplex>	192.168.79.112
LAN	1000baseT <full-duplex>	172.31.10.112

Configuration de pfSense

On va dans System puis Wizard Setup. On remplit les informations en fonction de son contexte puis on fait next :

172.31.10.113/wizard.php?xml=setup_wizard.xml

pfSense COMMUNITY EDITION

System ▾ Interfaces ▾ Firewall ▾ Services ▾ VPN ▾ Status ▾ Diagnostics ▾ Help ▾

Wizard / pfSense Setup / General Information

Step 2 of 9

General Information

On this screen the general pfSense parameters will be set.

Hostname: pfSense
EXAMPLE: myserver

Domain: localdomain
EXAMPLE: mydomain.com

The default behavior of the DNS Resolver will ignore manually configured DNS servers for client queries and query root DNS servers directly. To use the manually configured DNS servers below for client queries, visit Services > DNS Resolver and enable DNS Query Forwarding after completing the wizard.

Primary DNS Server: 192.168.79.2

Secondary DNS Server:

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

Next

On choisit la zone d'horaire :

172.31.10.113/wizard.php?xml=setup_wizard.xml

pfSense COMMUNITY EDITION

System ▾ Interfaces ▾ Firewall ▾ Services ▾ VPN ▾ Status ▾ Diagnostics ▾ Help ▾

Wizard / pfSense Setup / Time Server Information

Step 3 of 9

Time Server Information

Please enter the time, date and time zone.

Time server hostname: 0.pfsense.pool.ntp.org
Enter the hostname (FQDN) of the time server.

Timezone: Europe/Paris

On choisit de configurer on statique. On rentre donc une adresse ip, le masque et la gateway (l'adresse IP du serveur)

Wizard / pfSense Setup / Configure WAN Interface

Step 4 of 9

Configure WAN Interface

On this screen the Wide Area Network information will be configured.

Selected Type:

General configuration

MAC Address:

MTU:

MSS:

Static IP Configuration

IP Address:

Subnet Mask:

Upstream Gateway:

DHCP client configuration

DHCP Hostname:

PPPoE configuration

PPPoE Username:

PPPoE Password:

On rentre l'adresse IP du LAN :

Wizard / pfSense Setup / Configure LAN Interface

Step 5 of 9

Configure LAN Interface

On this screen the Local Area Network information will be configured.

LAN IP Address:

Subnet Mask:

[Next](#)

On choisit un mot de passe :

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.

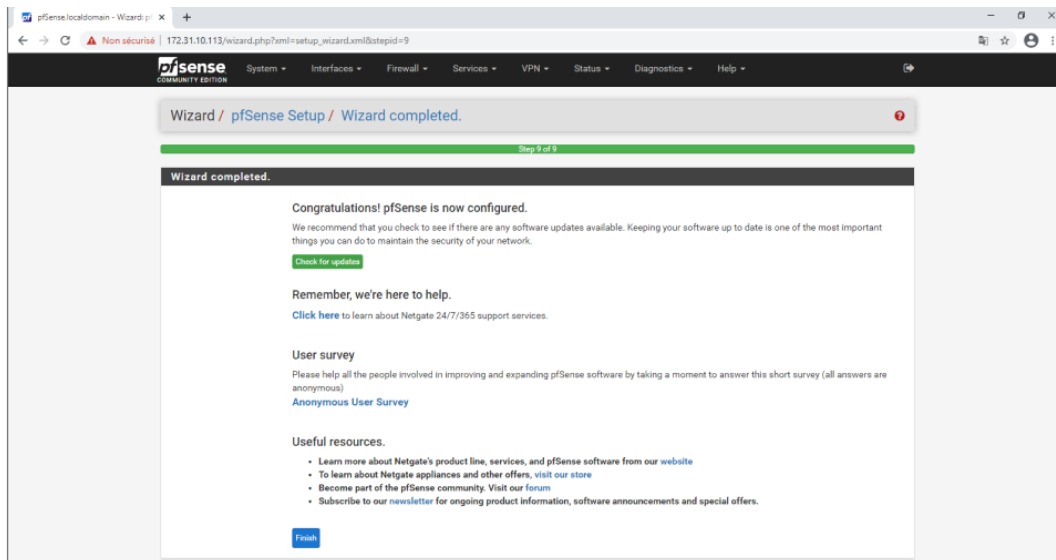
Admin Password:

Admin Password AGAIN:

