

Fichier pfSense

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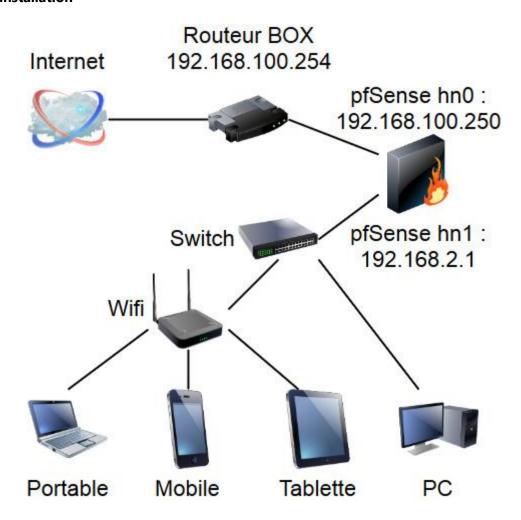
1- PRESENTATION

pfSense est un routeur / pare-feu basé sur **FreeBSD**. Il s'administre à distance via une interface Web.

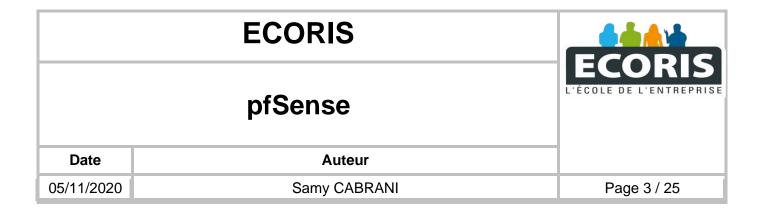
il utilise le pare-feu à états Packet Filter, des fonctions de routage et de NAT lui permettant de connecter plusieurs réseaux informatiques. Il comporte l'équivalent libre des outils et services utilisés habituellement sur des routeurs professionnels propriétaires.

pfSense intègre aussi un gestionnaire de paquets pour installer des fonctionnalités supplémentaires, comme un proxy, serveur VoIP ...

Schéma de L'installation



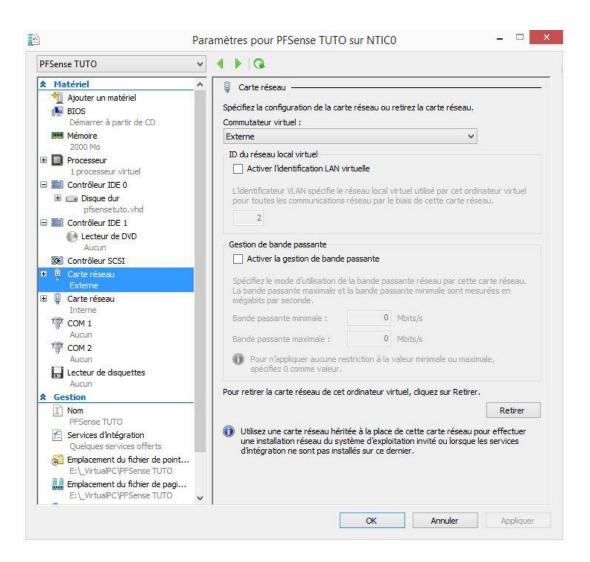




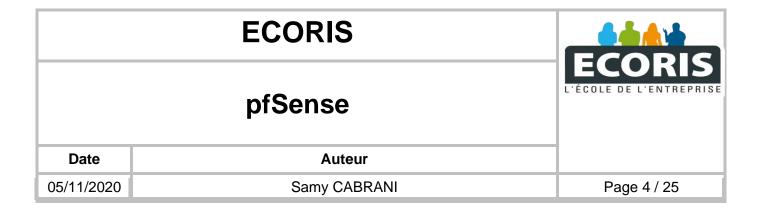
2- CONFIGURTION HYPER-V

Il s'agit d'Une machine virtuelle sous **Hyper-V**. La configuration est la suivante :

- 2 Cartes réseaux
- Disque dur de 60Go (minimum)
- Mémoire vive de 2 Go (minimum)

