

PETIT Antoine

Date de début : 15/02/2024

Date de fin :

PFSense



Sommaire

1 CAHIER DES CHARGE	3
2 MATÉRIELS ET LOGICIELS À DISPOSITION	3
2.1 PARAMÈTRE DE CONFIGURATION	3
3 RÉALISATION	4
3.1 INSTALLATION CLI PFSENSE	4
3.2 CONFIGURATION CLI DU PFSENSE	7
3.3 PRÉ-CONFIGURATION WEB DE PFSENSE	9
3.4 CONFIGURATION WEB DU NAT SUR LE PFSENSE1	11
3.5 CONFIGURATION WEB DU DHCP RELAY SUR LE PFSENSE2	12

1 CAHIER DES CHARGE

Avoir un serveur web derrière un pare-feu PFsense

2 MATÉRIELS ET LOGICIELS À DISPOSITION

Oracle VM Virtual Box

2.1 *PARAMÈTRE DE CONFIGURATION*

PFSense 1		
Interface 1	Accès par pont	DHCP
Interface 2	INTERNE	10.0.23.254

Srv Web FTP		
Interface 1	INTERNE	10.0.23.250

Srv DHCP		
Interface 1	INTERNE	10.0.23.249

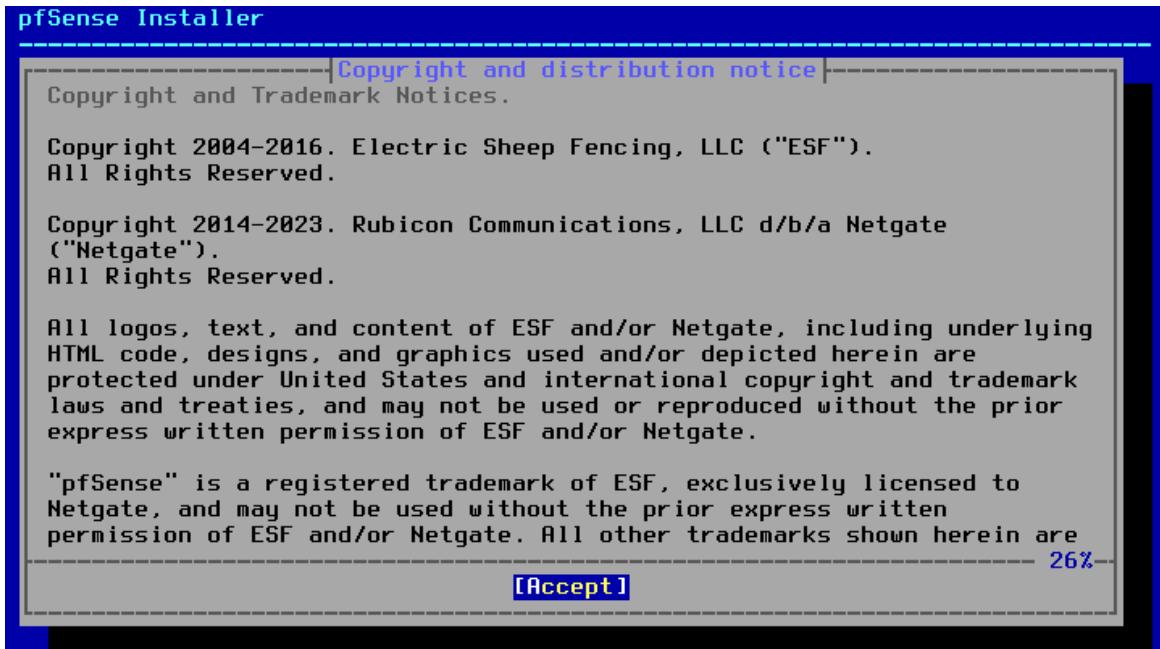
PFSense 2		
Interface 1	INTERNE	10.0.23.253
Interface 2	INTERNE 2	10.0.24.254

