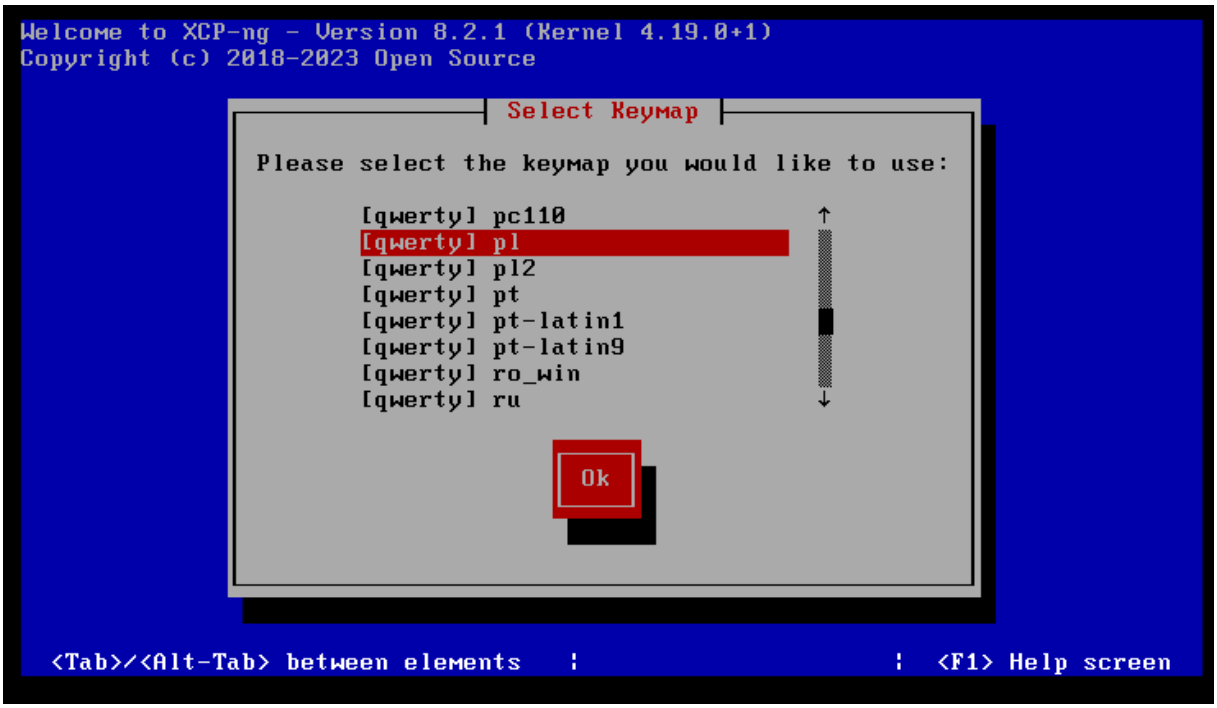
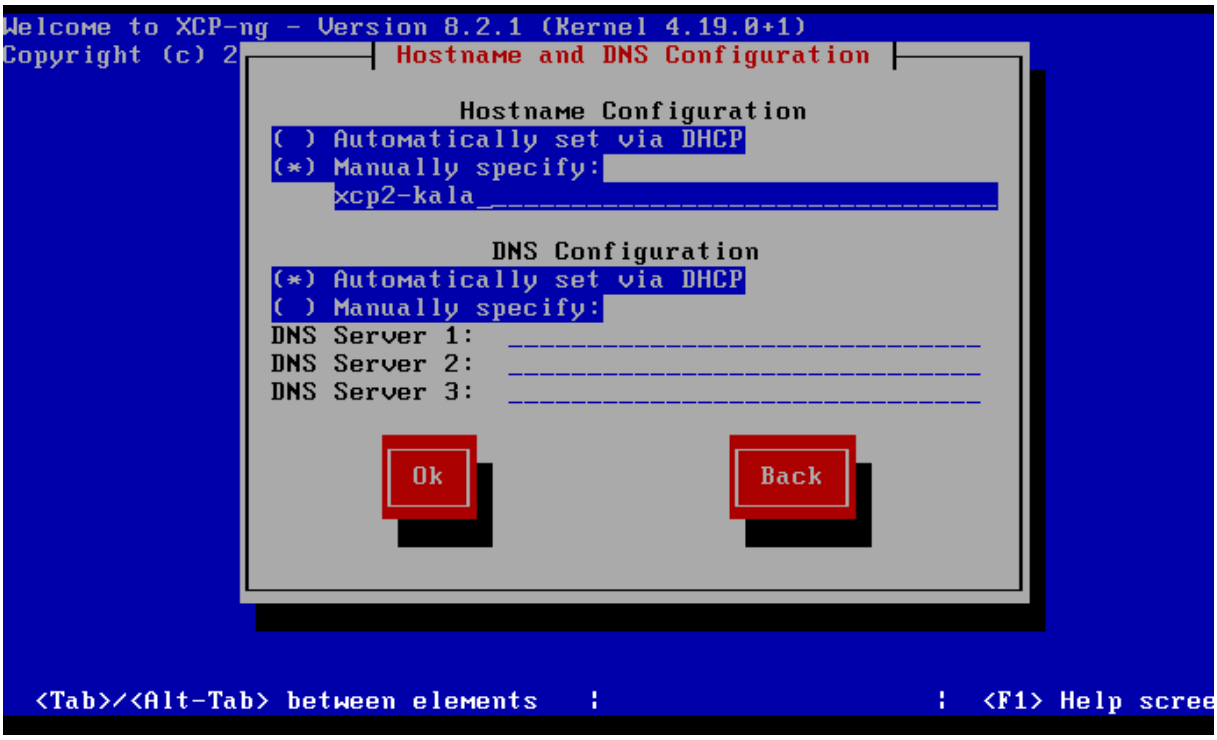
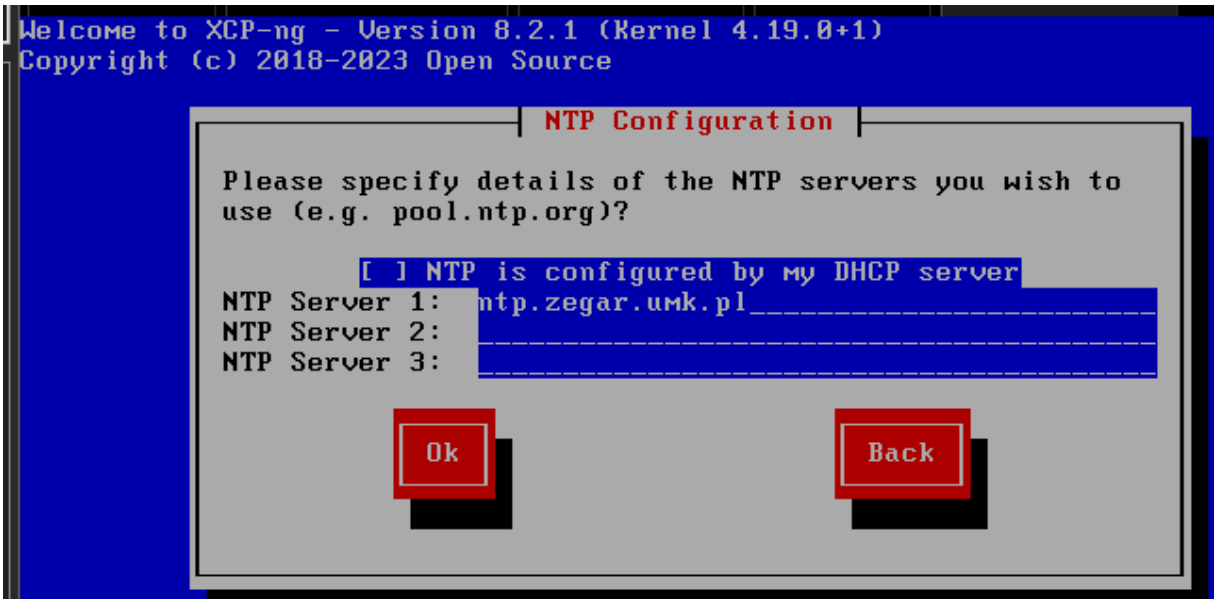
Zad 1



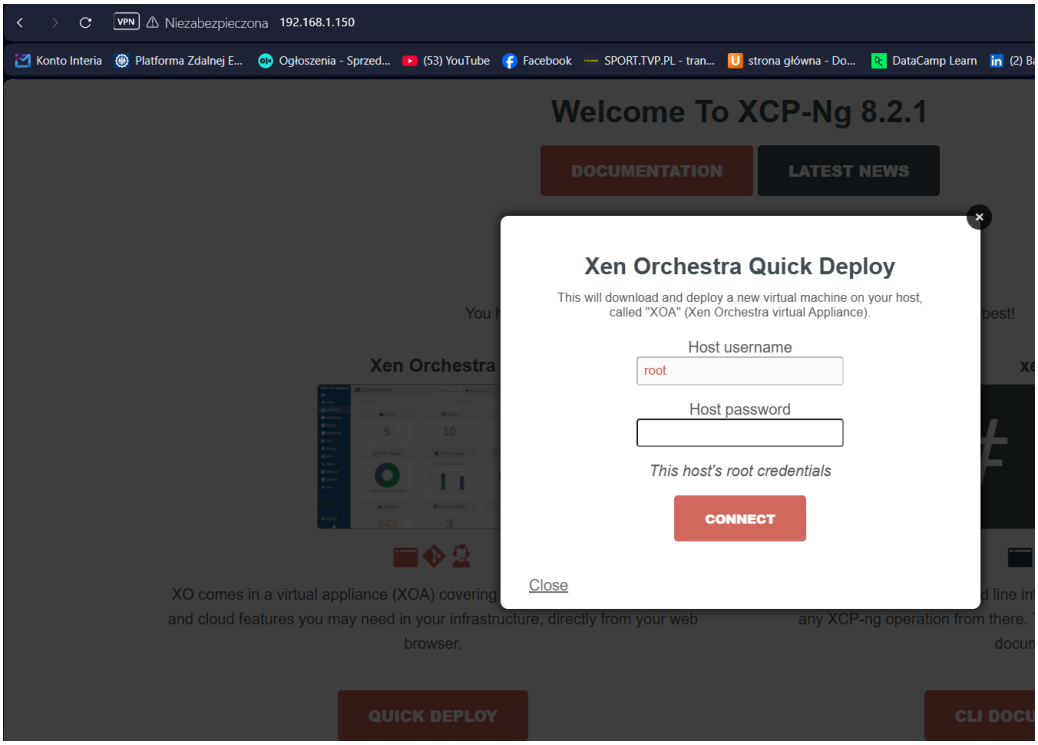
Wybieramy język i przekalkujemy dalej



Ustawiamy nazwę



W przeglądarce wpisujemy adres maszyny i klikamy „Quick deploy”:



Na nowej maszynie (u mnie debian11):