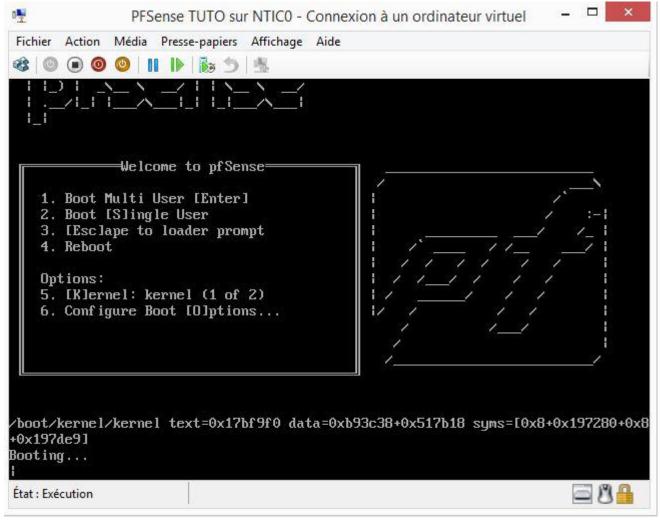






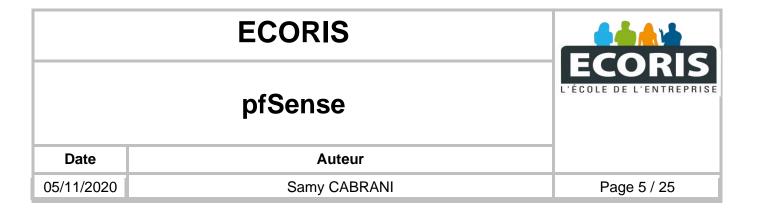
3- INSTALLATION

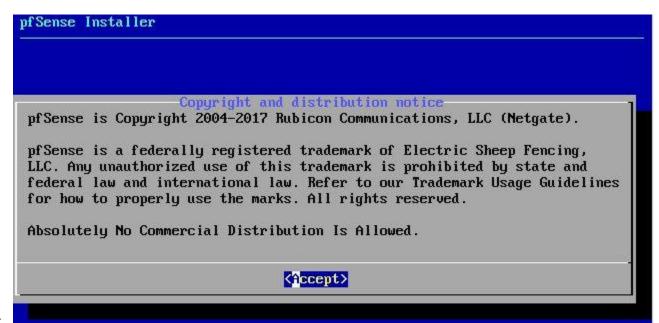
Démarrer la VM



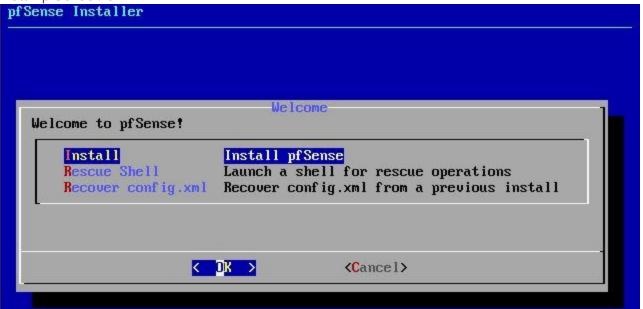
5- Accepter la licence







7- Install pfSense : **OK**



9- Sélectionner **French** dans le menu déroulant

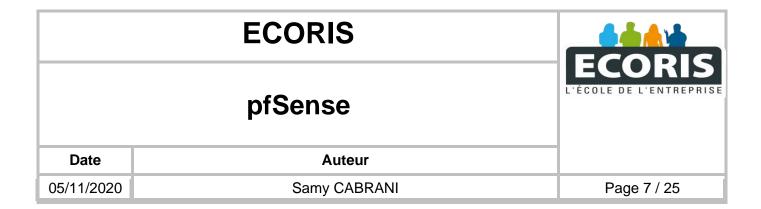


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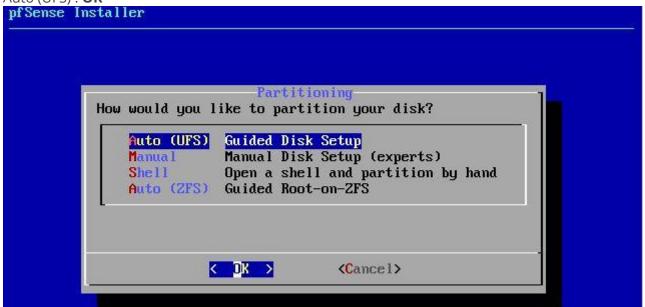
11- Sélectionner : Continue with fr.kbd keymap





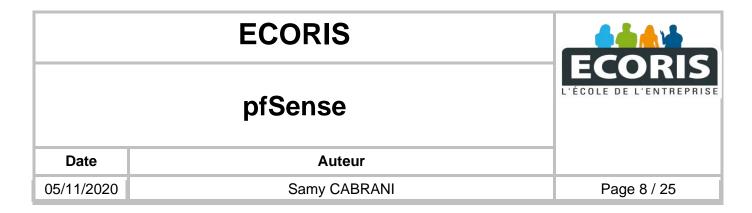


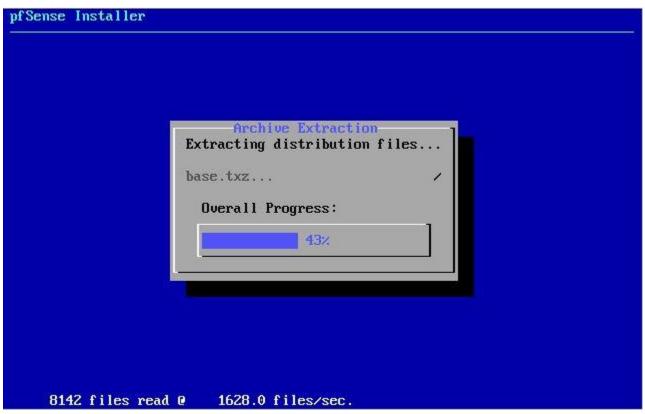
13- Auto (UFS): **OK**



15- Patientez pendant l'installation







17- Sélectionner : **No**



19- Sélectionner : **Reboot** (Ne pas oublier d'éjecter le CD)

