TP 10 - TOUJANI Mohamed - SANS BINOME

Tuesday, May 7, 2024 5:35 PM

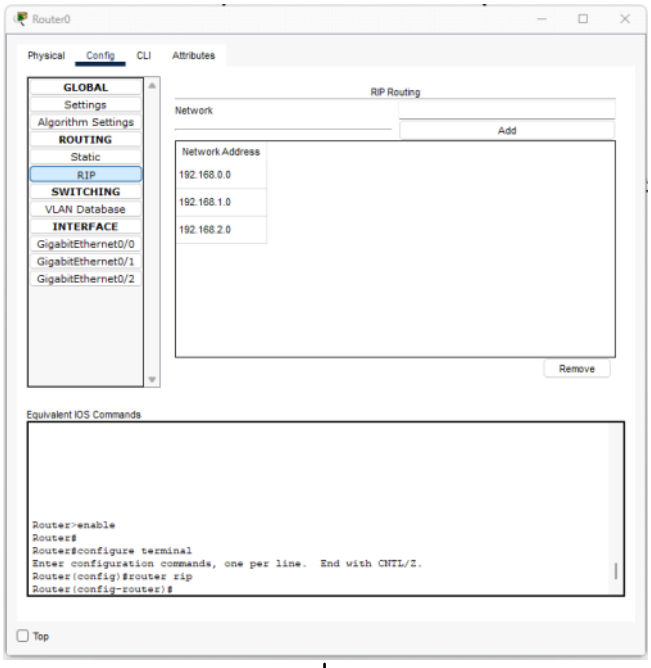
Machine	Attribut	@IP	Netmask
PC0	Fa0	192.168.0.10	255.255.255.0
	passerelle par défaut	192.168.0.1	255.255.255.0
Laptop1	Fa0	192.168.3.10	255.255.255.0
	passerelle par défaut	192.168.3.1	255.255.255.0
Server0	Fa0	192.168.2.10	255.255.255.0
	passerelle par défaut	192.168.8.2	255.255.255.0
Server3	Fa0	192.168.7.10	255.255.255.0
	passerelle par défaut	192.168.7.1	255.255.255.0
Router0	Gig0/0	192.168.0.1	NONE
	Gig0/1	192.168.1.1	NONE
	Gig0/2	192.168.2.1	NONE
Router1	Gig0/0	192.168.3.1	NONE
	Gig0/1	192.168.1.2	NONE
	Gig0/2	192.168.4.1	NONE
Router2	Gig0/0	192.168.6.1	NONE
	Gig0/1	192.168.4.2	NONE
	Gig0/2	192.168.5.1	NONE
Router3	Gig0/0	192.168.6.2	NONE
	Gig0/1	192.168.8.1	NONE
	Gig0/2	192.168.7.1	NONE
Router4	Gig0/0	192.168.2.1	NONE
	Gig0/1	192.168.8.2	NONE
	Gig0/2	192.168.5.2	NONE

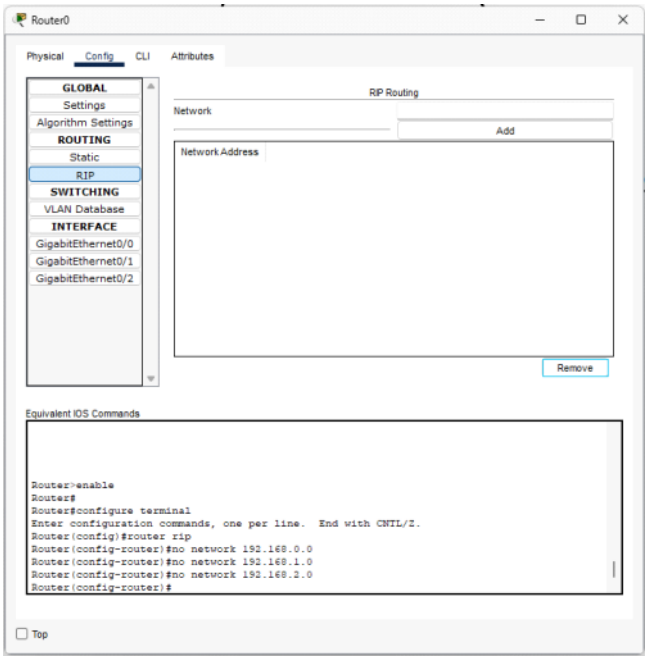
Avec cette configuration, et après la mise de RIP, toutes les machines peuvent se pinguer.

