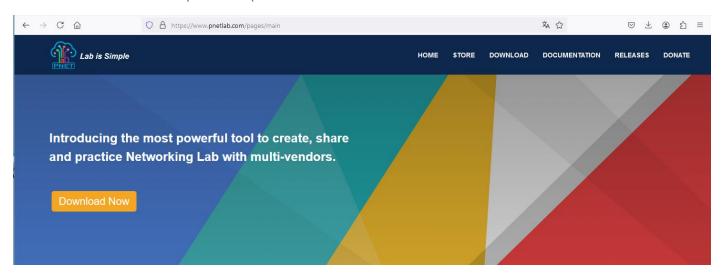
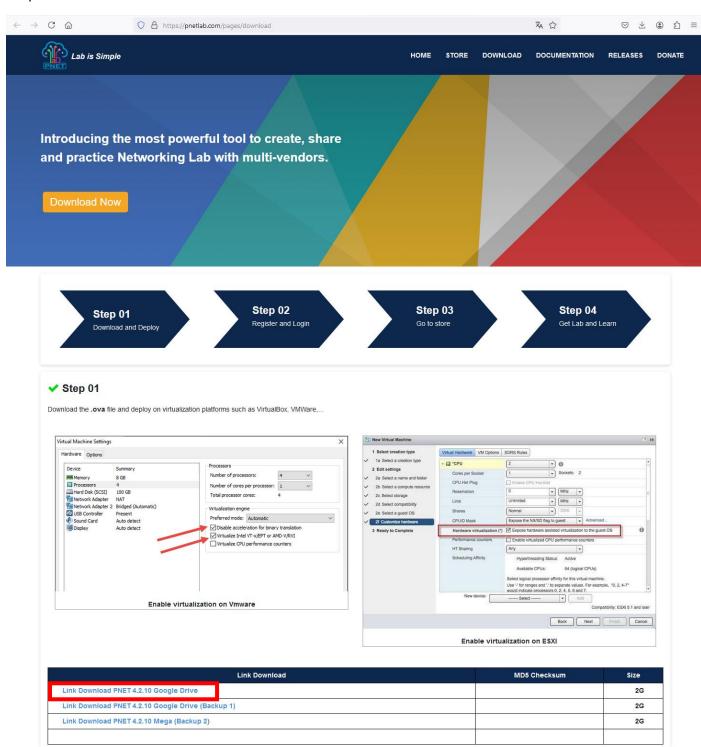
## Rendez-vous sur le site : <a href="https://www.pnetlab.com">https://www.pnetlab.com</a>



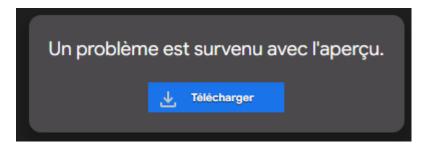
#### Cliquez sur Download Now



#### Cliquez sur:

## Link Download PNET 4.2.10 Google Drive

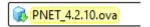
## Puis sur Télécharger :



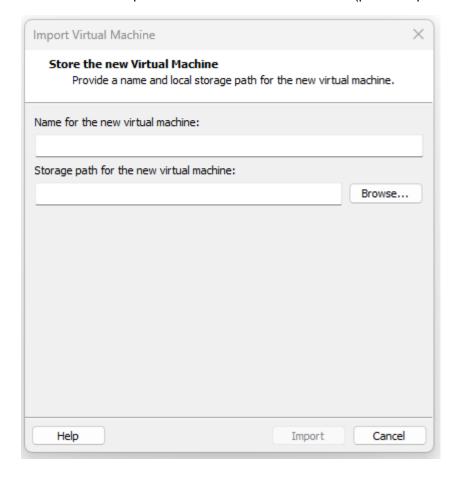
Ouvrez VM Workstation Pro

Dans le menu File cliquez sur open

Sélectionnez le fichier :



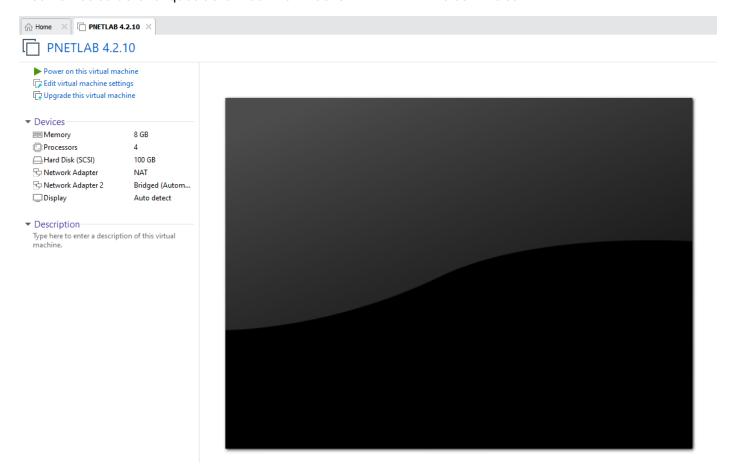
Saisissez un nom pour la machine virtuelle PNETLAB (par exemple PNETLAB 4.2.10)



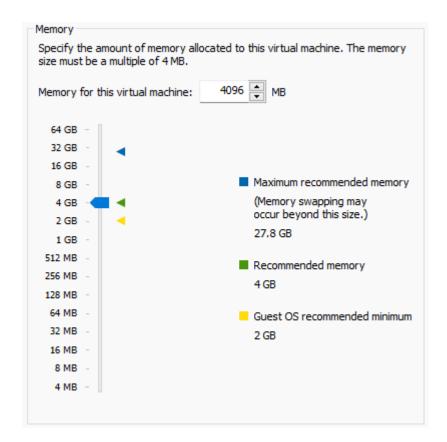
# Cliquez sur Import



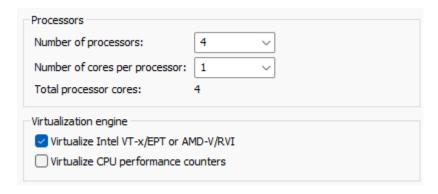
Modifiez les caractéristiques de la machine virtuelle PNETLAB 4.2.10 comme suit