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21- Saisissez "**n**" pour "no" pour la création de **VLAN**

```
AMD Features2=0x21<LAHF,ABM>
    Structured Extended Features=0x2bb9<FSGSBASE,BMI1,HLE,AVX2,SMEP,BMI2,ERMS,RTM,
   NFPUSG>
   XSAVE Features=0x1<XSAVEOPT>
   Hypervisor: Origin = "Microsoft Hv"
   Done.
   ..... done.
   Initializing...... done.
   Starting device manager (devd)...done.
   Loading configuration.....done.
   Updating configuration......done.
   Warning: Configuration references interfaces that do not exist: em0 em1
  Network interface mismatch -- Running interface assignment option.
  Valid interfaces are:
  hn0
          00:15:5d:64:04:3f (down) Hyper-V Network Interface
  hn1
          00:15:5d:64:04:40 (down) Hyper-V Network Interface
  Do VLANs need to be set up first?
  If VLAMs will not be used, or only for optional interfaces, it is typical to
   say no here and use the webConfigurator to configure VLAMs later, if required.
22-Should VLANs be set up now [yin]? n
```

23- Sélectionner la carte réseau internet **WAN : hn0** – (Voir dans Hyper-V l'adresse MAC qui correspond a votre carte)



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```
Initializing...... done.
   Starting device manager (devd)...done.
   Loading configuration.....done.
   Updating configuration.....done.
   Warning: Configuration references interfaces that do not exist: em0 em1
   Network interface mismatch -- Running interface assignment option.
  Valid interfaces are:
  hn0
          00:15:5d:64:04:3f (down) Hyper-V Network Interface
          00:15:5d:64:04:40 (down) Hyper-V Network Interface
  hn1
  Do VLANs need to be set up first?
  If VLAMs will not be used, or only for optional interfaces, it is typical to
   say no here and use the webConfigurator to configure VLAMs later, if required.
  Should VLAMs be set up now [yin]? 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
24- (hn0 hn1 or a): hn0
```

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25- Sélectionner la carte réseau local **LAN : hn1** – (Voir dans Hyper-V l'adresse MAC qui correspond a votre carte)



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```
Warning: Configuration references interfaces that do not exist: em0 em1
   Network interface mismatch -- Running interface assignment option.
   Valid interfaces are:
           00:15:5d:64:04:3f (down) Hyper-V Network Interface
           00:15:5d:64:04:40 (down) Hyper-V Network Interface
   hn1
   Do VLANs need to be set up first?
   If VLAMs 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 [yin]? 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
   (hn0 hn1 or a): hn0
   Enter the LAN interface name or 'a' for auto-detection
   NOTE: this enables full Firewalling/NAT mode.
26- (hm1 a or nothing if finished): hm1
27- Appliquer les changements : "y" pour "yes"
   The interfaces will be assigned as follows:
   WAN -> hn0
```

28-Do you want to proceed [yin]? y

LAN -> hn1



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```
Starting syslog...done.
   Starting CRON... done.
   pf Sense 2.4.4-RELEASE amd64 Thu Sep 20 09:03:12 EDT 2018
  Bootup complete
   FreeBSD/amd64 (pfSense.localdomain) (ttyv0)
   Hyper-V Virtual Machine - Netgate Device ID: 391ed73786ee43989c09
   *** Welcome to pfSense 2.4.4-RELEASE (amd64) on pfSense ***
   WAN (wan)
                    -> hn0
                                  -> v4/DHCP4: 192.168.100.150/24
    LAN (lan)
                    -> hn1
                                  -> v4: 192.168.1.1/24
   0) Logout (SSH only)
1) Assign Interfaces
                                           9) pf Top
                                          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
                                          14) Enable Secure Shell (sshd)
   5) Reboot system
   6) Halt system
                                          15) Restore recent configuration
    7) Ping host
                                          16) Restart PHP-FPM
   8) Shell
30-Enter an option:
```

- 31- Configuration de l'adresse IP de la carte réseau local LAN hn1
- 32- Sélectionner : 2 (Set interface IP address)

0) Logout (SSH only)	9) pf Top
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) She11	
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Enter an option: 2	

34- Sélectionner la carte réseau local LAN: 2

33-

```
Available interfaces:

1 - WAN (hm0 - dhcp, dhcp6)
2 - LAN (hm1 - static)

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

36- Saisissez l'adresse IP souhaitée : 192.168.2.1 (pour notre exemple)



