

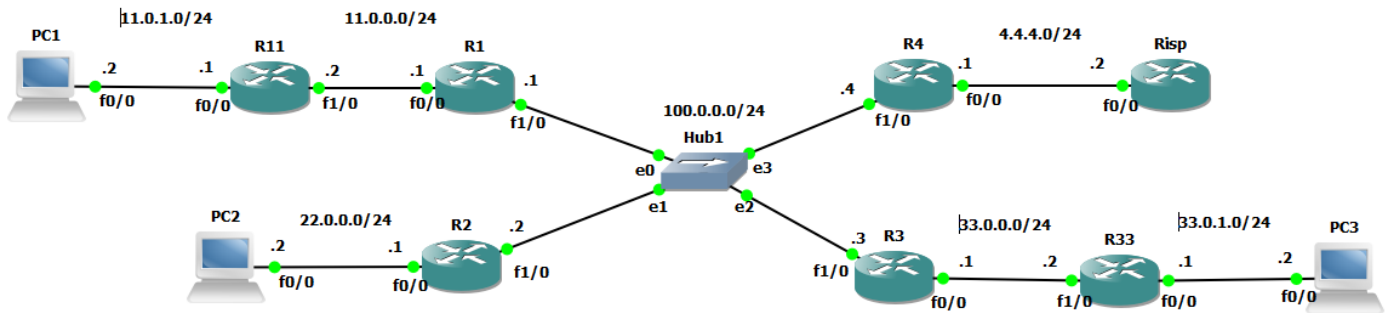
# Memòria Treball de Laboratori XC2

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Laboratori 2 – Intra Domain Routing: OSPF

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## 1. Esquema de la xarxa desenvolupada



## 2. Relació de les línies de programació

PC1	R11	R1
<pre> interface FastEthernet0/0 ip address 11.0.1.2 255.255.255.0 duplex half ! interface FastEthernet1/0 no ip address shutdown duplex auto speed auto ! ip route 0.0.0.0 0.0.0.0 11.0.1.1 </pre>	<pre> interface FastEthernet0/0 ip address 11.0.1.1 255.255.255.0 duplex half ! interface FastEthernet1/0 ip address 11.0.0.2 255.255.255.0 duplex auto speed auto ! router ospf 3 passive-interface FastEthernet0/0 network 11.0.0.0 0.0.0.255 area 1 network 11.0.1.0 0.0.0.255 area 1 </pre>	<pre> interface Loopback0 ip address 10.0.111.1 255.255.255.252 ! interface FastEthernet0/0 ip address 11.0.0.1 255.255.255.0 duplex half ! interface FastEthernet1/0 ip address 100.0.0.1 255.255.255.0 duplex auto speed auto ! router ospf 4 network 11.0.0.0 0.0.0.255 area 1 network 100.0.0.0 0.0.0.255 area 0 ! router ospf 3 area 1 range 11.0.0.0 255.255.254.0 </pre>

PC2	R2
<pre> interface FastEthernet0/0 ip address 22.0.0.2 255.255.255.0 duplex half ! ip route 0.0.0.0 0.0.0.0 22.0.0.1 </pre>	<pre> interface Loopback0 ip address 10.0.112.1 255.255.255.252 ! interface FastEthernet0/0 ip address 22.0.0.1 255.255.255.0 duplex half ! interface FastEthernet1/0 ip address 100.0.0.2 255.255.255.0 duplex auto speed auto ! interface FastEthernet1/1 no ip address shutdown duplex auto speed auto ! router ospf 1 passive-interface FastEthernet0/0 network 22.0.0.0 0.0.0.255 area 0 network 100.0.0.0 0.0.0.255 area 0 </pre>

PC3	R33	R3
<pre> interface FastEthernet0/0 ip address 33.0.1.2 255.255.255.0 duplex half ! ip route 0.0.0.0 0.0.0.0 33.0.1.1 </pre>	<pre> interface FastEthernet0/0 ip address 33.0.1.1 255.255.255.0 duplex half ! interface FastEthernet1/0 ip address 33.0.0.2 255.255.255.0 duplex auto speed auto ! router ospf 5 network 33.0.0.0 0.0.0.255 area 3 network 33.0.1.0 0.0.0.255 area 3 </pre>	<pre> interface Loopback0 ip address 10.0.113.1 255.255.255.252 ! interface FastEthernet0/0 ip address 33.0.0.1 255.255.255.0 duplex half ! interface FastEthernet1/0 ip address 100.0.0.3 255.255.255.0 duplex auto speed auto ! router ospf 6 network 33.0.0.0 0.0.0.255 area 3 network 100.0.0.0 0.0.0.255 area 0 ! router ospf 5 area 3 range 33.0.0.0 255.255.254.0 </pre>

Risp	R4
<pre> interface FastEthernet0/0 ip address 4.4.4.2 255.255.255.0 duplex ip route 0.0.0.0 0.0.0.0 4.4.4.1 </pre>	<pre> interface Loopback0 ip address 10.0.114.1 255.255.255.252 ! interface FastEthernet0/0 ip address 4.4.4.1 255.255.255.0 duplex half ! interface FastEthernet1/0 ip address 100.0.0.4 255.255.255.0 duplex auto speed auto !  router ospf 2 passive-interface FastEthernet0/0 network 4.4.4.0 0.0.0.255 area 0 network 100.0.0.0 0.0.0.255 area 0 default-information originate ! ip route 0.0.0.0 0.0.0.0 4.4.4.2 </pre>

### 3. Comentaris

L'únic problema amb el GNS3 era que per validar una connexió d'un Host a un altre, havia de fer varies vegades ping fins que envies algun packet.

