

TP 7- Route statique résumée et route par défaut

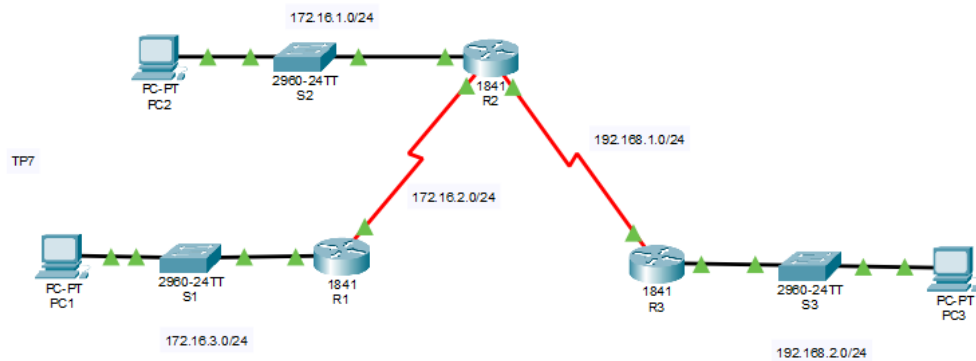
Nesrine El Ahmadi

BTS SIO

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→ On ouvre le fichier Packet Tracer TP7.pka. On ferme la fenêtre PT Activity.



Il n'y a pas de protocole de routage dynamique activé sur les routeurs de la simulation.

Les configurations IP des différentes interfaces sont les suivantes :

PT Activity: 00:31:11

2.6.2 : Configuration d'une route par défaut

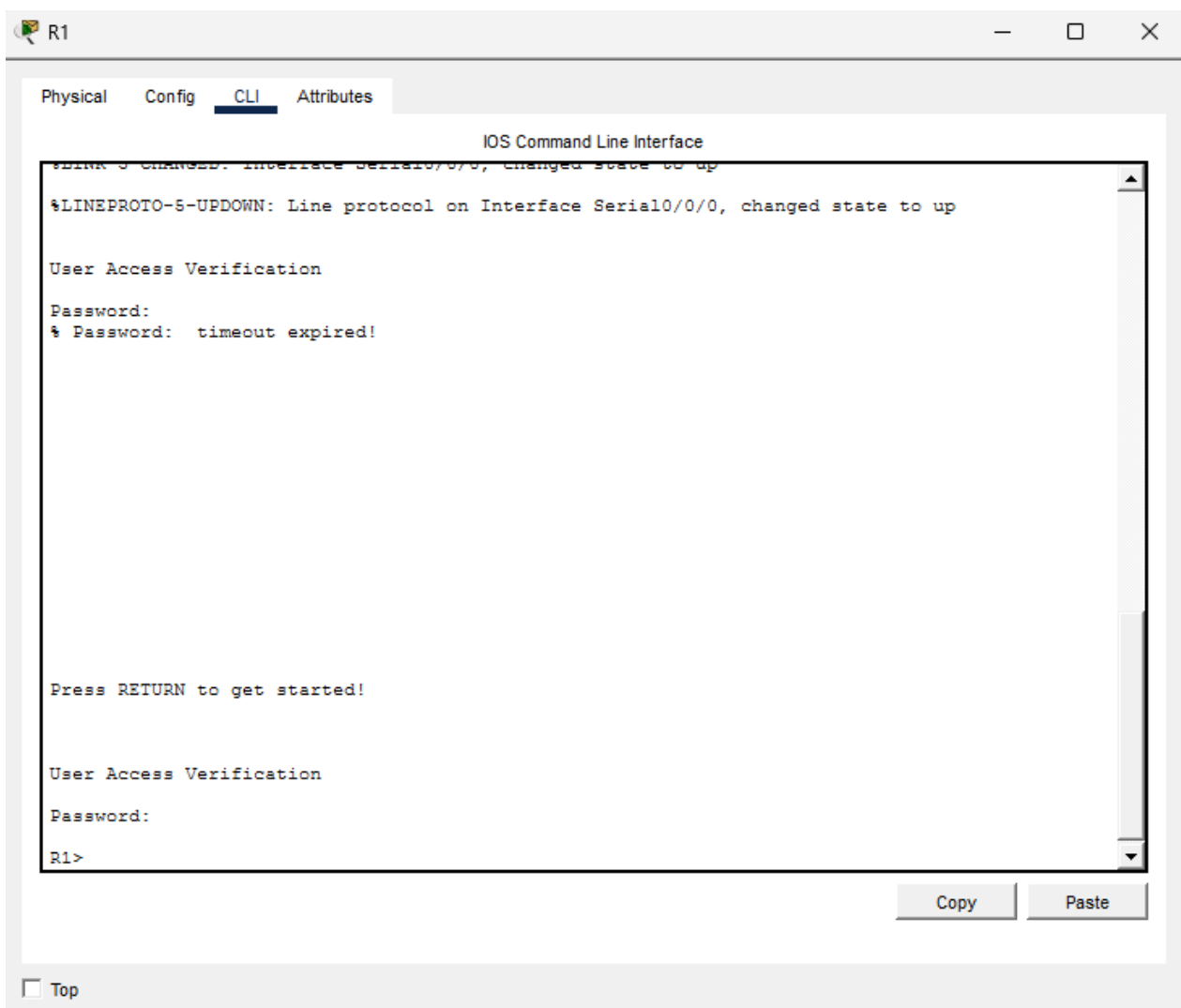
Périphérique	Interface	Adresse IP	Masque de sous-réseau	Passerelle par défaut
R1	Fa0/0	172.16.3.1	255.255.255.0	N/D
	S0/0/0	172.16.2.1	255.255.255.0	N/D
R2	Fa0/0	172.16.1.1	255.255.255.0	N/D
	S0/0/0	172.16.2.2	255.255.255.0	N/D
	S0/0/1	192.168.1.2	255.255.255.0	N/D
R3	Fa0/0	192.168.2.1	255.255.255.0	N/D
	S0/0/1	192.168.1.1	255.255.255.0	N/D
PC1	Carte réseau	172.16.3.10	255.255.255.0	172.16.3.1
PC2	Carte réseau	172.16.1.10	255.255.255.0	172.16.1.1
PC3	Carte réseau	192.168.2.10	255.255.255.0	192.168.2.1

