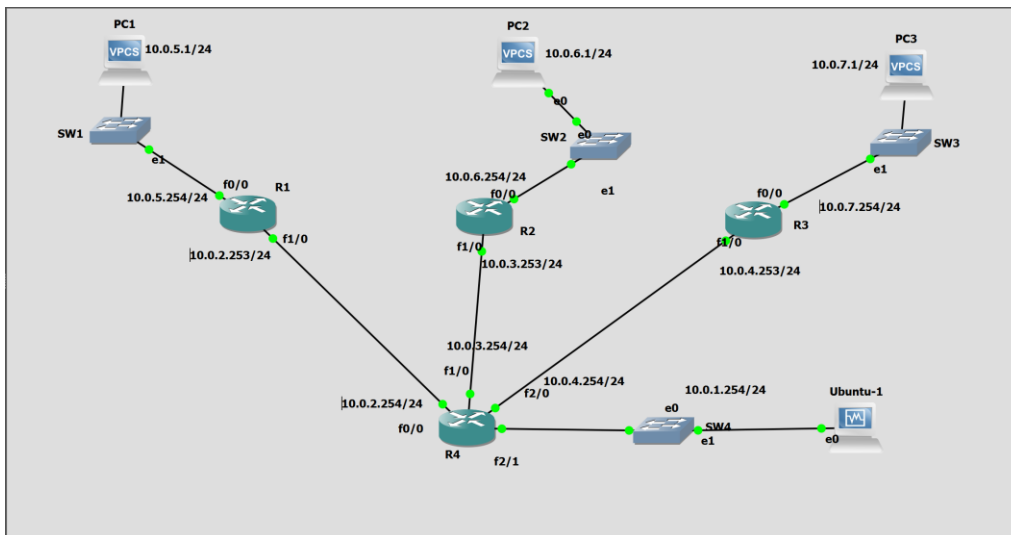


Enrutamiento Múltiple

Martínez Coronel Brayan Yosafat

Desarrollo de la práctica



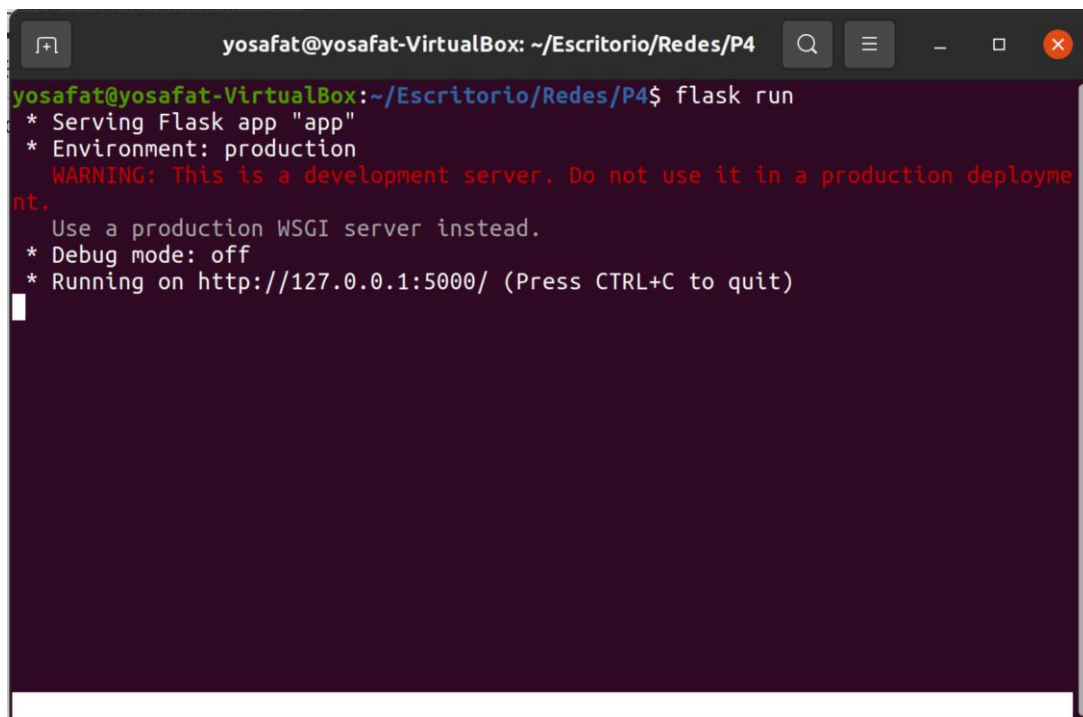
Arquitectura requerida

```
R4
R4(config)#username cisco pri
R4(config)#username cisco privilege 15 password cisco
R4(config)#end
R4#
*Mar 27 12:49:39.795: %SYS-5-CONFIG_I: Configured from console by console
R4#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R4#show ip routes
^
% Invalid input detected at '^' marker.
R4#show ip route
Codes: C - connected, S - static, 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
       i - IS-IS, su - IS-IS summary, 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

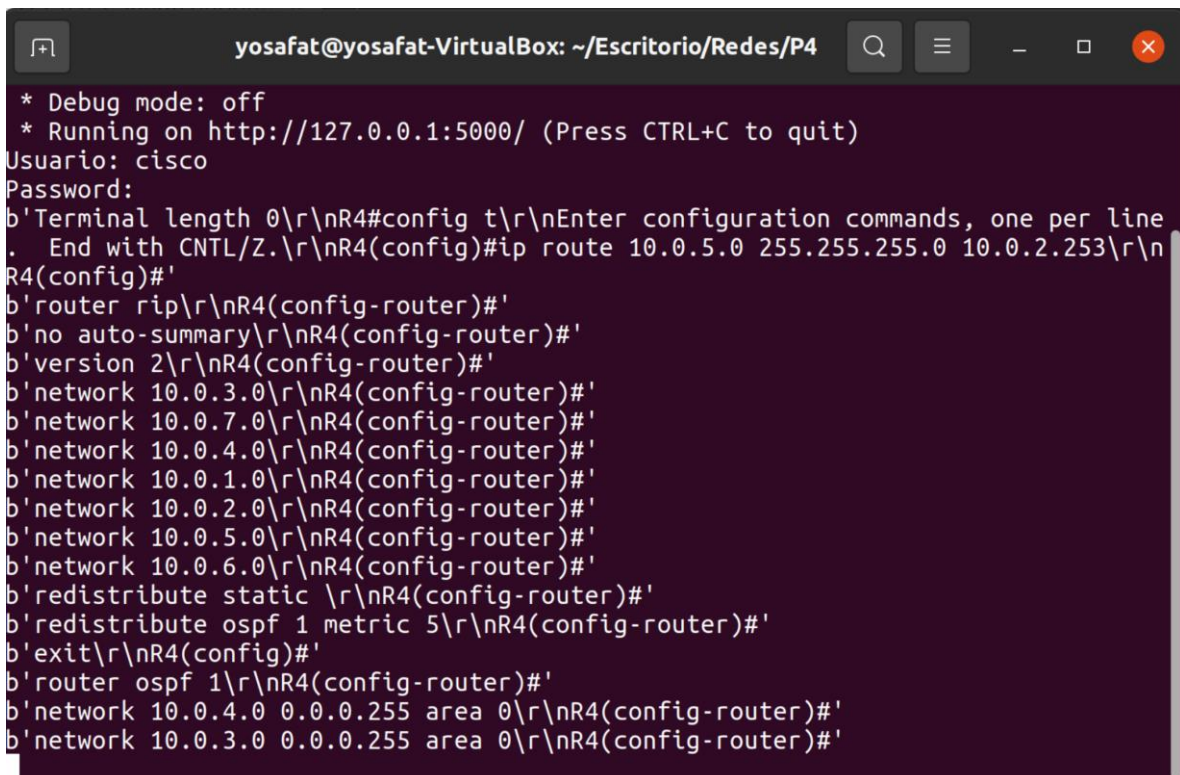
 10.0.0.0/24 is subnetted, 4 subnets
C    10.0.2.0 is directly connected, FastEthernet0/0
C    10.0.3.0 is directly connected, FastEthernet1/0
C    10.0.1.0 is directly connected, FastEthernet2/1
C    10.0.4.0 is directly connected, FastEthernet2/0
R4#
```

Conexiones antes de correr la app en Flask

A terminal window titled 'yosafat@yosafat-VirtualBox: ~/Escritorio/Redes/P4'. The prompt is 'yosafat@yosafat-VirtualBox:~/Escritorio/Redes/P4\$'. The command 'flask run' has been executed. The output shows: '* Serving Flask app "app"', '* Environment: production', a red warning message 'WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.', '* Debug mode: off', and '* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)'.

