

BRETON Théo

PROJET N°6 : MIGRATION DE MON SERVEUR PROXMOX VERS UN TOUT NOUVEAU PROXMOX SURPUISSANT



MIGRATION DE MON PROXMOX VERS UN TOUT NOUVEAU PROXMOX SURPUISSANT

X PROXMOX

MIGRATION



Windows Server
Base de données
SQL SERVER



SQL Server



Windows Server
Active Directory



AD DS



Ubuntu Server
Docker



docker



Home Assistant



Automatisation
maison



Debian
ZABBIX

ZABBIX

Monitoring

❶ Installation de PROXMOX sur ce mini pc Nipogi avec ma procédure :

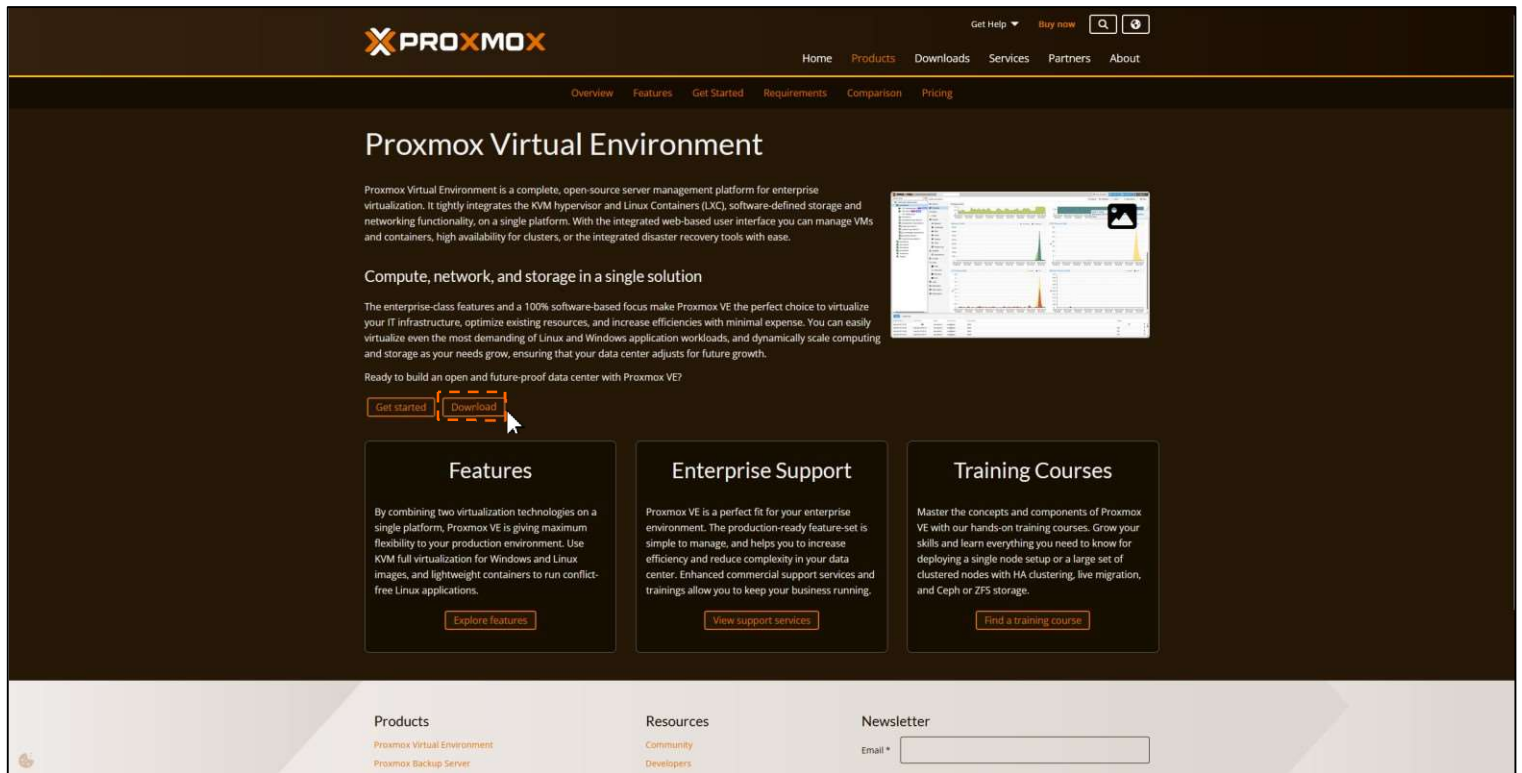


1. Installation de Proxmox sur une clé USB avec Rufus :

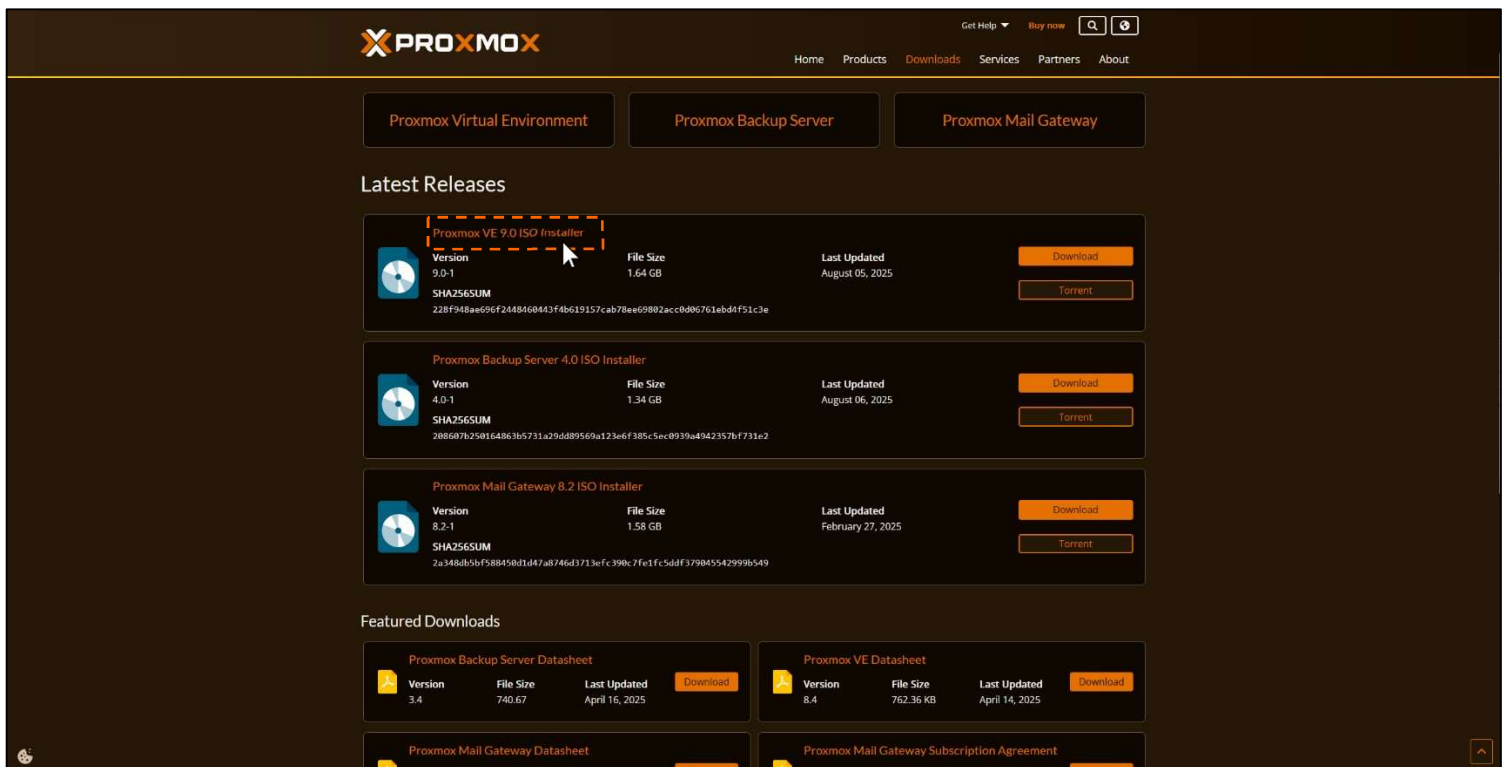
Ce rendre sur le site officiel de proxmox : <https://www.proxmox.com/en/>



🖱️ Cliquez sur « Proxmox Virtual Environnement »



Cliquez sur « Download »



Sur cette page, vous avez les différentes versions de Proxmox.
Celle que nous devons prendre est la version « Proxmox VE 9.0 ISO

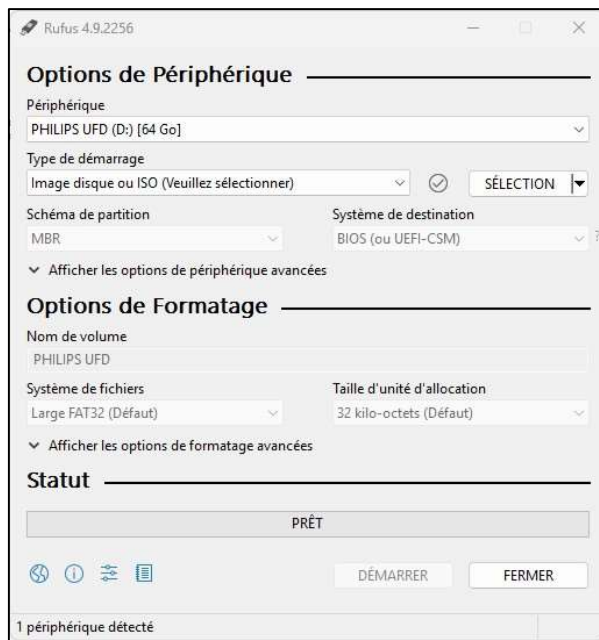
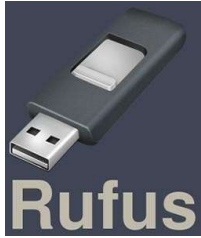
Installer » Cliquez sur cette version pour la télécharger.

Nous allons maintenant nous occuper de la partie installation de
Proxmox sur clé USB :

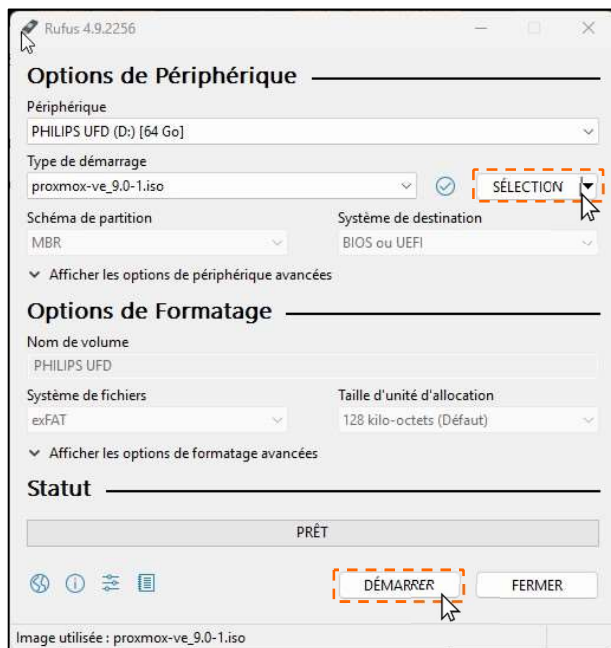


PROJET PERSONNEL – Théo BRETON

**PROJET N°6 : MIGRATION DE MON SERVEUR PROXMOX VERS UN TOUT NOUVEAU
PROXMOX SURPUISSANT**



Pour cela aller dans « SELECTION » et aller chercher dans l'emplacement ou vous l'avez téléchargé le fichier ISO.
Puis cliquez sur « DEMARRER » pour que Rufus installe « Proxmox » sur votre clé USB. De façon à ce que votre PC puisse démarrer dessus sans problème.



2. Installation de Proxmox grâce à la clé USB

Branchez votre clé USB sur le PC. Puis aller dans le BIOS de votre pc au moyen des touches ci-dessous :

ATTENTION : Il est obligatoire de brancher votre pc via un câble RJ45 sur votre réseau pour le bon déroulement de la configuration !!!

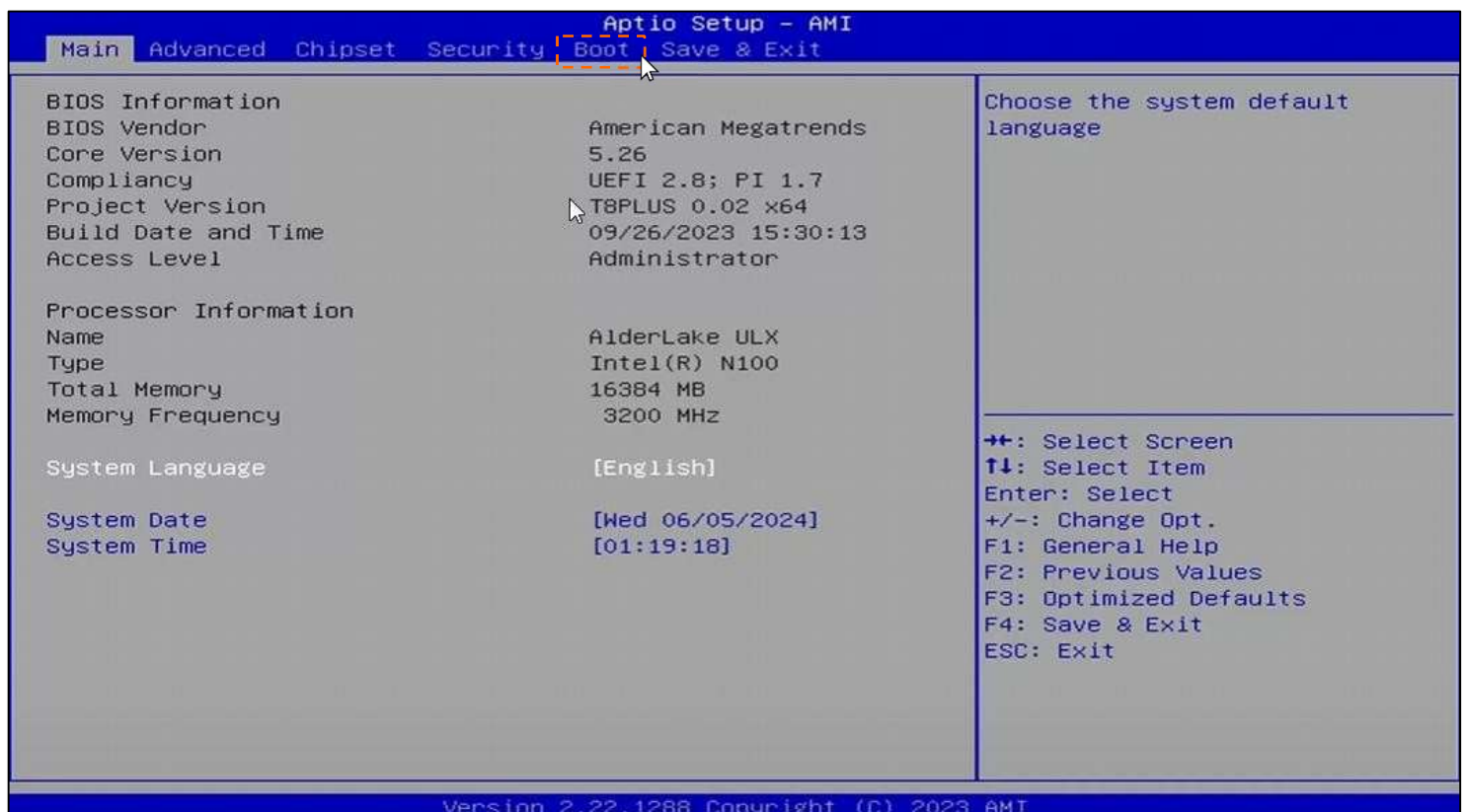
→ Plusieurs méthodes :

🖱️ Accéder au BIOS selon la marque de votre ordinateur :

🖱️ Appuyer plein de fois sur la touche « Echap » □ Ou rester appuyer les touches si dessous :

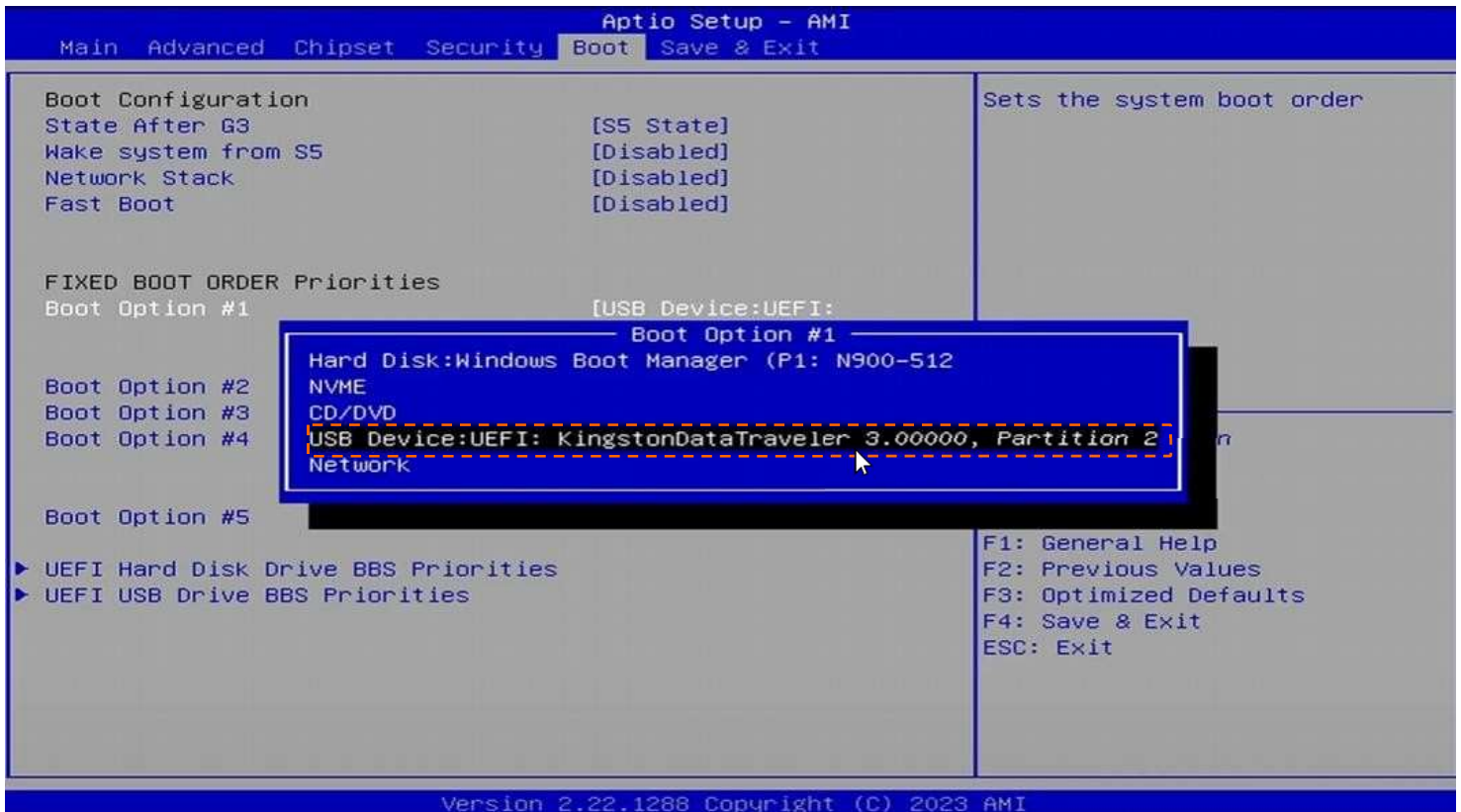
- ASUS **F2** ou **Suppr (Delete)**
- Acer **F2**
- Dell **F2** ou **F12**
- HP **Esc**, puis **F10**
- Lenovo **F1, F2**, ou **Fn + F2**

