INSTITUT UNIVERSITAIRE DES SCIENCES - IUS

Faculté des Sciences et Technologie - FST

Niveau L3 Sciences Informatiques
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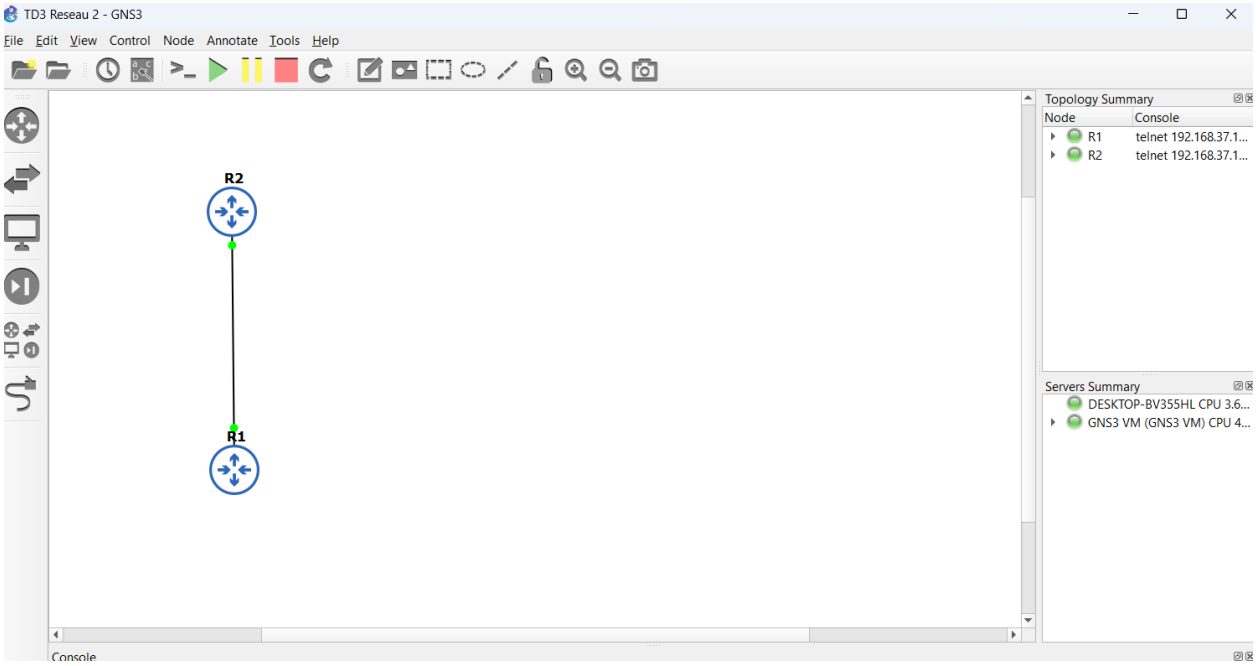
Prenom : Marie Béatrice
Soumis au chargé de cours Ismael SAINT AMOUR
Date: Dimanche 19 avril 2025

TD3- La configuration des protocoles Telnet, SSH, DNS et DHCP avec GNS3 ont pour objectif de vous permettre de maîtriser les concepts et les compétences pratiques liés à la configuration, à la gestion et au dépannage des réseaux.

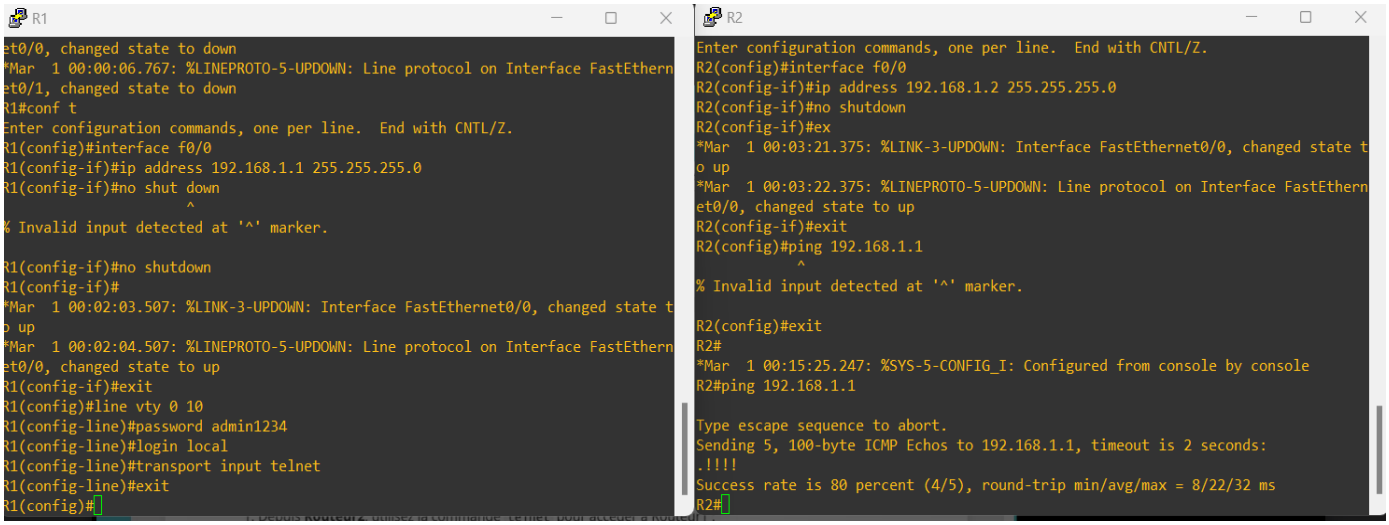
Comprendre la différence entre Telnet (non sécurisé) et SSH (sécurisé).
Configurer l'accès à distance à un routeur ou un commutateur via Telnet et SSH.
Configurer un serveur DNS et DHCP sur un routeur Cisco.
Tester l'attribution des adresses IP aux clients.

