

Installation de GNS3, VMware Workstation et Images de Routeurs

Introduction

Ce document compile les captures d'écran fournies pour détailler visuellement le processus d'installation de GNS3, de VMware Workstation, ainsi que des images de routeurs. Les captures d'écran utilisées sont situées dans le chemin

1. Paramètres de la Machine Virtuelle (VMware Workstation)

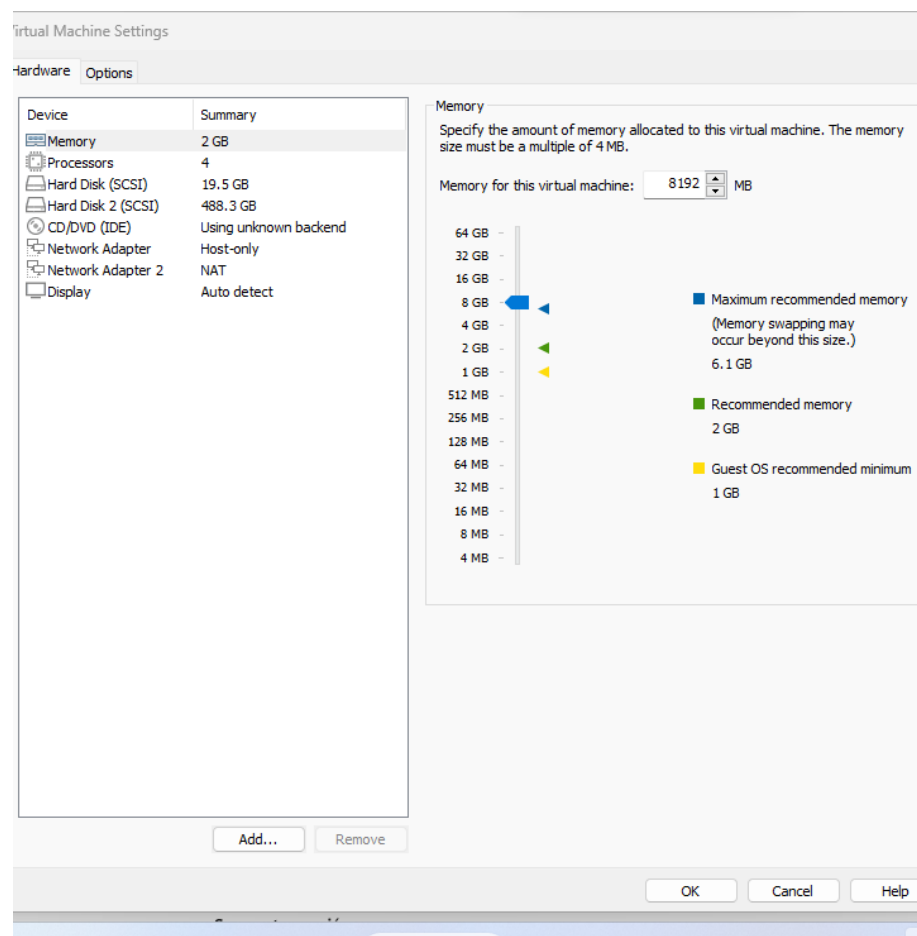


Figure 1: Paramètres de la machine virtuelle

2. Configuration de la VM pour GNS3

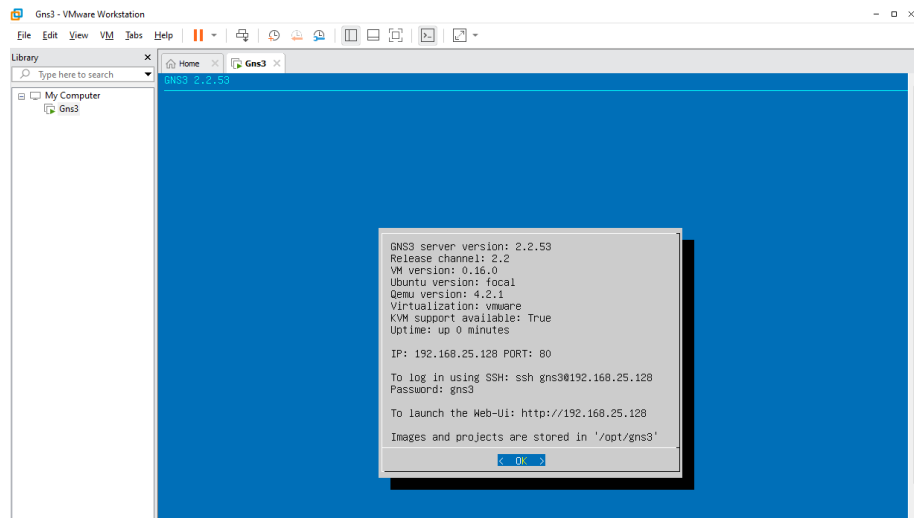