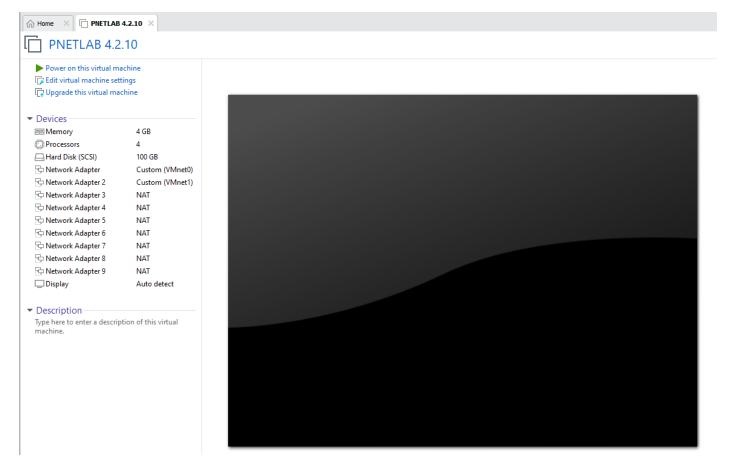
Affectez 4Go de RAM



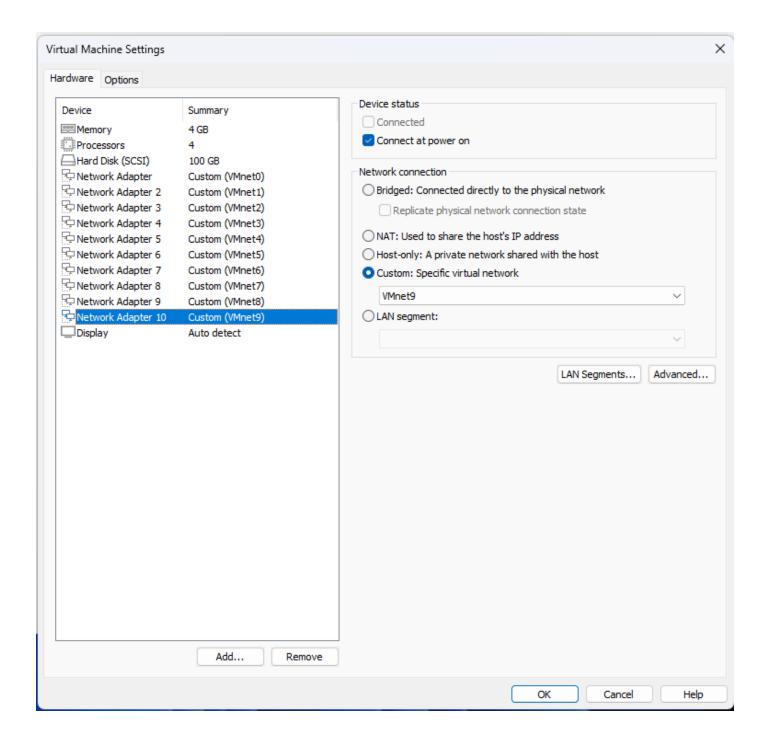
### Affecter 4 processeurs logiques et activez la virtualisation



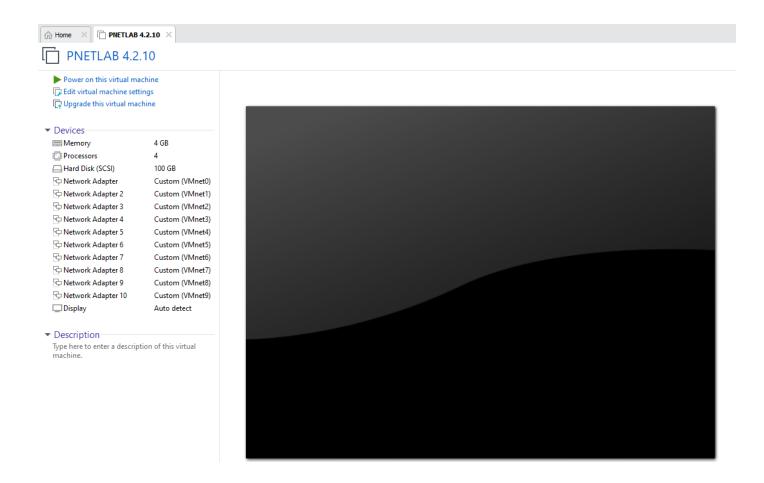
Ajouter 8 Network Adapter et cliquez sur OK



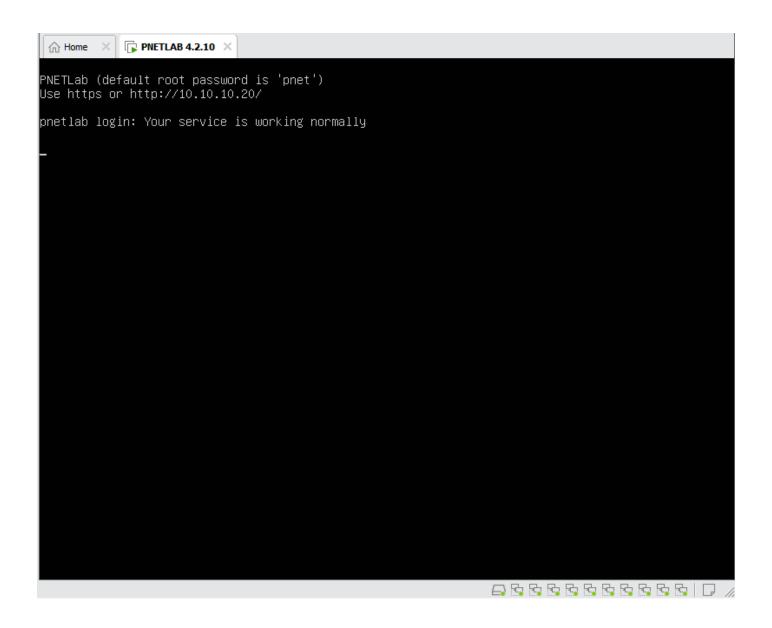
Configurez les en mode Custom (de VMnet0 à VMnet9) puis cliquez sur OK



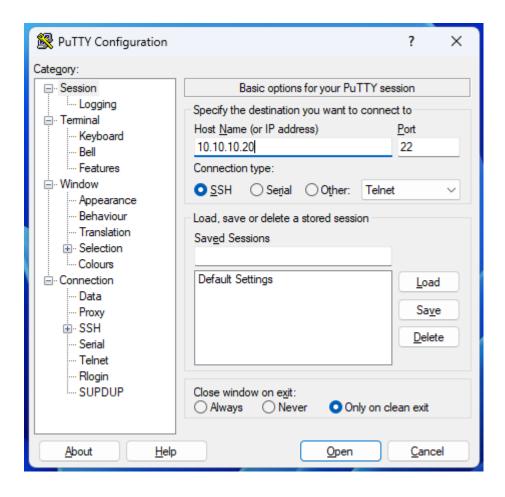
Démarrez la machine PNETLAB 4.2.10



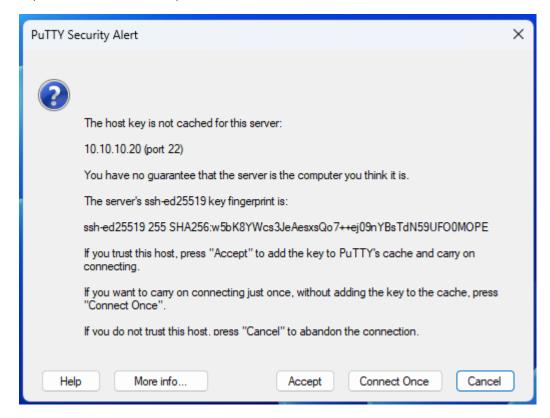
PNETLAB 4.2.10 est démarrée



Démarrez putty. Saisir l'adresse IP de la machine PNETLAB et tapez sur le bouton Open