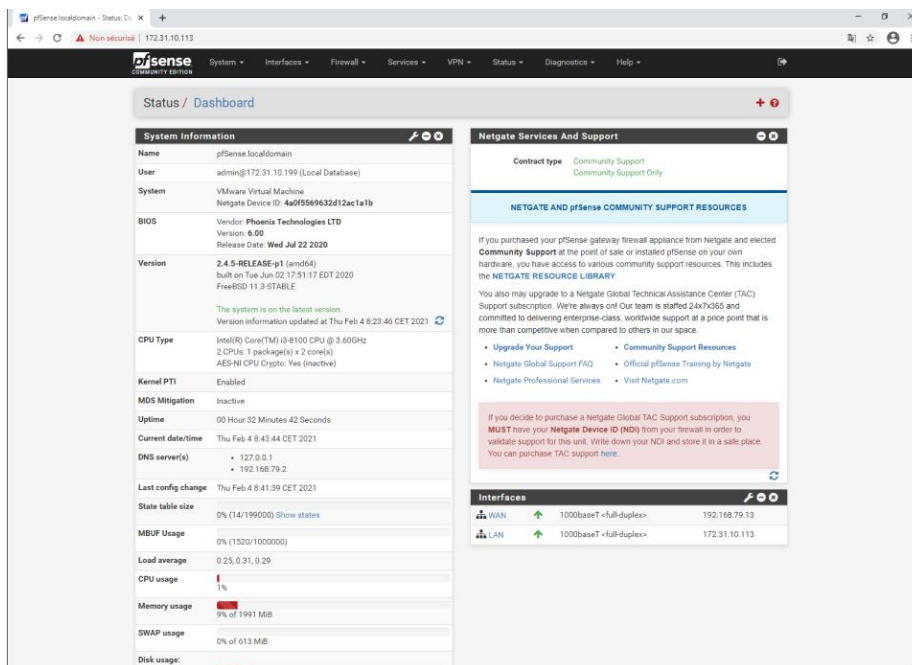
Mdp : Gb42

[Next](#)

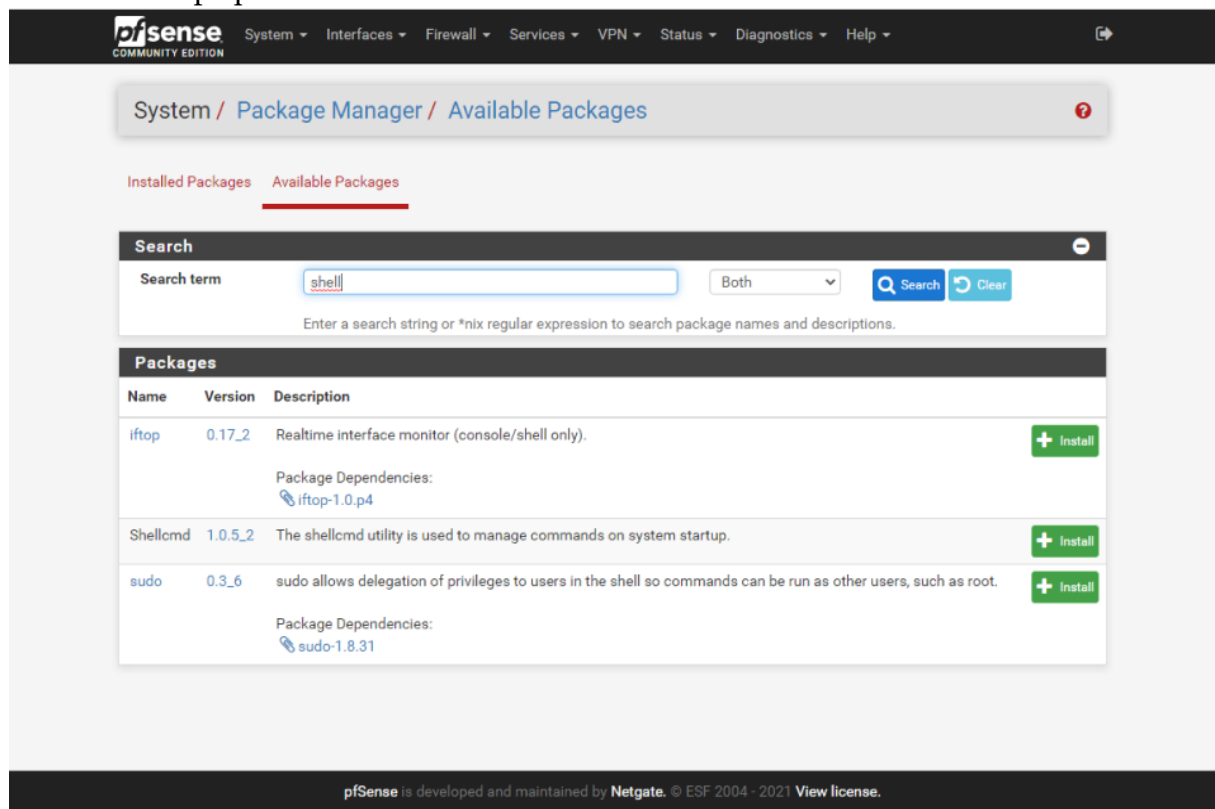
On fait finish :