Figure 2: Configuration de la VM pour GNS3

3. Écran de Bienvenue de l'installation de GNS3

4. Choix du dossier dans le Menu Démarrer

5. Choix de l'emplacement d'installation de GNS3

6. Avancement de l'installation de GNS3

7. Sélection des options de simulation



Figure 3: Écran de Bienvenue de GNS3

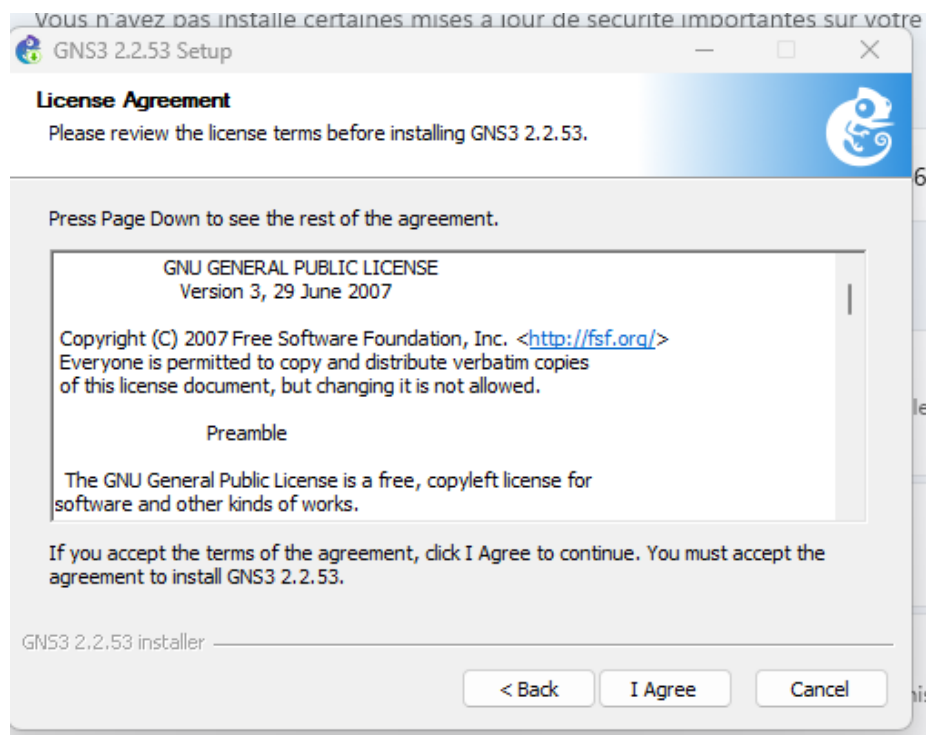


Figure 4: Choix du dossier dans le menu démarrer

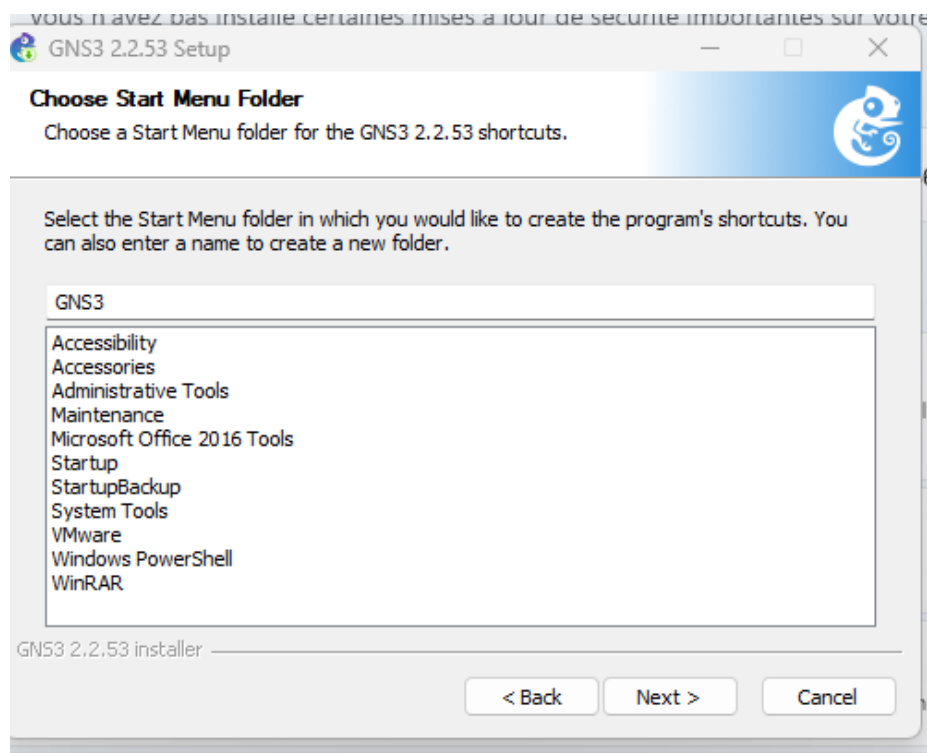


Figure 5: Choix de l'emplacement d'installation

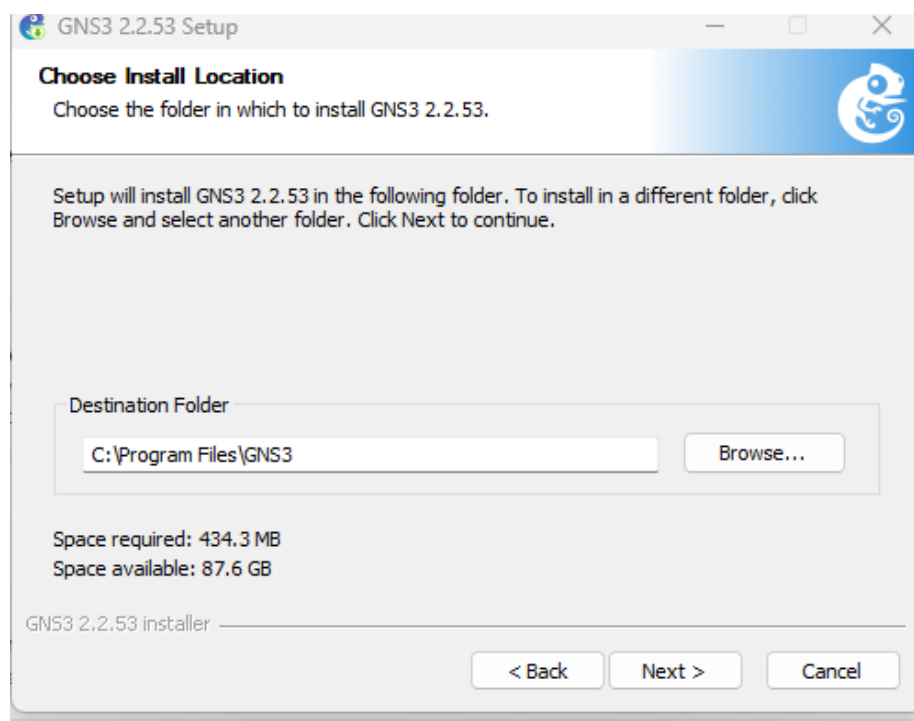


Figure 6: Progression de l'installation