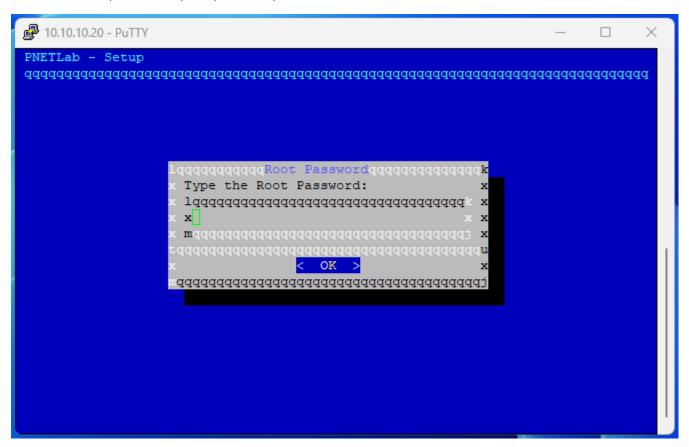


#### Tapez sur le bouton Accept



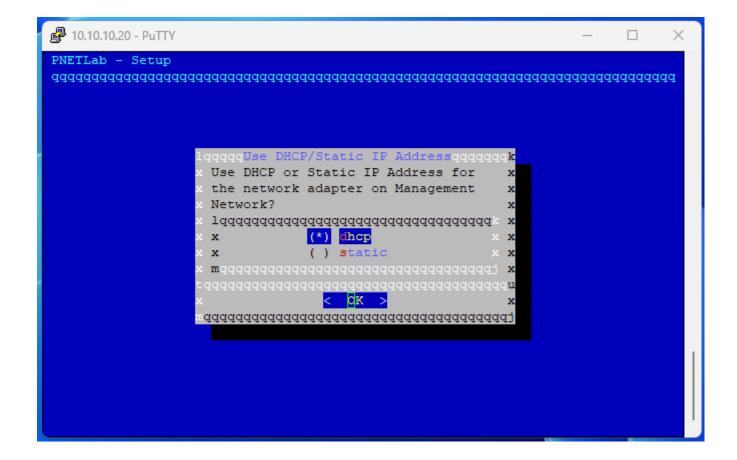
Saisissez le login : root et le password : pnet

Ressaisissez le password : pnet (deux fois)

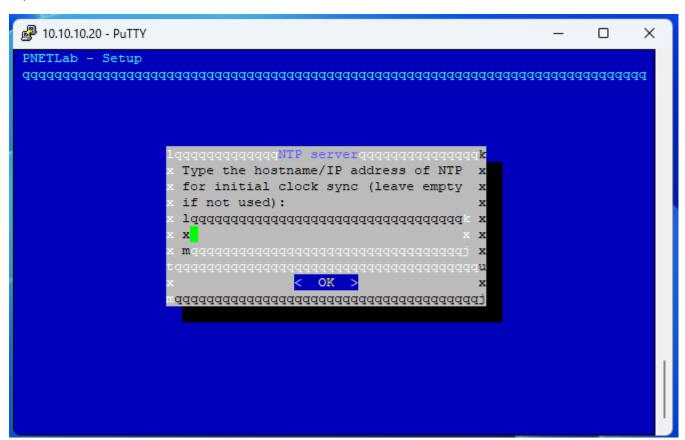


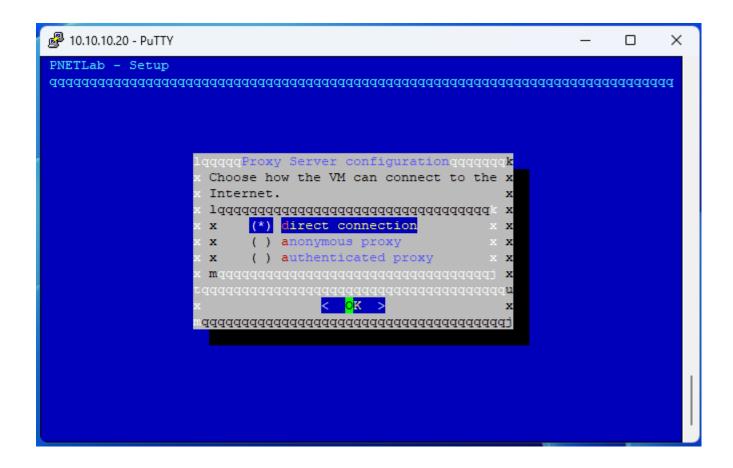
Saisissez le DNS: 8.8.8.8

Cliquez sur la touche Entrée



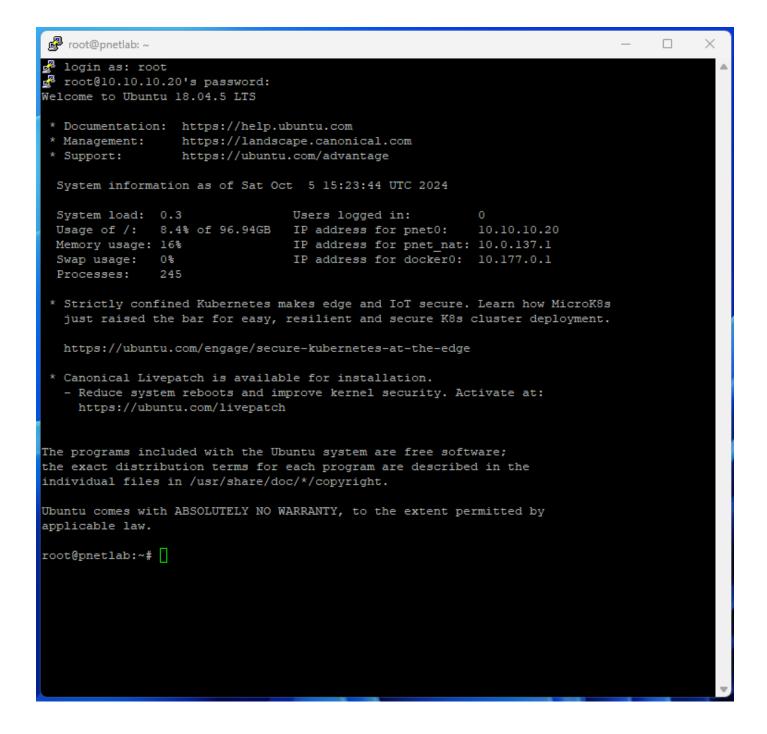
Tapez sur la touche Entrée





La machine redémarre et vous perdez la connexion de putty

Redémarrez putty, sasir le login : root et le password pnet



Installez l'utilitaire ishare2 en saisissant la commande

wget -O /usr/sbin/ishare2 https://raw.githubusercontent.com/pnetlabrepo/ishare2/main/ishare2 > /dev/null 2>&1 && chmod +x /usr/sbin/ishare2 && ishare2

Tapez sur la touche Entrée à chaque question posée (4 fois)

```
Welcome to the ishare2 configuration wizard.
 - This wizard will guide you through the configuration process.
 - Press Enter to accept the default value.
 - You can modify the configuration later by running: ishare2 config.
 - Press Ctrl+C to cancel.
[+] Use aria2c for faster downloads? (default: no)
[+] (y/n):
[+] Check SSL certificate? (default: yes)
[+] (y/n):
[+] Choose the update channel.
1) alpha
2) beta
main
[*] Enter the number of the branch you want to use (default: main):
[!] Using the default branch.
[+] Choose a mirror. (default: Rotate mirrors)
1) Rotate mirrors (recommended)
2) Google Drive mirror
3) Onedrive mirror
4) Custom mirror
[*] Enter the number of the mirror you want to use (default: 1):
```