Ensuite une fois dans le BIOS de votre PC :



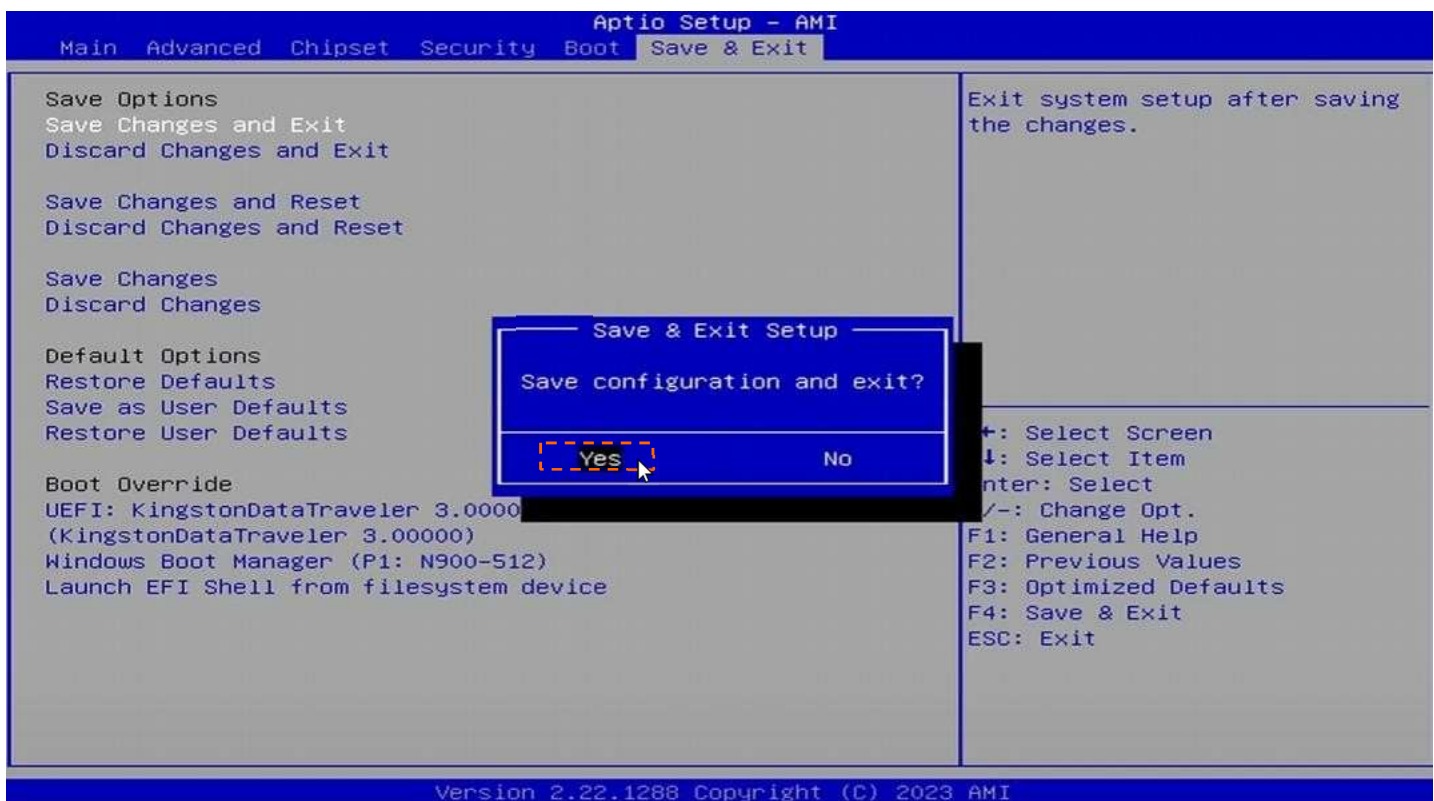
🖱️ Aller dans le menu « Boot » pour que le PC puisse démarrer obligatoirement sur la clé USB ou se trouve, Proxmox :

☞ Sélectionné votre clé USB :

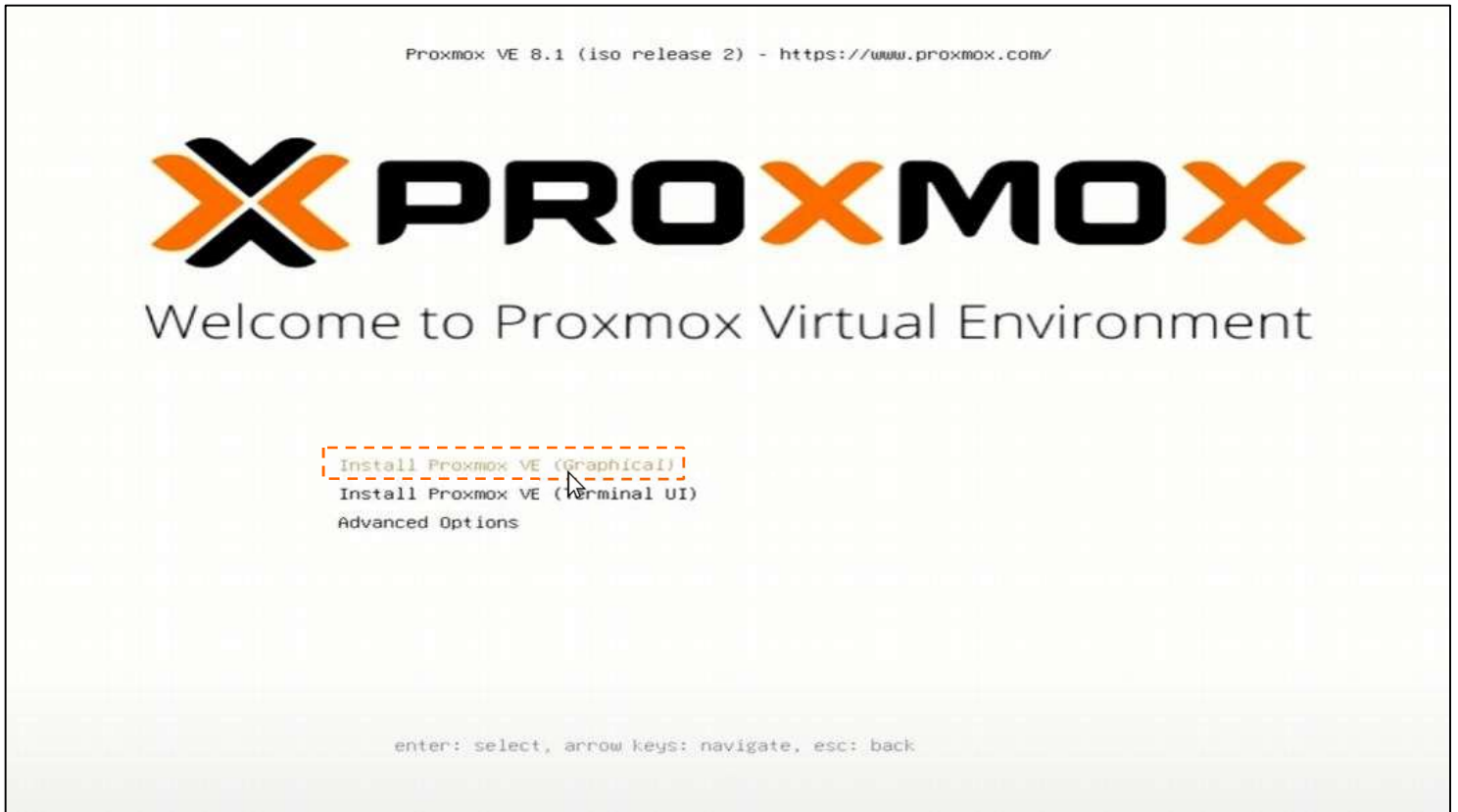


☞ Puis cliquer sur la touche conserver pour enregistrer votre paramétrage :

(Exemple : F4 pour ce cas)



3. Processus d'installation de Proxmox :



3 options s'offrent à vous pour installer Proxmox :

Install Proxmox VE (Graphical) → recommandé pour la majorité des utilisateurs.

- ☞ Interface graphique conviviale.
- ☞ Plus simple à suivre si tu n'es pas à l'aise uniquement avec le terminal.
- ☞ Idéal pour une première installation.

Install Proxmox VE (Terminal UI) → pour utilisateurs avancés ou environnements sans affichage graphique.

- ☞ Installation entièrement dans le terminal (texte).
- ☞ Utile si ton PC a une carte graphique basique ou si tu veux un processus minimaliste.

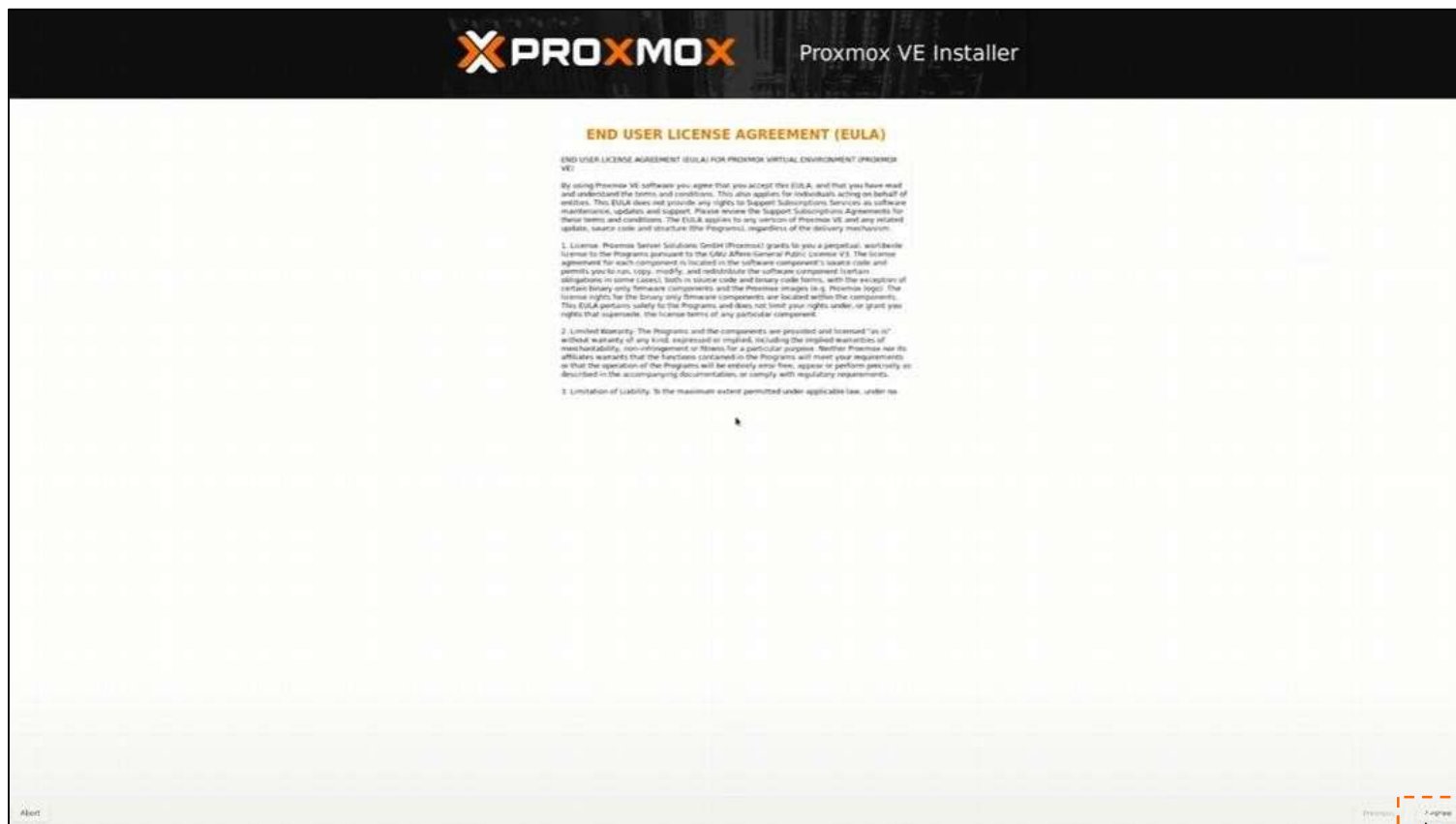
Advanced Options → pour cas particuliers.

- ☞ Permet de passer des paramètres spéciaux au noyau Linux, par exemple pour du dépannage ou du matériel exotique.

Pour notre cas, nous allons choisir l'option avec l'interface graphique « **Install Proxmox VE (Graphical)** ».

Une fois cette option sélectionnée vous allez arriver sur cette page qui vous demande d'accepter les licences :

Cliquez donc sur « I agree » :



Sur cette page, on va vous demander, où est ce que vous souhaitez installer Proxmox sur votre pc :

- Sélectionner le disque où vous souhaitez installer Proxmox.
- Une fois le disque sélectionné, cliquez sur « Next »

Proxmox Virtual Environment (PVE)

The Proxmox Installer automatically partitions your hard disk, it installs all required packages and makes the system bootable from the hard disk. All existing partitions and data will be lost.

Press the Next button to continue the installation.

• **Please verify the installation target**
The displayed hard disk will be used for the installation. Warning: All existing partitions and data will be lost.

• **Automatic hardware detection**
The installer automatically configures your hardware.

• **Graphical user interface**
Final configuration will be done on the graphical user interface, via a web browser.

Target installation: /dev/sda (476.84 GiB, 9300.53 GiB) Options

About

Previous Next

Sur cette page, on va vous demander, votre localisation et la langue de votre clavier :



Location and Time Zone selection

The Proxmox Installer automatically makes location-based optimizations, like choosing the nearest mirror to download files from. Also, make sure to select the correct time zone and keyboard layout.

Press the Next button to continue the installation.

- **Country:** The selected country is used to choose nearby mirror servers. This will speed up downloads and make updates more reliable.
- **Time Zone:** Automatically adjust daylight saving time.
- **Keyboard Layout:** Choose your keyboard layout.

Country: Belgium

Time zone: Europe/Brussels

Keyboard Layout: Belgian-French

Abort

Previous

Next

Sur cette page, on va vous demander, un mot de passe et une adresse mail.

Saisissez votre mot de passe et votre adresse-mail.

ATTENTION : N'oubliez surtout pas de la noter pour ne pas l'oublier !!!

Cliquez sur « Next »

PROXMOX Proxmox VE Installer

Administration Password and Email Address

Proxmox Virtual Environment is a full featured, highly secure GNU/Linux system, based on Debian.

In this step, please provide the root password.

- Password:** Please use a strong password. It should be at least 8 characters long, and contain a combination of letters, numbers, and symbols.
- Email:** Enter a valid email address. Your Proxmox VE server will send important alert notifications to this email account (such as backup failures, high availability events, etc.).

Press the Next button to continue the installation.

Next

Sur cette page, on va retrouver toute la configuration réseau.
Saisir un nom pour votre Proxmox dans « Hostname »

Pour le reste de la configuration, elle est normalement complétée si votre pc est bien branché en RJ45 sur votre réseau.

PROXMOX Proxmox VE Installer

Management Network Configuration

Please verify the displayed network configuration. You will need a valid network configuration to access the management interface after installing.

After you have finished, press the Next button. You will be shown a list of the options that you chose during the previous steps.

- **IP address (CIDR):** Set the main IP address and netmask for your server in CIDR notation.
- **Gateway:** IP address of your gateway or firewall.
- **DNS Server:** IP address of your DNS server.

Management interface: enp2s0 - 84:47:09:37:41:19 (98169)

Hostname (FQDN): BlankSpace-NCIT

IP Address (CIDR): 192.168.0.100 / 24

Gateway: 192.168.0.1

DNS Server: 1.1.1.1, 0.0.1

Buttons: About, Previous, Next

Patientez durant l'installation de Proxmox sur votre pc.



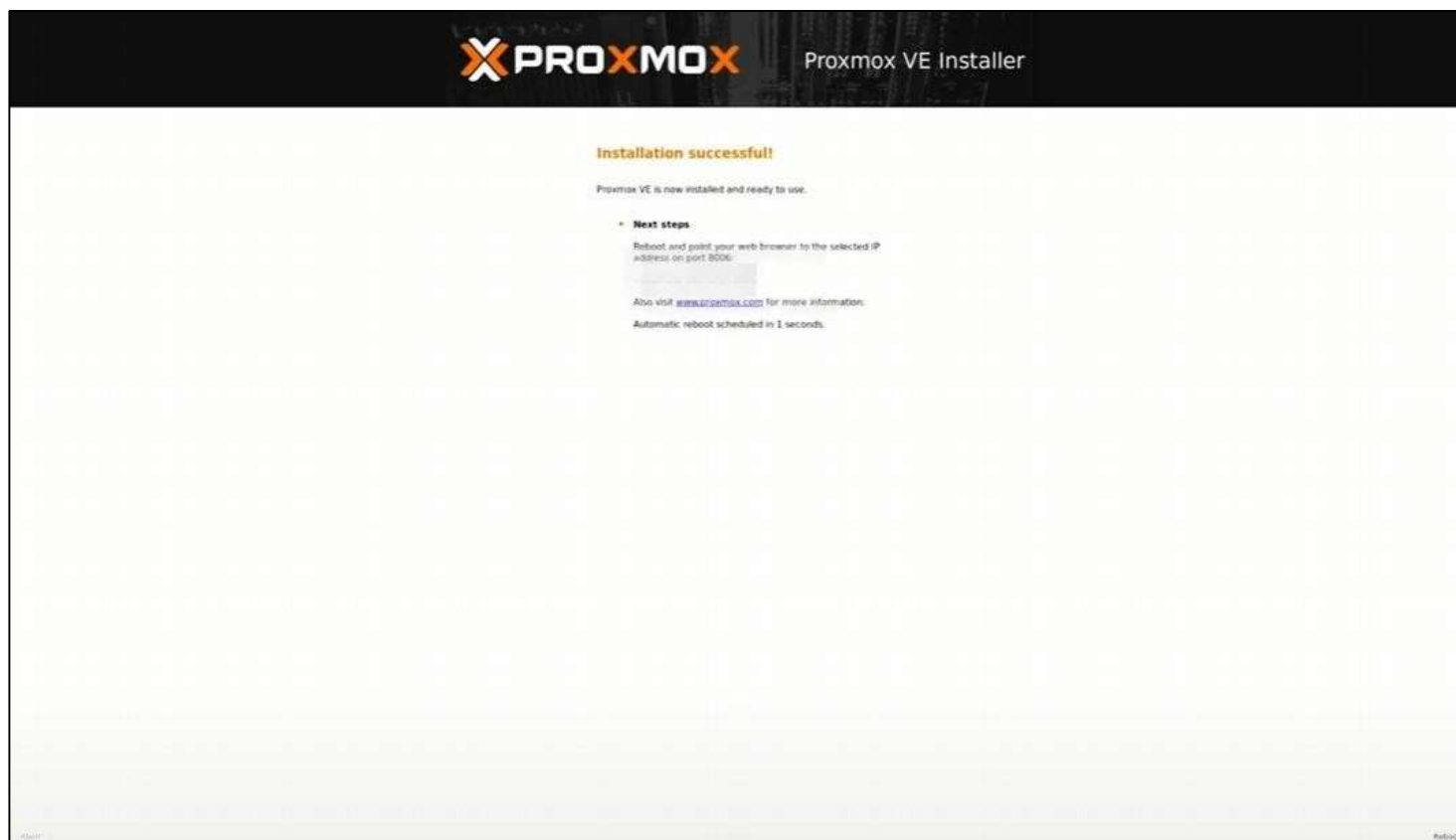
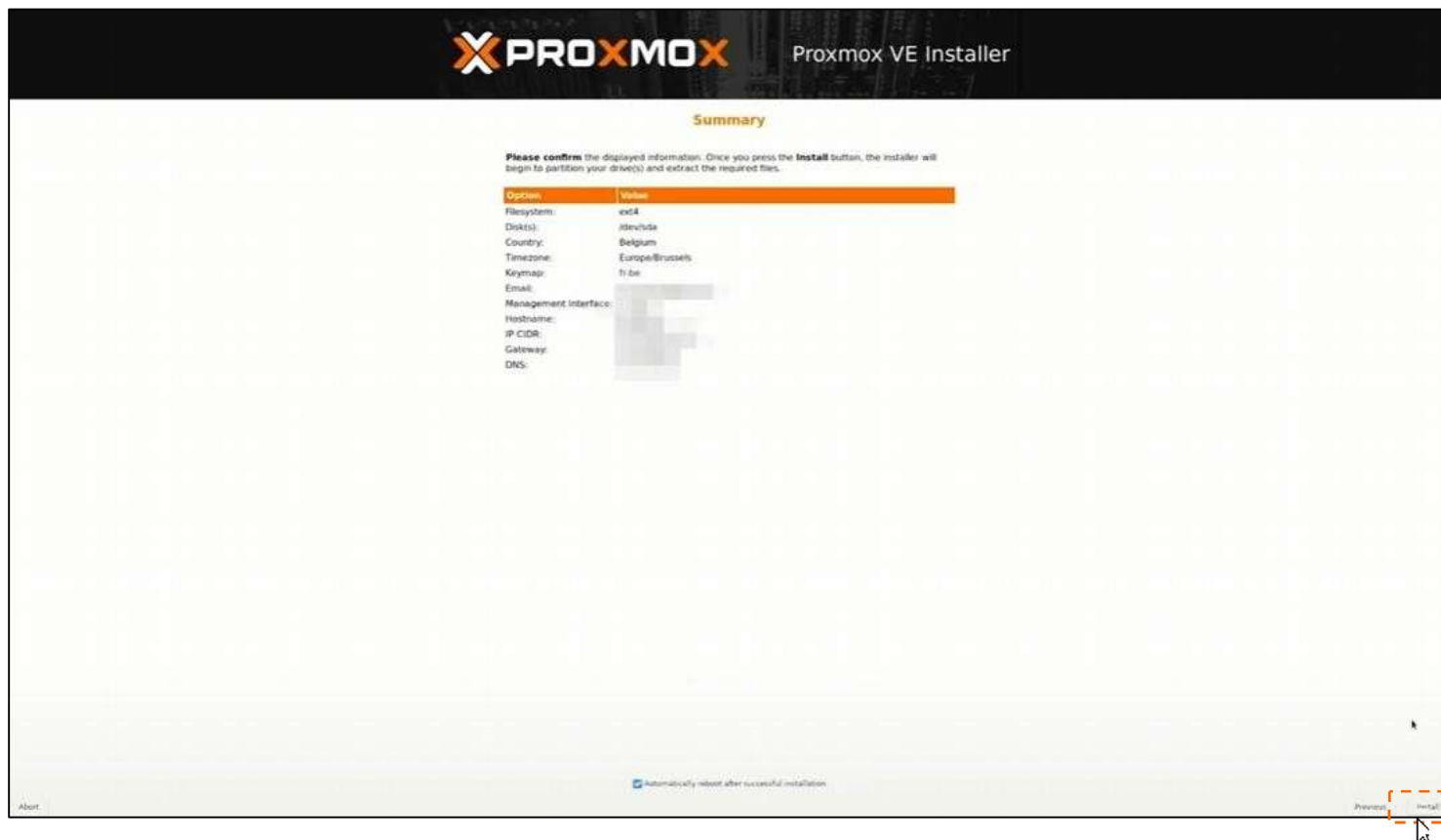
Une fois l'installation terminée Proxmox va automatiquement démarrer.