Cli Debian 12		
Interface 1	INTERNE 2	DHCP

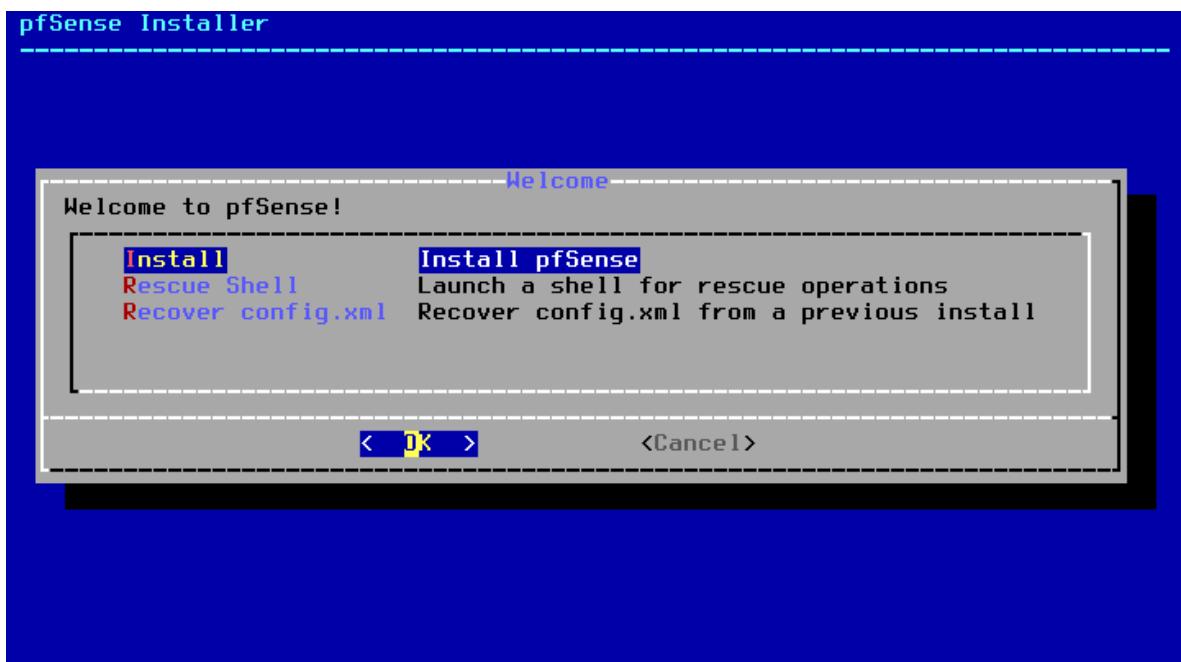
3 RÉALISATION

3.1 INSTALLATION CLI PFSENSE

Une fois PFSense lancer (sur l'iso) vous arriverait sur cette page :



Appuyez sur entrer pour ENTRÉE



Appuyez une nouvelle fois sur ENTRÉE pour accepter (vérifiez de bien etre sur « Install »)

pfSense Installer



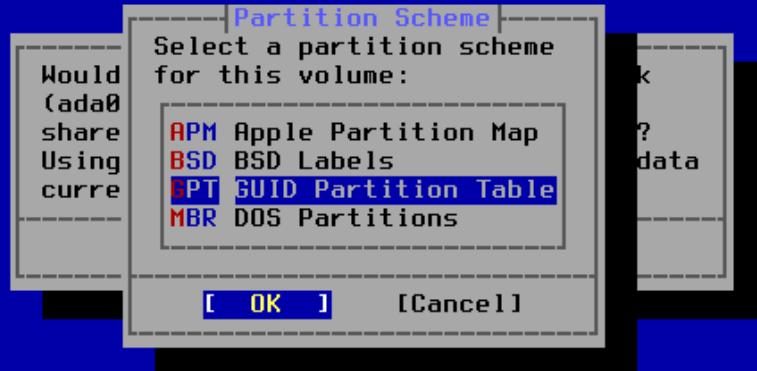
Menu options help choose which disk to setup using UFS and standard partitions
Choisissez « Auto (UFS) » et appuyer sur ENTRÉE

FreeBSD Installer



Choisissez « Entire Disk » et appuyer sur ENTRÉE

FreeBSD Installer



Bootable on most x86 systems and EFI aware ARM64

1. Choisissez « GPT » et appuyer sur ENTRÉE la page suivante vous montre le résultat et vous demande si cela vous convient si oui appuyer sur ENTRÉE si cela ne vous convient pas libre a vous de le modifié .
2. Une fois arrivez sur la page de confirmation, choisissez « Commit » et appuyer sur ENTRÉE
3. Une fois arrivez sur la page de « Complete » choisissez «Reboot »pour redémarrer et appuyer sur ENTRÉE

