FreeCloud Technical Documentation

Group Members:

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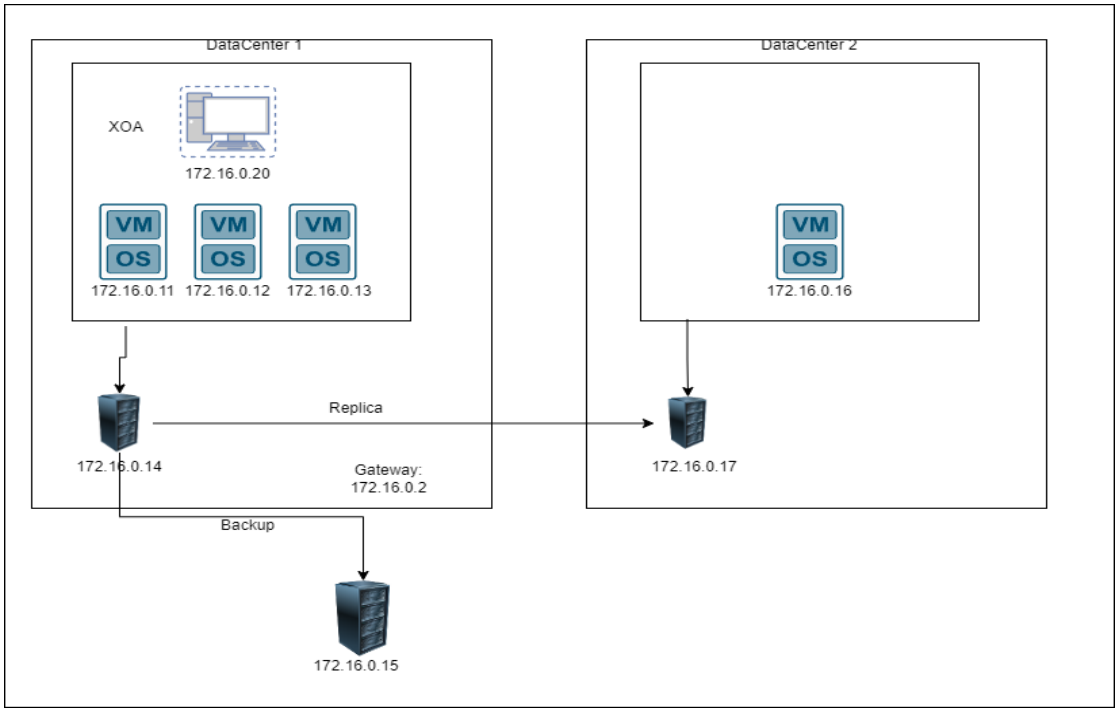
1. Architectural Overview

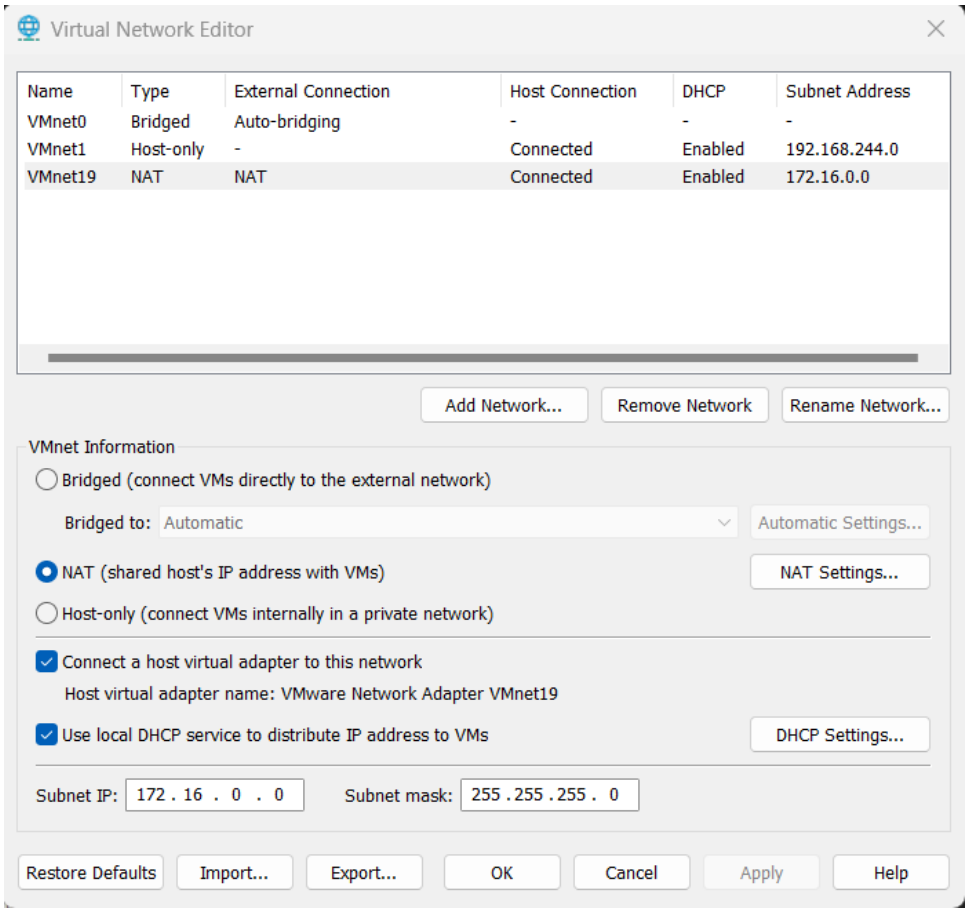


2. Infrastructure

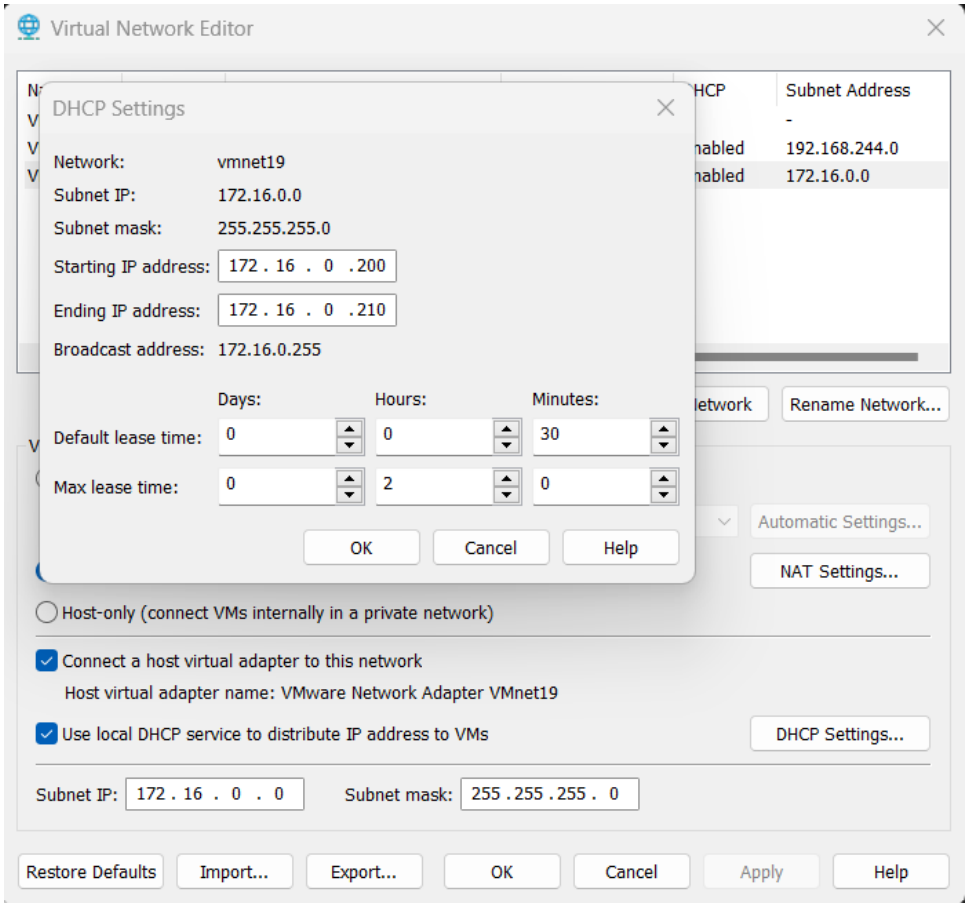
- **Virtualization Cluster:**
  - Configuration of a VMnet network with NAT on VMware for internal networking and Internet access.

First we need to create a network for our virtual machines.

For that open VmWare Workstation Pro and go to edit -> virtual network editor and you should have this window.



I already created my network named ‘VMnet19’. To have the same network as me you’ll just have to replicate my configuration.



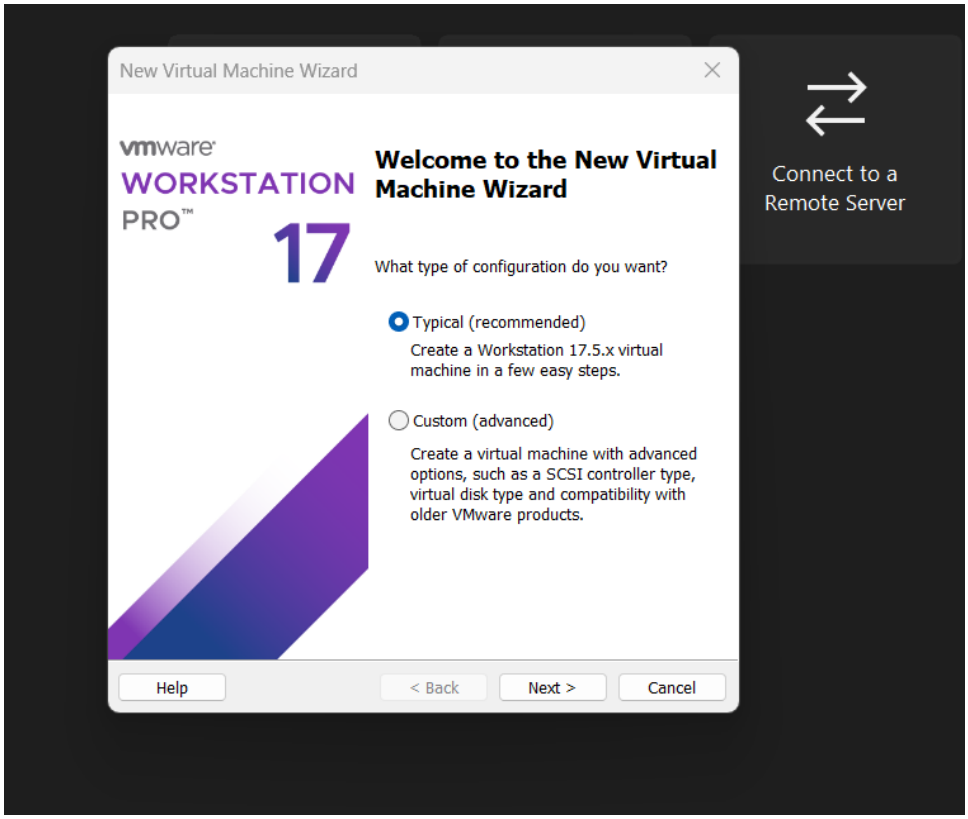
Up here is the content of my DHCP settings.

For all the machines we are going to create below we are going to put them in this network.

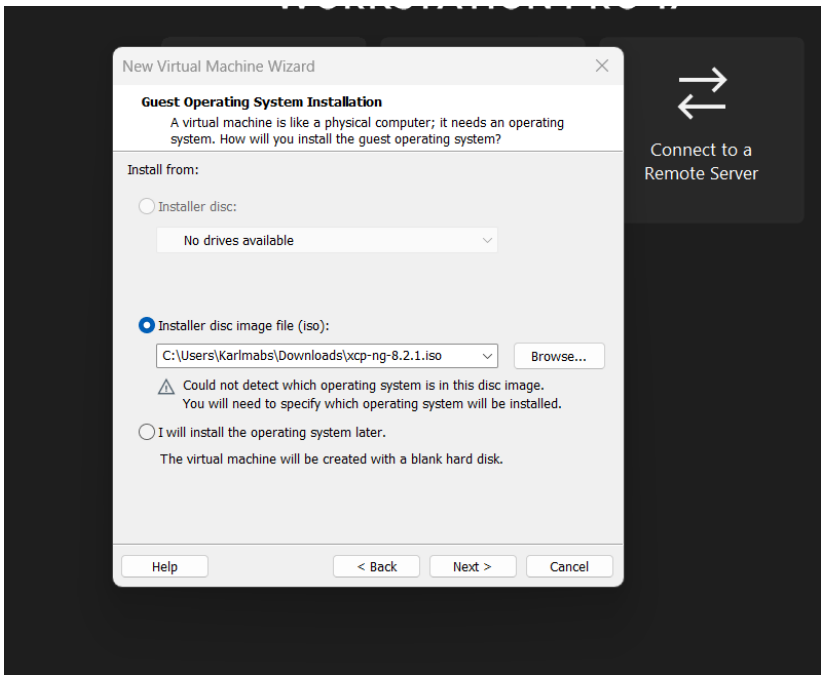
- Creation of 3 VMs on VMware as hosts in vmware.

Next, we need to create the 3 nodes for our cluster. Below we are going to create a virtual machine and install xcp-ng step by step:

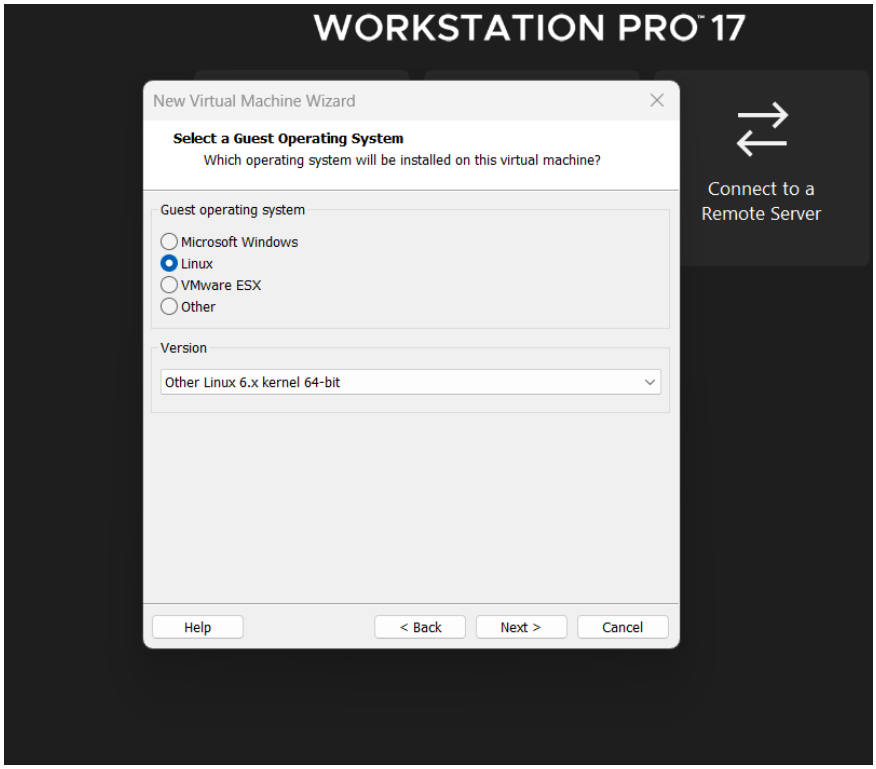
1. In the new virtual machine wizard, choose ‘Typical’



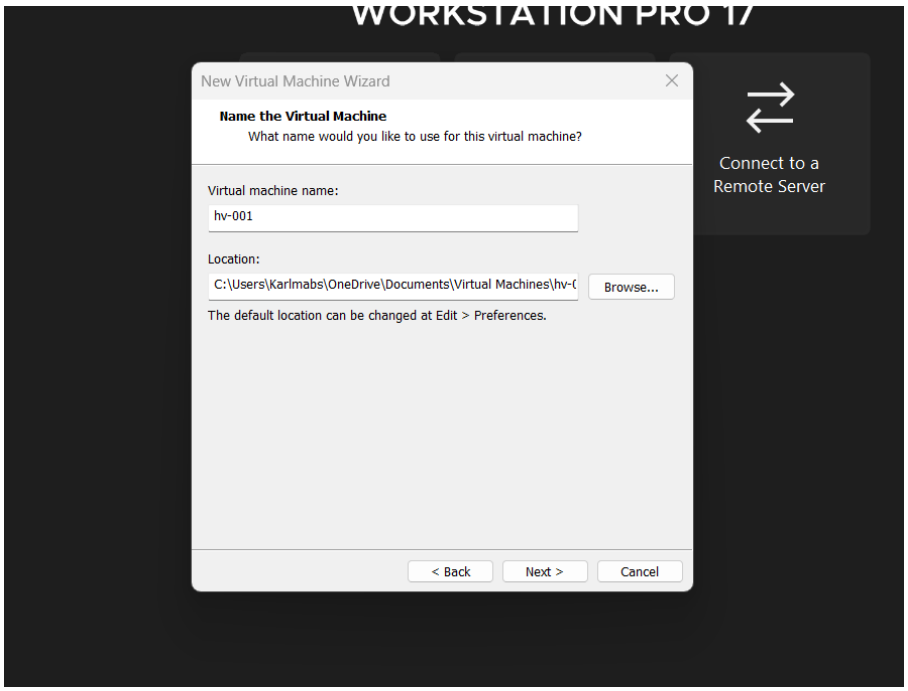
2. Now, choose the disc image to use for the virtual machine, in our case xcp-ng image



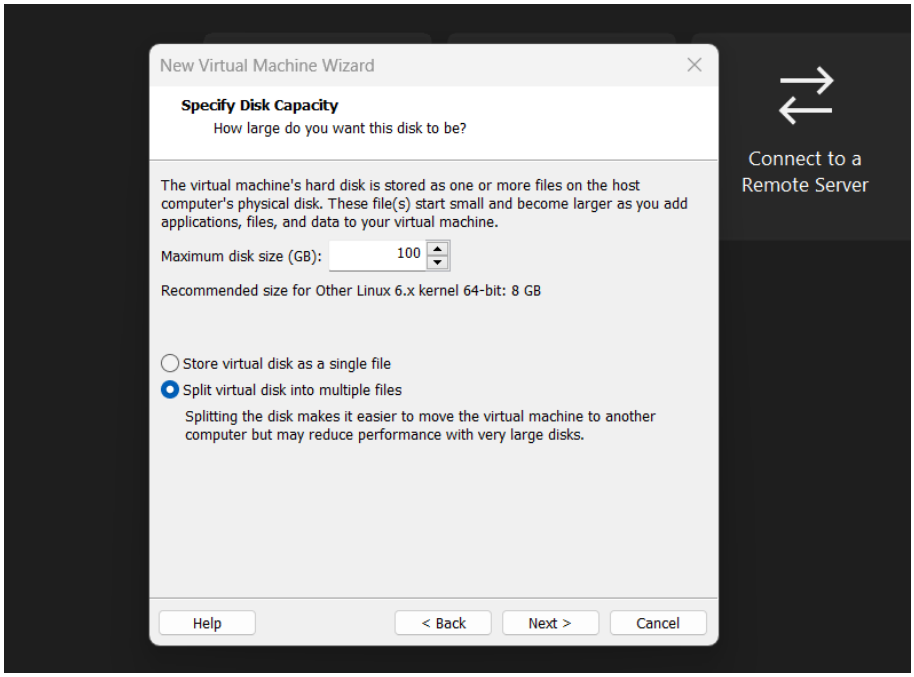
3. Select now the guest operating system as shown below



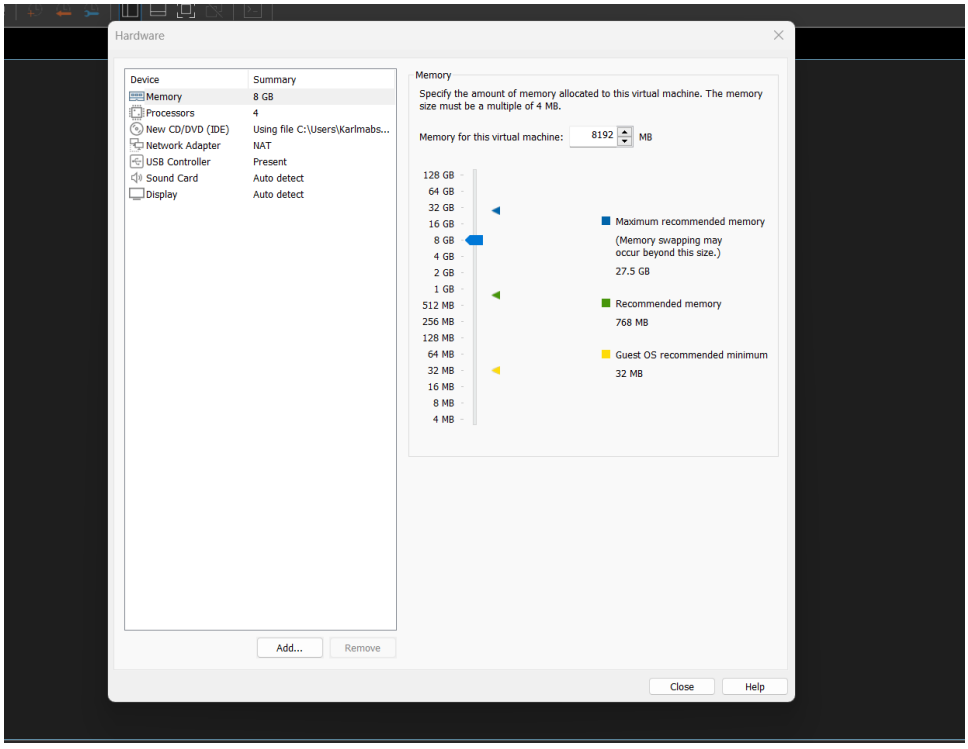
4. Choose the name and location of your vm



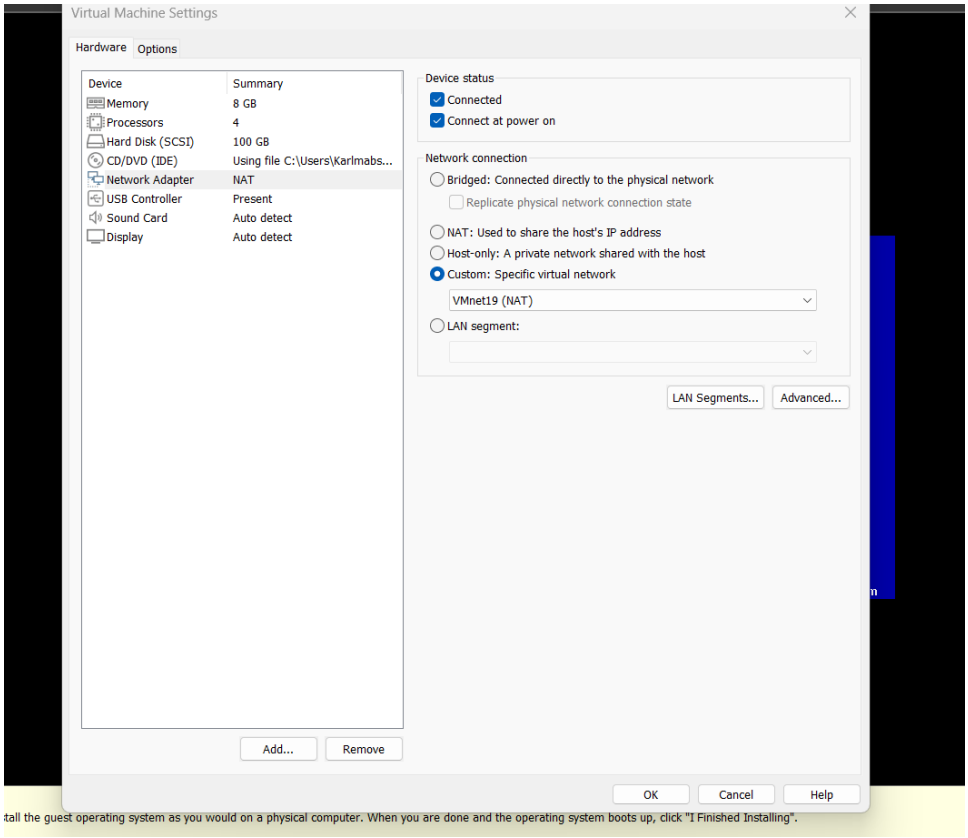
5. Specify your disk capacity in our case I will allow 100GB



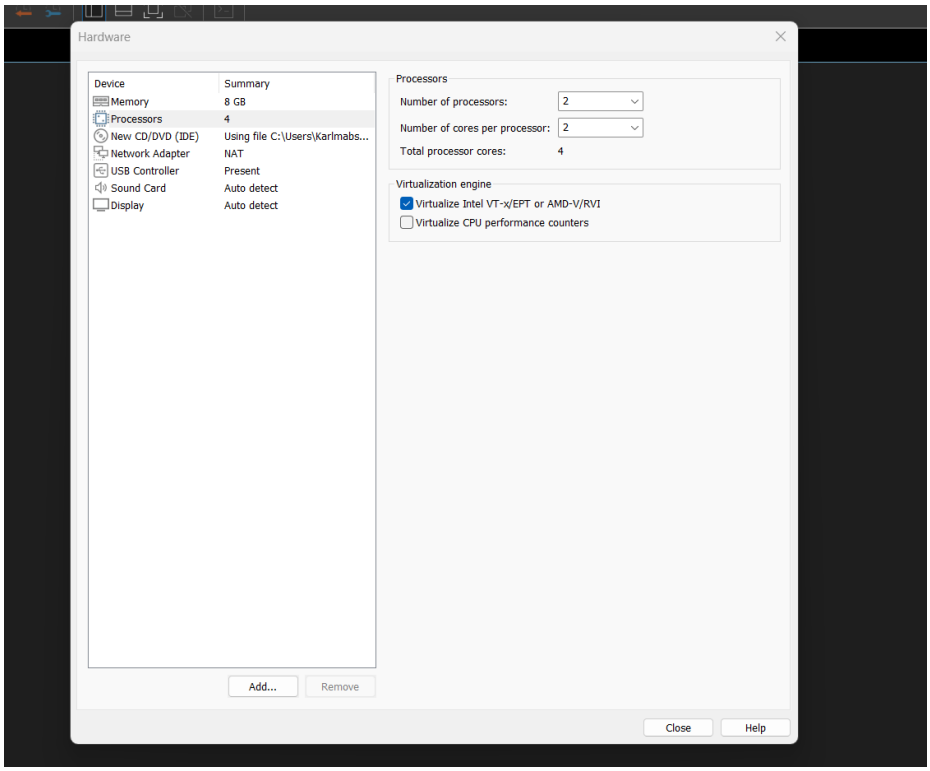
6. Next, we will configure our ram and processor



For this machine we'll go with 8GB of RAM



Here we chose the network we want to put our vm in.



Up here we checked ‘virtualize intel vt-c/EPT or AMD-V/RVI’ to be enable virtualization on our vm.

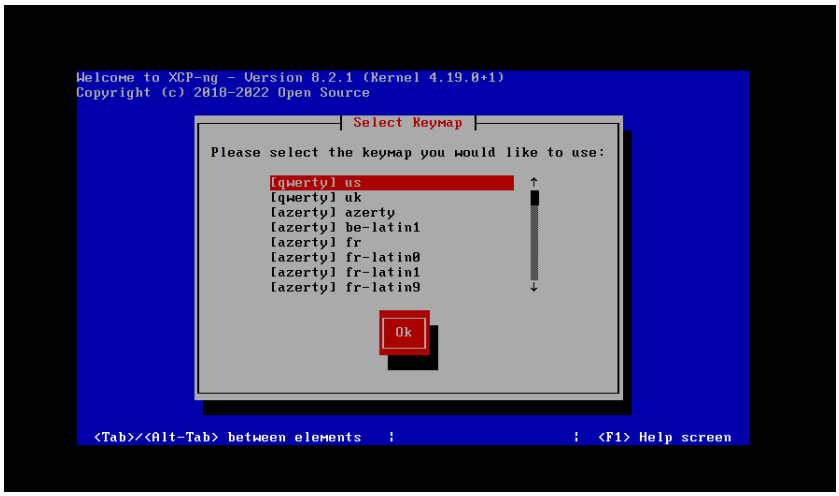
With the settings above our first virtual machine is created. And we should now be able to run it. Do it!!

- Installation of XCPNG.

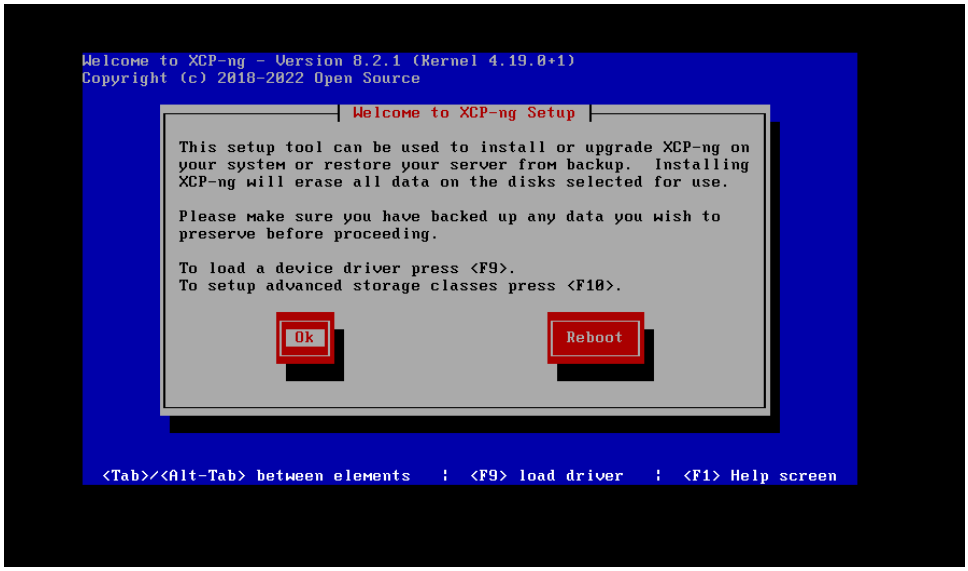
You should have this screen.