L'utilitaire ishare2 est installé

```
You can start using ishare2!
  [!] IMPORTANT NOTICES:
  - ishare2 is a free and open-source project. If you paid
   for it, you have been scammed.
 - Do not download ishare2 from unofficial sources as they
   may contain arbitrary code.
 MOTD from the ishare2 team:
 Changelog:
  - Fixed bug when doing integrity checks againts gemu images.
 Telegram: https://t.me/NetLabHub
 Donate: https://buymeacoffee.com/sudoalex
 GitHub: https://github.com/ishare2-org/ishare2-cli
Syntax
ishare2 [action] [paraml] [param2] [--overwrite]
action:
               : Search for images available on LabHub mirrors.
   search
   pull
               : Download an image by specifying the type and id.
   installed : Shows images installed on the server.
               : Shows available labs and downloads the images for the selected lab.
   mylabs
               : Same as labs command but you can use a customized path.
   relicense : Generates an iourc license for iol images.
               : Shows a menu to upgrade ishare2 or PNETLab.
   upgrade
               : Test internet connectivity to required sites.
   test
               : Shows full help information.
   help
paraml:
   type = all, iol, qemu, dynamips, docker or name.
param2:
   id = This can be obtained using ishare2 search <type>
 -overwrite:
   Used to overwrite an existing image if it already exists on your system.
Try: ishare2 help for more information.
root@pnetlab:~#
```

Visualisez les appliances de type IOL avec la commande

[!] ishare2 will rotate among the available mirrors.

Configuration completed successfully.

Ishare2 search iol

```
MOTD from the ishare2 team:
  Changelog:
  - Fixed bug when doing integrity checks againts gemu images.
  Telegram: https://t.me/NetLabHub
  Donate: https://buymeacoffee.com/sudoalex
  GitHub: https://github.com/ishare2-org/ishare2-cli
    Available IOL images
ID NAME
                                                                 SIZE
   L2-ADVENTERPRISEK9-M-15.2-20150703.bin
                                                                 105.8 MiB
   L2-ADVENTERPRISEK9-M-15.2-IRON-20151103.bin
                                                                 108.3 MiB
                                                                 108.3 MiB
   L2-Adventerprisek9-ms.nov3 2015 high iron.bin
   L3-ADVENTERPRISEK9-M-15.4-2T.bin
                                                                 152.0 MiB
   c2600-adventerprisek9-mz.124-25d.bin
                                                                 28.6 MiB
6
   c2600-advsecurityk9-mz.124-15.tl4.bin
                                                                 18.7 MiB
   c3660-a3jk9s-mz.124-15.T14.bin
                                                                 40.5 MiB
    c3660-a3jk9s-mz.124-25d.bin
                                                                 35.1 MiB
    i86bi Linux-L2-AdvEnterpriseK9-M 152 May 2018.bin
                                                                 120.4 MiB
         _Linux-L2-Adventerprisek9-ms.SSA.high_iron_20190423.bin 120.4 MiB
   i86bi
11
   i86bi_Linux-L3-AdvEnterpriseK9-M2_157_3_May_2018.bin
                                                                 176.2 MiB
                                                                 120.4 MiB
12 i86bi_LinuxL2-AdvEnterpriseK9-M_152_May_2018.bin
13 i86bi LinuxL3-AdvEnterpriseK9-M2 157 3 May 2018.bin
                                                                 176.2 MiB
14 i86bi LinuxL3-AdvEnterpriseK9-M2 157 3 May 2018.bin
                                                                 176.2 MiB
15 i86bi linux-adventerprisek9-ms.154-1.T AntiGNS3.bin
                                                                 145.6 MiB
16 i86bi linux 12-adventerprisek9-ms.SSA.high iron 20180510.bin 120.4 MiB
17 i86bi linux 12-adventerprisek9-ms.SSA.high iron 20190423.bin 120.4 MiB
18 i86bi linux 12-adventerprisek9-ms.SSA.high iron 20190423.bin 120.4 MiB
                                                                 100.2 MiB
19 i86bi linux 12-advipservicesk9-ms.high iron 20170202.bin
20 i86bi linux 12-ipbasek9-ms.high iron aug9 2017b.bin
                                                                 100.8 MiB
   i86bi linux 12-ipbasek9-ms.may8-2013-team track.bin
                                                                 58.9 MiB
21
   i86bi linux 13-L3-ADVENTERPRISEK9-M-15.4-2T.bin
                                                                 152.0 MiB
root@pnetlab:~#
```

Téléchargez les deux appliances de base (Switch et Routeur Cisco) avec la commande