Configurer le protocole Telnet sur cette topologie

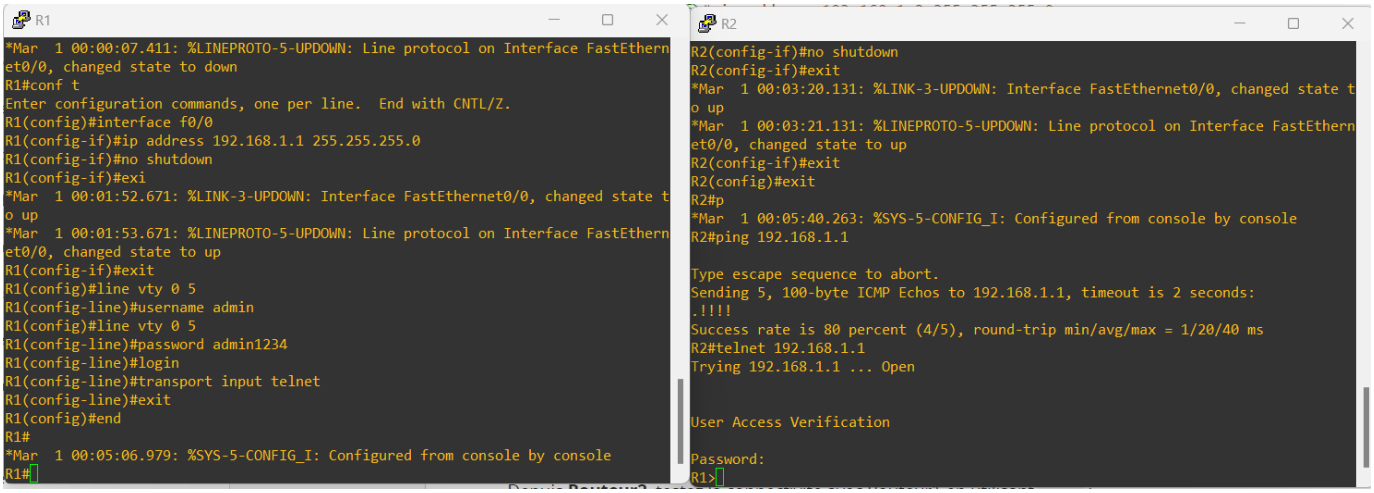
1. Reproduire cette topologie en configurant le protocole Telnet.



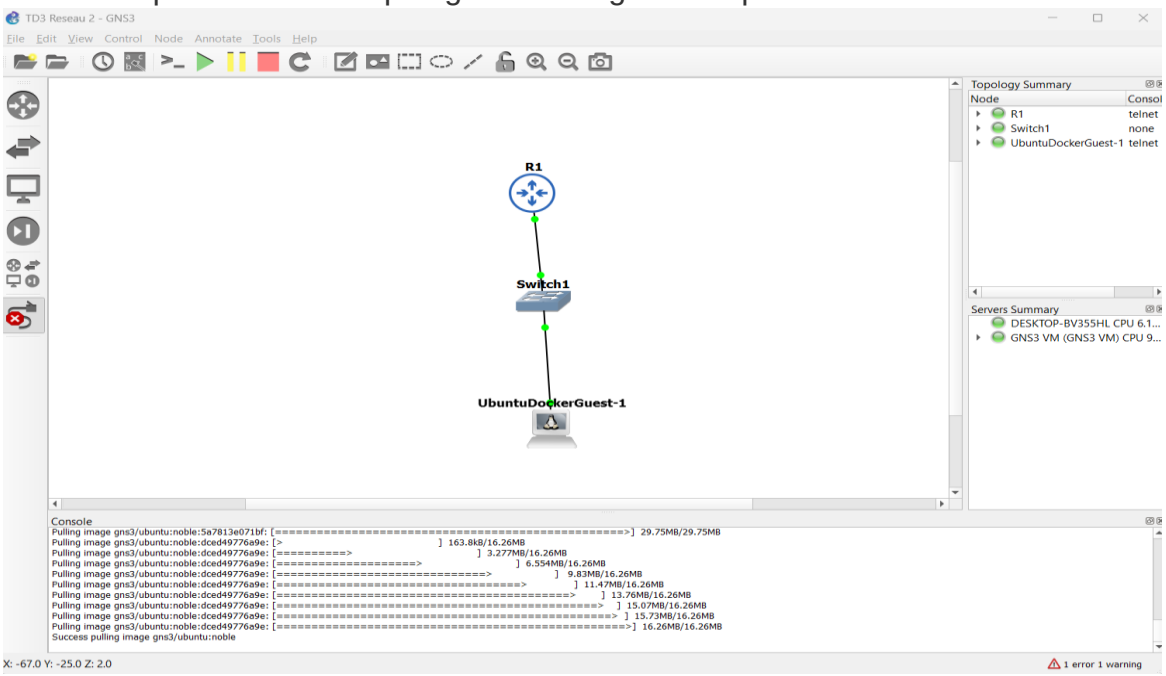
- Configurer les routeurs et telnet sur le routeur R1