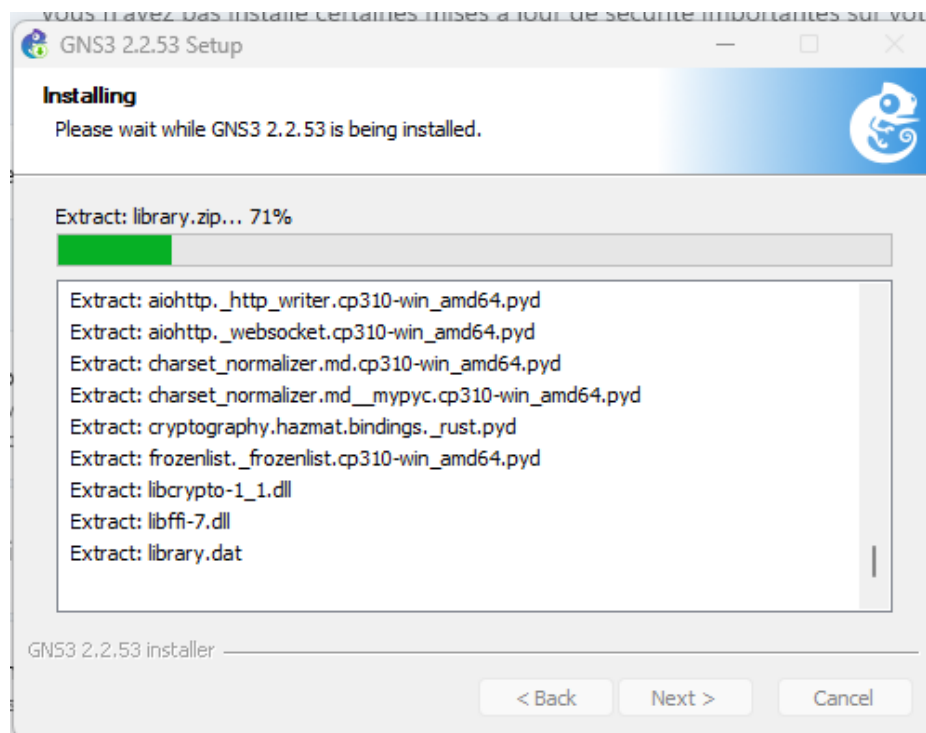


Figure 7: Options de simulation

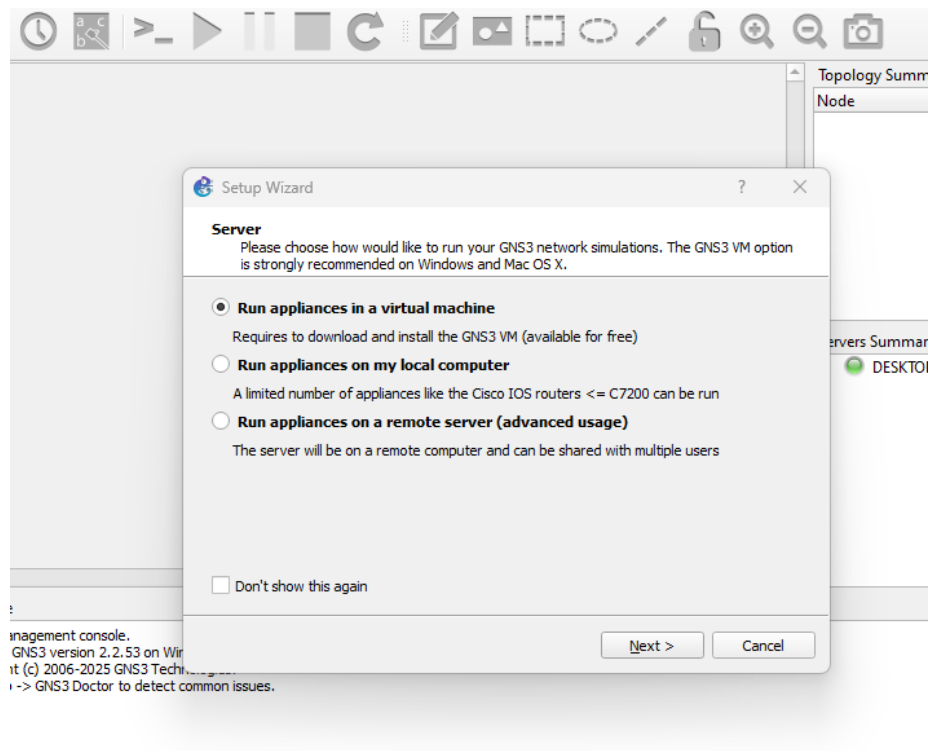


Figure 8: Création d'un nouveau template

8. Création d'un nouveau template (Appliance)

9. Installation de l'appliance Cisco 1700 - Étape 1

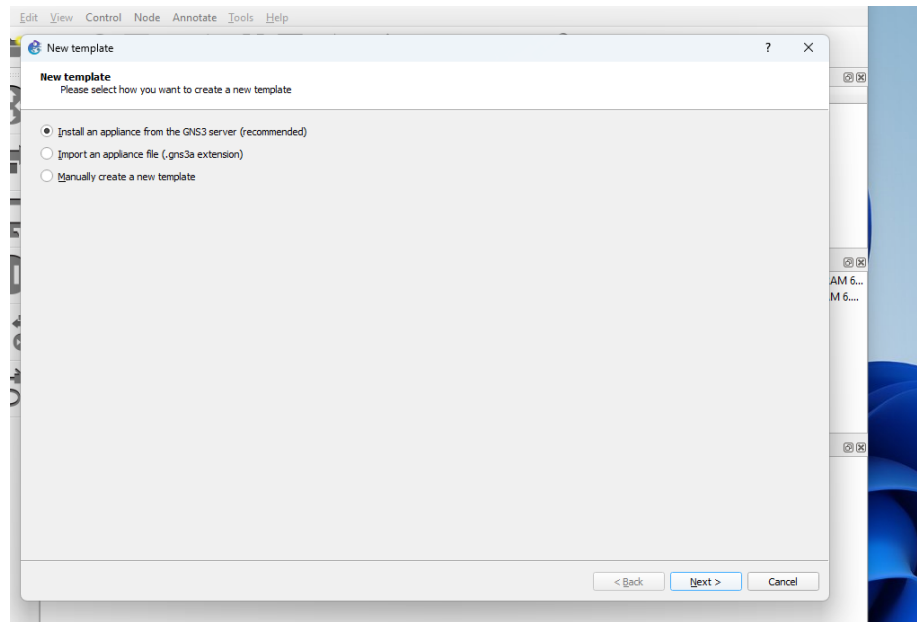


Figure 9: Installation Cisco 1700 - Étape 1

10. Installation de l'appliance Cisco 1700 - Étape 2

11. Installation de l'appliance Cisco 1700 - Étape 3

12. Importation des fichiers nécessaires pour Cisco 1700

13. Sélection du fichier d'image pour Cisco 1700