Ishare2 pull iol 12

:oot@pnetlab:~# ishare2 search iol

Ishare pull iol 13

**MODIFICATION: IL FAUT TELECHARGER LES APPLIANCES 9 et 11** 

**SWITCH L2 ET L3** 

9 i86bi Linux-L2-AdvEnterpriseK9-M 152 May 2018.bin 120.4 MiB

**ROUTER** 

11 i86bi Linux-L3-AdvEnterpriseK9-M2 157 3 May 2018.bin 176.2 MiB

```
root@pnetlab:~# ishare2 pull iol 12
 MOTD from the ishare2 team:
 Changelog:
  - Fixed bug when doing integrity checks againts gemu images.
  Telegram: https://t.me/NetLabHub
  Donate: https://buymeacoffee.com/sudoalex
  GitHub: https://github.com/ishare2-org/ishare2-cli
[!] IMAGE INFO
 - Image Name
                   : i86bi_LinuxL2-AdvEnterpriseK9-M_152_May_2018.bin
 - Image Size
                   : 120.4 MiB

    Image Type

 - Image ID
                   : 12

    Image path

                   : /opt/unetlab/addons/iol/bin/
                   : https://labhub.eu.org
 - Using host
[!] DOWNLOADING IMAGE
opt/unetlab/addons/io 100%[==================================] 120.38M 39.5MB/s
                                                                                 in 3.0s
+] Basic integrity checks passed. The downloaded image is the expected size.
[+] DOWNLOAD COMPLETED!
root@pnetlab:~# ishare2 pull iol 13
[!] IMAGE INFO
 - Image Name
                   : i86bi_LinuxL3-AdvEnterpriseK9-M2_157_3_May_2018.bin
 - Image Size
                  : 176.2 MiB

    Image Type

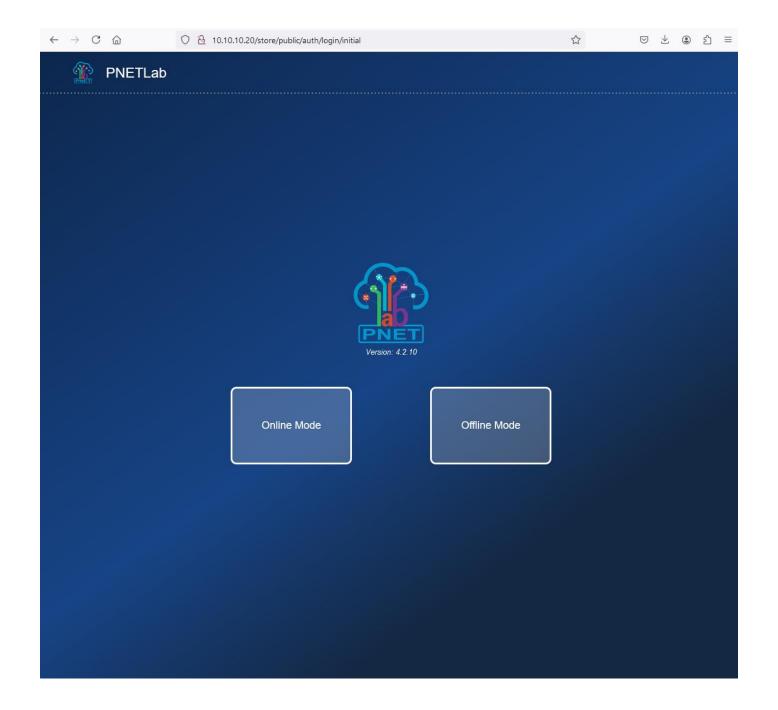
 - Image ID
               : /opt/unetlab/addons/iol/bin/
: https://drive.labhub.eu.org

    Image path

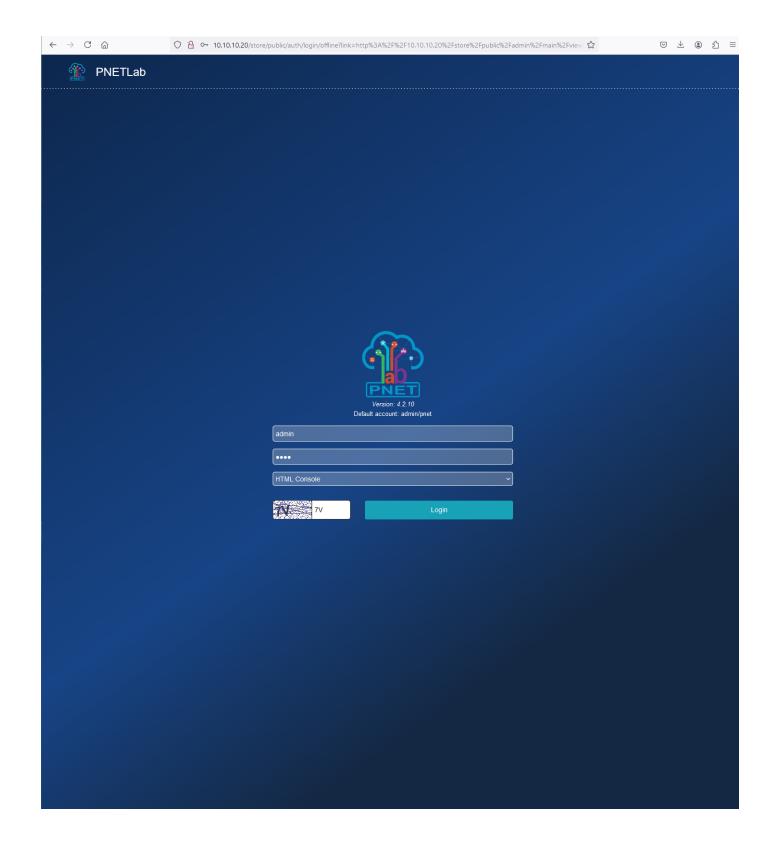
 - Using host
[!] DOWNLOADING IMAGE
opt/unetlab/addons/io 100%[==================================] 176.20M 58.4MB/s
                                                                                 in 3.0s
[+] Basic integrity checks passed. The downloaded image is the expected size.
[+] DOWNLOAD COMPLETED!
root@pnetlab:~#
```

Connectez vous à la machine PNETLAB avec le navigateur de votre PC

Cliquez sur le bouton Offline

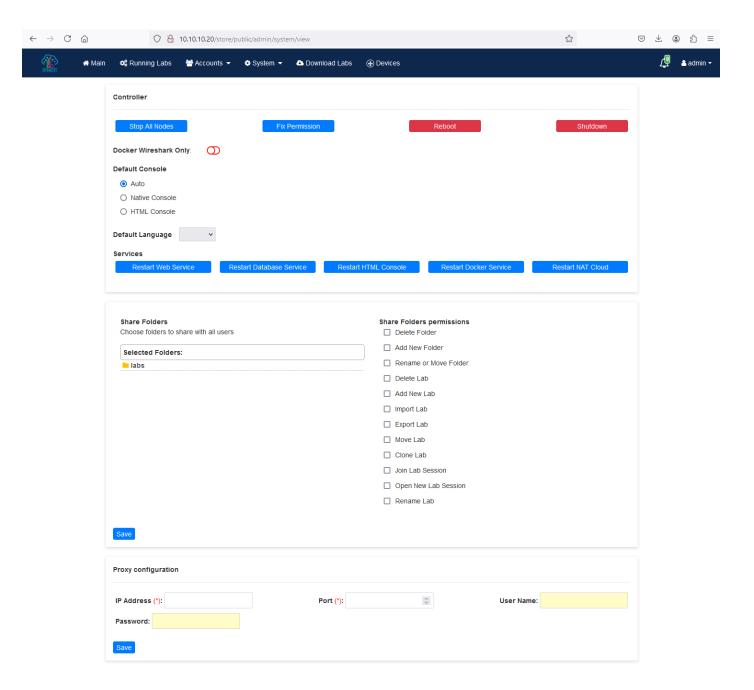


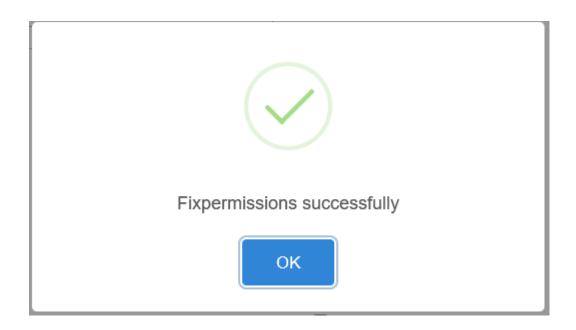
Saisissez le login : admin, le password pnet, sélectionnez la console HTML, saisissez le Capcha et cliquez sur le bouton login



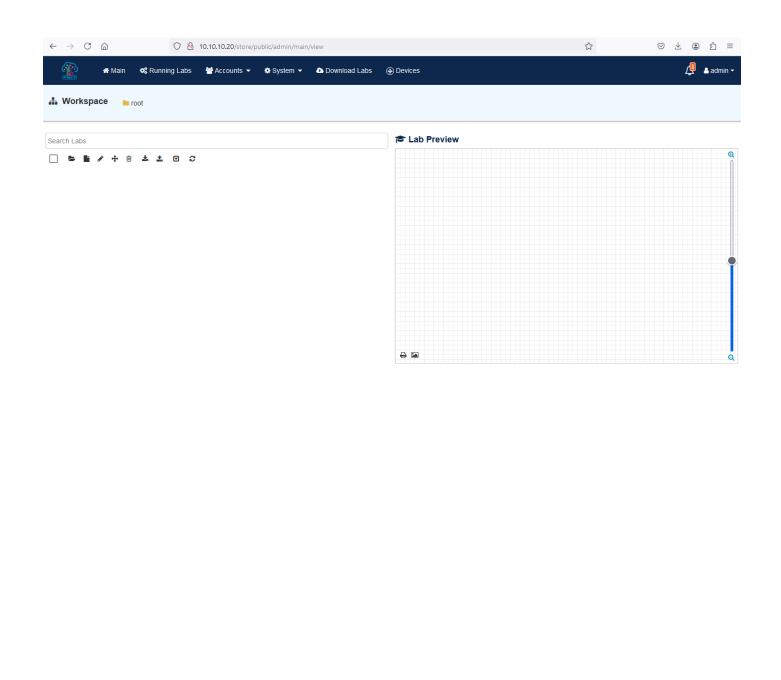
Dans le menu System puis System Settings, cliquez sur le bouton Fix Permission

Remarque : Chaque fois que vous téléchargerez une nouvelle appliance, il faudra faire cette opération pour pouvoir l'utiliser. En cas d'oubli, l'appliance ne démarrera simplement pas.