1. Examen des routes statiques

Etape 1 : consultation de la configuration

On procède comme suit pour chacun des trois routeurs :

- On se connecte au routeur en utilisant le mot de passe cisco. On passe en mode d'exécution privilégié (commande enable ou en) en utilisant le mot de passe class.
- On vas dans routeur (ici 1) puis on selectionne CLI c'est ici que le mot de passe est demandé.



```
R1>enable
Password:
R1#
```

- On entre la commande show running-config (sh run) pour consulter la configuration actuelle du routage statique

```
R1#show running-config
Building configuration...

Current configuration : 931 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
!
!
enable secret 5 $1$.3RO$VLUOdBF2OqNBn0EjQBvR./
!
!
!
!
!
ip cef
no ipv6 cef
!

spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
ip address 172.16.3.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/0/0
ip address 172.16.2.1 255.255.255.0
clock rate 64000
!
interface Serial0/0/1
no ip address
clock rate 2000000
!
interface Vlan1
no ip address
shutdown
!
```

TP 7- Route statique résumée et route par défaut

```
ip classless
ip route 192.168.2.0 255.255.255.0 172.16.2.2
ip route 192.168.1.0 255.255.255.0 172.16.2.2
ip route 172.16.1.0 255.255.255.0 172.16.2.2
!
ip flow-export version 9
!
!
!
!
!
!
!
line con 0
password cisco
login
!
line aux 0
!
line vty 0 4
password cisco
login
!
!
!
end

R1#
```

