U-tad
CENTRO UNIVERSITARIO
DE TECNOLOGÍA Y ARTE DIGITAL

ENTORNO DE LABORATORIO

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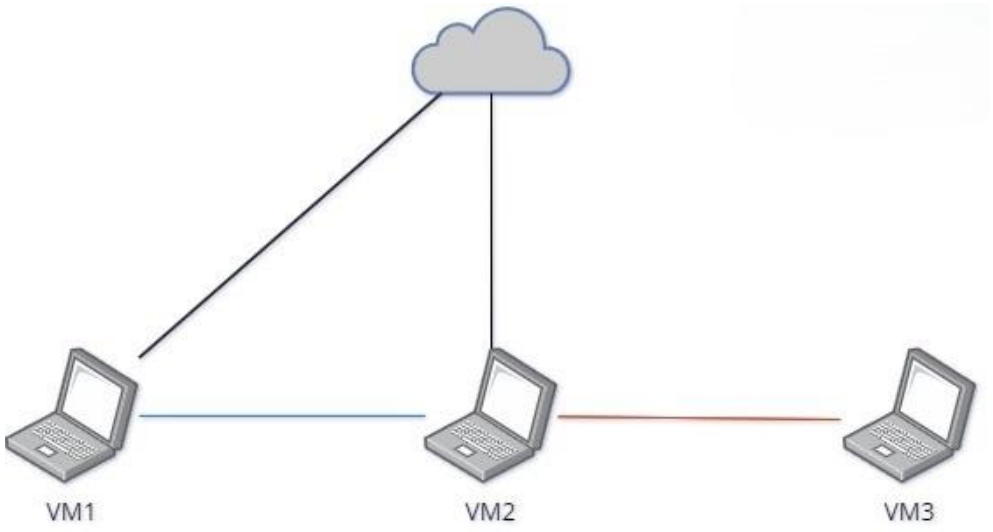
Tabla de contenido

Introducción

Realizar la interconexión de 3 máquinas virtuales (VM) siguiendo el siguiente esquema de red:



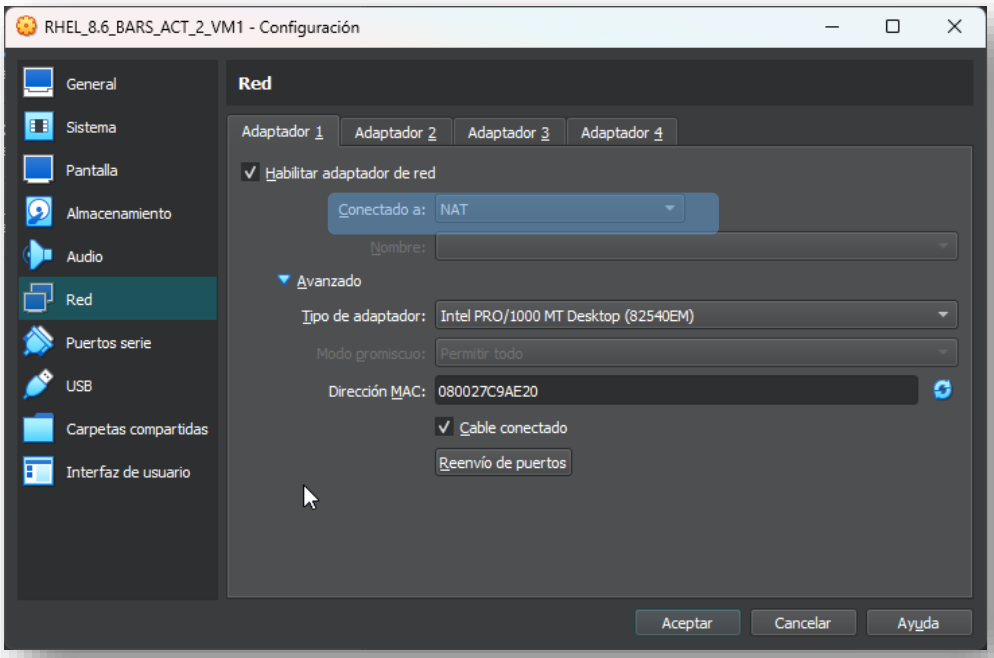
- **VM1**: Deberá tener conexión a internet y conexión con la VM2, pero no con la VM3.
- **VM2**: Deberá tener conexión tanto a internet, como a ambas VMs.
- **VM3**: Solo deberá tener conexión con VM2.