@ réseau destination	netmask	@IP de l'interface ou de la gateway	coût
192.168.0.0	255.255.255.0	192.168.5.1	3
192.168.1.0	255.255.255.0	192.168.5.1	2
192.168.2.0	255.255.255.0	Directement connectée	0
192.168.3.0	255.255.255.0	192.168.5.1	2
192.168.4.0	255.255.255.0	192.168.5.1	1
192.168.5.0	255.255.255.0	Directement connectée	0
192.168.6.0	255.255.255.0	192.168.5.1 ; 192.168.8.1	1
192.168.7.0	255.255.255.0	192.168.8.1	1
192.168.8.0	255.255.255.0	Directement connectée	0

PARTIE OSPF

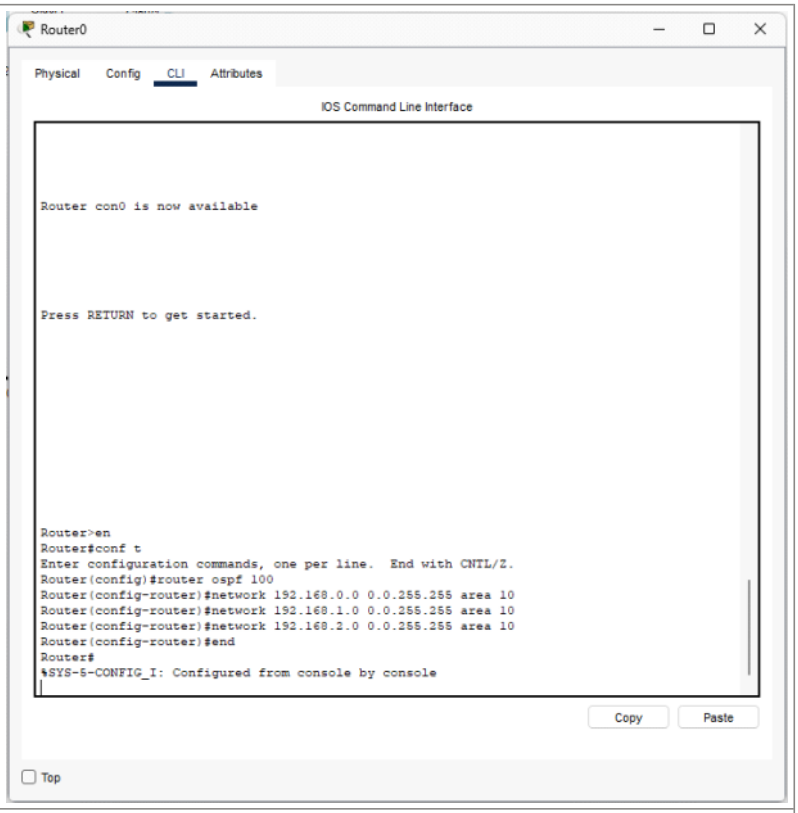
Désactiver RIP en supprimant les entrées de l'onglet RIP de chacun des routeurs.
EXEMPLE ROUTER0



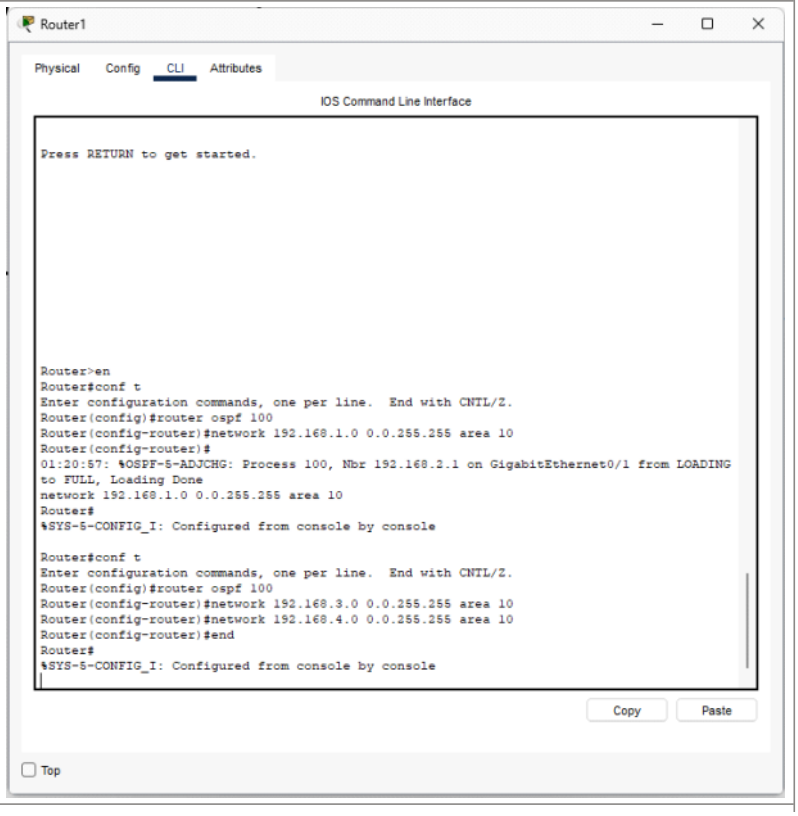


La configuration OSPF dans la CLI de chaque routeur.