- Accéder à R1 via telnet a partir du routeur 2



2. Reproduire cette topologie en configurant le protocole Telnet.



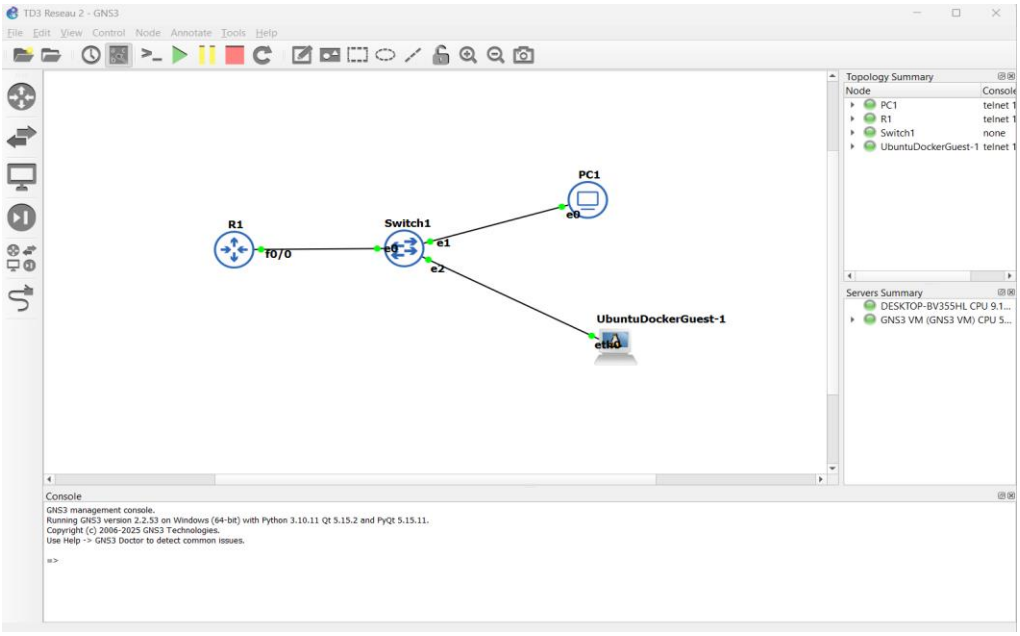
R1

```
, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2010 by Cisco Systems, Inc.
Compiled Tue 17-Aug-10 12:08 by prod_rel_team
*Mar  1 00:00:02.899: %SNMP-5-COLDSTART: SNMP agent on host R1 is undergoing a c
old start
*Mar  1 00:00:02.939: %CRYPTO-6-ISAKMP_ON_OFF: ISAKMP is OFF
*Mar  1 00:00:02.943: %CRYPTO-6-GDOI_ON_OFF: GDOI is OFF
*Mar  1 00:00:03.131: %LINK-5-CHANGED: Interface FastEthernet0/0, changed state
to administratively down
*Mar  1 00:00:03.155: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state
to administratively down
*Mar  1 00:00:04.131: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to down
*Mar  1 00:00:04.155: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/1, changed state to down
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface f0/0
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
*Mar  1 00:05:09.007: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state t
o up
*Mar  1 00:05:10.007: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to up
R1(config-if)#exit
R1(config)#line vty 0 5
R1(config-line)#username admin
R1(config)#line vty 0 5
R1(config-line)#password admin1234
R1(config-line)#login
R1(config-line)#transport input telnet
R1(config-line)#exit
R1(config)#exit
R1#sh
*Mar  1 00:09:57.311: %SYS-5-CONFIG_I: Configured from console by console
R1#show ip interfaces brief
                ^
% Invalid input detected at '^' marker.

R1#show ip interface brief
Interface                  IP-Address      OK? Method Status                Prot
ocol
FastEthernet0/0            192.168.1.1     YES manual up                    up

FastEthernet0/1            unassigned      YES unset  administratively down down

R1#
```

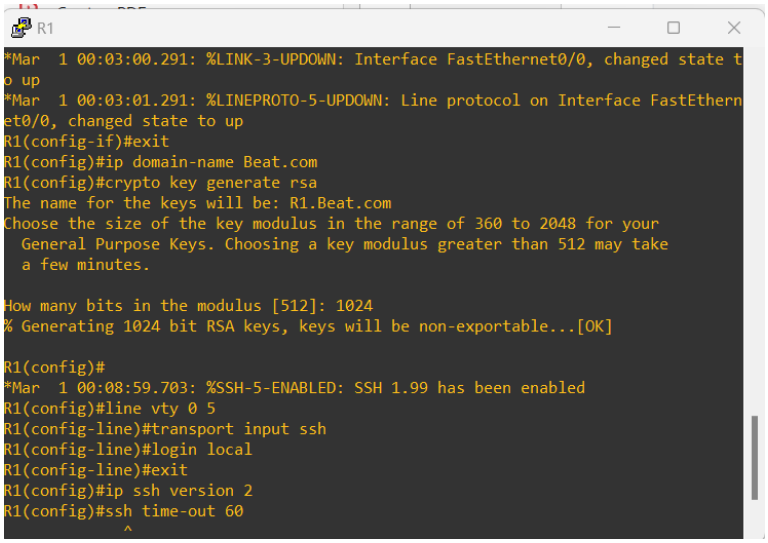
root@UbuntuDockerGuest-1: ~

```
  GNU nano 7.2                  /etc/network/interfaces *
#
# This is a sample network config, please uncomment lines to configure the netw>
#

# Uncomment this line to load custom interface files
# source /etc/network/interfaces.d/*

# Static config for eth0
auto eth0
iface eth0 inet static
        address 192.168.1.2
        netmask 255.255.255.0
        gateway 192.168.1.1
        up echo nameserver 0.0.0.0 > /etc/resolv.conf

# DHCP config for eth0
#auto eth0
#iface eth0 inet dhcp
#       hostname UbuntuDockerGuest-1


^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^/ Go To Line
```