Let's continue with the steps for xcp-ng configuration:

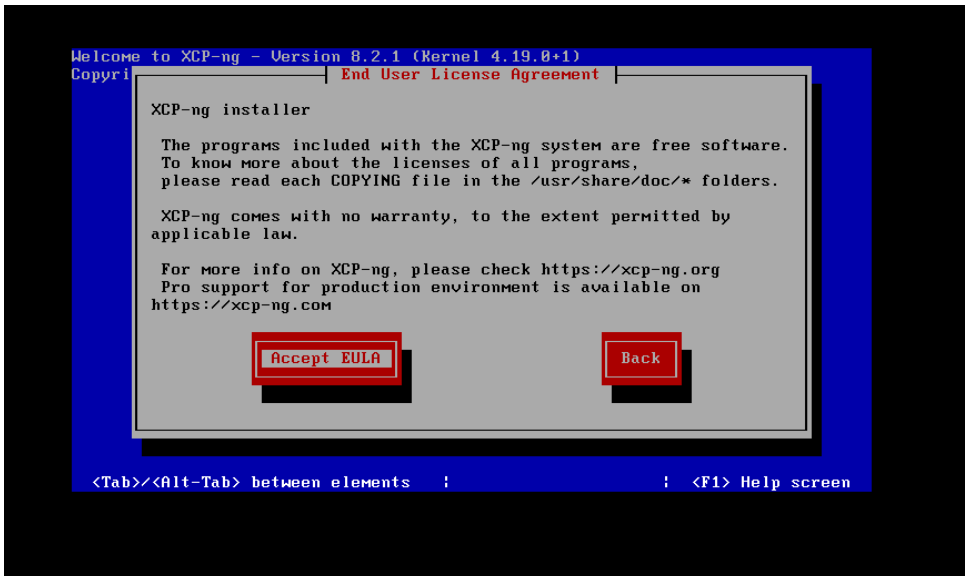
1. Choose your language



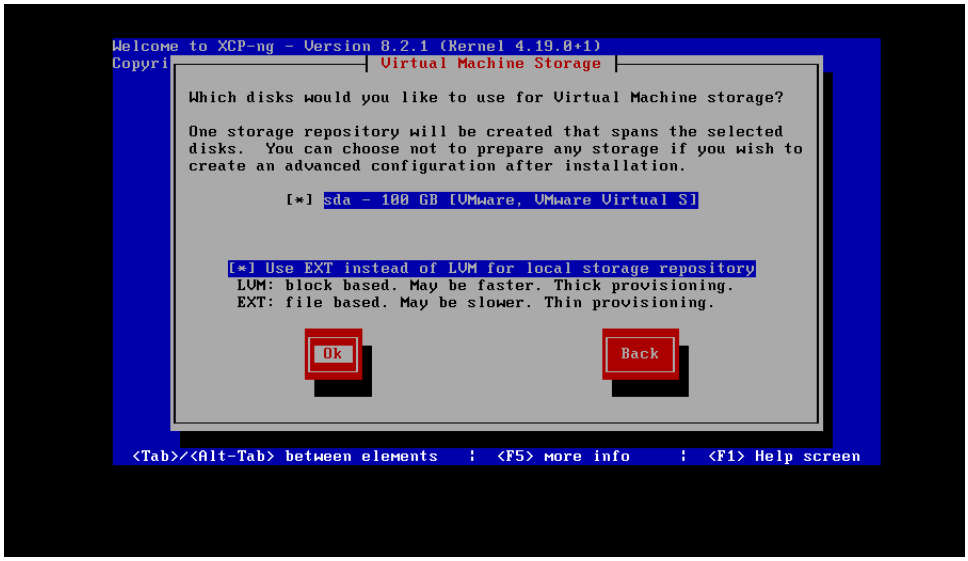
2. Select OK



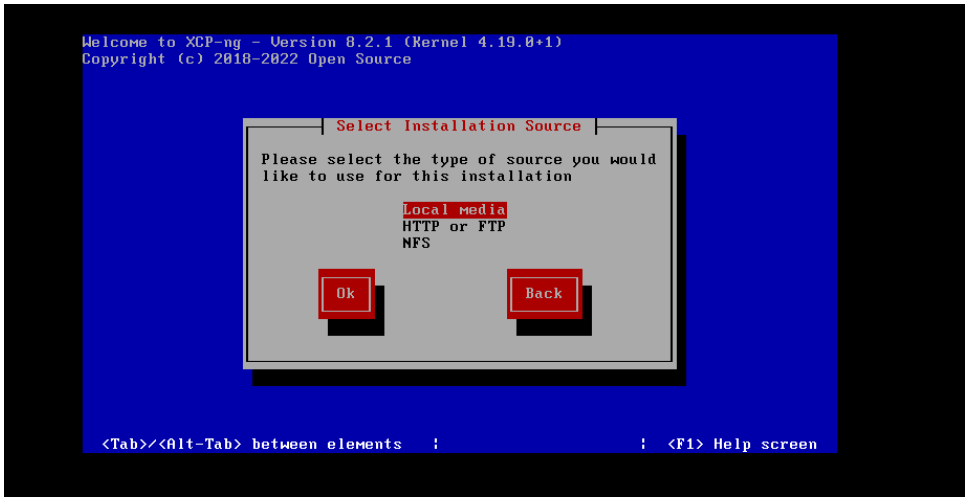
3. Select ‘Accept Eula’



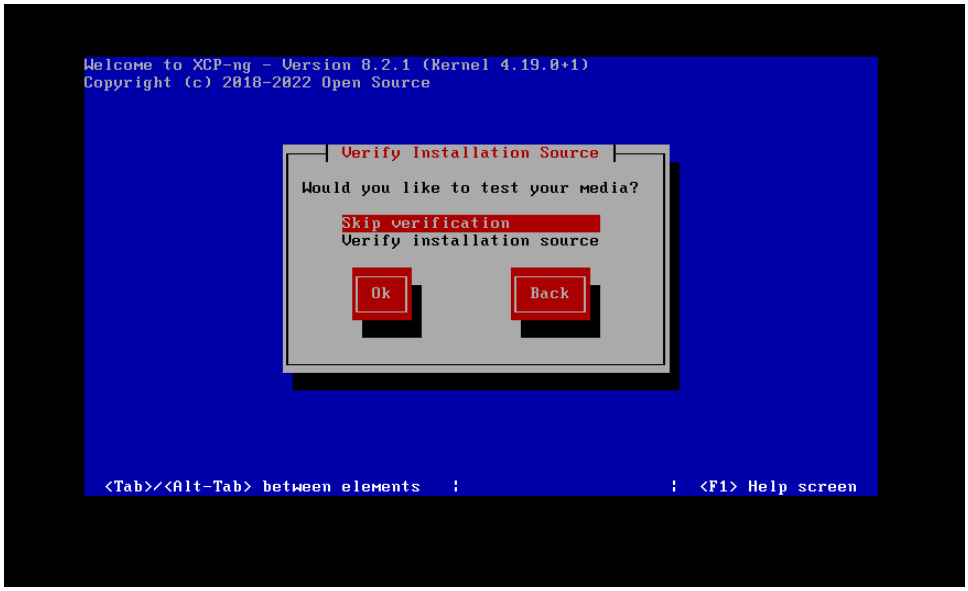
4. Configure as below



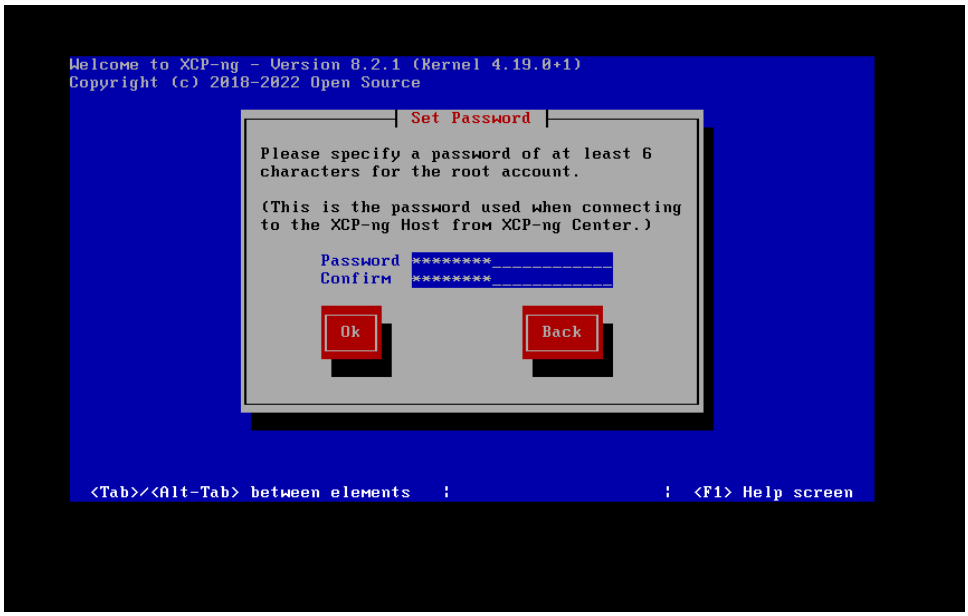
5. Select ‘Local Media’



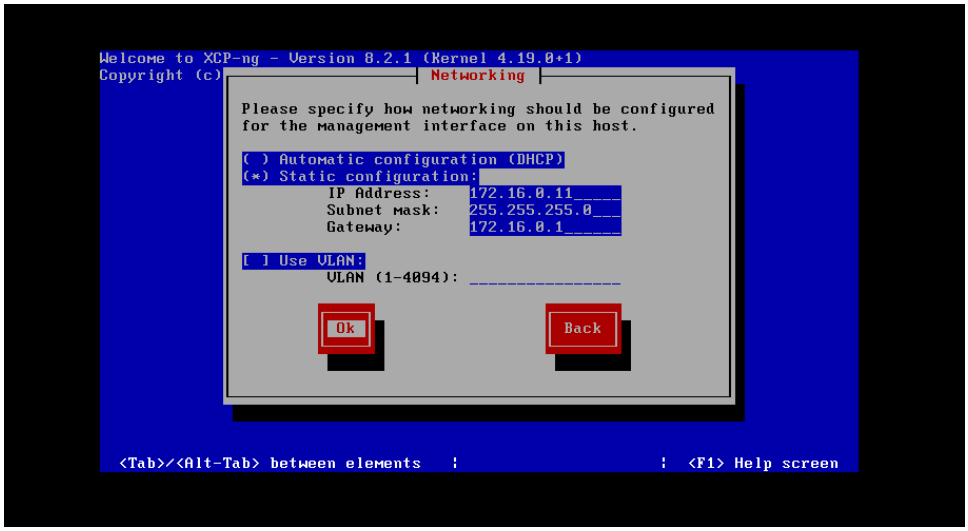
6. Now you can skip the verification



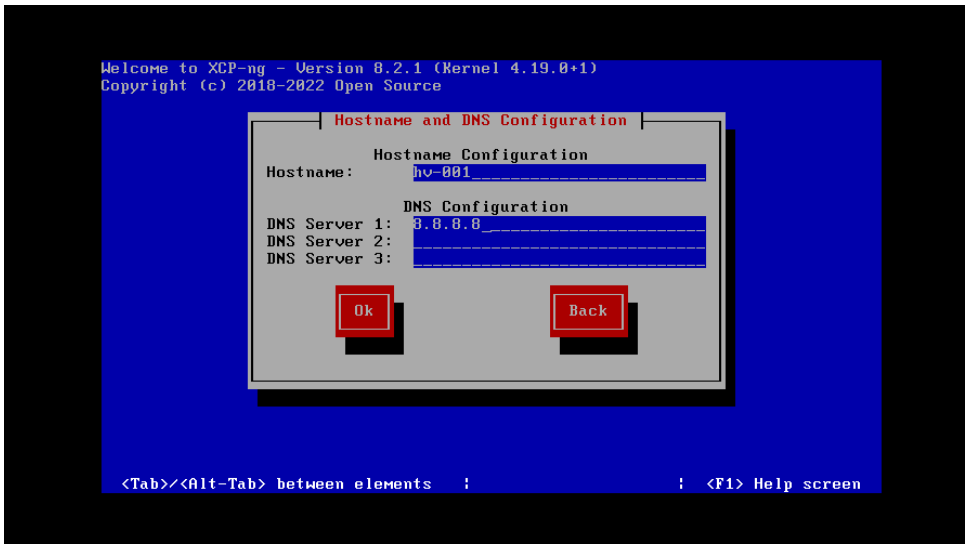
7. Set your password. An easy one like ‘rootroot’ would be easy to remember but don’t use that in production



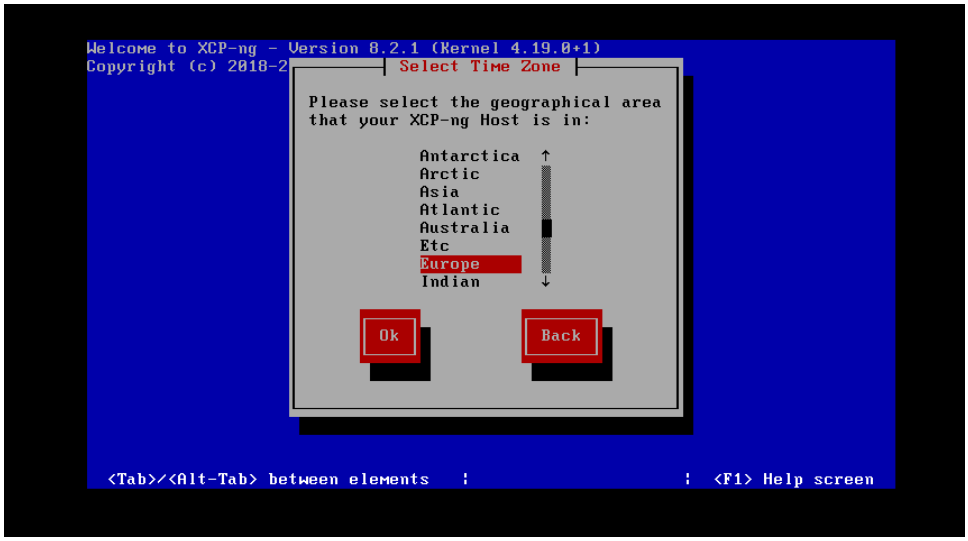
8. Now we’ll configure the network as shown in our diagram

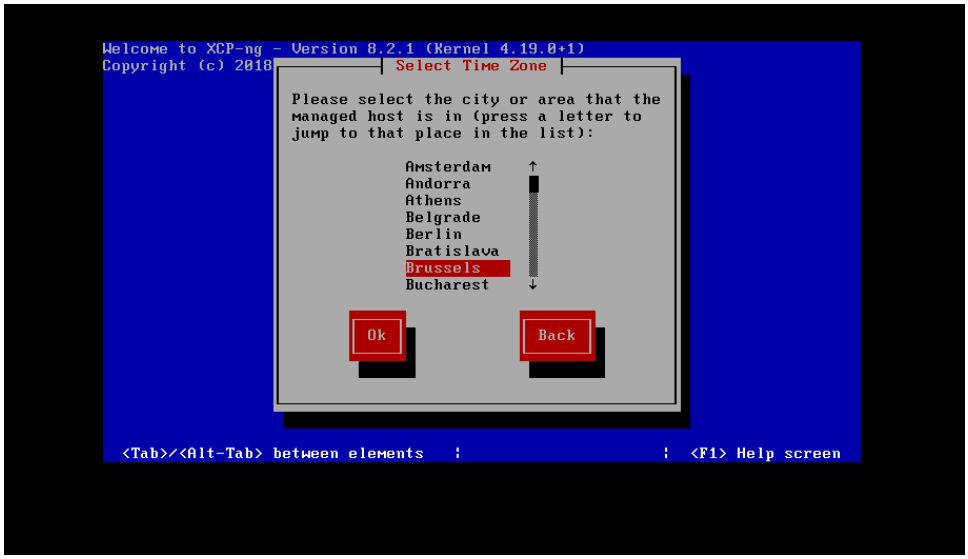


9. Hostname and DNS configuration

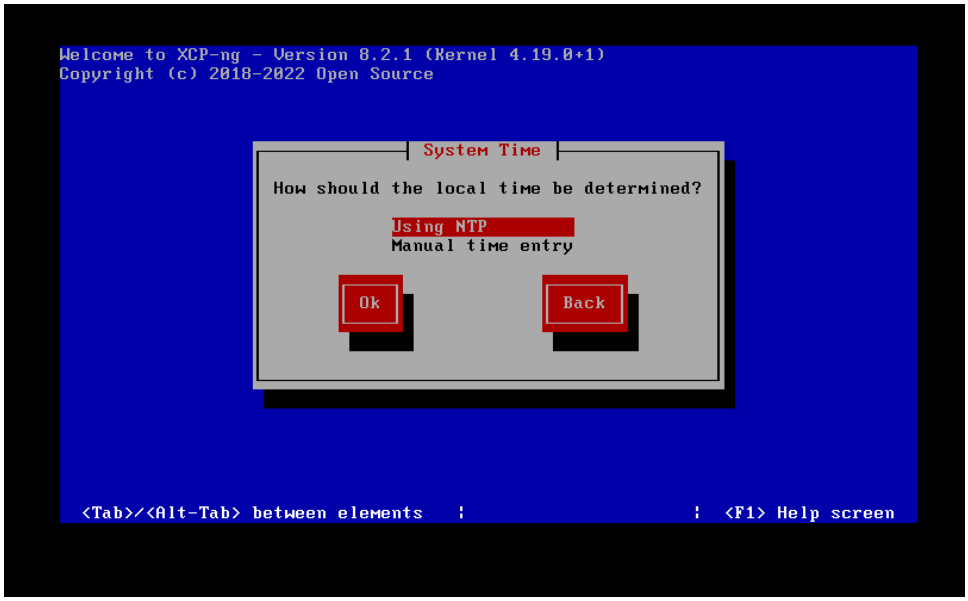


10. Select now your time zone

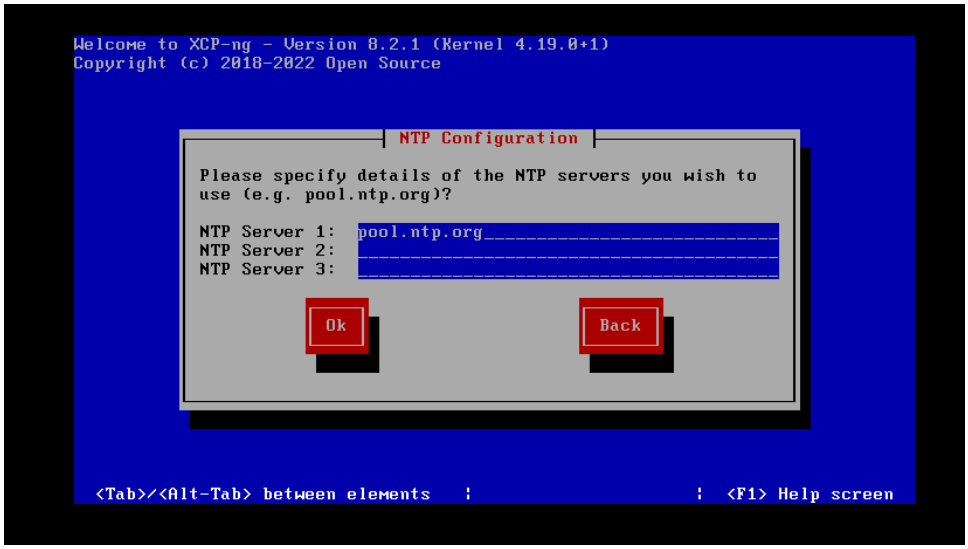




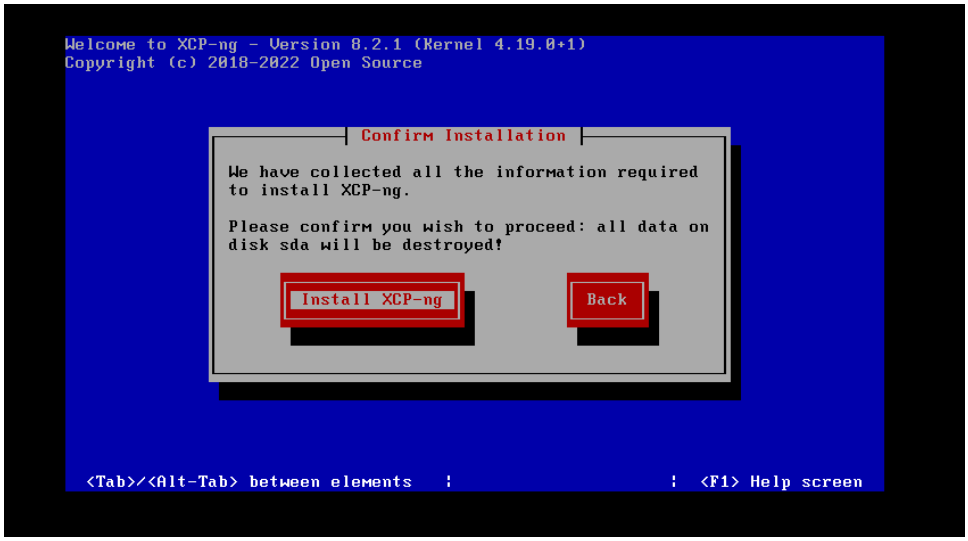
11. Choose now your system time

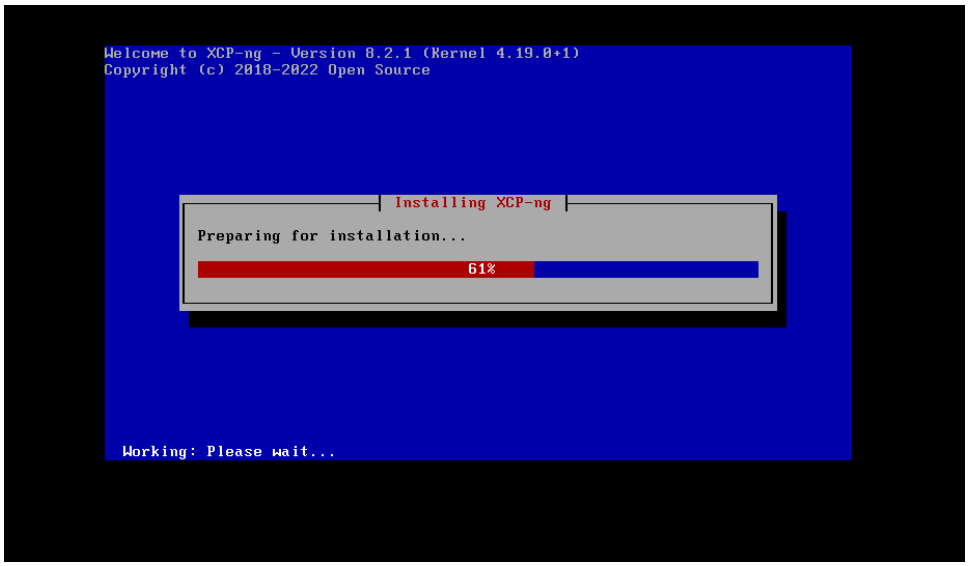


12. NTP configuration

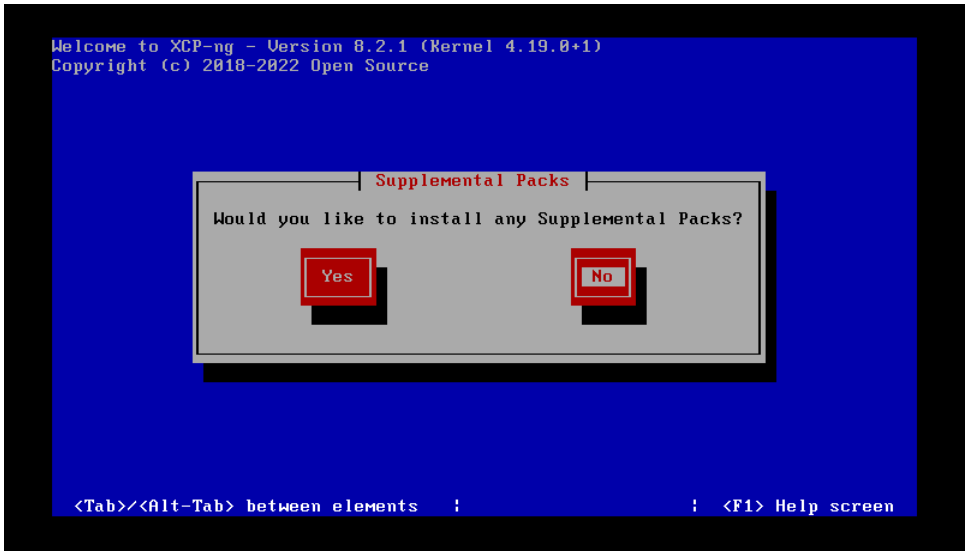


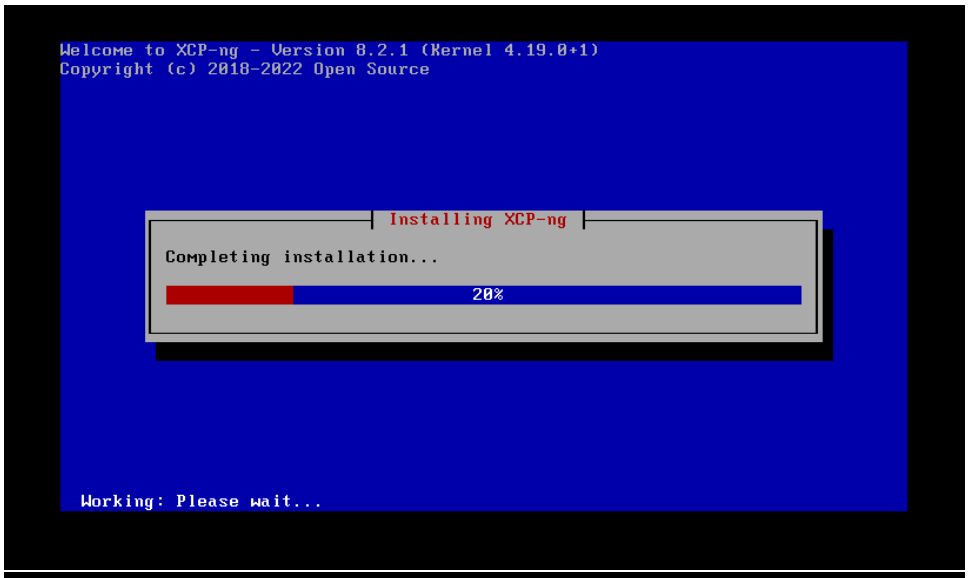
13. Now select ‘install XCP-ng'

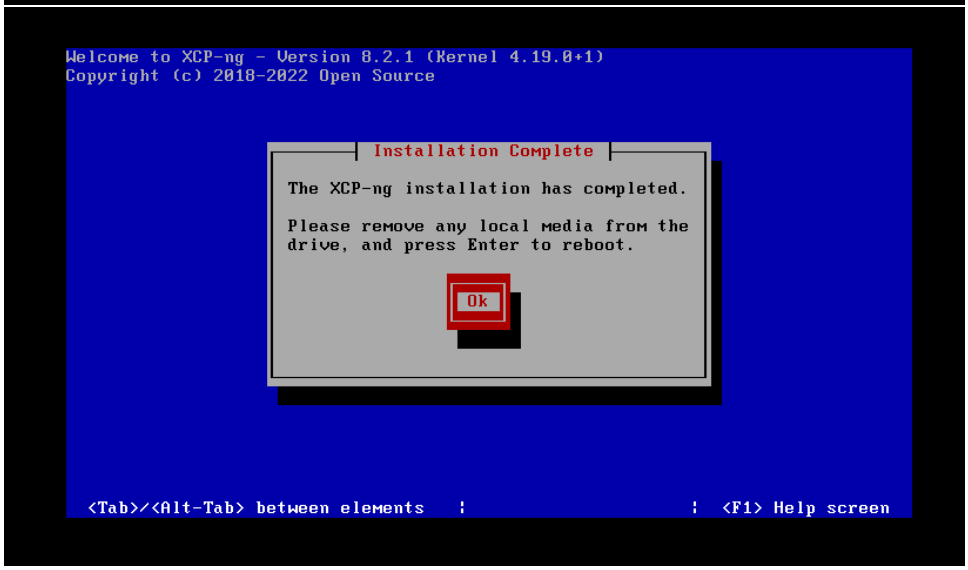




14. Don’t install additional packages as it is not useful for us







Our XCP-ng installation is now done!!

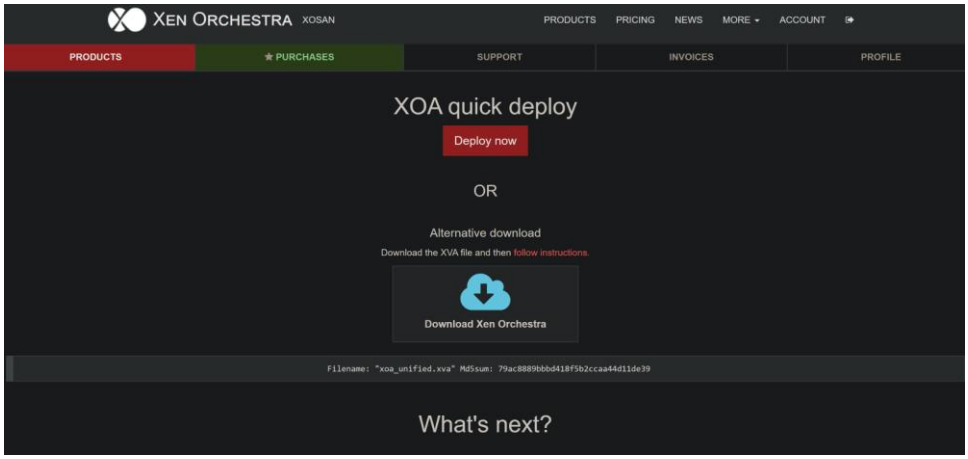
You should now see this page

For the installation of the other hosts needed in this project you will just have to follow the above instructions for their setup. The only changes we'll be at the level of the network, you'll configure as shown in the diagram.

Once you have your 3 hosts up and running, you can proceed now to the deployment of Xen Orchestra. The steps are shown below:

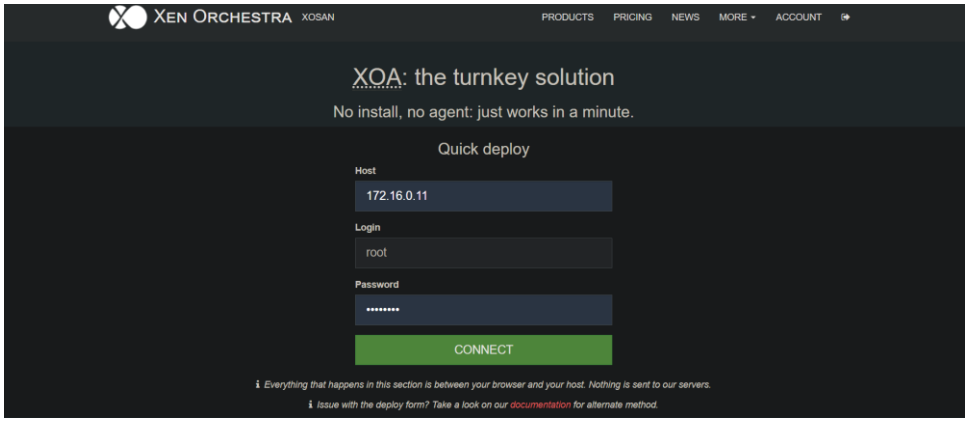
- Deployment of Xen Orchestra in one of my hosts.