PFsense est installé

3.2 CONFIGURATION CLI DU PFSENSE

Une fois PFSense redémarré, vous arriverez sur cette page :

```
*** Welcome to pfSense 2.7.2-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: ■
```

Sur cette page PFSense vous indique les IP qu'il a attribuées à chaque interface si celle-ci vous convient et passez directement à la prochaine étape sinon, tapez 2 pour changer les IP des interfaces une fois ceci fait on vous demande quel est l'interface que vous voulez changer sélectionnez-la avec le chiffre qui lui a été attribué.

```
Available interfaces:
```

```
1 - WAN (em0 - dhcp, dhcp6)
2 - LAN (em1 - static)
```

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

Ensuite, on vous demande si vous voulez passer votre interface en DHCP :

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

Si vous avez répondu non, il vous demandera d'entrer l'IP que vous voulez lui donner :

```
Enter the new LAN IPv4 address. Press <ENTER> for none:
> 10.0.23.254
```

Il vous demande ensuite le mask (a donné en cidr sans le slash) :

```
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
```

Une fois ceci fait il vous demande si vous voulez configurer une IPv6 sur l'interface pour ma part se sera non :

```
Configure IPv6 address LAN interface via DHCP6? (y/n) n
Enter the new LAN IPv6 address. Press <ENTER> for none:
>
```

Il vous demande ensuite si vous voulez que PFSense servent de serveur DHCP :

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

On vous demande si vous voulez déplacer l'interface web :

```
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...

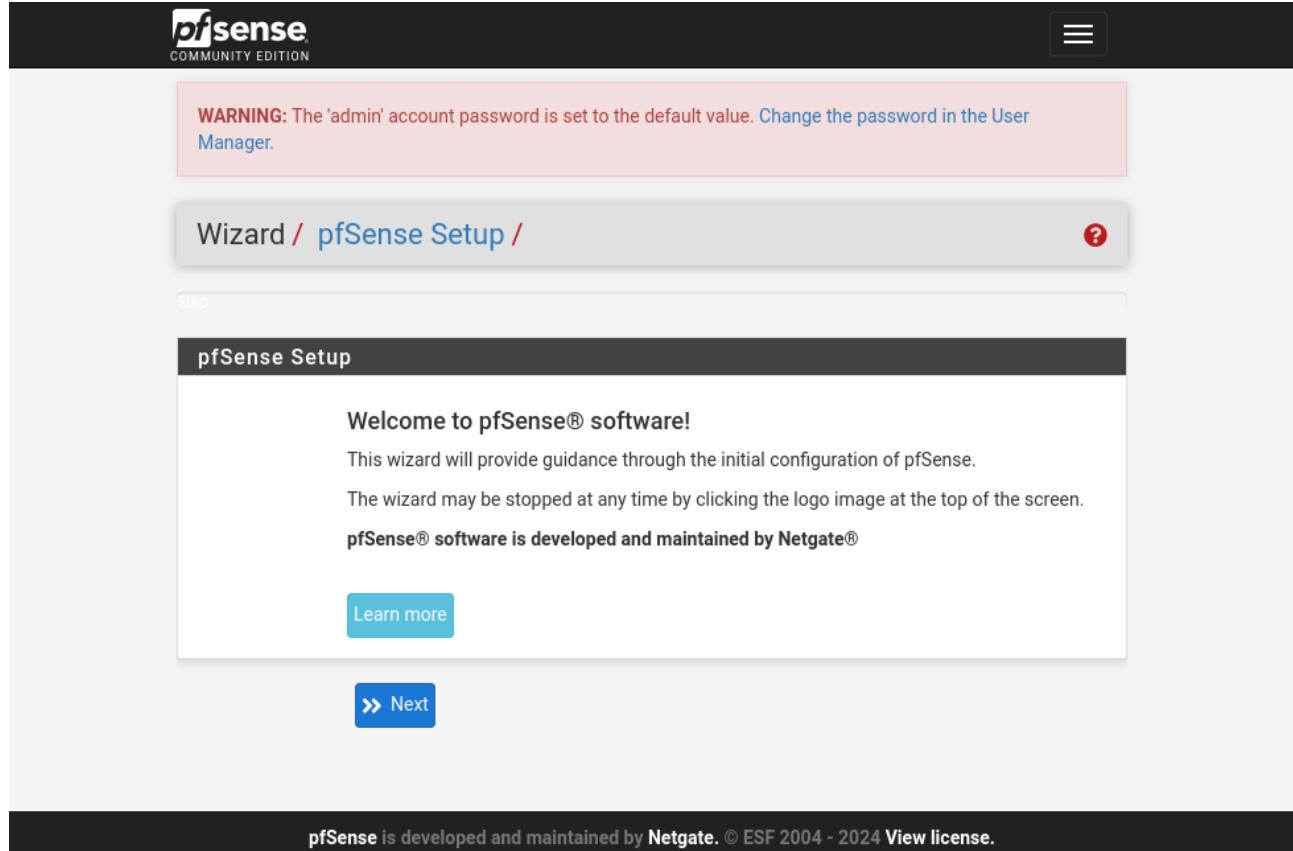
The IPv4 LAN address has been set to 10.0.23.254/24
You can now access the webConfigurator by opening the following URL in your web
browser:
      https://10.0.23.254/
Press <ENTER> to continue.
```