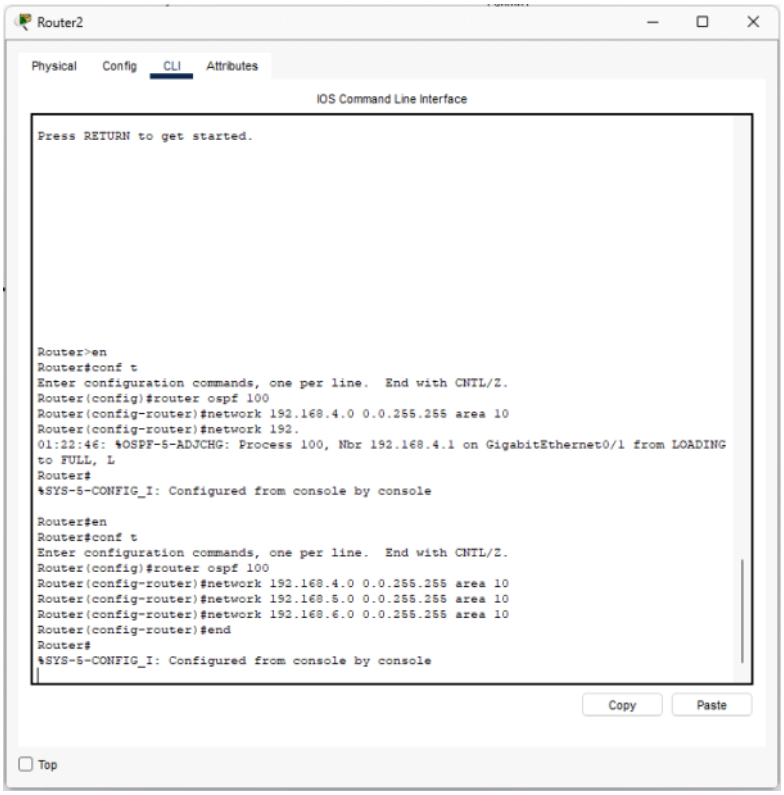
Router0



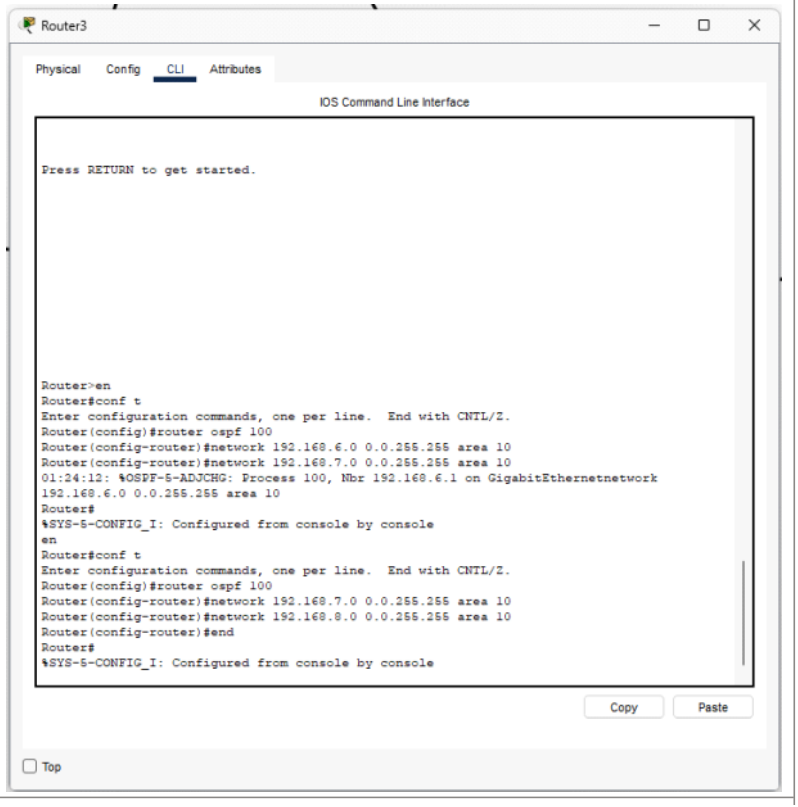
Router1



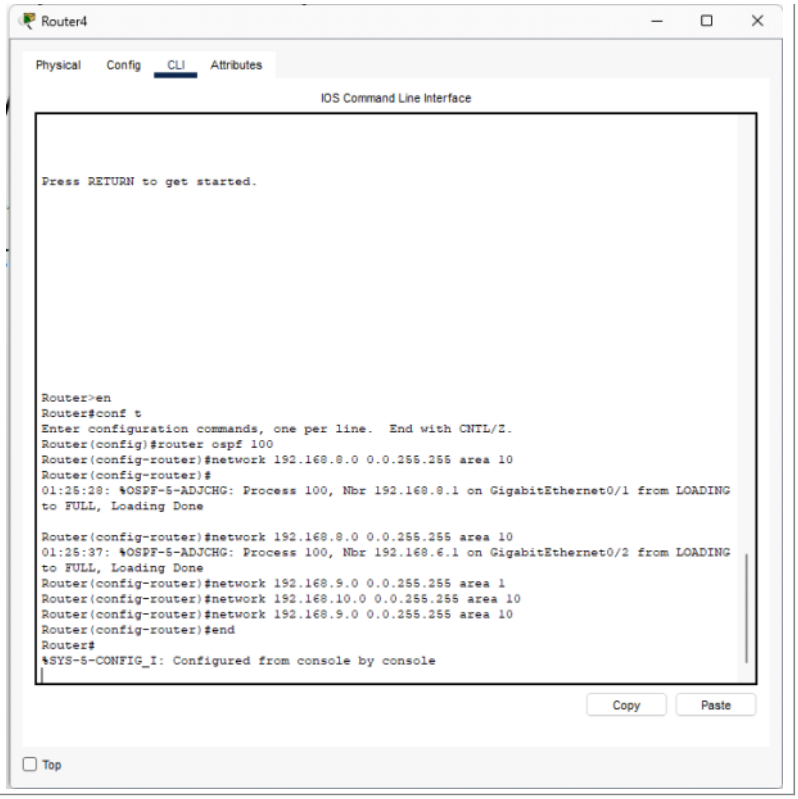
Router2



Router3



Router4


Router4
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router ospf 100
Router(config-router)#network 192.168.8.0 0.0.255.255 area 10
Router(config-router)#
01:25:28: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.8.1 on GigabitEthernet0/1 from LOADING
to FULL, Loading Done
Router(config-router)#network 192.168.8.0 0.0.255.255 area 10