- On entre la commande show ip route pour afficher la table de routage . Chaque routeur comprend des routes statiques vers chaque réseau distant.

```
R1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

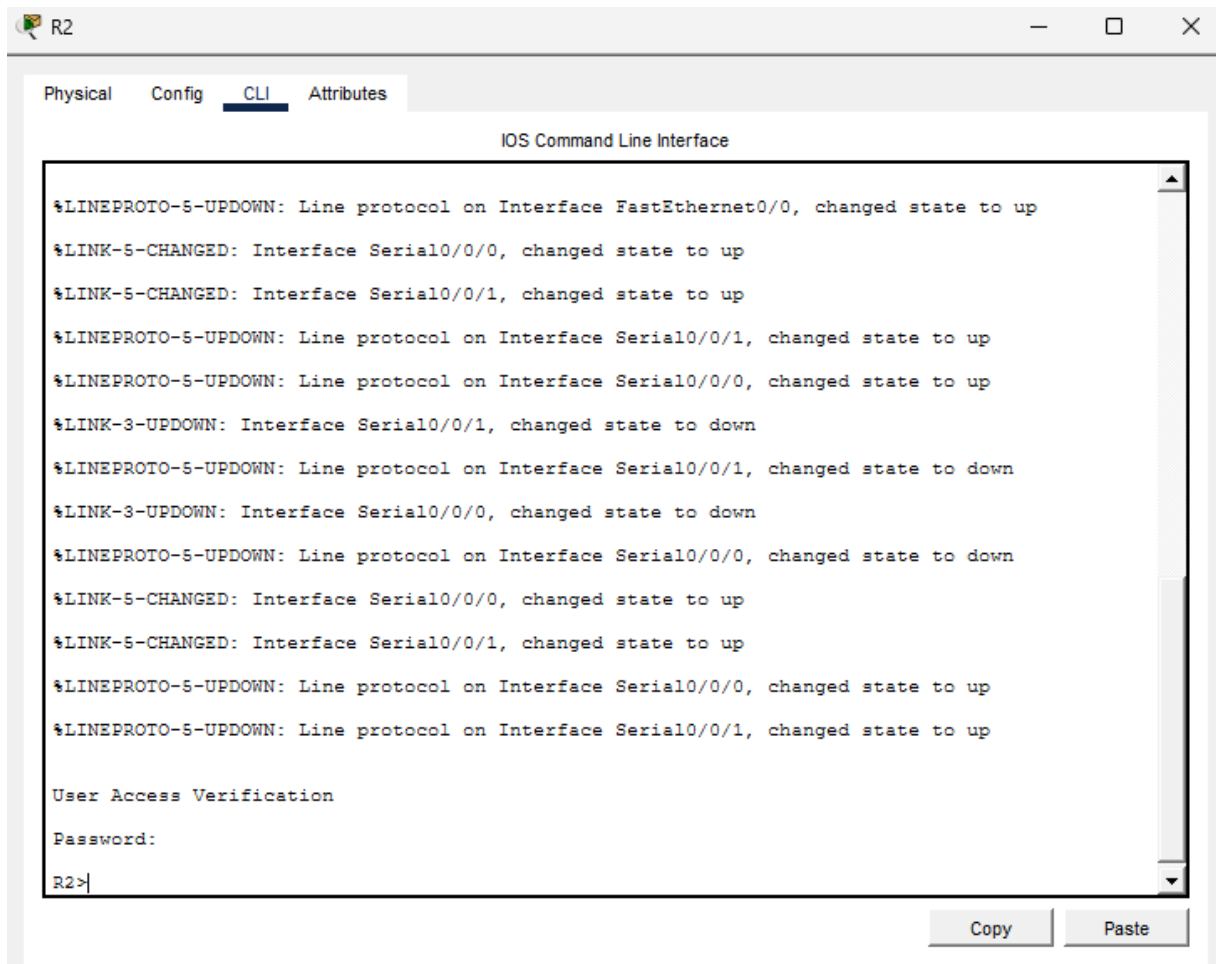
Gateway of last resort is not set

    172.16.0.0/24 is subnetted, 3 subnets
S       172.16.1.0 [1/0] via 172.16.2.2
C       172.16.2.0 is directly connected, Serial0/0/0
C       172.16.3.0 is directly connected, FastEthernet0/0
S       192.168.1.0/24 [1/0] via 172.16.2.2
S       192.168.2.0/24 [1/0] via 172.16.2.2

R1#
```

On fait la même chose pour le routeur 2.

- On se connecte au routeur en utilisant le mot de passe cisco. On passe en mode d'exécution privilégié (commande enable ou en) en utilisant le mot de passe class.



```
R2>enable
Password:
R2#
```

TP 7- Route statique résumée et route par défaut

- On entre la commande show running-config (sh run) pour consulter la configuration actuelle du routage statique .

```
R2#sh run
Building configuration...

Current configuration : 945 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R2
!
!
!
enable secret 5 $1$PCsi$wSNWHdMCJ/OFjFulaGztP0
!
!
!
!
!
!
ip cef
no ipv6 cef
--More-- |
```

```
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
 mac-address 0007.eca7.1511
 ip address 172.16.1.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 mac-address 0001.42dd.a220
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 ip address 172.16.2.2 255.255.255.0
!
interface Serial0/0/1
 ip address 192.168.1.2 255.255.255.0
 clock rate 64000
!
interface Vlan1
 no ip address
 shutdown
.
```

```

ip classless
ip route 172.16.3.0 255.255.255.0 Serial0/0/0
ip route 192.168.2.0 255.255.255.0 Serial0/0/1
!
ip flow-export version 9
!
!
!
!
!
!
!
line con 0
  password cisco
  login
!
line aux 0
!
line vty 0 4
  password cisco
  login
!
!
!
end

R2#

