



Departament d'Arquitectura de Computadors

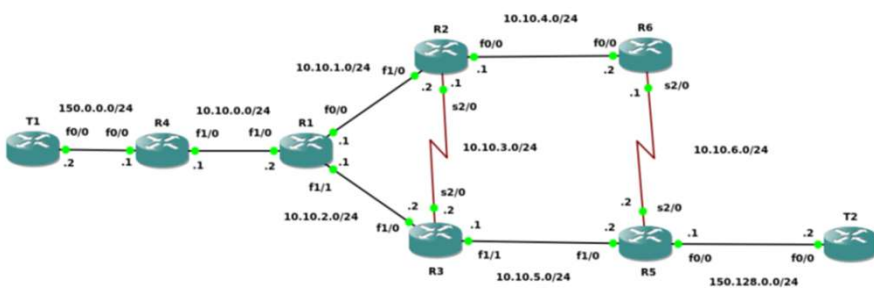
Taller#4 Core Network MPLS

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Xarxa proposada

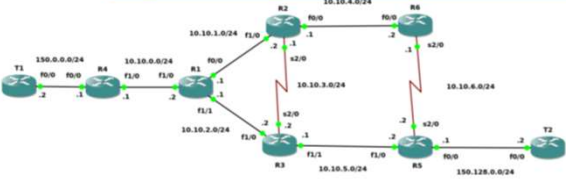


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Terminals



T1

```
interface FastEthernet0/0
ip address 150.0.0.2 255.255.255.0

ip route 0.0.0.0 0.0.0.0 150.0.0.1
```

T2

```
interface FastEthernet0/0
ip address 150.128.0.2 255.255.255.0

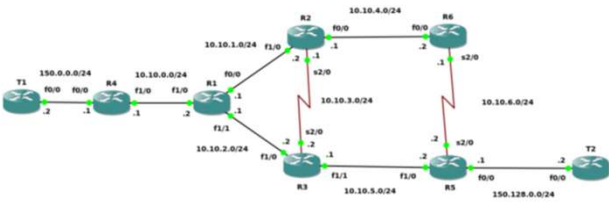
ip route 0.0.0.0 0.0.0.0 150.128.0.1
```

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R4



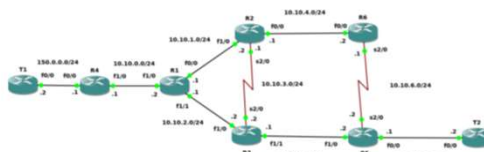
```
interface FastEthernet0/0
ip address 150.0.0.1 255.255.255.0
interface FastEthernet1/0
ip address 10.10.0.1 255.255.255.0

router ospf 1
network 10.10.0.0 0.0.0.255 area 0
network 150.0.0.0 0.0.0.255 area 0
```

← Manca el Loopback

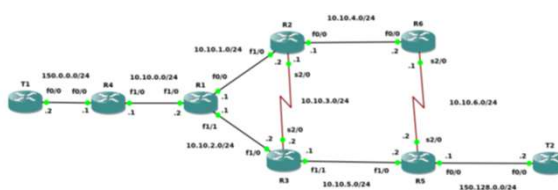
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```
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
interface Tunnel10
 ip unnumbered Loopback0
 tunnel destination 5.5.5.5
 tunnel mode mpls traffic-eng
 tunnel mpls traffic-eng autoroute announce
 tunnel mpls traffic-eng priority 7 7
 tunnel mpls traffic-eng bandwidth 50
 tunnel mpls traffic-eng path-option 1 explicit name LP1
interface FastEthernet0/0
 ip address 10.10.1.1 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 150
```

R1 (2)



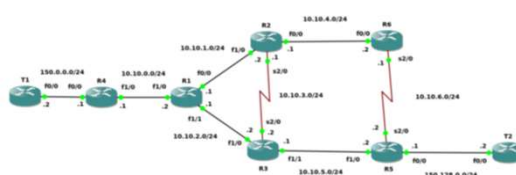
← Manca el Loopback

R2

```
mpls label protocol ldp
mpls traffic-eng tunnels

interface Loopback0
 ip address 2.2.2.2 255.255.255.255
interface FastEthernet0/0
 ip address 10.10.4.1 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 50
interface FastEthernet1/0
 ip address 10.10.1.2 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 150
interface Serial2/0
 ip address 10.10.3.1 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 100

router ospf 1
 mpls traffic-eng router-id Loopback0
 mpls traffic-eng area 0
 network 10.10.1.0 0.0.0.255 area 0
 network 10.10.3.0 0.0.0.255 area 0
 network 10.10.4.0 0.0.0.255 area 0
```



Manca el Loopback

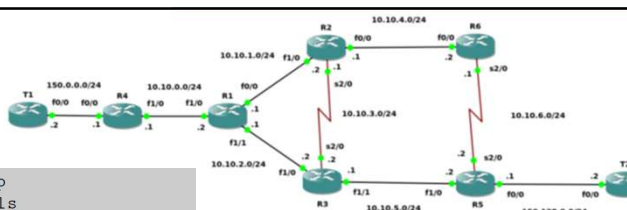


R3