01:25:37: %OSPF-5-ADJCHG: Process 100, Nbr 192.168.6.1 on GigabitEthernet0/2 from LOADING
to FULL, Loading Done
Router(config-router)#network 192.168.5.0 0.0.255.255 area 1
Router(config-router)#network 192.168.10.0 0.0.255.255 area 10
Router(config-router)#network 192.168.9.0 0.0.255.255 area 10
Router(config-router)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
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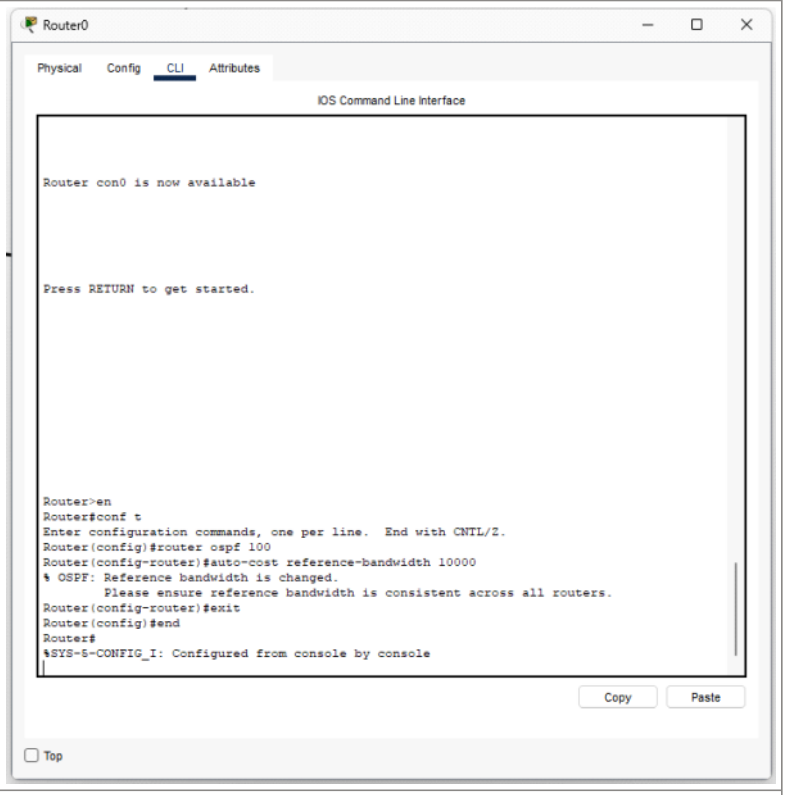
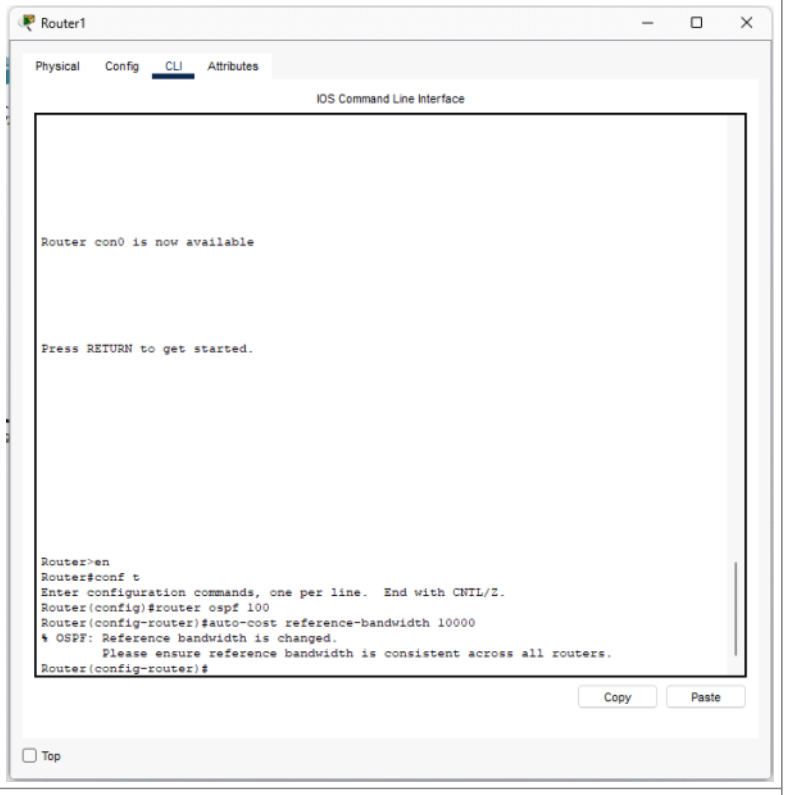
Les commandes auto-cost