ATTENTION : Ne retirer pas la clé USB pour l'instant !!!

Sur cette page, vous allez retrouver un récapitulatif de tout ce que vous avez saisi lors de la configuration de votre Proxmox :

Vérifier que tout est correct !

☞ Cliquez sur « Install » pour installer Proxmox.



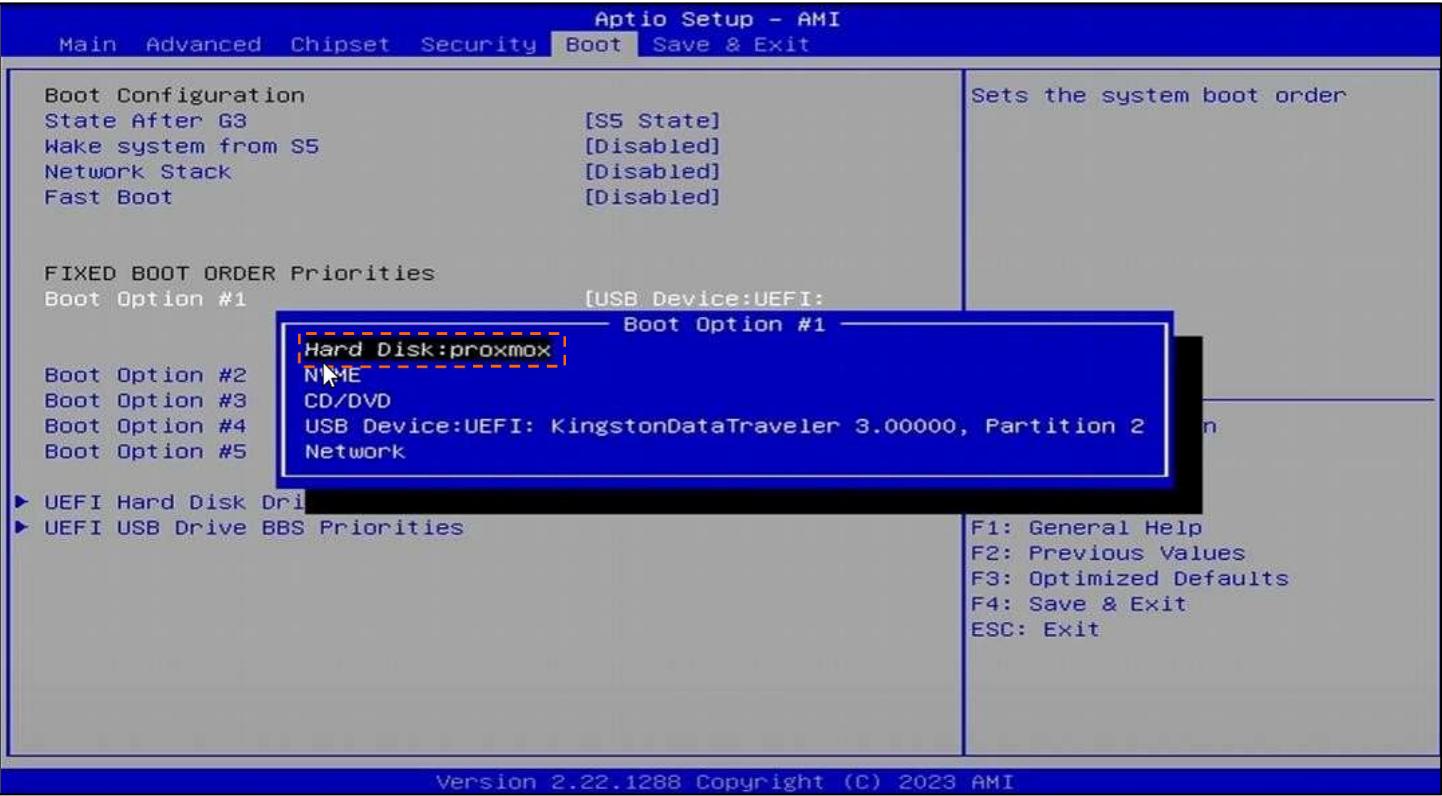
Une fois l'installation terminée, **votre pc va redémarrer sur la clé USB** ce qui est normal car l'ordre de démarrage n'a pas été changé. **Donc éteignez votre pc** quand vous êtes sur cette page en restant appuyer sur le **bouton d'allumage**.

Donc comme tout à l'heure, vous allez retourner dans le BIOS, changer l'ordre de boot (démarrage).

🖱️ Cliquez sur « Boot »



Sélectionnez « Hard Disk : proxmox »
🖱️ Appuyer sur la touche concernée pour sauvegarder. (Exemple : F4 pour ce cas)





Puis « Entrée » pour enregistré.



Votre va maintenant redémarrer sur Proxmox :
Faites « Entrée » pour démarrer sur « Proxmox VE GNU/Linux »



4. Connexion à Proxmox :

Vous avez l'adresse IP, de votre Proxmox, vous pouvez maintenant, y accéder depuis votre Navigateur.

```
-----  
Welcome to the Proxmox Virtual Environment. Please use your web browser to  
configure this server - connect to:  
  
https://192.168.1.50:8006/  
  
-----  
Give login: _
```

Saisir l'adresse IP, de votre Proxmox dans la zone de recherche, puis cliquez sur « Avancé » et « Continuer vers (...) »

❶ Migration des machines virtuelle

➡ Première machine virtuelle – Windows Server

Cette machine virtuelle me sert comme machine de test pour les différents travaux que je fais en BTS SIO.

Sur le serveur d'origine en 192.168.3.111 — backup en LZO

```
vzdump <VMID> --storage local --mode stop --compress lzo
```

```
root@proxmox-theo:~# vzdump 100 --storage local --mode stop --compress lzo
INFO: starting new backup job: vzdump 100 --storage local --compress lzo --mode stop
INFO: Starting Backup of VM 100 (qemu)
INFO: Backup started at 2026-06-13 12:04:45
INFO: status = stopped
INFO: backup mode: stop
INFO: ionice priority: 7
INFO: VM Name: WinServer2022
INFO: include disk 'ide0' 'local-lvm:vm-100-disk-1' 32G
INFO: include disk 'efidisk0' 'local-lvm:vm-100-disk-0' 4M
INFO: include disk 'tpmstate0' 'local-lvm:vm-100-disk-2' 4M
INFO: creating vzdump archive '/var/lib/vz/dump/vzdump-qemu-100-2026_06_13-12_04_45.vma.lzo'
INFO: starting kvm to execute backup task
swtvm_setup: Not overwriting existing state file.
INFO: attaching TPM drive to QEMU for backup
INFO: started backup task 'c86b6a63-6aa9-4399-9211-6ef6dc3cde0a'
INFO: 3% (1.1 GiB of 32.0 GiB) in 3s, read: 385.5 MiB/s, write: 330.5 MiB/s
INFO: 6% (2.0 GiB of 32.0 GiB) in 6s, read: 296.0 MiB/s, write: 291.4 MiB/s
INFO: 8% (2.7 GiB of 32.0 GiB) in 9s, read: 252.5 MiB/s, write: 251.3 MiB/s
INFO: 10% (3.5 GiB of 32.0 GiB) in 12s, read: 252.5 MiB/s, write: 220.2 MiB/s
INFO: 12% (4.1 GiB of 32.0 GiB) in 15s, read: 200.6 MiB/s, write: 199.9 MiB/s
INFO: 14% (4.5 GiB of 32.0 GiB) in 18s, read: 161.5 MiB/s, write: 161.3 MiB/s
INFO: 16% (5.1 GiB of 32.0 GiB) in 21s, read: 199.8 MiB/s, write: 195.6 MiB/s
INFO: 17% (5.7 GiB of 32.0 GiB) in 24s, read: 207.8 MiB/s, write: 202.0 MiB/s
INFO: 19% (6.3 GiB of 32.0 GiB) in 27s, read: 199.4 MiB/s, write: 197.4 MiB/s
INFO: 21% (6.8 GiB of 32.0 GiB) in 30s, read: 165.5 MiB/s, write: 164.9 MiB/s
INFO: 22% (7.3 GiB of 32.0 GiB) in 33s, read: 163.5 MiB/s, write: 161.2 MiB/s
INFO: 24% (7.8 GiB of 32.0 GiB) in 36s, read: 170.0 MiB/s, write: 162.4 MiB/s
INFO: 26% (8.3 GiB of 32.0 GiB) in 39s, read: 189.7 MiB/s, write: 187.9 MiB/s
INFO: 27% (8.8 GiB of 32.0 GiB) in 42s, read: 145.0 MiB/s, write: 144.8 MiB/s
INFO: 28% (9.2 GiB of 32.0 GiB) in 45s, read: 167.2 MiB/s, write: 165.5 MiB/s
INFO: 30% (9.8 GiB of 32.0 GiB) in 48s, read: 175.9 MiB/s, write: 163.7 MiB/s
INFO: 32% (10.4 GiB of 32.0 GiB) in 51s, read: 211.5 MiB/s, write: 210.2 MiB/s
INFO: 33% (10.8 GiB of 32.0 GiB) in 54s, read: 154.6 MiB/s, write: 145.7 MiB/s
INFO: 35% (11.3 GiB of 32.0 GiB) in 57s, read: 157.0 MiB/s, write: 154.5 MiB/s
INFO: 36% (11.8 GiB of 32.0 GiB) in 1m, read: 156.0 MiB/s, write: 155.8 MiB/s
INFO: 38% (12.2 GiB of 32.0 GiB) in 1m 3s, read: 152.2 MiB/s, write: 150.2 MiB/s
INFO: 40% (12.9 GiB of 32.0 GiB) in 1m 6s, read: 245.8 MiB/s, write: 245.5 MiB/s
INFO: 42% (13.4 GiB of 32.0 GiB) in 1m 9s, read: 180.7 MiB/s, write: 174.6 MiB/s
INFO: 43% (13.9 GiB of 32.0 GiB) in 1m 12s, read: 155.7 MiB/s, write: 150.3 MiB/s
INFO: 44% (14.4 GiB of 32.0 GiB) in 1m 15s, read: 163.5 MiB/s, write: 160.0 MiB/s
INFO: 46% (14.9 GiB of 32.0 GiB) in 1m 18s, read: 164.3 MiB/s, write: 160.5 MiB/s
INFO: 47% (15.4 GiB of 32.0 GiB) in 1m 21s, read: 167.2 MiB/s, write: 166.4 MiB/s
INFO: 50% (16.2 GiB of 32.0 GiB) in 1m 24s, read: 278.0 MiB/s, write: 89.3 MiB/s
INFO: 51% (16.5 GiB of 32.0 GiB) in 1m 27s, read: 128.3 MiB/s, write: 123.3 MiB/s
INFO: 53% (17.3 GiB of 32.0 GiB) in 1m 30s, read: 242.1 MiB/s, write: 241.4 MiB/s
INFO: 55% (17.9 GiB of 32.0 GiB) in 1m 33s, read: 206.6 MiB/s, write: 168.5 MiB/s
INFO: 71% (22.7 GiB of 32.0 GiB) in 1m 36s, read: 1.6 GiB/s, write: 66.1 MiB/s
INFO: 98% (31.5 GiB of 32.0 GiB) in 1m 39s, read: 2.9 GiB/s, write: 101.3 KiB/s
INFO: 100% (32.0 GiB of 32.0 GiB) in 1m 41s, read: 283.8 MiB/s, write: 221.0 MiB/s
INFO: backup is sparse: 14.69 GiB (45%) total zero data
INFO: transferred 32.00 GiB in 101 seconds (324.5 MiB/s)
INFO: stopping kvm after backup task
INFO: archive file size: 11.22GB
INFO: Finished Backup of VM 100 (00:01:44)
INFO: Backup finished at 2026-06-13 12:06:29
INFO: Backup job finished successfully
INFO: notified via target 'mail-to-root'
```


Sur le serveur d'origine en 192.168.3.111, on fait le transfert

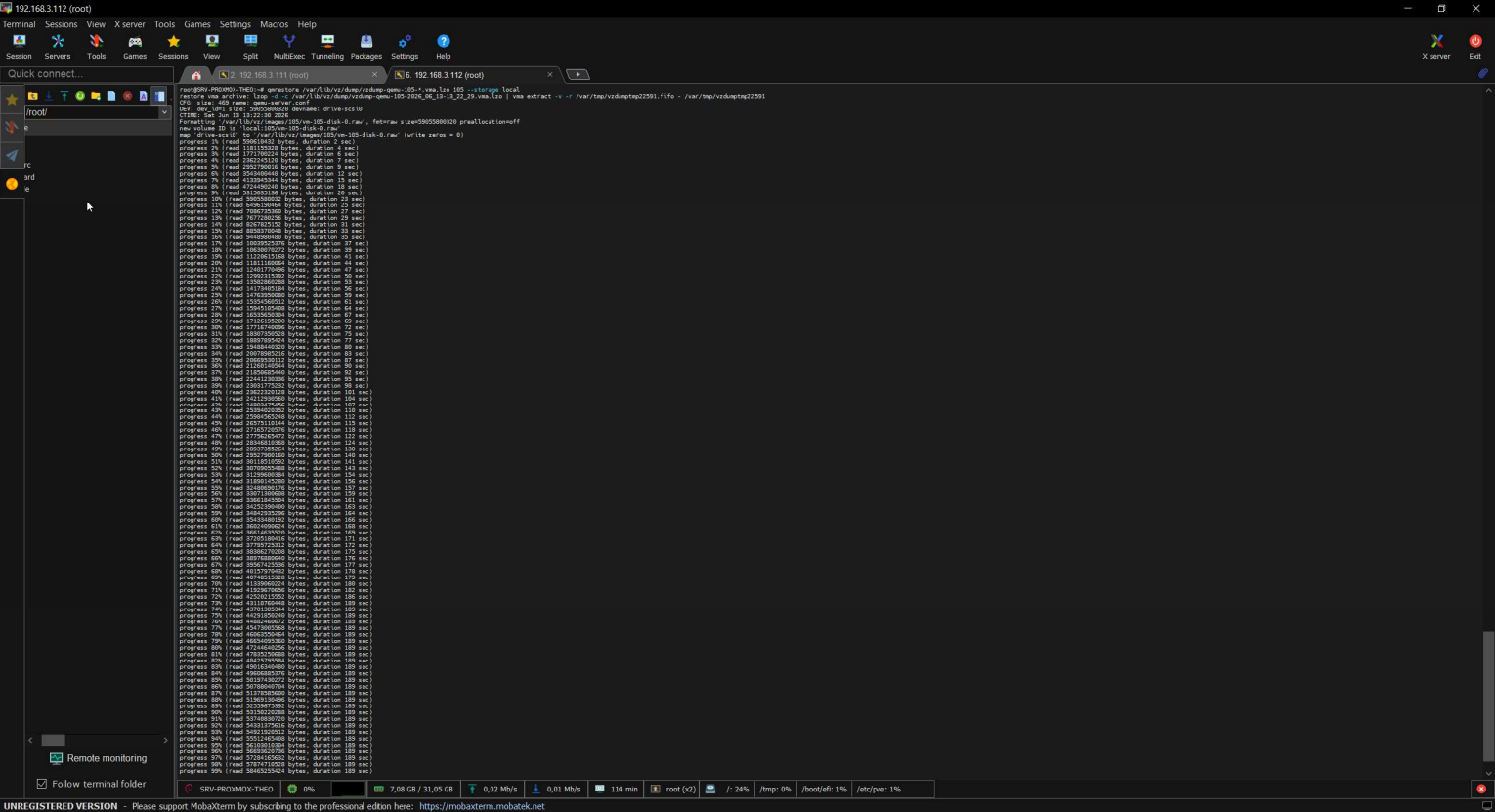
```
rsync -av --progress /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*vma.lzo
```

```
root@proxmox-theo:~# rsync -av --progress /var/lib/vz/dump/vzdump-qemu-100-2026_06_13-12_04_45.vma.lzo root@192.168.3.112:/var/lib/vz/dump/
root@192.168.3.112's password:
sending incremental file list
vzdump-qemu-100-2026_06_13-12_04_45.vma.lzo
12,049,116,942 100% 111.93MB/s 0:01:42 (xfr#1, to-chk=0/1)

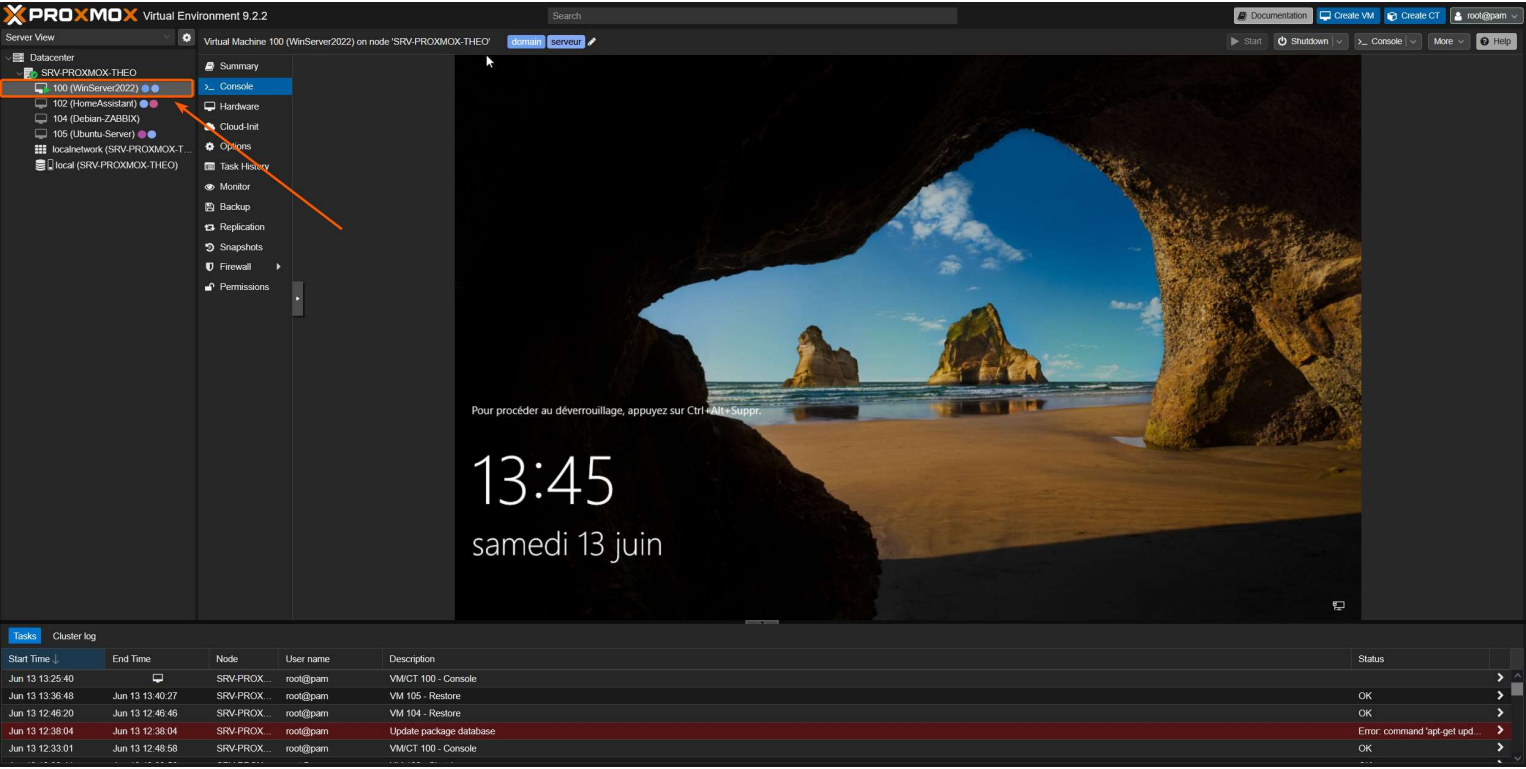
sent 12,052,058,751 bytes received 35 bytes 111,078,882.82 bytes/sec
total size is 12,049,116,942 speedup is 1.00
```

