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# Procédure PFsense

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### 1-Introduction

#### Cette procédure explique comment paramétrer pfSense

PfSense est un système d'exploitation open source ayant pour but la mise en place de routeur/pare-feu basé sur le système d'exploitation FreeBSD. À l'origine un fork de m0n0wall, il utilise le pare-feu à états Packet Filtre ainsi que des fonctions de routage et de NAT lui permettant de connecter plusieurs réseaux informatiques. Il comporte l'équivalent libre des outils et services utilisés habituellement sur des routeurs professionnels propriétaires. PfSense convient pour la sécurisation d'un réseau domestique ou d'entreprise.

#### Procédure PFsense

### 1.1– Schéma



### 2-Installation de PFsense

- 1. Créer une VM sous Linux avec l'iso PFsense.
- 1GO de ram et 20go de stockage
- 2. Une fois la VM installé, pressez la touche « Entrer » sur « Install ».

Welcome to pfSense!	Не 1 соме-	1
<mark>install</mark> Rescue Shell Recover config.×Ml	<mark>Install pfSense</mark> Launch a shell for rescue operations Recover config.xml from a previous install	
۲ ۲	Cancel>	

3. Pressez la touche « Entrer » sur « Auto ».

Auto (ZFS)	Guided Root-on-ZFS
Auto (UFS)	Guided UFS Disk Setup
Manua l	Manual Disk Setup (experts)
Shell	Open a shell and partition by hand

4. Tout accepter jusqu'à cette image ou l'on doit cocher cette case avec la touche « Espace » du clavier

[*] da0 UMware, UMware Virtual S	
< <mark>OK &gt;</mark> < Back >	

5. Rajoutez les cartes réseau suivante à la NAT > WAN, DMZ, LAN 0, WIFI

Device	Summary	Device status
Memory	256 MB	Connected
Processors	1	✓ Connect at power on
Hard Disk (SCSI)	20 G8	Notice for second as
S CD/DVD (IDE)	Using file Z:\Pare-feu\pfSens	Network connection
Network Adapter	NAT	O Bridged: Connected directly to the physical network
Network Adapter 2	LAN Segment	Replicate physical network connection state
Network Adapter 3	NAT	
US8 Controller	Present	O NAT: Used to share the host's IP address
Sound Card	Auto detect	Host-only: A private network shared with the host
] Display	Auto detect	O Custom: Specific virtual network
		VMnet0 ~
		LAN segment:
		~ ·
		LAN Segments Advanced

6. Nous allons maintenant configurer les interfaces.

1 - WAN (e 2 - LAN (e 3 - OPT1 ( 4 - OPT2 (	м3 — dhcp, dhcp6) м0 — static) ем1) ем4)	
Enter the	number of the interface you wish to configure: 1	
Configure	IPv4 address WAN interface via DHCP? (y∕n) y	
Configure	IPv6 address WAN interface via DHCP6? (y∕n) n	
Enter the	new WAN IPv6 address. Press <enter> for none:</enter>	
> Disabling Disabling	ΙΡυ4 DHCPD ΙΡυ6 DHCPD	
Do you wan	t to revert to HTTP as the webConfigurator protocol? (y/n) n	

 8) Shell Enter an option: 2 Available interfaces: 1 - WAN (ем3 - dhcp) 2 - LAN (ем0 - static) 3 - OPT1 (ем1) 4 - OPT2 (ем4) 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: > 192.168.10.0 Subnet Masks are entered as bit counts (as in CIDR notation) in pfSense. e.g. 255.255.255.8 = 24 255.255.8.8 = 16 255.0.0.8 = 8 Enter the new LAN IPv4 subnet bit count (1 to 32): > 27 255.255.0.0 16 255.0.0.0 = 8 Enter the new LAN IPv4 subnet bit count (1 to 32): > 27 You cannot set broadcast address to an interface Enter the new LAN IPv4 address. Press <ENTER> for none: > 192.168.10.30 Subnet masks are entered as bit counts (as in CIDR notation) e.g. 255.255.255.0 = 24 255.255.0.0 = 16 = 8 255.0.0.0 Enter the new LAN IPv4 subnet bit count (1 to 32): > 27 For a WAN, enter the new LAN IPv4 upstream gateway address. For a LAN, press <ENTER> for none: > Configure IPv6 address LAN interface via DHCP6? (y/n) n Enter the new LAN IPv6 address. Press <ENTER> for none: 