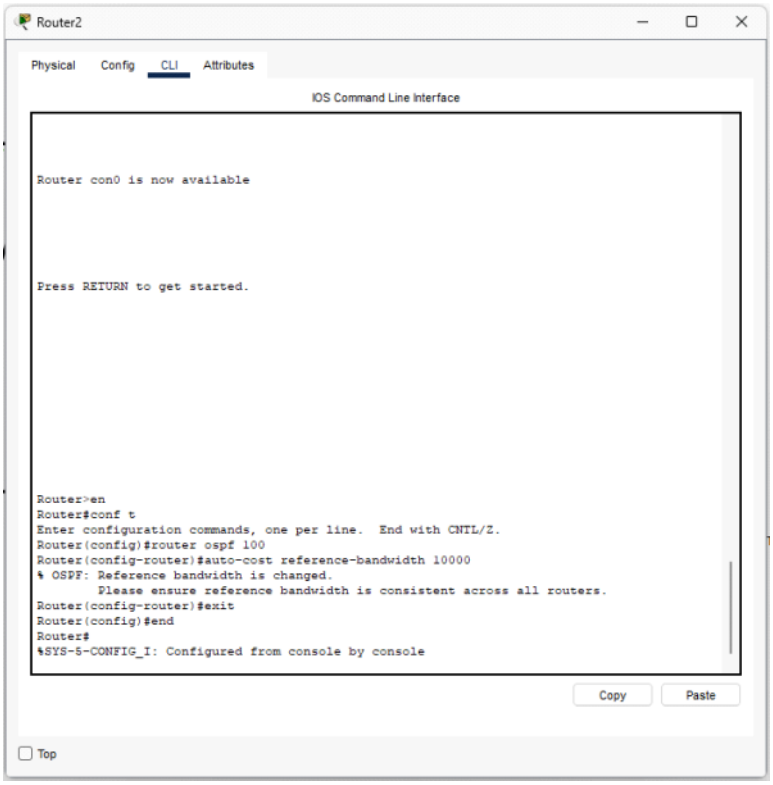
Router0



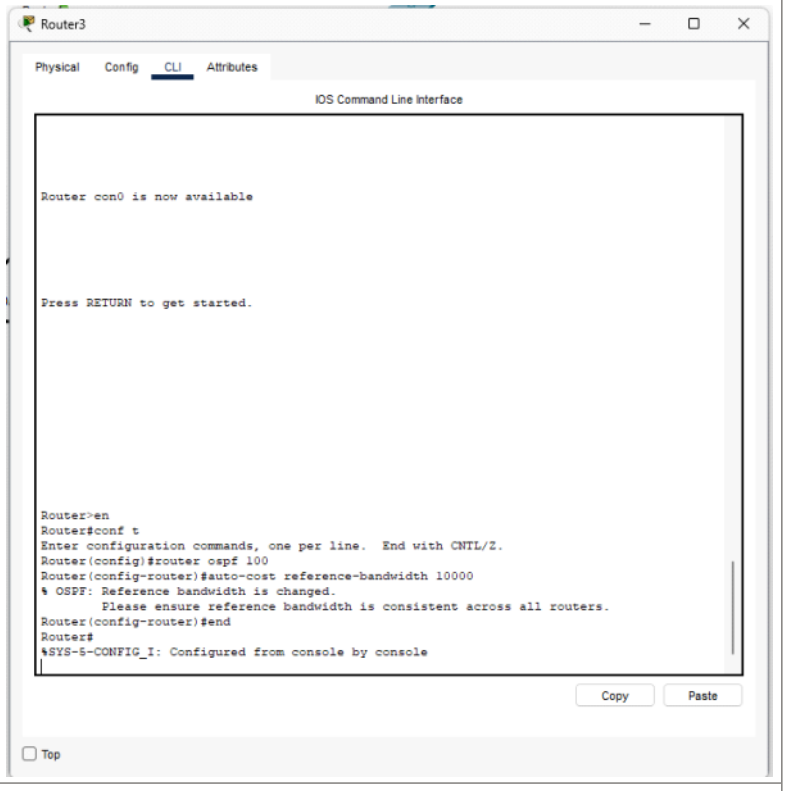
Router1



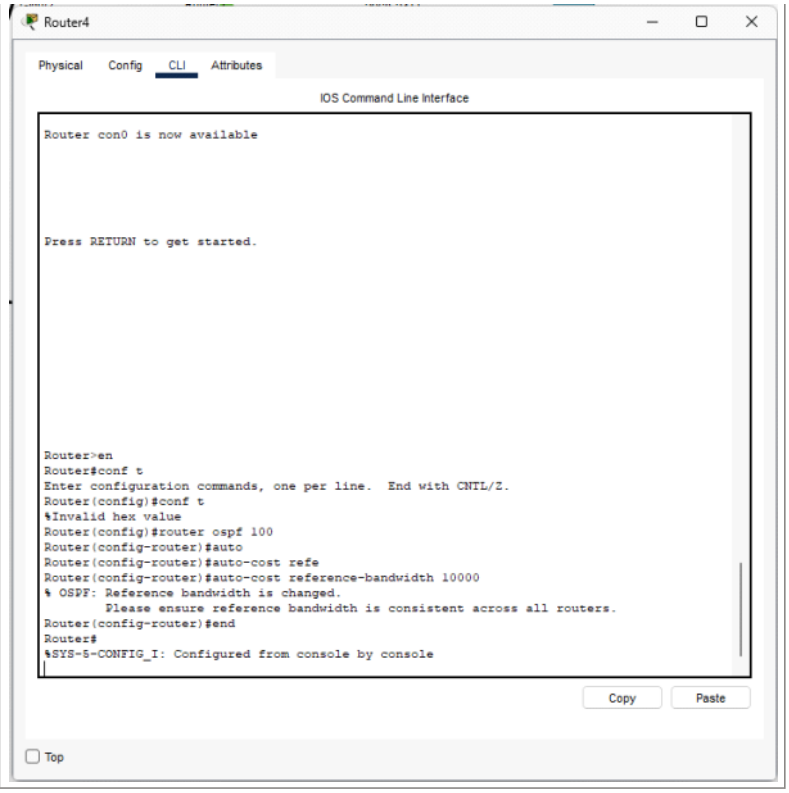
Router2



Router3



Router4


Router4
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router con0 is now available
Press RETURN to get started.
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#conf t
%Invalid hex value
Router(config)#router ospf 100
Router(config-router)#auto
Router(config-router)#auto-cost refe
Router(config-router)#auto-cost reference-bandwidth 10000
% OSPF: Reference bandwidth is changed.