3. Reproduire cette topologie en configurant le protocole SSH.

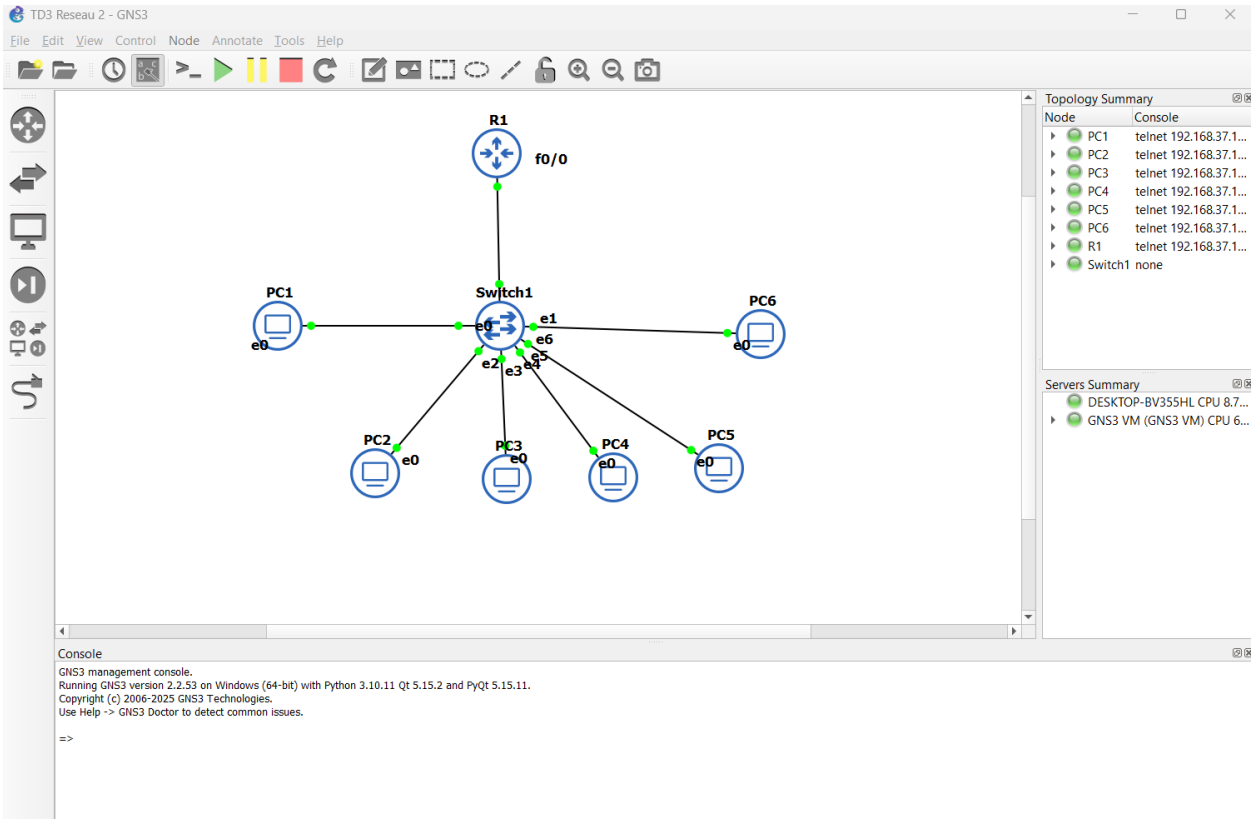


Configurer le routeur avec le protocole SSh

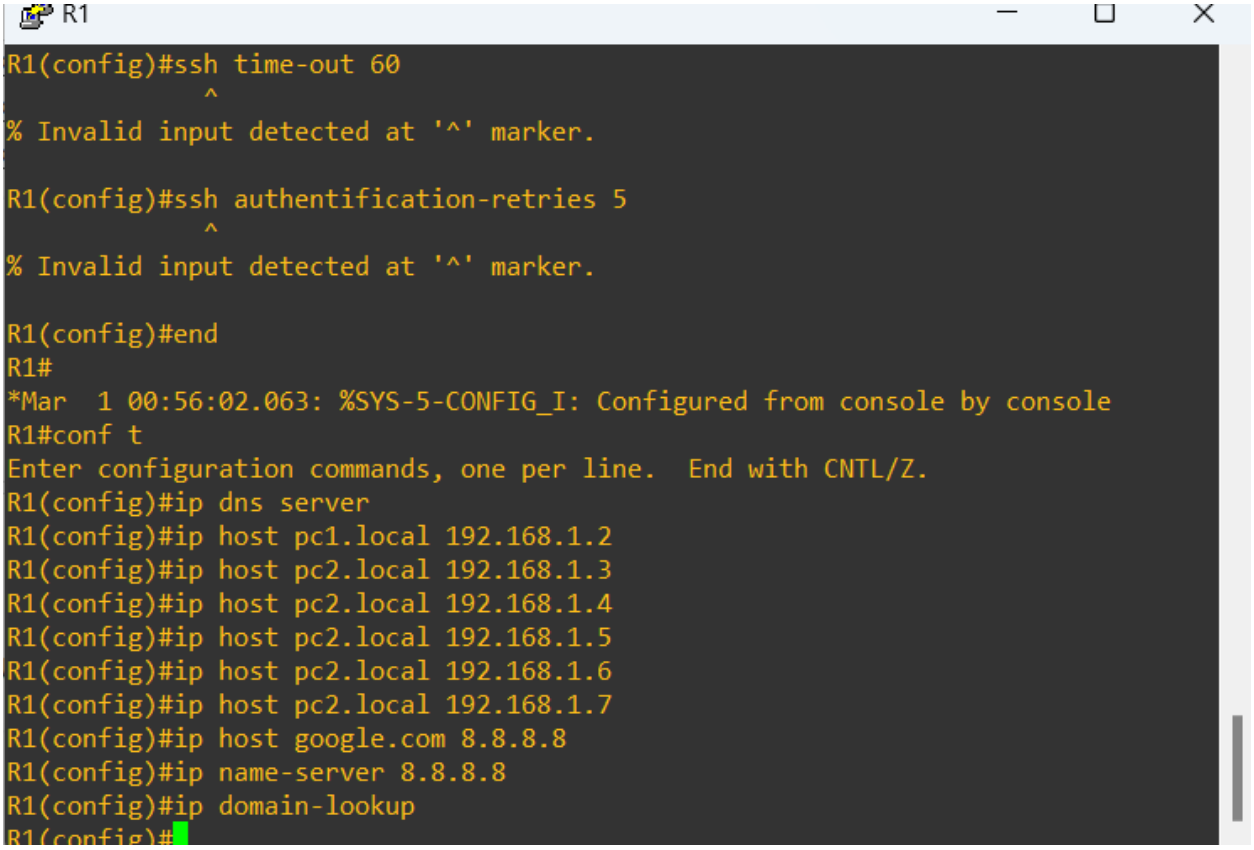


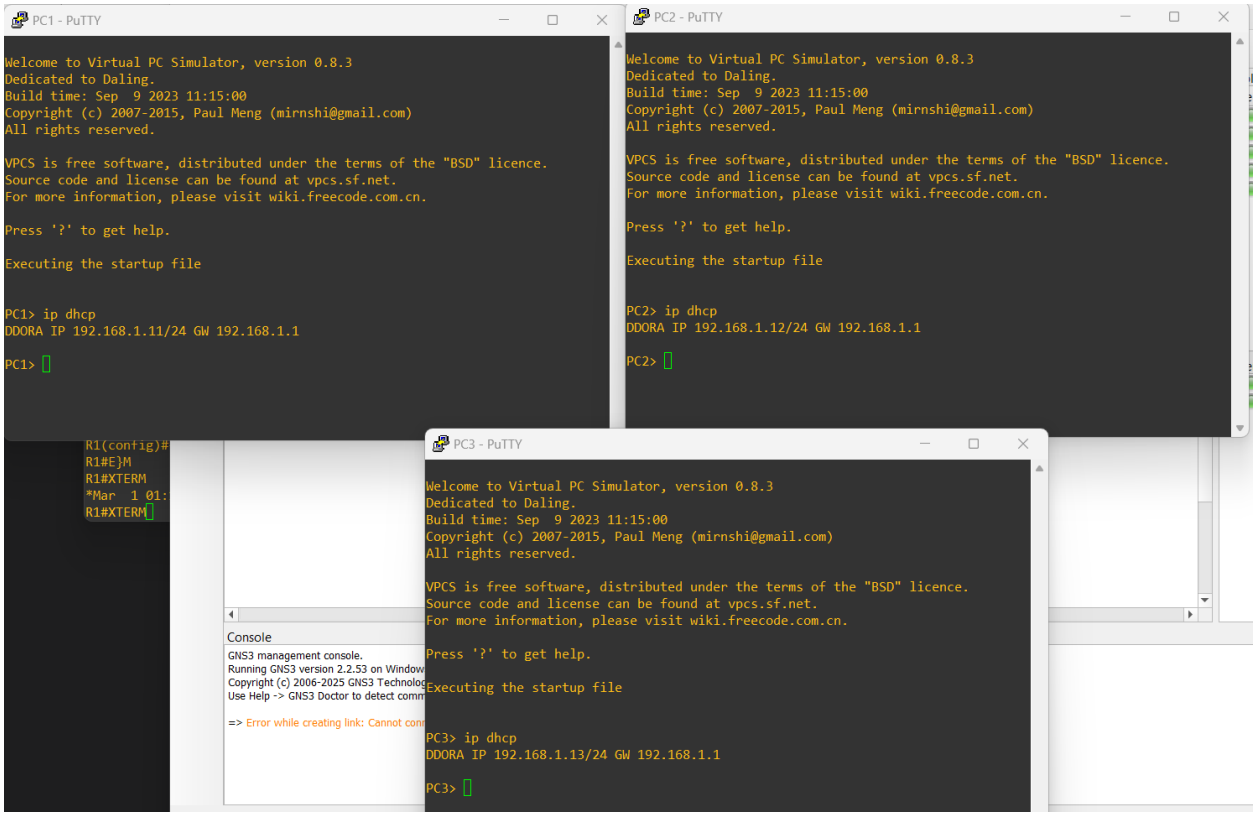
```
R2
R2(config-if)#exit
*Mar  1 00:17:51.611: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state t
o up
*Mar  1 00:17:52.611: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/0, changed state to up
R2(config-if)#exit
R2(config)#ssh admin@192.168.1.1
             ^
% Invalid input detected at '^' marker.

R2(config)#ssh admin@192.168.1.1
             ^
% Invalid input detected at '^' marker.

R2(config)#
R2#
*Mar  1 00:23:18.679: %SYS-5-CONFIG_I: Configured from console by console
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ssh admin@192.168.1.1
             ^
% Invalid input detected at '^' marker.

R2(config)#
```