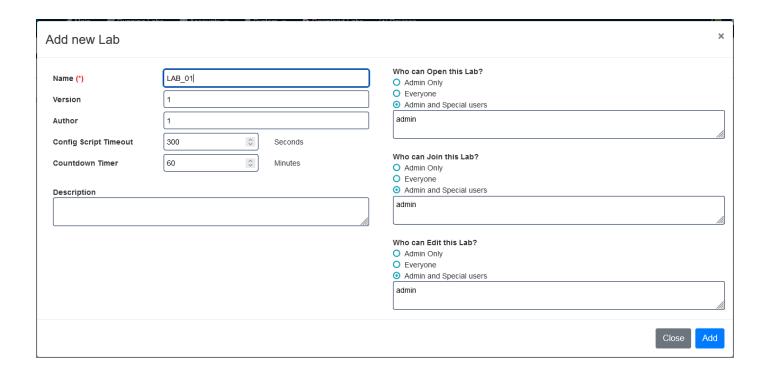




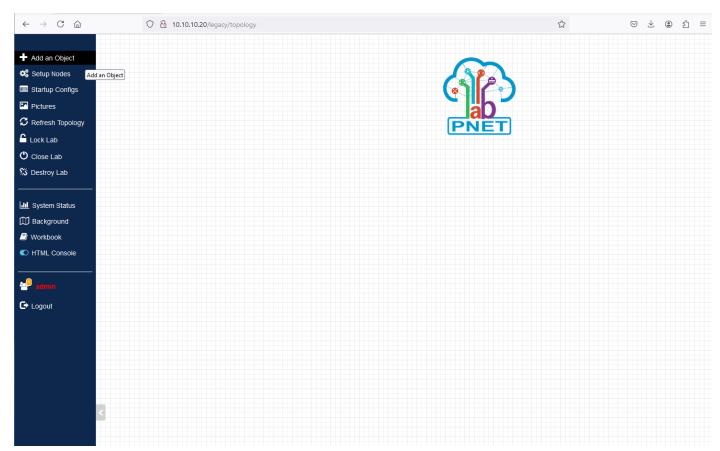
Cliquez sur le menu Main. Vous êtes prêt à utiliser PNETLAB Ajoutez un nouveau lab

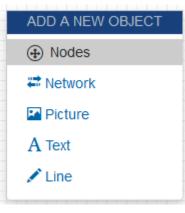


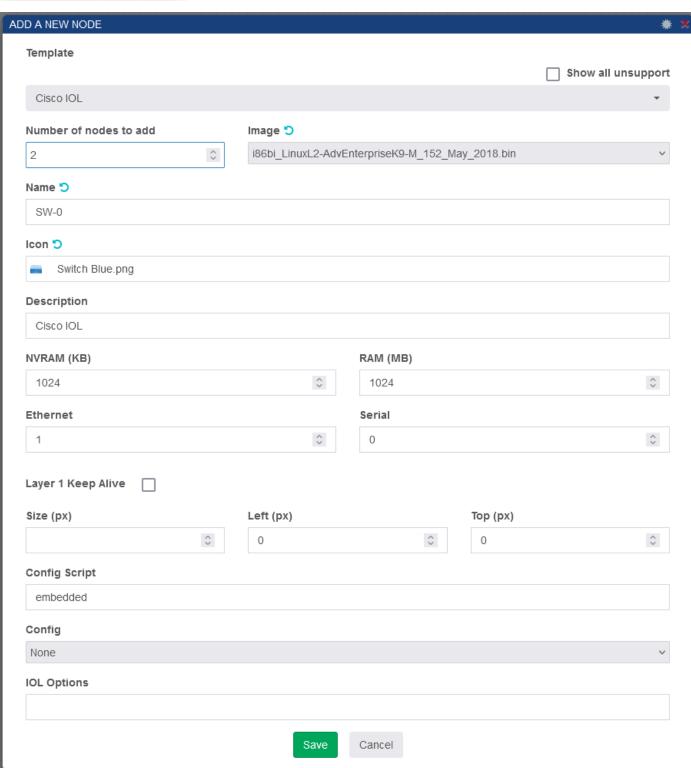
Saisissez un nom et cliquez sur le bouton Add