Sur le serveur de destination en 192.168.3.112 — On restore la machine virtuelle

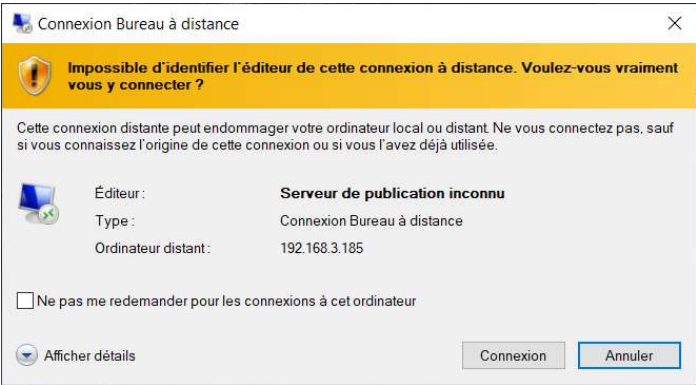
```
qmrestore /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*vma.lzo <VMID> --storage local
```

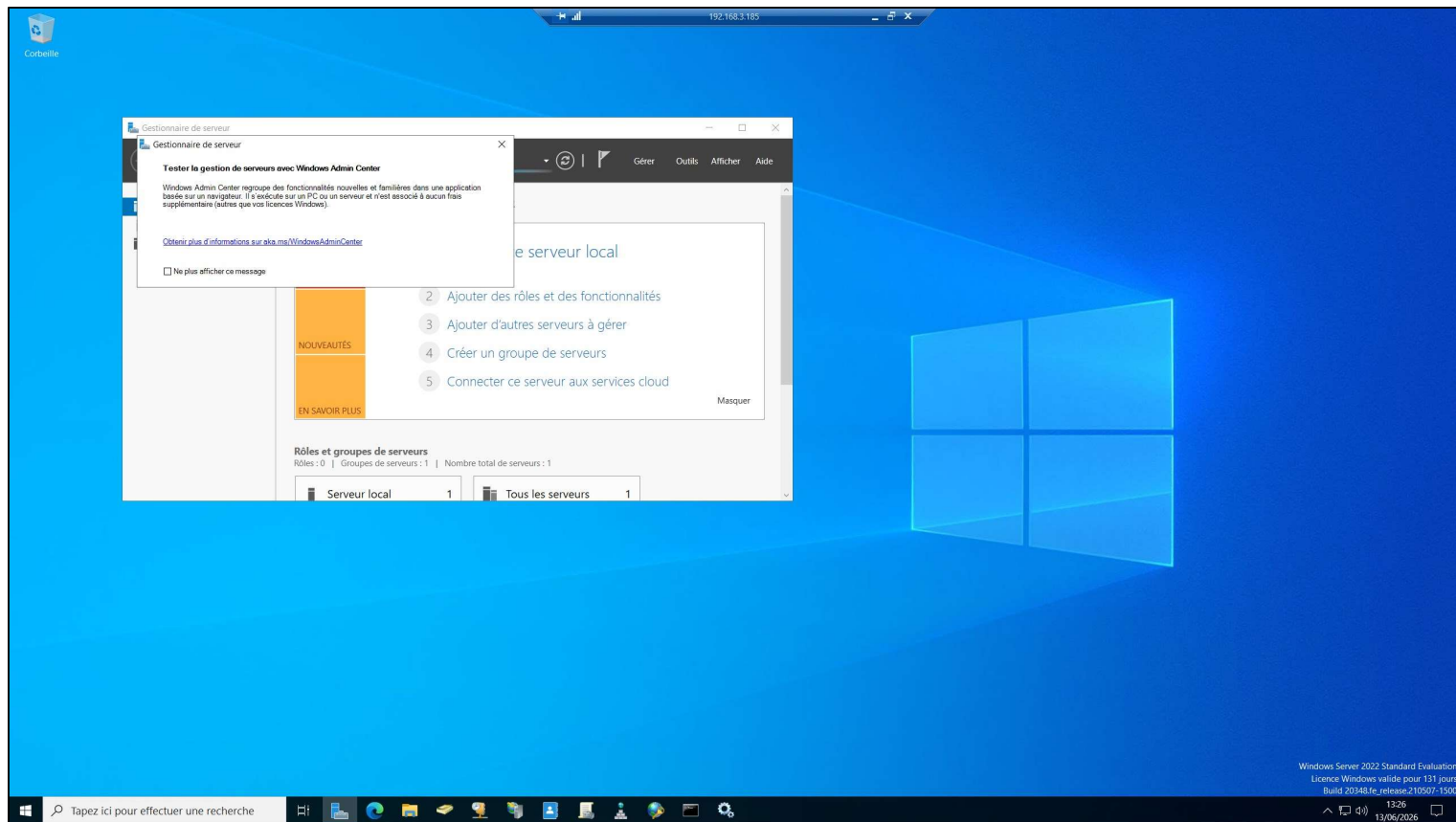


Une fois le transfère terminer :



On essaye de se connecter en bureau à distance :





La machine virtuelle est parfaitement restaurée.



Cette machine virtuelle correspond à mon serveur de domotique qui gère toute l'infrastructure domotique.

Sur le serveur d'origine en 192.168.3.111 — backup en LZO

```
vzdump <VMID> --storage local --mode stop --compress lzo
```

```
root@proxmox-theo:~# vzdump 102 --storage local --mode stop --compress lzo
INFO: starting new backup job: vzdump 102 --compress lzo --mode stop --storage local
INFO: Starting Backup of VM 102 (qemu)
INFO: Backup started at 2026-06-13 12:13:36
INFO: status = stopped
INFO: backup mode: stop
INFO: ionice priority: 7
INFO: VM Name: HomeAssistant
INFO: include disk 'scsi0' 'local-lvm:vm-102-disk-2' 32G
INFO: include disk 'efidisk0' 'local-lvm:vm-102-disk-0' 4M
INFO: creating vzdump archive '/var/lib/vz/dump/vzdump-qemu-102-2026_06_13-12_13_36.vma.lzo'
INFO: starting kvm to execute backup task
INFO: started backup task 'd035d285-fa01-4a23-ac77-a4befaf87628'
INFO: 3% (1.2 GiB of 32.0 GiB) in 3s, read: 407.2 MiB/s, write: 321.1 MiB/s
INFO: 6% (2.1 GiB of 32.0 GiB) in 6s, read: 310.5 MiB/s, write: 250.1 MiB/s
INFO: 10% (3.3 GiB of 32.0 GiB) in 9s, read: 419.9 MiB/s, write: 215.8 MiB/s
INFO: 13% (4.5 GiB of 32.0 GiB) in 12s, read: 382.4 MiB/s, write: 153.8 MiB/s
INFO: 16% (5.2 GiB of 32.0 GiB) in 15s, read: 263.4 MiB/s, write: 228.0 MiB/s
INFO: 18% (5.8 GiB of 32.0 GiB) in 18s, read: 210.2 MiB/s, write: 209.9 MiB/s
INFO: 20% (6.5 GiB of 32.0 GiB) in 21s, read: 235.7 MiB/s, write: 203.4 MiB/s
INFO: 22% (7.2 GiB of 32.0 GiB) in 24s, read: 239.2 MiB/s, write: 228.3 MiB/s
INFO: 24% (7.9 GiB of 32.0 GiB) in 27s, read: 243.4 MiB/s, write: 242.3 MiB/s
INFO: 27% (8.9 GiB of 32.0 GiB) in 30s, read: 335.4 MiB/s, write: 194.8 MiB/s
INFO: 29% (9.6 GiB of 32.0 GiB) in 33s, read: 218.7 MiB/s, write: 218.5 MiB/s
INFO: 31% (10.1 GiB of 32.0 GiB) in 36s, read: 194.5 MiB/s, write: 193.7 MiB/s
INFO: 33% (10.7 GiB of 32.0 GiB) in 39s, read: 198.2 MiB/s, write: 192.2 MiB/s
INFO: 35% (11.3 GiB of 32.0 GiB) in 42s, read: 215.1 MiB/s, write: 209.3 MiB/s
INFO: 37% (12.0 GiB of 32.0 GiB) in 45s, read: 207.8 MiB/s, write: 207.3 MiB/s
INFO: 38% (12.4 GiB of 32.0 GiB) in 48s, read: 148.2 MiB/s, write: 148.2 MiB/s
INFO: 40% (12.9 GiB of 32.0 GiB) in 51s, read: 181.6 MiB/s, write: 158.6 MiB/s
INFO: 41% (13.4 GiB of 32.0 GiB) in 54s, read: 171.4 MiB/s, write: 170.2 MiB/s
INFO: 43% (13.8 GiB of 32.0 GiB) in 57s, read: 119.8 MiB/s, write: 119.7 MiB/s
INFO: 44% (14.2 GiB of 32.0 GiB) in 1m, read: 127.6 MiB/s, write: 119.0 MiB/s
INFO: 48% (15.6 GiB of 32.0 GiB) in 1m 3s, read: 494.7 MiB/s, write: 289.5 MiB/s
INFO: 51% (16.4 GiB of 32.0 GiB) in 1m 6s, read: 264.2 MiB/s, write: 264.0 MiB/s
INFO: 52% (16.9 GiB of 32.0 GiB) in 1m 9s, read: 176.0 MiB/s, write: 162.3 MiB/s
INFO: 54% (17.4 GiB of 32.0 GiB) in 1m 12s, read: 170.0 MiB/s, write: 169.3 MiB/s
INFO: 58% (18.9 GiB of 32.0 GiB) in 1m 15s, read: 506.3 MiB/s, write: 135.1 MiB/s
INFO: 61% (19.8 GiB of 32.0 GiB) in 1m 18s, read: 303.3 MiB/s, write: 302.5 MiB/s
INFO: 63% (20.5 GiB of 32.0 GiB) in 1m 21s, read: 236.1 MiB/s, write: 236.0 MiB/s
INFO: 65% (21.0 GiB of 32.0 GiB) in 1m 24s, read: 180.8 MiB/s, write: 151.4 MiB/s
INFO: 66% (21.4 GiB of 32.0 GiB) in 1m 27s, read: 150.9 MiB/s, write: 150.4 MiB/s
INFO: 90% (29.0 GiB of 32.0 GiB) in 1m 30s, read: 2.5 GiB/s, write: 5.8 MiB/s
INFO: 100% (32.0 GiB of 32.0 GiB) in 1m 32s, read: 1.5 GiB/s, write: 260.0 KiB/s
INFO: backup is sparse: 14.86 GiB (46%) total zero data
INFO: transferred 32.00 GiB in 92 seconds (356.2 MiB/s)
INFO: stopping kvm after backup task
INFO: archive file size: 8.00GB
INFO: Finished Backup of VM 102 (00:01:34)
INFO: Backup finished at 2026-06-13 12:15:10
INFO: Backup job finished successfully
INFO: notified via target 'mail-to-root'
```

Sur le serveur d'origine en 192.168.3.111, on fait le transfert

```
rsync -av --progress /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*.vma.lzo
```

```
root@proxmox-theo:~# rsync -av --progress /var/lib/vz/dump/vzdump-qemu-102-2026_06_13-12_13_36.vma.lzo root@192.168.3.112:/var/lib/vz/dump/
root@192.168.3.112's password:
sending incremental file list
vzdump-qemu-102-2026_06_13-12_13_36.vma.lzo
 8,593,639,923 100% 109.68MB/s   0:01:14 (xfr#1, to-chk=0/1)

sent 8,595,738,117 bytes received 35 bytes 104,190,765.48 bytes/sec
total size is 8,593,639,923 speedup is 1.00
```

Sur le serveur de destination en 192.168.3.112 — On restore la machine virtuelle

```
qmrestore /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*.vma.lzo <VMID> --storage local
```

The screenshot shows the MobaxTerm application interface. At the top, there's a menu bar with options like Terminal, Sessions, View, X server, Tools, Games, Settings, and Help. Below the menu is a toolbar with icons for Session, Servers, Tools, Games, Sessions, View, Split, MobaXterm, Tunneling, Packages, Settings, and Help. The main window is titled "192.168.3.112 (root)" and displays a file transfer progress window. The progress window shows a list of files being transferred from a local drive to a remote server. The progress bar at the bottom indicates that the transfer is 0% complete. The status bar at the bottom shows system information like CPU usage, memory, and network status.

Une fois la migration de mon HomeAssistant il faut rebrancher tous les périphériques sur le nouveau serveur et les passer sur la machine virtuelle.

→ Dongle SONOFF – Zigbee



→ Aquara Hub



On bascule les périphérique USB sur la machine virtuelle.

PROXMOX Virtual Environment 9.2.2

Server View

SRV-PROXMOX-THEO

100 (WinServer2022)

102 (HomeAssistant)

104 (Debian-ZABBIX)

105 (Ubuntu-Server)

localnetwork (SRV-PROXMOX-THEO)

local (SRV-PROXMOX-THEO)

Summary

Console

Hardware

Cloud-Init

Options

Task History

Monitor

Backup

Replication

Snapshots

Firewall

Permissions

Add

Remove

Edit

Disk Action

Revert

Memory

Processors

BIOS

Display

Machine

SCSI Controller

Hard Disk (scsi0)

Network Device (net0)

EFI Disk

USB Device (usb0)

USB Device (usb1)

3.00 GB

2 (1 sockets, 2 cores) [x86-64-v2-AES]

OVMM (UEFI)

Default

Default (440bx)

VirtualIO SCSI single

local:102/vm-102-disk-1.raw,iothread=1,size=32G

virtio-BD:24:11:3E:7A:BA,bridge=vmbri0,firewall=1

local:102/vm-102-disk-0.raw,efitype=4m,ms-cert=2023,pre-enrolled-keys=1,size=528K

host=3-1.4

host=3-2

Edit: USB Device

Spice Port

Use mapped Device

Use USB Vendor/Device ID

Use USB Port

Choose Device

Choose Port

Use USB3

Bluetooth Radio (3-2)

Help

OK

Tasks

Cluster log

Start Time	End Time	Node	User name	Description	Status
Jun 13 14:08:44	Jun 13 14:09:01	SRV-PROX...	root@pam	VM/CT 102 - Console	OK
Jun 13 14:08:43	Jun 13 14:08:44	SRV-PROX...	root@pam	VM 102 - Start	Warning 1
Jun 13 14:08:00	Jun 13 14:08:00	SRV-PROX...	root@pam	Erase data	OK
Jun 13 14:07:41	Jun 13 14:07:57	SRV-PROX...	root@pam	VM 105 - Shutdown	OK
Jun 13 14:07:38	Jun 13 14:07:39	SRV-PROX...	root@pam	VM/CT 105 - Console	OK

PROXMOX Virtual Environment 9.2.2

Server View

SRV-PROXMOX-THEO

100 (WinServer2022)

102 (HomeAssistant)

104 (Debian-ZABBIX)

105 (Ubuntu-Server)

localnetwork (SRV-PROXMOX-THEO)

local (SRV-PROXMOX-THEO)

Summary

Console

Hardware

Cloud-Init

Options

Task History

Monitor

Backup

Replication

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Disk Action

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Memory

Processors

BIOS

Display

Machine

SCSI Controller

Hard Disk (scsi0)

Network Device (net0)

EFI Disk

USB Device (usb0)

USB Device (usb1)

3.00 GB

2 (1 sockets, 2 cores) [x86-64-v2-AES]

OVMM (UEFI)

Default

Default (440bx)

VirtualIO SCSI single

local:102/vm-102-disk-1.raw,iothread=1,size=32G

virtio-BD:24:11:3E:7A:BA,bridge=vmbri0,firewall=1

local:102/vm-102-disk-0.raw,efitype=4m,ms-cert=2023,pre-enrolled-keys=1,size=528K

host=3-1.4

host=3-2

Edit: USB Device

Spice Port

Use mapped Device

Use USB Vendor/Device ID

Use USB Port

Choose Device

Choose Port

Use USB3

Sanoff Zigbee 3.0 USB Dongle Plus (3-1)