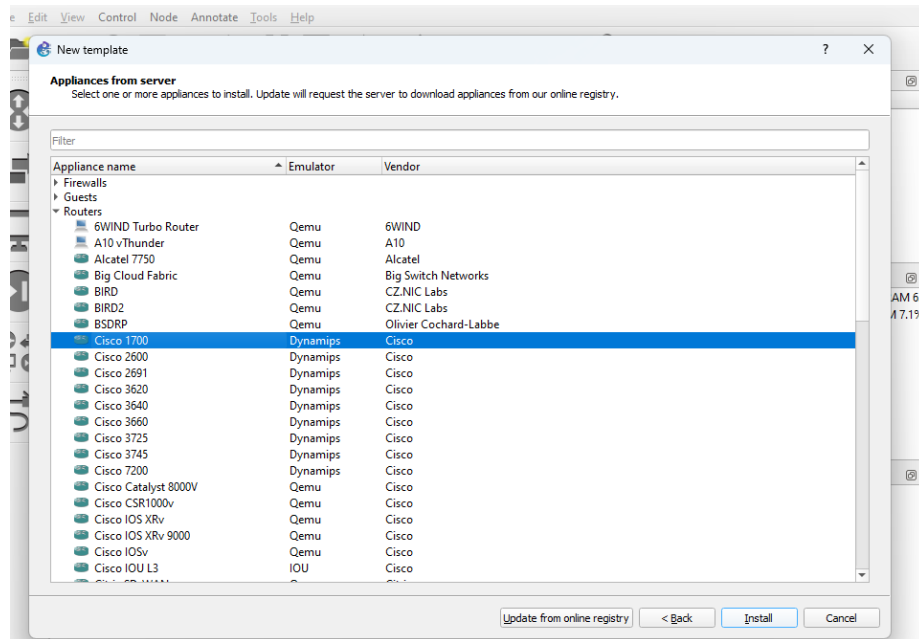


Figure 10: Installation Cisco 1700 - Étape 2

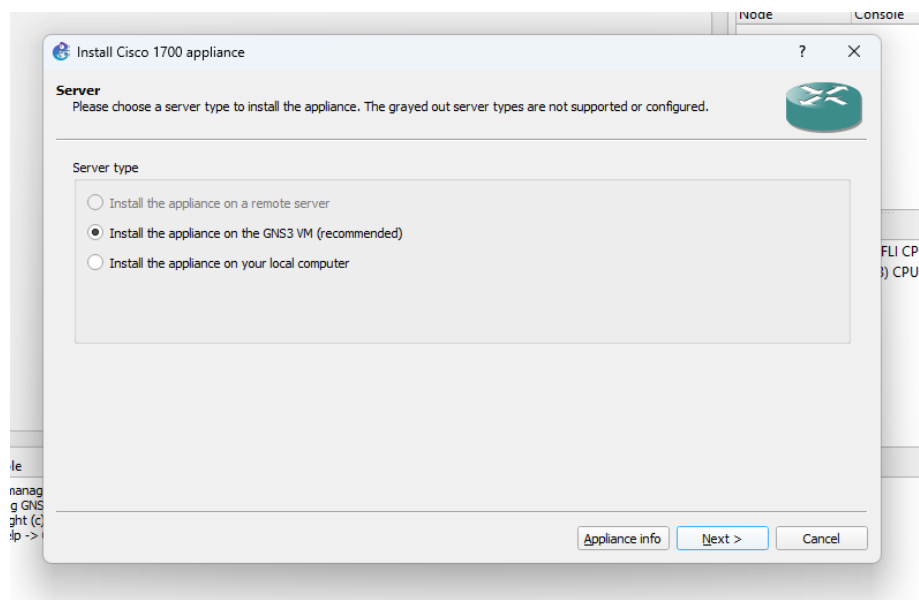


Figure 11: Installation Cisco 1700 - Étape 3

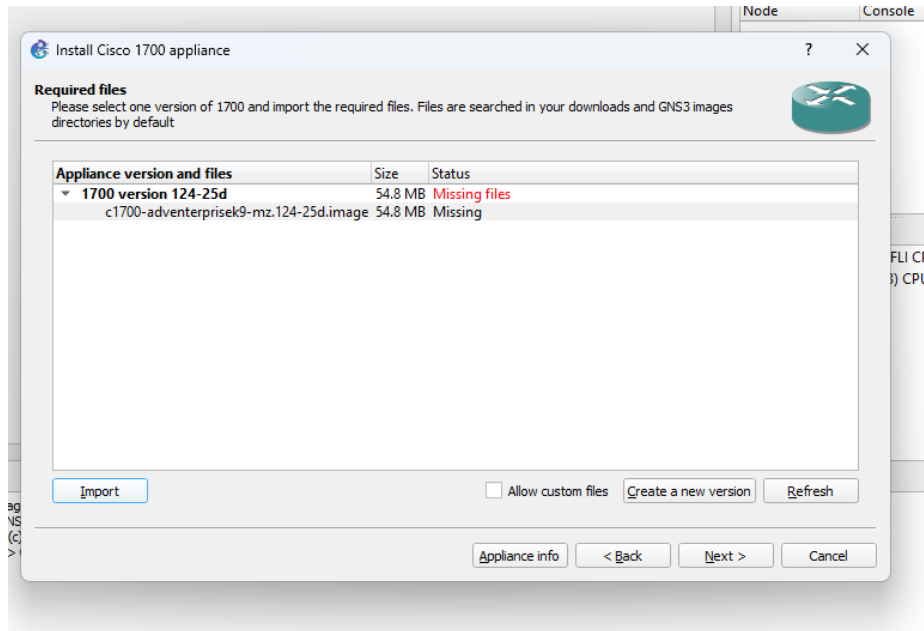


Figure 12: Importation des fichiers nécessaires

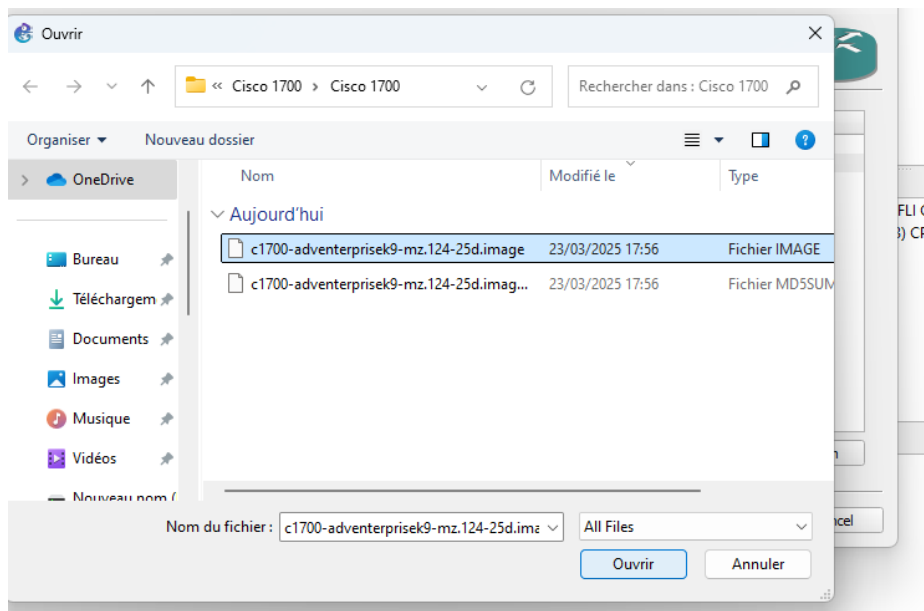


Figure 13: Sélection du fichier d'image pour Cisco 1700

14. Finalisation de l'installation de Cisco 1700

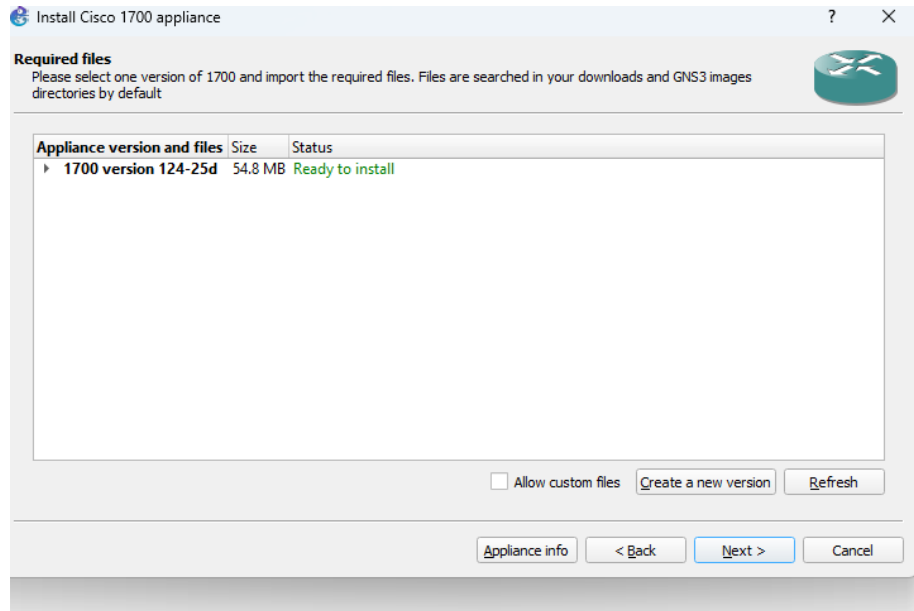


Figure 14: Finalisation de l'installation de Cisco 1700