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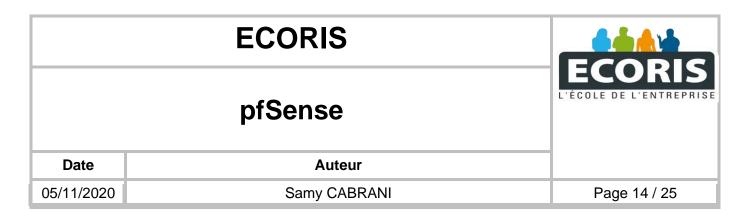
Date

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```
Enter the new LAN IPv4 address. Press <ENTER> for none:
37-> 192.168.2.1
38- Saisissez le masque sous réseau au format CIDR : 24
   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 31):
40- Laissez vide pour ne pas définir la passerelle : Tapez ENTREE
   For a WAN, enter the new LAN IPv4 upstream gateway address.
   For a LAN, press <ENTER> for none:
41-
42- Laissez vide pour ne pas définir d'adresse IPV6 : Tapez ENTREE
   Enter the new LAN IPv6 address. Press <ENTER> for none:
43-
44- Activer le Serveur DHCP: "y" pour "yes"
Do you want to enable the DHCP server on LAN? (y/n) y
46- Définir la plage d'adressage IP du DHCP (exemple : 192.168.2.101 jusqu'à 192.168.2.199)
   Do you want to enable the DHCP server on LAN? (y/n) y