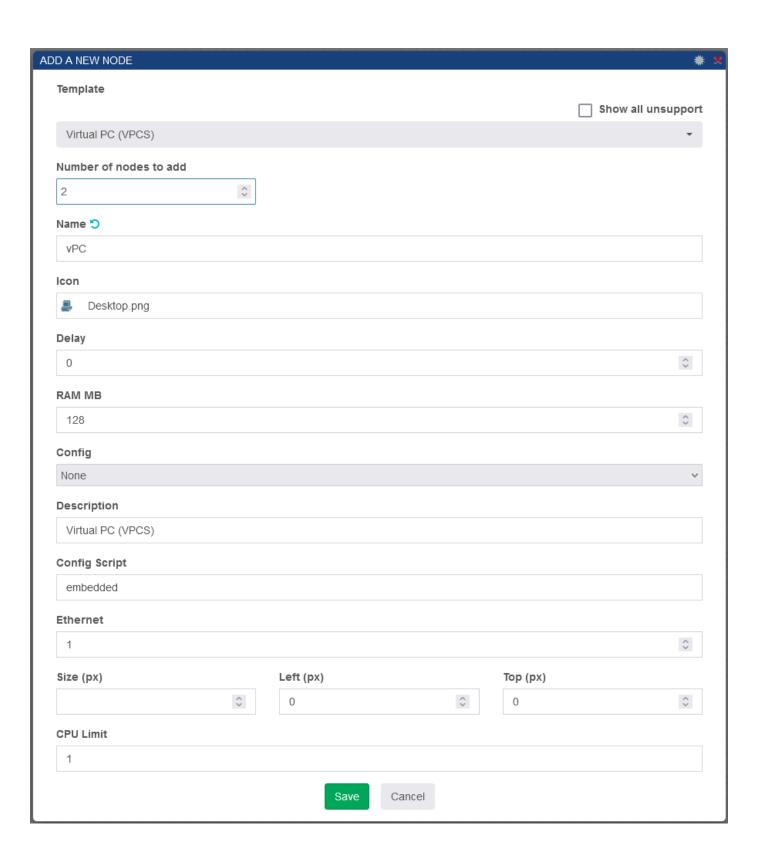


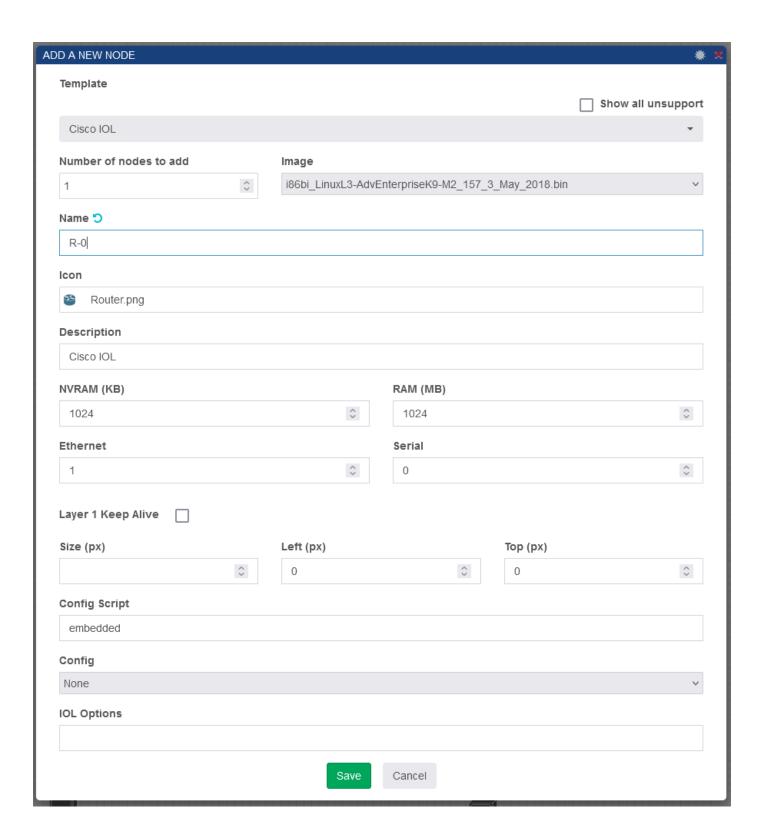
# Ajouter des appliances



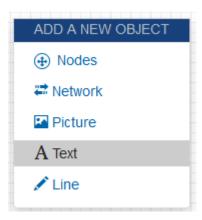




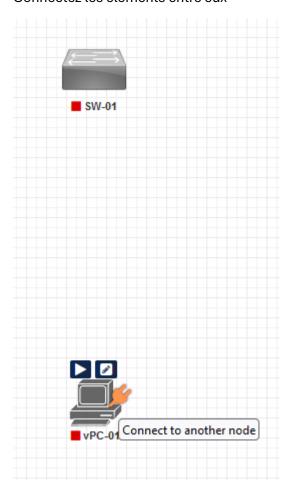




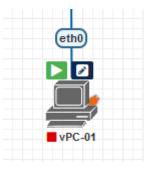
Ajoutez du texte



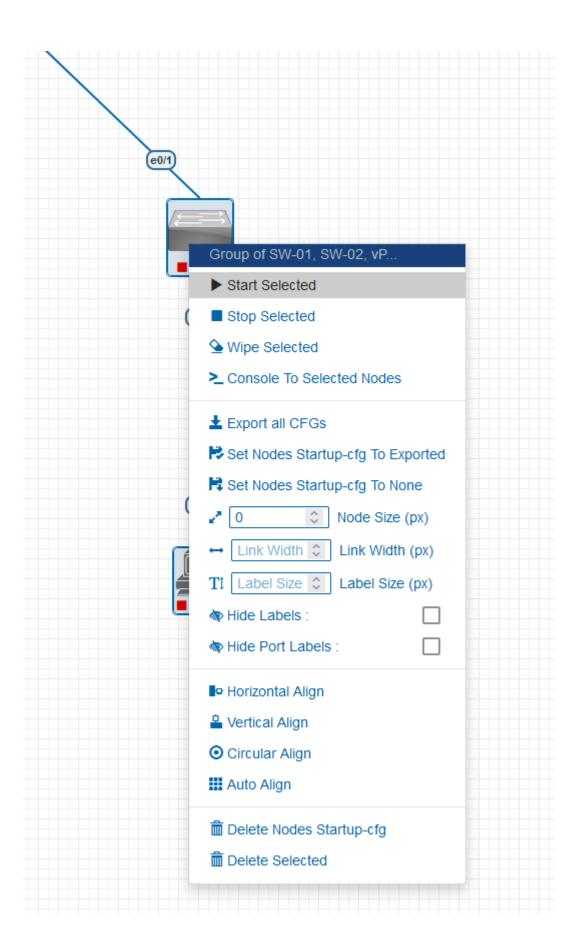
#### Connectez les éléments entre eux

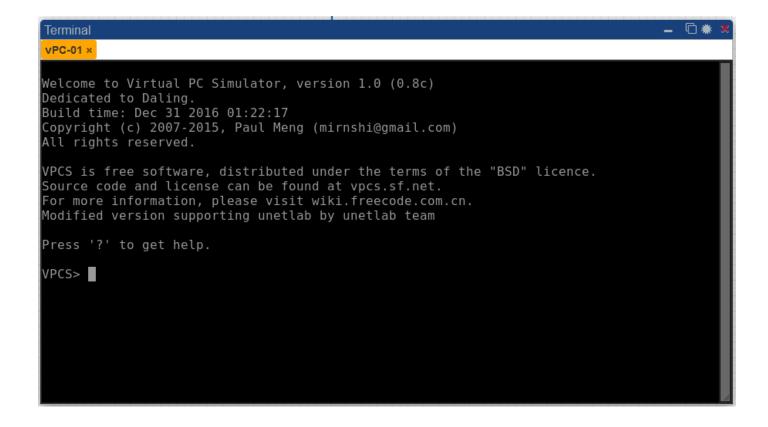


Démarrez les appliances en cliquant sur le bouton Play



ou en sélectionnant l'ensemble des appliances, puis en positionnant le curseur de la souris au-dessus d'une appliances, puis en cliquant sur le bouton droit de la souris, puis en cliquant sur Start Selected





Saisir le hostname du vPC, l'adresse IP, son Masque de sous-réseau, l'adresse IP de sa passerelle et sauvegardez la configuration.

```
VPCS> set pcname vPC-01

vPC-01> ip 192.168.1.10 255.255.255.0 192.168.1.254
Checking for duplicate address...
PC1 : 192.168.1.10 255.255.255.0 gateway 192.168.1.254

vPC-01> save
Saving startup configuration to startup.vpc
. done

vPC-01> ■
```

Configurez le vPC-02 de la même manière

Sélectionnez le routeur. Dans le CLI, tapez la touche Entrée. Saisissez NO et validez.

Configurez les interfaces du routeur

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int E0/0
Router(config-if)#ip add 192.168.1.254 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
Router(config)#
*Oct 5 16:12:46.088: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up
*Oct 5 16:12:47.096: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, chan
ged state to up
Router(config)#int E0/1
Router(config-if)#ip add 192.168.2.254 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
*Oct 5 16:13:09.223: %LINK-3-UPDOWN: Interface Ethernet0/1, changed state to up
*Oct 5 16:13:10.227: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, chan
ged state to up
Router(config)#end
Router#
Router#
*Oct 5 16:13:13.561: %SYS-5-CONFIG I: Configured from console by console
Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