15. Instructions après l'installation de Cisco 1700

16. Interface post-installation de GNS3

Reproduction de la Topologie et Configuration du Routeur et des PCs

Configuration Réseau

1. Configuration du Routeur

Voici les étapes effectuées pour configurer le routeur : - Activation de l'interface FastEthernet :

- Vérification de l'image IOS chargée et des erreurs de compatibilité.

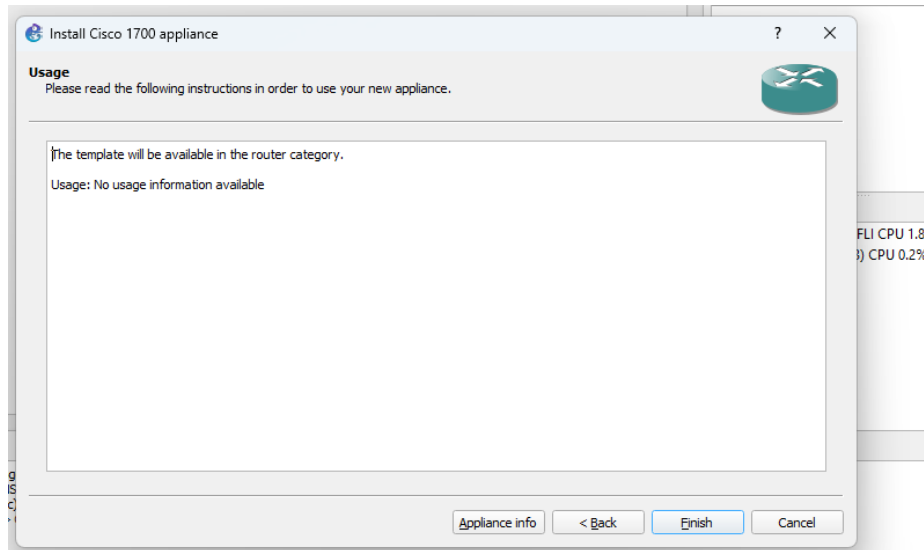


Figure 15: Instructions après l'installation de Cisco 1700

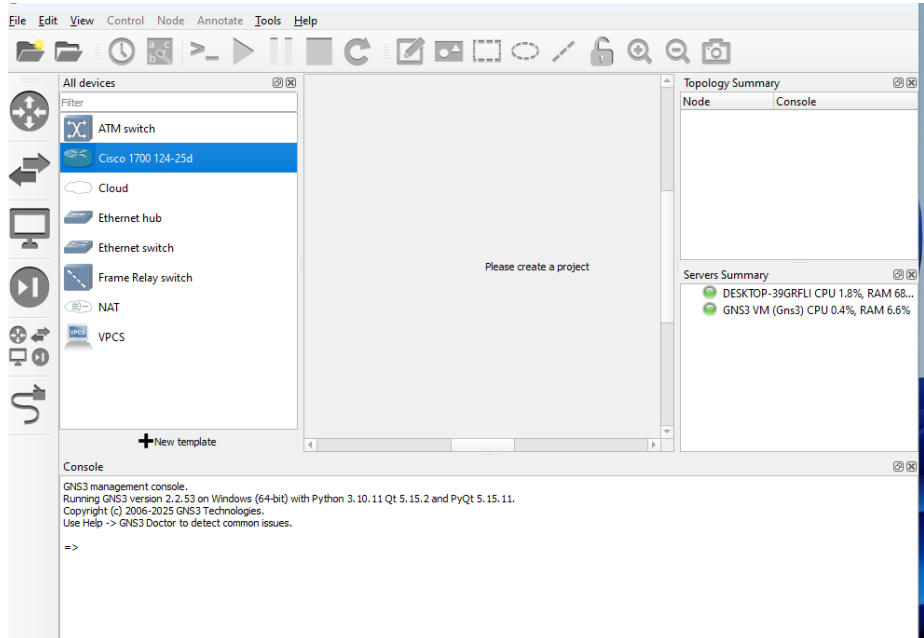
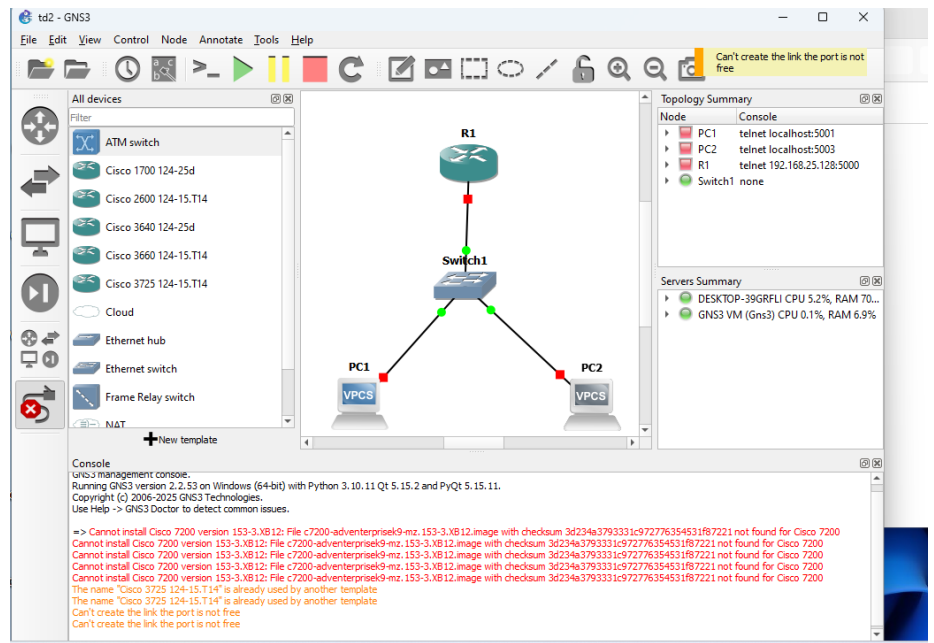