```

- On entre la commande show ip route pour afficher la table de routage . Chaque routeur comprend des routes statiques vers chaque réseau distant.

```

R2#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

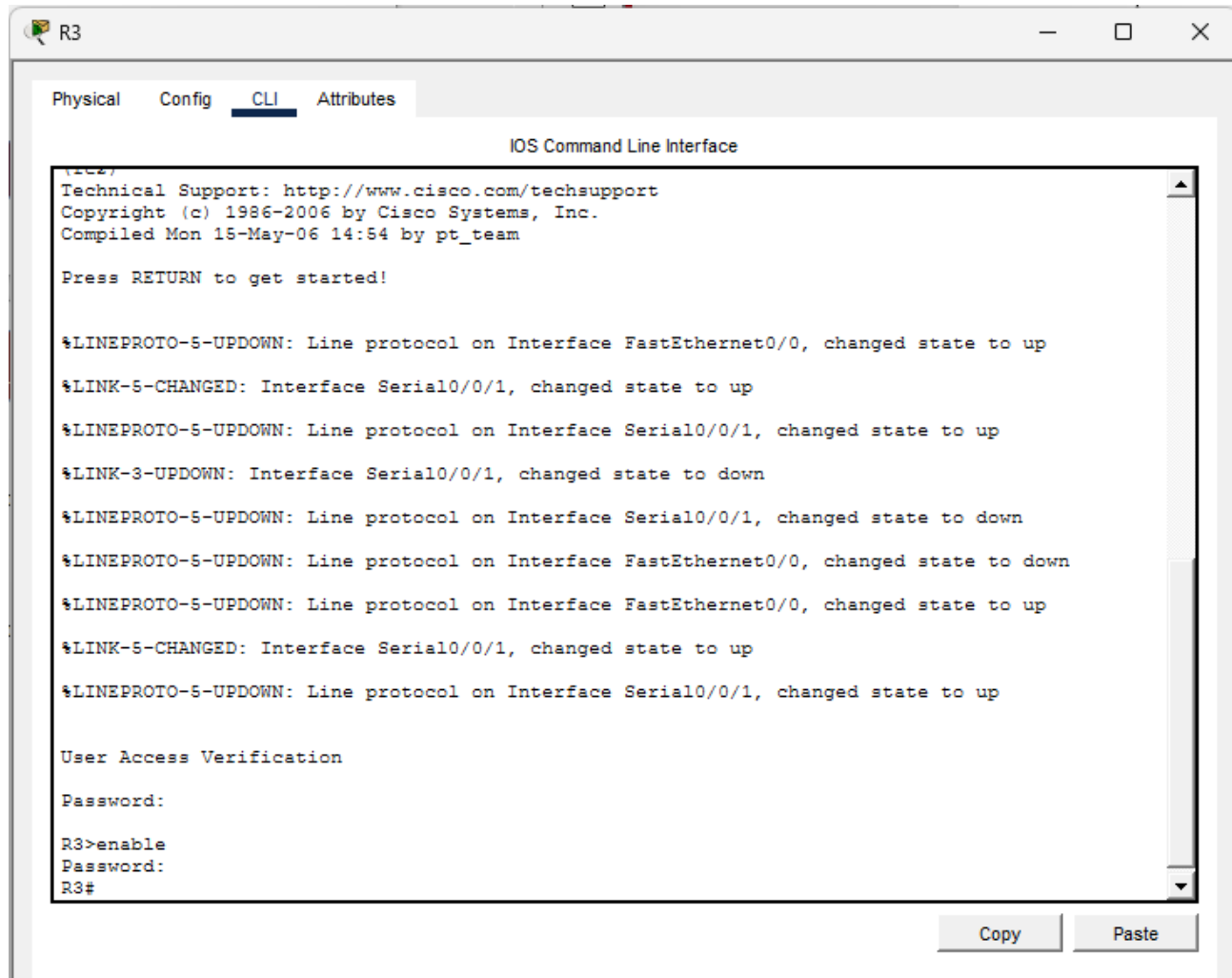
    172.16.0.0/24 is subnetted, 3 subnets
C       172.16.1.0 is directly connected, FastEthernet0/0
C       172.16.2.0 is directly connected, Serial0/0/0
S       172.16.3.0 is directly connected, Serial0/0/0
C     192.168.1.0/24 is directly connected, Serial0/0/1
S     192.168.2.0/24 is directly connected, Serial0/0/1

R2#

```

On fait la même chose pour le routeur 3.