```
mpls label protocol ldp
mpls traffic-eng tunnels

interface Loopback0
 ip address 3.3.3.3 255.255.255.255
interface FastEthernet1/0
 ip address 10.10.2.2 255.255.255.0
 mpls ip
interface FastEthernet1/1
 ip address 10.10.5.1 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 100
interface Serial2/0
 ip address 10.10.3.2 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 100

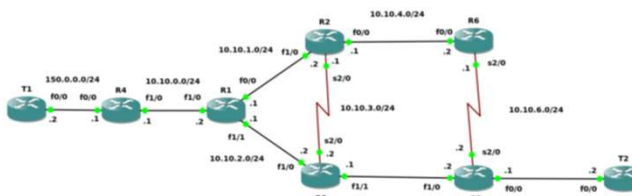
router ospf 1
 mpls traffic-eng router-id Loopback0
 mpls traffic-eng area 0
 network 10.10.2.0 0.0.0.255 area 0
 network 10.10.3.0 0.0.0.255 area 0
 network 10.10.5.0 0.0.0.255 area 0
```



Manca el Loopback



R5 (1)

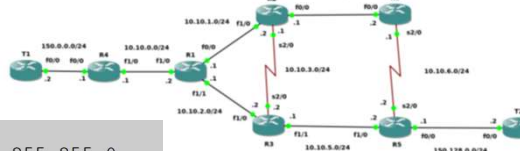


```
mpls label protocol ldp
mpls traffic-eng tunnels

interface Loopback0
 ip address 5.5.5.5 255.255.255.255
interface Tunnel10
 ip unnumbered Loopback0
 tunnel destination 1.1.1.1
 tunnel mode mpls traffic-eng
 tunnel mpls traffic-eng autoroute announce
 tunnel mpls traffic-eng priority 7 7
 tunnel mpls traffic-eng bandwidth 100
 tunnel mpls traffic-eng path-option 1 explicit name LP2
```

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R5 (2)



```
interface FastEthernet0/0
 ip address 150.128.0.1 255.255.255.0
interface FastEthernet1/0
 ip address 10.10.5.2 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 100
interface Serial2/0
 ip address 10.10.6.2 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 50

router ospf 1
 mpls traffic-eng router-id Loopback0
 mpls traffic-eng area 0
 network 10.10.5.0 0.0.0.255 area 0
 network 10.10.6.0 0.0.0.255 area 0
 network 150.128.0.0 0.0.0.255 area 0
 ip explicit-path name LP2 enable
 next-address 10.10.5.1
 next-address 10.10.3.1
 next-address 10.10.1.1
 next-address 1.1.1.1
```

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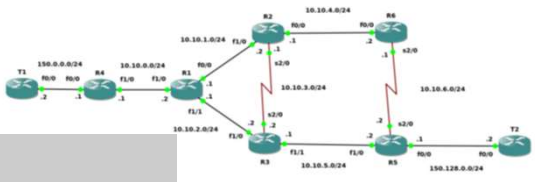
R6

```
mpls label protocol ldp
mpls traffic-eng tunnels

interface Loopback0
 ip address 6.6.6.6 255.255.255.255
interface FastEthernet0/0
 ip address 10.10.4.2 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 50
interface Serial2/0
 ip address 10.10.6.1 255.255.255.0
 mpls ip
 mpls traffic-eng tunnels
 ip rsvp bandwidth 50

router ospf 1
 mpls traffic-eng router-id Loopback0
 mpls traffic-eng area 0
 network 10.10.4.0 0.0.0.255 area 0
 network 10.10.6.0 0.0.0.255 area 0
```

Manca el Loopback

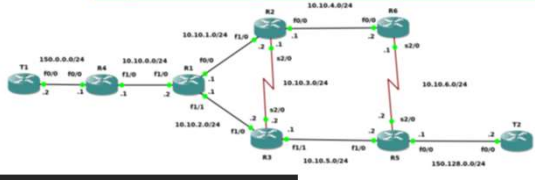


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Resultats



```
T1#traceroute 150.128.0.2
Type escape sequence to abort.
Tracing the route to 150.128.0.2
 0 150.0.0.1 8 msec 12 msec 8 msec
 1 10.10.0.2 24 msec 16 msec 20 msec
 2 10.10.1.2 [MPLS: Label 18 Exp 0] 60 msec 84 msec 60 msec
 3 10.10.4.2 [MPLS: Label 18 Exp 0] 80 msec 76 msec 72 msec
 4 10.10.6.2 60 msec 60 msec 60 msec
 5 150.128.0.2 76 msec 92 msec 84 msec
T1#

T2#traceroute 150.0.0.2
Type escape sequence to abort.
Tracing the route to 150.0.0.2
 0 150.128.0.1 16 msec 12 msec 12 msec
 1 10.10.5.1 [MPLS: Label 18 Exp 0] 56 msec 60 msec 52 msec
 2 10.10.3.1 [MPLS: Label 20 Exp 0] 48 msec 56 msec 56 msec
 3 10.10.1.1 52 msec 52 msec 68 msec
 4 10.10.0.1 68 msec 60 msec 60 msec
 5 150.0.0.2 68 msec 80 msec 80 msec
T2#
```

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