Help

OK

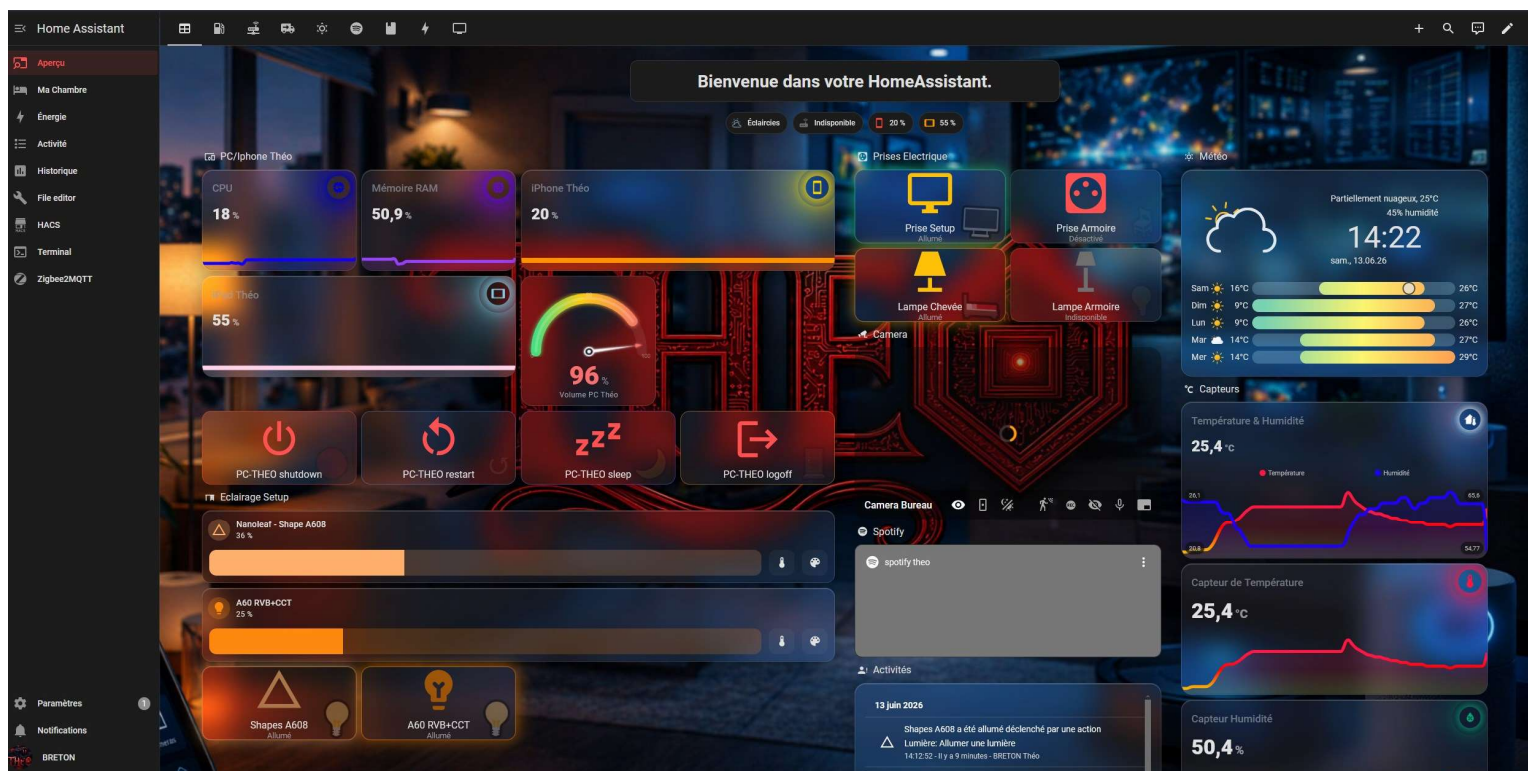
Tasks

Cluster log

Start Time	End Time	Node	User name	Description	Status
Jun 13 14:08:44	Jun 13 14:09:01	SRV-PROX...	root@pam	VM/CT 102 - Console	OK
Jun 13 14:08:43	Jun 13 14:08:44	SRV-PROX...	root@pam	VM 102 - Start	Warning 1
Jun 13 14:08:00	Jun 13 14:08:00	SRV-PROX...	root@pam	Erase data	OK
Jun 13 14:07:41	Jun 13 14:07:57	SRV-PROX...	root@pam	VM 105 - Shutdown	OK
Jun 13 14:07:38	Jun 13 14:07:39	SRV-PROX...	root@pam	VM/CT 105 - Console	OK

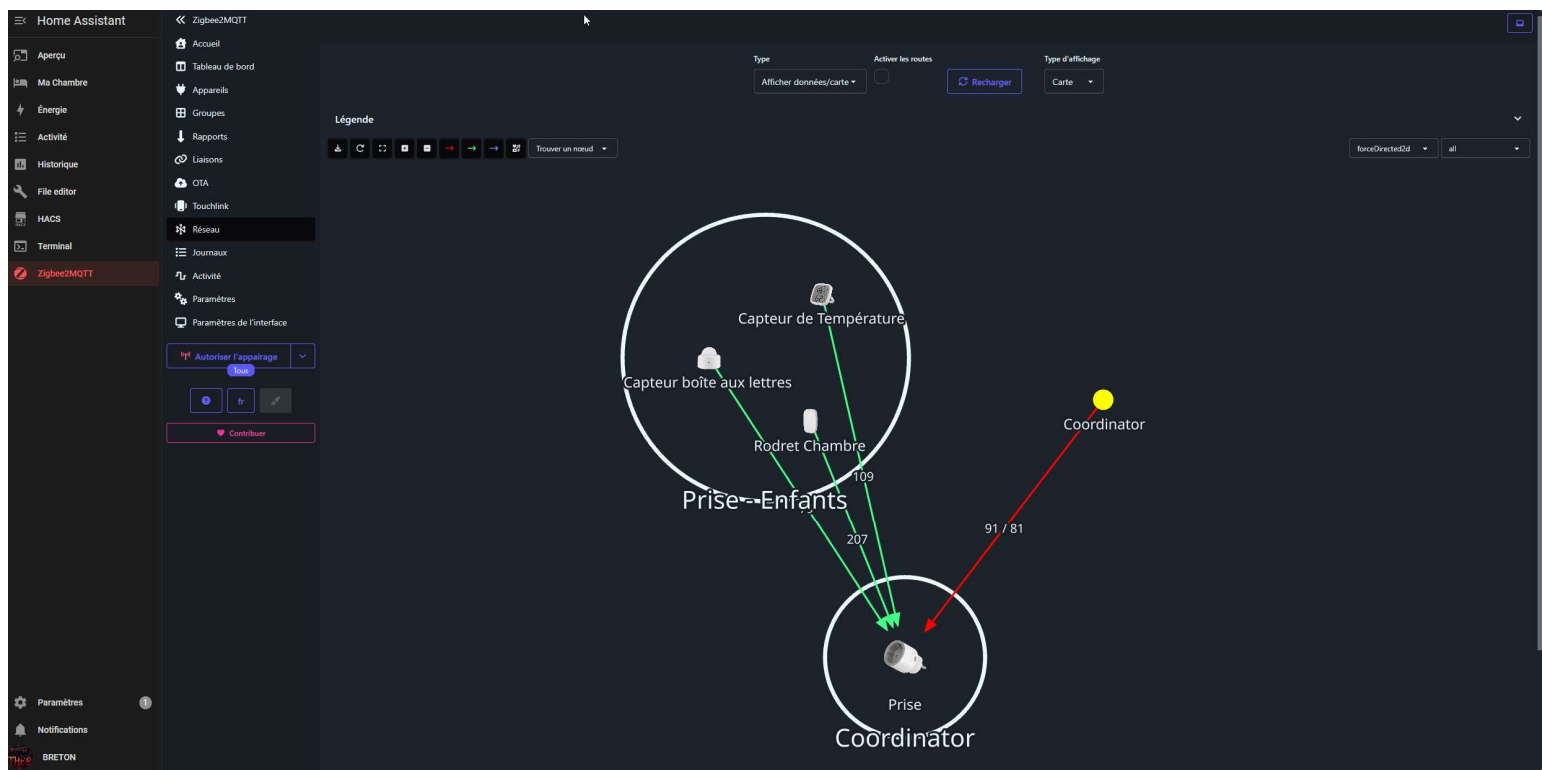


On peut maintenant redémarrer HomeAssistant sur le nouveau serveur.
L'interface sauvegarder dans la backup est bien chargée.



Voyons maintenant le réseau Zigbee, est-il bien revenu ?

La réponse est oui, les appareils sont a nouveau connecter au coordinateur.





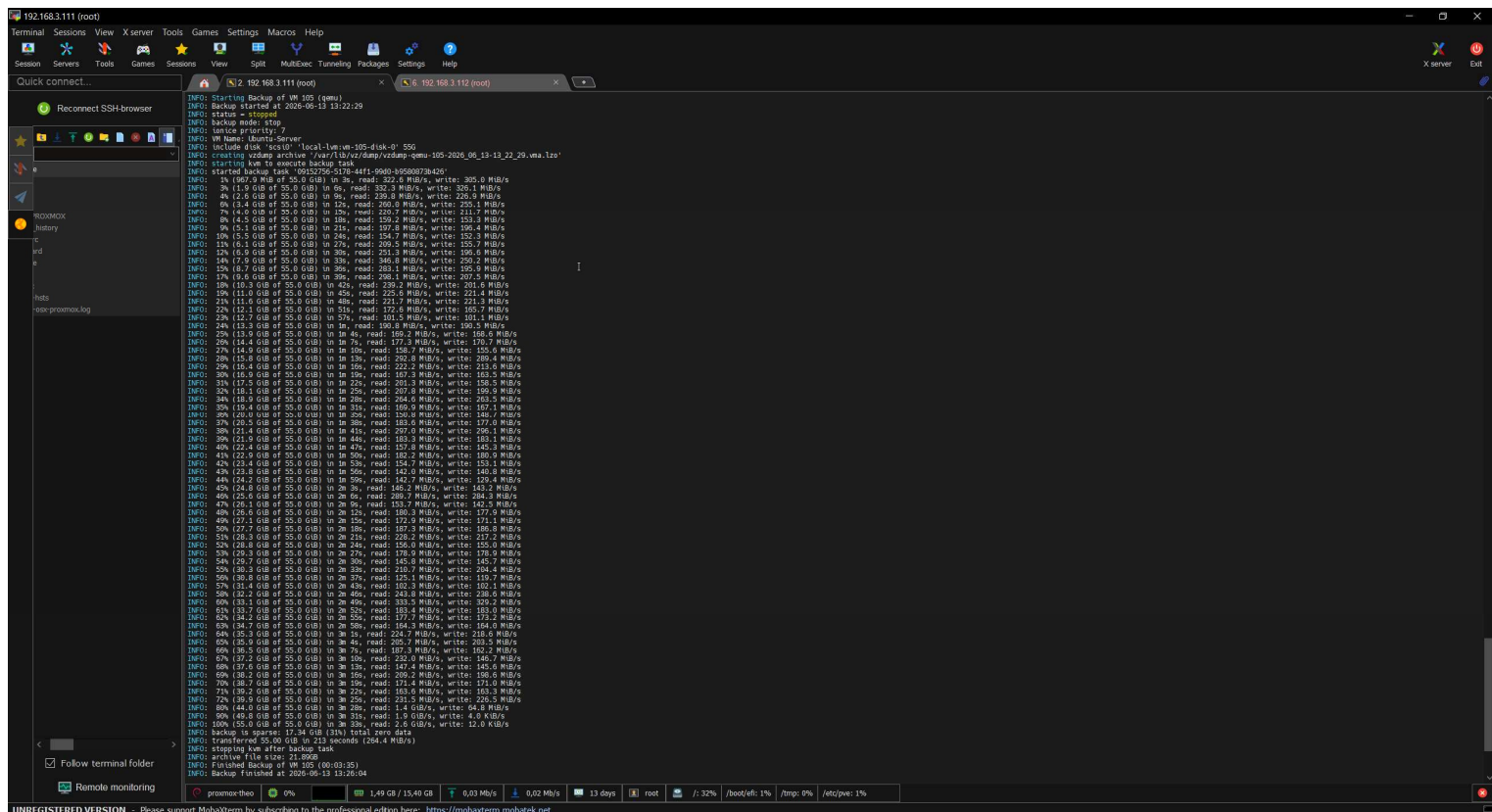
Troisième machine virtuelle – Ubuntu Server qui héberger mon docker

Cette machine virtuelle mes sert à héberger tout mes conteneurs :



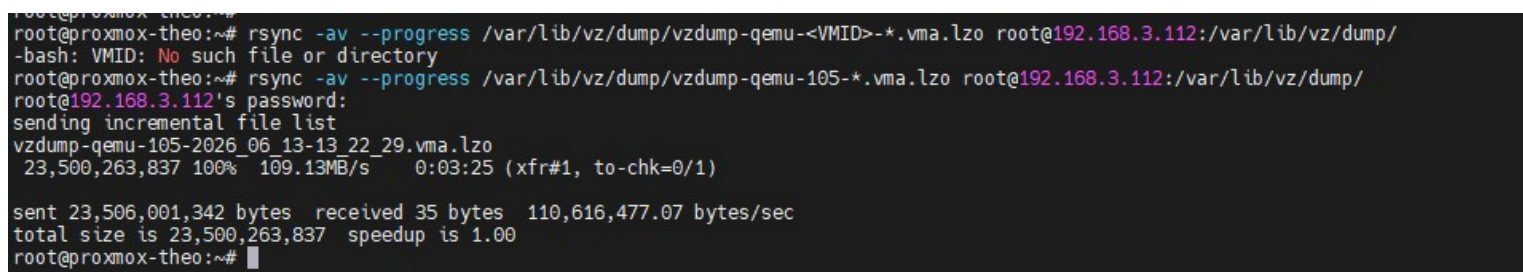
Sur le serveur d'origine en 192.168.3.111 — backup en LZO

```
vzdump <VMID> --storage local --mode stop --compress lzo
```



Sur le serveur d'origine en 192.168.3.111, on fait le transfert

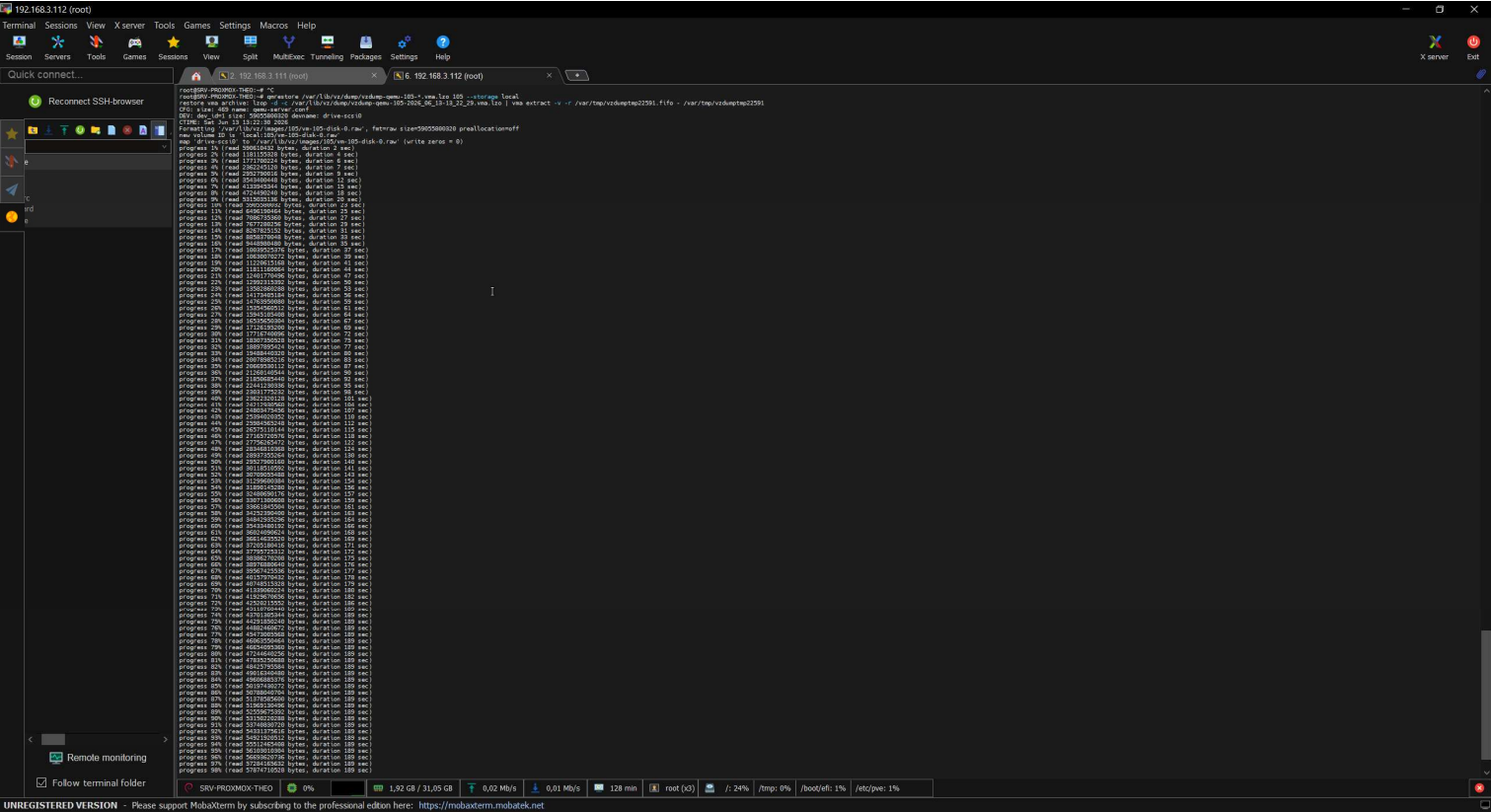
```
rsync -av --progress /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*.vma.lzo
```



PROJET PERSONNEL – Théo BRETON

PROJET N°6 : MIGRATION DE MON SERVEUR PROXMOX VERS UN TOUT NOUVEAU PROXMOX SURPUISSANT

```
qmrestore /var/lib/vz/dump/vzdump-qemu-<VMID>-* .vma.lzo <VMID> --storage local
```





Quatrième machine virtuelle – Mon deuxième Windows Server

Cette machine virtuelle me permet de stocker tous mes contacts dans SQL Server. Aujourd'hui stocké tous mes contacts dans un serveur de base de données est devenu indispensable pour me protéger des attaques du type hameçonnage. En faisant cela me protège mes contacts.