Apt update

Apt install mc git

```
root@debian11:~# git clone https://github.com/ronivay/XenOrchestraInstallerUpdater.git
Klonowanie do „XenOrchestraInstallerUpdater”...
remote: Enumerating objects: 1529, done.
remote: Counting objects: 100% (412/412), done.
remote: Compressing objects: 100% (136/136), done.
remote: Total 1529 (delta 289), reused 276 (delta 276), pack-reused 1117 (from 3)
Pobieranie obiektów: 100% (1529/1529), 395.59 KiB | 3.38 MiB/s, gotowe.
Rozwiązywanie delt: 100% (914/914), gotowe.
root@debian11:~# mkdir /etc/ssl/xo
root@debian11:~# cd /etc/ssl/xo
root@debian11:/etc/ssl/xo# openssl req -newkey rsa:4096 \
> -x509\
> -sha256 \
> -days 3650 \
> -nodes \
> -out xo.crt\
> -keyout xo.key_
```

```
Country Name (2 letter code) [AU]:PL
State or Province Name (full name) [Some-State]:
Locality Name (eg, city) []:
Organization Name (eg, company) [Internet Widgits Pty Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (e.g. server FQDN or YOUR name) []:
Email Address []:
root@debian11:/etc/ssl/xo# cd /root/XenOrchestraInstallerUpdater/
root@debian11:~/XenOrchestraInstallerUpdater# cp sample.xo-install.cfg xO-install.cf
root@debian11:~/XenOrchestraInstallerUpdater# mcedit xo-install.cf

root@debian11:~/XenOrchestraInstallerUpdater# mcedit xo-install.sh

root@debian11:~/XenOrchestraInstallerUpdater# cp sample.xo-install.cfg xO-install.cfg
root@debian11:~/XenOrchestraInstallerUpdater# mcedit xO-install.cfg

root@debian11:~/XenOrchestraInstallerUpdater#
```

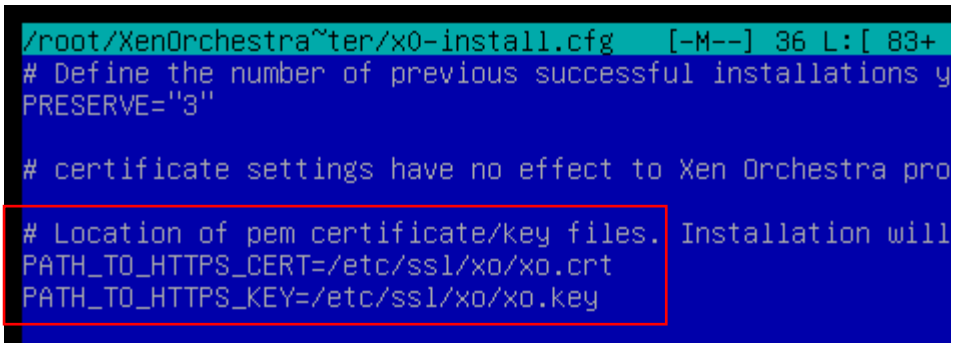
Modyfikujemy plik:

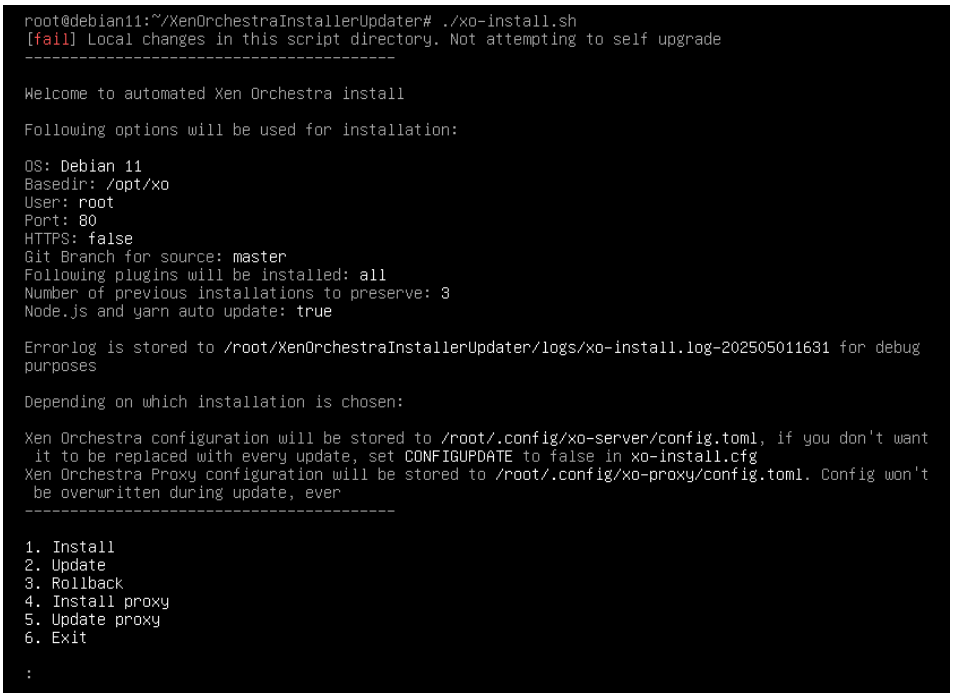
```
/root/XenOrchestra~ter/xO-install.cfg   [-M--]  9 L:[  1+19  20/146] *(615 /6861b) 0034 0x022 [*][X]
# Optional user that runs the service
# default: root
# no effect to Xen Orchestra proxy
#XOUSER=

# Optional parameter if running as non privileged user to use sudo when mounting/umounting shares in
# no effect if XOUSER is root
# options true/false
# no effect to Xen Orchestra proxy
#USESUDO=false

# Optional parameter to generate sudoers config when missing completely if USESUDO is set to true
# no effect if XOUSER is root
# options true/false
# no effect to Xen Orchestra proxy
#GENSUDO=false

# Port number where xen-orchestra service is bound
# no effect to Xen Orchestra proxy
PORT="443"
```





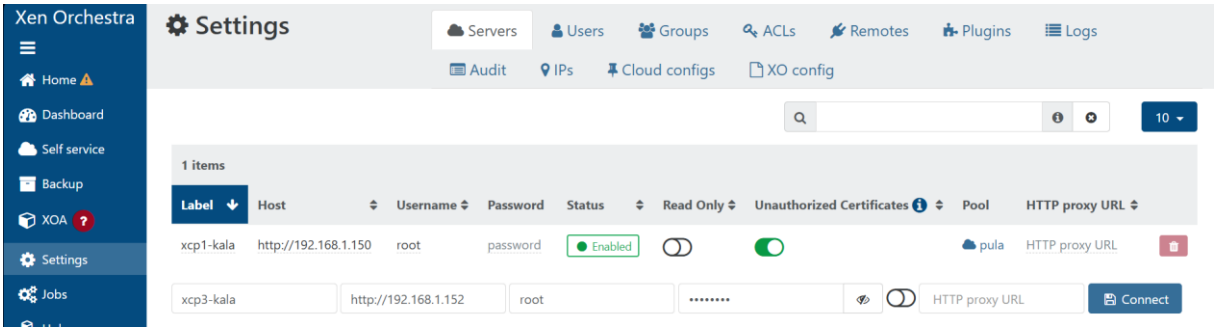
Wybieramy „1” i czekamy...

Po zakończeniu instalacji w przeglądarce wpisujemy adres IP maszyny na której dokonaliśmy instalacji. (http://..). Wpisujemy dane logowania:

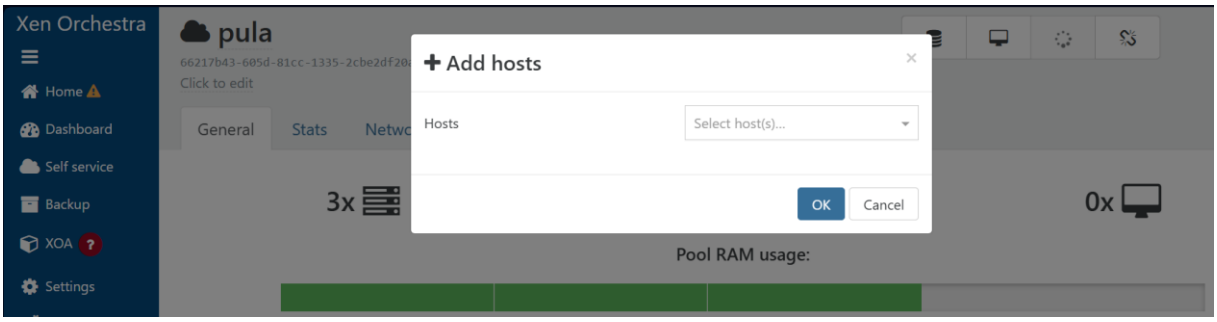
L: admin@admin.net

H: admin

Dodajemy węzły:



Tworzymy pule:



Tworzymy zasób iSCSI:

Na zewnętrznej masyznie (u mnie Debian 11):

apt update
apt install targetcli-fb -y

Na węzłach wydajemy polecenie :

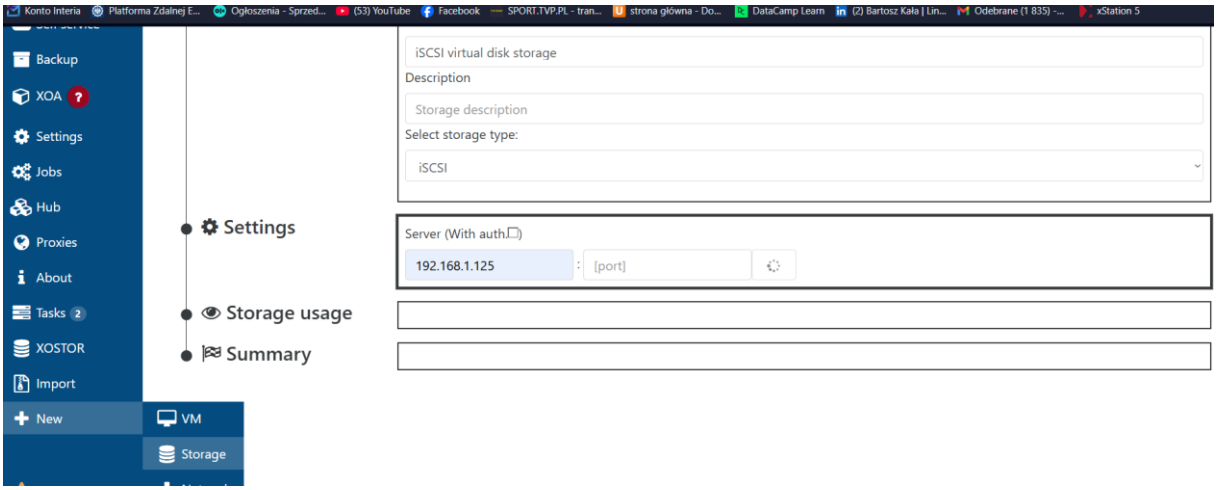
```
[14:23 xcp1-kala ~]# cat /etc/iscsi/initiatorname.iscsi
InitiatorName=iqn.2025-05.com.example:3e2d5566
InitiatorAlias=xcp1-kala
[14:23 xcp1-kala ~]#
```

Na osobnej maszynie:

```
root@debian11:~# systemctl enable targetclid.service
root@debian11:~# systemctl start targetclid.service
root@debian11:~# mkdir /iscsi
root@debian11:~# targetcli
targetcli shell version 2.1.53
Copyright 2011-2013 by Datera, Inc and others.
For help on commands, type 'help'.

/> cd /backstores/fileio
/backstores/fileio> create disk1 /iscsi/disk1.img 75G
Created fileio disk1 with size 80530636800
/backstores/fileio> cd /iscsi
/iscsi> create iqn.2025-05.private:storage.targetmd1/tpg1/luns
Could not create Target in configFS
/iscsi> create iqn.2025-05.private:storage.targetmd1
Created target iqn.2025-05.private:storage.targetmd1.
Created TPG 1.
Global pref auto_add_default_portal=true
Created default portal listening on all IPs (0.0.0.0), port 3260.
/iscsi> cd /iscsi/iqn.2025-05.private:storage.targetmd1/tpg1/luns
/iscsi/iqn.20...md1/tpg1/luns> create /backstores/fileio/disk1
Created LUN 0.
/iscsi/iqn.20...md1/tpg1/luns> cd /iscsi/iqn.2025-05.private:storage.targetmd1/tpg1/acls
/iscsi/iqn.20...md1/tpg1/acls> create iqn.2025-05.com.example:3e2d5566
Created Node ACL for iqn.2025-05.com.example:3e2d5566
Created mapped LUN 0.
/iscsi/iqn.20...md1/tpg1/acls> create iqn.2025-05.com.example:1e838837
Created Node ACL for iqn.2025-05.com.example:1e838837
Created mapped LUN 0.
/iscsi/iqn.20...md1/tpg1/acls> create iqn.2025-05.com.example:b3e69a20
Created Node ACL for iqn.2025-05.com.example:b3e69a20
Created mapped LUN 0.
/iscsi/iqn.20...md1/tpg1/acls> cd /
/> saveconfig
Configuration saved to /etc/rtslib-fb-target/saveconfig.json
/> _
```