- On se connecte au routeur en utilisant le mot de passe **cisco**. On passe en mode d'exécution privilégié (commande enable ou en) en utilisant le mot de passe **class**.



```
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Mon 15-May-06 14:54 by pt_team

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up

User Access Verification

Password:

R3>enable
Password:
R3#
```

- On entre la commande show running-config (sh run) pour consulter la configuration actuelle du routage statique .

```

R3#sh run
Building configuration...

Current configuration : 972 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R3
!
!
!
enable secret 5 $1$PCsi$wSNWHdMCJ/OFjFu1aGztP0
!
!
!
!
!
ip cef
no ipv6 cef
--More--

```

```

spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
 mac-address 0003.e472.7a36
 ip address 192.168.2.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 mac-address 0006.2a91.d285
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 no ip address
 clock rate 2000000
!
interface Serial0/0/1
 ip address 192.168.1.1 255.255.255.0
!
interface Vlan1
 no ip address
 shutdown

```

```
ip classless
ip route 172.16.3.0 255.255.255.0 192.168.1.2
ip route 172.16.2.0 255.255.255.0 192.168.1.2
ip route 172.16.1.0 255.255.255.0 192.168.1.2
!
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
 password cisco
 login
!
line aux 0
!
line vty 0 4
 password cisco
 login
!
!
!
end

R3#
```

- On entre la commande show ip route pour afficher la table de routage . Chaque routeur comprend des routes statiques vers chaque réseau distant.

```
R3#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

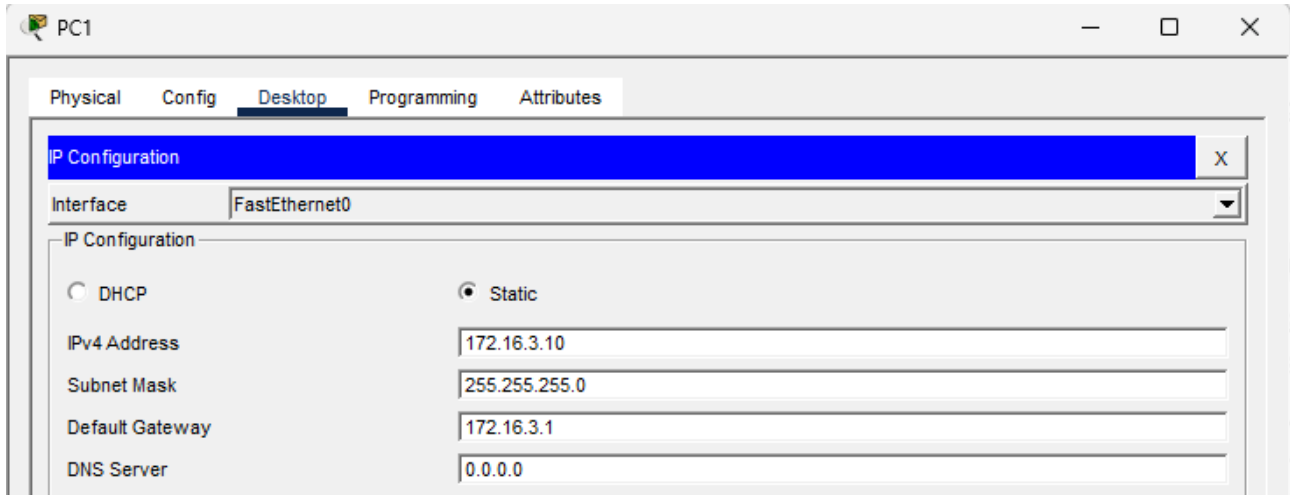
    172.16.0.0/24 is subnetted, 3 subnets
S       172.16.1.0 [1/0] via 192.168.1.2
S       172.16.2.0 [1/0] via 192.168.1.2
S       172.16.3.0 [1/0] via 192.168.1.2
C       192.168.1.0/24 is directly connected, Serial0/0/1
C       192.168.2.0/24 is directly connected, FastEthernet0/0

R3#
```