1. Login to your Xen Orchestra account
2. You should have this page



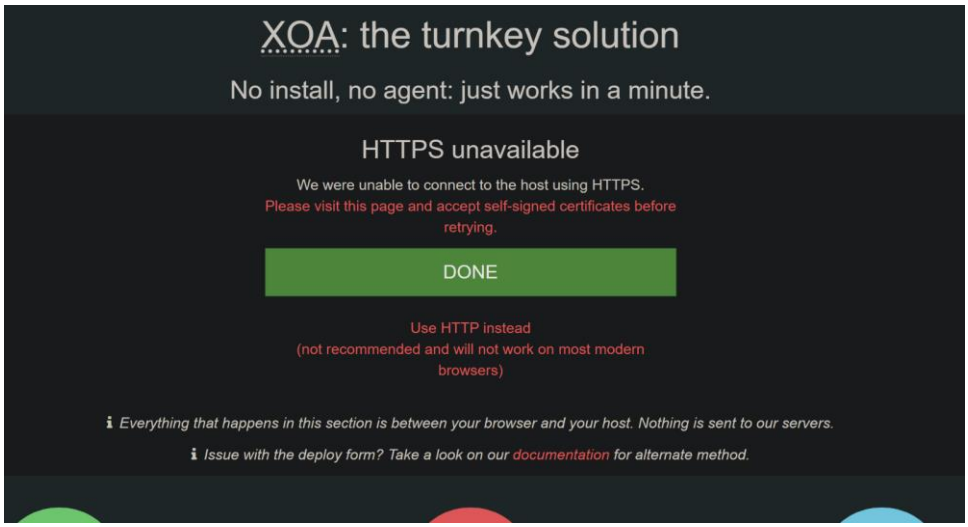
Click on deploy now

3. Now you must type in the ip address of the host on which you want to install Xen Orchestra and its password

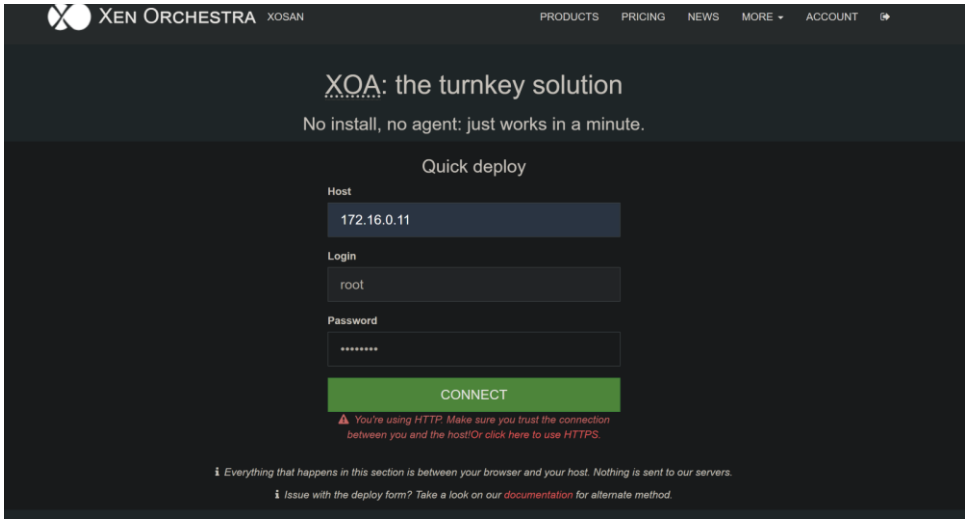


After that you click on connect.

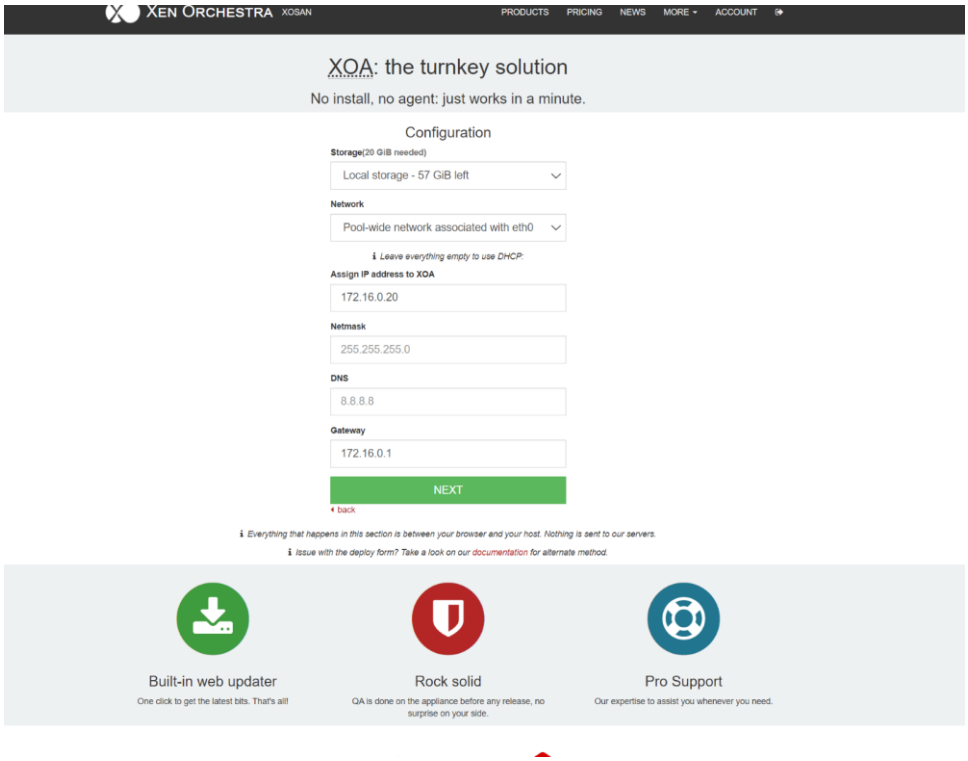
4. On the following page click on the first link in red to accept self-signed certificates



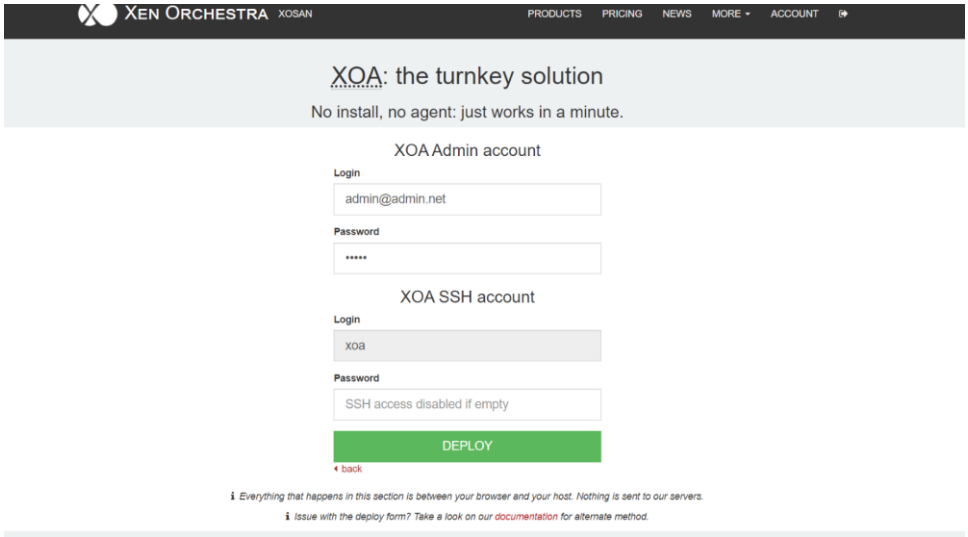
5. Now you should be able to connect on our previous page



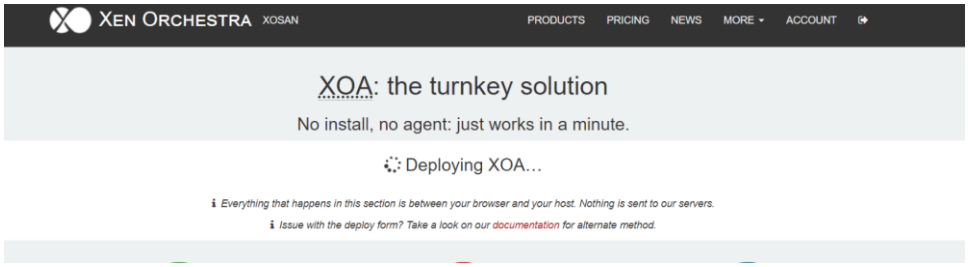
6. In the next page, you will be asked to configure the network for your Xen Orchestra vm. I will use the one specified in the diagram



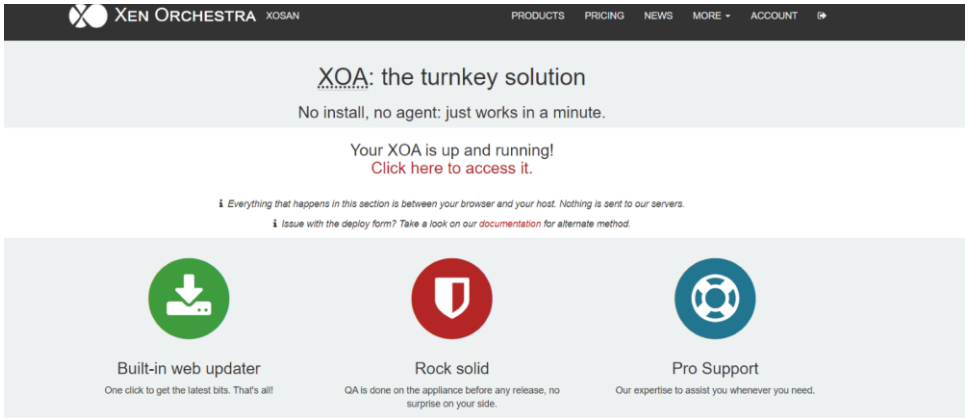
7. On the next page you will be asked to configure your admin account and ssh account. I will just go with the default settings.



8. Now all you need to do is to wait a bit.



9. If you see the following, then your installation is done.



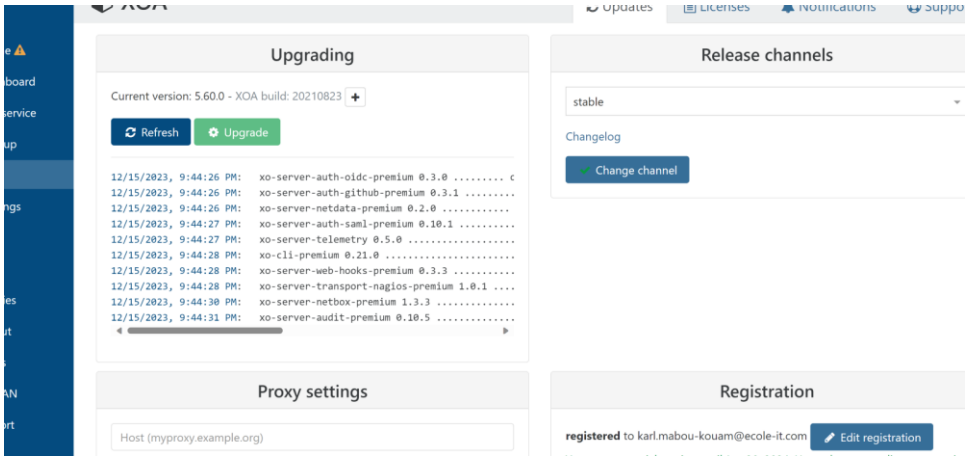
You should now be able to access the Xen Orchestra machine by entering its ip address on the search bar

To login, use the admin account you configured for Xen orchestra. If you let the default settings it should be:

Login: admin@admin.net

Password: admin

Before we proceed it is essential to make updates and have a xen orchestra license for you to follow the rest.

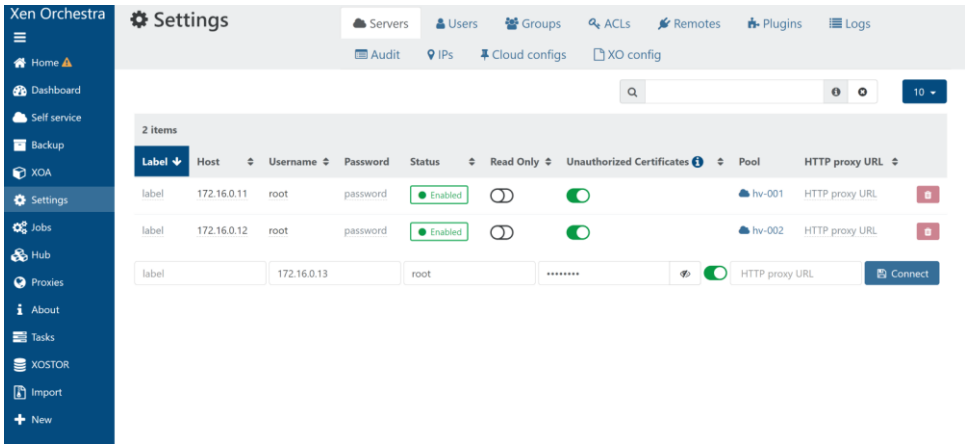


To do the updates head over to XOA in the sidebar in xen orchestra appliance.

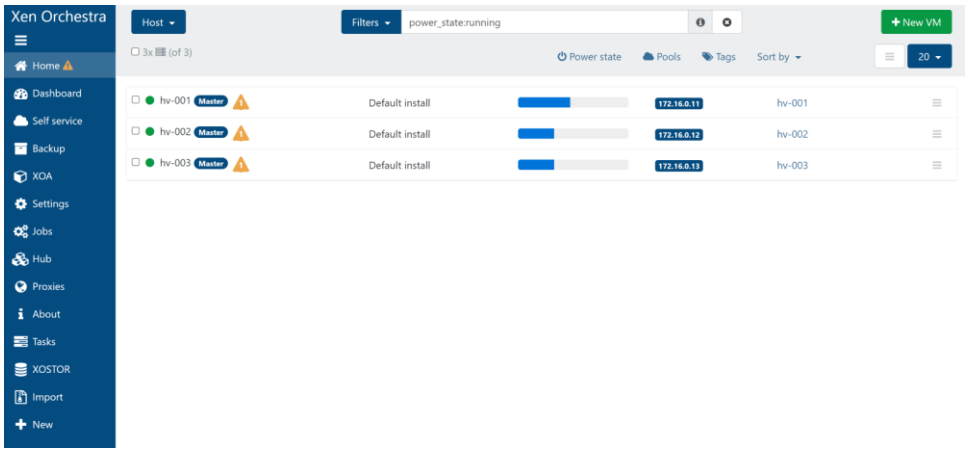
- Servers' registration

We need to register our hosts in the XOA (Xen Orchestra) appliance for them to be visible. We'll do it for the remaining 2 hosts since the host which has XOA installed on is registered by default.

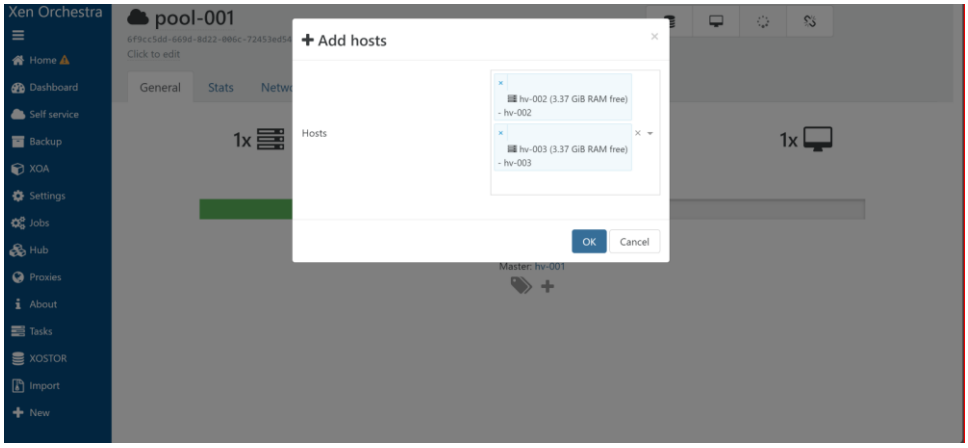
To do that go in Settings -> Servers, there below the server already registered, enter the ip and credentials of the host you want to add and press on 'Connect'.

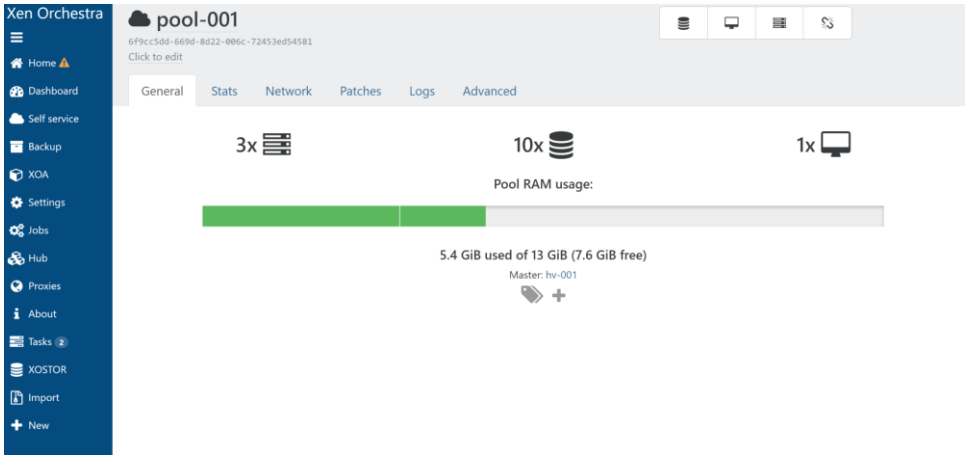


When registered you should be able to see them amongst the hosts in Home -> hosts.



Now we need to put all our hosts in the same pool. For that we'll go to Home -> Pools. There you will see 3 hosts, one for each host by default we are to select one edit its name and then add the other hosts to it.





As you can see after that you'll see that our pool has now 3 hosts in it.

- **Redundancy**:

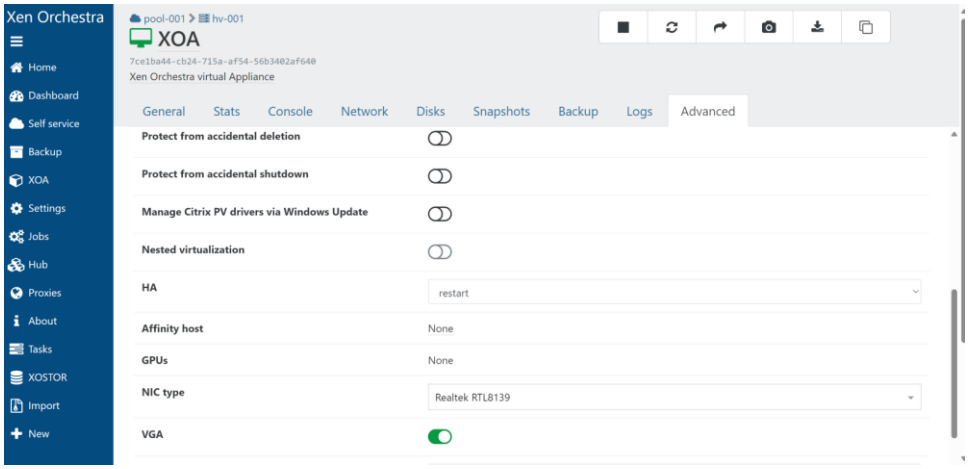
Redundancy is there to help us have our virtual machines always available if there is at least one host available and healthy.

- Enabling High Availability (HA) for VMs on each host.

For our vms to restart automatically on another host when its previous one is down for some reason, we need first to have a shared storage in the pool for that to be possible.

When you have set up a shared storage for your pool you can do the following to every vms you want to be restarted automatically.

Select the vm in Home -> Vms. Then go to advanced and search for HA and set it to restart.

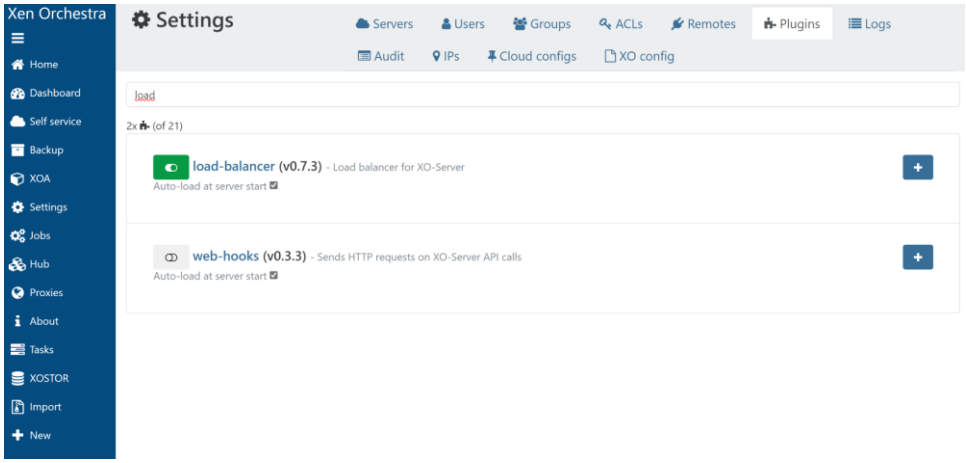


- **Load Balancing**:

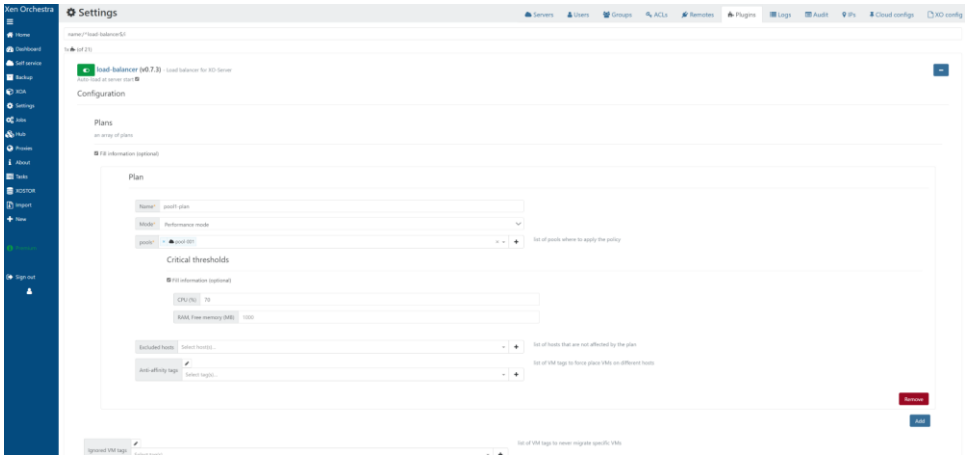
The load balancing here allows us to balance the load of vms amongst the hosts in the same pool.

- Configuration of load balancing in Xen Orchestra.

The load balancing option is in the plugins section of the settings.



We are going to add a load balancing plan.



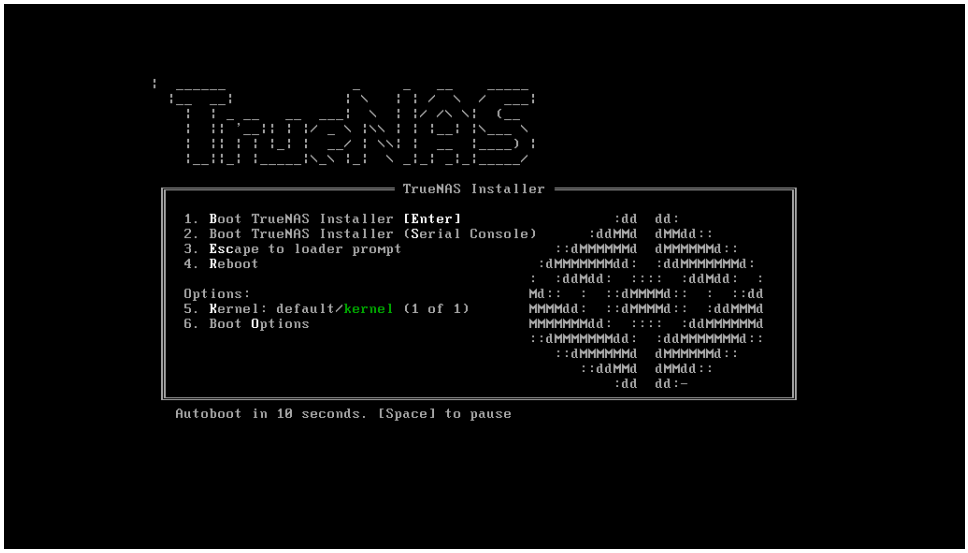
Up here a created a performance-based plan, setting CPU utilization threshold at 70%.

- **Storage Infrastructure**:
- Setting up an additional VM for TrueNAS installation.

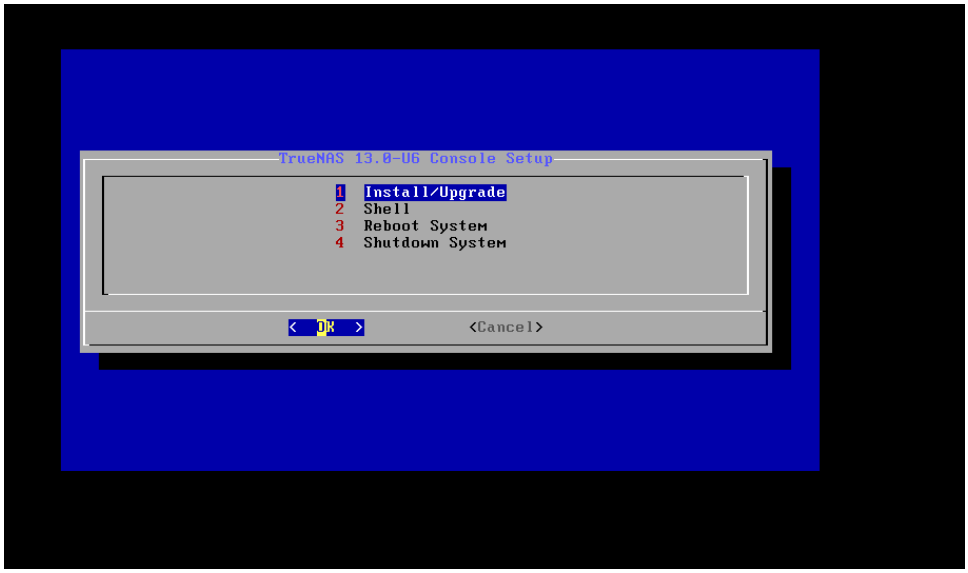
Here we will firstly create a virtual machine in which we'll install TueNas. For the vm creation, proceed as shown up there giving at least 2Go of ram (minimum required for TrueNas) and 50Go of disk storage. Make sure to put the machine in the same network we created.

- TrueNAS installation.

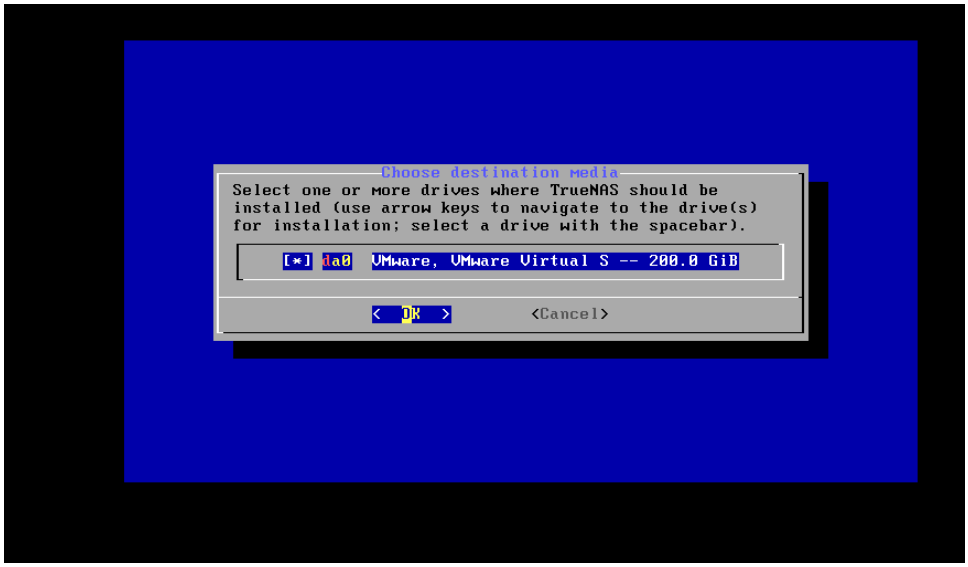
Down below are the steps to install TrueNas



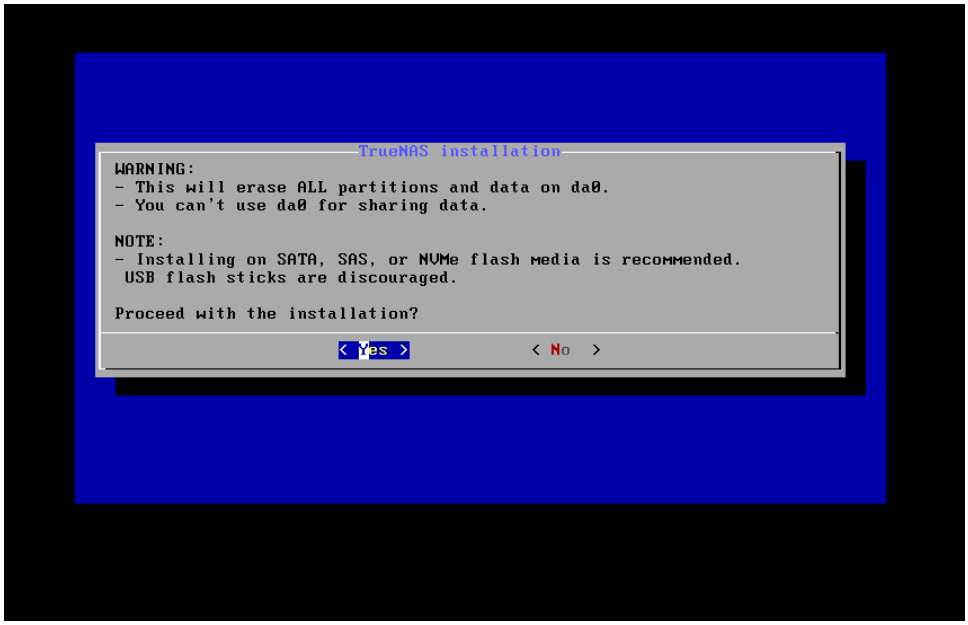
1. Select the install option



2. Now we select the drive on which we want to install TrueNas

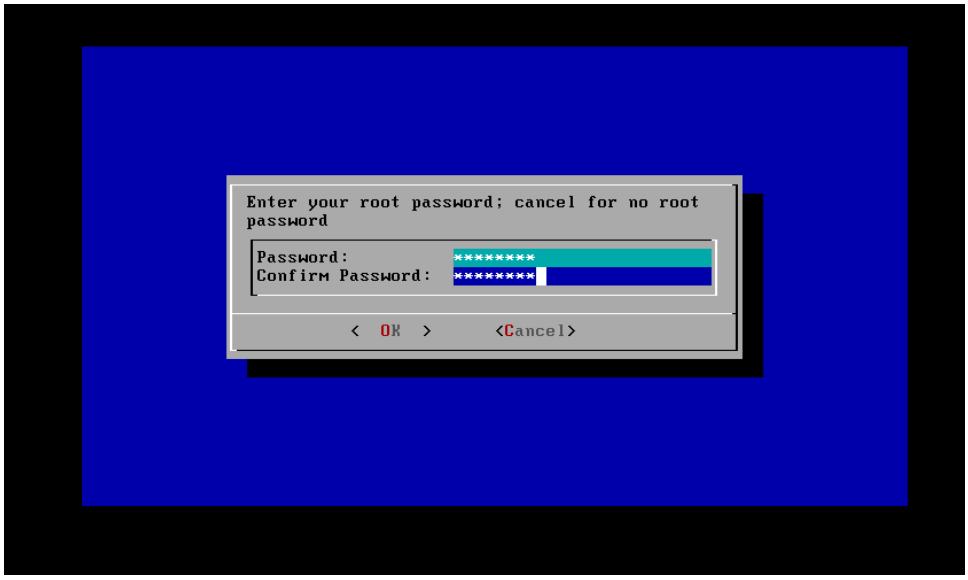


3. In the next step our disk is gonna be erased

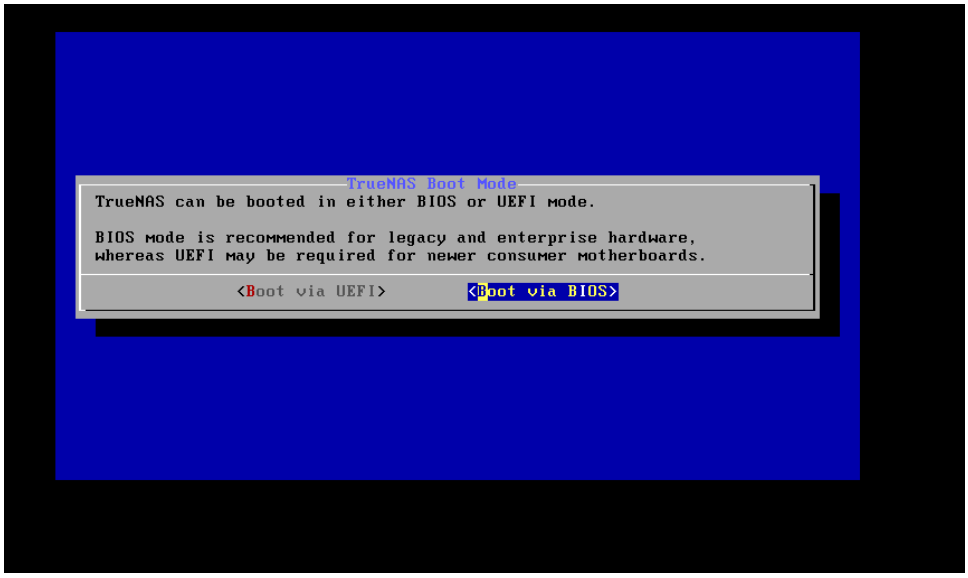


Here we are warned that we can use our current disk for sharing. So we'll need to create another one.