Podłączamy zasób:



Importujemy obraz ISO:

Na interesującym nas węźle:

Mkdir /var/opt

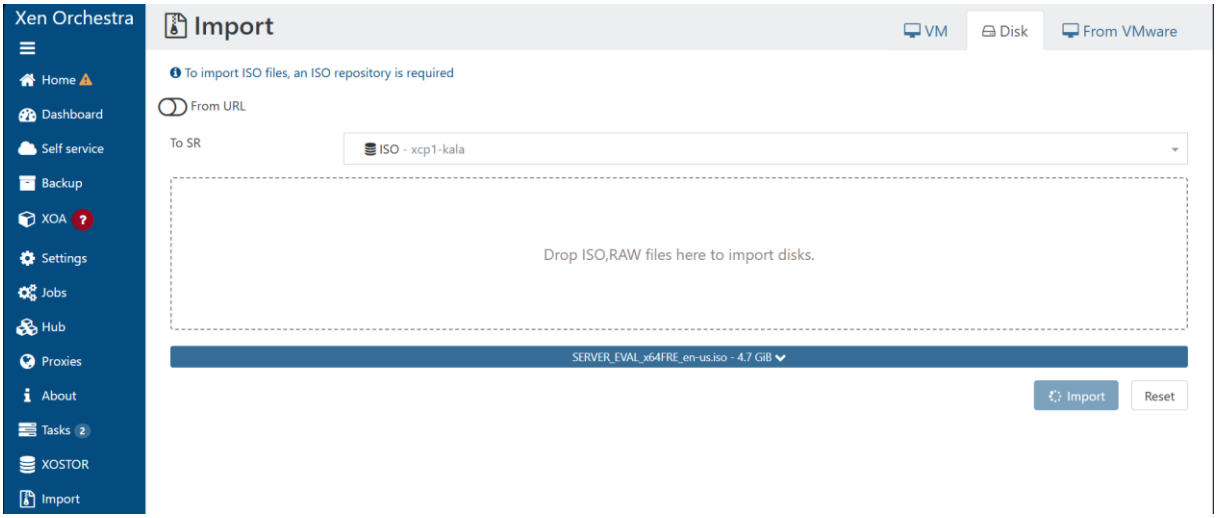
xe host-list

xe sr-create name-label=ISO type=iso device-config:location=/var/opt/ISO device-config:legacy_mode=true content-type=iso host-uuid=<UUID_Hosta>

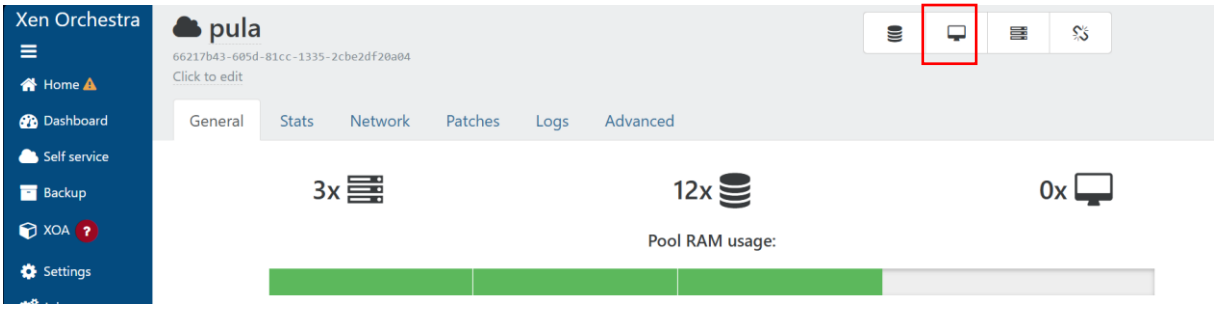
xe pbd-plug uuid=6d218ea7-d16e-a478-8a94-776d576b9f63

(uuid klastra pobieramy za pomącą komendy: xe pool-list)

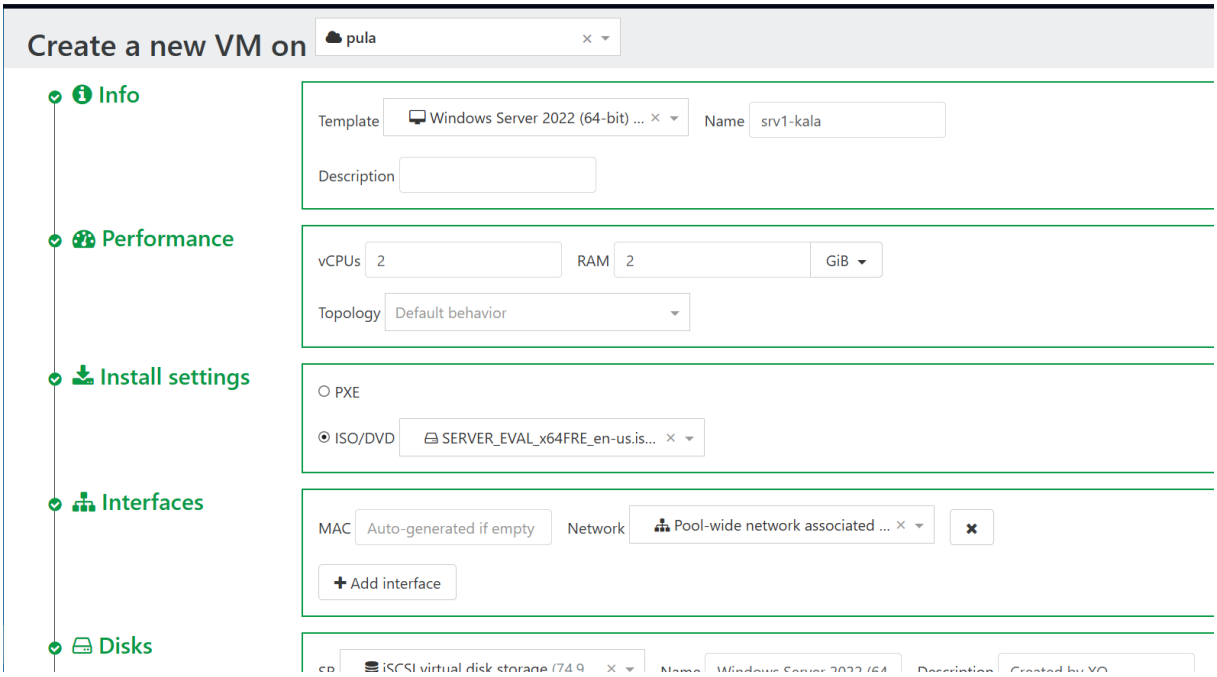
(importujemy z URL/ możemy też z dysku lokalnego)

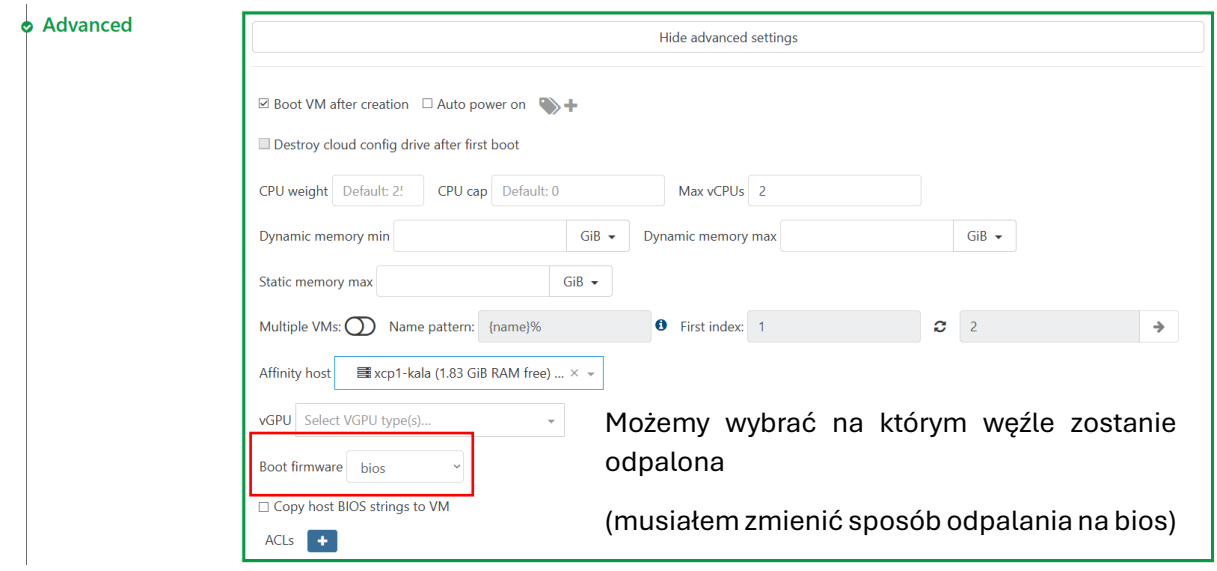


Tworzymy wirtualną maszynę:



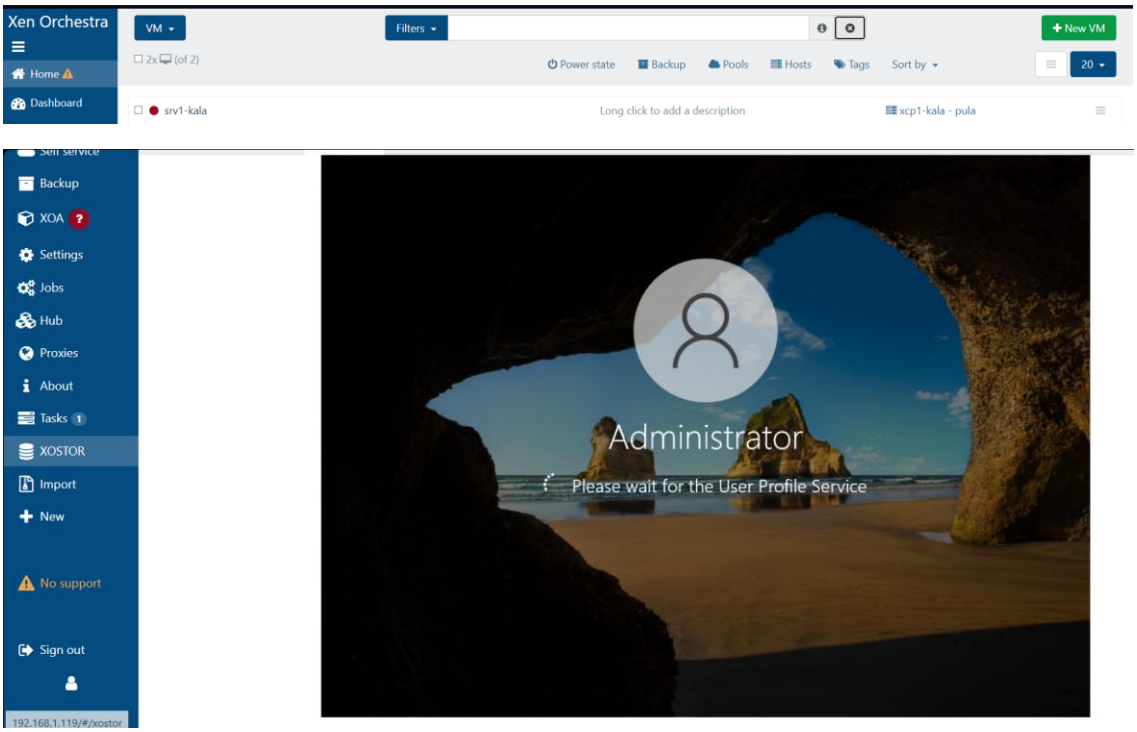
Uzupełniamy:

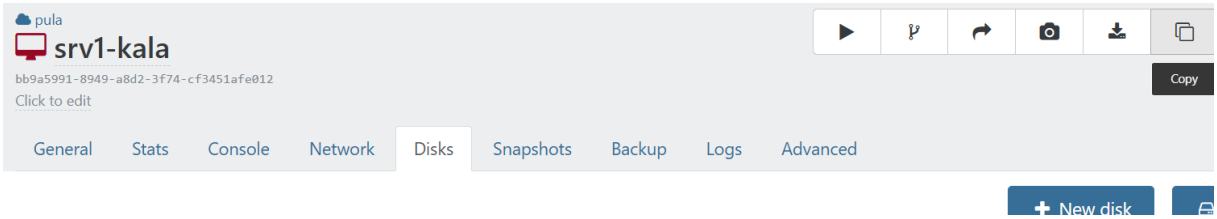


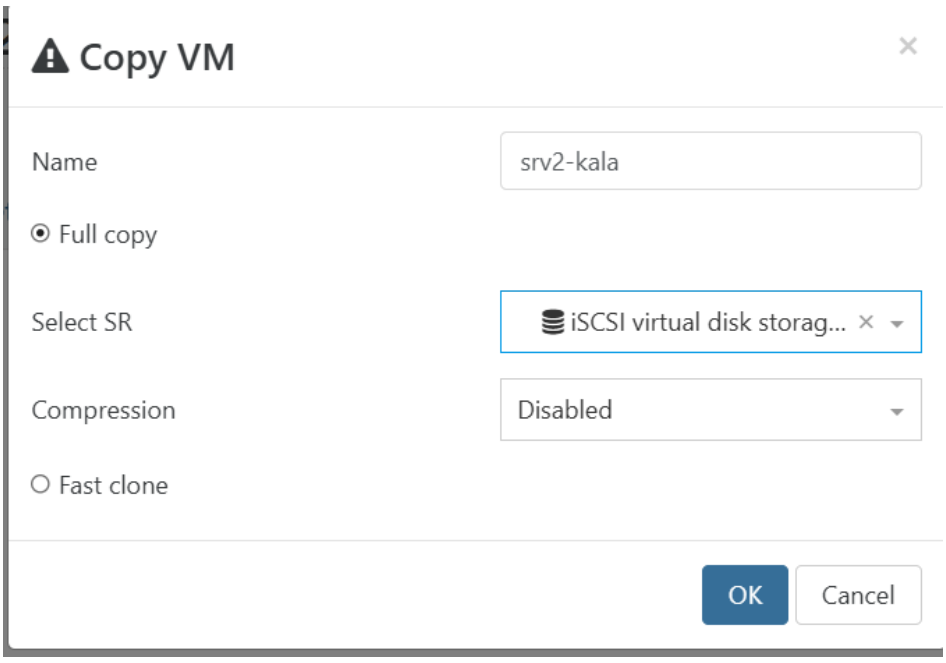


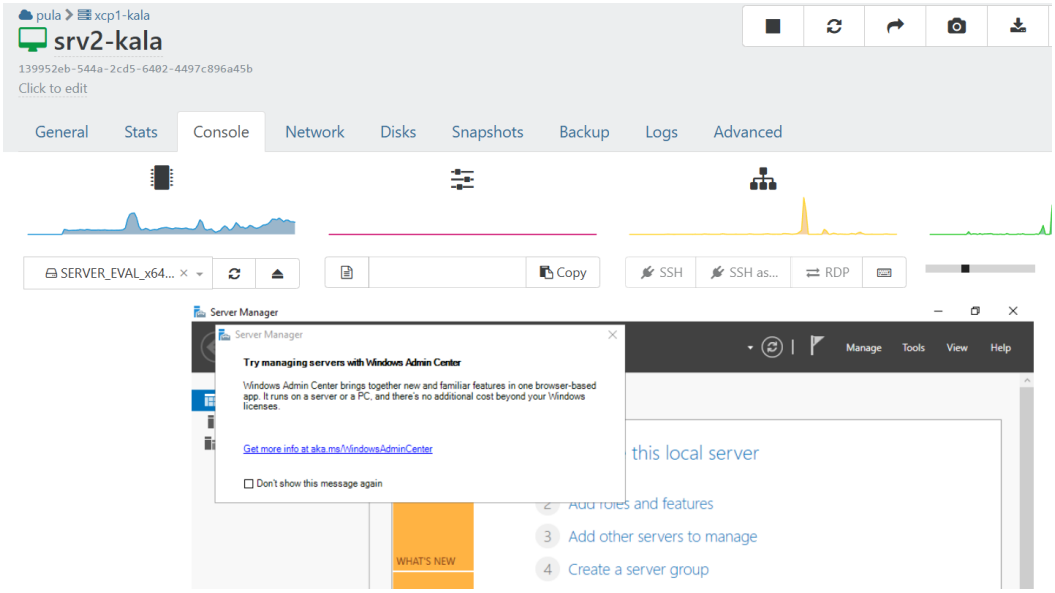
Możemy wybrać na którym węźle zostanie odpalona

(musiałem zmienić sposób odpalania na bios)


Xen Orchestra
VM
Filters
New VM
Home
Dashboard
Power state
Backup
Pools
Hosts
Tags
Sort by
20
srv1-kala
Long click to add a description
xcp1-kala - pula
Backup
XOA
Settings
Jobs
Hub
Proxies
About
Tasks
XOSTOR
Import
New
No support
Sign out
Administrator
Please wait for the User Profile Service

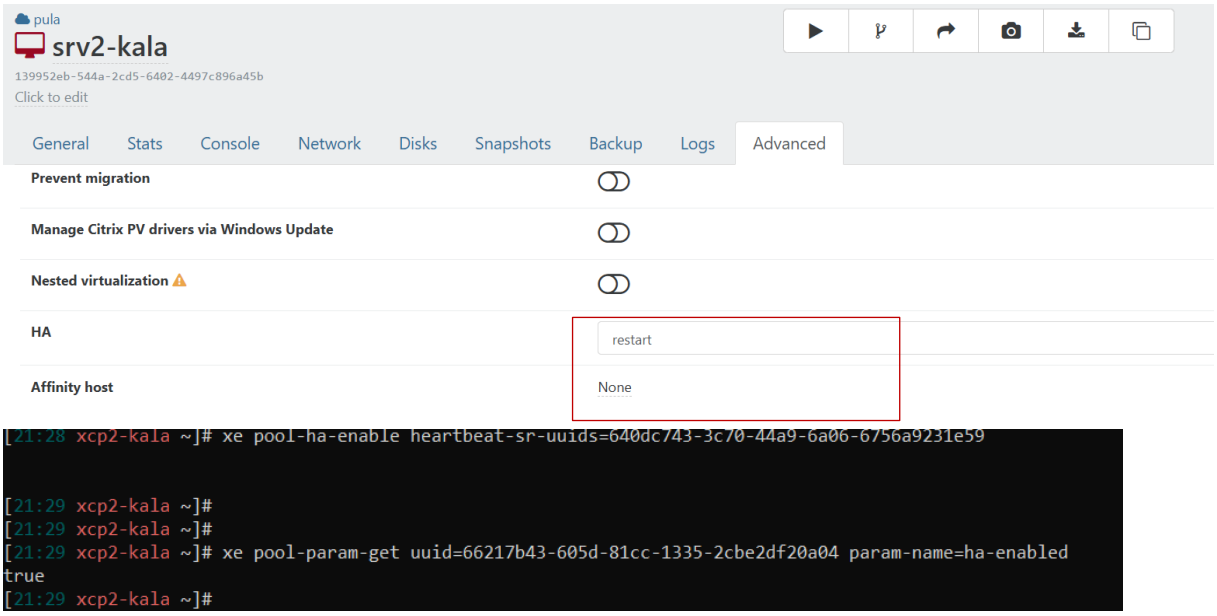

pula
srv1-kala
bb9a5991-8949-a8d2-3f74-cf3451afe012
Click to edit
Copy
General
Stats
Console
Network
Disks
Snapshots
Backup
Logs
Advanced
New disk


Copy VM
Name
srv2-kala
Full copy
Select SR
iSCSI virtual disk storag...
Compression
Disabled
Fast clone
OK
Cancel

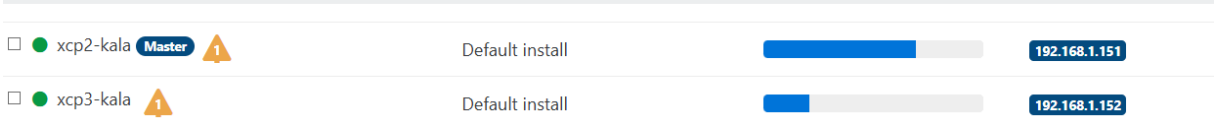


Usuwamy obraz ISO.

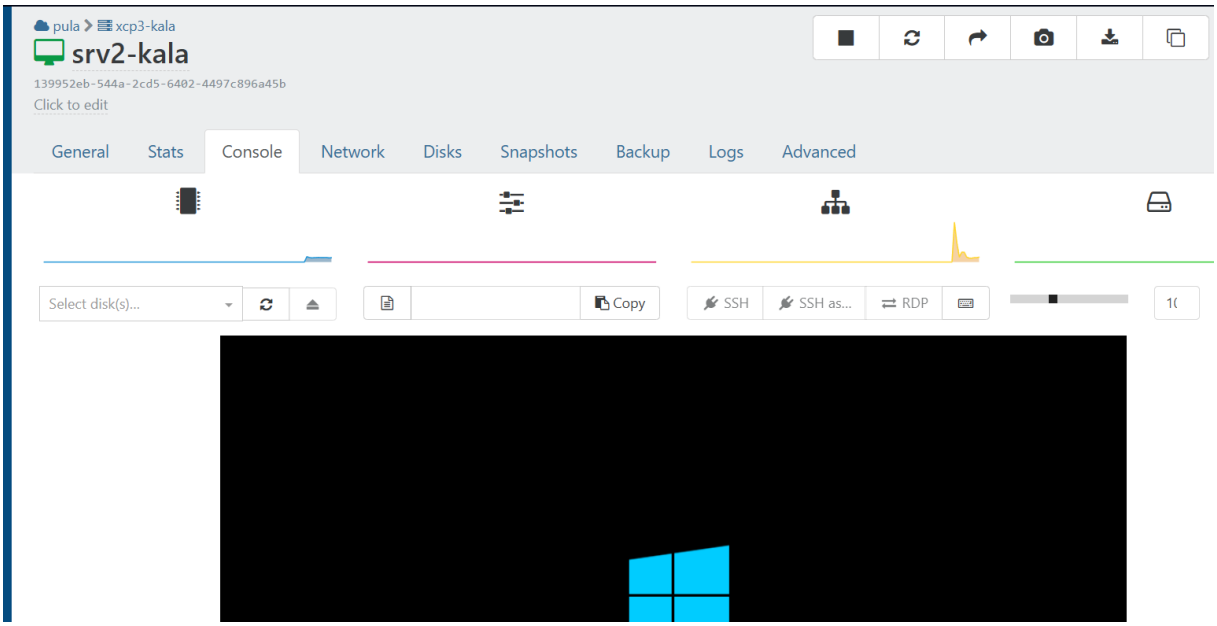
Włączenie HA:



Zatrzymujemy działanie xpc1 (na nim działa maszyna)



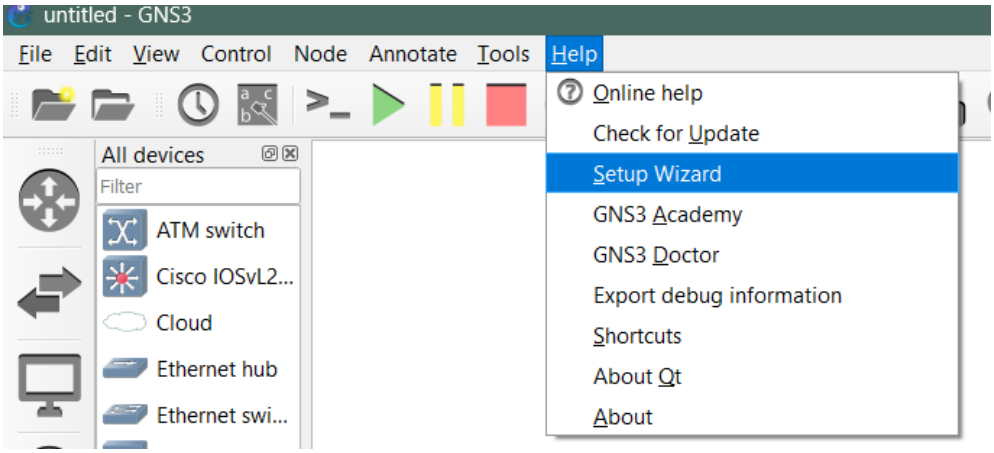
Po chwili:

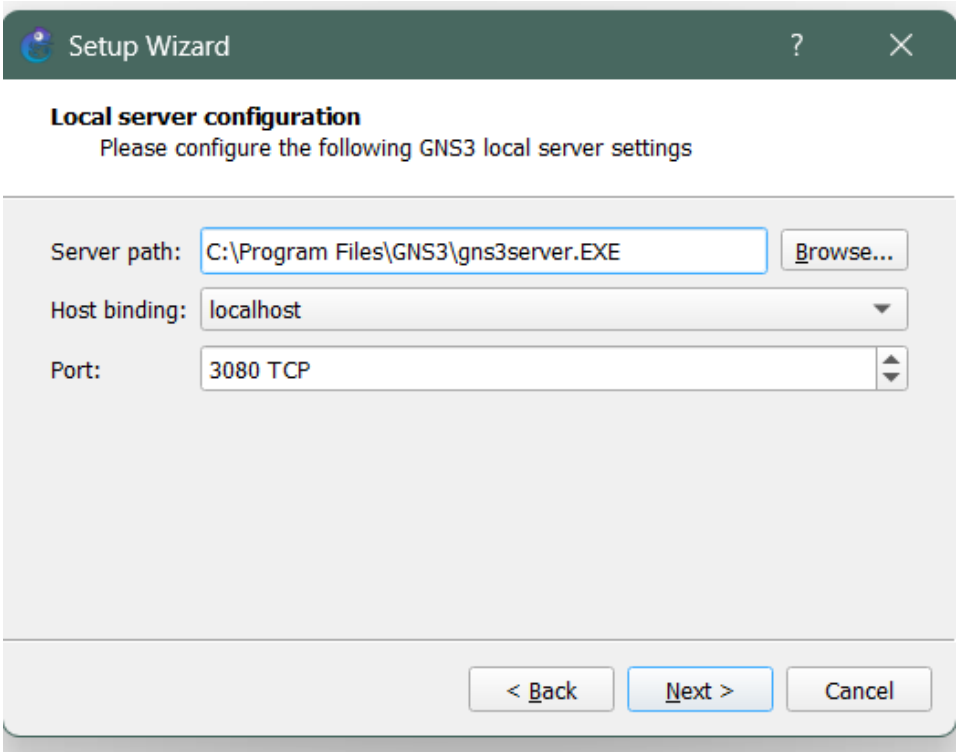


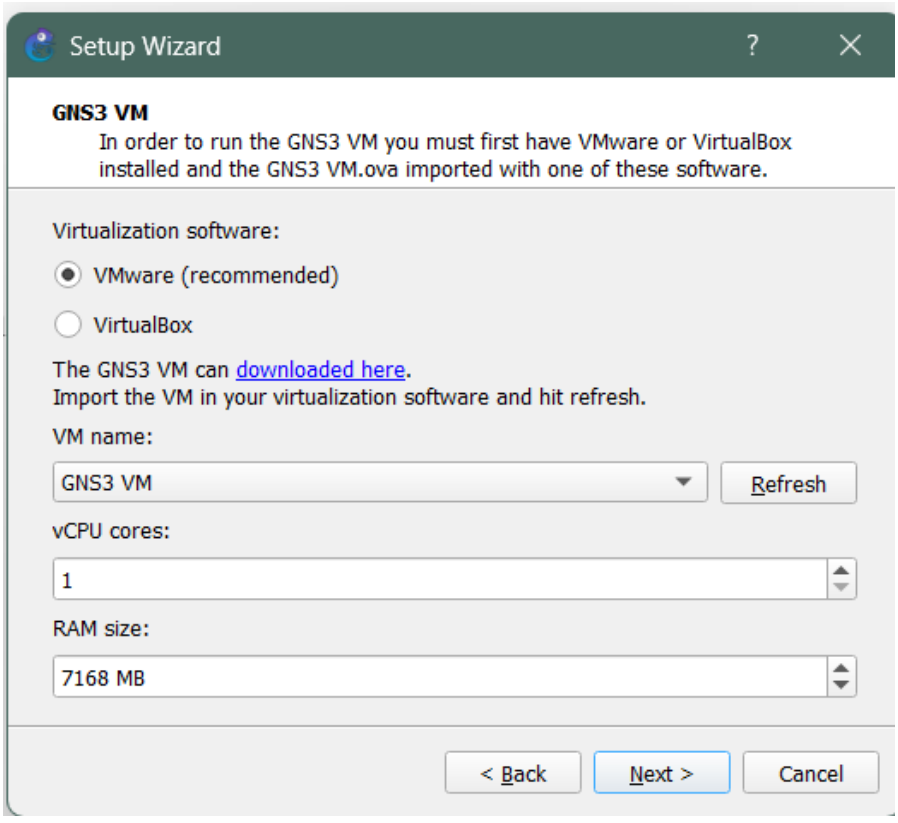
Wysoka dostępność działa.

Zad 2

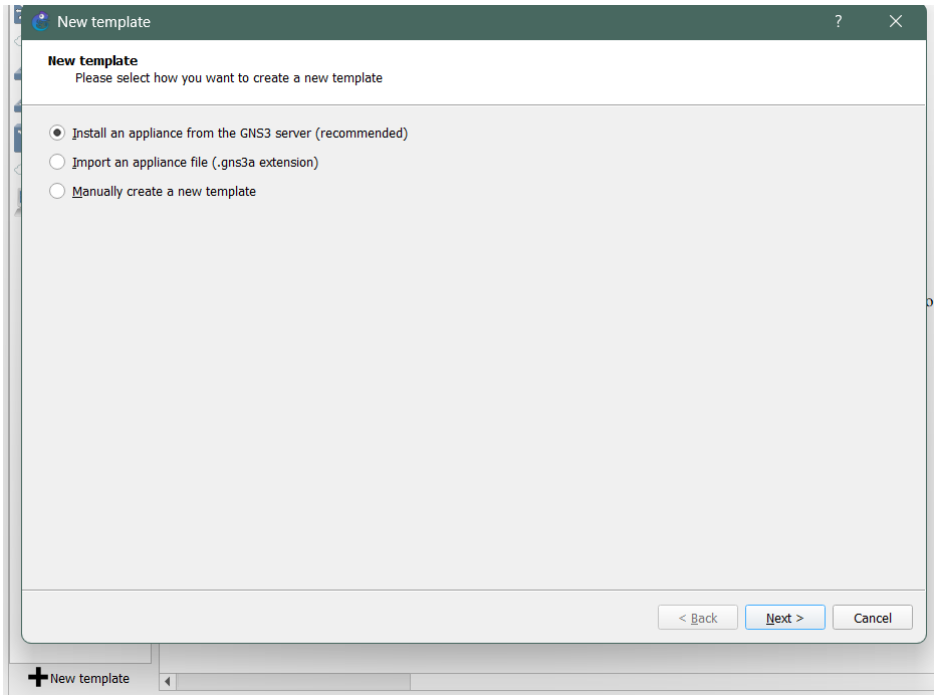
Instalujemy GNS3, oraz pobieramy wirtualną maszynę GNS3. Po instalacji podłączamy się do maszyny GNS3:

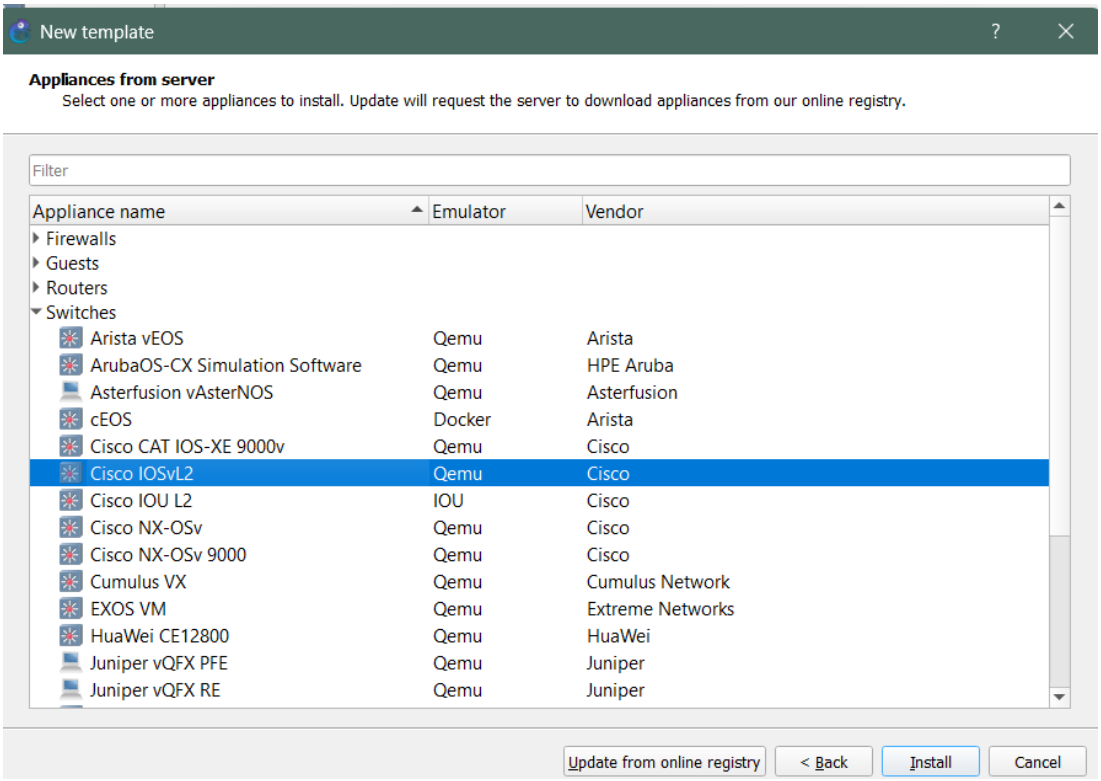


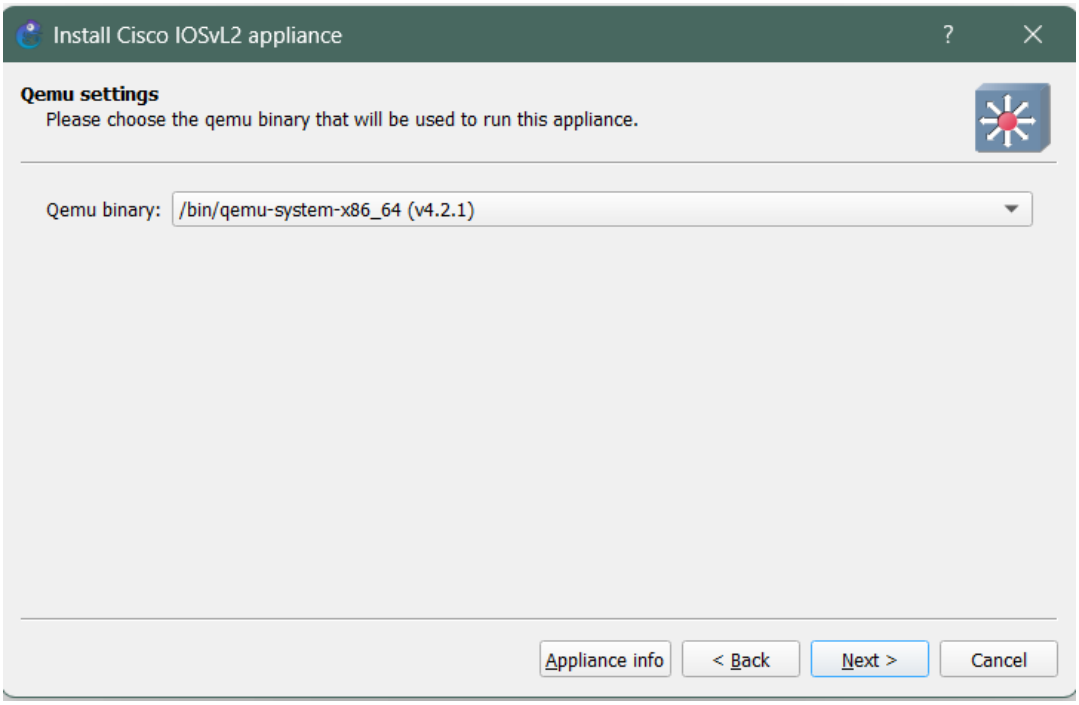

Setup Wizard
Local server configuration
Please configure the following GNS3 local server settings
Server path:
C:\Program Files\GNS3\gns3server.EXE
Browse...
Host binding:
localhost
Port:
3080 TCP
< Back
Next >
Cancel

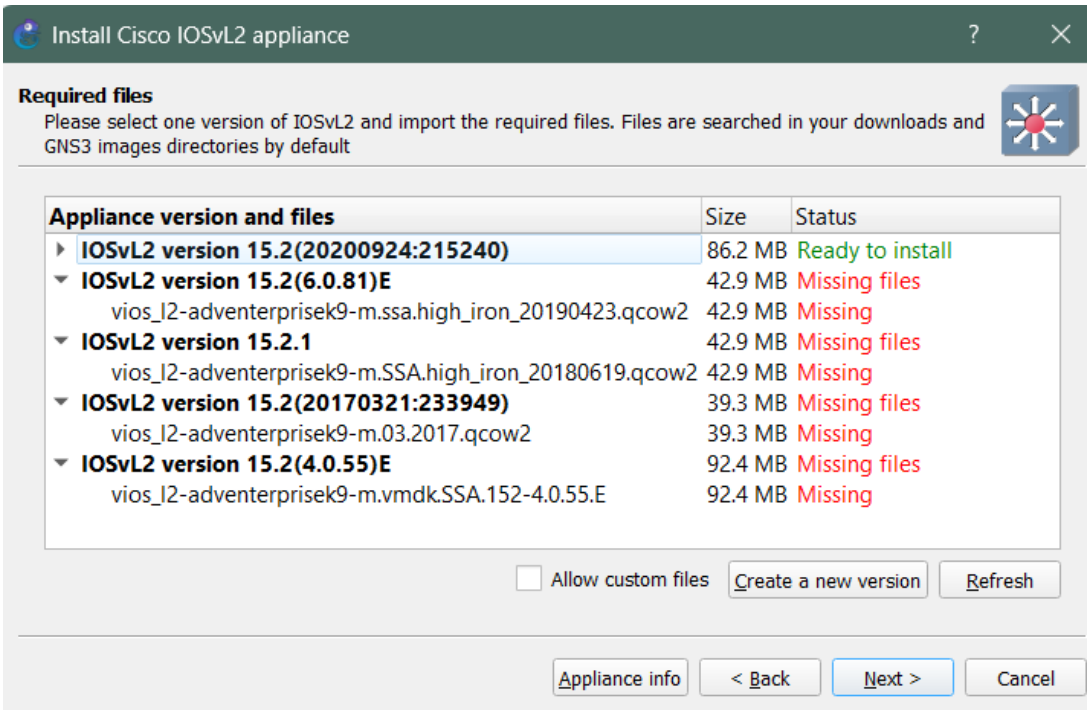

Setup Wizard
GNS3 VM
In order to run the GNS3 VM you must first have VMware or VirtualBox installed and the GNS3 VM.ova imported with one of these software.
Virtualization software:
VMware (recommended)
VirtualBox
The GNS3 VM can downloaded here.
Import the VM in your virtualization software and hit refresh.
VM name:
GNS3 VM
Refresh
vCPU cores:
1
RAM size:
7168 MB
< Back
Next >
Cancel

Dodajemy przełączniki:

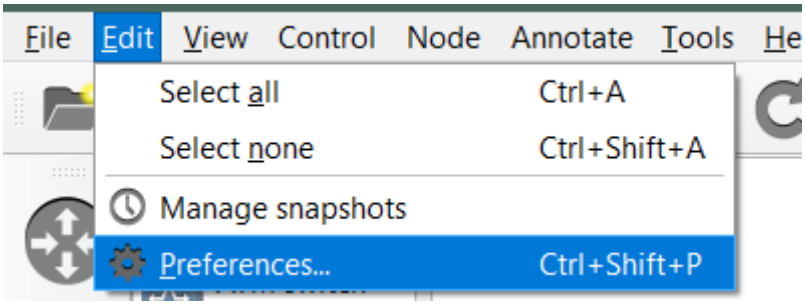


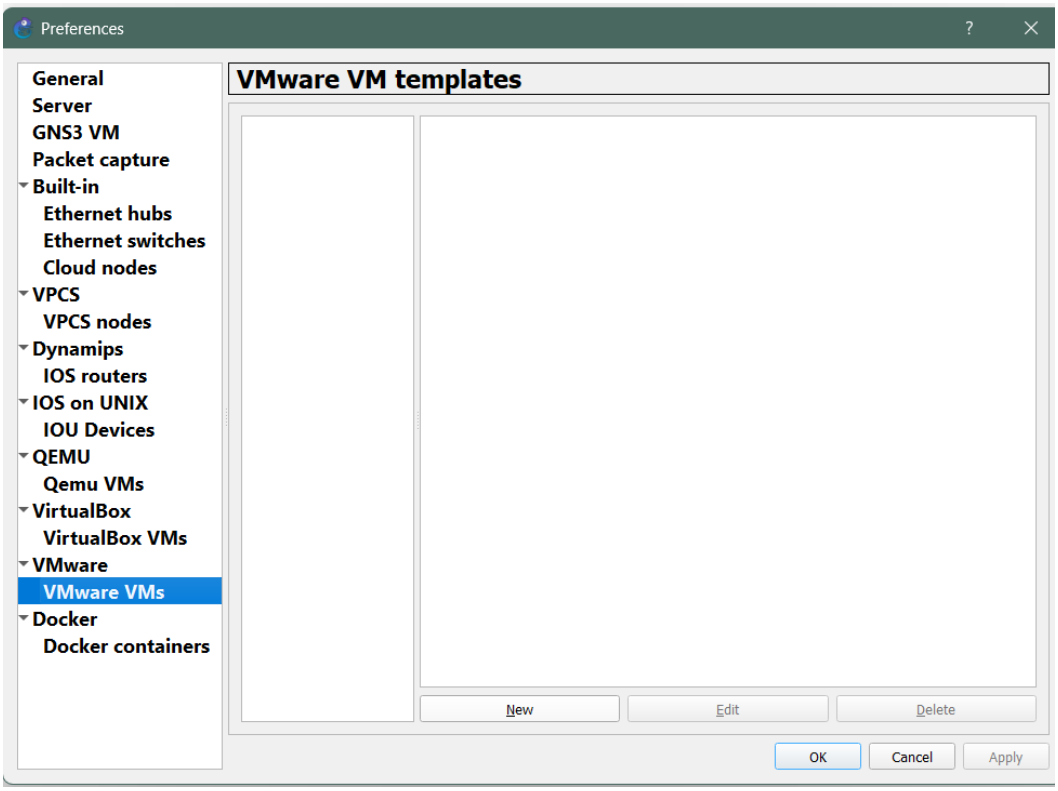


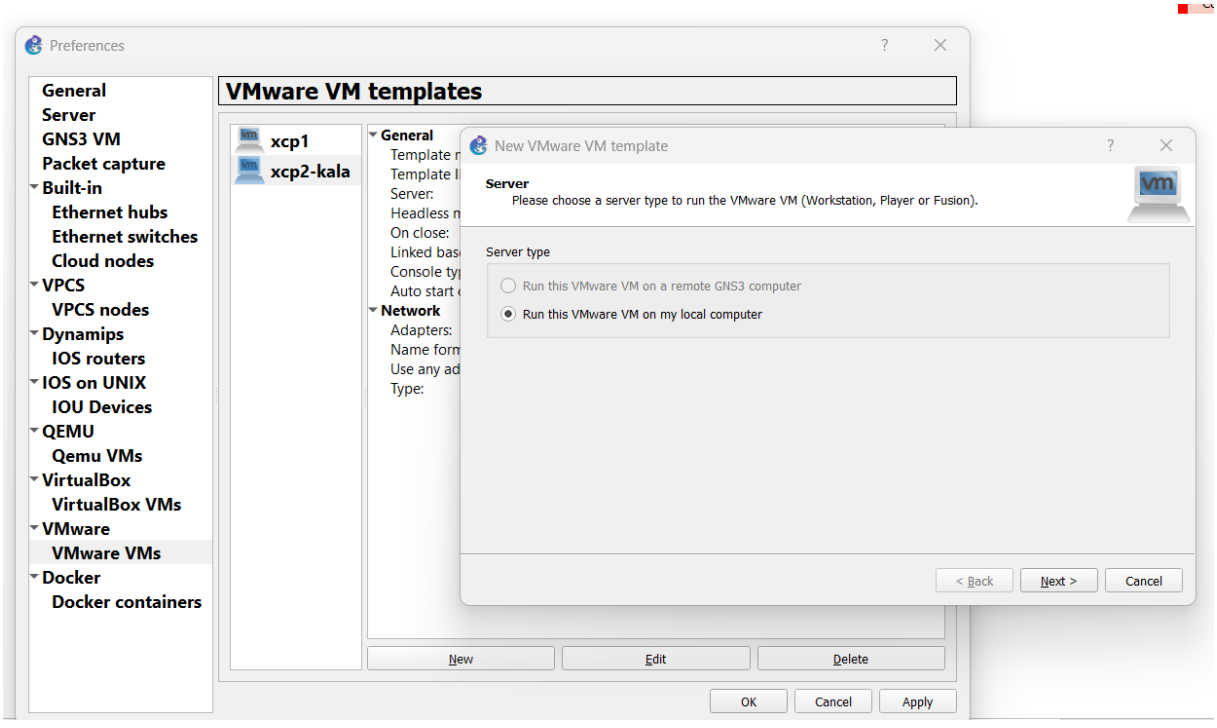


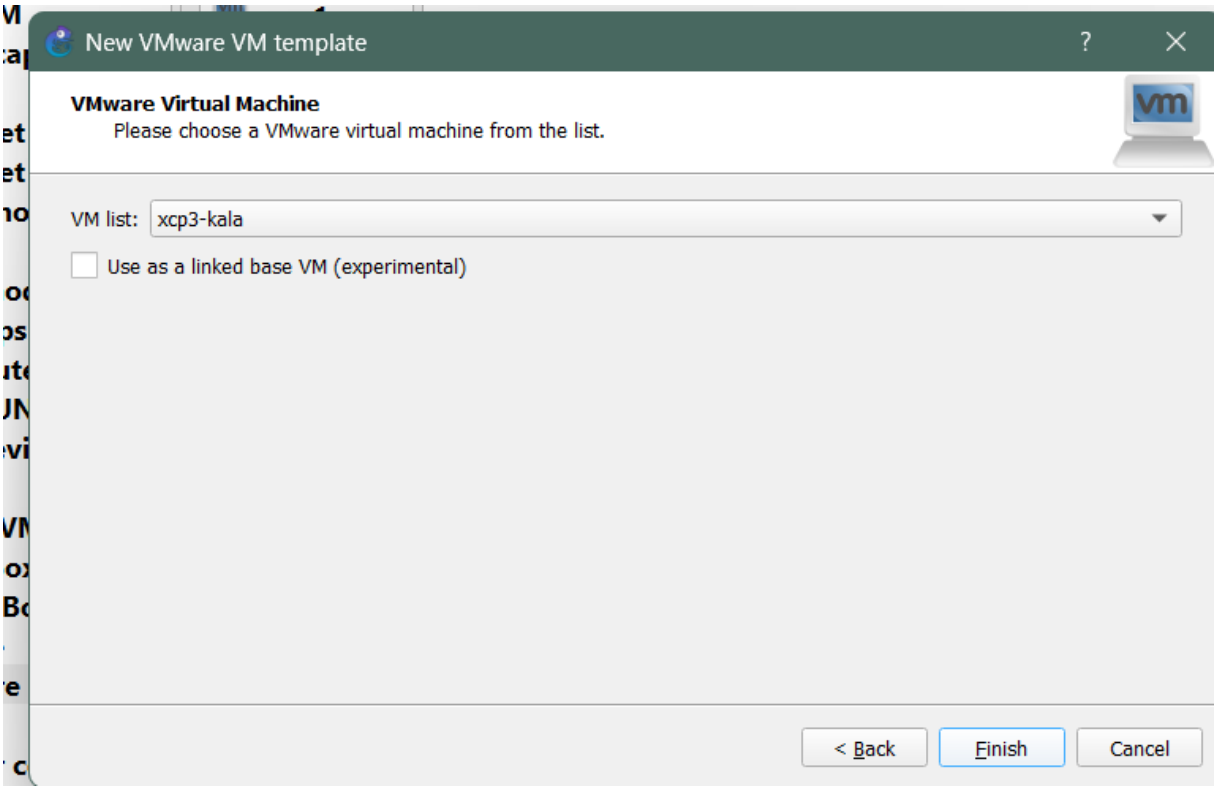


Dodajemy maszyn wirtualne:

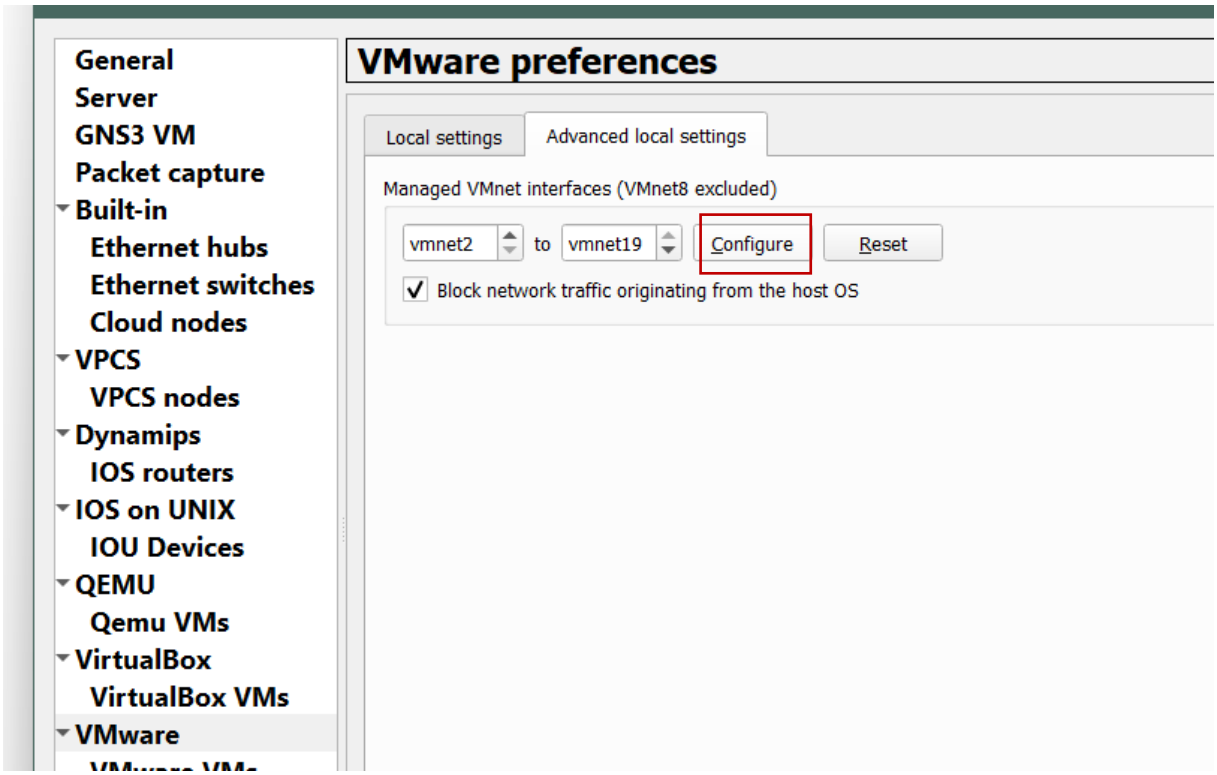



Preferences
General
Server
GNS3 VM
Packet capture
Built-in
Ethernet hubs
Ethernet switches
Cloud nodes
VPCS
VPCS nodes
Dynamips
IOS routers
IOS on UNIX
IOU Devices
QEMU
Qemu VMs
VirtualBox
VirtualBox VMs
VMware
VMware VMs
Docker
Docker containers
VMware VM templates
New
Edit
Delete
OK
Cancel
Apply

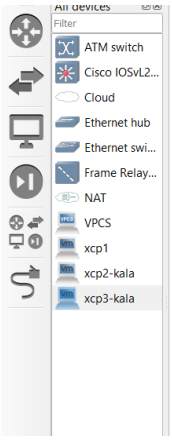

Preferences
General
Server
GNS3 VM
Packet capture
Built-in
Ethernet hubs
Ethernet switches
Cloud nodes
VPCS
VPCS nodes
Dynamips
IOS routers
IOS on UNIX
IOU Devices
QEMU
Qemu VMs
VirtualBox
VirtualBox VMs
VMware
VMware VMs
Docker
Docker containers
VMware VM templates
xcp1
xcp2-kala
General
Server:
On close:
Network
Adapters:
Type:
New
Edit
Delete
OK
Cancel
Apply
New VMware VM template
Server
Please choose a server type to run the VMware VM (Workstation, Player or Fusion).
Server type
Run this VMware VM on a remote GNS3 computer
Run this VMware VM on my local computer
< Back
Next >
Cancel

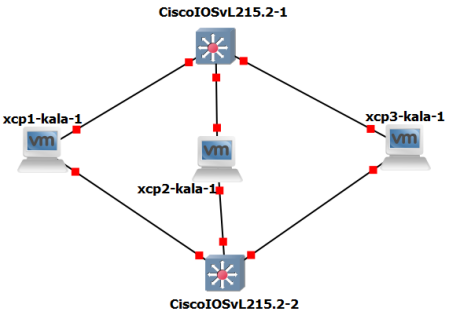


Zmieniamy ustawienia sieci:



Przeciągamy elementy do projektu:



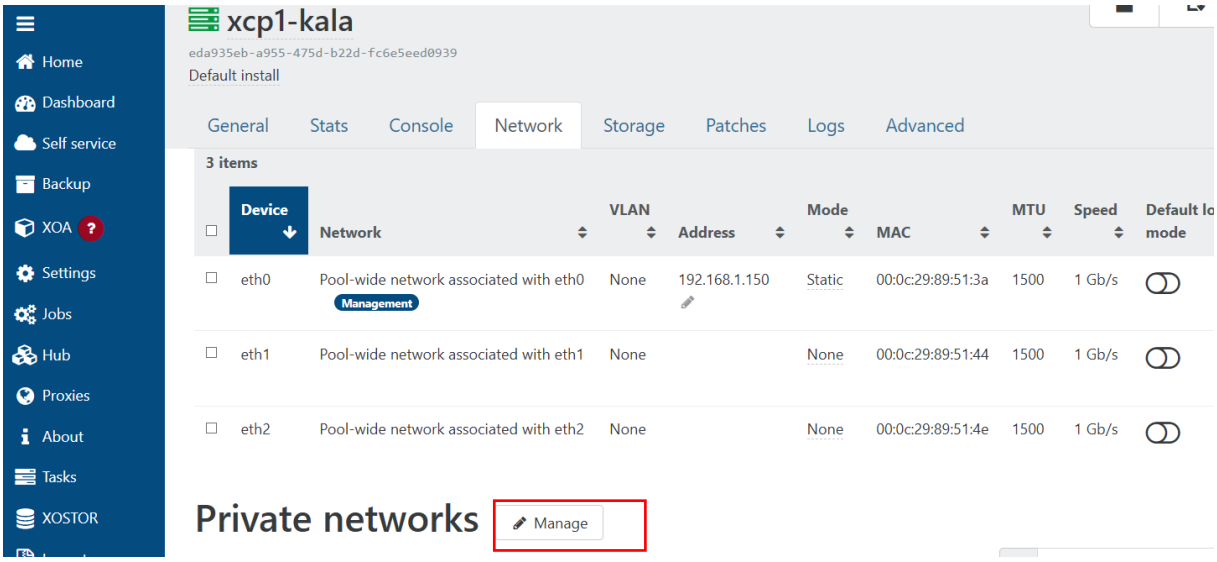


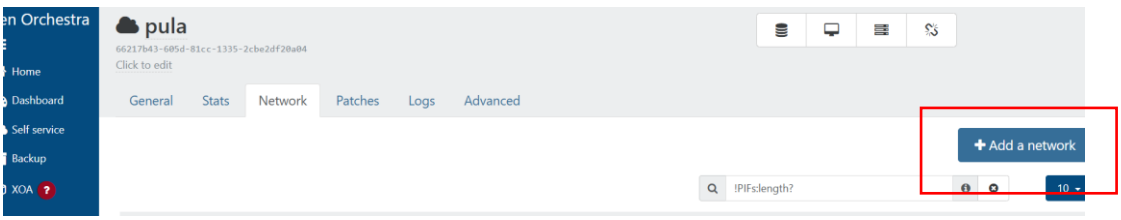
Na switch'ach wydajemy polecenia:

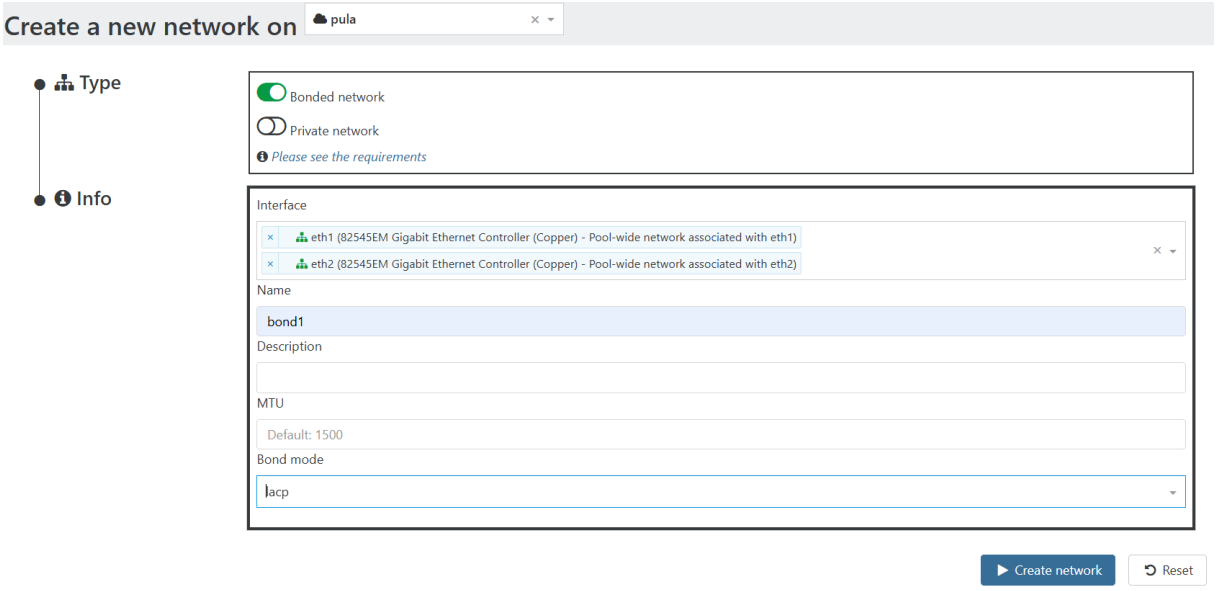
```
Switch>ena
Switch#conf term
Switch#conf terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int range g0/1-3
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#channel-group 20 mode active
Creating a port-channel interface Port-channel 20

Switch(config-if-range)#
*May  4 11:20:55.851: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEth
ernet0/1, changed state to down
*May  4 11:20:55.901: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEth
ernet0/3, changed state to down
```

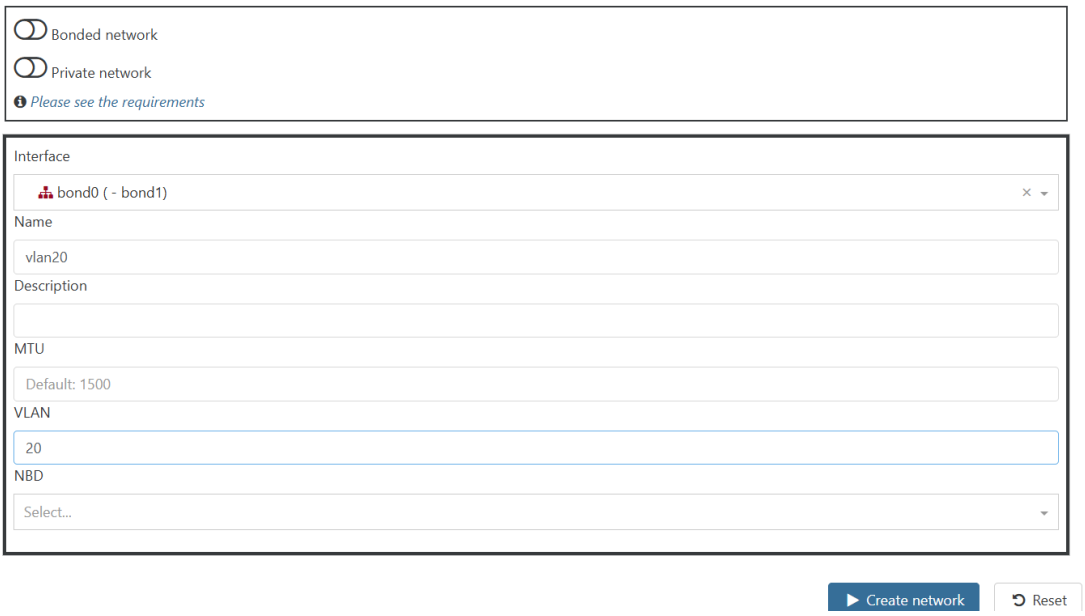
Ustawienia dla hosta (ustawiamy tak na wszystkich 3):

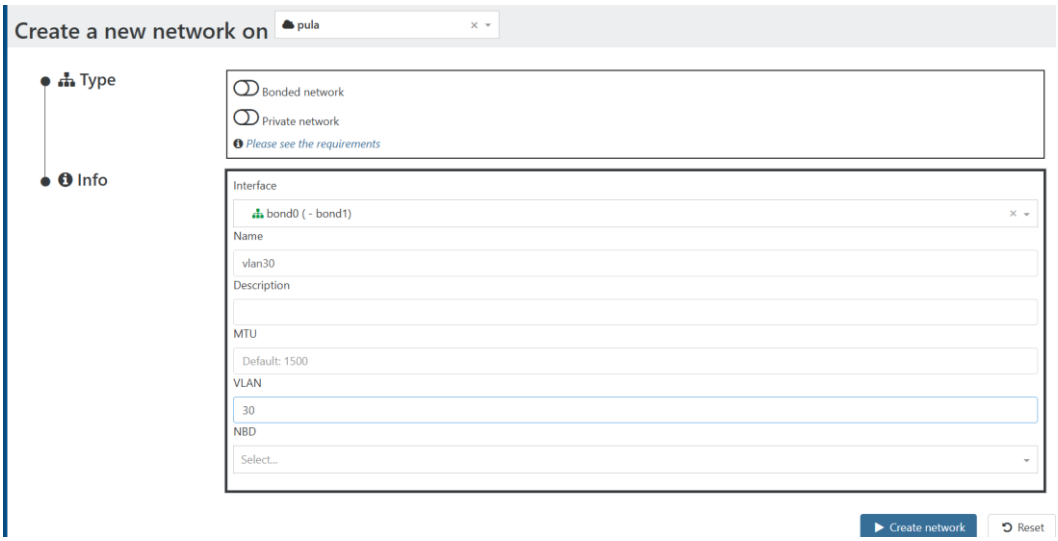






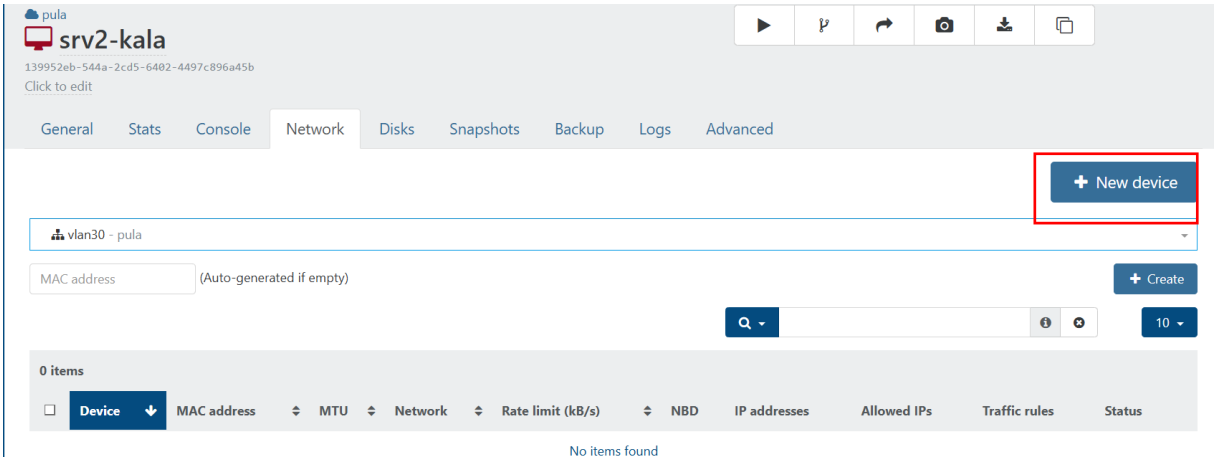
Tworzymy Vlany:

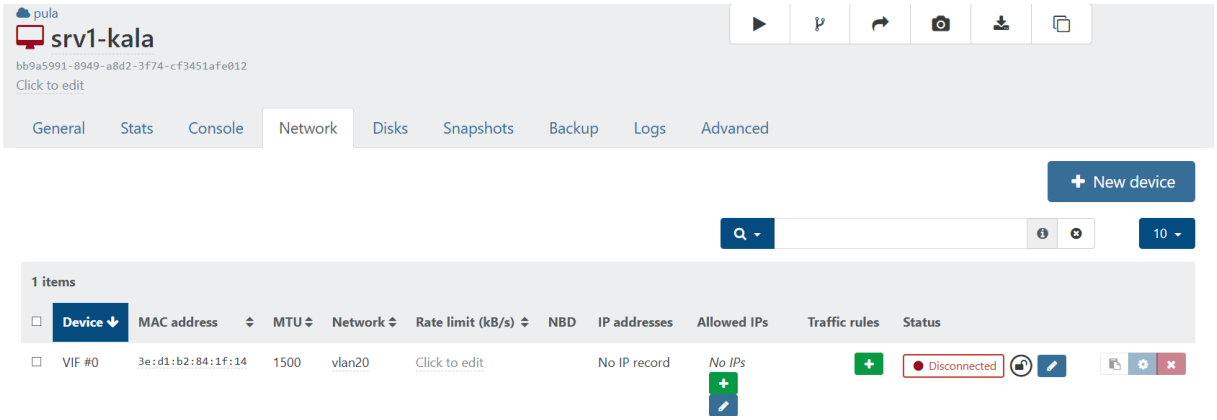




Przechodzimy do ustawień sieci dla konkretnej maszyny i dodajemy nową sieć.

Następnie wybieramy z listy:





Na switch’ach wydajemy polecenia:

```
Switch>ena
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 20
Switch(config-vlan)#name vlan20
Switch(config-vlan)#vlan 30
Switch(config-vlan)#name vlan30
Switch(config-vlan)#interface rane g0/1-3
                                 ^
% Invalid input detected at '^' marker.

Switch(config)#interface range g0/1-3
Switch(config-if-range)# switchport trunk encapsulation dot1q
Switch(config-if-range)# switchport mode trunk
Switch(config-if-range)#switchport trunk allowed vlan 20,30
Switch(config-if-range)#
```

```
Switch#ena
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int g1/1
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int g1/2
Switch(config-if)#switchport access vlan 30
```