Figure 16: Interface de GNS3



Capture d'écran :

2. Paramètres des PCs

Les PCs ont été configurés avec les adresses IP suivantes : - **PC1** : 192.168.1.2/24
- **PC2** : 192.168.1.3/24

Les paramètres DNS ont été mis à jour pour permettre la résolution des noms de domaine si nécessaire.

```
R1
Processor board ID FTX0945W0MY (4279256517), with hardware revision 0000
MPC860T processor: part number 0, mask 0
1 FastEthernet interface
128K bytes of NVRAM.
4096K bytes of processor board System flash (Read/Write)

SETUP: new interface FastEthernet0 placed in "shutdown" state

Press RETURN to get started!

*Mar 1 00:00:00.859: %C1700-3-BADIMAGE: The IOS image loaded supports voice. The platform you are running is not voice capable.
*Mar 1 00:00:00.859: %C1700-3-BADIMAGE: The IOS image loaded supports voice. The platform you are running is not voice capable.
*Mar 1 00:00:04.603: %LINEPROTO-5-UPDOWN: Line protocol on Interface VoIP-Null0, changed state to up
*Mar 1 00:00:04.611: %LINK-3-UPDOWN: Interface FastEthernet0, changed state to up
*Mar 1 00:00:04.835: %SYS-5-CONFIG_I: Configured from memory by console
*Mar 1 00:00:05.179: %SYS-5-RESTART: System restarted --
Cisco IOS Software, C1700 Software (C1700-ADVENTERPRISEK9-M), Version 12.4(25d), RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2010 by Cisco Systems, Inc.
Compiled Wed 18-Aug-10 03:53 by prod_rel_team
*Mar 1 00:00:05.195: %SNMP-5-COLDSTART: SNMP agent on host R1 is undergoing a cold start
*Mar 1 00:00:05.611: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0, changed state to down
*Mar 1 00:00:06.843: %LINK-5-CHANGED: Interface FastEthernet0, changed state to administratively down
R1#
R1#en
R1#enable
R1#
```

Capture d'écran PC1 :

Node properties

Switch1 configuration

General

Name: Switch1

Console type: telnet

Settings

Port: 8

VLAN: 1

Type: access

QinQ EtherType: 0x8100

Ports

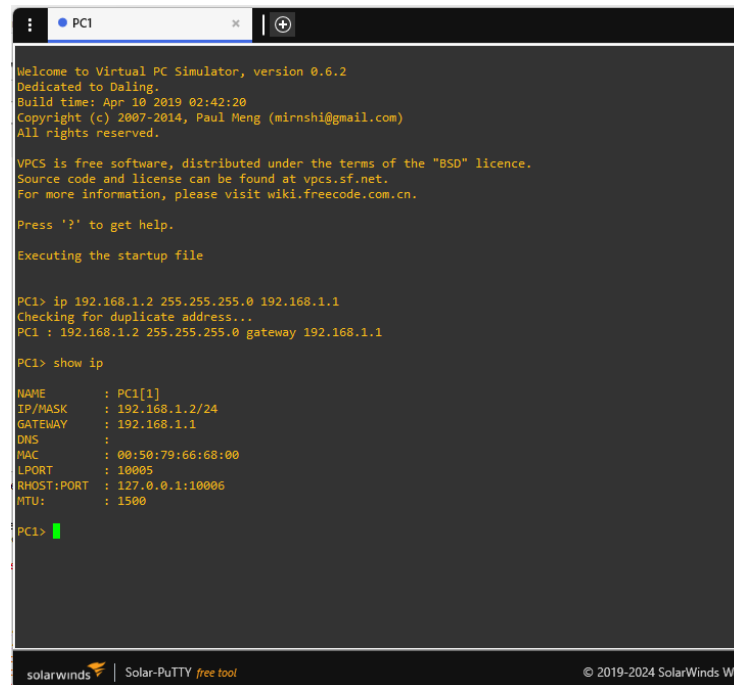
Port	VLAN	Type	EtherType
0	1	access	
1	1	access	
2	1	access	
3	1	access	
4	1	access	
5	1	access	
6	1	access	
7	1	access	

Buttons: Add, Delete, Reset, OK, Cancel, Apply

Capture d'écran PC2 :

3. Test de Connectivité

Les tests de ping ont été effectués entre les PCs et le routeur pour confirmer la connectivité.



```
PC1
Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 10 2019 02:42:20
Copyright (c) 2007-2014, Paul Meng (mirnshi@gmail.com)
All rights reserved.

VPCS is free software, distributed under the terms of the "BSD" licence.
Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

PC1> ip 192.168.1.2 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC1 : 192.168.1.2 255.255.255.0 gateway 192.168.1.1

PC1> show ip

NAME       : PC1[1]
IP/MASK    : 192.168.1.2/24
GATEWAY    : 192.168.1.1
DNS        :
MAC        : 00:50:79:66:68:00
LPORT      : 10005
RHOST:PORT : 127.0.0.1:10006
MTU        : 1500

PC1>
```

Capture d'écran des tests de connectivité :



```
Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 10 2019 02:42:20
Copyright (c) 2007-2014, Paul Meng (mirnshi@gmail.com)
All rights reserved.

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Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

PC2> ip 192.168.1.3 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC1 : 192.168.1.3 255.255.255.0 gateway 192.168.1.1

PC2> show ip
NAME      : PC2[1]
IP/MASK    : 192.168.1.3/24
GATEWAY    : 192.168.1.1
DNS        :
MAC        : 00:50:79:66:68:01
LPORT      : 10007
HOST:PORT  : 127.0.0.1:10008
MTU        : 1500

PC2>
```

