

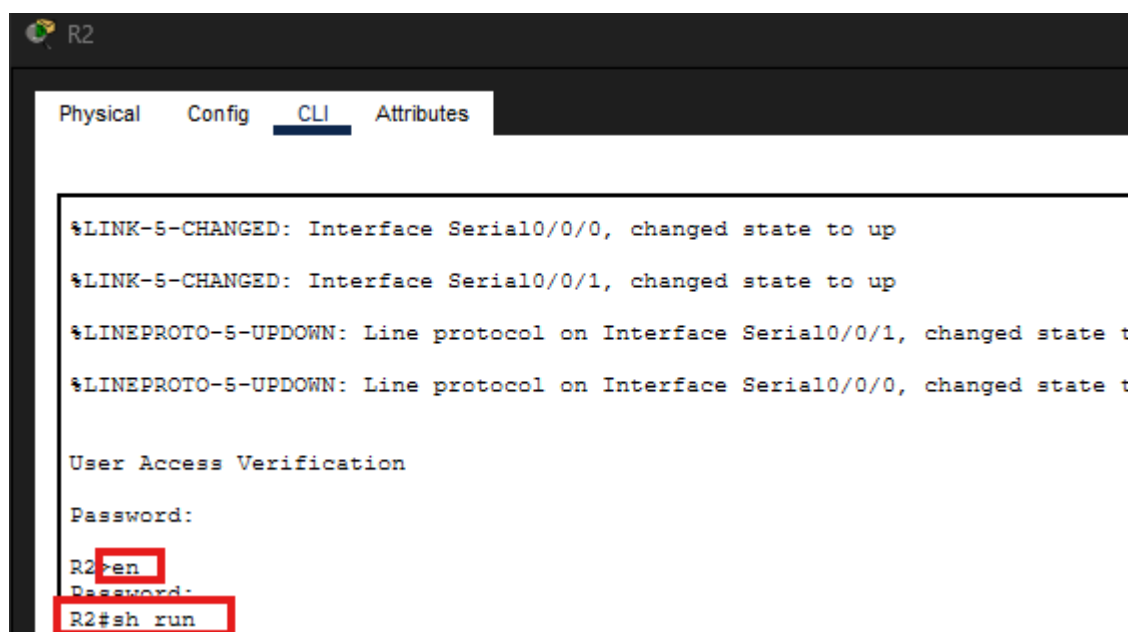
TP 7 - Route statique résumée et route par défaut

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1. Examen des routes statiques

Je vais sur la configuration du routeur R2 et je passe en mode privilégié



```
R2
Physical Config CLI Attributes
%LINK-5-CHANGED: Interface Serial0/0/0, 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
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up
User Access Verification
Password:
R2#en
Password:
R2#sh run
```

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J'affiche la table de routage de R2 avec la commande **sh ip route**

```
R2#sh 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#
```

Je fais la même chose pour les routeurs R1 et R3

R1 :

```
User Access Verification
Password:
R1#en
Password:
R1#sh run
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 $1$.3R0$VLUOdBF2OqNBn0EjQBvR./
!
!
!
!
!
ip cef
no ipv6 cef
--More--
```

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```
R1#sh 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#
```

R3 :

```
R3#en
Password:
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--
```

TP 7 - Route statique résumée et route par défaut

```
R3#sh 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, Serial10/0/1
C       192.168.2.0/24 is directly connected, FastEthernet0/0
```

```
C:\>ping 172.16.3.0

Pinging 172.16.3.0 with 32 bytes of data:

Reply from 172.16.2.1: bytes=32 time=2ms TTL=254
Reply from 172.16.2.1: bytes=32 time=1ms TTL=254
Reply from 172.16.2.1: bytes=32 time=1ms TTL=254
Reply from 172.16.2.1: bytes=32 time=1ms TTL=254

Ping statistics for 172.16.3.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms

C:\>
```

```
C:\>ping 192.168.2.0

Pinging 192.168.2.0 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=14ms TTL=254
Reply from 192.168.1.1: bytes=32 time=1ms TTL=254
Reply from 192.168.1.1: bytes=32 time=1ms TTL=254
Reply from 192.168.1.1: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.2.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 14ms, Average = 4ms

C:\>
```

Les deux ping s'effectuent correctement

TP 7 - Route statique résumée et route par défaut

Je me mets en mode configuration et je supprime les routes qu'il y avait pour les remplacer par une route par défaut

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

Je quitte le mode de configuration en appuyant sur les touches ctrl+z et j'enregistre la configuration avec la commande **copy run start**

```
R3(config)#^Z
R3#
%SYS-5-CONFIG I: Configured from console by console
copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
```

```
ip classless
ip route 172.16.0.0 255.255.252.0 192.168.1.2
```

```
R3#sh 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#
```

On peut voir que les changements apportés ont bien été sauvegarder

TP 7 - Route statique résumée et route par défaut

A partir de l'invite de commandes sur PC 1 j'effectue un ping sur les deux autres machines

```
C:\>ping 172.16.1.1
Pinging 172.16.1.1 with 32 bytes of data:

Reply from 172.16.1.1: bytes=32 time=13ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254
Reply from 172.16.1.1: bytes=32 time=1ms TTL=254

Ping statistics for 172.16.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, Average = 4ms
```

```
C:\>ping 172.16.2.1
Pinging 172.16.2.1 with 32 bytes of data:

Reply from 172.16.2.1: bytes=32 time<1ms TTL=255
Reply from 172.16.2.1: bytes=32 time<1ms TTL=255
Reply from 172.16.2.1: bytes=32 time<1ms TTL=255
Reply from 172.16.2.1: bytes=32 time=1ms TTL=255

Ping statistics for 172.16.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\>
```

Les deux ping marchent sans problème