4. Reproduire cette topologie en configurant le serveur DNS.



- **Configurer le routeur et les PCs**




PC1 - PuTTY
Welcome to Virtual PC Simulator, version 0.8.3
Dedicated to Daling.
Build time: Sep 9 2023 11:15:00
Copyright (c) 2007-2015, 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 dhcp
DDORA IP 192.168.1.11/24 GW 192.168.1.1
PC1>
PC2 - PuTTY
Welcome to Virtual PC Simulator, version 0.8.3
Dedicated to Daling.
Build time: Sep 9 2023 11:15:00
Copyright (c) 2007-2015, 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
PC2> ip dhcp
DDORA IP 192.168.1.12/24 GW 192.168.1.1
PC2>
R1(config)#
R1#E}M
R1#XTERM
*Mar 1 01:
R1#XTERM
Console
GNS3 management console.
Running GNS3 version 2.2.53 on Windov
Copyright (c) 2006-2025 GNS3 Technolog
Use Help -> GNS3 Doctor to detect comm
=> Error while creating link: Cannot con
PC3 - PuTTY
Welcome to Virtual PC Simulator, version 0.8.3
Dedicated to Daling.
Build time: Sep 9 2023 11:15:00
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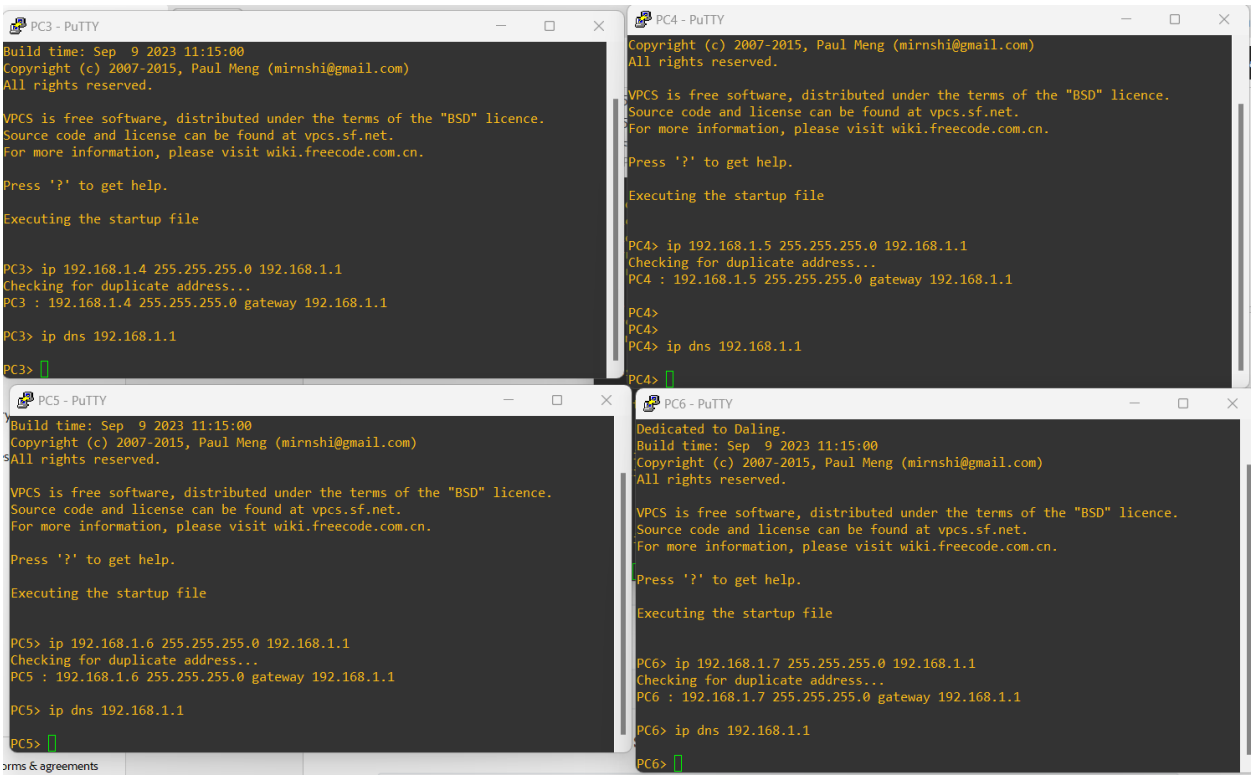
Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.
Press '?' to get help.
Executing the startup file
PC3> ip dhcp
DDORA IP 192.168.1.13/24 GW 192.168.1.1
PC3>