## 4. Resultats

### 4.1 Taules d'enruntament

R4	R1
<p><b>S*</b> 0.0.0.0/0 [1/0] via 4.4.4.2 4.0.0.0/8 is variably subnetted, 2 subnets, 2 masks</p> <p><b>C</b> 4.4.4.0/24 is directly connected, FastEthernet0/0</p> <p><b>L</b> 4.4.4.1/32 is directly connected, FastEthernet0/0</p> <p>10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks</p> <p><b>C</b> 10.0.114.0/30 is directly connected, Loopback0</p> <p><b>L</b> 10.0.114.1/32 is directly connected, Loopback0</p> <p>11.0.0.0/24 is subnetted, 2 subnets</p> <p><b>O IA</b> 11.0.0.0 [110/2] via 100.0.0.1, 00:01:03, FastEthernet1/0</p> <p><b>O IA</b> 11.0.1.0 [110/3] via 100.0.0.1, 00:01:02, FastEthernet1/0</p> <p>22.0.0.0/24 is subnetted, 1 subnets</p> <p><b>O</b> 22.0.0.0 [110/2] via 100.0.0.2, 00:00:27, FastEthernet1/0</p> <p>33.0.0.0/24 is subnetted, 2 subnets</p> <p><b>O IA</b> 33.0.0.0 [110/2] via 100.0.0.3, 00:00:48, FastEthernet1/0</p> <p><b>O IA</b> 33.0.1.0 [110/3] via 100.0.0.3, 00:00:48, FastEthernet1/0</p> <p>100.0.0.0/8 is variably subnetted, 2 subnets, 2 masks</p> <p><b>C</b> 100.0.0.0/24 is directly connected, FastEthernet1/0</p> <p><b>L</b> 100.0.0.4/32 is directly connected, FastEthernet1/0</p>	<p><b>O*E2</b> 0.0.0.0/0 [110/1] via 100.0.0.4, 00:01:25, FastEthernet1/0</p> <p>4.0.0.0/24 is subnetted, 1 subnets</p> <p><b>O</b> 4.4.4.0 [110/2] via 100.0.0.4, 00:01:25, FastEthernet1/0</p> <p>10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks</p> <p><b>C</b> 10.0.111.0/30 is directly connected, Loopback0</p> <p><b>L</b> 10.0.111.1/32 is directly connected, Loopback0</p> <p>11.0.0.0/8 is variably subnetted, 3 subnets, 2 masks</p> <p><b>C</b> 11.0.0.0/24 is directly connected, FastEthernet0/0</p> <p><b>L</b> 11.0.0.1/32 is directly connected, FastEthernet0/0</p> <p><b>O</b> 11.0.1.0/24 [110/2] via 11.0.0.2, 00:01:20, FastEthernet0/0</p> <p>22.0.0.0/24 is subnetted, 1 subnets</p> <p><b>O</b> 22.0.0.0 [110/2] via 100.0.0.2, 00:00:24, FastEthernet1/0</p> <p>33.0.0.0/24 is subnetted, 2 subnets</p> <p><b>O IA</b> 33.0.0.0 [110/2] via 100.0.0.3, 00:00:52, FastEthernet1/0</p> <p><b>O IA</b> 33.0.1.0 [110/3] via 100.0.0.3, 00:00:52, FastEthernet1/0</p> <p>100.0.0.0/8 is variably subnetted, 2 subnets, 2 masks</p> <p><b>C</b> 100.0.0.0/24 is directly connected, FastEthernet1/0</p> <p><b>L</b> 100.0.0.1/32 is directly connected, FastEthernet1/0</p>

## 4.2 Pings de Host a Host

### Ping PC1 a PC3

```
PC1#ping 33.0.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 33.0.1.2, timeout is 2 seconds:
!!...
Success rate is 40 percent (2/5), round-trip min/avg/max = 1580/1774/1968 ms
```

### Ping PC1 a PC2

```
PC1#ping 22.0.0.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 22.0.0.2, timeout is 2 seconds:
...!.
Success rate is 20 percent (1/5), round-trip min/avg/max = 1036/1036/1036 ms
```

### Ping PC1 a Risp

```
PC1#ping 4.4.4.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 4.4.4.2, timeout is 2 seconds:
!....
Success rate is 20 percent (1/5), round-trip min/avg/max = 1644/1644/1644 ms
```