On a maintenant le récapitulatif :



Ensuite on va dans System Package manager et available package :
On cherche le paquets shell et on install Shellcmd :



pfSense COMMUNITY EDITION

System ▾ Interfaces ▾ Firewall ▾ Services ▾ VPN ▾ Status ▾ Diagnostics ▾ Help ▾

System / Package Manager / Available Packages

Installed Packages Available Packages

Search

Search term Both

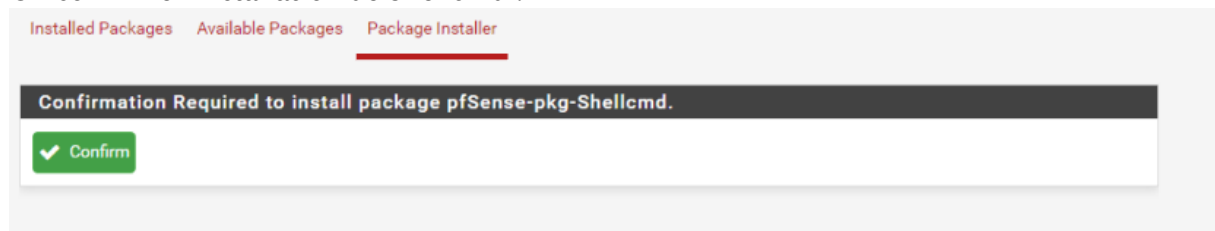
Enter a search string or *nix regular expression to search package names and descriptions.

Packages

Name	Version	Description	
iftop	0.17_2	Realtime interface monitor (console/shell only).	+ Install
Package Dependencies: ↳ iftop-1.0.p4			
Shellcmd	1.0.5_2	The shellcmd utility is used to manage commands on system startup.	+ Install
sudo	0.3_6	sudo allows delegation of privileges to users in the shell so commands can be run as other users, such as root.	+ Install
Package Dependencies: ↳ sudo-1.8.31			

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On confirme l'installation de Shellcmd :

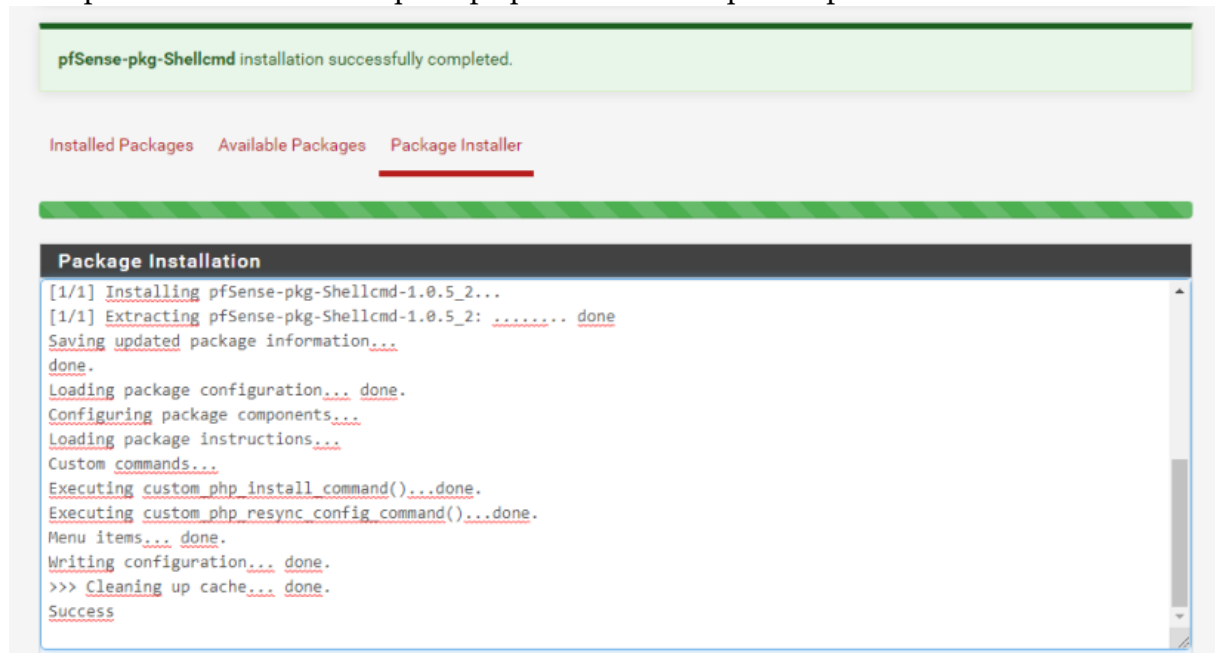


Installed Packages Available Packages Package Installer

Confirmation Required to install package pfSense-pkg-Shellcmd.