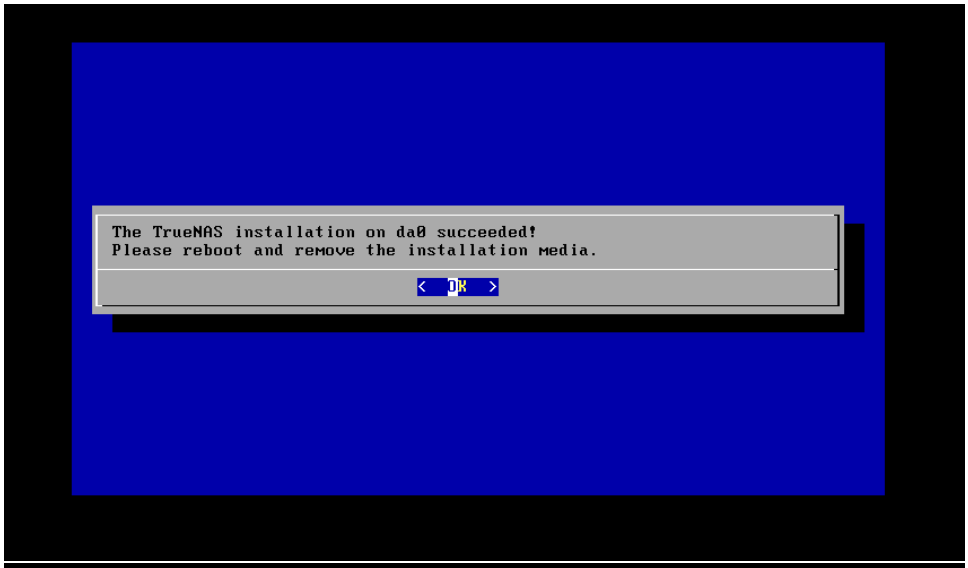
4. Password setup

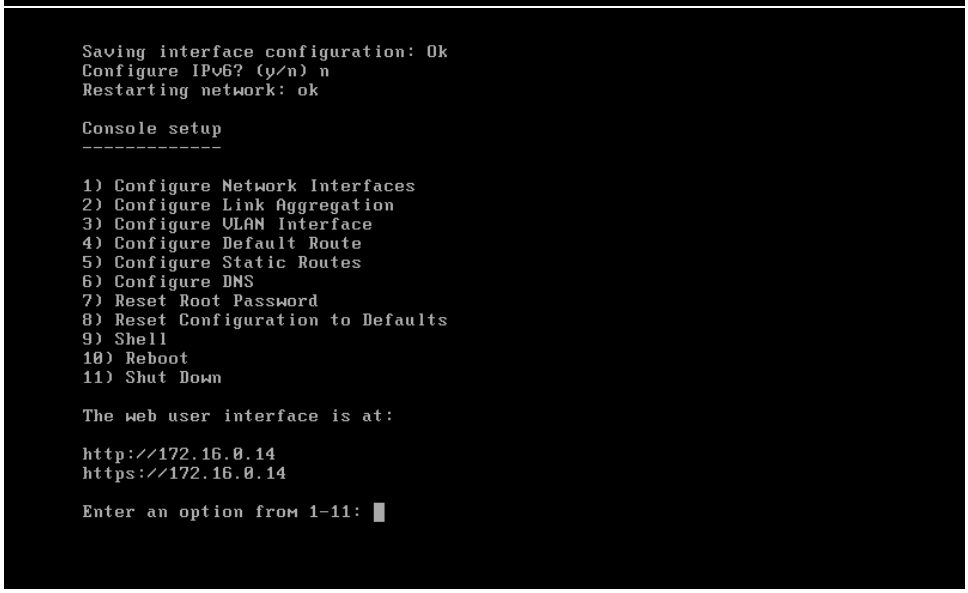


5. Select the boot option

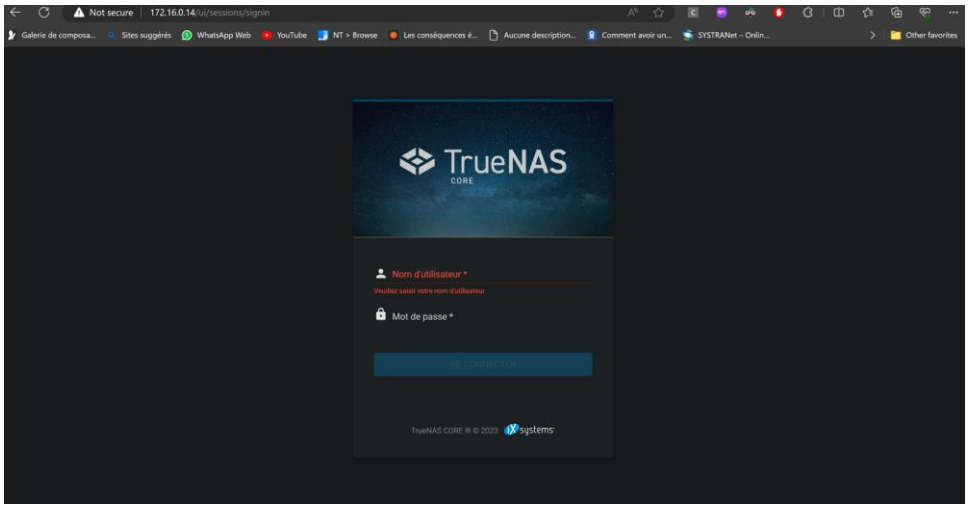


6. Installation completed





We should now be able to access the web interface by using its ip address.

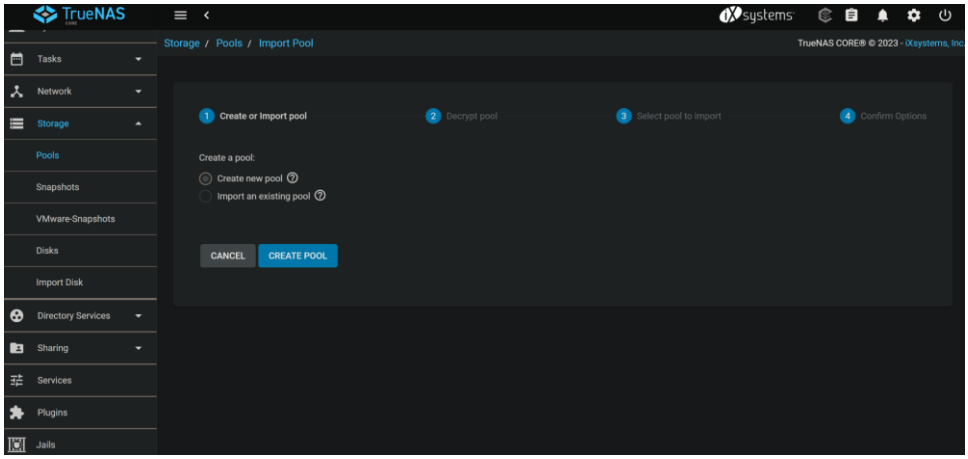


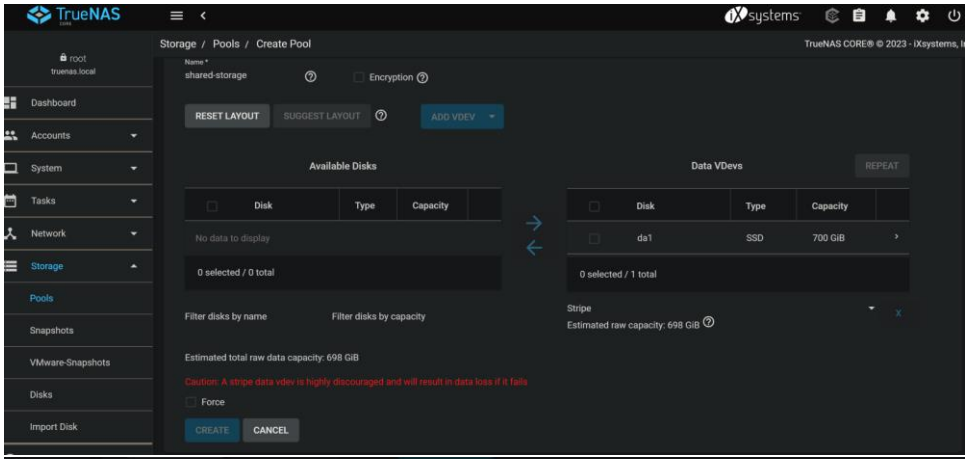
- Configuration of iSCSI drives on TrueNAS.

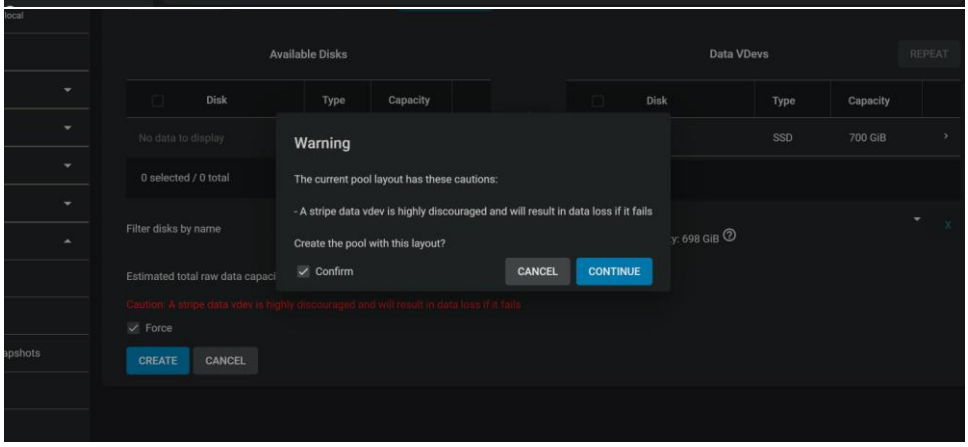
To configure the ISCSI drive on TrueNas, first you need to create another disk for your vm holding TrueNas.

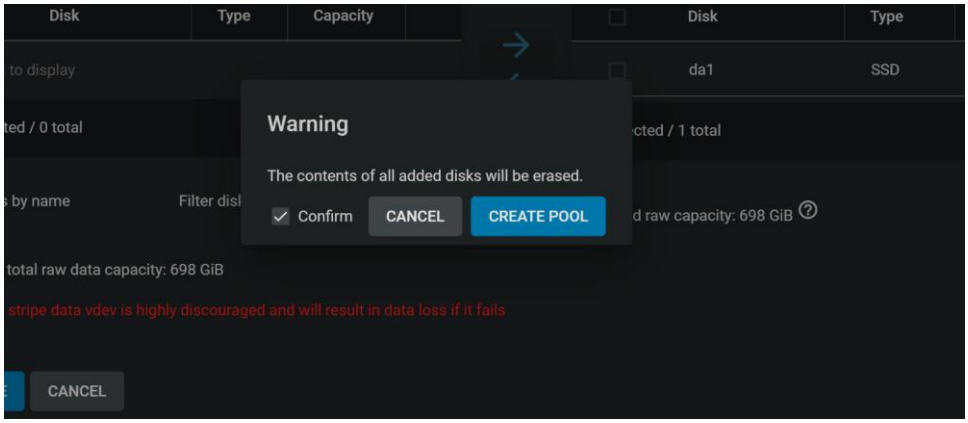
After that we'll do as in their documentation to configure the ISCSI sharing.

1. Go to Storage -> pools and create a new pool

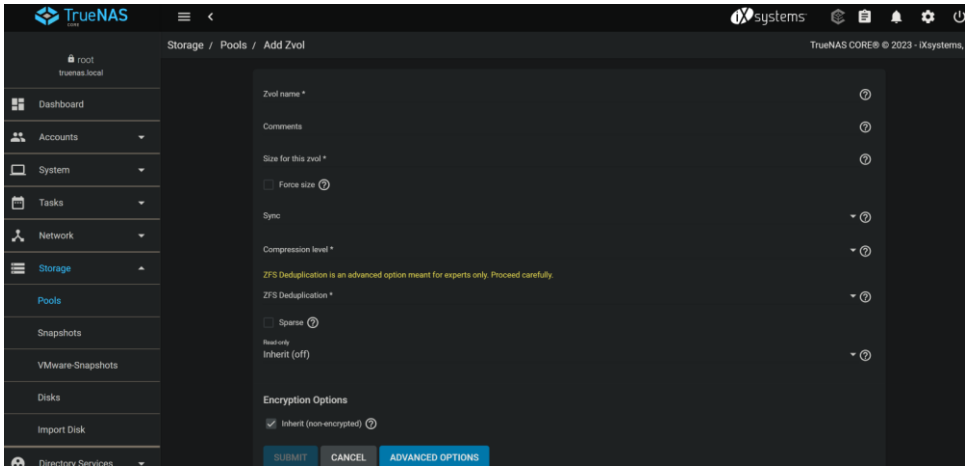




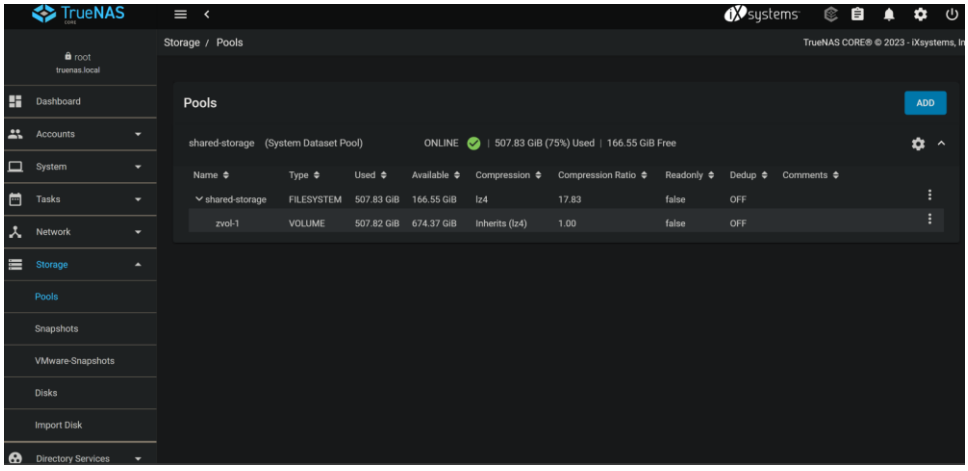




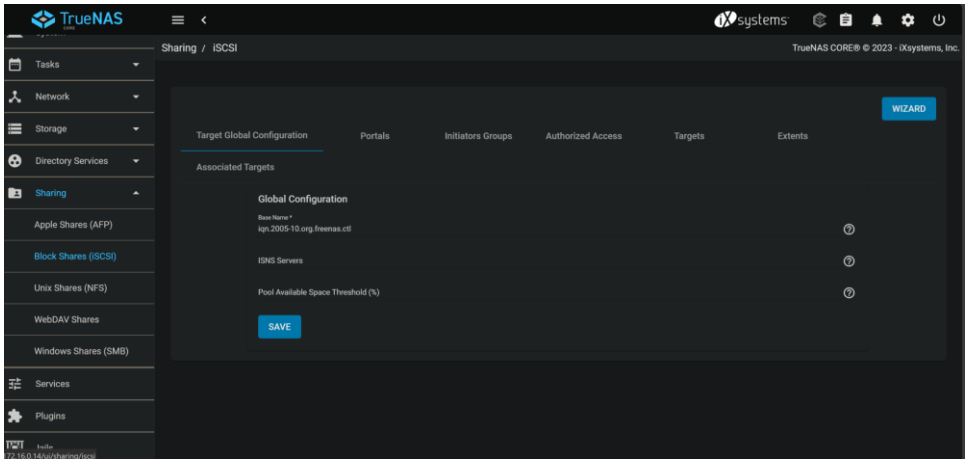
2. Next, we need to create a ZVOL for our newly created pool by going to its options.



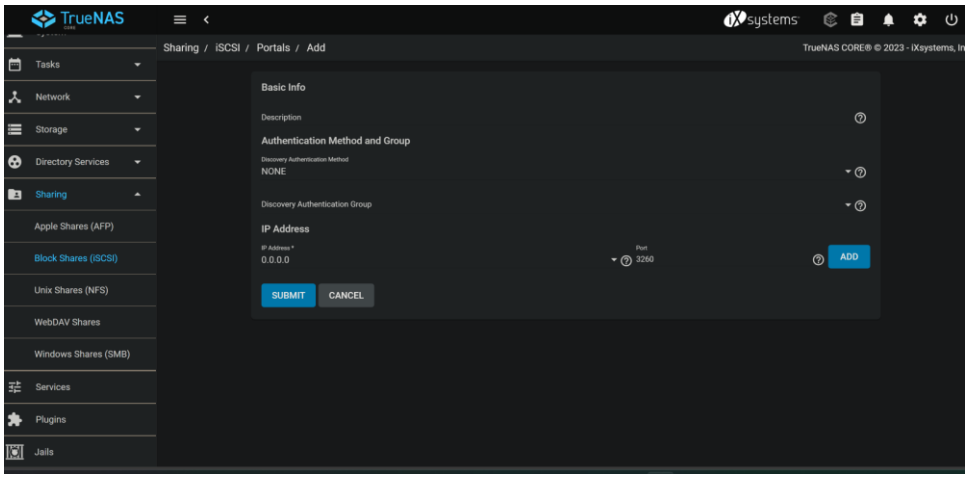
For this basically you just must provide a name and a size for your volume.



3. Now we'll go to Sharing -> ISCSI

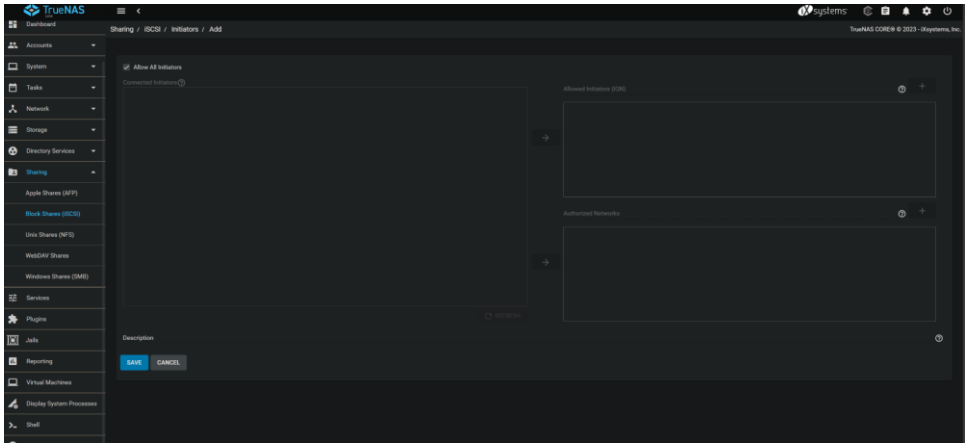


4. We need to create a new portal by going to the portals tab.

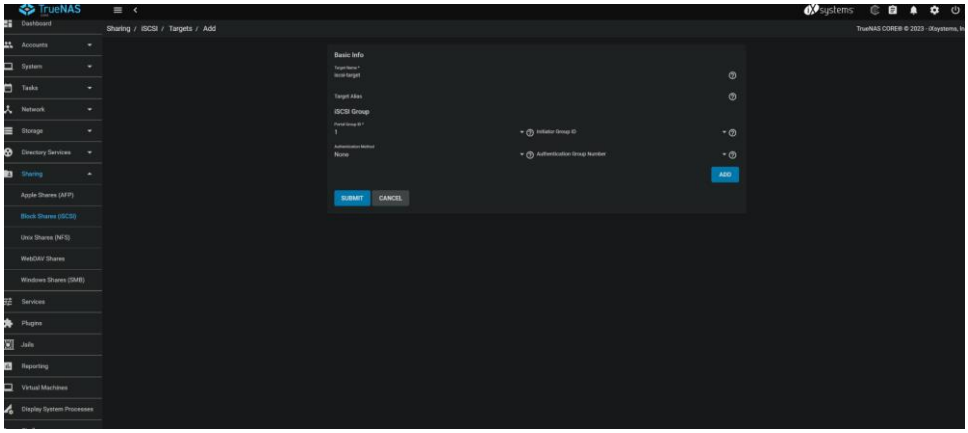


We set the ip address to 0.0.0.0 to allow connections from every endpoints

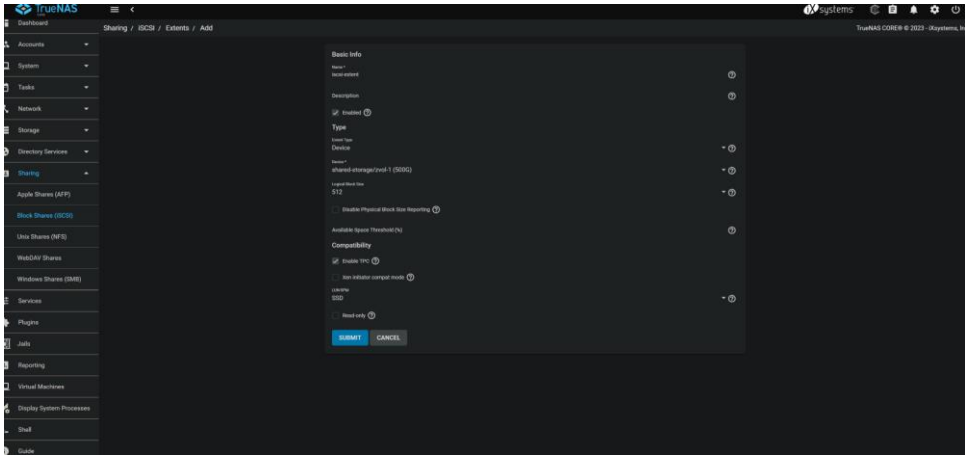
5. Now we need to create an initiator by going to the initiator tab



6. Target creation

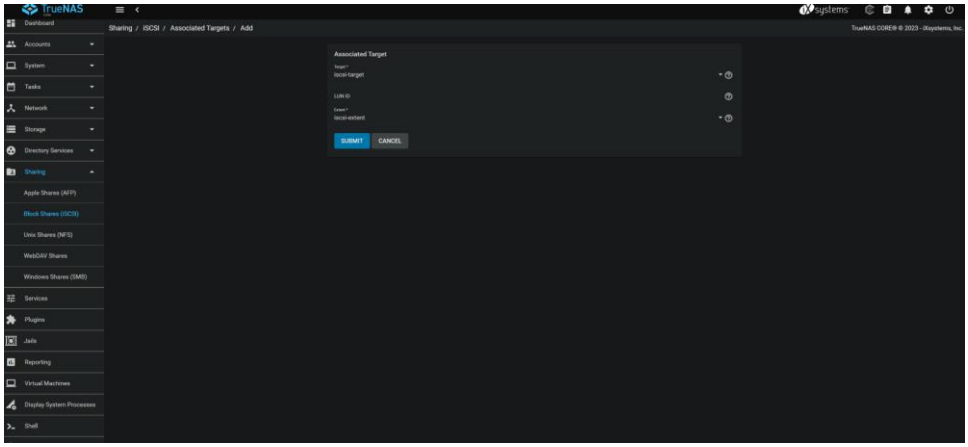


7. Extent creation



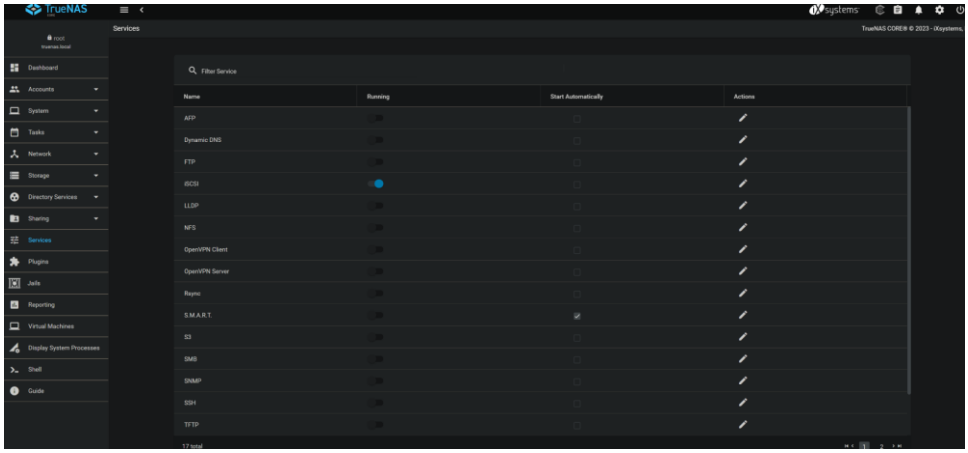
8. Next you need to create an associated target

Here you will assign our newly created extent and target.



9. Finally, you must enable the ISCSI service

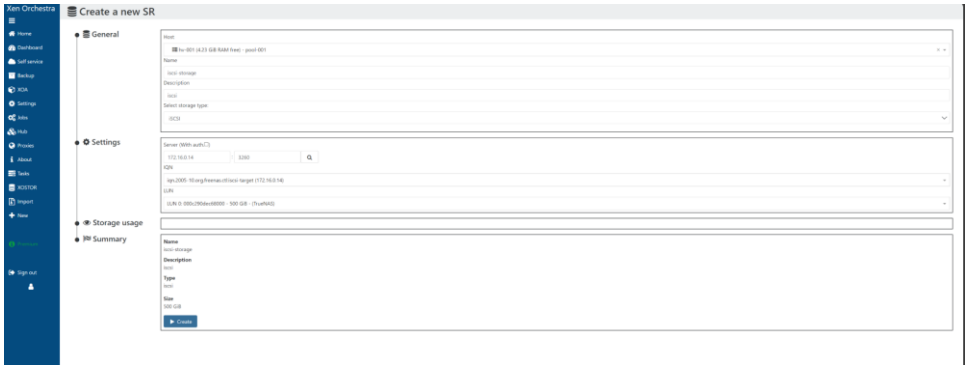
For that go to Services in the sidebar and locate the ISCSI service and enable it



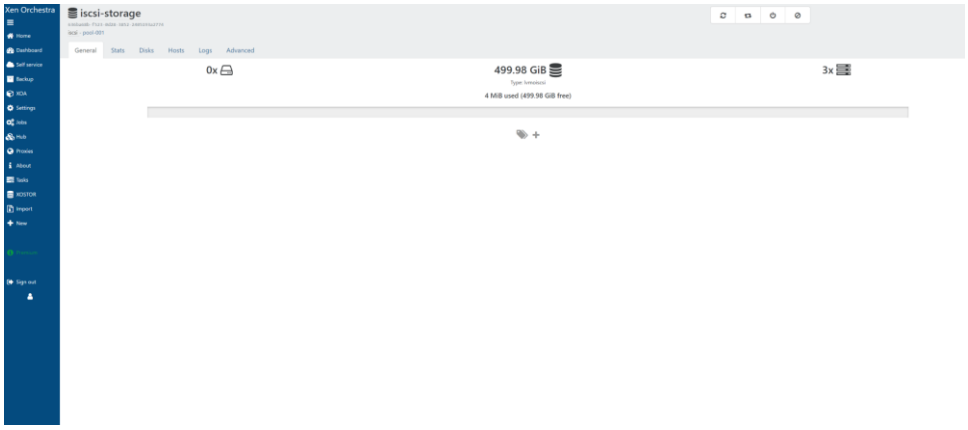
- Creation of a new Storage Repository (SR) in Xen Orchestra using TrueNAS iSCSI.

We can now create an SR that will use the drive we shared with TrueNas.