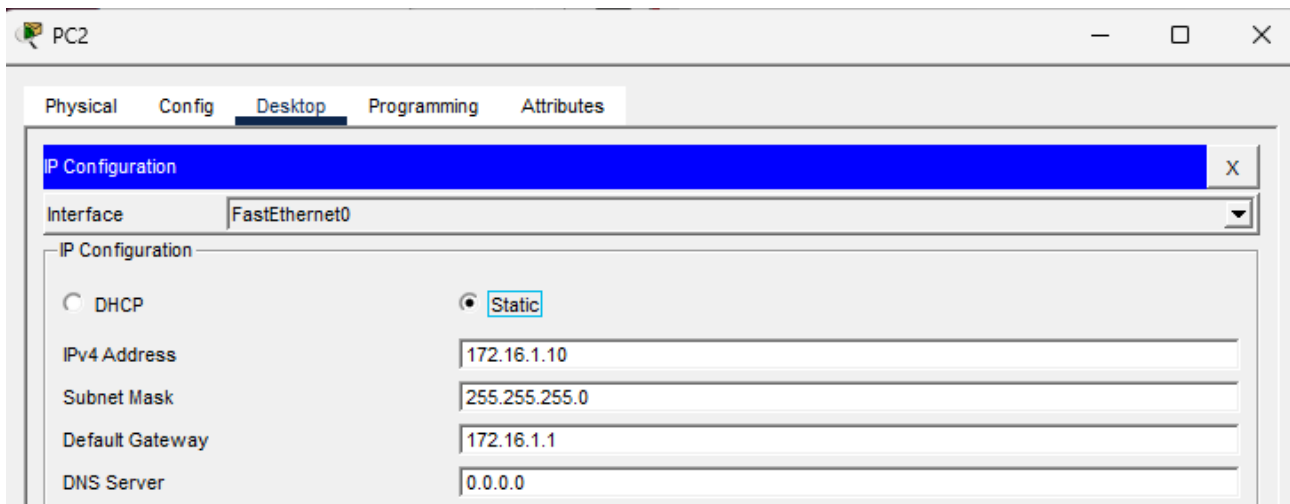
Etape 2 : vérification de la connectivité

A partir de l'invite de commandes sur les trois ordinateurs, on effectue un test ping des deux autres ordinateurs . Tout les pings fonctionnent.

@ip ordinateur 1 :172.16.3.10

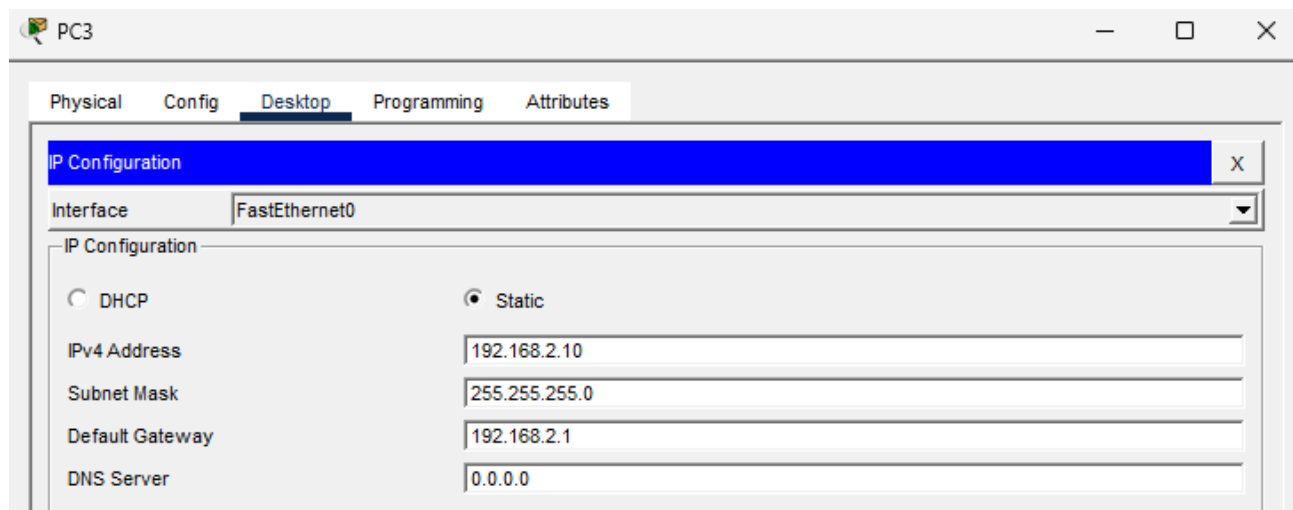


@ip ordinateur 2 :172.16.1.10



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@ip ordinateur 3 :192.168.2.10



Test ping a partir de l'ordinateur 1 :

- ping du pc2

```
C:\>ping 172.16.1.10

Pinging 172.16.1.10 with 32 bytes of data:

Reply from 172.16.1.10: bytes=32 time=8ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126
Reply from 172.16.1.10: bytes=32 time=4ms TTL=126
Reply from 172.16.1.10: bytes=32 time=2ms TTL=126

Ping statistics for 172.16.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 8ms, Average = 3ms

C:\>|
```

- ping du pc3

```
C:\>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: bytes=32 time=14ms TTL=125
Reply from 192.168.2.10: bytes=32 time=2ms TTL=125
Reply from 192.168.2.10: bytes=32 time=2ms TTL=125
Reply from 192.168.2.10: bytes=32 time=2ms TTL=125

Ping statistics for 192.168.2.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 14ms, Average = 5ms

C:\>|
```

Test ping a partir de l'ordinateur 2 :

- ping du pc1

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.3.10

Pinging 172.16.3.10 with 32 bytes of data:

Reply from 172.16.3.10: bytes=32 time=1ms TTL=126
Reply from 172.16.3.10: bytes=32 time=4ms TTL=126
Reply from 172.16.3.10: bytes=32 time=1ms TTL=126
Reply from 172.16.3.10: bytes=32 time=2ms TTL=126

Ping statistics for 172.16.3.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 4ms, Average = 2ms

C:\>|
```

-ping du pc3

```
C:\>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: bytes=32 time=1ms TTL=126
Reply from 192.168.2.10: bytes=32 time=1ms TTL=126
Reply from 192.168.2.10: bytes=32 time=4ms TTL=126
Reply from 192.168.2.10: bytes=32 time=3ms TTL=126

Ping statistics for 192.168.2.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 4ms, Average = 2ms

C:\>|
```

Test ping a partir de l'ordinateur 3 :

- ping du pc1

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.3.10

Pinging 172.16.3.10 with 32 bytes of data:

Reply from 172.16.3.10: bytes=32 time=2ms TTL=125
Reply from 172.16.3.10: bytes=32 time=8ms TTL=125
Reply from 172.16.3.10: bytes=32 time=2ms TTL=125
Reply from 172.16.3.10: bytes=32 time=2ms TTL=125

Ping statistics for 172.16.3.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 8ms, Average = 3ms

C:\>
```

- ping du pc2

```
C:\>ping 172.16.1.10

Pinging 172.16.1.10 with 32 bytes of data:

Reply from 172.16.1.10: bytes=32 time=9ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126

Ping statistics for 172.16.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 9ms, Average = 3ms

C:\>
```

2. Résumé des routes statiques (routeur R3)

Etape 1 : remplacement des routes statiques existantes par une route résumée (agrégée)

On passe en mode Configuration globale sur le routeur R3 et entre les commandes suivantes :

```
R3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#
```

- R3(config)#no ip route 172.16.1.0 255.255.255.0 192.168.1.2
- R3(config)#no ip route 172.16.2.0 255.255.255.0 192.168.1.2
- R3(config)#no ip route 172.16.3.0 255.255.255.0 192.168.1.2
- R3(config)#ip route 172.16.0.0 255.255.252.0 192.168.1.2

```
R3(config)#no ip route 172.16.1.0 255.255.255.0 192.168.1.2
R3(config)#no ip route 172.16.2.0 255.255.255.0 192.168.1.2
R3(config)#no ip route 172.16.3.0 255.255.255.0 192.168.1.2
R3(config)#ip route 172.16.0.0 255.255.252.0 192.168.1.2
R3(config)#
```

Etape 2 : enregistrement des configurations mises à jour

Sur le routeur R3, on quitte le mode de configuration à l'aide de la combinaison de touches Ctrl+z.
On enregistre la configuration en exécutant la commande copy run start (copy running-config startup-config).

```
R3#
%SYS-5-CONFIG_I: Configured from console by console
copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
```

Etape 3 : consultation de la configuration

Sur le routeur R3 :

- On entre la commande `sh run (show running-config)` pour vérifier la nouvelle configuration du routage statique.

```
R3#sh run
Building configuration...

Current configuration : 878 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R3
!
!
!
enable secret 5 $1$PCsi$wSNWHDMCJ/OFjFulaGztP0
!
!
!
!
!
!
!
ip cef
no ipv6 cef
--More--
```

```
no ipv6 cef
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
spanning-tree mode pvst
!  
!  
!  
!  
!  
!  
interface FastEthernet0/0
  mac-address 0003.e472.7a36
  ip address 192.168.2.1 255.255.255.0
  duplex auto
  speed auto
!  
interface FastEthernet0/1
  mac-address 0006.2a91.d285
  no ip address
  duplex auto
  speed auto
```

```
shutdown
!
ip classless
ip route 172.16.0.0 255.255.252.0 192.168.1.2
!
ip flow-export version 9
!
!
!
!
!
!
!
line con 0
password cisco
login
!
line aux 0
!
line vty 0 4
password cisco
login
!
!
!
end
```

R3#

- On entre la commande show ip route pour afficher la table de routage modifiée. Une seule route statique accède à chaque réseau distant .

```
R3#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

Gateway of last resort is not set

```
      172.16.0.0/22 is subnetted, 1 subnets
S       172.16.0.0 [1/0] via 192.168.1.2
C      192.168.1.0/24 is directly connected, Serial0/0/1
C      192.168.2.0/24 is directly connected, FastEthernet0/0
```

R3#

Etape 4 : vérification de la connectivité

A partir de l'invite de commandes sur PC3, on effectue un test ping des deux autres ordinateurs. Tous les tests ping doivent aboutir .

Pc2 :