#### Testez la connectivité

```
vPC-01> ping 192.168.1.254

84 bytes from 192.168.1.254 icmp_seq=1 ttl=255 time=0.598 ms

84 bytes from 192.168.1.254 icmp_seq=2 ttl=255 time=1.727 ms

84 bytes from 192.168.1.254 icmp_seq=3 ttl=255 time=0.561 ms

84 bytes from 192.168.1.254 icmp_seq=4 ttl=255 time=0.445 ms

84 bytes from 192.168.1.254 icmp_seq=5 ttl=255 time=0.487 ms

vPC-01> ■
```

```
vPC-02> ping 192.168.2.254

84 bytes from 192.168.2.254 icmp_seq=1 ttl=255 time=0.308 ms

84 bytes from 192.168.2.254 icmp_seq=2 ttl=255 time=0.392 ms

84 bytes from 192.168.2.254 icmp_seq=3 ttl=255 time=0.438 ms

84 bytes from 192.168.2.254 icmp_seq=4 ttl=255 time=0.478 ms

84 bytes from 192.168.2.254 icmp_seq=5 ttl=255 time=0.801 ms

vPC-02> ping 192.168.1.10

84 bytes from 192.168.1.10 icmp_seq=1 ttl=63 time=0.729 ms

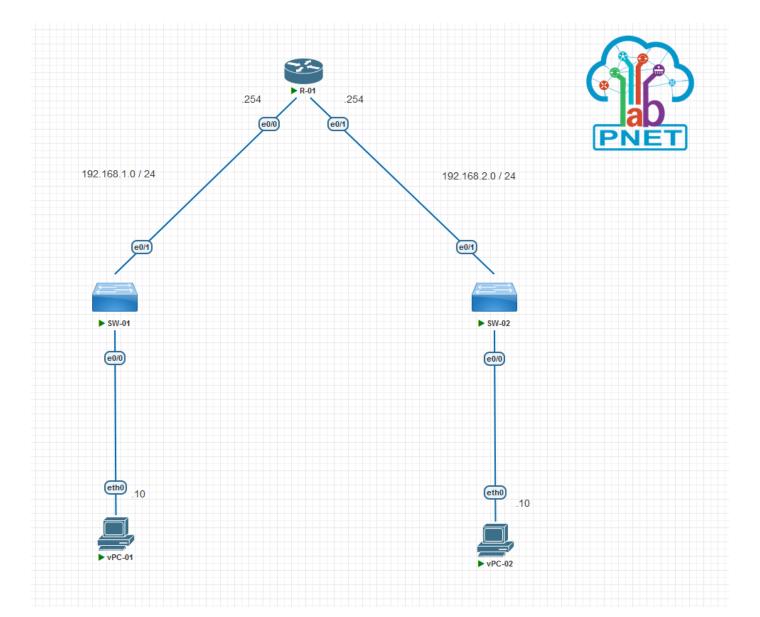
84 bytes from 192.168.1.10 icmp_seq=2 ttl=63 time=0.742 ms

84 bytes from 192.168.1.10 icmp_seq=3 ttl=63 time=0.851 ms

84 bytes from 192.168.1.10 icmp_seq=4 ttl=63 time=0.833 ms

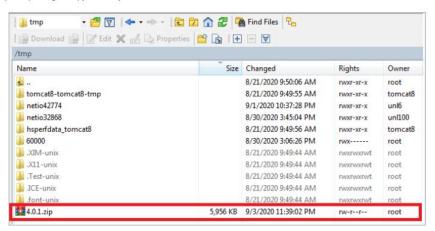
84 bytes from 192.168.1.10 icmp_seq=4 ttl=63 time=0.833 ms

84 bytes from 192.168.1.10 icmp_seq=5 ttl=63 time=0.682 ms
```

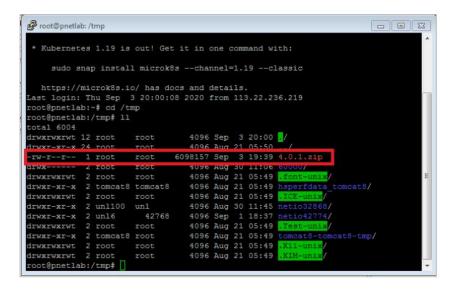


#### 2. PNETLab can not connect to Internet.

- · Access link to download the upgrade package.
- You have to upgrade step by step from your current version to the latest version. (E.g you can upgrade 1.0.1 > 1.0.2 > 1.0.3 . But you can not upgrade from 1.0.1 > 1.0.3 it may be get the error.)
- $\bullet$  After Download the upgrade patch package. Copy it to  $\mbox{/tmp}$  folder of PNETLab



- . SSH to PNETLab with root account and run command to check:
  - cd /tmp
  - o Is -I



- · Unzip upgrade package by command:
  - delete old upgrade folder if exist by command: rm -rf upgrade
  - o unzip [package] -d ./upgrade (Eg: unzip 4.0.1.zip -d ./upgrade)
  - Check again by command: Is -I. You should see the upgrade folder

```
root@pnetlab:/tmp# unzip 4.0.1.zip -d ./upgrade
Archive: 4.0.1.zip

creating: ./upgrade/system_files/
inflating: ./upgrade/system_files/app.pp

creating: ./upgrade/system_files/app.pp

creating: ./upgrade/system_files/app/Console/
creating: ./upgrade/system_files/app/Console/Commands/
inflating: ./upgrade/system_files/app/Console/Commands/ConvertName.php
inflating: ./upgrade/system_files/app/Console/Commands/crontab
inflating: ./upgrade/system_files/app/Console/Commands/crontab
inflating: ./upgrade/system_files/app/Console/Commands/harddisk_alert
inflating: ./upgrade/system_files/app/Console/Commands/harddisk_alert
inflating: ./upgrade/system_files/app/Console/Commands/harddisk_limit
inflating: ./upgrade/system_files/app/Console/Commands/harddisk_limit.service
inflating: ./upgrade/system_files/app/Console/Commands/KeepAlive.php
inflating: ./upgrade/system_files/app/Console/Commands/KeepAlive.php
inflating: ./upgrade/system_files/app/Console/Commands/Mode
```

```
root@pnetlab:/tmp# 1s -1
total 5980
-rw-r--r- 1 root root 6098157 Sep 3 19:39 4.0.1.zip
drwx----- 2 root root 4096 Aug 30 11:06 60000
drwxr-xr-x 2 tomcat8 tomcat8 4096 Aug 21 05:49 hsperfdata_tomcat8
drwxr-xr-x 2 unl100 unl 4096 Aug 30 11:45 netio32868
drwxr-xr-x 2 unl6 42768 4096 Sep 1 18:37 netio42774
drwxr-xr-x 2 uncat8 root 4096 Aug 21 05:49 tomcat8-tomcat8-tmp
drwxr-xr-x 3 root root 4096 Sep 3 20:08 upgrade
```

- · Run below commands to upgrade.
  - o chmod 755 -R upgrade
  - o find upgrade -type f -print0 | xargs -0 dos2unix 2>&1
  - ./upgrade/upgrade

```
root@pnetlab:/tmp# chmod 755 -R upgrade
root@pnetlab:/tmp# find upgrade -type f -print0 | xargs -0 dos2unix
dos2unix: converting file upgrade/upgrade to Unix format ...
dos2unix: Binary symbol 0x1A found at line 2
dos2unix: Skipping binary file upgrade/system_files/images/qemu.png
dos2unix: Binary symbol 0x1A found at line 2
dos2unix: Skipping binary file upgrade/system_files/images/docker.png
dos2unix: converting file upgrade/system_files/vendors~%2E/store/public/react/pages/admin-StatusView-js.js to Unix format ...
```

```
root@pnetlab:/tmp#
root@pnetlab:/tmp# ./upgrade/upgrade

mysql: [Warning] Using a password on the command line interface can be insecure.

Jpgraded successfully
root@pnetlab:/tmp#
```

· Login to Web Guide and check again