Please ensure reference bandwidth is consistent across all routers.
Router(config-router)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
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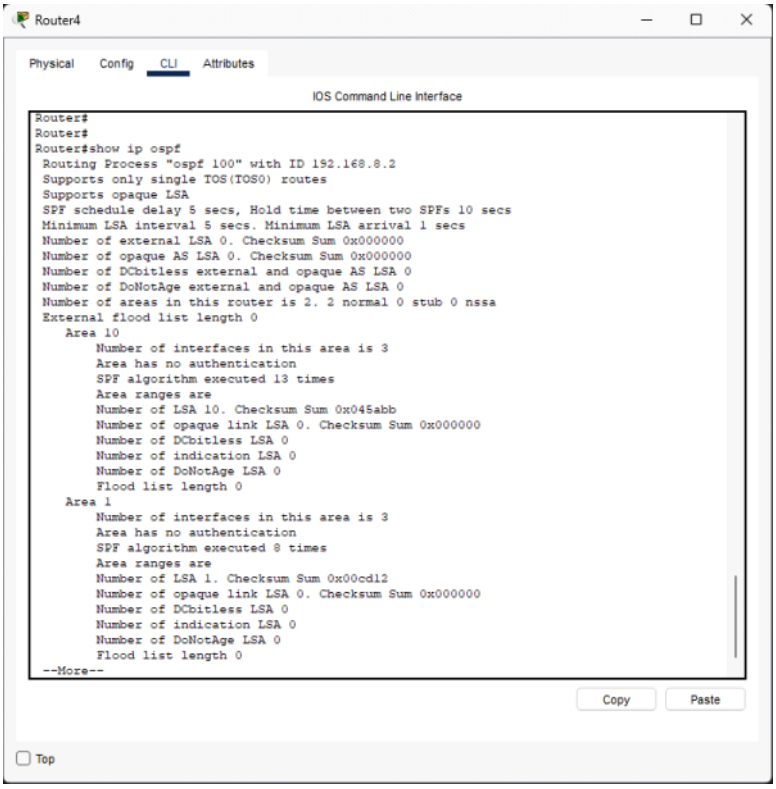
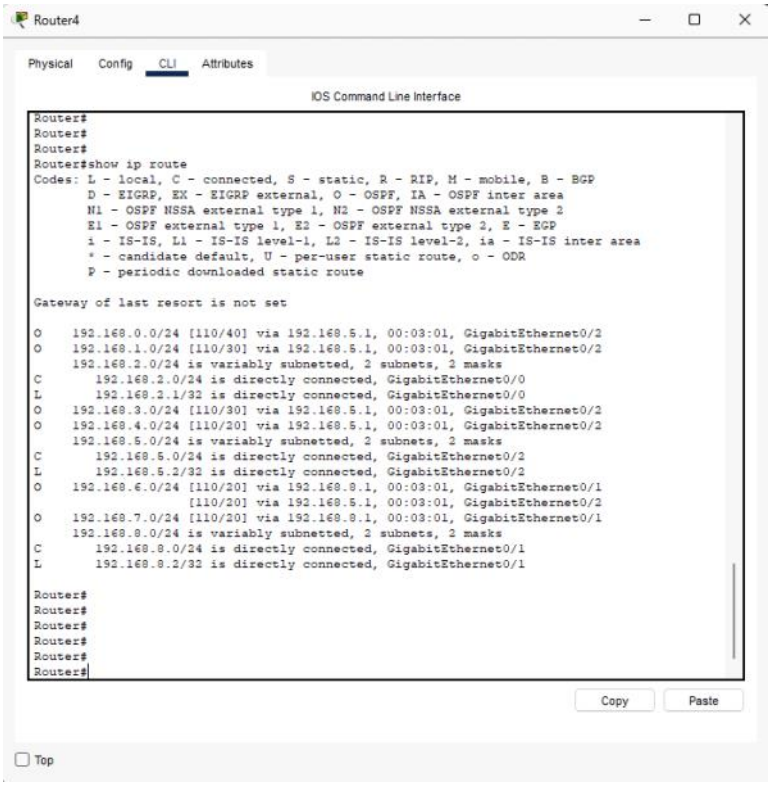
Les commandes show ip route, ip ospf, etc.





```
Router#
Router#
Router#
Router#show ip ospf neighbor

Neighbor ID     Pri   State           Dead Time   Address         Interface
192.168.2.1       1   EXSTART/DR      00:00:31    192.168.2.1     GigabitEthernet0/0
192.168.8.1       1   FULL/BDR        00:00:31    192.168.8.1     GigabitEthernet0/1
192.168.6.1       1   FULL/BDR        00:00:36    192.168.5.1     GigabitEthernet0/2
Router#
```

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```
Router#show ip ospf da
Router#show ip ospf database
            OSPF Router with ID (192.168.8.2) (Process ID 100)

                Router Link States (Area 1)

Link ID         ADV Router      Age         Seq#       Checksum Link count
192.168.8.2     192.168.8.2     239         0x80000006 0x00cd12 3

                Router Link States (Area 10)