Capture d'écran des tests de connectivité 2 :

Reproduction de la topologie et configuration du routeur et des PCs

Topologie du réseau

Voici une représentation visuelle de la topologie mise en place :

Configuration du routeur

Interface FastEthernet0/0

- IP Address : 192.168.1.1/24
- Status : Active
- Commandes :

```
bash interface FastEthernet0/0 ip
address 192.168.1.1 255.255.255.0 no shutdown
```

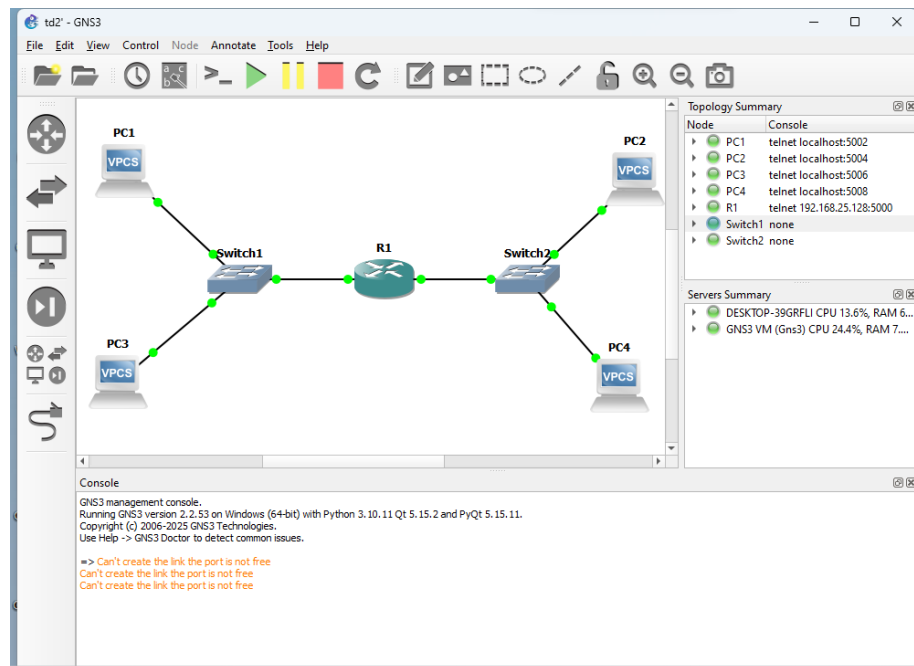


Figure 17: Topologie réseau

Interface FastEthernet0/1

- **IP Address** : 192.168.2.1/24
- **Status** : Active
- **Commandes** : `bash interface FastEthernet0/1 ip address 192.168.2.1 255.255.255.0 no shutdown`

Configuration des PCs

PC1

- **IP Address** : 192.168.1.2/24
- **Gateway** : 192.168.1.1
- **Commandes** : `bash set pc1 ip 192.168.1.2 255.255.255.0 192.168.1.1`

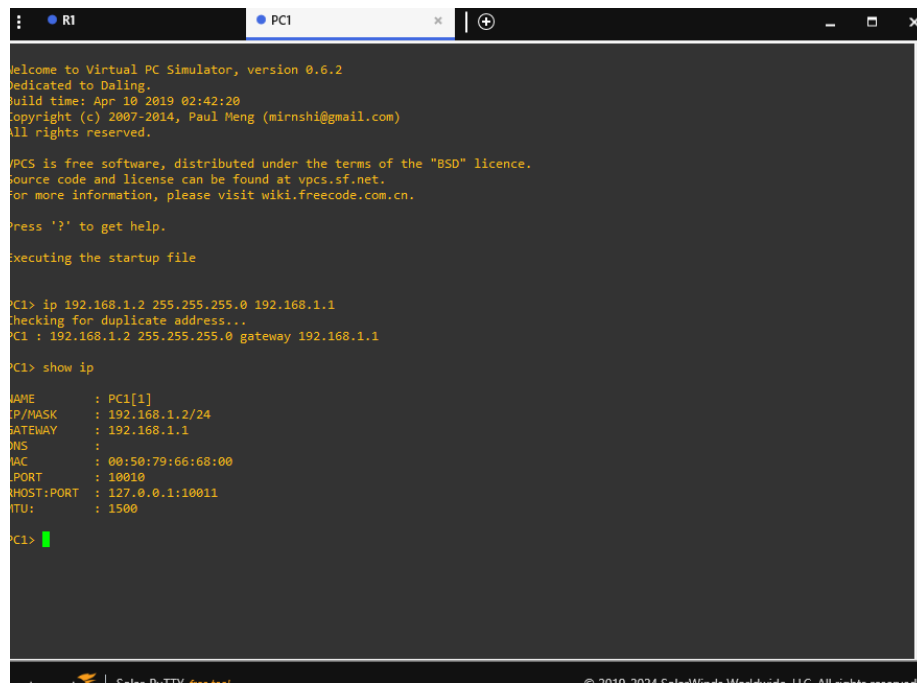
PC2

- **IP Address** : 192.168.2.2/24
- **Gateway** : 192.168.2.1

```
SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2010 by Cisco Systems, Inc.
Compiled Tue 17-Aug-10 11:00 by prod_rel_team
*Mar 1 00:00:05.643: %SNMP-5-COLDSTART: SNMP agent on host R1 is undergoing a c
old start
*Mar 1 00:00:05.687: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar 1 00:00:05.687: %CRYPTO-6-ISAAMP_ON_OFF: ISAAMP is OFF
*Mar 1 00:00:05.691: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar 1 00:00:05.691: %CRYPTO-6-ISAAMP_ON_OFF: ISAAMP is OFF
*Mar 1 00:00:06.075: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to down
*Mar 1 00:00:06.075: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/1, changed state to down
*Mar 1 00:00:07.319: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state
to administratively down
*Mar 1 00:00:07.323: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state
to administratively down
R1#enable
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#interface FastEthernet0
% Incomplete command.

R1(config)#interface FastEthernet0/0
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#
*Mar 1 00:01:48.555: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Mar 1 00:01:49.555: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1(config)#interface FastEthernet0/1
R1(config-if)#ip address 192.168.2.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
*Mar 1 00:02:46.671: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
*Mar 1 00:02:47.671: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
R1(config-if)#exit
R1(config)#
```