Pour LAN, configurer l'IP dans le réseau 192.168.10.0/27 donc en 192.168.10.30, cette fois mettre le http sur le LAN et ne pas mettre en DHCP, activé le http sur le LAN 0. Pareil sur OPT1 (DMZ) et OPT2 (wifi). Pour le WAN une particularité il faut activer le DHCP.

7. Repasser l'interface NAT de R1 sur le LAN 0

#### **Procédure PFsense**

		Device status	
Device	Summary	Connected	
Processors	2 G8 2	Connect at power on	
Hard Disk (WMe)	50 GB Auto datact	Network connection	
Network Adapter	LAN Segment	O Bridged: Connected directly to the physical network	
Network Adapter 2	LAN Segment	Replicate physical network connection state	
Setwork Adapter 3	LAN Segment	ONAT: Used to share the host's IP address	
4 Sound Card	Auto detect	O Host-only: A private network shared with the host	
Printer	Present	Ocustom: Specific virtual network	
Display	Auto detect	VMnet0 v	
		LAN segment:	
		im0	
		caro -	
		LAN Segments Advanced	
	Add Remove		
		OK Cancel Help	

- 3- Configuration de pfSense sur l'interface Web de R1
  - 1. Aller sur R1, vérifier la carte réseau, mettre les bonnes routes, et aller en http sur 192.168.10.30, pour se log admin mdp pfSense, puis mettre le DNS serveur en 192.168.130.2, mettre un mot de passe

t Admin WebGUI P	assword		
	On this screen the admin password w	vill be set, which is used to access the WebGUI and	also SSH services if enabled.
Admin Password		Ô	
min Password AGAIN			
~			

2. Configurer les routes sur le PFsense, aller dans setting, routes + faire Apply changes et changer les defaults Gateway ipv4 et ipv6

		Set this option to disable this gateway without removing it from the list	
		Set this option to disable this gateway without removing it norm the list.	
Ŀ	Interface	LAN	~
		Choose which interface this gateway applies to.	
Addres	s Family	IPv4	~
		Choose the Internet Protocol this gateway uses.	
	Name	Vers_Lan	
		Gateway name	
	Gateway	192.168.10.29	
		Gateway IP address	
	-		
ault gateway			
nult gateway əfault gateway IPv4	WANL	DHCP	
ault gateway afault gateway IPv4	WAN_[ Select a	DHCP v gateway or failover gateway group to use as the default gateway.	
ault gateway efault gateway IPv4 efault gateway IPv6	WAN_[ Select a	DHCP v gateway or failover gateway group to use as the default gateway.	
nult gateway ofault gateway IPv4 ofault gateway IPv6	WAN_[ Select a None Select a	DHCP v gateway or failover gateway group to use as the default gateway.	
ault gateway efault gateway IPv4 efault gateway IPv6	WAN_[ Select a Select a	DHCP v gateway or failover gateway group to use as the default gateway.	
ault gateway efault gateway IPv4 efault gateway IPv6	WAN_I Select a None Select a	DHCP v gateway or failover gateway group to use as the default gateway. gateway or failover gateway group to use as the default gateway.	

3. Cliquez sur « static routes », configurer les routes vers Lan 1, Lan 2, et Lan 3 et Apply changes.

tatio	Routes				
	Network	Gateway	Interface	Description	Actions
2	192.168.10.32/27	Vera_Lan - 192.168.10.29	LAN	Vers Ian 1	<b>∕</b> □\0∎
2	192.168.10.64/27	Vers_Lan - 192.168.10.29	LAN	Vers lan 2	/CO1
0	192.168.10.96/27	Vers_Lan - 192.168.10.29	LAN	Vers Ian 3	/D08