Appuyer sur ENTRÉE et on a fini de configurer l'interface LAN

3.3 PRÉ-CONFIGURATION WEB DE PFSENSE

Tapez l'IP de votre PFSense dans la barre d'URL de votre navigateur web (attention à bien être du côté LAN)

Se connecter au PFSense (login : admin / mdp : pfsense)



Une fois sur cette page faites next>

1. (step 1) puis appuyez sur next>
2. (step 2) Entrer vos DNS si vous en avez puis appuyez sur next>
3. (step 3) sélectionnez votre time zone puis appuyez sur next>
4. (step 4) puis appuyez sur next>
5. (step 5) puis appuyez sur next> (si vous avez modifié l'IP LAN en CLI)
6. (step 6) tapez le mot de passe admin et appuyez sur next>
7. (step 7) Appuyez sur Reload>
8. (step 9) Appuyez sur Finish

Copyright and Trademark Notices.

Copyright® 2004-2016. Electric Sheep Fencing, LLC ('ESF'). All Rights Reserved.

Copyright® 2014-2023. Rubicon Communications, LLC d/b/a Netgate ('Netgate'). All Rights Reserved.

All logos, text, and content of ESF and/or Netgate, including underlying HTML code, designs, and graphics used and/or depicted herein are protected under United States and international copyright and trademark laws and treaties, and may not be used or reproduced without the prior express written permission of ESF and/or Netgate.

'pfSense® is a registered trademark of ESF, exclusively licensed to Netgate, and may not be used without the prior express written permission of ESF and/or Netgate. All other trademarks shown herein are owned by the respective companies or persons indicated.

pfSense® software is open source and distributed under the Apache 2.0 license. However, no commercial distribution of ESF and/or Netgate software is allowed without the prior written consent of ESF and/or Netgate.

ESF and/or Netgate make no warranty of any kind, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. ESF and/or Netgate shall not be liable for errors contained herein or for any direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of any software, information, or material.

Restricted Rights Legend.

No part of ESF and/or Netgate's information or materials may be published, distributed, reproduced, publicly displayed, used to create derivative works, or translated to another language, without the prior written consent of ESF and/or Netgate. The information contained herein is subject to change without notice.