☒ Confirm

Dans packet installer on voit que le paquet s'installe et qu'il est par la suite bien installé :



pfSense-pkg-Shellcmd installation successfully completed.

Installed Packages Available Packages Package Installer

Package Installation

```
[1/1] Installing pfSense-pkg-Shellcmd-1.0.5_2...
[1/1] Extracting pfSense-pkg-Shellcmd-1.0.5_2: ..... done
Saving updated package information...
done.
Loading package configuration... done.
Configuring package components...
Loading package instructions...
Custom commands...
Executing custom php install command()...done.
Executing custom php resync_config_command()...done.
Menu items... done.
Writing configuration... done.
>>> Cleaning up cache... done.
Success
```

Puis dans la configuration du paquets Shellcmd on mets les configurations suivantes si ce n'est pas déjà fait :

Shellcmd Configuration

Command
Enter the command to run.

Shellcmd Type
Choose the shellcmd type. Click Info for details. [i](#)

Description
Enter a description for this command. (This is for your reference only.)

[Save](#)

On tape ensuite la commande suivante avec shellcmd :

Command	Shellcmd Type	Description
kbdcontrol -l /usr/share/syscons/keymaps/fr.iso.kbd	shellcmd	clavier_FR

[Save](#) [+ Add](#)

On retourne sur la recherche de paquets et on cherche squid et on installe Squid dans l'ordre suivant :

System / Package Manager / Available Packages

Installed Packages Available Packages

Search

Search term Both [Search](#) [Clear](#)

Enter a search string or *nix regular expression to search package names and descriptions.

Packages

Name	Version	Description	Install
Lightsquid	3.0.6_7	LightSquid is a high performance web proxy reporting tool. Includes proxy realtime statistics (SQStat). Requires Squid package. Package Dependencies: lighttpd-1.4.54 lightsquid-1.8.5	+ Install
squid	0.4.45_2	High performance web proxy cache (3.5 branch). It combines Squid as a proxy server with its capabilities of acting as a HTTP / HTTPS reverse proxy. It includes an Exchange-Web-Access (OWA) Assistant, SSL filtering and antivirus integration via C-ICAP. Package Dependencies: squidclamav-7.1 squid_radius_auth-1.10 squid-4.10 c-icap-modules-0.5.4	+ Install
squidGuard	1.16.18_13	High performance web proxy URL filter. Package Dependencies: squidguard-1.4.15	+ Install

On voit donc que les paquets se sont bien installés :

pfSense-pkg-squid installation successfully completed.

Installed Packages Available Packages Package Installer

Package Installation

```
configuration file /usr/local/etc/squid/squid.conf.sample.  
  
/usr/local/etc/squid/squid.conf.documented is a fully annotated  
configuration file you can consult for further reference.  
  
Additionally, you should check your configuration by calling  
'squid -f /path/to/squid.conf -k parse' before starting Squid.  
=====  
Message from pfSense-pkg-squid-0.4.45_2:  
  
--  
Please visit Services - Squid Proxy Server menu to configure the package and enable the proxy.  
>>> Cleaning up cache... done.  
Success
```

pfSense-pkg-squidGuard installation successfully completed.

Installed Packages Available Packages Package Installer

Package Installation

```
Check documentation here:  
  
http://www.squidguard.org/Doc/  
  
To activate the changes do a /usr/local/sbin/squid -k reconfigure  
=====  
Message from pfSense-pkg-squidGuard-1.16.18_13:  
  
--  
Please visit Services - SquidGuard Proxy Filter - Target Categories and set up at least one category there before  
enabling SquidGuard. See https://forum.pfsense.org/index.php?topic=94312.0 for details.  
>>> Cleaning up cache... done.  
Success
```

pfSense-pkg-Lightsquid installation successfully completed.

Installed Packages Available Packages Package Installer

Package Installation

```
the future. To volunteer to maintain this port, please create an issue at:  
  
https://bugs.freebsd.org/bugzilla  
  
More information about port maintainership is available at:  
  
https://www.freebsd.org/doc/en/articles/contributing/ports-contributing.html#maintain-port  
=====  
Message from pfSense-pkg-Lightsquid-3.0.6_7:  
  
--  
Please visit Status - Squid Proxy Reports - Settings and read the configuration and usage instructions.  
>>> Cleaning up cache... done.  
Success
```