   Enter the start address of the IPv4 client address range: 192.168.2.101
47-Enter the end address of the IPv4 client address range: 192.168.2.199
48- Activez le retour a http en tant que protocole de configuration Web. Entrez : "y" pour "yes"
Do you want to revert to HTTP as the webConfigurator protocol? (y/n) y
50- Configuration terminée. Cliquez : ENTREE
   Please wait while the changes are saved to LAN...
    Reloading filter...
    Reloading routing configuration...
    Restarting webConfigurator...
   The IPv4 LAN address has been set to 192.168.2.1/24
   You can now access the webConfigurator by opening the following URL in your web
   browser:
                    http://192.168.2.1/
51-Press <ENTER> to continue.
```

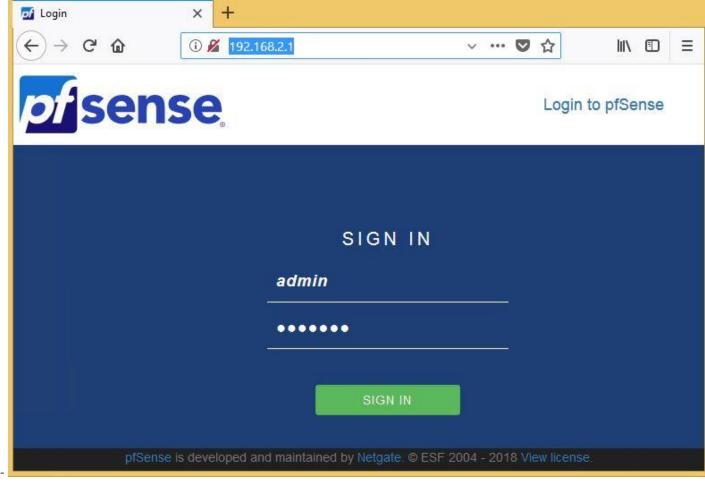
52- Retour au Menu. L'adresse IP de pfSense est notée dans la partie LAN : 192.168.2.1



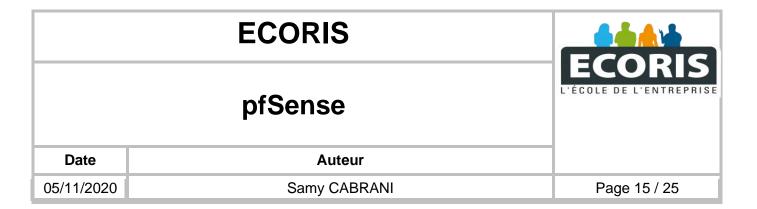




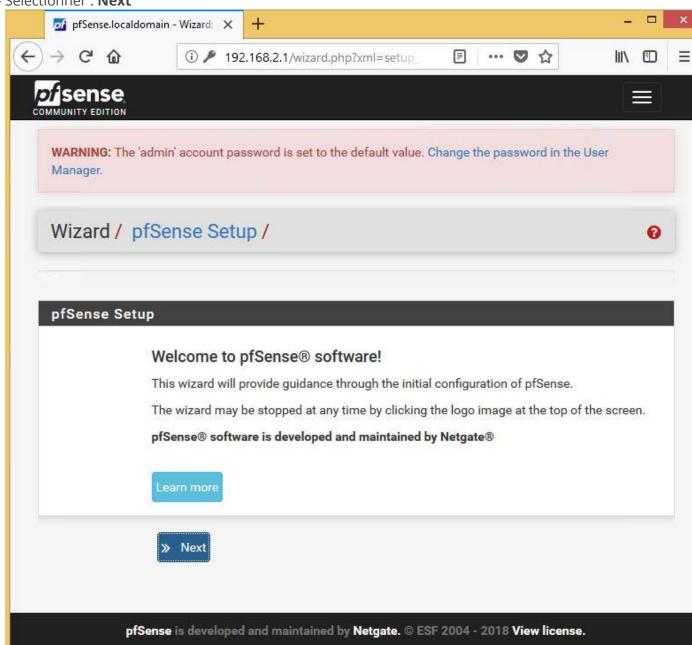