Sur le serveur d'origine en 192.168.3.111 — backup en LZO

```
vzdump <VMID> --storage local --mode stop --compress lzo
```

```
root@proxmox-theo:~#
root@proxmox-theo:~# vzdump 107 --storage local --mode stop --compress lzo
INFO: starting new backup job: vzdump 107 --mode stop --compress lzo --storage local
INFO: Starting Backup of VM 107 (qemu)
INFO: Backup started at 2026-06-13 14:39:21
INFO: status = stopped
INFO: backup mode: stop
INFO: tonice priority: 7
INFO: VM Name: WinServerBDD
INFO: include disk 'ide0' 'local-lvm:vm-107-disk-1' 32G
INFO: include disk 'efidisk0' 'local-lvm:vm-107-disk-0' 4M
INFO: include disk 'tpmstate0' 'local-lvm:vm-107-disk-2' 4M
INFO: creating vzdump archive '/var/lib/vz/dump/vzdump-qemu-107-2026_06_13-14_39_21.vma.lzo'
INFO: starting kvm to execute backup task
swtprm setup: Not overwriting existing state file.
INFO: attaching TPM drive to QEMU for backup
INFO: started backup task 'ef2ee0e6-0adb-445d-863a-c3c265b084e1'
INFO: 3% (1.0 GiB of 32.0 GiB) in 3s, read: 357.7 MiB/s, write: 313.6 MiB/s
INFO: 5% (1.9 GiB of 32.0 GiB) in 6s, read: 286.4 MiB/s, write: 285.6 MiB/s
INFO: 8% (2.7 GiB of 32.0 GiB) in 9s, read: 291.2 MiB/s, write: 289.9 MiB/s
INFO: 10% (3.5 GiB of 32.0 GiB) in 12s, read: 245.3 MiB/s, write: 220.6 MiB/s
INFO: 12% (4.1 GiB of 32.0 GiB) in 15s, read: 218.7 MiB/s, write: 217.8 MiB/s
INFO: 14% (4.7 GiB of 32.0 GiB) in 18s, read: 190.9 MiB/s, write: 190.6 MiB/s
INFO: 16% (5.3 GiB of 32.0 GiB) in 21s, read: 216.3 MiB/s, write: 209.8 MiB/s
INFO: 18% (5.9 GiB of 32.0 GiB) in 24s, read: 217.5 MiB/s, write: 216.6 MiB/s
INFO: 19% (6.4 GiB of 32.0 GiB) in 27s, read: 160.7 MiB/s, write: 159.4 MiB/s
INFO: 21% (7.0 GiB of 32.0 GiB) in 30s, read: 193.7 MiB/s, write: 193.2 MiB/s
INFO: 23% (7.6 GiB of 32.0 GiB) in 33s, read: 209.9 MiB/s, write: 209.0 MiB/s
INFO: 25% (8.2 GiB of 32.0 GiB) in 36s, read: 203.0 MiB/s, write: 202.2 MiB/s
INFO: 27% (8.7 GiB of 32.0 GiB) in 39s, read: 189.4 MiB/s, write: 189.2 MiB/s
INFO: 29% (9.4 GiB of 32.0 GiB) in 42s, read: 213.7 MiB/s, write: 208.8 MiB/s
INFO: 31% (10.0 GiB of 32.0 GiB) in 45s, read: 226.5 MiB/s, write: 224.3 MiB/s
INFO: 33% (10.7 GiB of 32.0 GiB) in 48s, read: 244.9 MiB/s, write: 194.3 MiB/s
INFO: 35% (11.4 GiB of 32.0 GiB) in 51s, read: 209.0 MiB/s, write: 205.3 MiB/s
INFO: 37% (11.9 GiB of 32.0 GiB) in 54s, read: 196.0 MiB/s, write: 187.2 MiB/s
INFO: 39% (12.5 GiB of 32.0 GiB) in 57s, read: 191.7 MiB/s, write: 187.8 MiB/s
INFO: 41% (13.3 GiB of 32.0 GiB) in 1m, read: 270.1 MiB/s, write: 207.2 MiB/s
INFO: 43% (13.8 GiB of 32.0 GiB) in 1m 3s, read: 188.5 MiB/s, write: 188.5 MiB/s
INFO: 44% (14.3 GiB of 32.0 GiB) in 1m 6s, read: 154.7 MiB/s, write: 145.3 MiB/s
INFO: 46% (14.9 GiB of 32.0 GiB) in 1m 9s, read: 214.4 MiB/s, write: 210.9 MiB/s
INFO: 48% (15.5 GiB of 32.0 GiB) in 1m 12s, read: 194.7 MiB/s, write: 193.6 MiB/s
INFO: 50% (16.0 GiB of 32.0 GiB) in 1m 15s, read: 180.6 MiB/s, write: 178.8 MiB/s
INFO: 51% (16.5 GiB of 32.0 GiB) in 1m 18s, read: 181.2 MiB/s, write: 178.9 MiB/s
INFO: 53% (17.1 GiB of 32.0 GiB) in 1m 21s, read: 187.3 MiB/s, write: 186.3 MiB/s
INFO: 55% (17.6 GiB of 32.0 GiB) in 1m 24s, read: 180.8 MiB/s, write: 180.0 MiB/s
INFO: 56% (18.1 GiB of 32.0 GiB) in 1m 27s, read: 177.3 MiB/s, write: 177.0 MiB/s
INFO: 58% (18.6 GiB of 32.0 GiB) in 1m 30s, read: 158.7 MiB/s, write: 158.6 MiB/s
INFO: 59% (19.1 GiB of 32.0 GiB) in 1m 33s, read: 164.7 MiB/s, write: 163.7 MiB/s
INFO: 61% (19.7 GiB of 32.0 GiB) in 1m 36s, read: 198.2 MiB/s, write: 197.0 MiB/s
INFO: 63% (20.3 GiB of 32.0 GiB) in 1m 39s, read: 199.4 MiB/s, write: 198.4 MiB/s
INFO: 64% (20.8 GiB of 32.0 GiB) in 1m 42s, read: 185.5 MiB/s, write: 183.0 MiB/s
INFO: 66% (21.4 GiB of 32.0 GiB) in 1m 45s, read: 202.4 MiB/s, write: 195.7 MiB/s
INFO: 68% (21.9 GiB of 32.0 GiB) in 1m 48s, read: 182.5 MiB/s, write: 180.7 MiB/s
INFO: 70% (22.4 GiB of 32.0 GiB) in 1m 51s, read: 164.3 MiB/s, write: 161.1 MiB/s
INFO: 71% (22.9 GiB of 32.0 GiB) in 1m 54s, read: 171.8 MiB/s, write: 171.3 MiB/s
INFO: 73% (23.4 GiB of 32.0 GiB) in 1m 57s, read: 166.5 MiB/s, write: 165.6 MiB/s
INFO: 74% (23.9 GiB of 32.0 GiB) in 2m, read: 161.8 MiB/s, write: 160.3 MiB/s
INFO: 77% (24.8 GiB of 32.0 GiB) in 2m 3s, read: 307.0 MiB/s, write: 124.3 MiB/s
INFO: 78% (25.2 GiB of 32.0 GiB) in 2m 6s, read: 155.9 MiB/s, write: 155.9 MiB/s
INFO: 80% (25.7 GiB of 32.0 GiB) in 2m 9s, read: 176.4 MiB/s, write: 132.4 MiB/s
INFO: 83% (26.6 GiB of 32.0 GiB) in 2m 12s, read: 306.0 MiB/s, write: 177.1 MiB/s
INFO: 87% (27.9 GiB of 32.0 GiB) in 2m 15s, read: 419.0 MiB/s, write: 162.0 MiB/s
INFO: 92% (29.7 GiB of 32.0 GiB) in 2m 18s, read: 630.8 MiB/s, write: 139.2 MiB/s
INFO: 94% (30.3 GiB of 32.0 GiB) in 2m 21s, read: 193.2 MiB/s, write: 140.7 MiB/s
INFO: 95% (30.6 GiB of 32.0 GiB) in 2m 24s, read: 124.0 MiB/s, write: 121.3 MiB/s
INFO: 96% (30.9 GiB of 32.0 GiB) in 2m 27s, read: 100.0 MiB/s, write: 100.0 MiB/s
INFO: 99% (31.8 GiB of 32.0 GiB) in 2m 30s, read: 298.1 MiB/s, write: 207.3 MiB/s
INFO: 100% (32.0 GiB of 32.0 GiB) in 2m 31s, read: 198.3 MiB/s, write: 196.2 MiB/s
INFO: backup is sparse: 4.43 GiB (13%) total zero data
INFO: transferred 32.00 GiB in 151 seconds (217.0 MiB/s)
INFO: stopping kvm after backup task
INFO: archive file size: 17.43GB
INFO: Finished Backup of VM 107 (00:02:33)
INFO: Backup finished at 2026-06-13 14:41:54
INFO: Backup job finished successfully
INFO: notified via target 'mail-to-root'
root@proxmox-theo:~#
```

Sur le serveur d'origine en 192.168.3.111, on fait le transfert

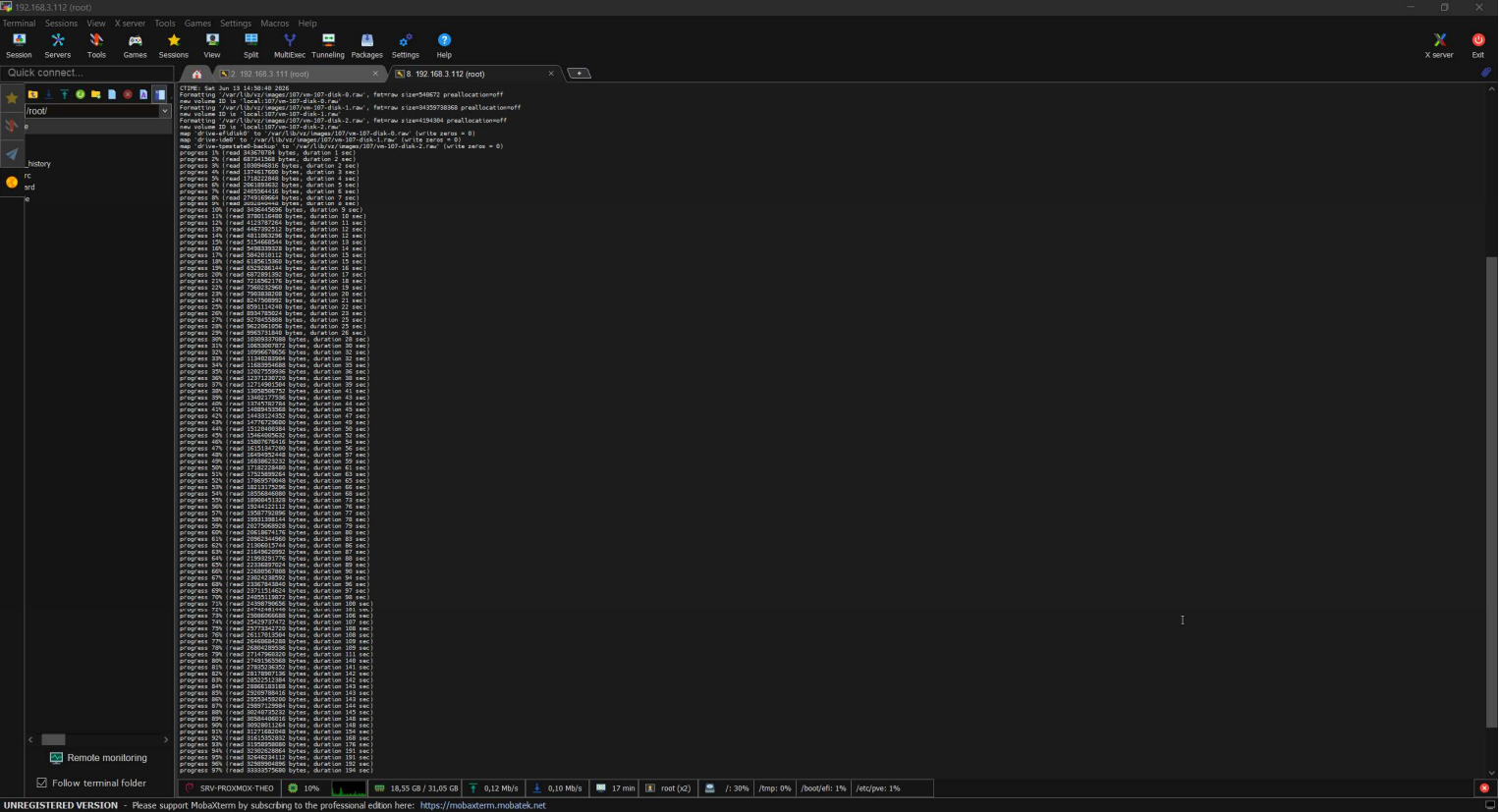
```
rsync -av --progress /var/lib/vz/dump/vzdump-qemu-<VMID>-* .vma.lzo
```

```
root@proxmox-theo:~# rsync -av --progress /var/lib/vz/dump/vzdump-qemu-107-* .vma.lzo root@192.168.3.112:/var/lib/vz/dump/
root@192.168.3.112's password:
sending incremental file list
vzdump-qemu-107-2026_06_13-14_39_21.vma.lzo
18,714,699,977 100% 111.78MB/s 0:02:39 (xfr#1, to-chk=0/1)

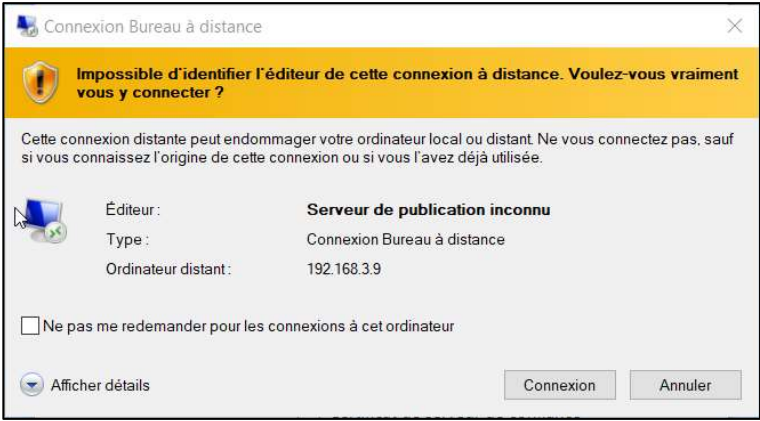
sent 18,719,269,131 bytes received 35 bytes 112,428,043.04 bytes/sec
total size is 18,714,699,977 speedup is 1.00
root@proxmox-theo:~#
```

Sur le serveur de destination en 192.168.3.112 — On restore la machine virtuelle

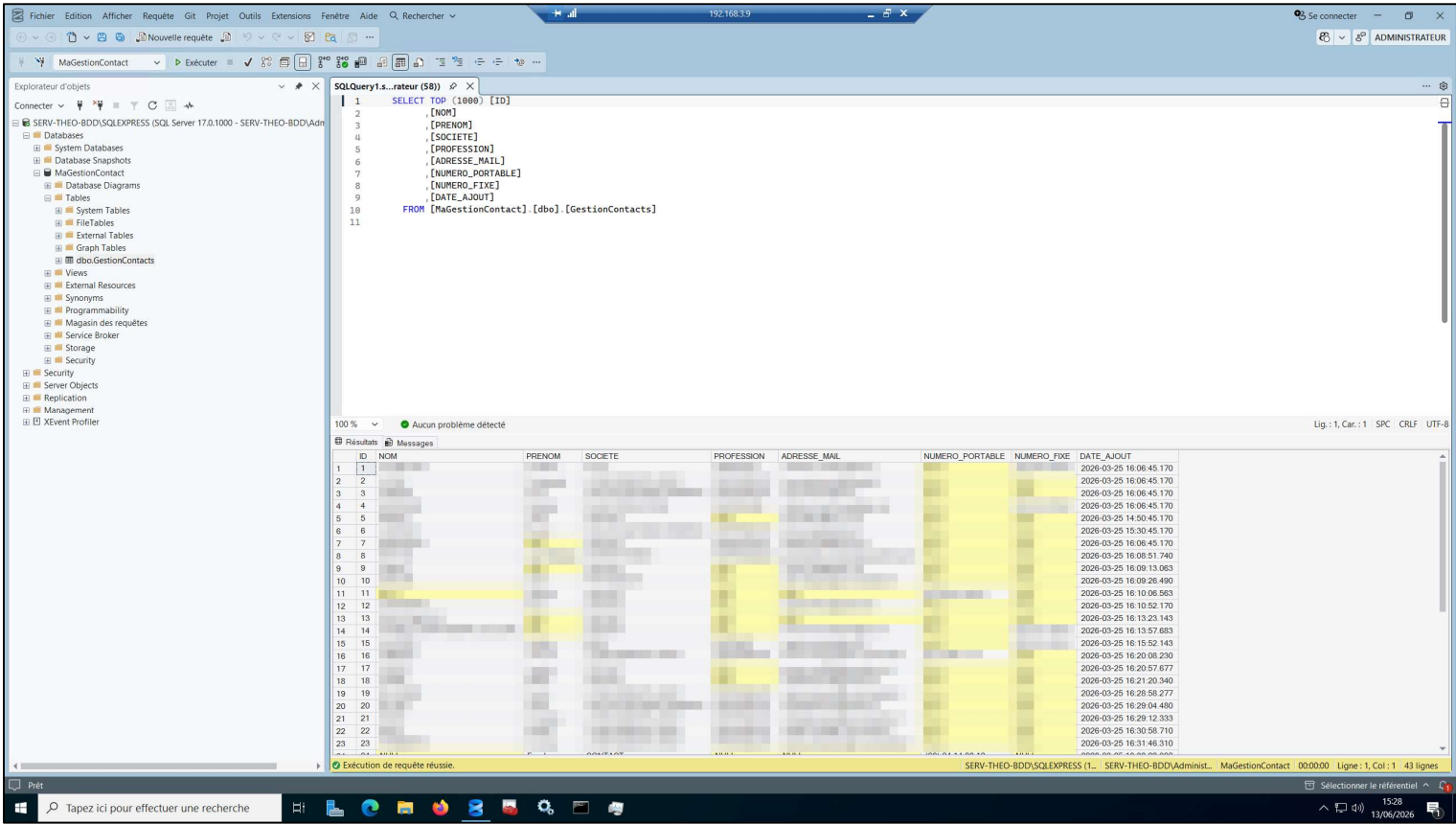
```
qmrestore /var/lib/vz/dump/vzdump-qemu-<VMID>-* .vma.lzo <VMID> --storage local
```



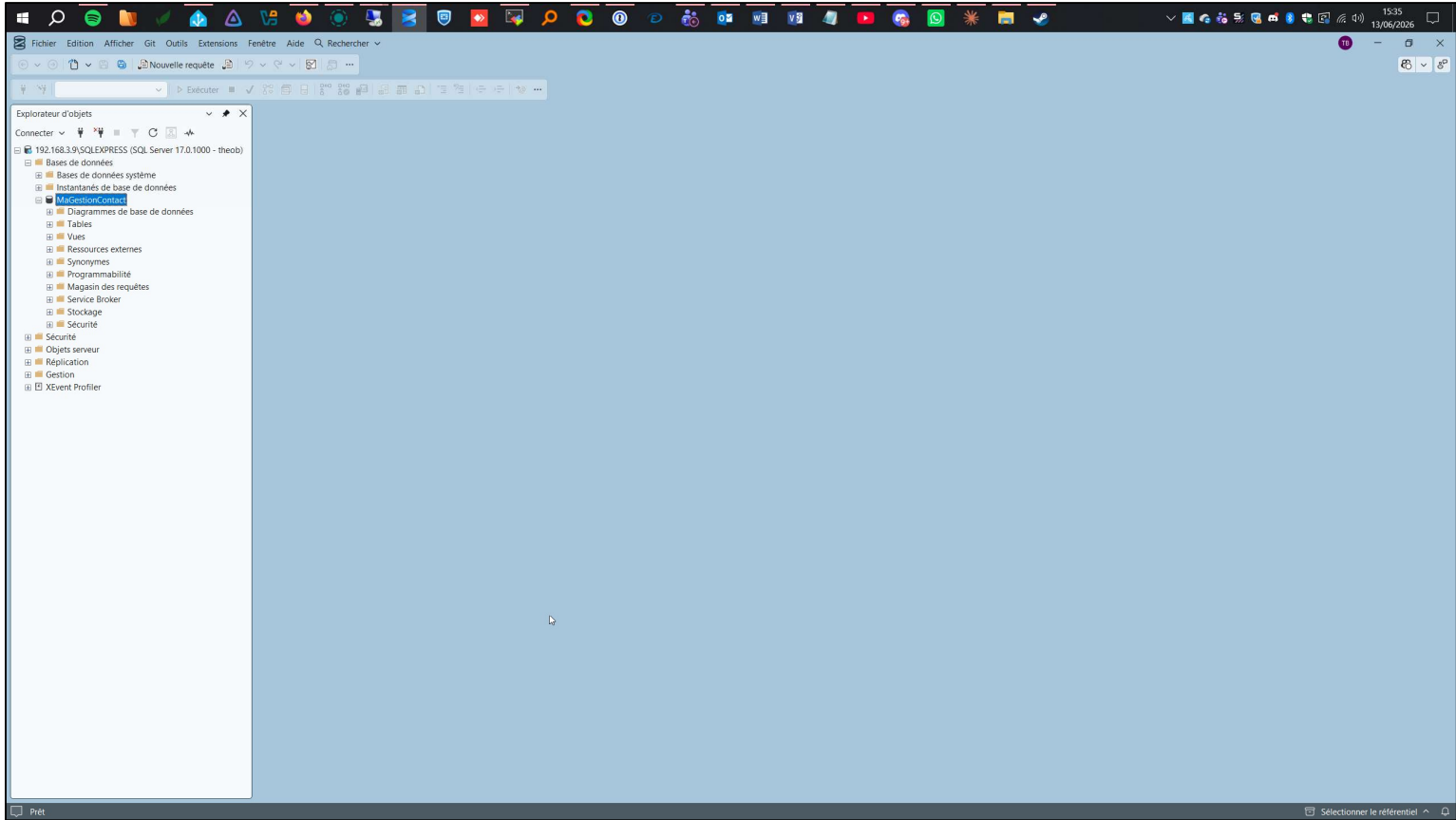
Une fois la migration finis on va tester de ce connecter en RDP au serveur :



On accède ensuite à ma base de donnée de contact.