Go back to the Xen Orchestra web interface and in the sidebar select New -> Storage. In there configure as in the following picture



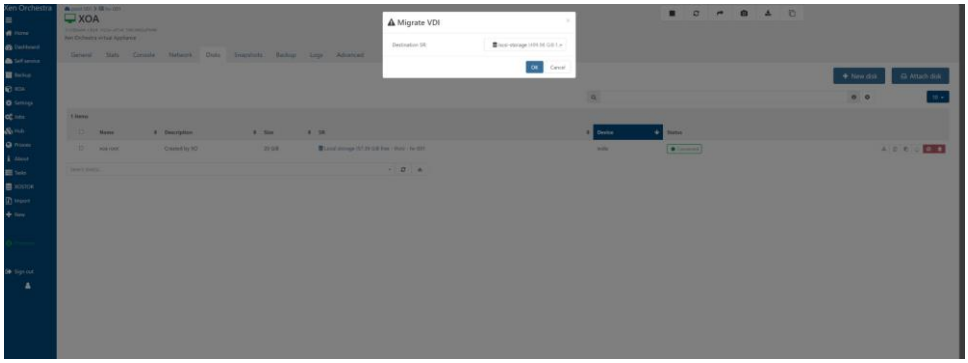
We should be able to see this screen if everything worked well.



- Migration of existing VMs to the new SR.

We need to migrate our existing vm in the new storage as it was until now stored in the local storage of its host.

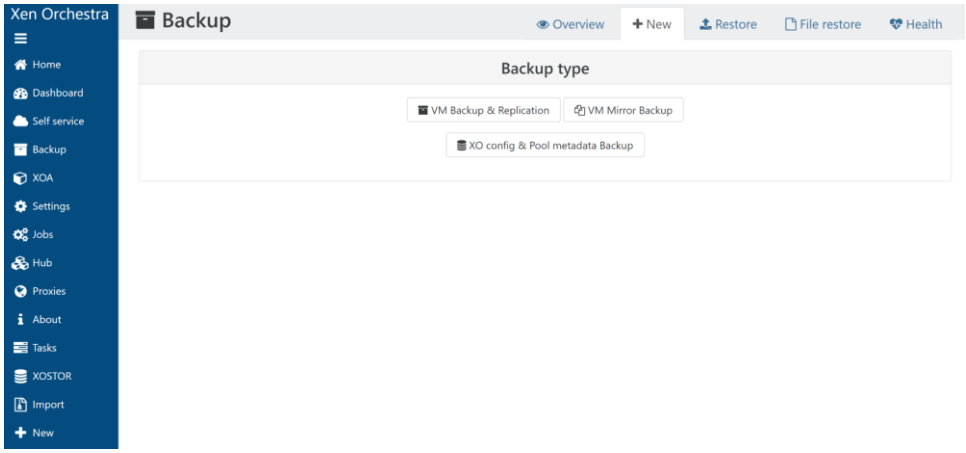
For that go to Home -> vms, there you click on 'XOA' and go to disks. You will see the disk it is currently saved on. In the same line on the right, you will see the option to migrate to another disk and you will select the new storage we just created.



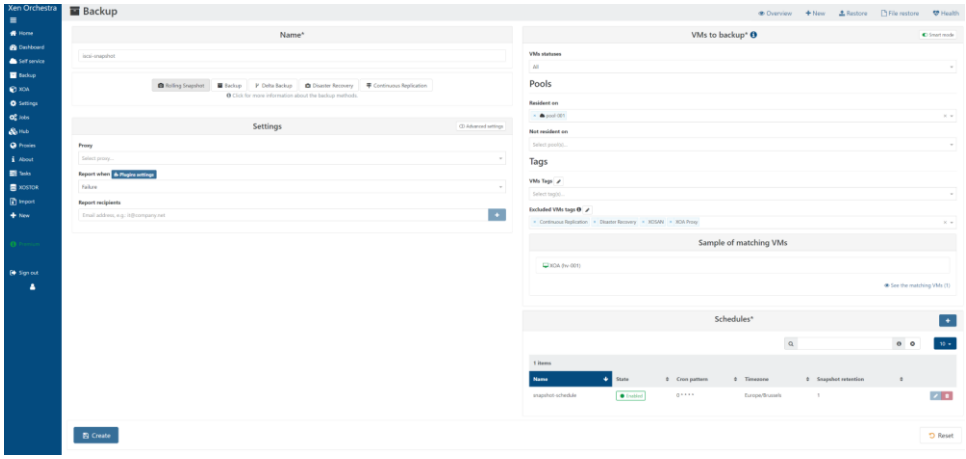
- Configuring rolling snapshots on an hourly basis.

We are going now to configure rolling snapshots in our ISCSI storage.

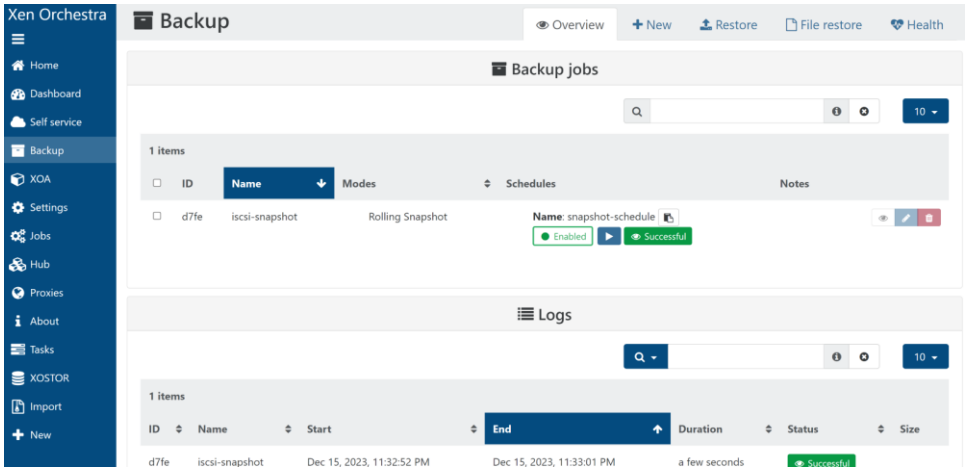
1. Go to BackUp -> New -> VM Backup & Replication



2. now we need to configure the backup



As the picture shows we gave a name to the backup, set the type to rolling snapshots, chose all the vms in pool 1 by using the smart mode to consider even vms created in that pool after the backup creation. Finally, we scheduled to be triggered every hour



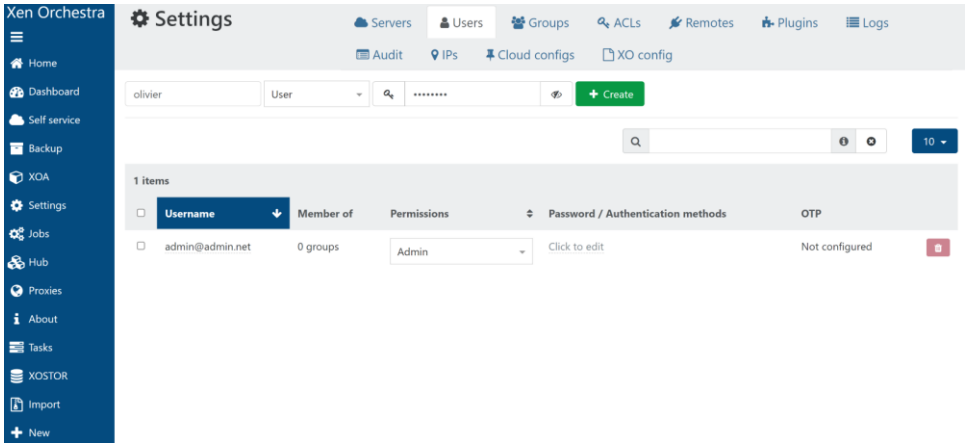
It is now created, and I launched it manually and it works fine.

3. Security

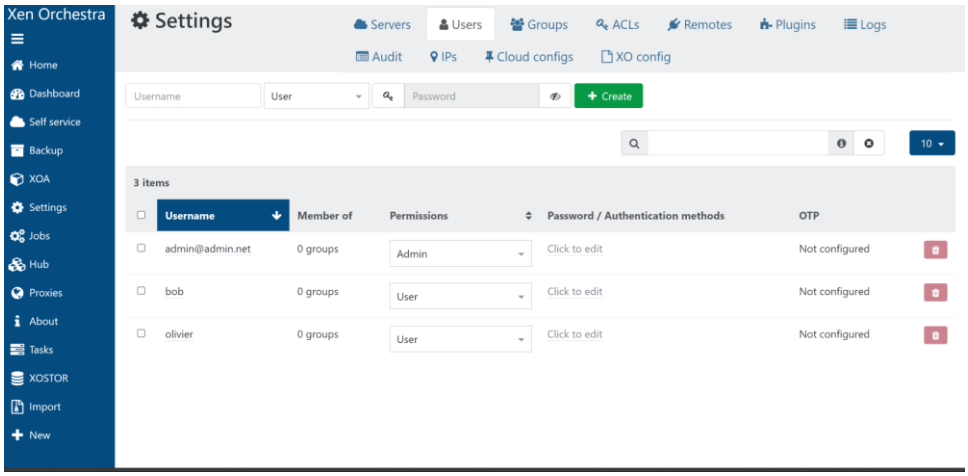
We'll create users with different priveleges in Xen Orchestra.

- Creation of two user accounts in Xen Orchestra: 'olivier' (full access) and 'bob' (limited to viewing VMs).

1. Go to Settings -> Users to create a user as shown below



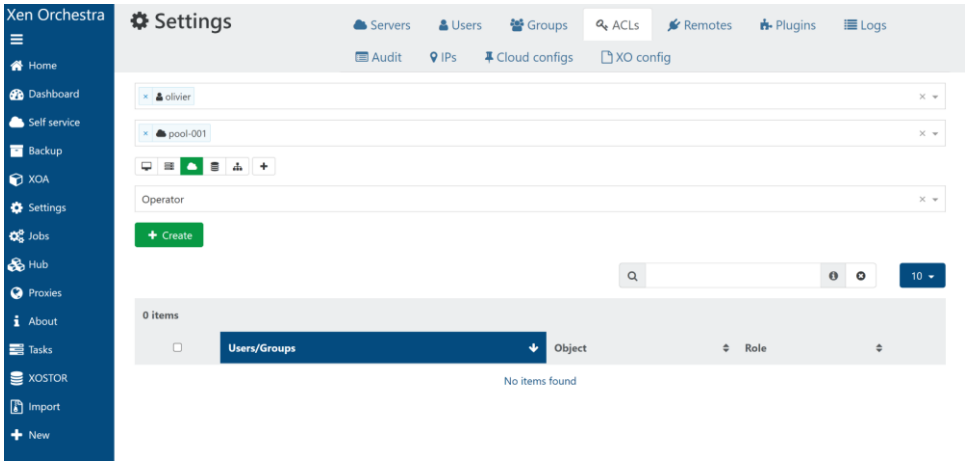
Here is an example with Olivier. You can do the same for Bob.



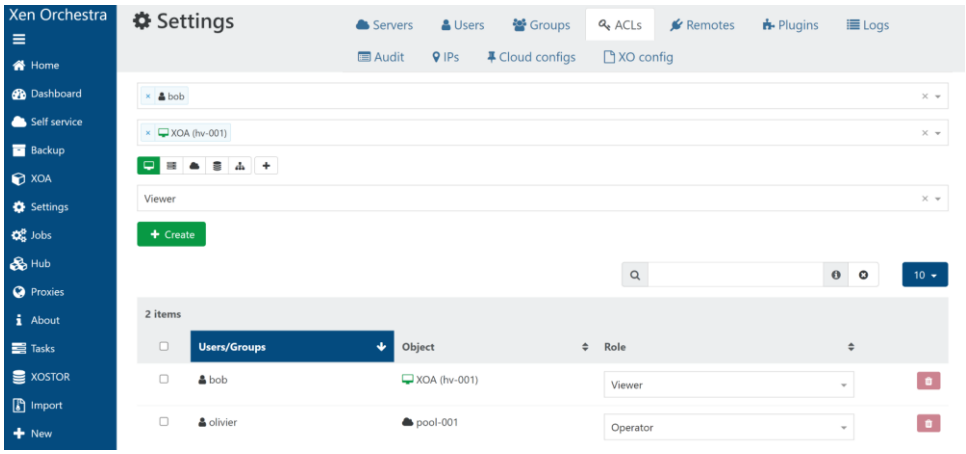
- Configuration of appropriate rights in the ACLs section for both users.

Now it is time to define what each of them can do. For that go to Settings -> ACLs

In that page you choose the user, we start with Olivier, he needs access to all the clusters, so we choose pool and then we select all the pools we have in xen orchestra. We just selected pool-001 because pool-002 doesn't yet exist but when we create it, we should also add it here.

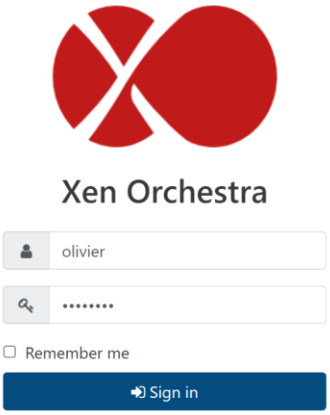


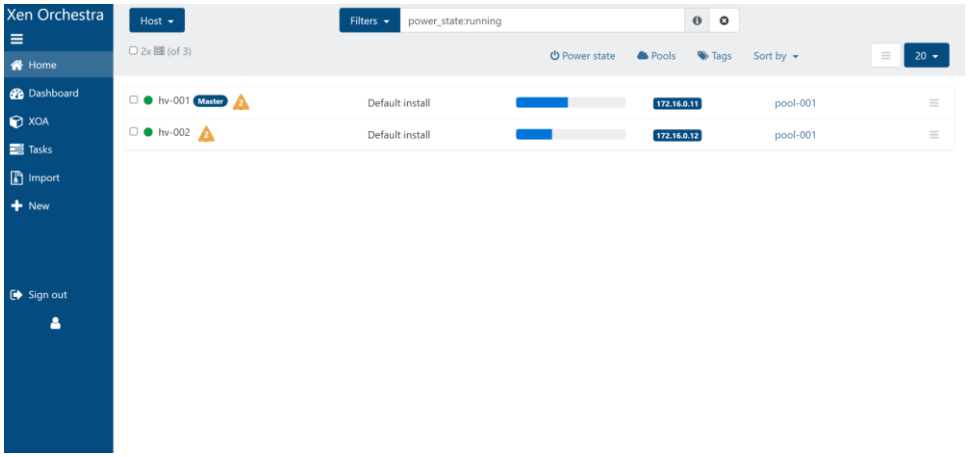
Now let proceed with Bob



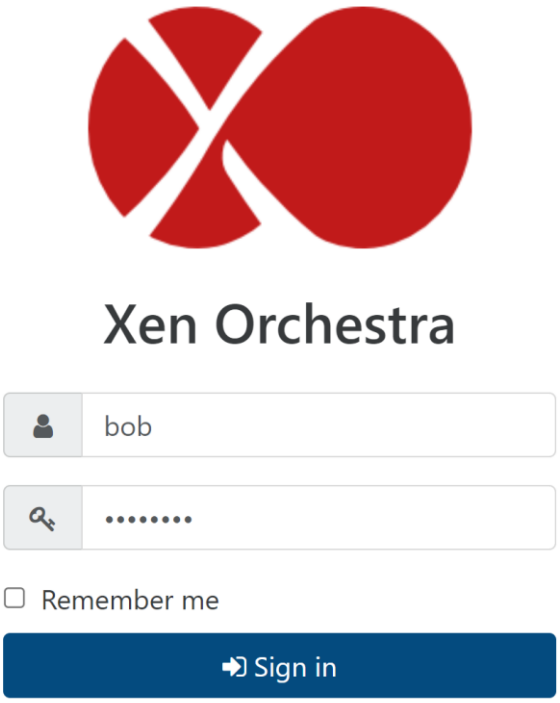
Bob should just be able to view virtual machines, so we select the ones available and the role Viewer.

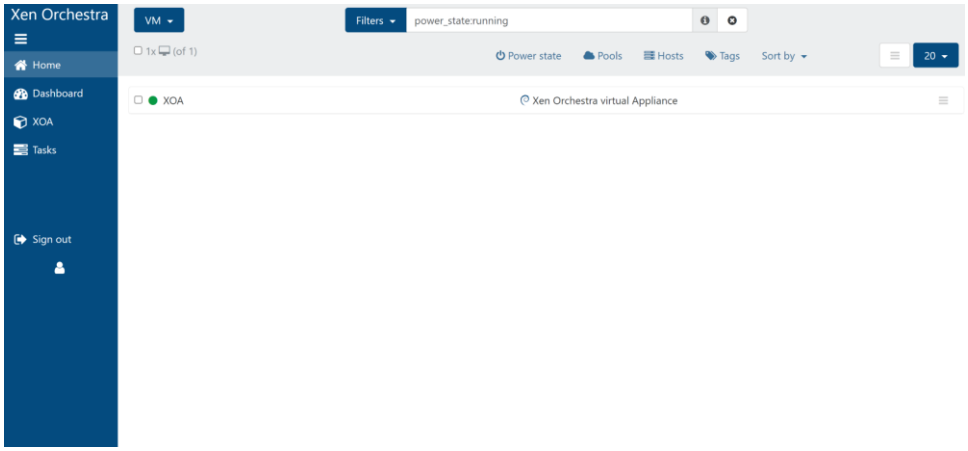
Now we'll connect to them and see what each of them have as options





We see that Olivier has access to elements from the pool 1 as configured.





And Bob can just view our vm.

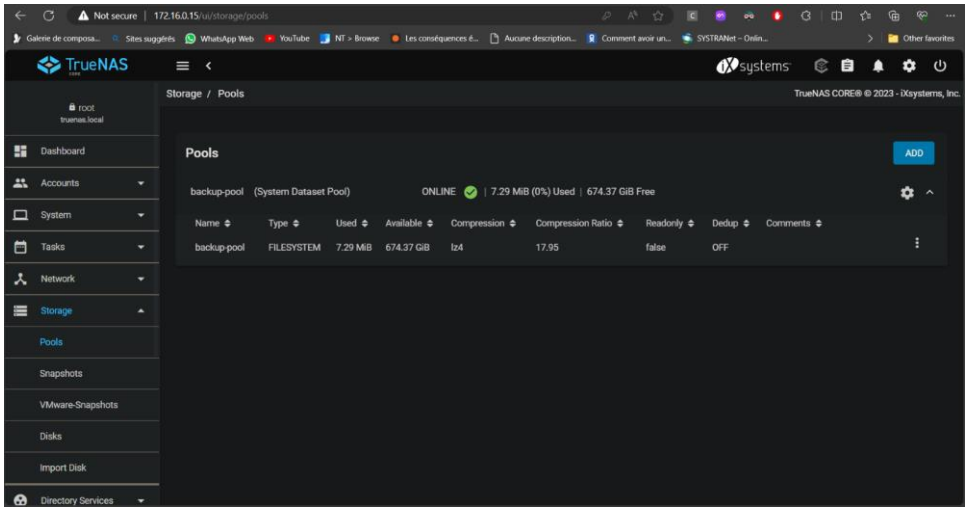
4. Backups & PRA (Physical Recovery Area)

- **Backup Configuration:**
- Setup of another VM for TrueNAS with NFS drive configuration.

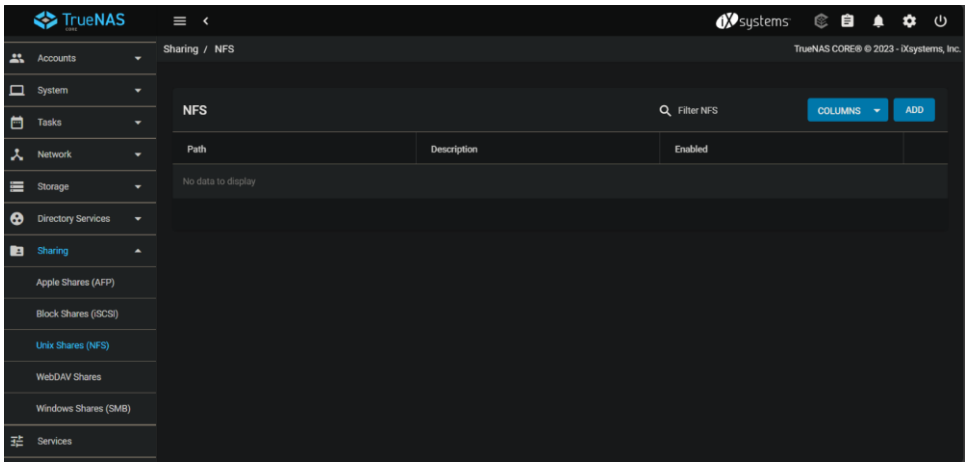
We need to create another virtual machine on which we are going to install TrueNas and set up an NFS drive. At this point you should already know how to create a virtual machine on VmWare so I won't repeat the process.

I will go directly to the setup of the NFS on TrueNas

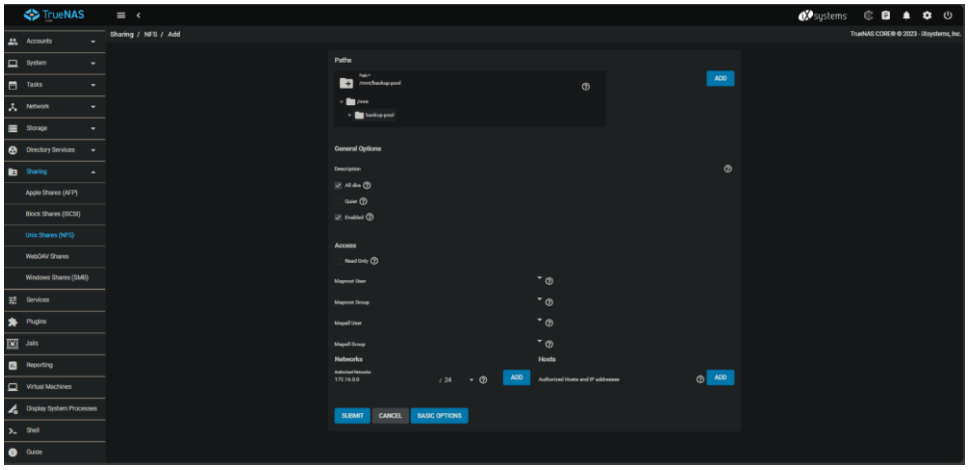
1. First, we create a pool like before



2. Next, we go on Sharing -> NFS and click on add

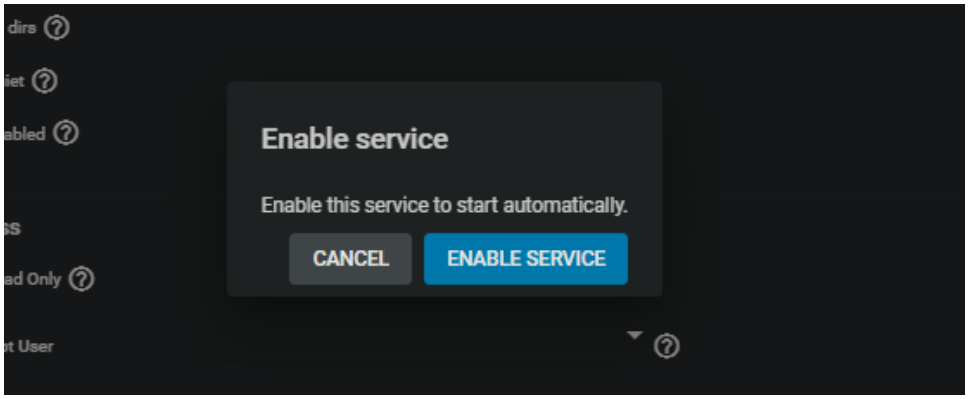


3. Now we configure the settings like below

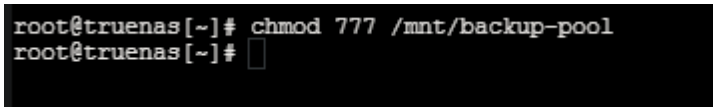


We selected the filesystem created before and we allow all ip addresses from our network

4. We will be prompted to enable the NFS service and we'll accept



5. Now we'll type a command in the TrueNas shell to give permissions to all users

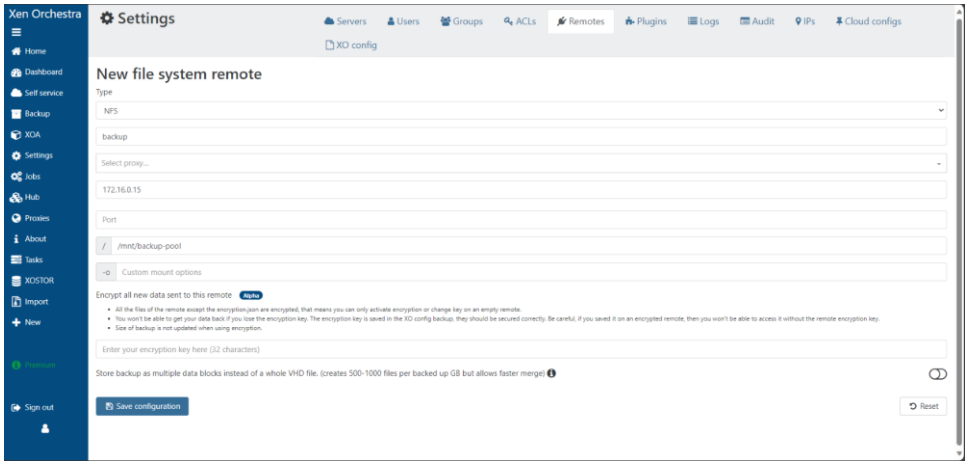


With this our setup in TrueNas is complete.

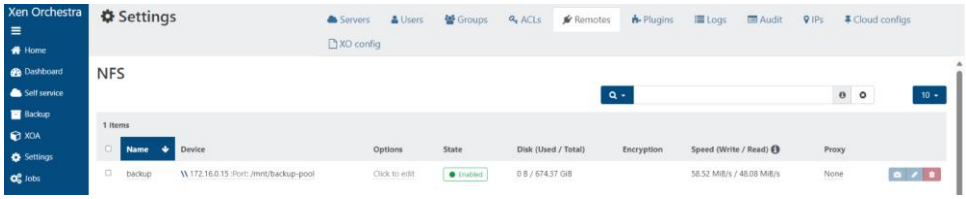
- Creating a new remote in Xen Orchestra for backups, pointing to the NFS drive.

Now we'll go back to Xen orchestra to create a remote NFS to store the vm backups.

1. Go to Settings -> Remotes and configure as below



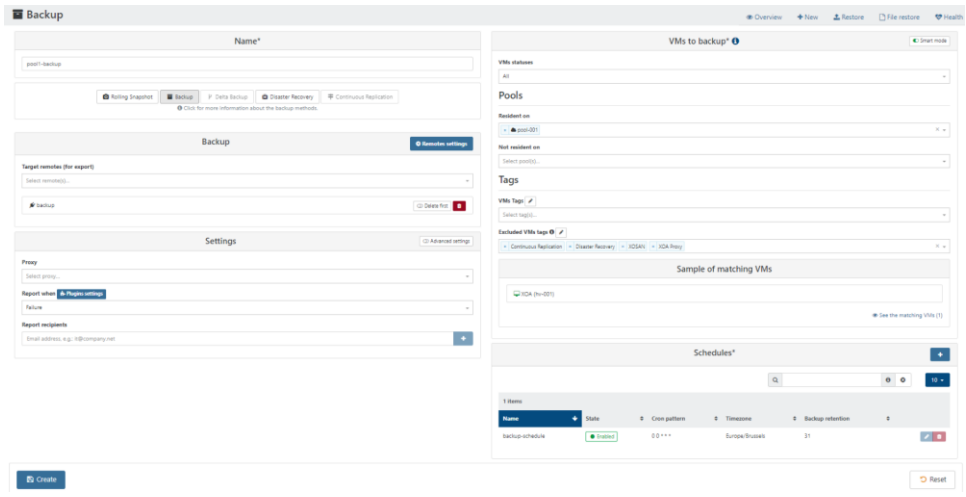
2. If done well, you will have the following screen



- Scheduling daily backups with a retention period of 31 days.

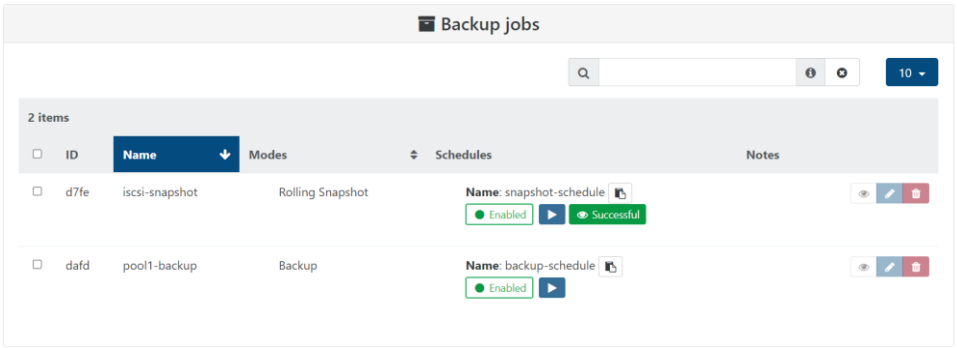
For that go to Backup -> New and select 'Vm Backup & Replication'

1. Configure as below



As shown, you must define a name, select the remote to use for the backup, select the vms to backup and finally schedule it to be triggered every day with a retention day of 31.

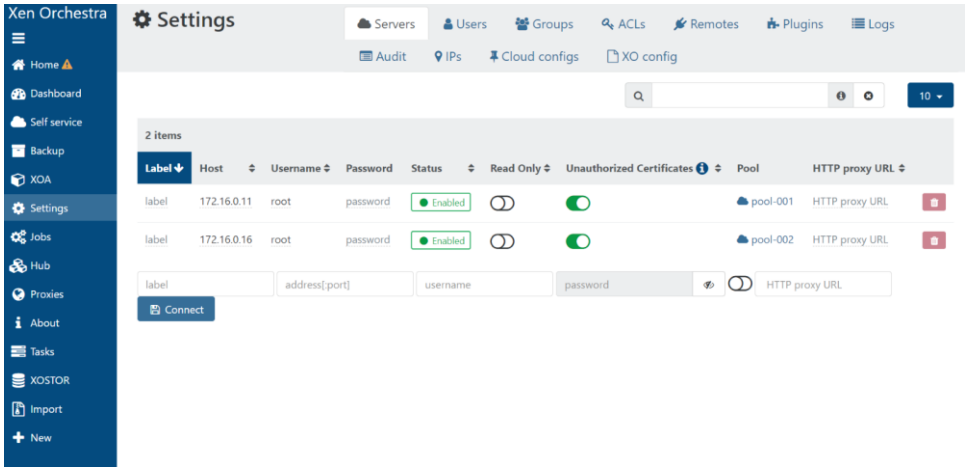
2. If you did well, you should see the following



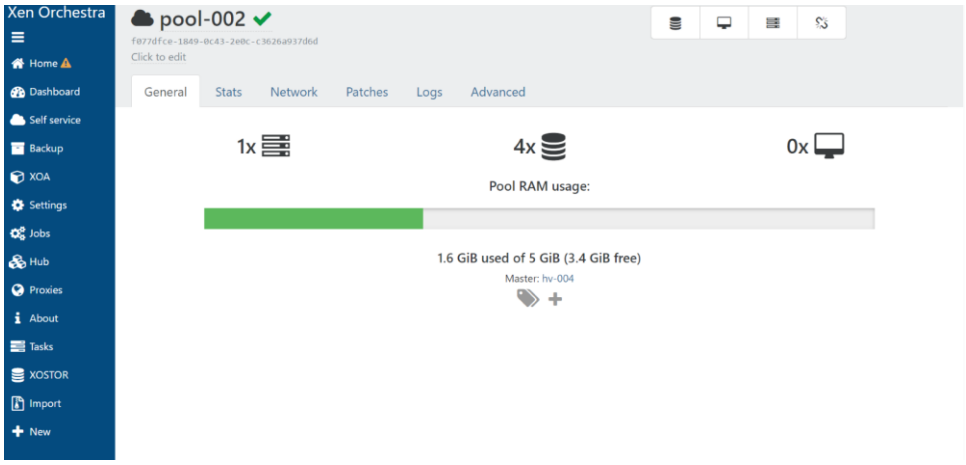
- **PRA Setup**:
- Creation and configuration of the additional VM with XCP-ng for a separate pool.