Figure 18: Configuration du routeur



```

Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
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For more information, please visit wiki.freecode.com.cn.

Press '?' to get help.

Executing the startup file

PC1> ip 192.168.1.2 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC1 : 192.168.1.2 255.255.255.0 gateway 192.168.1.1

PC1> show ip

NAME       : PC1[1]
IP/MASK     : 192.168.1.2/24
GATEWAY     : 192.168.1.1
DNS         :
MAC         : 00:50:79:66:68:00
LPORT      : 10010
RHOST:PORT  : 127.0.0.1:10011
RTU:        : 1500

PC1> 
```

Figure 19: Configuration PC1

- **Commandes** : `bash` `set pc2 ip 192.168.2.2 255.255.255.0 192.168.2.1`

```

Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 10 2019 02:42:20
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Press '?' to get help.

Executing the startup file

PC3> ip 192.168.1.3 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC1 : 192.168.1.3 255.255.255.0 gateway 192.168.1.1

PC3> show ip
NAME      : PC3[1]
IP/MASK   : 192.168.1.3/24
GATEWAY   : 192.168.1.1
DNS       :
MAC       : 00:50:79:66:68:02
LPORT     : 10014
RHOST:PORT : 127.0.0.1:10015
MTU       : 1500

PC3>

```

Figure 20: Configuration PC2

PC3

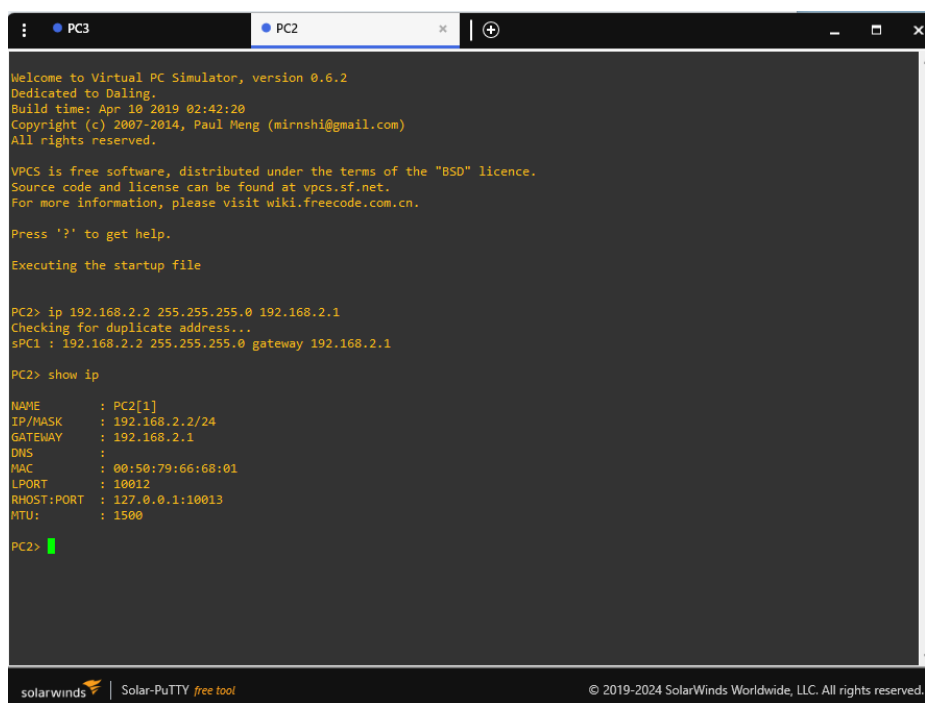
- **IP Address** : 192.168.2.3/24
- **Gateway** : 192.168.2.1
- **Commandes** : `bash` `set pc3 ip 192.168.2.3 255.255.255.0 192.168.2.1`

PC4

- **IP Address** : 192.168.2.4/24
- **Gateway** : 192.168.2.1
- **Commandes** : `bash` `set pc4 ip 192.168.2.4 255.255.255.0 192.168.2.1`

Tests de connectivité

- **PC1 vers Routeur** :



The image shows a window titled "Virtual PC Simulator" with two tabs: "PC3" and "PC2". The "PC2" tab is active, displaying a terminal window with the following text:

```
Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 10 2019 02:42:20
Copyright (c) 2007-2014, Paul Meng (mirnshi@gmail.com)
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Press '?' to get help.

Executing the startup file

PC2> ip 192.168.2.2 255.255.255.0 192.168.2.1
Checking for duplicate address...
sPC1 : 192.168.2.2 255.255.255.0 gateway 192.168.2.1

PC2> show ip
NAME      : PC2[1]
IP/MASK    : 192.168.2.2/24
GATEWAY    : 192.168.2.1
DNS        :
MAC        : 00:50:79:66:68:01
LPORT      : 10012
RHOST:PORT : 127.0.0.1:10013
MTU        : 1500

PC2> █
```

At the bottom of the window, there is a footer bar with the SolarWinds logo, the text "Solar-PuTTY free tool", and the copyright notice "© 2019-2024 SolarWinds Worldwide, LLC. All rights reserved."

Figure 21: Configuration PC3



The image shows a screenshot of a 'Virtual PC Simulator' window. The window has three tabs: 'PC3', 'PC2', and 'PC4'. The 'PC4' tab is active. The terminal output within the window shows the following text:

```
Welcome to Virtual PC Simulator, version 0.6.2
Dedicated to Daling.
Build time: Apr 10 2019 02:42:20
Copyright (c) 2007-2014, Paul Meng (mirnshi@gmail.com)
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Press '?' to get help.

Executing the startup file

PC4> ip 192.168.2.3 255.255.255.0 192.168.2.1
Checking for duplicate address...
PC1 : 192.168.2.3 255.255.255.0 gateway 192.168.2.1

PC4> show ip

NAME       : PC4[1]
IP/MASK    : 192.168.2.3/24
GATEWAY    : 192.168.2.1
DNS        :
MAC        : 00:50:79:66:68:03
LPORT      : 10016
RHOST:PORT : 127.0.0.1:10017
MTU        : 1500

PC4>
```

At the bottom of the window, there is a status bar with the 'solarwinds' logo, the text 'Solar-PuTTY free tool', and the copyright notice '© 2019-2024 SolarWinds Worldwide, LLC. All rights reserved.'

Figure 22: Configuration PC4

- Commande : `ping 192.168.1.1`
 - Résultat : [Inclure les résultats ou le résumé]
 - **PC2 vers Routeur :**
 - Commande : `ping 192.168.2.1`
 - Résultat : [Inclure les résultats ou le résumé]
-

Conclusion

Ce td m'a permis de me familiariser avec le logiciel gns3 ainsi qu'avec vmware workstation.