54- Tapez L'adresse IP dans le navigateur : 192.168.2.1 – Username : admin – Password : pfsense



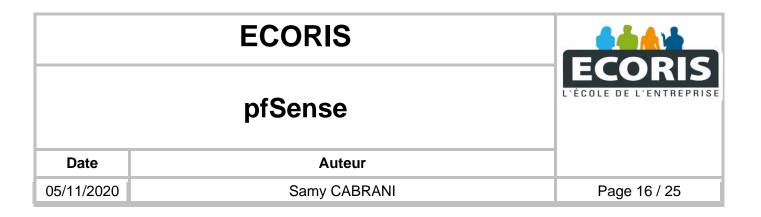


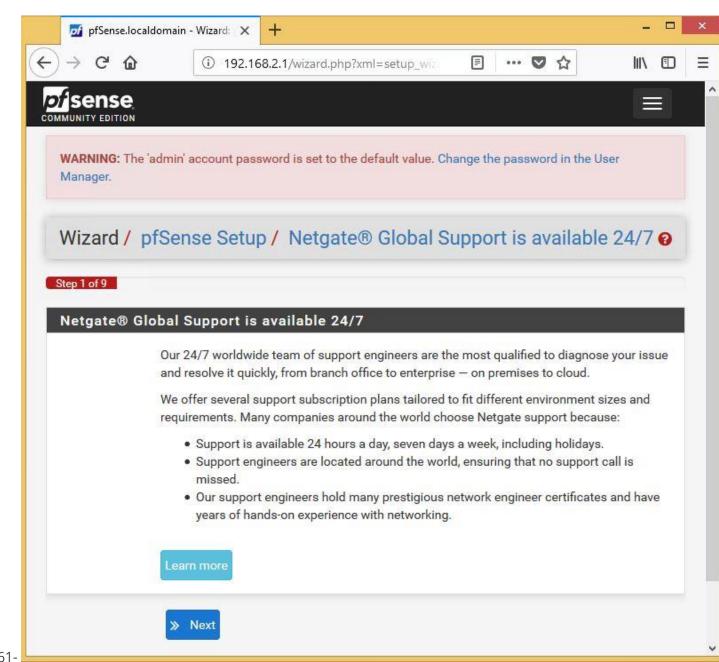


- 56-
- 57- Configuration de l'installation de Base de pfSense
- 58- Sélectionner : **Next**



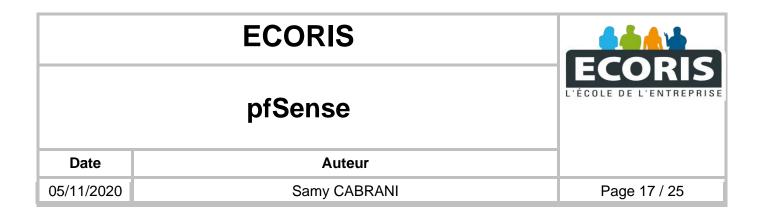
60-Sélectionner: Next

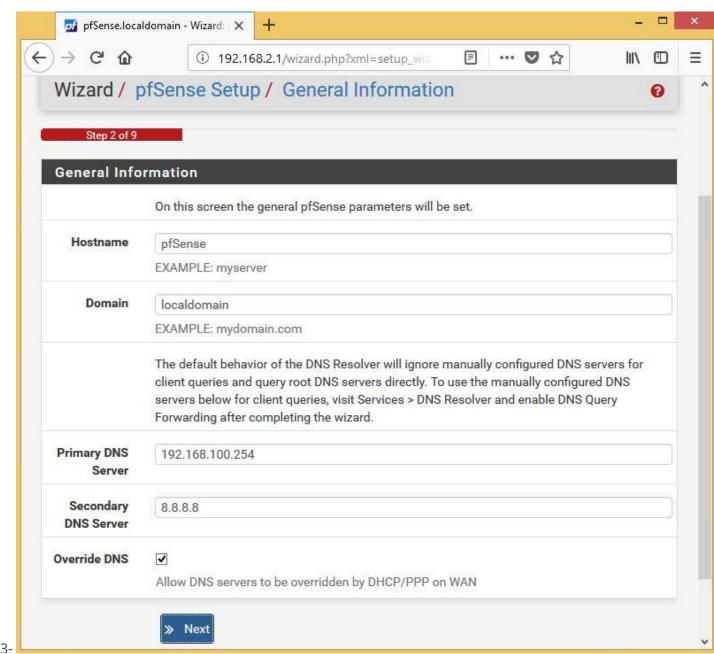




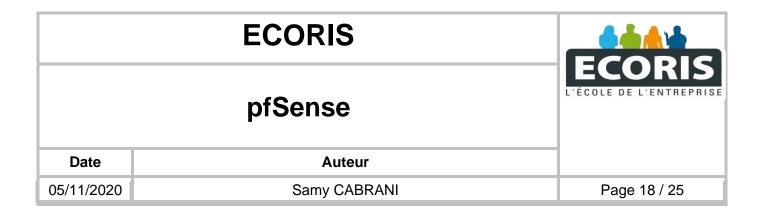
62- Renseigner : **Hostname , Domain , Primary DNS** (Routeur / Box) , **Secondary DNS** (Google) et cocher **Override DNS**

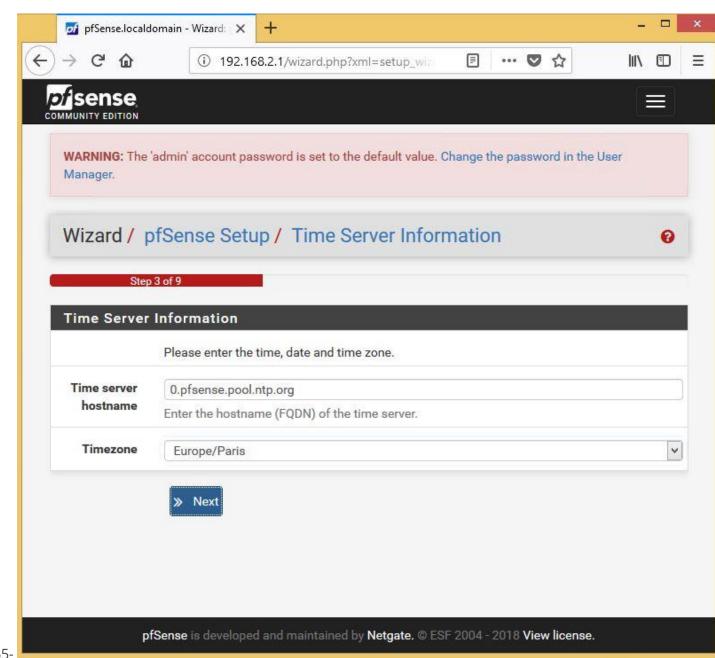






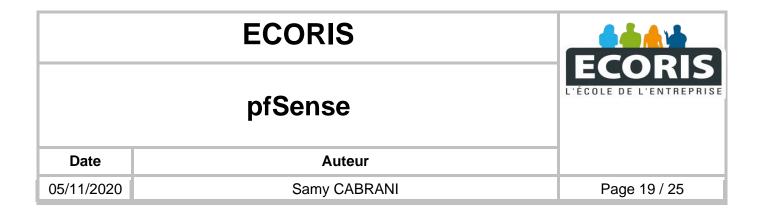
64- Sélectionner la **Timezone Europe**

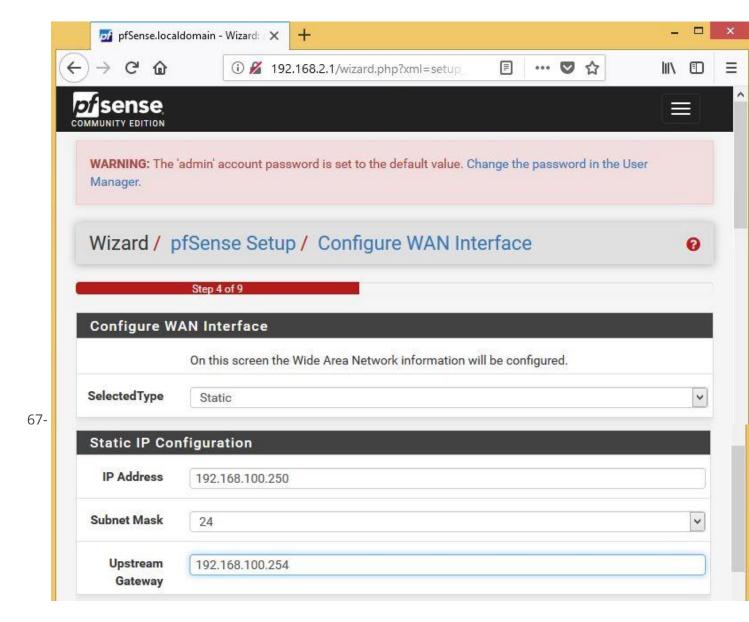




66- Configuration de la carte réseau internet **WAN** : 192.168.100.250 , **Masque sous reseau** (CIDR) : 24 , la **passerelle** (Routeur / Box) : 192.168.100.254