For the next steps we need to create another virtual machine on VmWare and install XCP-ng on it as we did in the previous steps.

After that you should register the server on Xen Orchestra.



After that go to Home -> Pools and you'll see a new pool with the new host in it. Just rename it for consistency

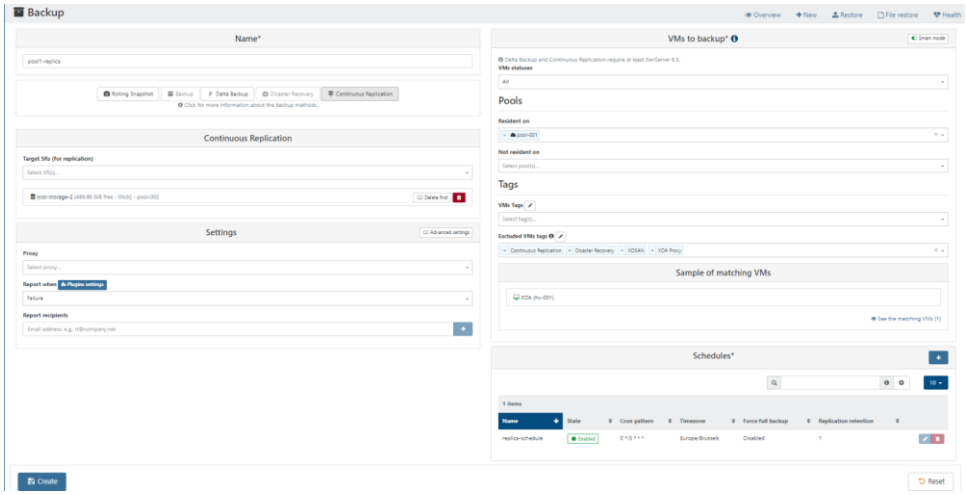


- Installation of TrueNAS and setup of another iSCSI drive for the second pool.

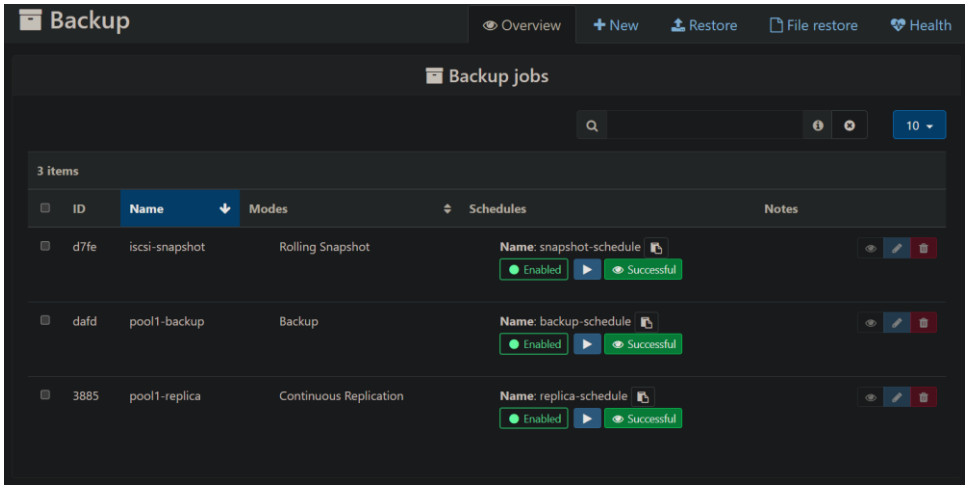
We need to create another virtual machine with TrueNas as we have already done before and configure an ISCSI drive. Just make sure to respect the network configuration as shown in the diagram

- Configuration of cross-pool replication (replicas) from Pool 1 to Pool 2's shared storage.

1. Go to Backup -> New and select 'Vm Backup & Retention'
2. Configure as shown below



After that you should now see it amongst the other backups

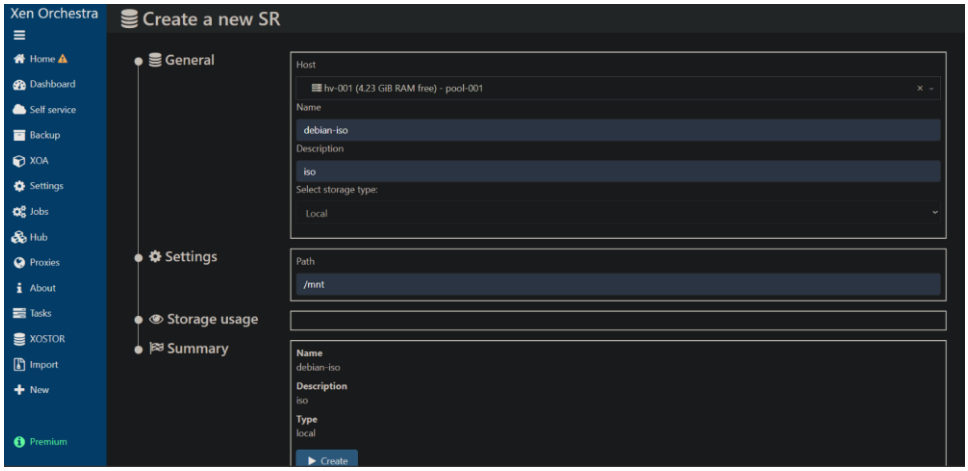


5. Templates

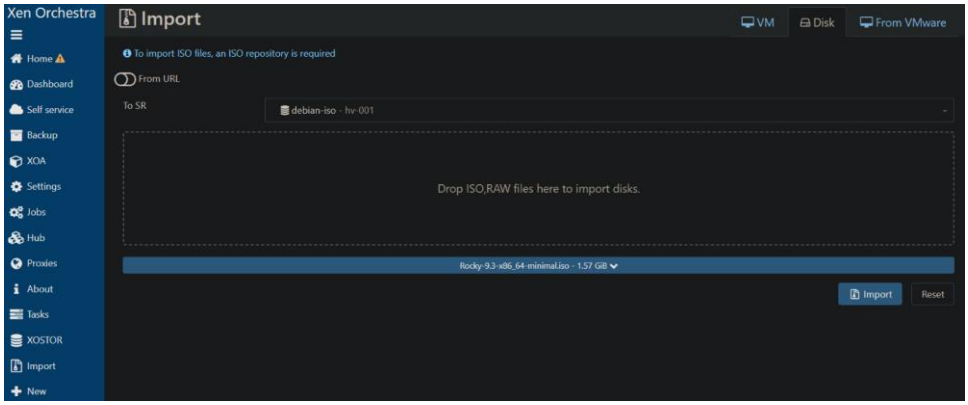
- Creation of Rocky Linux and Debian VMs in Pool 1.

To be able to create Rocky Linux and Debian Vm we first must create their storage and import their iso in their respective storage.

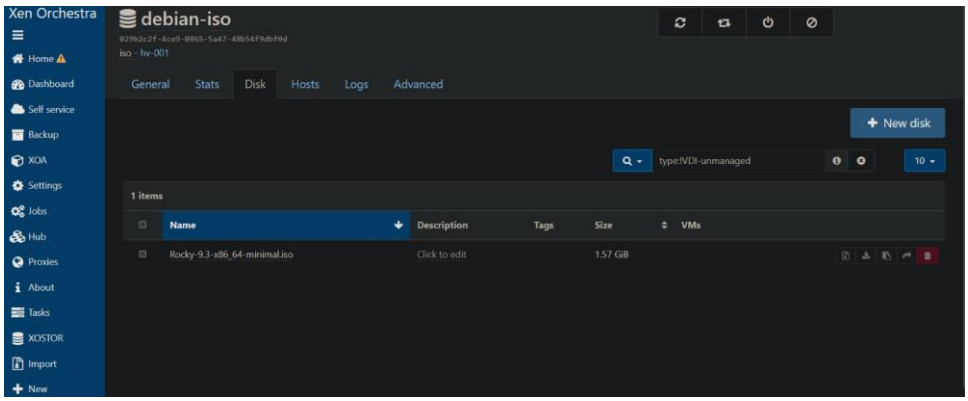
Go to New -> Storage and configure as below



After go to Import -> Disk and import the corresponding iso



After that you will be redirected here

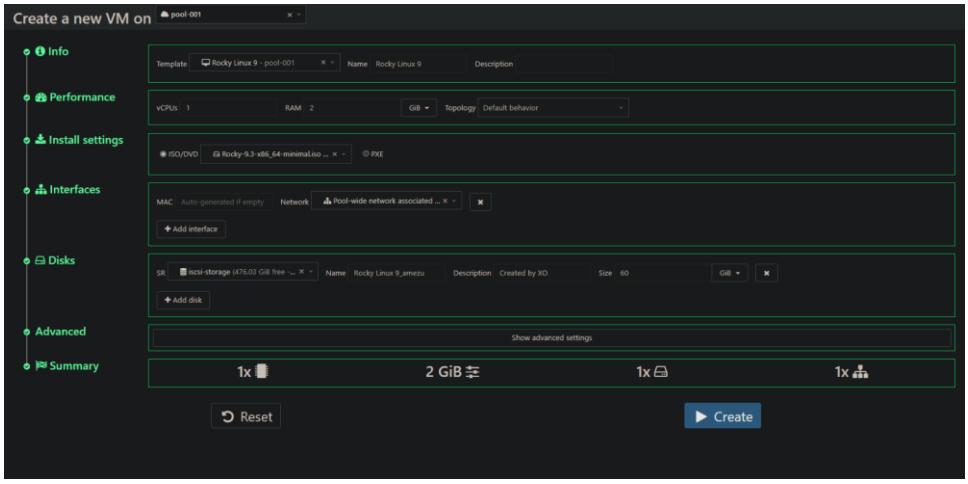


You'll do the same for the storage of the other OS.

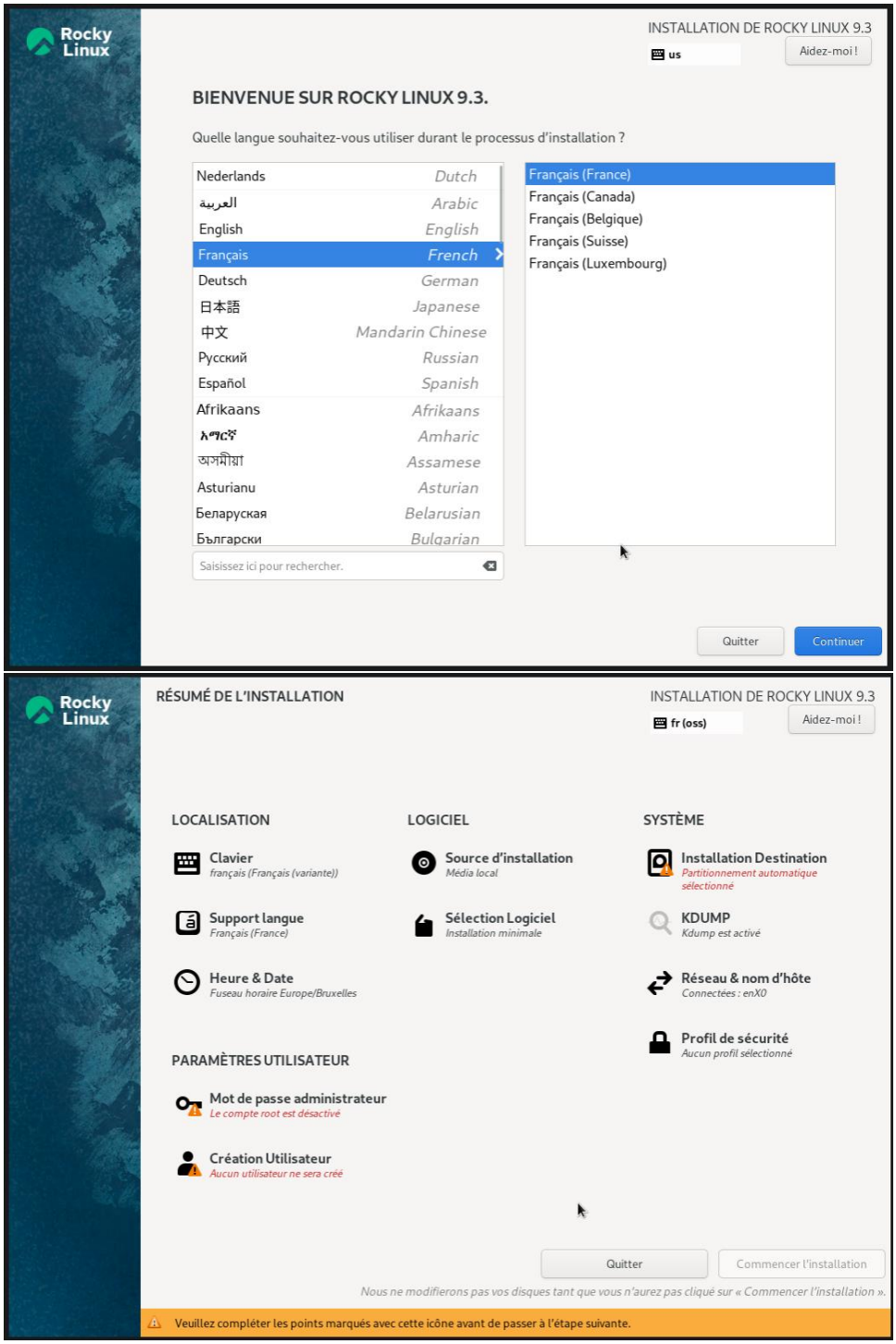
Now we need to create the vms

1. Rocky Linux Vm

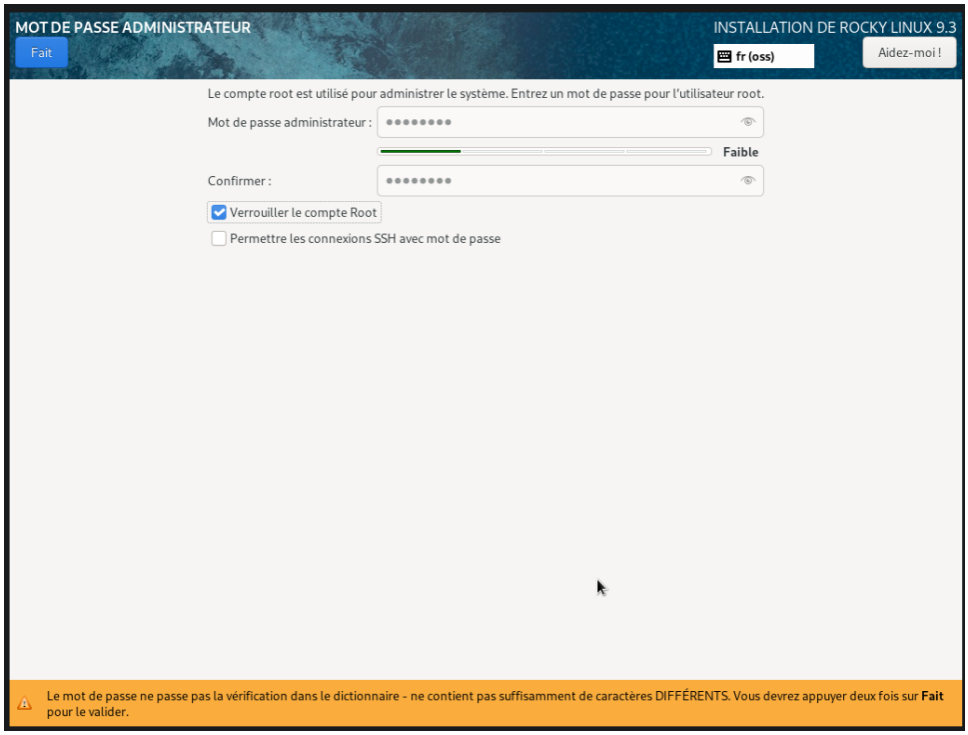
Go to Home -> Vms and click on ‘New Vm’ and configure as below



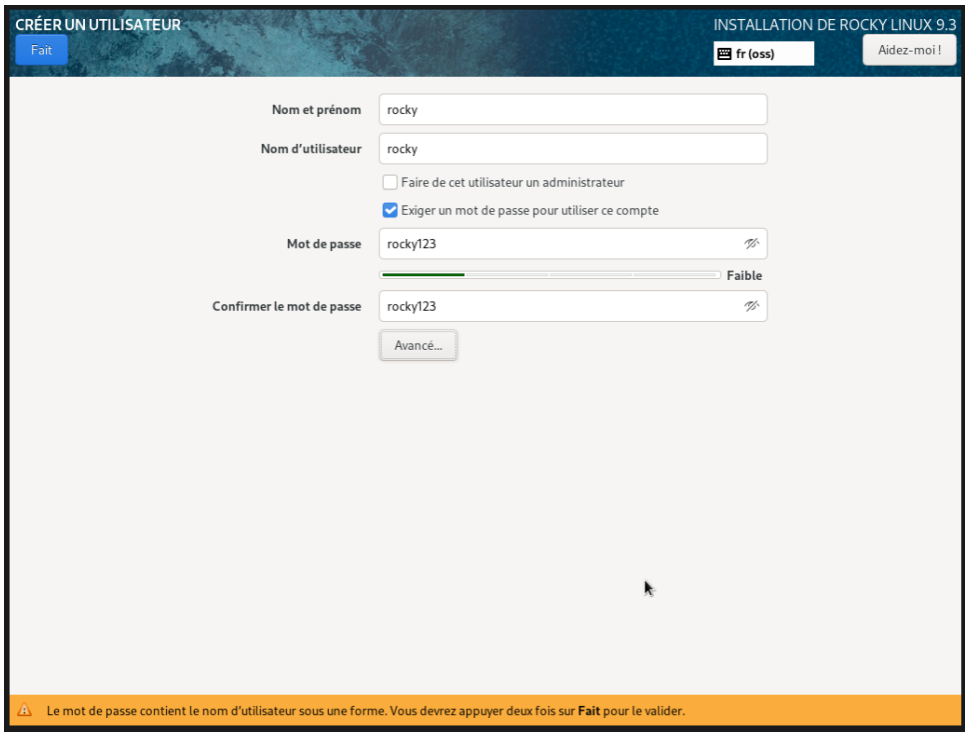
After the creation of the vm you can go to its console to continue with its setup



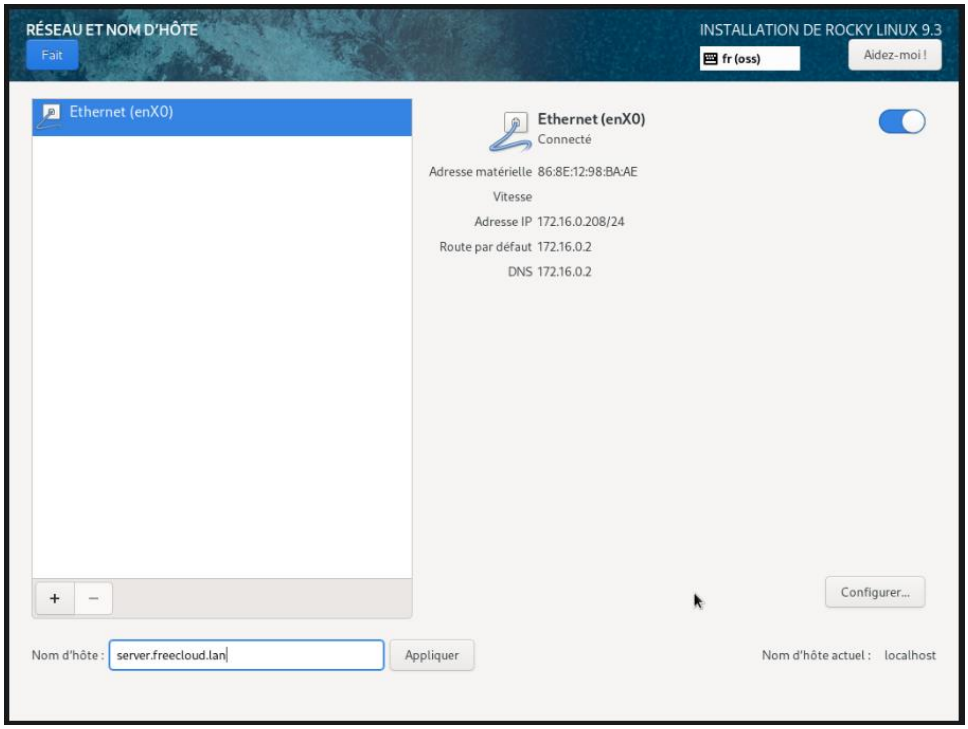
Next, we will configure the admin password, user password and hostname.



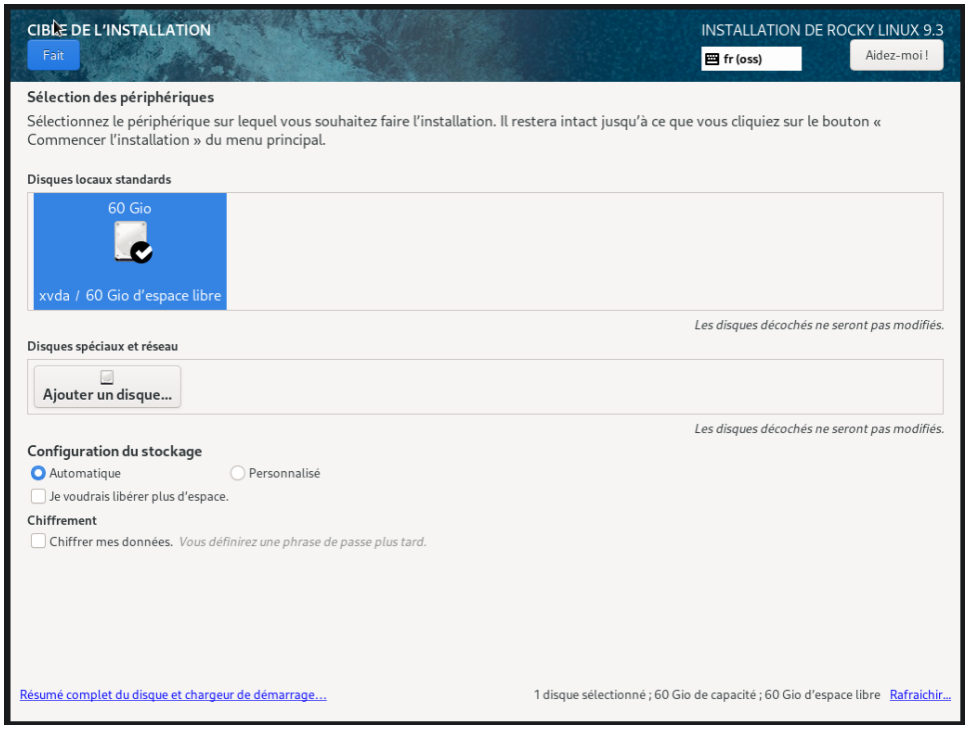
This is for the administrator password.



Here we configure our user in this case Rocky along with its password

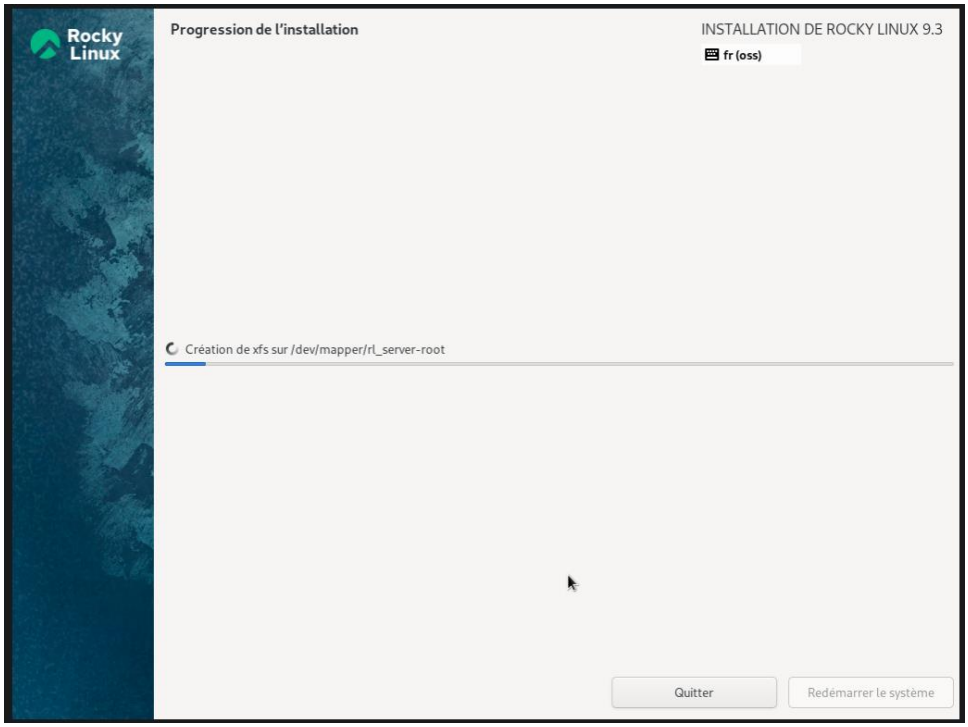


we setup our hostname

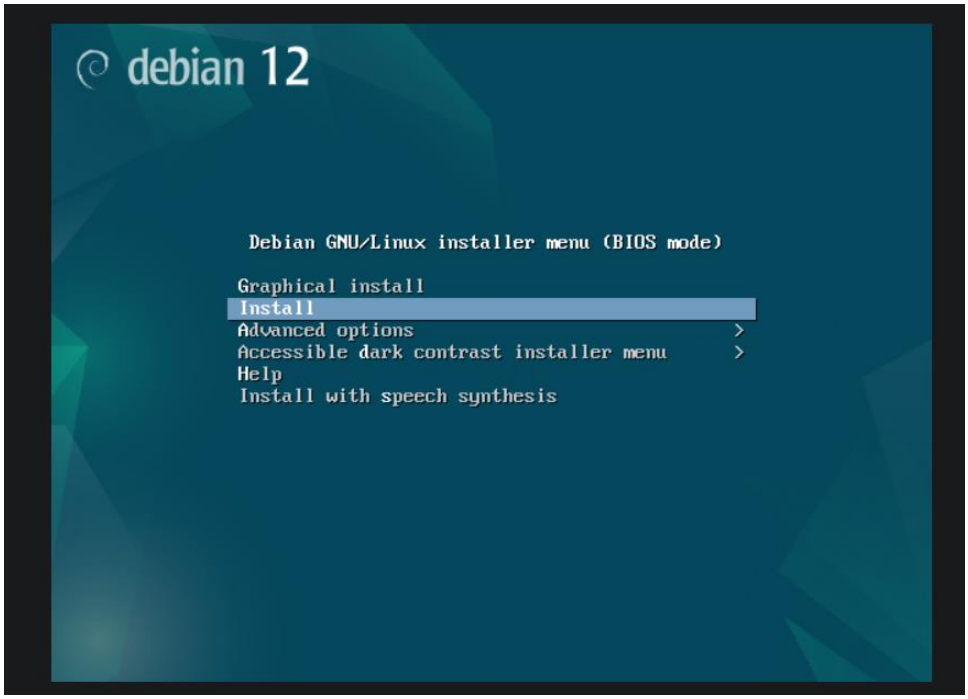


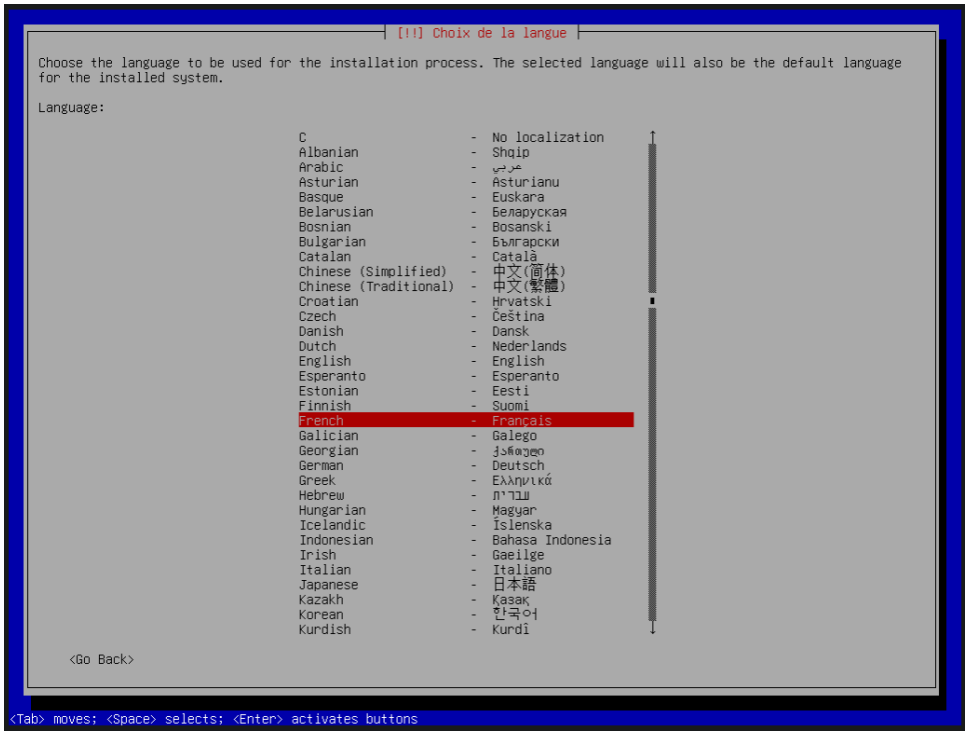
We select the disk on which we want to install Rocky Linux