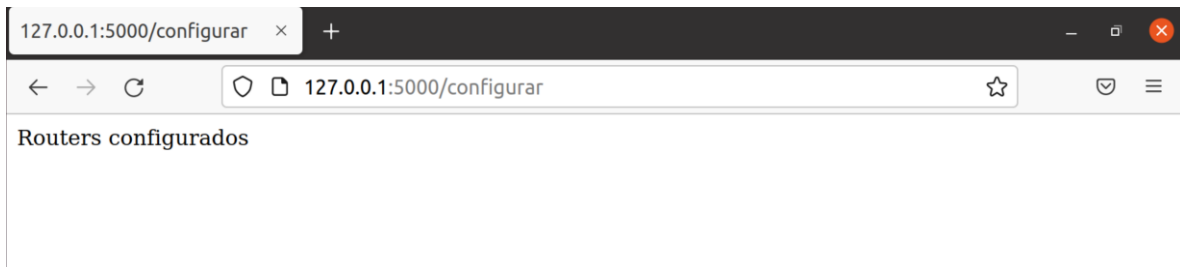
```
yosafat@yosafat-VirtualBox: ~/Escritorio/Redes/P4$ flask run
* Serving Flask app "app"
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Corriendo la app

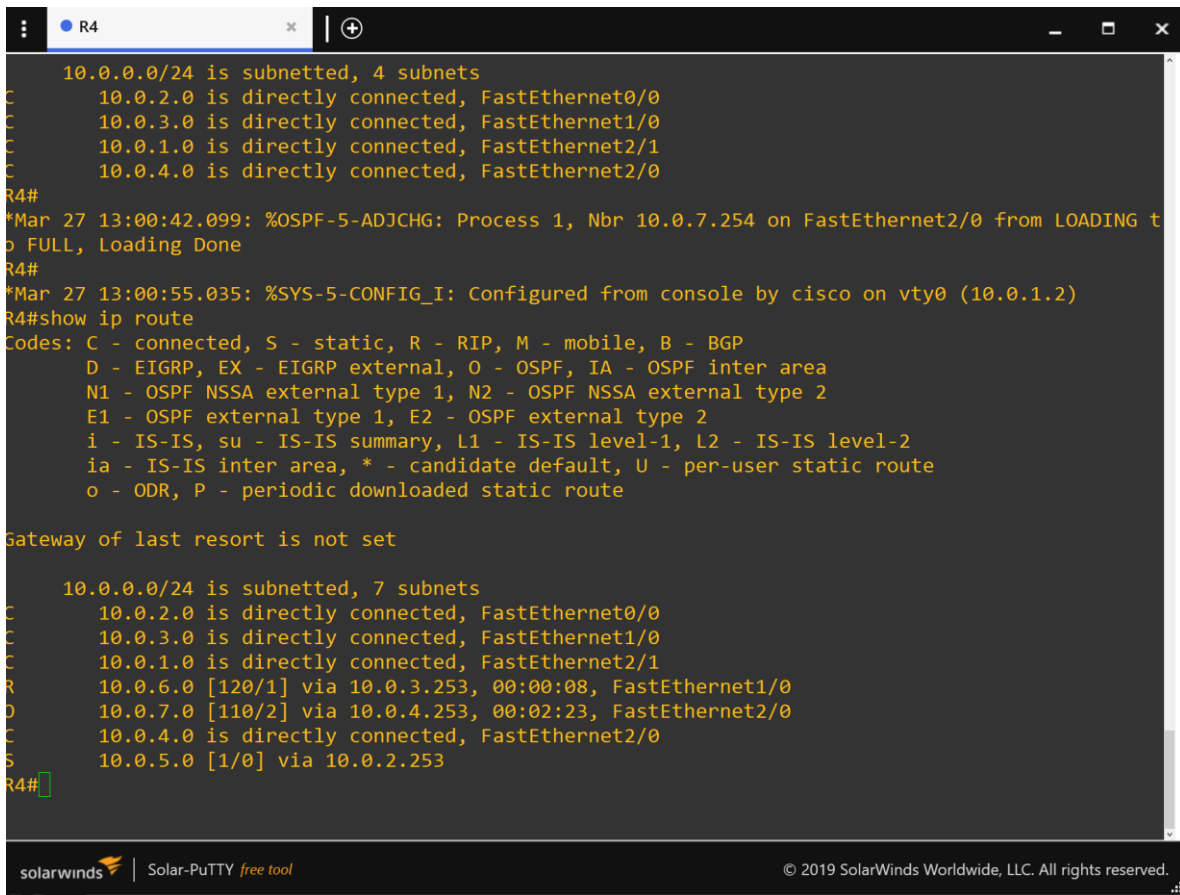
A terminal window titled 'yosafat@yosafat-VirtualBox: ~/Escritorio/Redes/P4'. The prompt is 'yosafat@yosafat-VirtualBox:~/Escritorio/Redes/P4\$'. The output shows: '* Debug mode: off', '* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)', 'Usuario: cisco', 'Password:', and a series of network configuration commands for a Cisco router. The commands are: 'terminal length 0', 'config t', 'ip route 10.0.5.0 255.255.255.0 10.0.2.253', 'router rip', 'no auto-summary', 'version 2', 'network 10.0.3.0', 'network 10.0.7.0', 'network 10.0.4.0', 'network 10.0.1.0', 'network 10.0.2.0', 'network 10.0.5.0', 'network 10.0.6.0', 'redistribute static', 'redistribute ospf 1 metric 5', 'exit', 'router ospf 1', 'network 10.0.4.0 0.0.0.255 area 0', and 'network 10.0.3.0 0.0.0.255 area 0'.