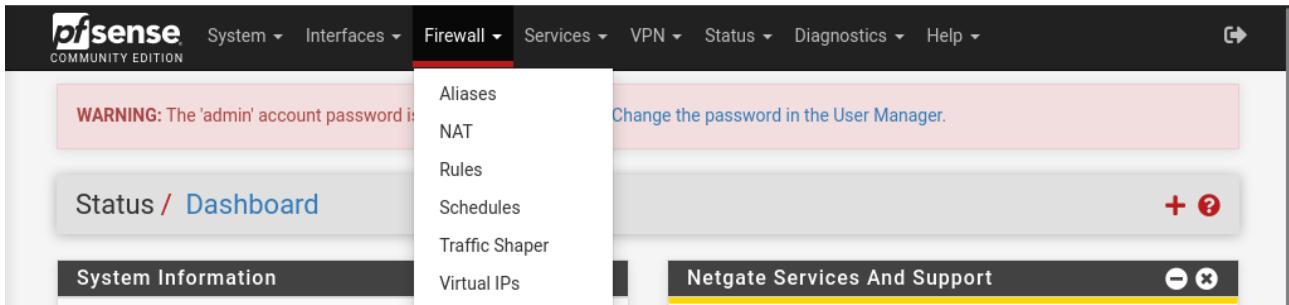
Use, duplication or disclosure by the U.S. Government may be subject to restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 for DOD agencies, and subparagraphs (c) (1) and (c) (2) of the Commercial Computer Software Restricted Rights clause at FAR 52.227-19 for other agencies.

Regulatory/Export Compliance.

The export and re-export of software is controlled for export purposes by the U.S. Government. By accepting this software and/or documentation, Licensee agrees to comply with all U.S. and foreign export laws and regulations as they relate to software and related documentation. Licensee will not export or re-export outside the United States software or documentation, whether directly or indirectly, to any Prohibited Party and will not cause, approve or otherwise intentionally facilitate others in so doing. A Prohibited Party includes: a party in a U.S. embargoed country or the United States has named as a supporter of international terrorism; a party involved in proliferation; a party identified by the U.S. Government as a Denied Party; a party named on the U.S. Government's Enemies List; a party prohibited from participation in export or re-export transactions by a U.S. Government General Order; a party listed by the U.S. Government's Office of Foreign Assets Control as ineligible to participate in transactions subject to U.S. jurisdiction; or any party that Licensee knows or has reason to know has violated or plans to violate U.S. or foreign export laws or regulations. Licensee shall ensure that each of its software users complies with U.S. and foreign export laws and regulations as they relate to software and related documentation.

Une fois ceci fait, appuyez sur « accept » puis « close »

3.4 CONFIGURATION WEB DU NAT SUR LE PFSENSE1



Allez dans Firewall>NAT>Port Forward puis cliquer sur « add »

The screenshot shows the 'Edit Redirect Entry' configuration page. The fields are as follows:

- Disabled:** Disable this rule
- No RDR (NOT):** Disable redirection for traffic matching this rule. (Note: This option is rarely needed. Don't use this without thorough knowledge of the implications.)
- Interface:** WAN (dropdown menu) - Choisir l'interface d'arrivée des paquets.
- Address Family:** IPv4 (dropdown menu) - Choisir l'Internet Protocol version this rule applies to.
- Protocol:** TCP (dropdown menu) - Choisir le protocole sur lequel vous voulez effectuez le Port Forwarding.
- Source:** Display Advanced
- Destination:** Invert match. - Choisir l'interface d'arrivée des paquets. (Note: Type is WAN address)
- Destination port range:** HTTP (From port dropdown), Custom (Custom dropdown), HTTP (To port dropdown) - Choisir le port depuis lequel vous voulez accéder à votre service depuis l'externe.
- Redirect target IP:** Address or Alias: 10.0.23.250 (Address input field) - Indiquer L'IP de la machine sur la quel il faut être rediriger. (Note: i.e. it is not possible to redirect from link-local addresses scope (fe80:*) to local scope (::1))
- Redirect target port:** HTTP (Port dropdown) - Indiquez le port du service a accéder.

3.5 CONFIGURATION WEB DU DHCP RELAY SUR LE PFSENSE2

Allez dans Services>DHCP Relay

Services / DHCP Relay

DHCP Relay Configuration

Enable Enable DHCP Relay

Downstream Interfaces WAN LAN

Sélectionner l'interface qui doit Laissez passer les requête DHCP

Interfaces without an IPv4 address will not be shown.

CARP Status VIP none

DHCP Relay will be stopped when the chosen VIP is in BACKUP status, and started in MASTER status.

Append circuit ID and agent ID to requests

Append the circuit ID (interface number) and the agent ID to the DHCP request.

Upstream Servers 10.0.23.249

Écrire l'IP du Serveur DHCP

+ Add Upstream Server

The IPv4 addresses of the servers to which DHCP requests are relayed.

Save