J'accède également depuis mon PC Personnel.





Cinquième machine virtuelle – Débian qui héberge ZABBIX

Cette machine virtuelle est très importante aussi car elle héberge mon serveur de supervision ZABBIX.

Cette dernière migration va confirmer toutes les migrations précédentes car ZABBIX supervise entièrement mon homelab, si un serveur ou un problème est détecté ZABBIX va l'indiquer.

Sur le serveur d'origine en 192.168.3.111 — backup en LZO

```
vzdump <VMID> --storage local --mode stop --compress lzo
```

```
root@proxmox-theo:~# vzdump 104 --storage local --mode stop --compress lzo
INFO: starting new backup job: vzdump 104 --compress lzo --mode stop --storage local
INFO: Starting Backup of VM 104 (qemu)
INFO: Backup started at 2026-06-13 12:35:11
INFO: status = stopped
INFO: backup mode: stop
INFO: ionice priority: 7
INFO: VM Name: Debian-ZABBIX
INFO: include disk 'scsi0' 'local-lvm:vm-104-disk-0' 32G
INFO: creating vzdump archive '/var/lib/vz/dump/vzdump-qemu-104-2026_06_13-12_35_11.vma.lzo'
INFO: starting kvm to execute backup task
INFO: started backup task '5209050e-7518-4f4f-b594-7c13570b3147'
INFO: 4% (1.5 GiB of 32.0 GiB) in 3s, read: 502.7 MiB/s, write: 275.9 MiB/s
INFO: 8% (2.6 GiB of 32.0 GiB) in 6s, read: 392.7 MiB/s, write: 276.5 MiB/s
INFO: 17% (5.6 GiB of 32.0 GiB) in 9s, read: 1013.8 MiB/s, write: 201.2 MiB/s
INFO: 29% (9.3 GiB of 32.0 GiB) in 12s, read: 1.2 GiB/s, write: 207.8 MiB/s
INFO: 32% (10.4 GiB of 32.0 GiB) in 15s, read: 358.9 MiB/s, write: 270.3 MiB/s
INFO: 35% (11.2 GiB of 32.0 GiB) in 18s, read: 295.8 MiB/s, write: 224.3 MiB/s
INFO: 40% (13.0 GiB of 32.0 GiB) in 21s, read: 592.8 MiB/s, write: 210.8 MiB/s
INFO: 52% (16.7 GiB of 32.0 GiB) in 24s, read: 1.3 GiB/s, write: 137.5 MiB/s
INFO: 70% (22.6 GiB of 32.0 GiB) in 27s, read: 1.9 GiB/s, write: 66.0 MiB/s
INFO: 82% (26.4 GiB of 32.0 GiB) in 30s, read: 1.3 GiB/s, write: 134.5 MiB/s
INFO: 97% (31.3 GiB of 32.0 GiB) in 33s, read: 1.6 GiB/s, write: 109.2 MiB/s
INFO: 100% (32.0 GiB of 32.0 GiB) in 36s, read: 233.8 MiB/s, write: 208.7 MiB/s
INFO: backup is sparse: 25.20 GiB (78%) total zero data
INFO: transferred 32.00 GiB in 36 seconds (910.2 MiB/s)
INFO: stopping kvm after backup task
INFO: archive file size: 2.62GB
INFO: Finished Backup of VM 104 (00:00:37)
INFO: Backup finished at 2026-06-13 12:35:48
INFO: Backup job finished successfully
INFO: notified via target 'mail-to-root'
```

Sur le serveur d'origine en 192.168.3.111, on fait le transfert

```
rsync -av --progress /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*vma.lzo
```

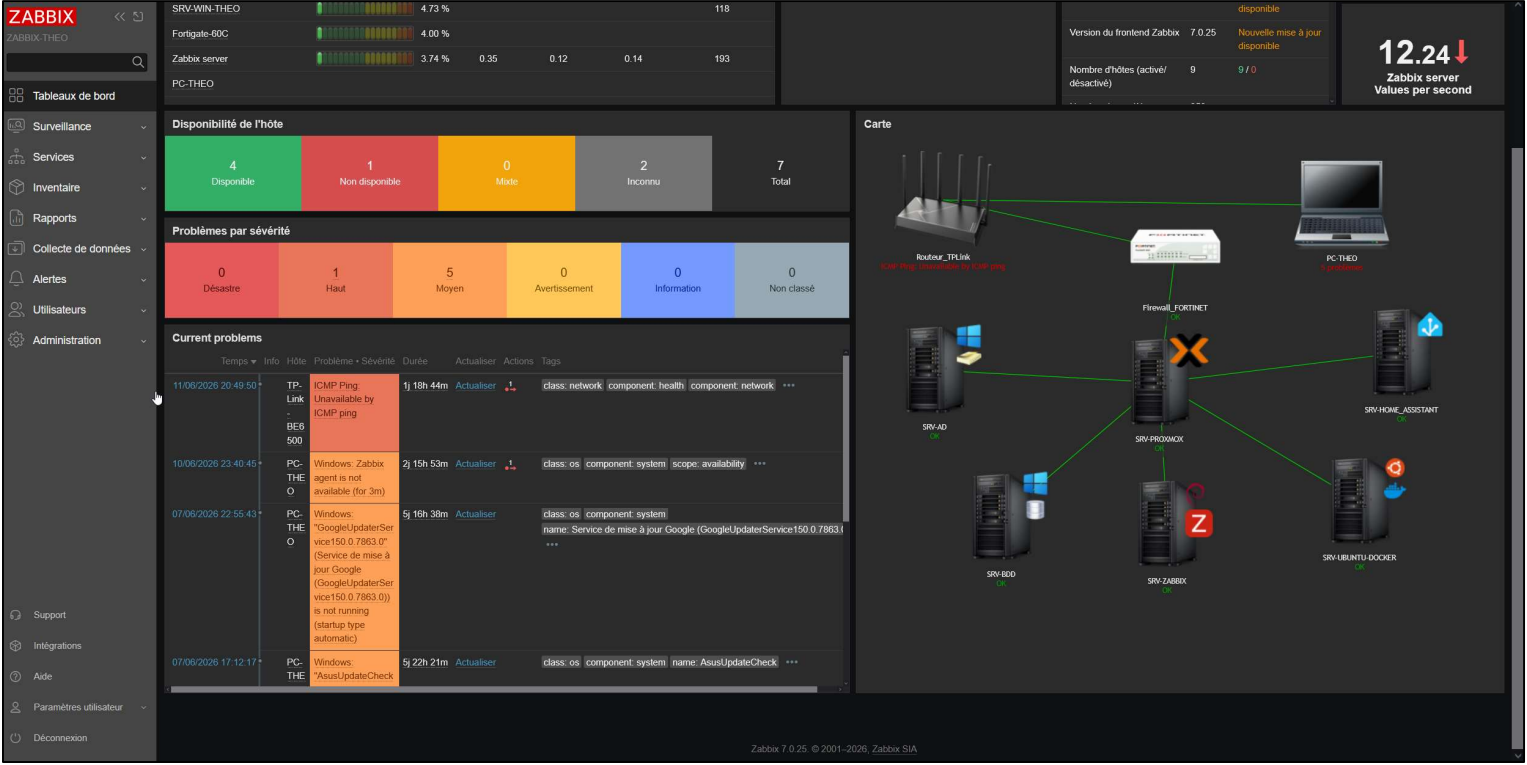
```
rsync -av --progress /var/lib/vz/dump/vzdump-qemu-104-2026_06_13-12_35_11.vma.lzo root@192.168.3.112:/var/lib/vz/dump/
root@192.168.3.112's password:
sending incremental file list
vzdump-qemu-104-2026_06_13-12_35_11.vma.lzo
 2,808,295,926 100% 111.95MB/s 0:00:23 (xfr#1, to-chk=0/1)

sent 2,808,981,680 bytes received 35 bytes 83,850,200.45 bytes/sec
total size is 2,808,295,926 speedup is 1.00
```

Sur le serveur de destination en 192.168.3.112 — On restore la machine virtuelle

```
qmrestore /var/lib/vz/dump/vzdump-qemu-<VMID>-*.*vma.lzo <VMID> --storage local
```

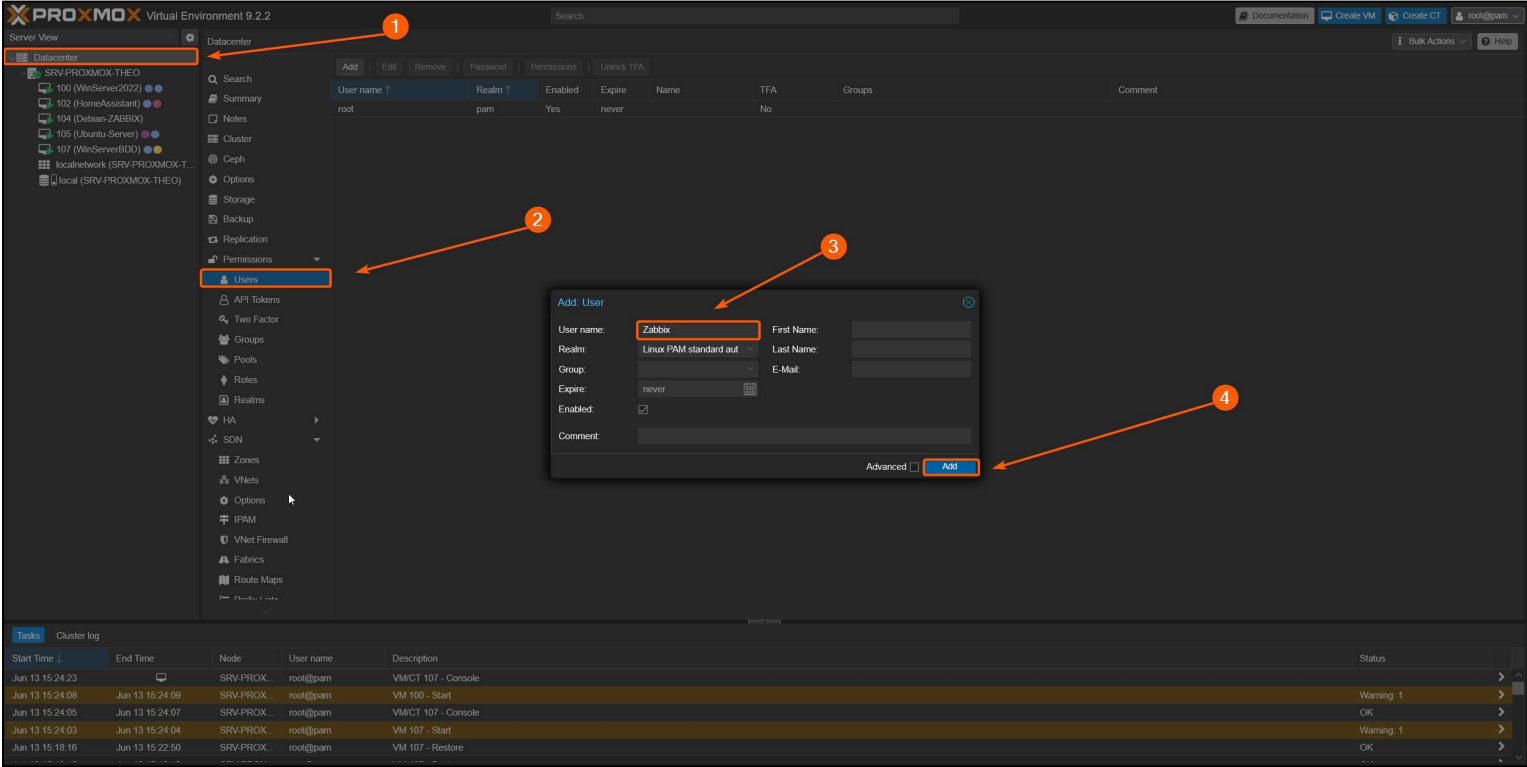

Tous les serveurs sont en statut « OK »



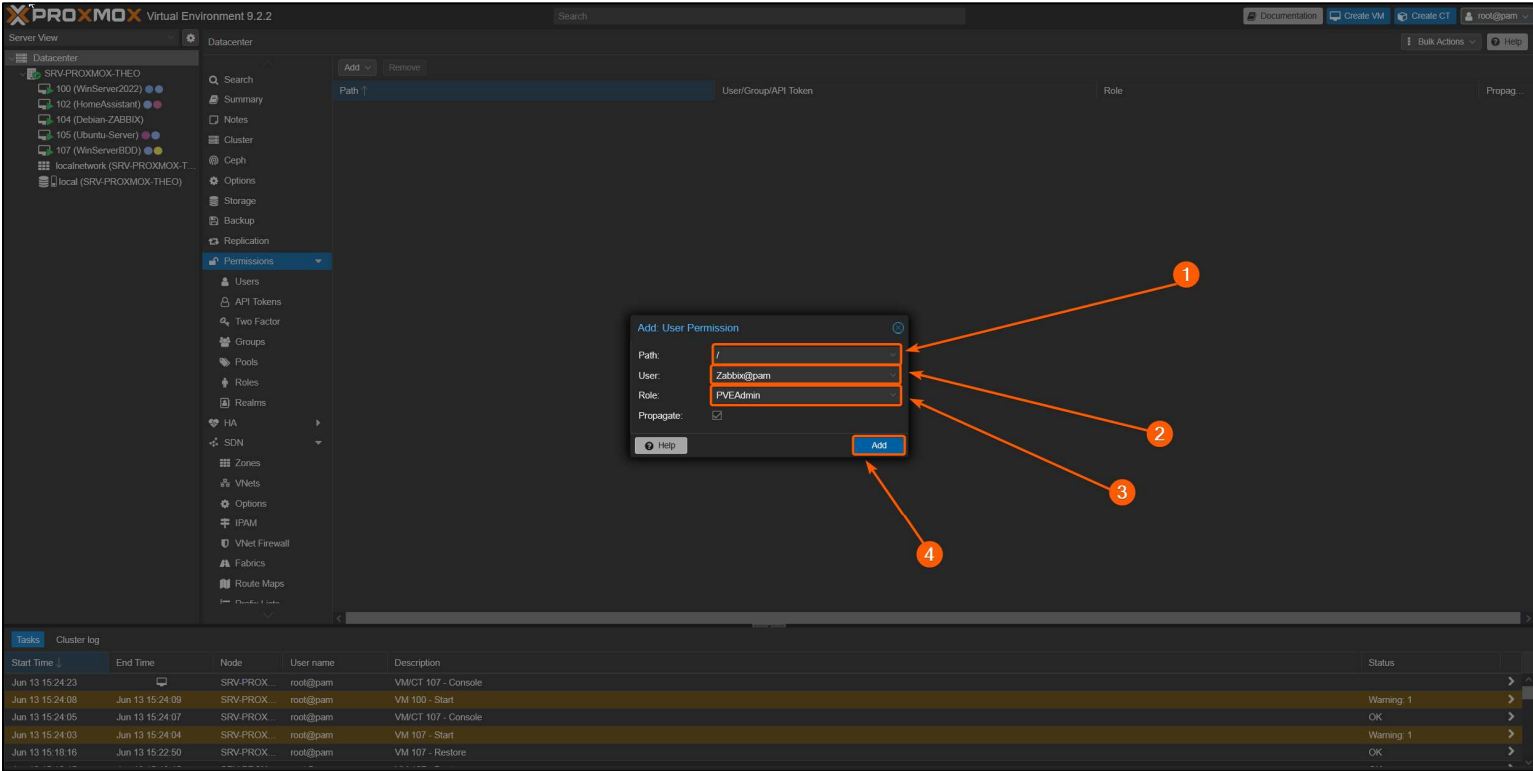
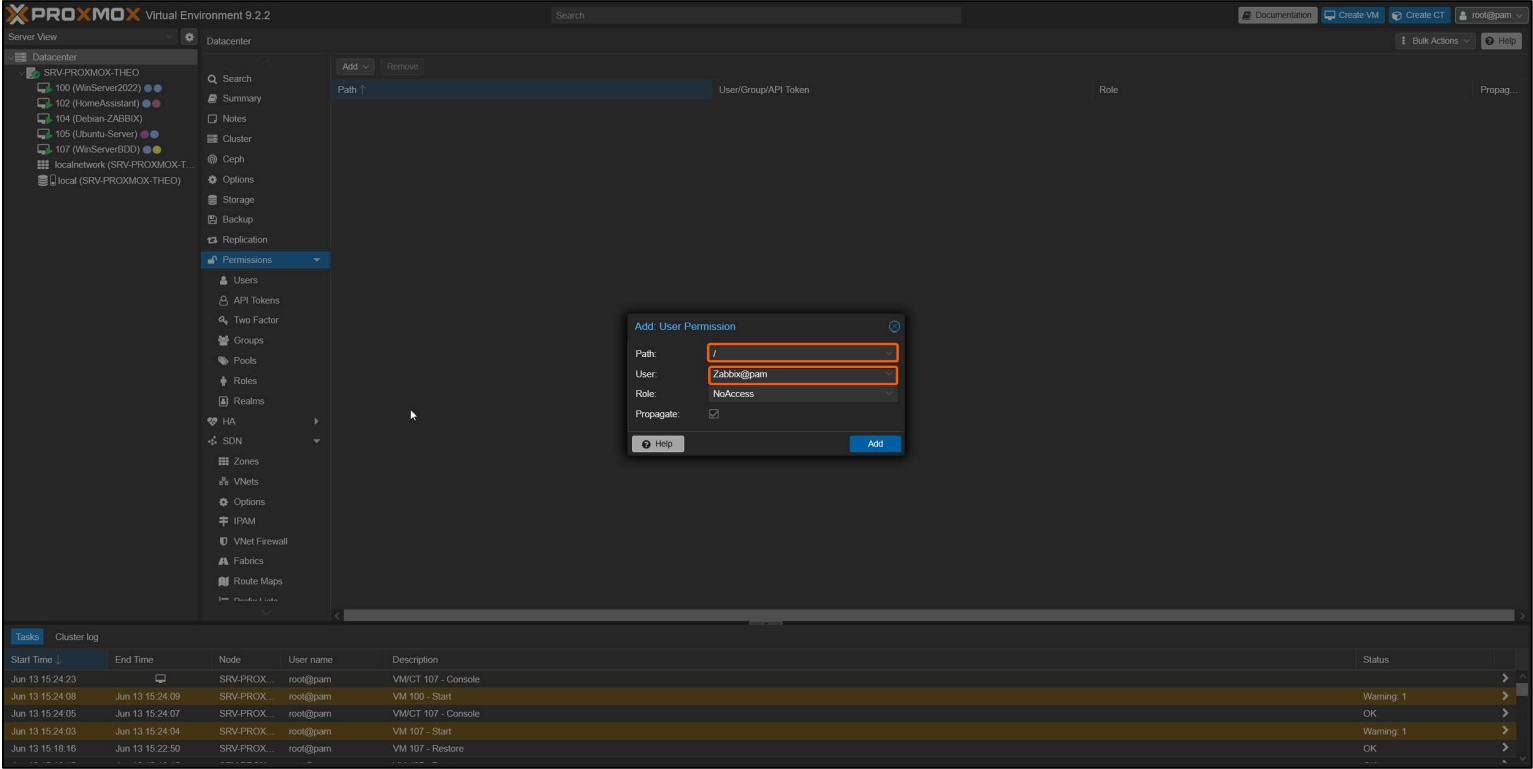
Pour que ZABBIX soit complet on va ajouté le tout nouveau serveur sur la carte du ZABBIX.