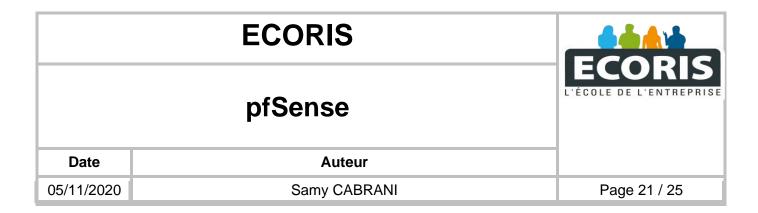


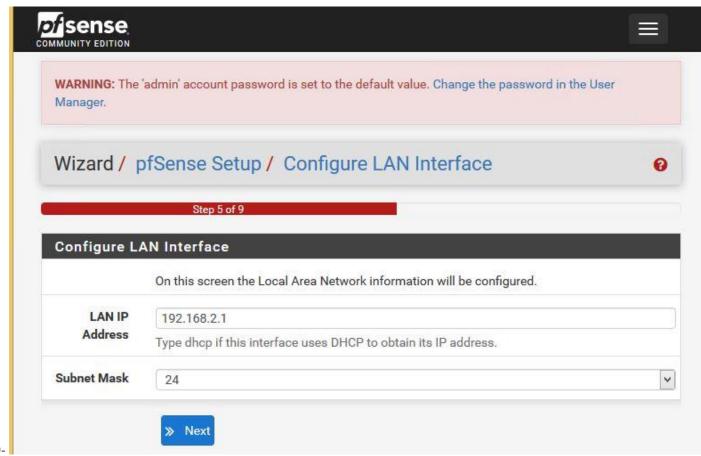
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RFC1918 Networks Block ✓ Block private networks from entering via WAN RFC1918 When set, this option blocks traffic from IP addresses that are reserved for private networks Private as per RFC 1918 (10/8, 172.16/12, 192.168/16) as well as loopback addresses (127/8). This Networks option should generally be left turned on, unless the WAN network lies in such a private address space, too. Block bogon networks Block bogon ☑ Block non-Internet routed networks from entering via WAN networks When set, this option blocks traffic from IP addresses that are reserved (but not RFC 1918) or not yet assigned by IANA. Bogons are prefixes that should never appear in the Internet routing table, and obviously should not appear as the source address in any packets received. Next pfSense is developed and maintained by Netgate. © ESF 2004 - 2018 View license.