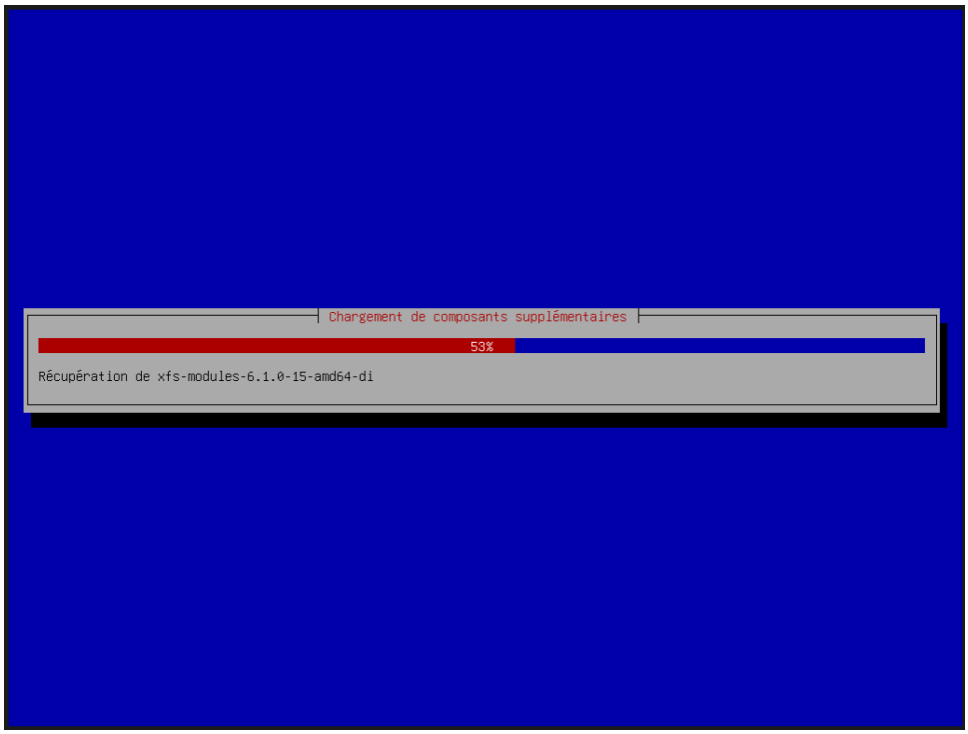
After that the installation begins

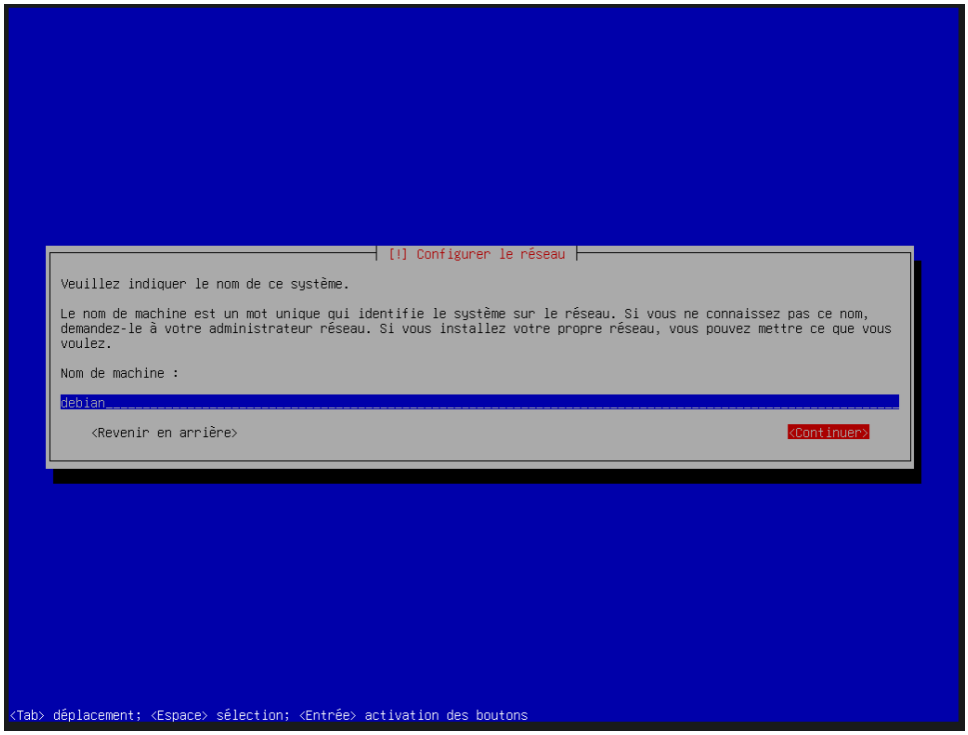

Rocky Linux
Progression de l'installation
INSTALLATION DE ROCKY LINUX 9.3
fr (oss)
Création de xfs sur /dev/mapper/rl_server-root
Quitter
Redémarrer le système

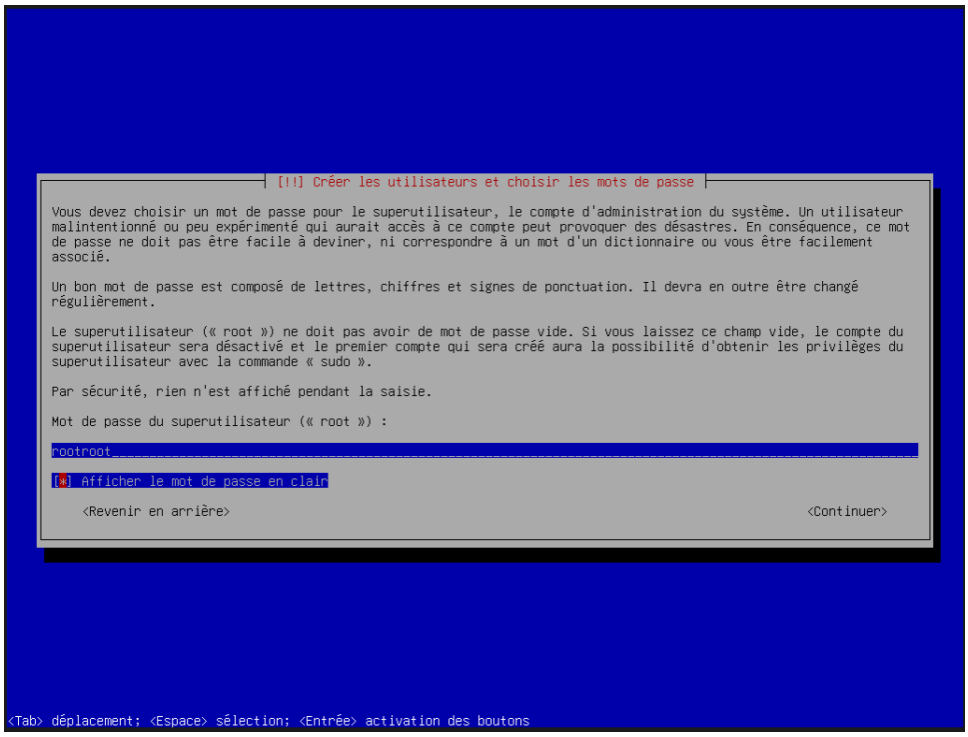
2. Debian

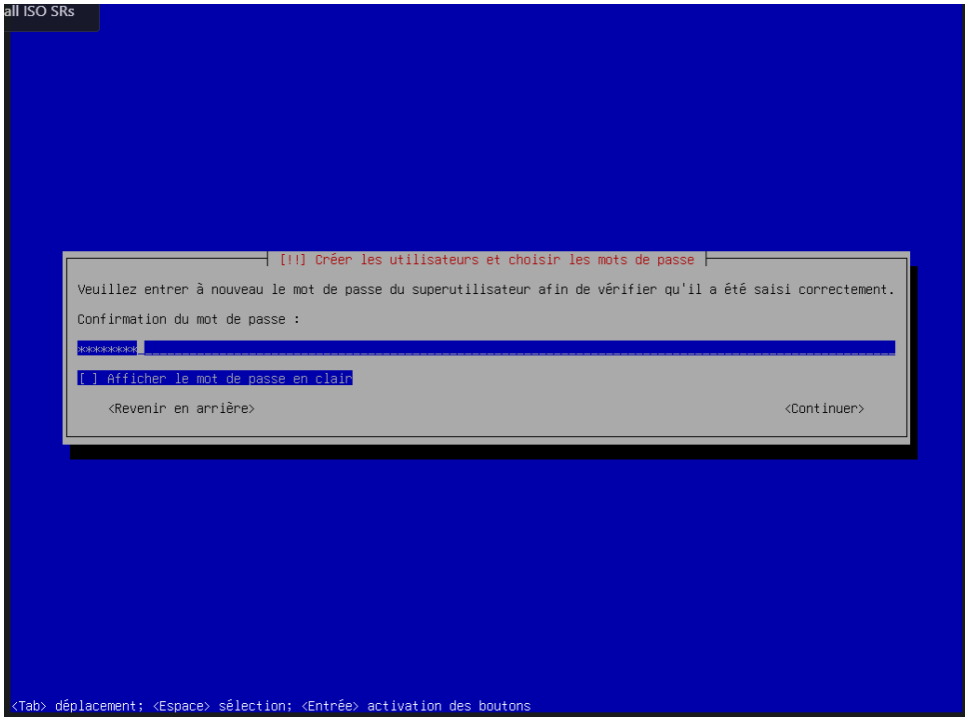

debian 12
Debian GNU/Linux installer menu (BIOS mode)
Graphical install
Install
Advanced options
Accessible dark contrast installer menu
Help
Install with speech synthesis

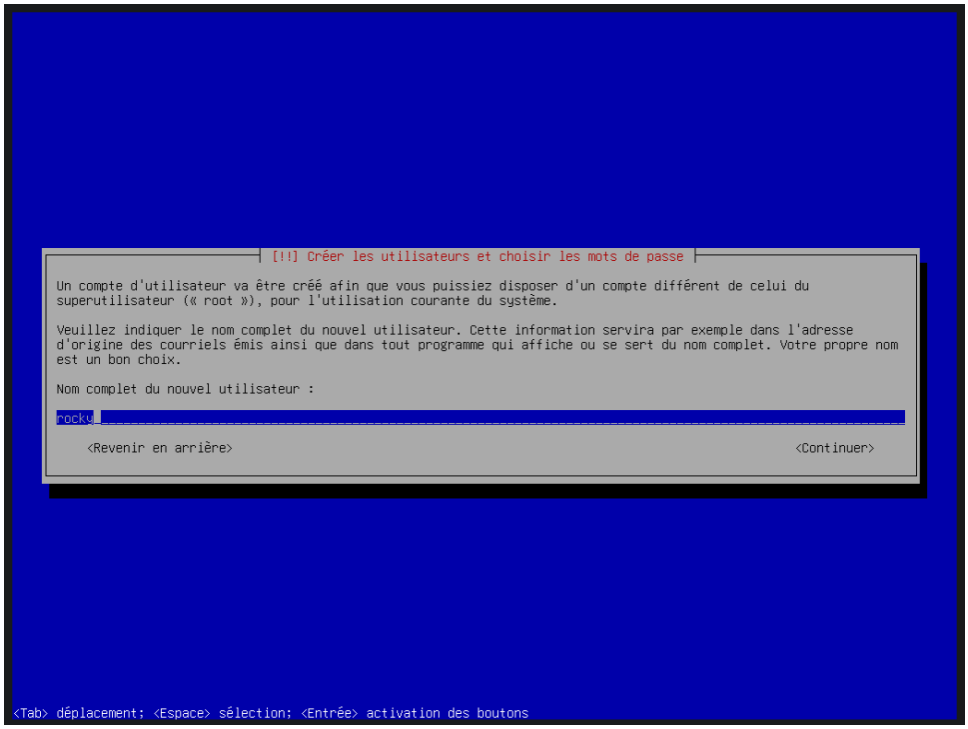

[!!] Choix de la langue
Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.
Language:
C - No localization
Albanian - Shqip
Arabic - عربي
Asturian - Asturianu
Basque - Euskara
Belarusian - Беларуская
Bosnian - Bosanski
Bulgarian - Български
Catalan - Català
Chinese (Simplified) - 中文(简体)
Chinese (Traditional) - 中文(繁體)
Croatian - Hrvatski
Czech - Čeština
Danish - Dansk
Dutch - Nederlands
English - English
Esperanto - Esperanto
Estonian - Eesti
Finnish - Suomi
French - Français
Galician - Galego
Georgian - ქართული
German - Deutsch
Greek - Ελληνικά
Hebrew - עברית
Hungarian - Magyar
Icelandic - Íslenska
Indonesian - Bahasa Indonesia
Irish - Gaeilge
Italian - Italiano
Japanese - 日本語
Kazakh - Қазақ
Korean - 한국어
Kurdish - Kurdî
<Go Back>
<Tab> moves; <Space> selects; <Enter> activates buttons

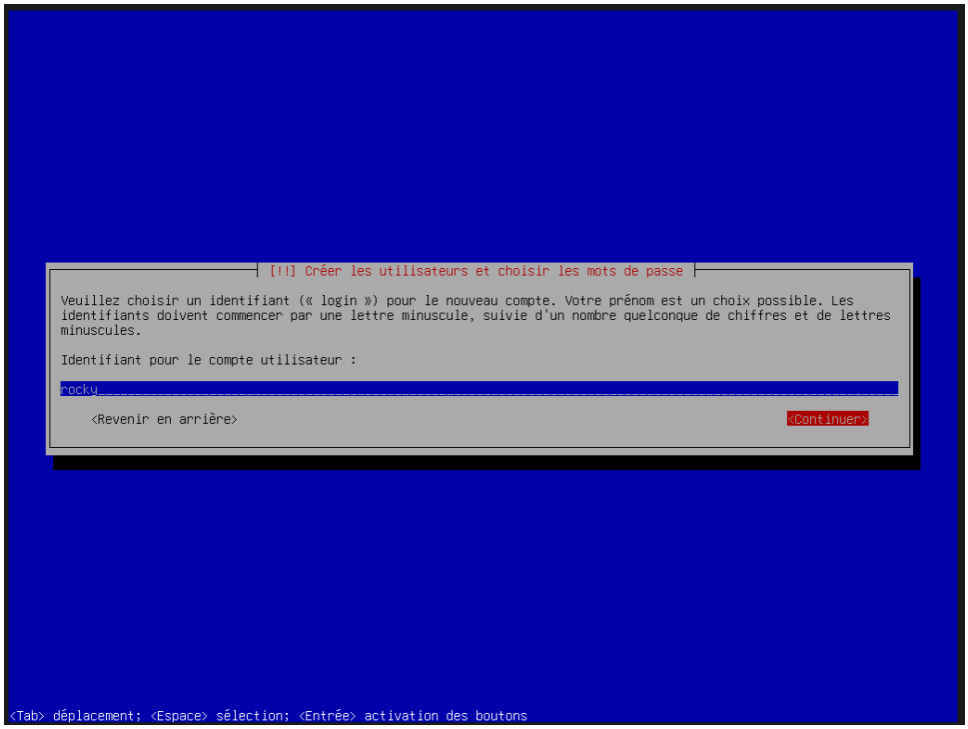

Chargement de composants supplémentaires
53%
Récupération de xfs-modules-6.1.0-15-amd64-di

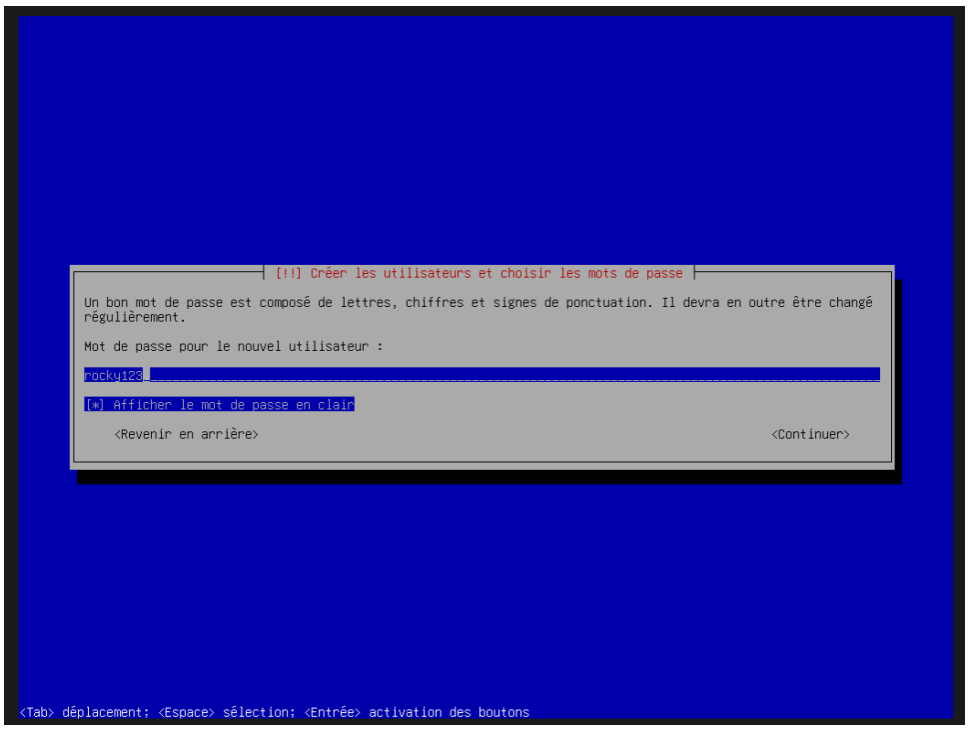

[!] Configurer le réseau
Veuillez indiquer le nom de ce système.
Le nom de machine est un mot unique qui identifie le système sur le réseau. Si vous ne connaissez pas ce nom, demandez-le à votre administrateur réseau. Si vous installez votre propre réseau, vous pouvez mettre ce que vous voulez.
Nom de machine :
debian
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

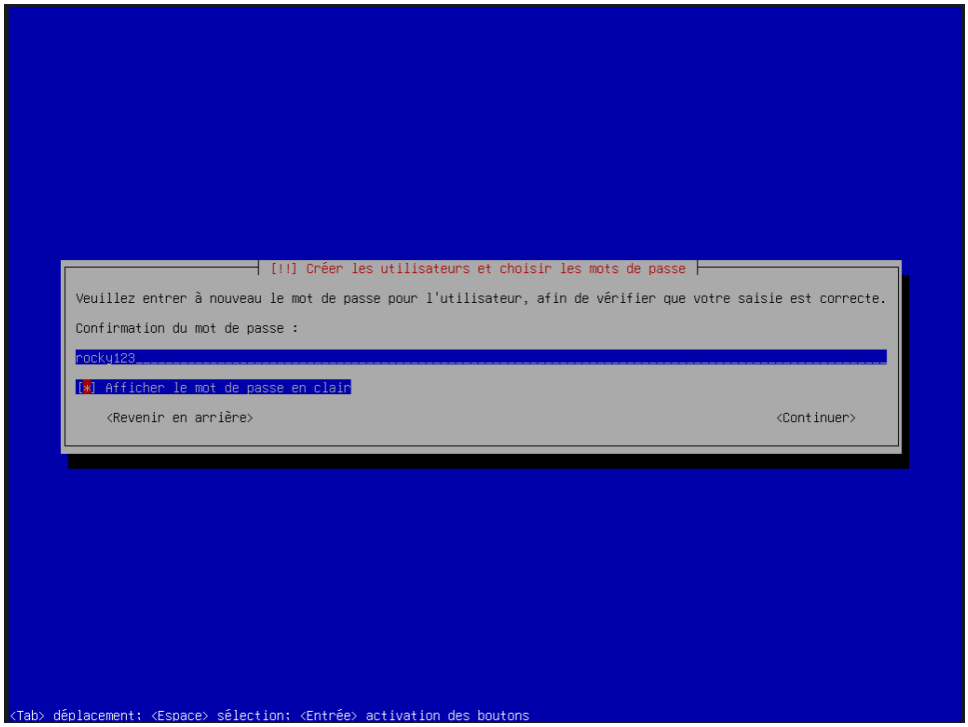

[!!] Créer les utilisateurs et choisir les mots de passe
Vous devez choisir un mot de passe pour le superutilisateur, le compte d'administration du système. Un utilisateur malintentionné ou peu expérimenté qui aurait accès à ce compte peut provoquer des désastres. En conséquence, ce mot de passe ne doit pas être facile à deviner, ni correspondre à un mot d'un dictionnaire ou vous être facilement associé.
Un bon mot de passe est composé de lettres, chiffres et signes de ponctuation. Il devra en outre être changé régulièrement.
Le superutilisateur (« root ») ne doit pas avoir de mot de passe vide. Si vous laissez ce champ vide, le compte du superutilisateur sera désactivé et le premier compte qui sera créé aura la possibilité d'obtenir les privilèges du superutilisateur avec la commande « sudo ».
Par sécurité, rien n'est affiché pendant la saisie.
Mot de passe du superutilisateur (« root ») :
rootroot
[ ] Afficher le mot de passe en clair
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

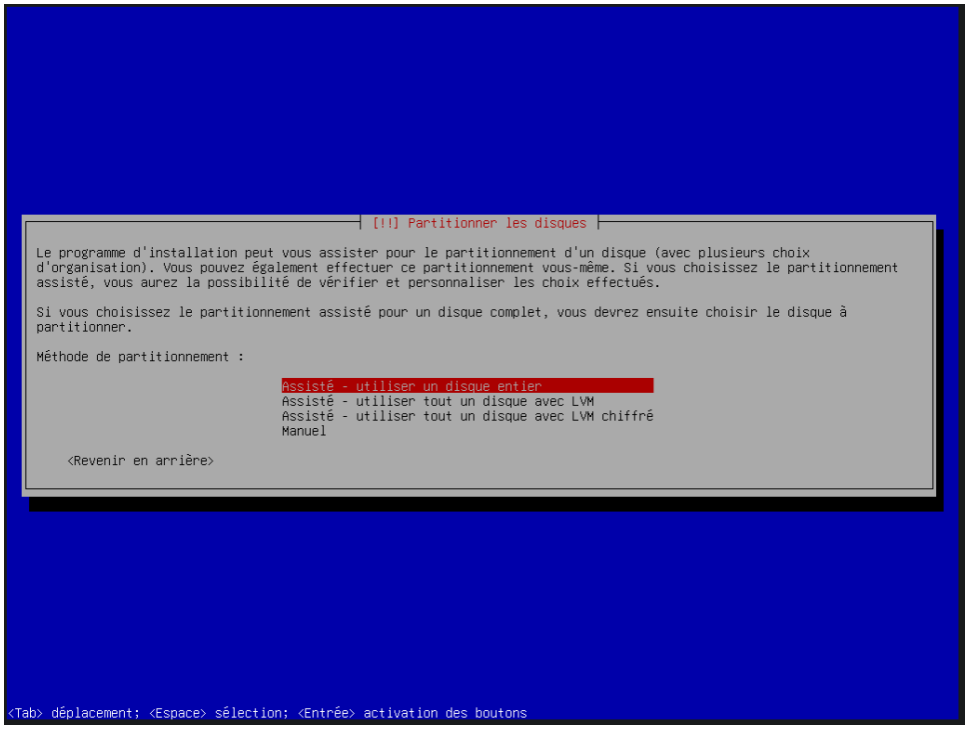

all ISO SRs
[!!] Créer les utilisateurs et choisir les mots de passe
Veuillez entrer à nouveau le mot de passe du superutilisateur afin de vérifier qu'il a été saisi correctement.
Confirmation du mot de passe :
****
[ ] Afficher le mot de passe en clair
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

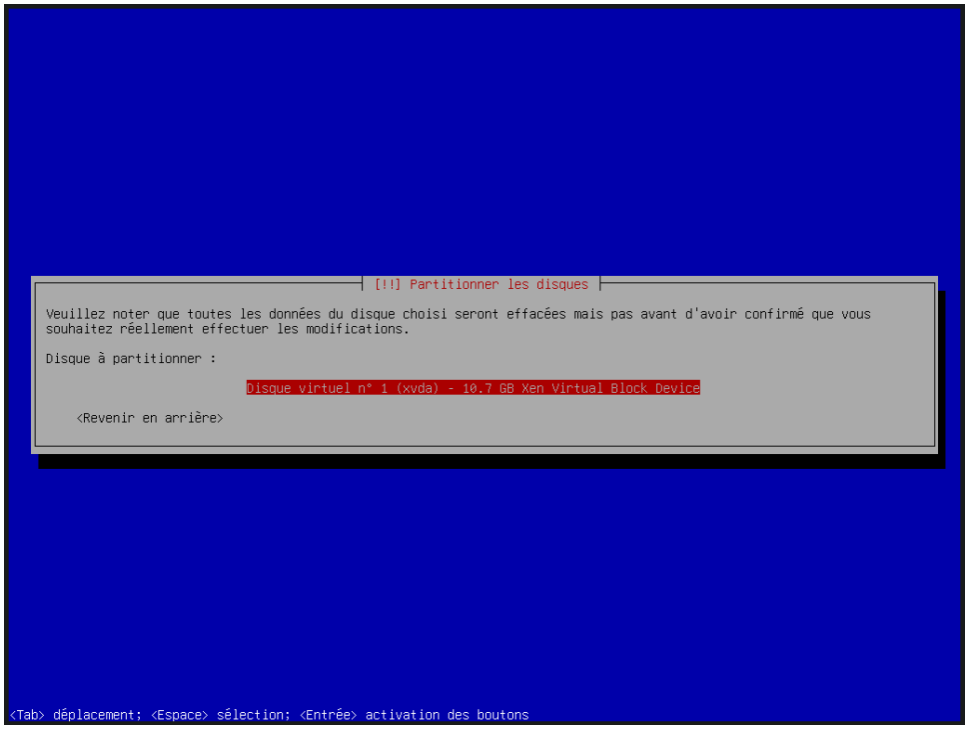

[!!] Créer les utilisateurs et choisir les mots de passe
Un compte d'utilisateur va être créé afin que vous puissiez disposer d'un compte différent de celui du superutilisateur (« root »), pour l'utilisation courante du système.
Veuillez indiquer le nom complet du nouvel utilisateur. Cette information servira par exemple dans l'adresse d'origine des courriels émis ainsi que dans tout programme qui affiche ou se sert du nom complet. Votre propre nom est un bon choix.
Nom complet du nouvel utilisateur :
rocky
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

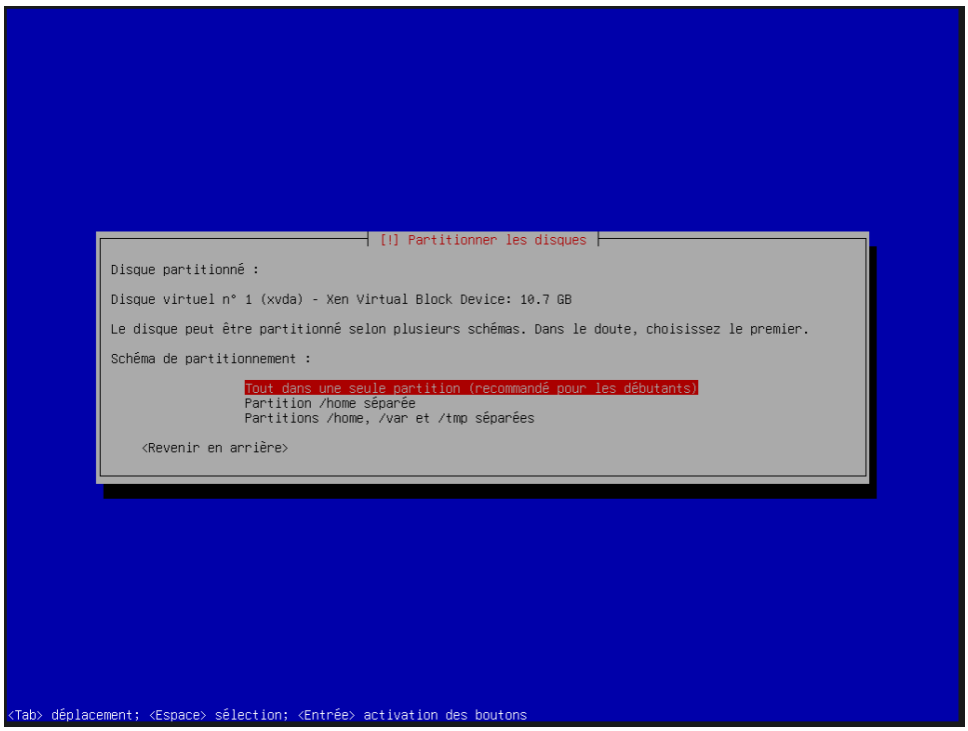

[!!] Créer les utilisateurs et choisir les mots de passe
Veuillez choisir un identifiant (« login ») pour le nouveau compte. Votre prénom est un choix possible. Les identifiants doivent commencer par une lettre minuscule, suivie d'un nombre quelconque de chiffres et de lettres minuscules.
Identifiant pour le compte utilisateur :
rocky
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

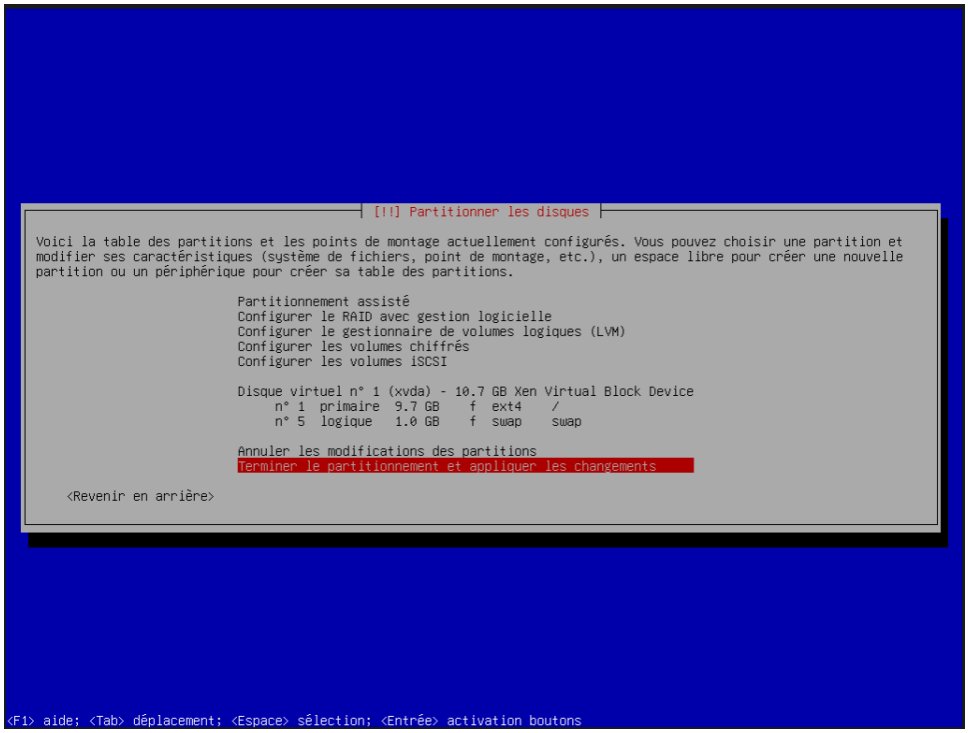

[!!] Créer les utilisateurs et choisir les mots de passe
Un bon mot de passe est composé de lettres, chiffres et signes de ponctuation. Il devra en outre être changé régulièrement.
Mot de passe pour le nouvel utilisateur :
rocky123
[*] Afficher le mot de passe en clair
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