Link ID         ADV Router      Age         Seq#       Checksum Link count
192.168.4.1     192.168.4.1     511         0x80000008 0x00a76c 3
192.168.8.1     192.168.8.1     420         0x80000009 0x00e80b 3
192.168.2.1     192.168.2.1     362         0x80000007 0x008efe 3
192.168.6.1     192.168.6.1     302         0x8000000a 0x00157c 3
192.168.8.2     192.168.8.2     241         0x80000009 0x002cca 3

                Net Link States (Area 10)
Link ID         ADV Router      Age         Seq#       Checksum
192.168.1.1     192.168.2.1     1057        0x80000001 0x007158
192.168.4.1     192.168.4.1     948         0x80000001 0x005e62
192.168.6.1     192.168.6.1     862         0x80000001 0x00f825
192.168.8.2     192.168.8.2     728         0x80000001 0x00091f
192.168.5.2     192.168.8.2     723         0x80000002 0x002902
Router#
```

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```
Router#show ip protocols

Routing Protocol is "ospf 100"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 192.168.8.2
  Number of areas in this router is 2. 2 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    192.168.0.0 0.0.255.255 area 1
    192.168.0.0 0.0.255.255 area 10
  Routing Information Sources:
    Gateway         Distance      Last Update
    192.168.2.1           110      00:06:28
    192.168.4.1           110      00:08:57
    192.168.6.1           110      00:05:28
    192.168.8.1           110      00:07:26
    192.168.8.2           110      00:04:27
  Distance: (default is 110)

Router#
```

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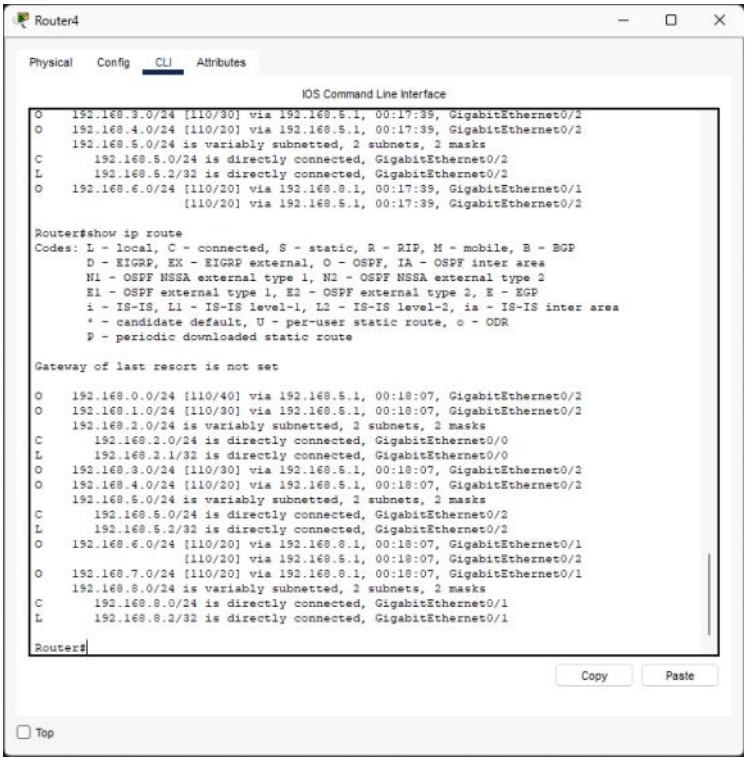
EN RÉSUMÉ :

A quoi servent ces commandes ?	REPONSE
Router# show ip ospf	affiche des informations détaillées sur les instances OSPF en cours d'exécution sur le routeur.
Router# show ip route	affiche la table de routage IP du routeur.
Router# show ip ospf neighbor	afficher des détails sur les relations de voisinage OSPF du routeur.
Router# show ip ospf database	Cette commande montre la base de données d'état de lien OSPF du routeur.
Router# show ip protocols	Cette commande fournit un résumé de tous les protocoles de routage qui sont configurés sur le routeur.

La table de routage de R4.



@ réseau destination	netmask	@IP de l'interface ou de la gateway	coût
192.168.0.0	255.255.255.0	192.168.5.1	40
192.168.1.0	255.255.255.0	192.168.5.1	30
192.168.2.0	255.255.255.0	Directement connectée	0
192.168.3.0	255.255.255.0	192.168.5.1	30
192.168.4.0	255.255.255.0	192.168.5.1	20
192.168.5.0	255.255.255.0	Directement connectée	0
192.168.6.0	255.255.255.0	192.168.5.1 ; 192.168.8.1	20
192.168.7.0	255.255.255.0	192.168.8.1	20
192.168.8.0	255.255.255.0	Directement connectée	0