```
C:\>ping 172.16.1.10

Pinging 172.16.1.10 with 32 bytes of data:

Reply from 172.16.1.10: bytes=32 time=9ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126
Reply from 172.16.1.10: bytes=32 time=4ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126

Ping statistics for 172.16.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 9ms, Average = 3ms

C:\>
```

Pc1 :

```
C:\>ping 172.16.3.10

Pinging 172.16.3.10 with 32 bytes of data:

Reply from 172.16.3.10: bytes=32 time=2ms TTL=125
Reply from 172.16.3.10: bytes=32 time=2ms TTL=125
Reply from 172.16.3.10: bytes=32 time=9ms TTL=125
Reply from 172.16.3.10: bytes=32 time=4ms TTL=125

Ping statistics for 172.16.3.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 9ms, Average = 4ms

C:\>
```

3. Configuration d'un réseau d'extrémité (routeur R1)

Etape 1 : remplacement des routes statiques existantes par une route par défaut

On passe en mode de configuration globale sur le routeur R1 et on entre les commandes suivantes :

```
Password:

R1>enable
Password:
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#
```

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- R1(config)#no ip route 172.16.1.0 255.255.255.0 172.16.2.2
- R1(config)#no ip route 192.168.1.0 255.255.255.0 172.16.2.2
- R1(config)#no ip route 192.168.2.0 255.255.255.0 172.16.2.2
- R1(config)#ip route 0.0.0.0 0.0.0.0 172.16.2.2

```
R1(config)#no ip route 172.16.1.0 255.255.255.0 172.16.2.2
R1(config)#no ip route 192.168.1.0 255.255.255.0 172.16.2.2
R1(config)#no ip route 192.168.2.0 255.255.255.0 172.16.2.2
R1(config)#ip route 0.0.0.0 0.0.0.0 172.16.2.2
R1(config)#
```

Etape 2 : enregistrement des configurations mises à jour

Sur le routeur R1, on quitte le mode de configuration à l'aide de la combinaison de touches Ctrl+z.
On enregistre la configuration en exécutant la commande copy run start.

```
R1#
%SYS-5-CONFIG_I: Configured from console by console
copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
```

Etape 3 : consultation de la configuration Sur le routeur R1 :

- On entre la commande show running-config pour vérifier la nouvelle configuration du routage statique .

```
R1#show running-config
Building configuration...

Current configuration : 828 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
!
!
enable secret 5 $1$.3RO$VLUOdBF2OqNBn0EjQBvR./
!
!
!
!
!
ip cef
no ipv6 cef
```

```

-
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
 ip address 172.16.3.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 ip address 172.16.2.1 255.255.255.0
 clock rate 64000
!
interface Serial0/0/1
 no ip address
 clock rate 2000000
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
ip route 0.0.0.0 0.0.0.0 172.16.2.2
,

```

```

-
ip flow-export version 9
!
!
!
!
!
!
!
!
!
line con 0
 password cisco
 login
!
line aux 0
!
line vty 0 4
 password cisco
 login
!
!
!
end

```

R1#

TP 7- Route statique résumée et route par défaut

- On entre la commande show ip route pour afficher la table de routage modifiée. Une seule route statique par défaut accède à chaque réseau distant .

```
R1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 172.16.2.2 to network 0.0.0.0

    172.16.0.0/24 is subnetted, 2 subnets
C       172.16.2.0 is directly connected, Serial0/0/0
C       172.16.3.0 is directly connected, FastEthernet0/0
S*    0.0.0.0/0 [1/0] via 172.16.2.2

R1#
```

Etape 4 : vérification de la connectivité A partir de l'invite de commandes sur PC1, on effectue un test ping des deux autres ordinateurs. En principe, tous les tests ping doivent aboutir .

Pc3 :

```
C:\>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: bytes=32 time=2ms TTL=125
Reply from 192.168.2.10: bytes=32 time=2ms TTL=125
Reply from 192.168.2.10: bytes=32 time=2ms TTL=125
Reply from 192.168.2.10: bytes=32 time=2ms TTL=125

Ping statistics for 192.168.2.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 2ms, Average = 2ms

C:\>|
```

Pc2 :

```
C:\>ping 172.16.1.10

Pinging 172.16.1.10 with 32 bytes of data:

Reply from 172.16.1.10: bytes=32 time=1ms TTL=126
Reply from 172.16.1.10: bytes=32 time=3ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126
Reply from 172.16.1.10: bytes=32 time=1ms TTL=126

Ping statistics for 172.16.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 3ms, Average = 1ms

C:\>|
```