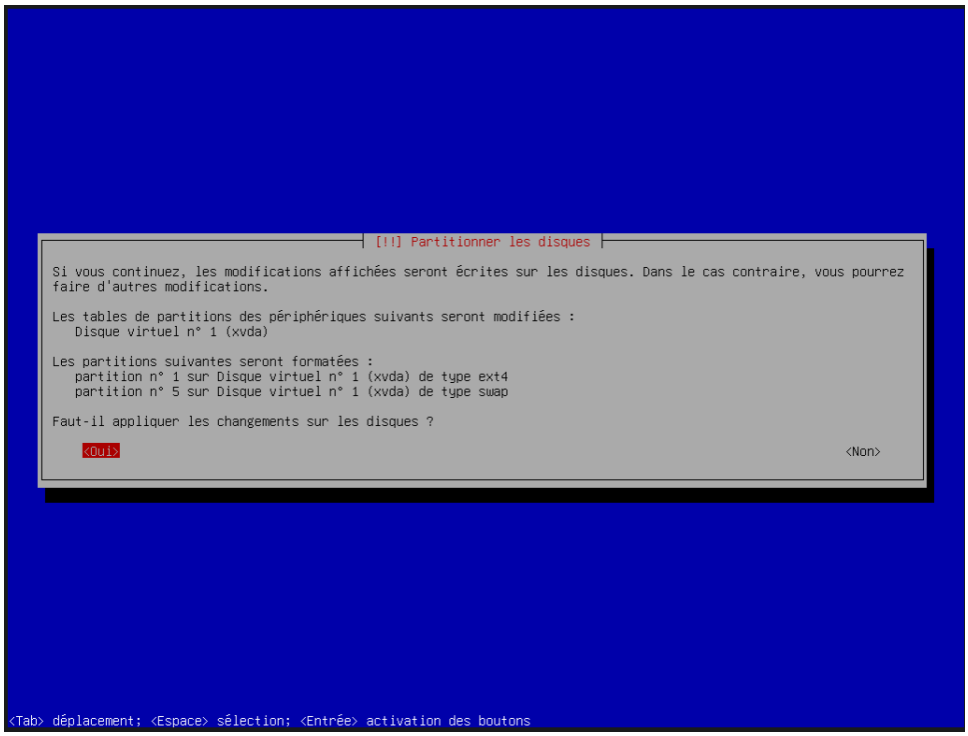

[!!] Créer les utilisateurs et choisir les mots de passe
Veuillez entrer à nouveau le mot de passe pour l'utilisateur, afin de vérifier que votre saisie est correcte.
Confirmation du mot de passe :
rocky123
[*] Afficher le mot de passe en clair
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

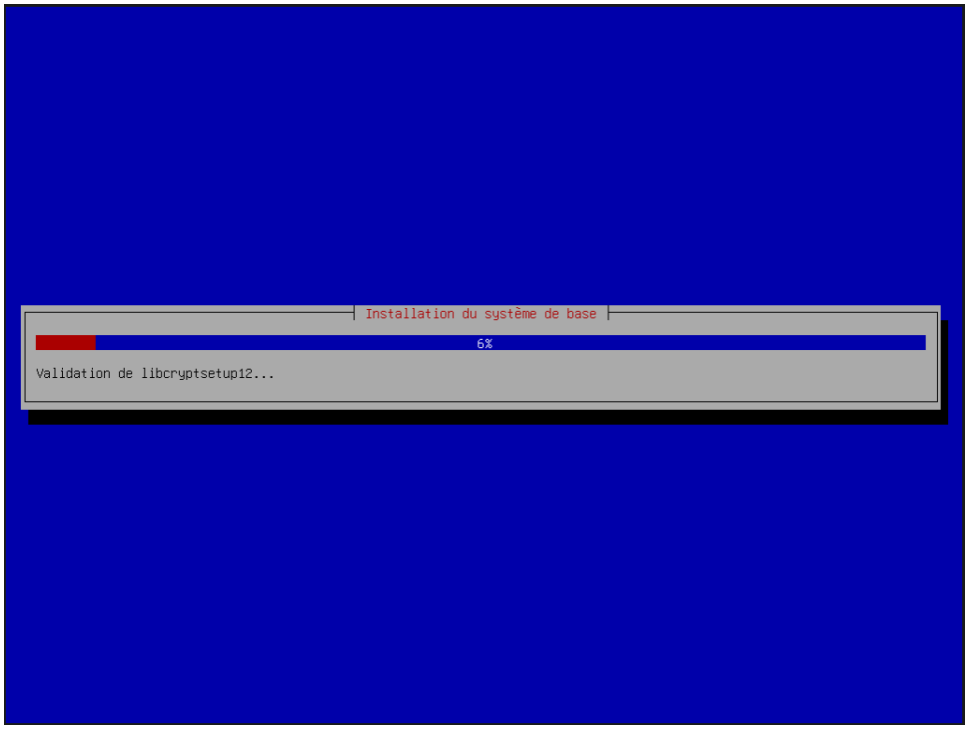

[!!] Partitionner les disques
Le programme d'installation peut vous assister pour le partitionnement d'un disque (avec plusieurs choix d'organisation). Vous pouvez également effectuer ce partitionnement vous-même. Si vous choisissez le partitionnement assisté, vous aurez la possibilité de vérifier et personnaliser les choix effectués.
Si vous choisissez le partitionnement assisté pour un disque complet, vous devrez ensuite choisir le disque à partitionner.
Méthode de partitionnement :
Assisté - utiliser un disque entier
Assisté - utiliser tout un disque avec LVM
Assisté - utiliser tout un disque avec LVM chiffré
Manuel
<Revenir en arrière>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

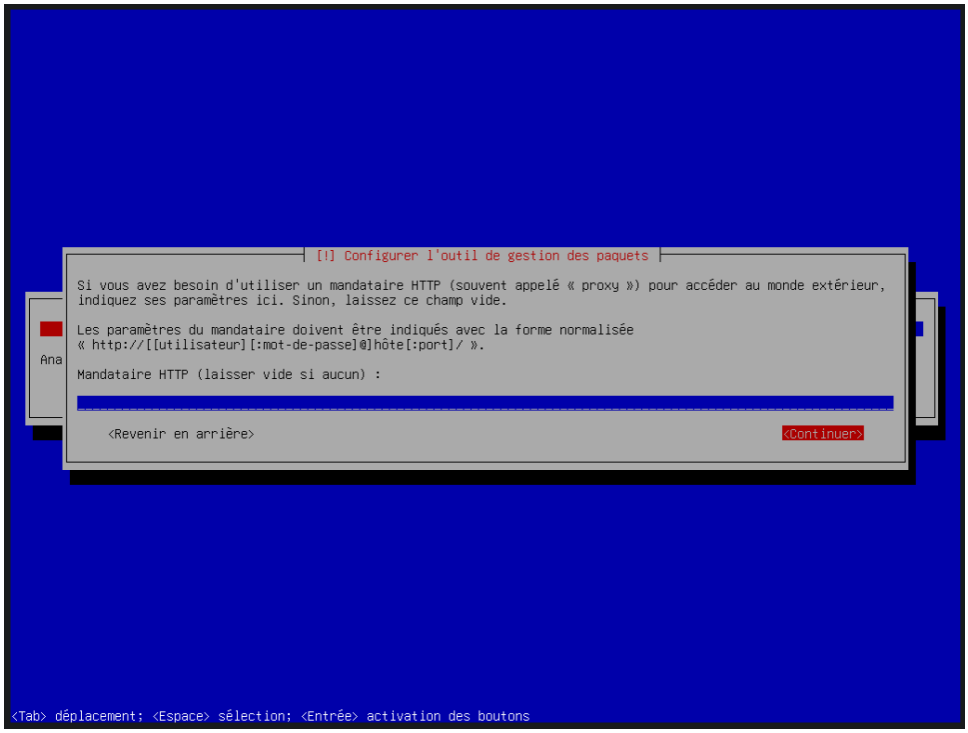

[!!] Partitionner les disques
Veuillez noter que toutes les données du disque choisi seront effacées mais pas avant d'avoir confirmé que vous souhaitez réellement effectuer les modifications.
Disque à partitionner :
Disque virtuel n° 1 (xvda) - 10.7 GB Xen Virtual Block Device
<Revenir en arrière>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

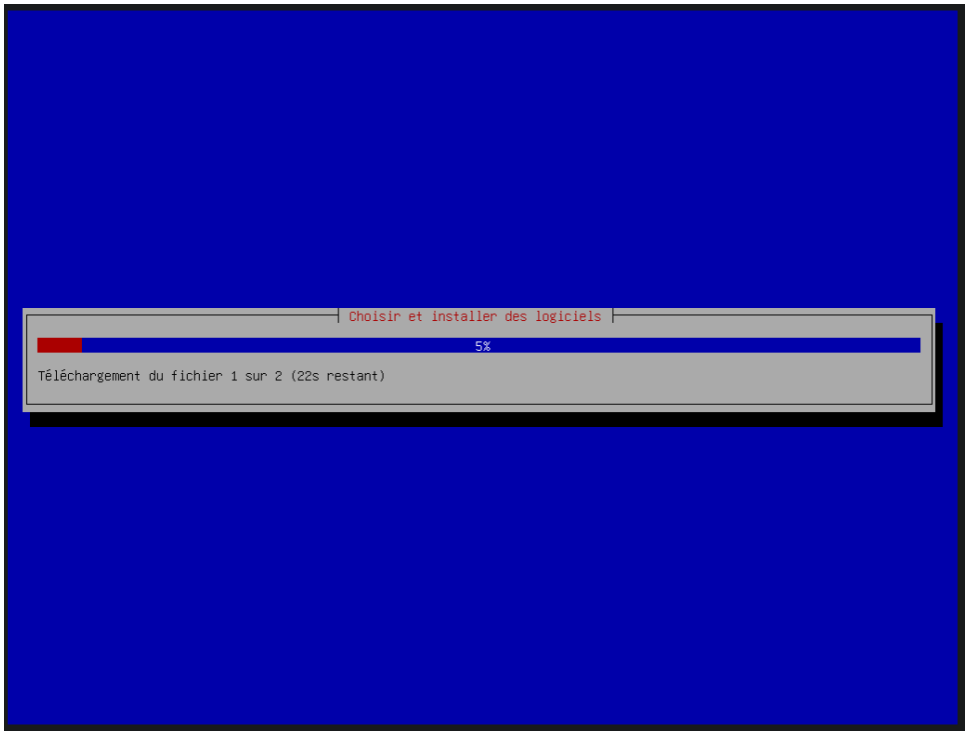

[!] Partitionner les disques
Disque partitionné :
Disque virtuel n° 1 (xvda) - Xen Virtual Block Device: 10.7 GB
Le disque peut être partitionné selon plusieurs schémas. Dans le doute, choisissez le premier.
Schéma de partitionnement :
Tout dans une seule partition (recommandé pour les débutants)
Partition /home séparée
Partitions /home, /var et /tmp séparées
<Revenir en arrière>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

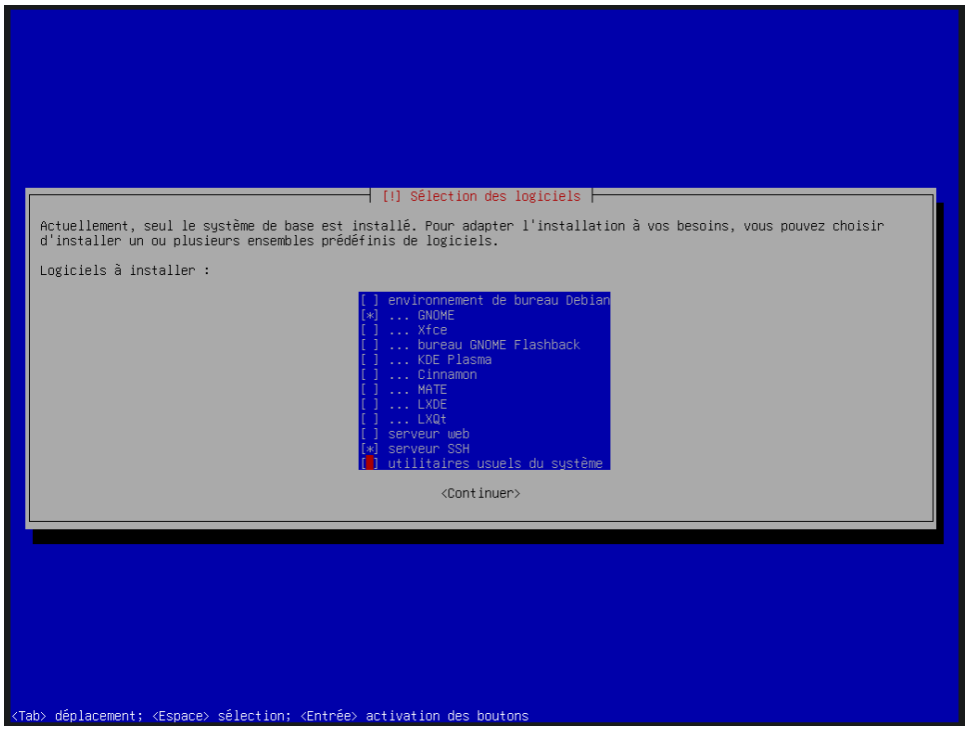

[!!] Partitionner les disques
Voici la table des partitions et les points de montage actuellement configurés. Vous pouvez choisir une partition et modifier ses caractéristiques (système de fichiers, point de montage, etc.), un espace libre pour créer une nouvelle partition ou un périphérique pour créer sa table des partitions.
Partitionnement assisté
Configurer le RAID avec gestion logicielle
Configurer le gestionnaire de volumes logiques (LVM)
Configurer les volumes chiffrés
Configurer les volumes iSCSI
Disque virtuel n° 1 (xvda) - 10.7 GB Xen Virtual Block Device
n° 1 primaire 9.7 GB f ext4 /
n° 5 logique 1.0 GB f swap swap
Annuler les modifications des partitions
Terminer le partitionnement et appliquer les changements
<Revenir en arrière>
<F1> aide; <Tab> déplacement; <Espace> sélection; <Entrée> activation boutons

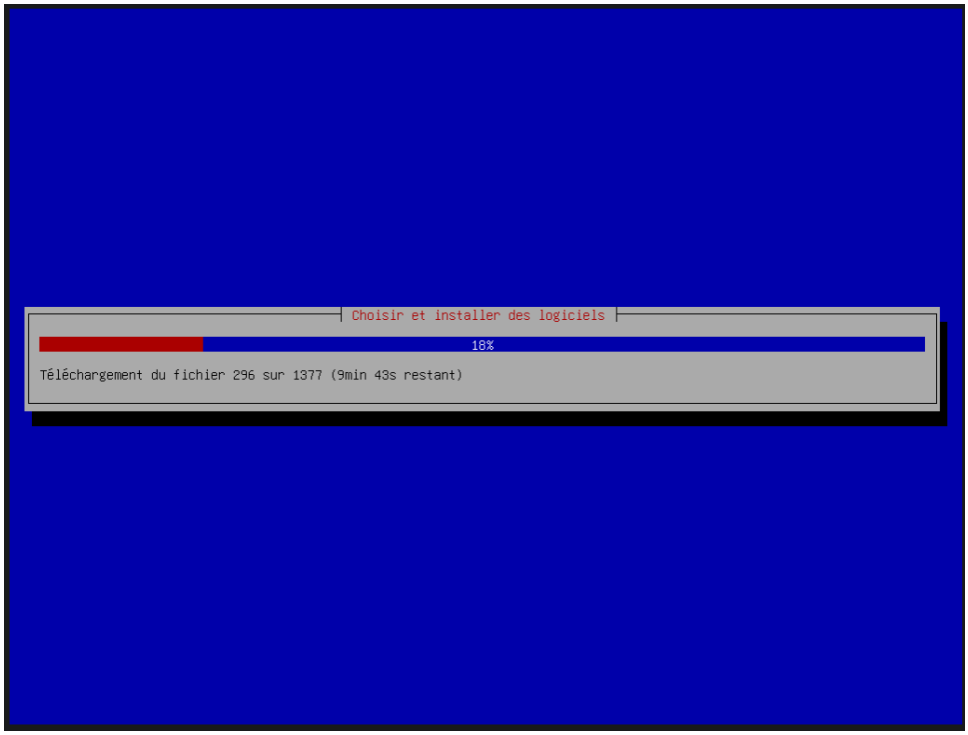

[!!] Partitionner les disques
Si vous continuez, les modifications affichées seront écrites sur les disques. Dans le cas contraire, vous pourrez faire d'autres modifications.
Les tables de partitions des périphériques suivants seront modifiées :
Disque virtuel n° 1 (xvda)
Les partitions suivantes seront formatées :
partition n° 1 sur Disque virtuel n° 1 (xvda) de type ext4
partition n° 5 sur Disque virtuel n° 1 (xvda) de type swap
Faut-il appliquer les changements sur les disques ?
<Oui>
<Non>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

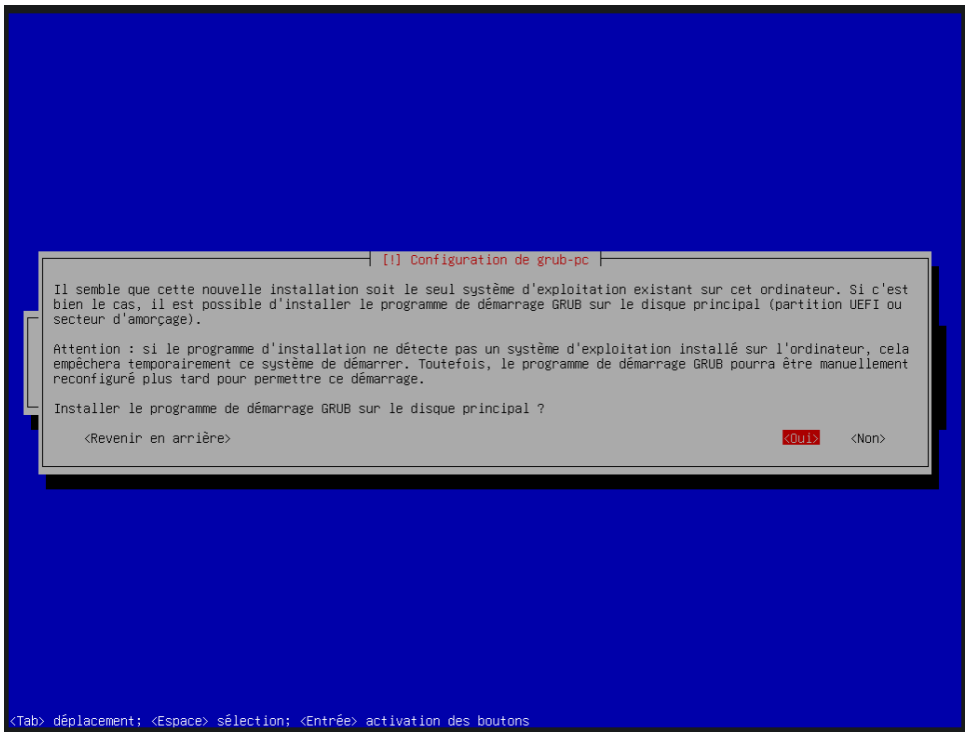

Installation du système de base
6%
Validation de libcryptsetup12...

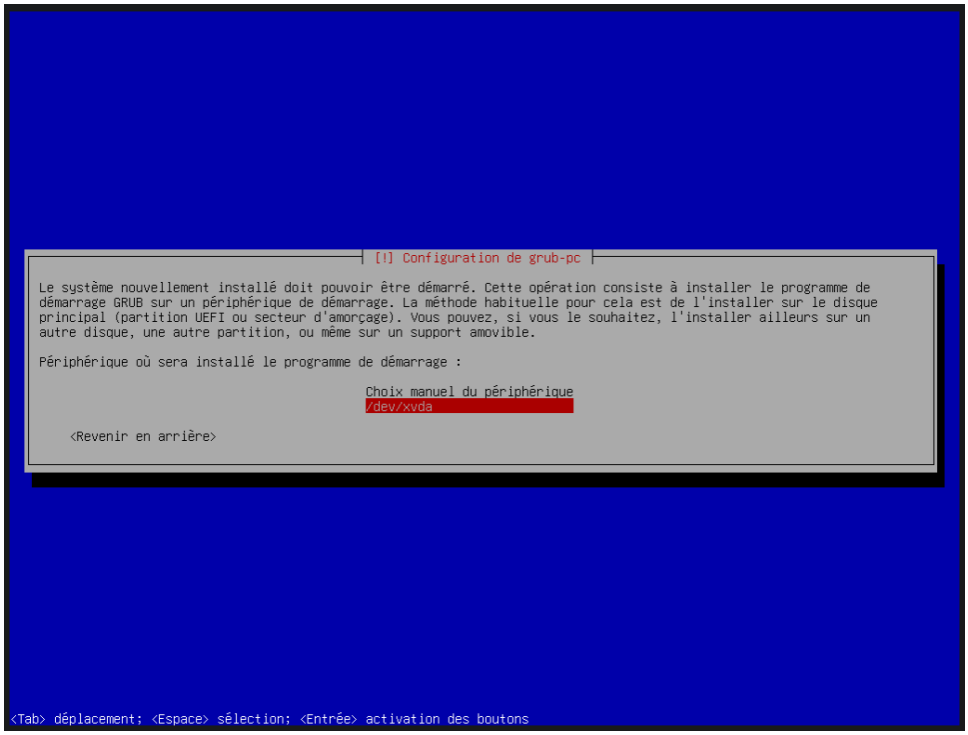

[!] Configurer l'outil de gestion des paquets
Si vous avez besoin d'utiliser un mandataire HTTP (souvent appelé « proxy ») pour accéder au monde extérieur, indiquez ses paramètres ici. Sinon, laissez ce champ vide.
Les paramètres du mandataire doivent être indiqués avec la forme normalisée « http://[[utilisateur][:mot-de-passe]@]hôte[:port]/ ».
Mandataire HTTP (laisser vide si aucun) :
<Revenir en arrière>
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons

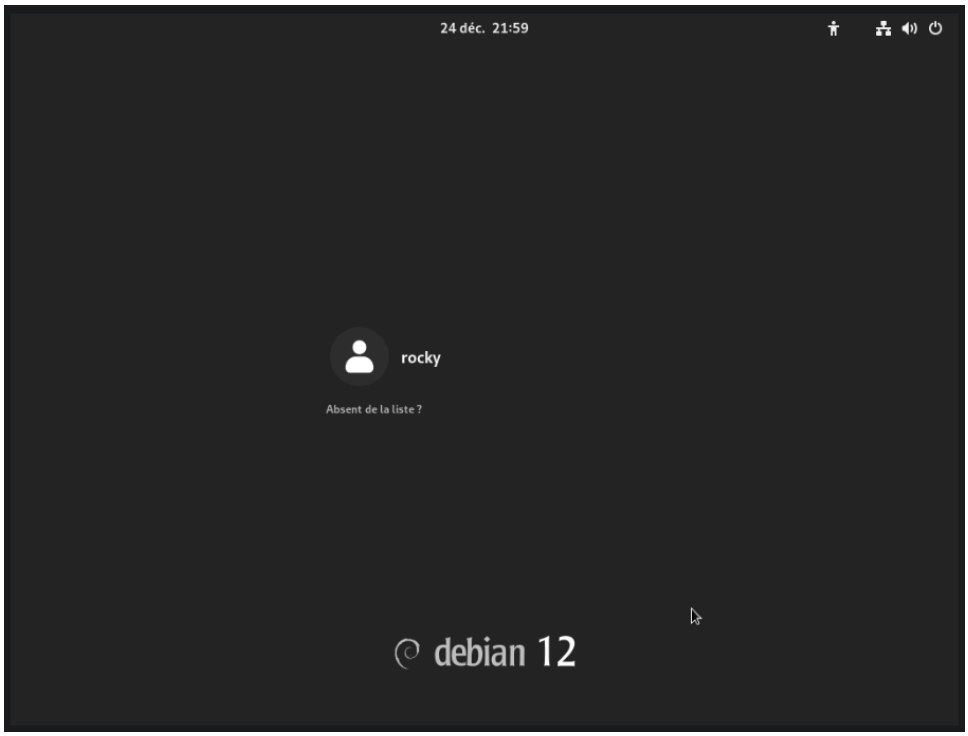

Choisir et installer des logiciels
5%
Téléchargement du fichier 1 sur 2 (22s restant)


[!] Sélection des logiciels
Actuellement, seul le système de base est installé. Pour adapter l'installation à vos besoins, vous pouvez choisir d'installer un ou plusieurs ensembles prédéfinis de logiciels.
Logiciels à installer :
[ ] environnement de bureau Debian
[*] ... GNOME
[ ] ... Xfce
[ ] ... bureau GNOME Flashback
[ ] ... KDE Plasma
[ ] ... Cinnamon
[ ] ... MATE
[ ] ... LXDE
[ ] ... LXQt
[ ] serveur web
[*] serveur SSH
[ ] utilitaires usuels du système
<Continuer>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons


Choisir et installer des logiciels
18%
Téléchargement du fichier 296 sur 1377 (9min 43s restant)


[!] Configuration de grub-pc
Il semble que cette nouvelle installation soit le seul système d'exploitation existant sur cet ordinateur. Si c'est bien le cas, il est possible d'installer le programme de démarrage GRUB sur le disque principal (partition UEFI ou secteur d'amorçage).
Attention : si le programme d'installation ne détecte pas un système d'exploitation installé sur l'ordinateur, cela empêchera temporairement ce système de démarrer. Toutefois, le programme de démarrage GRUB pourra être manuellement reconfiguré plus tard pour permettre ce démarrage.
Installer le programme de démarrage GRUB sur le disque principal ?
<Revenir en arrière>
<Oui>
<Non>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons


[!] Configuration de grub-pc
Le système nouvellement installé doit pouvoir être démarré. Cette opération consiste à installer le programme de démarrage GRUB sur un périphérique de démarrage. La méthode habituelle pour cela est de l'installer sur le disque principal (partition UEFI ou secteur d'amorçage). Vous pouvez, si vous le souhaitez, l'installer ailleurs sur un autre disque, une autre partition, ou même sur un support amovible.
Périphérique où sera installé le programme de démarrage :
Choix manuel du périphérique
/dev/xvda
<Revenir en arrière>
<Tab> déplacement; <Espace> sélection; <Entrée> activation des boutons


24 déc. 21:59
rocky
Absent de la liste ?
debian 12

- Configuration of OpenSSH on each, as specified.

The openssh setup will be the same for the 2 vms

First, we install the openssh-server

```
Rocky Linux 9.3 (Blue Onyx)
Kernel 5.14.0-362.8.1.el9_3.x86_64 on an x86_64

server login: root
Password:
[root@server ~]# sudo dnf install openssh-server_
```

then we want to change its default port to 940

```
[root@server ~]# sudo nano /etc/ssh/sshd_config
```

```
# If you want to change the port on a SELinux system, you have to tell
# SELinux about this change.
# semanage port -a -t ssh_port_t -p tcp #PORTNUMBER
#
Port 940_
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::
```

Then we install firewalld to open the port 940

```
[root@server ~]# sudo dnf install firewalld
```

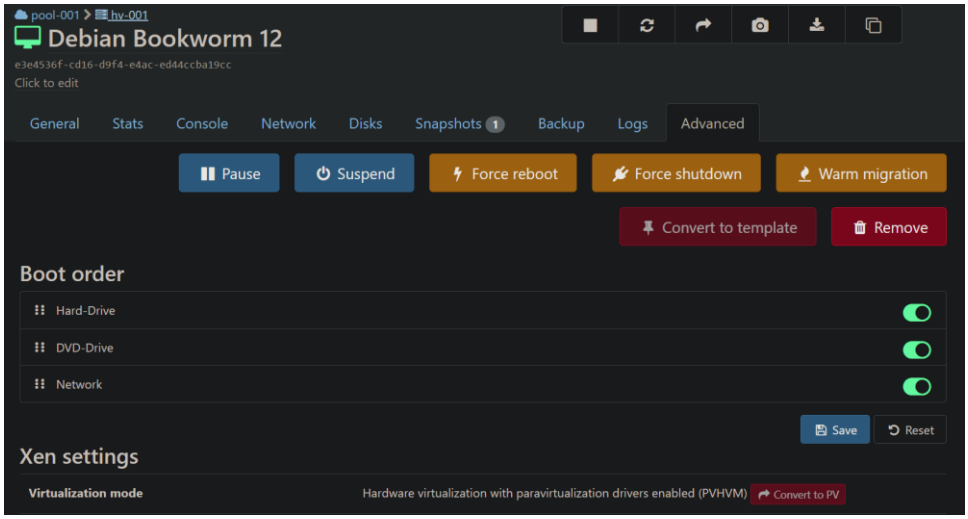
```
[root@server ~]# firewall-cmd --zone=public --add-port=940/tcp

success
[root@server ~]#
[root@server ~]# firewall-cmd --zone=public --list-ports
940/tcp
[root@server ~]#
```

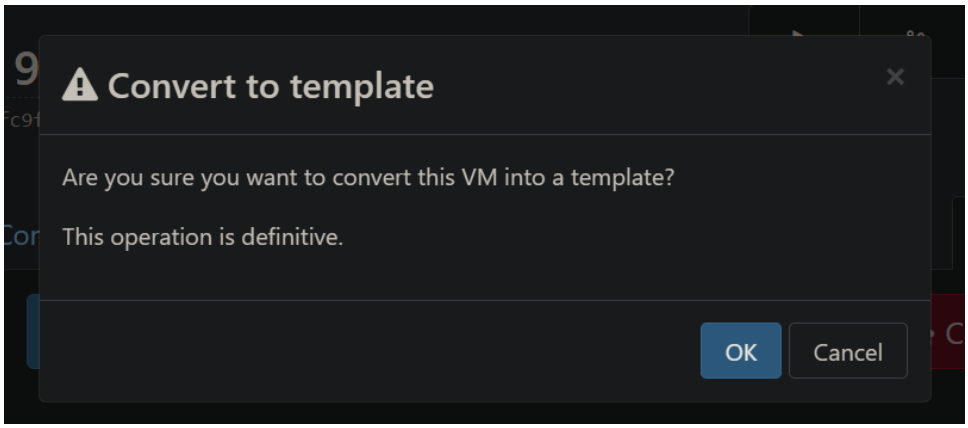
After that we restart our openssh service

```
[root@server ~]# systemctl restart sshd
```

- Conversion of these configured VMs into templates for future deployments.

To turn our vm into template we just go to the vm and then go to Advanced and select convert into template





6. References

- [Xen Orchestra | XO documentation (xen-orchestra.com)]
- [truenas.com/docs/]