```
yosafat@yosafat-VirtualBox: ~/Escritorio/Redes/P4$
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
Usuario: cisco
Password:
b'Terminal length 0\r\nR4#config t\r\nEnter configuration commands, one per line
. End with CNTL/Z.\r\nR4(config)#ip route 10.0.5.0 255.255.255.0 10.0.2.253\r\n
R4(config)#'
b'router rip\r\nR4(config-router)#'
b'no auto-summary\r\nR4(config-router)#'
b'version 2\r\nR4(config-router)#'
b'network 10.0.3.0\r\nR4(config-router)#'
b'network 10.0.7.0\r\nR4(config-router)#'
b'network 10.0.4.0\r\nR4(config-router)#'
b'network 10.0.1.0\r\nR4(config-router)#'
b'network 10.0.2.0\r\nR4(config-router)#'
b'network 10.0.5.0\r\nR4(config-router)#'
b'network 10.0.6.0\r\nR4(config-router)#'
b'redistribute static \r\nR4(config-router)#'
b'redistribute ospf 1 metric 5\r\nR4(config-router)#'
b'exit\r\nR4(config)#'
b'router ospf 1\r\nR4(config-router)#'
b'network 10.0.4.0 0.0.0.255 area 0\r\nR4(config-router)#'
b'network 10.0.3.0 0.0.0.255 area 0\r\nR4(config-router)#'
```

Corriendo los comandos con Paramiko



Resultado de Flask



Conexiones después de correr los comandos

```
yosafat@yosafat-VirtualBox: ~/Escritorio/Redes/P4
b'redistribute static metric 200 subnets\r\nR4(config-router)#'
b'redistribute rip metric 200 subnets \r\nR4(config-router)#'
b'exit\r\nR4(config)#'
b'exit\r\nR4#'
127.0.0.1 - - [27/Mar/2022 13:01:07] "GET /configurar HTTP/1.1" 200 -
^C
yosafat@yosafat-VirtualBox:~/Escritorio/Redes/P4$ ping 10.0.7.1
PING 10.0.7.1 (10.0.7.1) 56(84) bytes of data.
64 bytes from 10.0.7.1: icmp_seq=1 ttl=62 time=3030 ms
64 bytes from 10.0.7.1: icmp_seq=2 ttl=62 time=2005 ms
64 bytes from 10.0.7.1: icmp_seq=3 ttl=62 time=981 ms
64 bytes from 10.0.7.1: icmp_seq=4 ttl=62 time=33.4 ms
64 bytes from 10.0.7.1: icmp_seq=5 ttl=62 time=22.2 ms
64 bytes from 10.0.7.1: icmp_seq=6 ttl=62 time=33.1 ms
64 bytes from 10.0.7.1: icmp_seq=7 ttl=62 time=26.3 ms
64 bytes from 10.0.7.1: icmp_seq=8 ttl=62 time=30.5 ms
64 bytes from 10.0.7.1: icmp_seq=9 ttl=62 time=38.8 ms
64 bytes from 10.0.7.1: icmp_seq=10 ttl=62 time=29.0 ms
64 bytes from 10.0.7.1: icmp_seq=11 ttl=62 time=29.9 ms
64 bytes from 10.0.7.1: icmp_seq=12 ttl=62 time=34.1 ms
64 bytes from 10.0.7.1: icmp_seq=13 ttl=62 time=37.2 ms
64 bytes from 10.0.7.1: icmp_seq=14 ttl=62 time=39.2 ms
64 bytes from 10.0.7.1: icmp_seq=15 ttl=62 time=31.4 ms
64 bytes from 10.0.7.1: icmp_seq=16 ttl=62 time=24.7 ms
64 bytes from 10.0.7.1: icmp_seq=17 ttl=62 time=33.2 ms
```

Ping desde la máquina virtual