PC3 - PuTTY
Build time: Sep 9 2023 11:15:00
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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
PC3> ip 192.168.1.4 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC3 : 192.168.1.4 255.255.255.0 gateway 192.168.1.1
PC3> ip dns 192.168.1.1
PC3>
PC4 - PuTTY
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For more information, please visit wiki.freecode.com.cn.
Press '?' to get help.
Executing the startup file
PC4> ip 192.168.1.5 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC4 : 192.168.1.5 255.255.255.0 gateway 192.168.1.1
PC4>
PC4>
PC4> ip dns 192.168.1.1
PC4>
PC5 - PuTTY
Build time: Sep 9 2023 11:15:00
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For more information, please visit wiki.freecode.com.cn.
Press '?' to get help.
Executing the startup file
PC5> ip 192.168.1.6 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC5 : 192.168.1.6 255.255.255.0 gateway 192.168.1.1
PC5> ip dns 192.168.1.1
PC5>
PC6 - PuTTY
Dedicated to Daling.
Build time: Sep 9 2023 11:15:00
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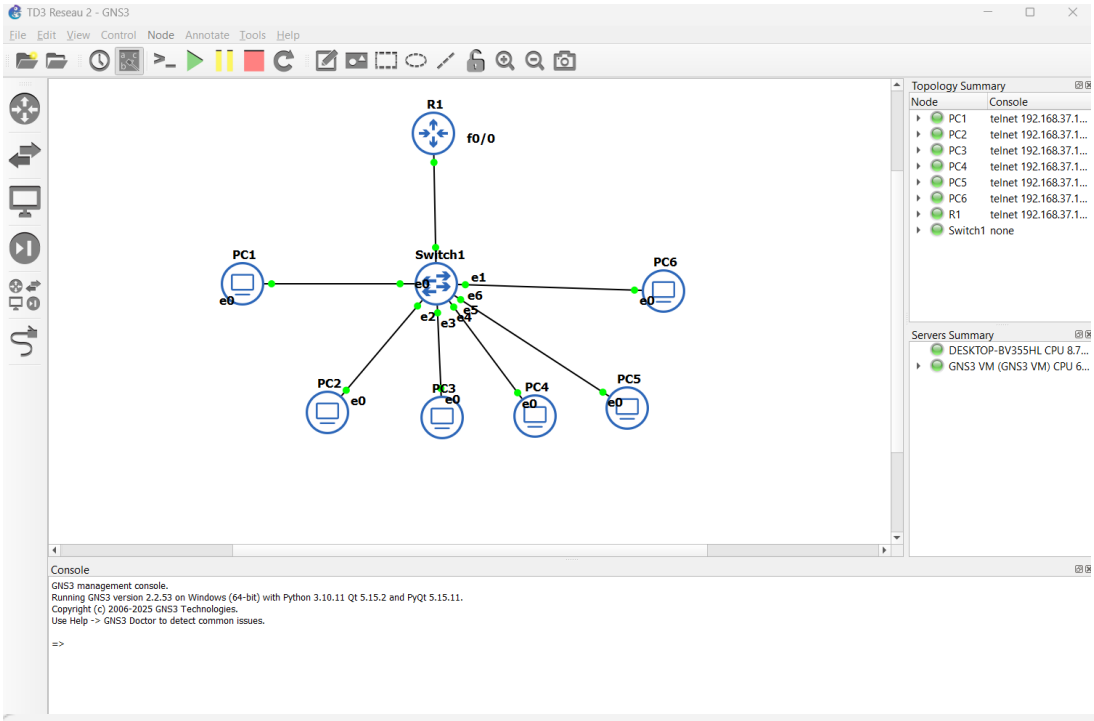
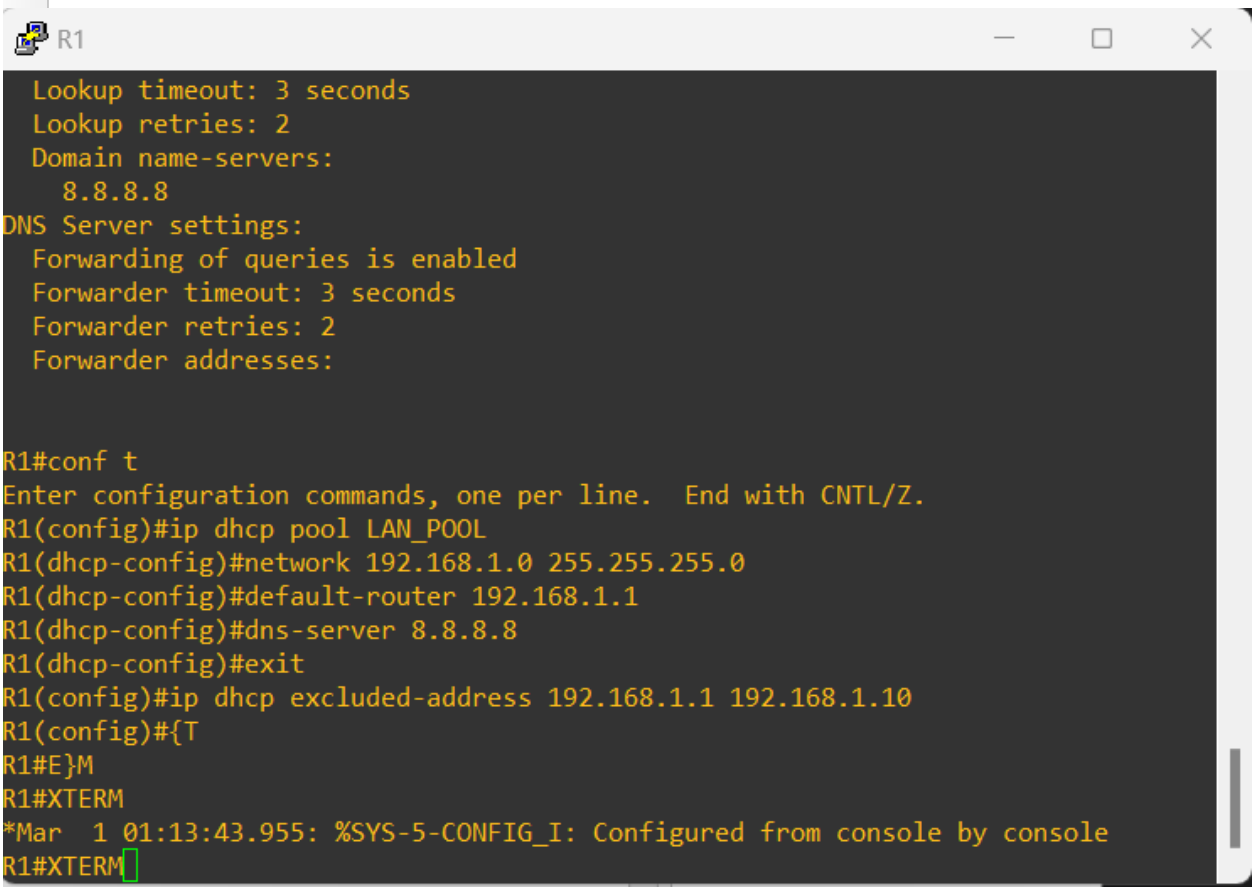
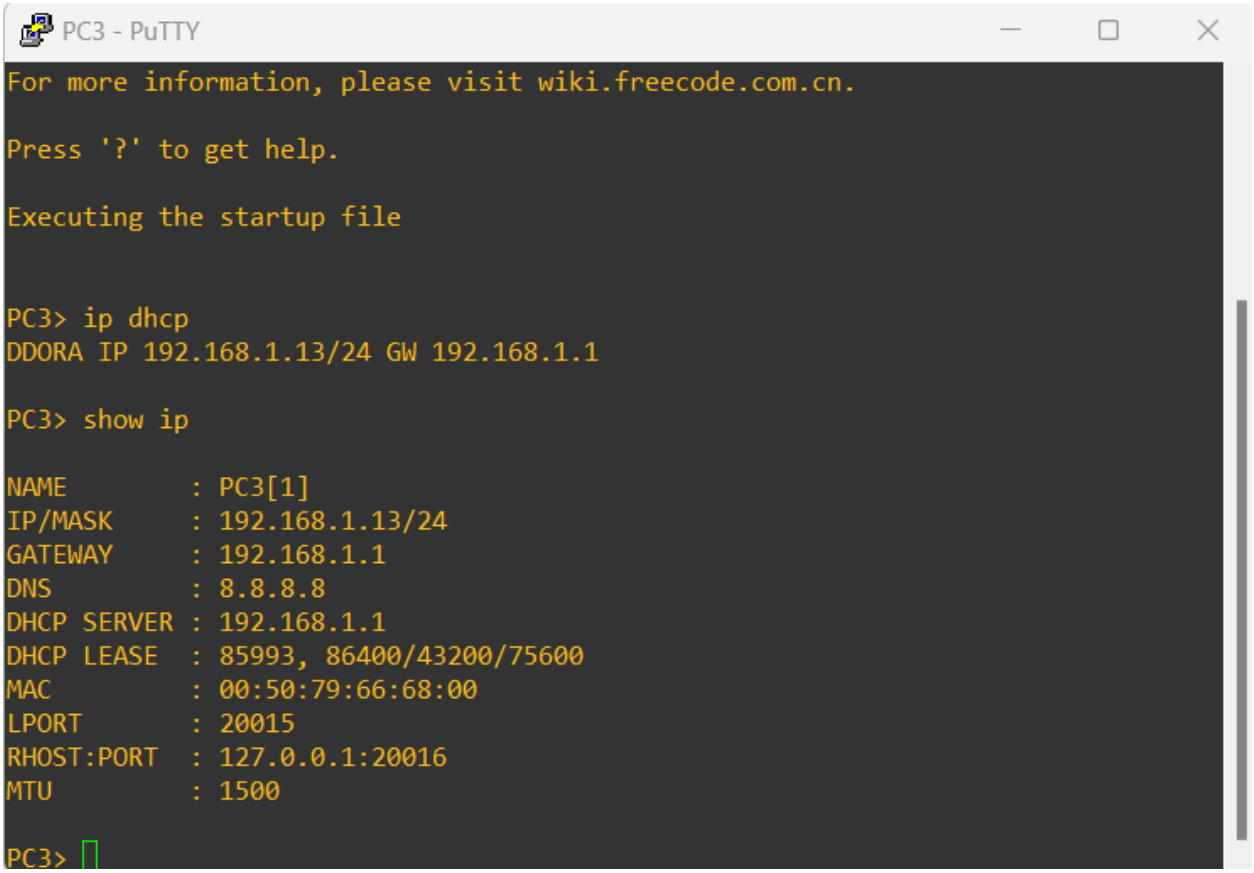
For more information, please visit wiki.freecode.com.cn.
Press '?' to get help.
Executing the startup file
PC6> ip 192.168.1.7 255.255.255.0 192.168.1.1
Checking for duplicate address...
PC6 : 192.168.1.7 255.255.255.0 gateway 192.168.1.1
PC6> ip dns 192.168.1.1
PC6>
rms & agreements

5-configuration un serveur DHCP







Conclusion

Ce TD me vous permet de maîtriser les concepts et les compétences pratiques liés à la configuration, à la gestion et au dépannage des réseaux avec les protocoles Telnet, SSH, DNS et DHCP