68- Vérification de la configuration de la carte réseau local LAN

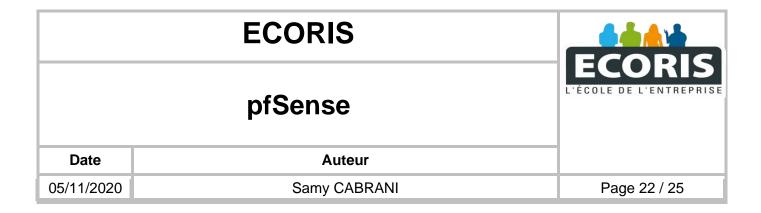


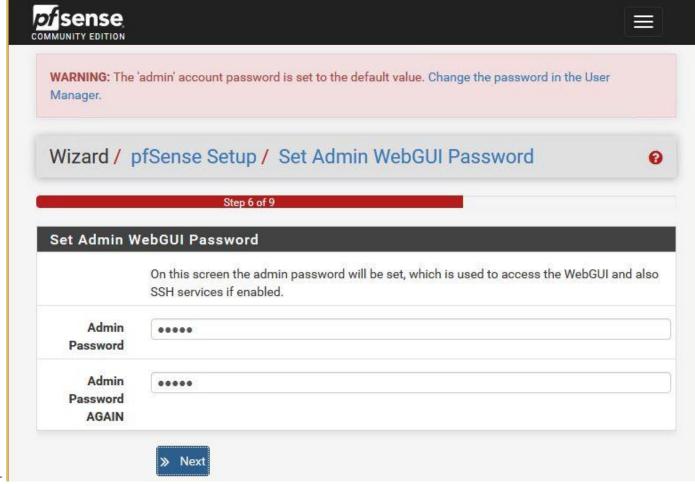




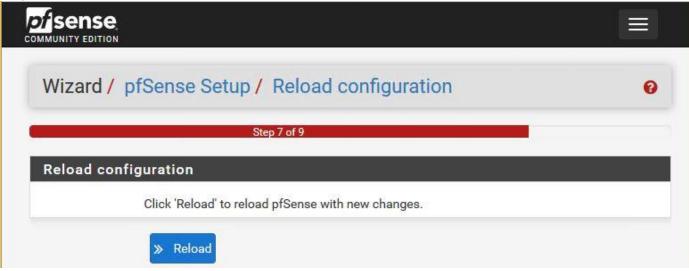
70- Modifier le **mot de passe admin**



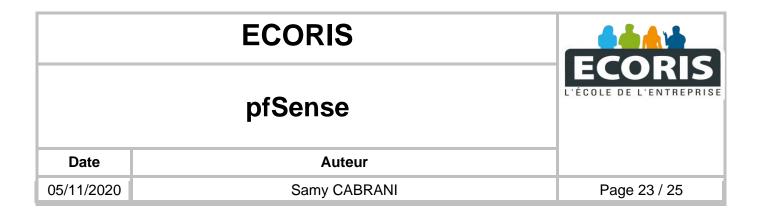


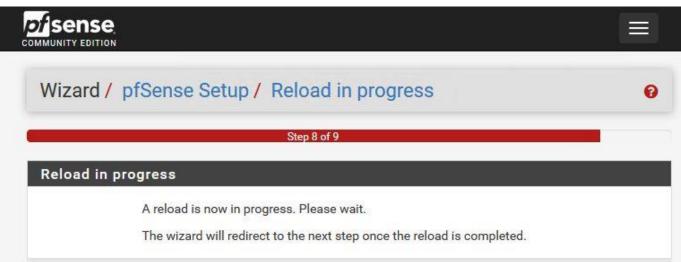


72- Cliquer sur: Reload

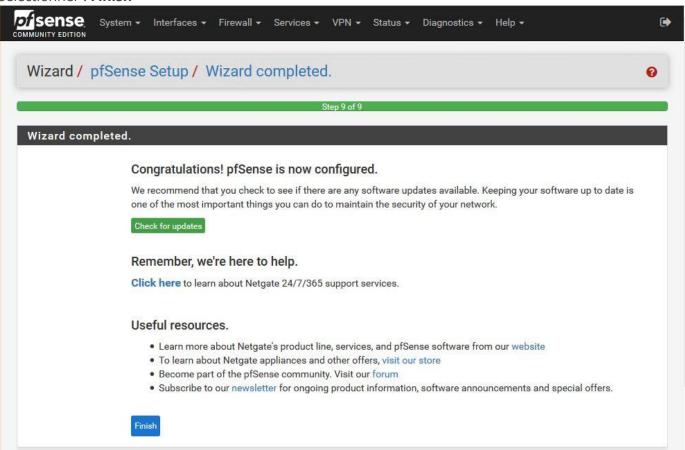


73- 74- Patientez ...

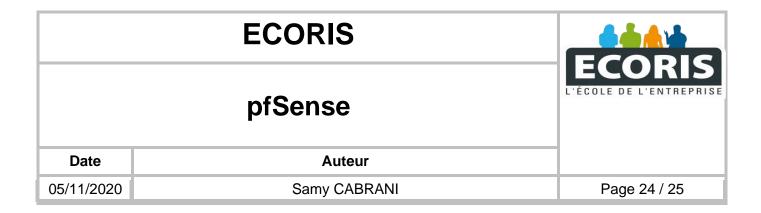


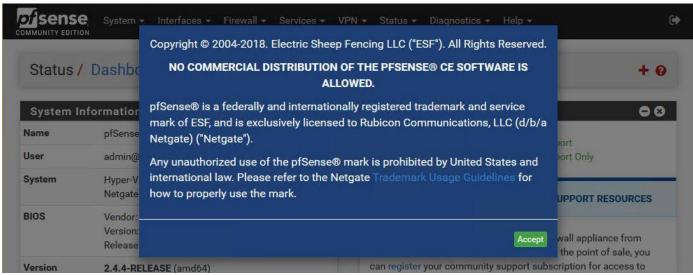


76- Sélectionner : **Finish**

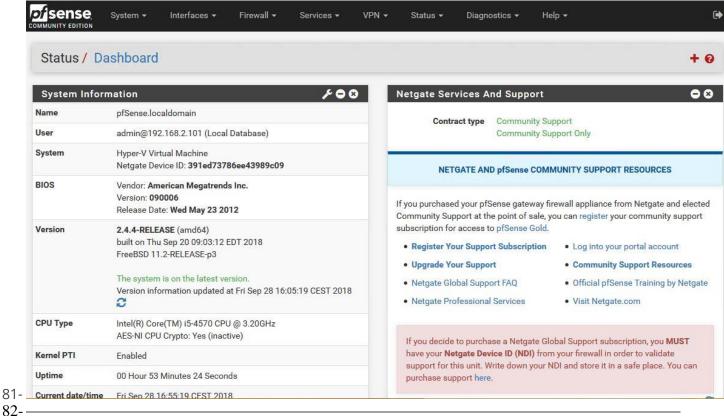


78- Accepter la licence

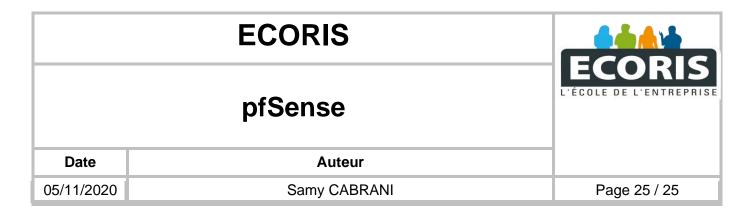




80- Tableau de bord de pfSense



83- Vérifier le Serveur DHCP: Services, DHCP Server





85- **Modifier**, si besoin, la plage d'adressage **IP** (Range) du **DHCP** (exemple : 192.168.2.101 jusqu'à 192.168.2.199)