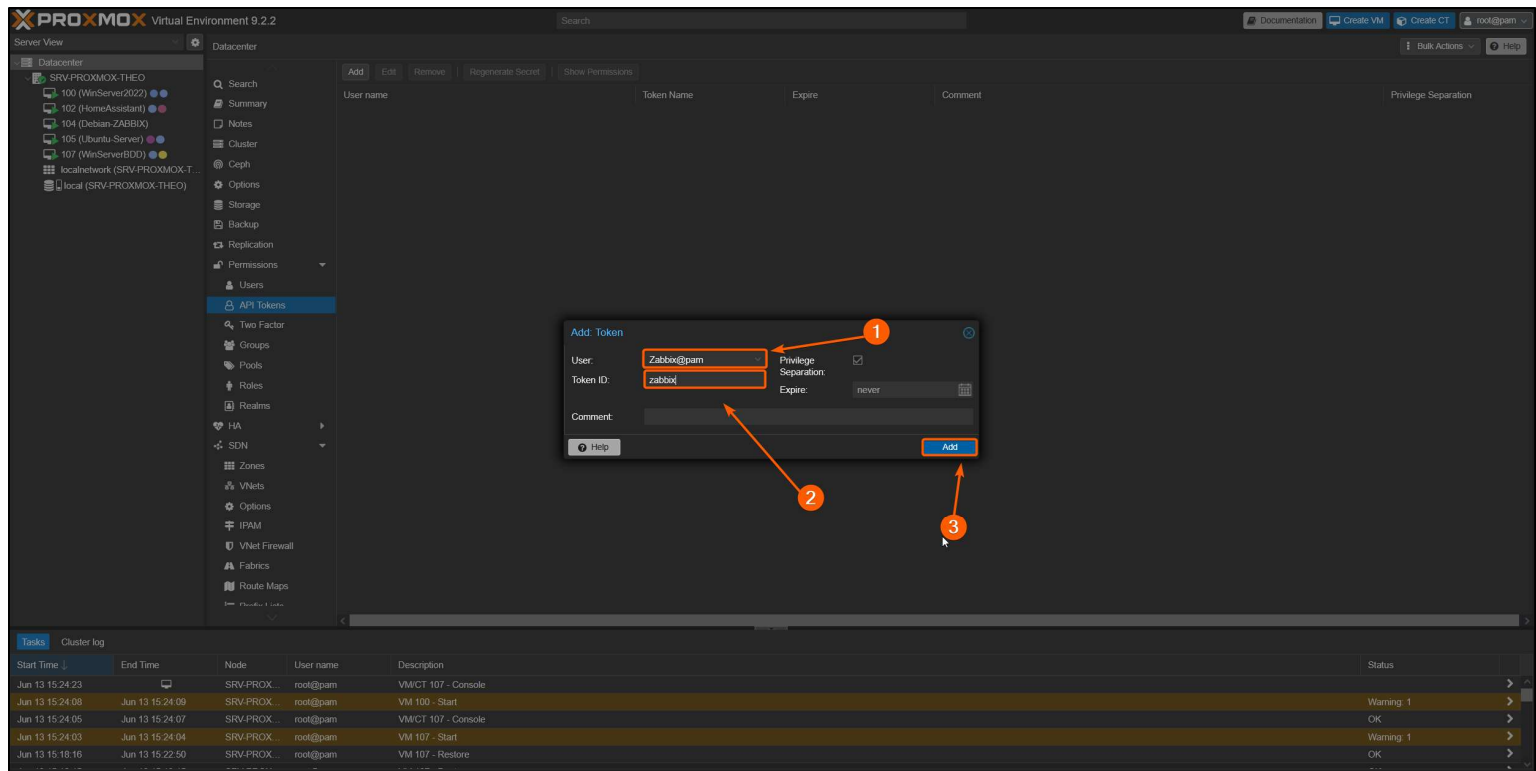
Pour sécuriser la connexion, nous allons créer un jeton API pour un utilisateur dédié avec des droits limités au datacenter.

Nous allons créer un utilisateur dédié en accédant à Datacenter > Permissions > Users > Add.

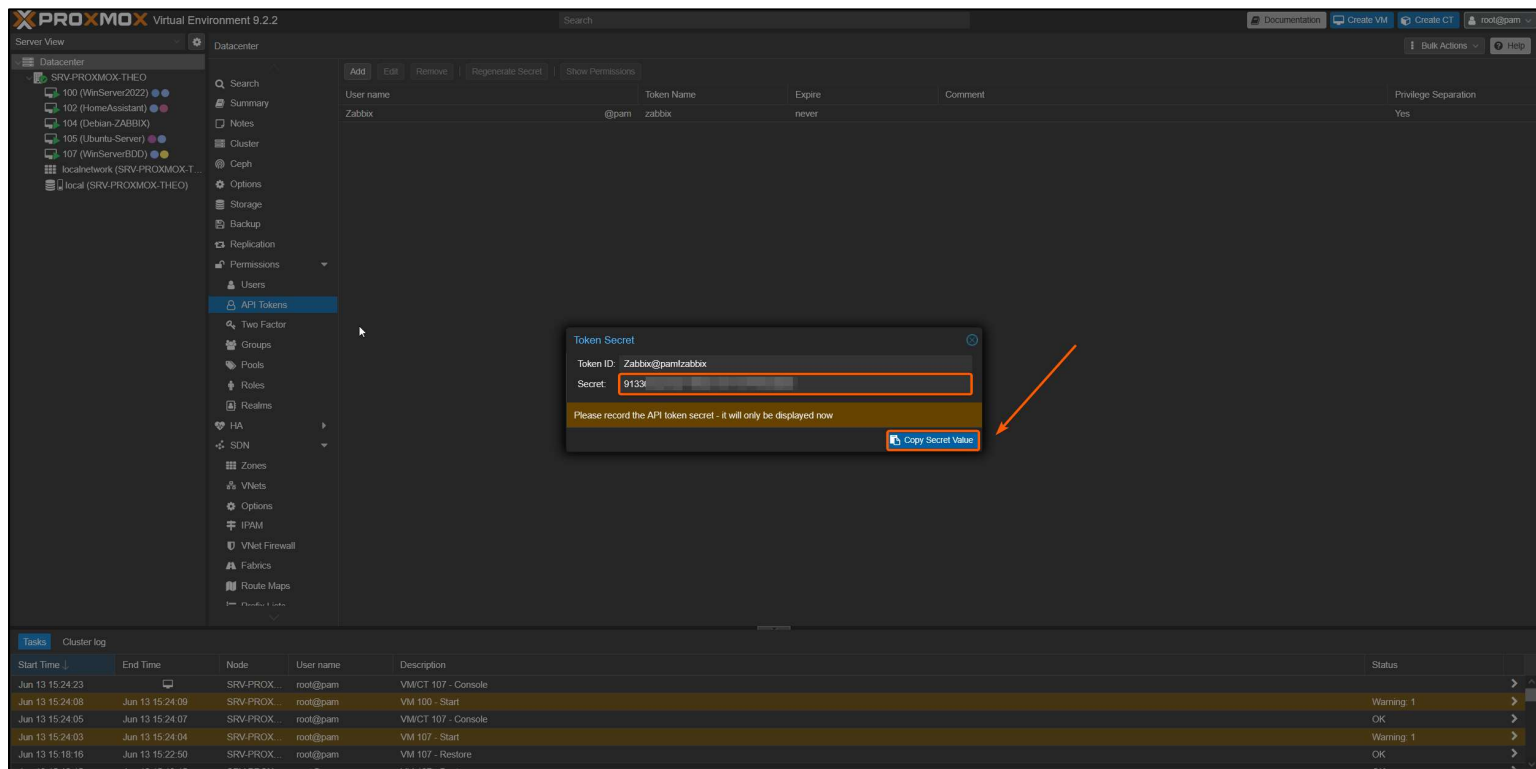


Une fois l'utilisateur créé, cliquez sur Permissions > Add > User Permission.

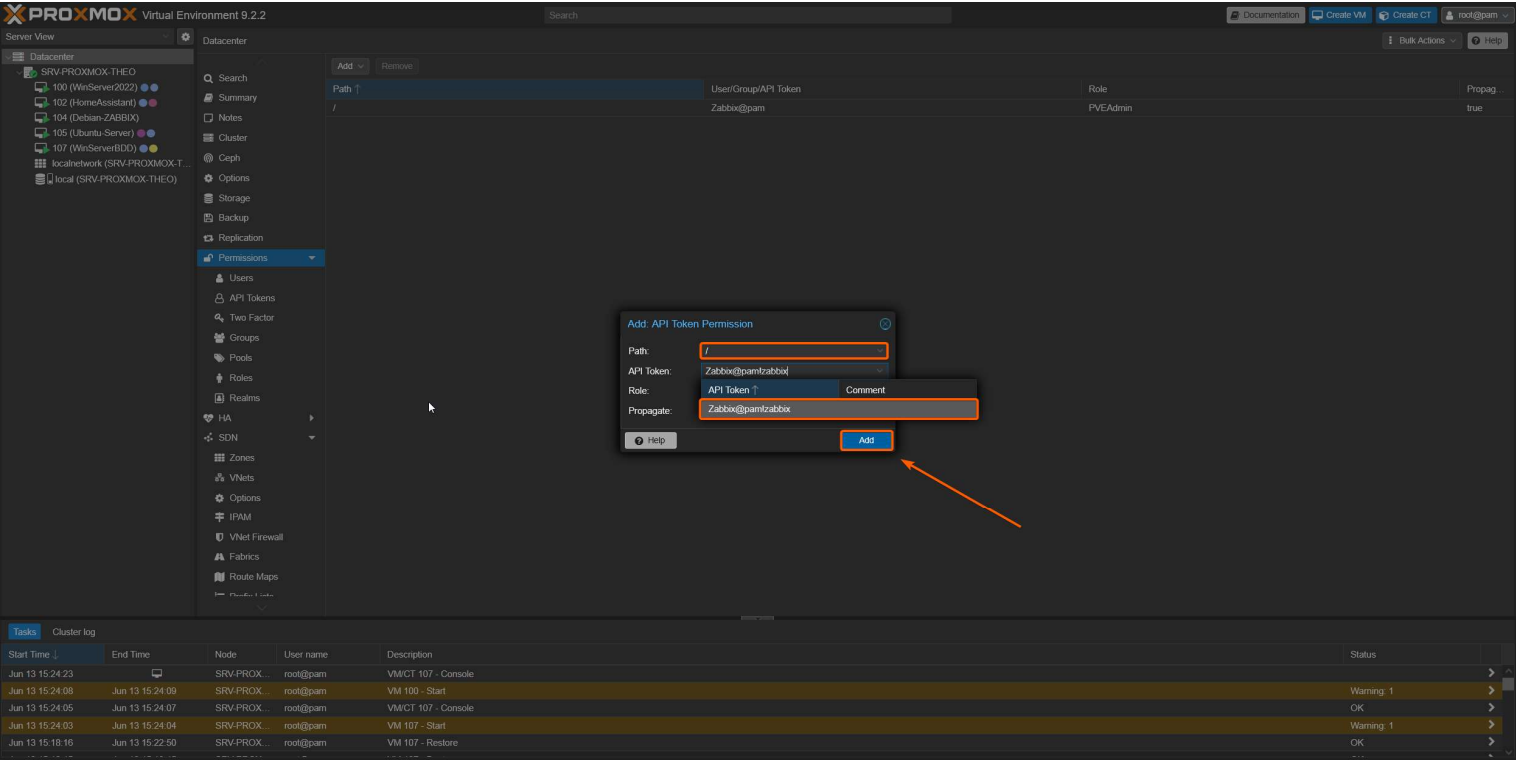




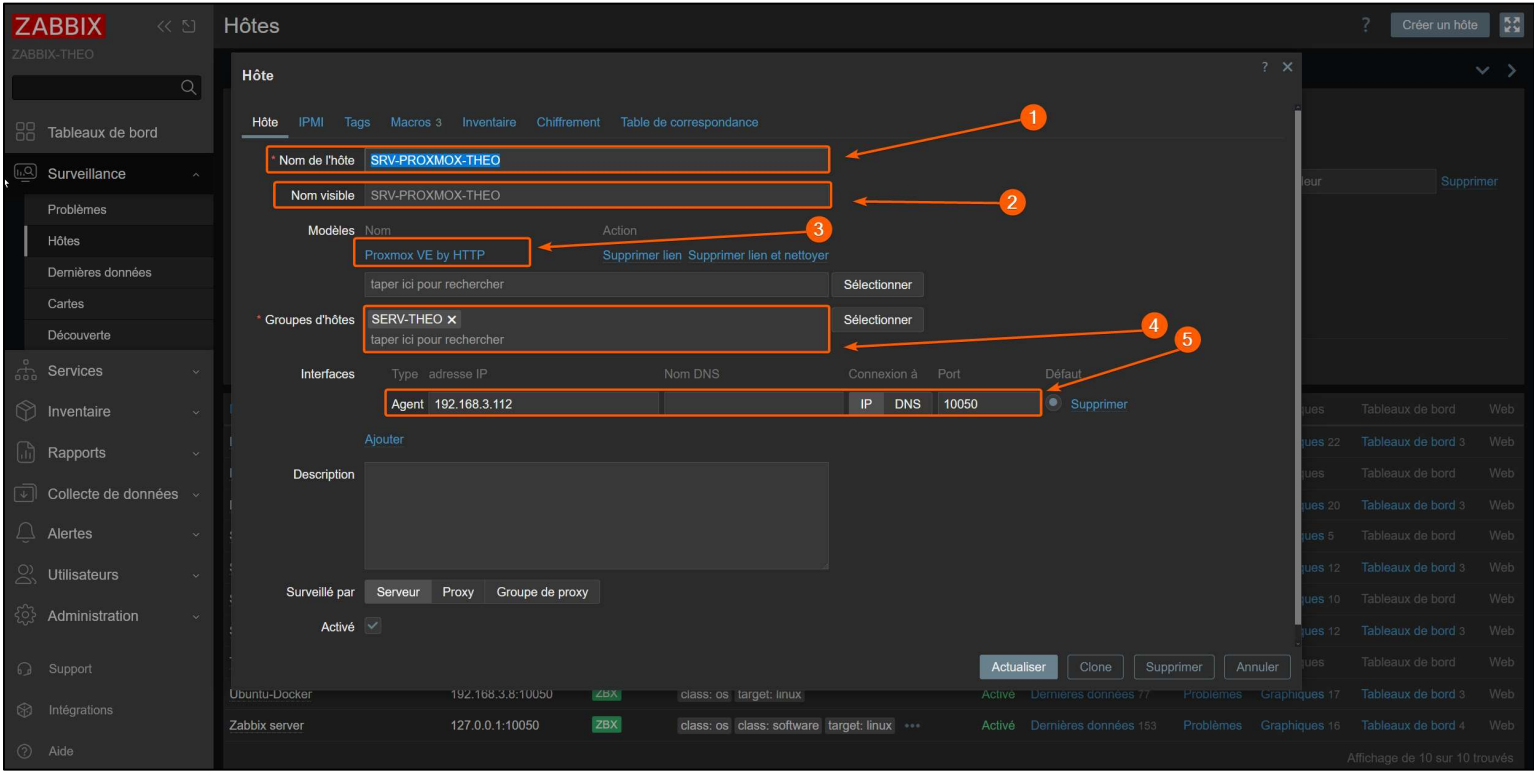
Ensuite, le jeton apparaîtra une seule fois. Récupérez-le et stockez-le dans un endroit sécurisé.

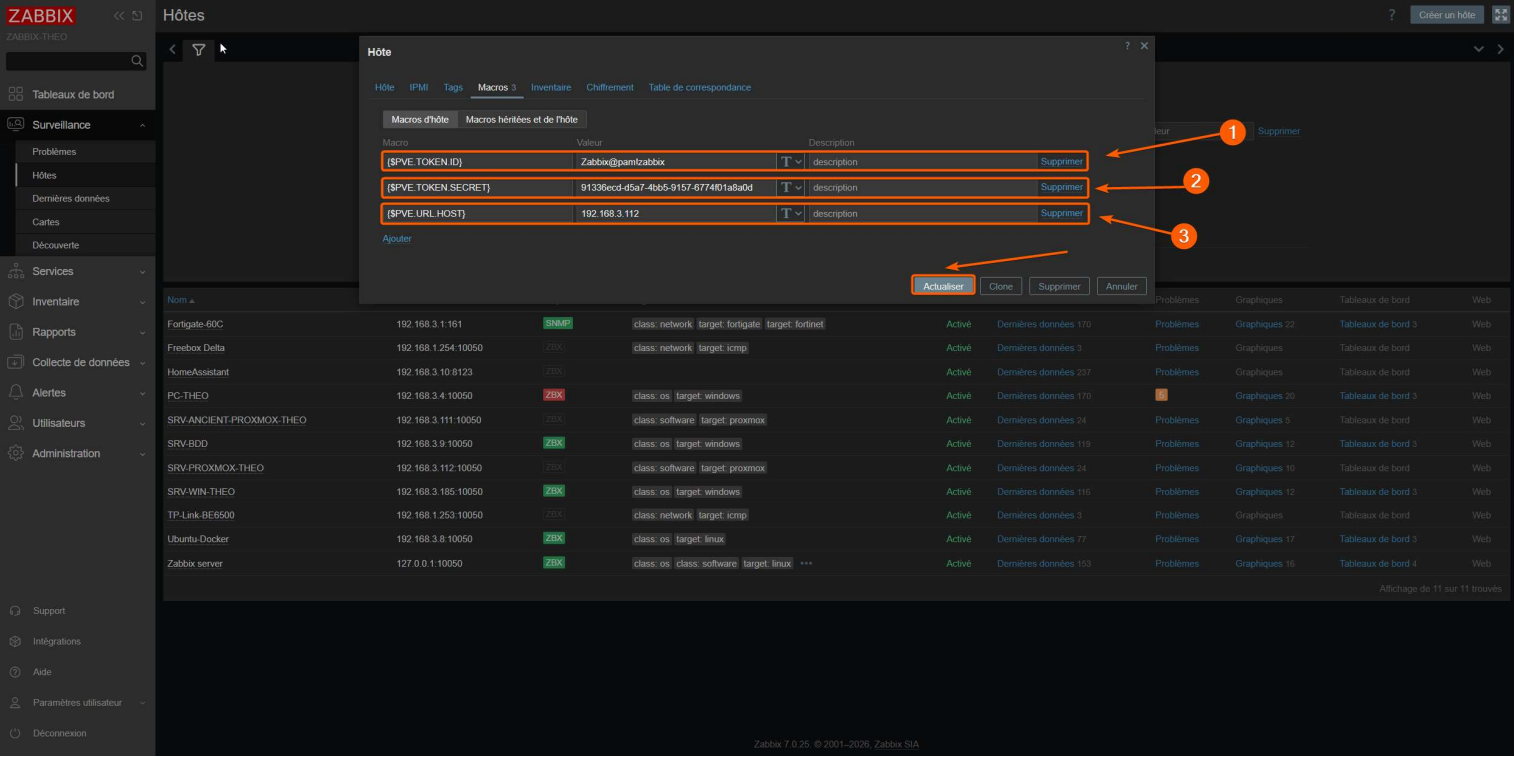


Ajoutez maintenant les autorisations au jeton.



Configuration sur Zabbix





Pour conclure ce projet, le serveur ZABBIX nous indique que toute la partie serveurs et totalement opérationnelle.