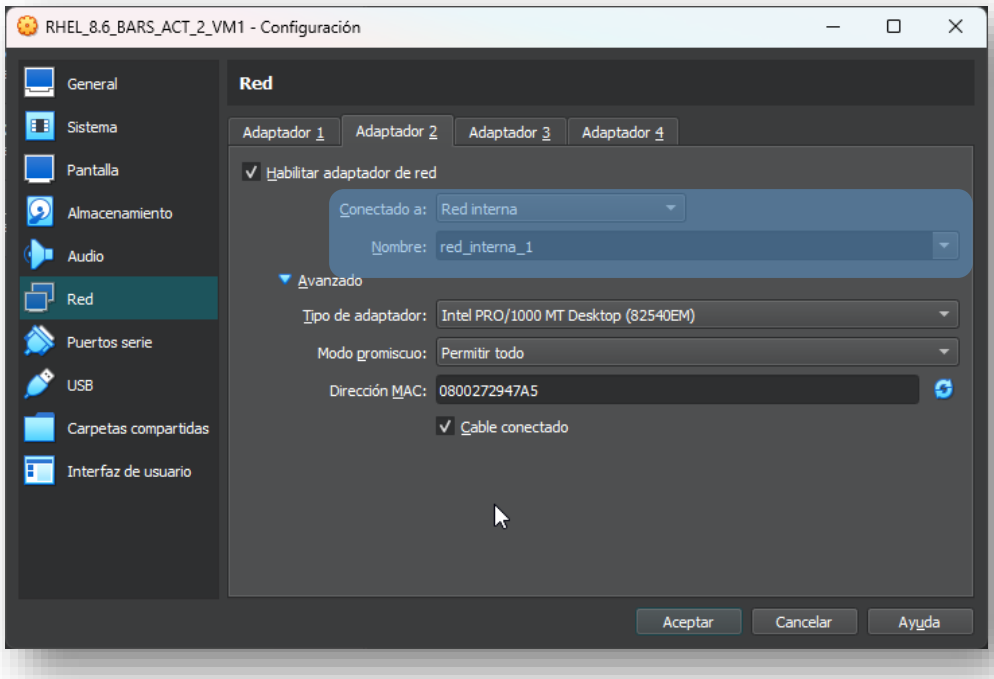
Configuración

Adaptadores de red en VM1

Los adaptadores de red en VM1 van a ser:

- Adaptador 1: conectado a NAT.
- Adaptador 2: conectado a red interna, nombre "red_interna_1"

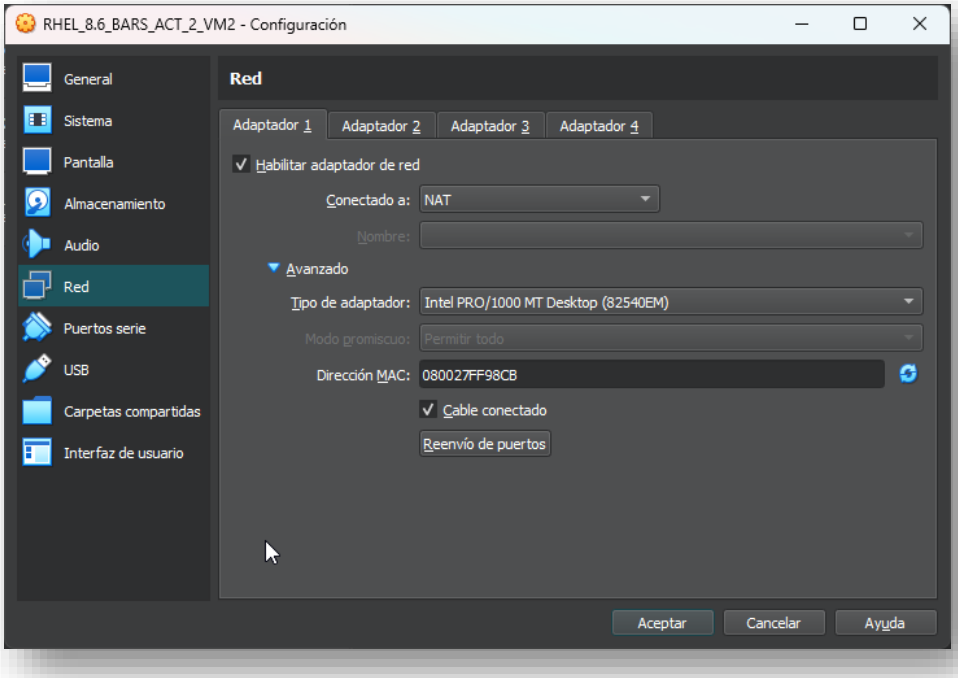


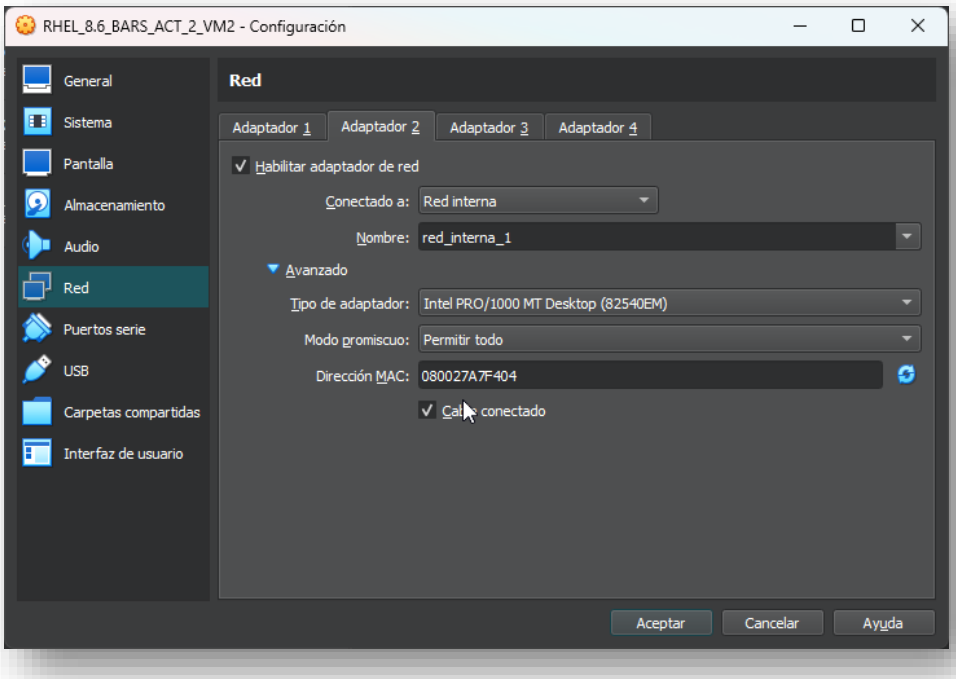


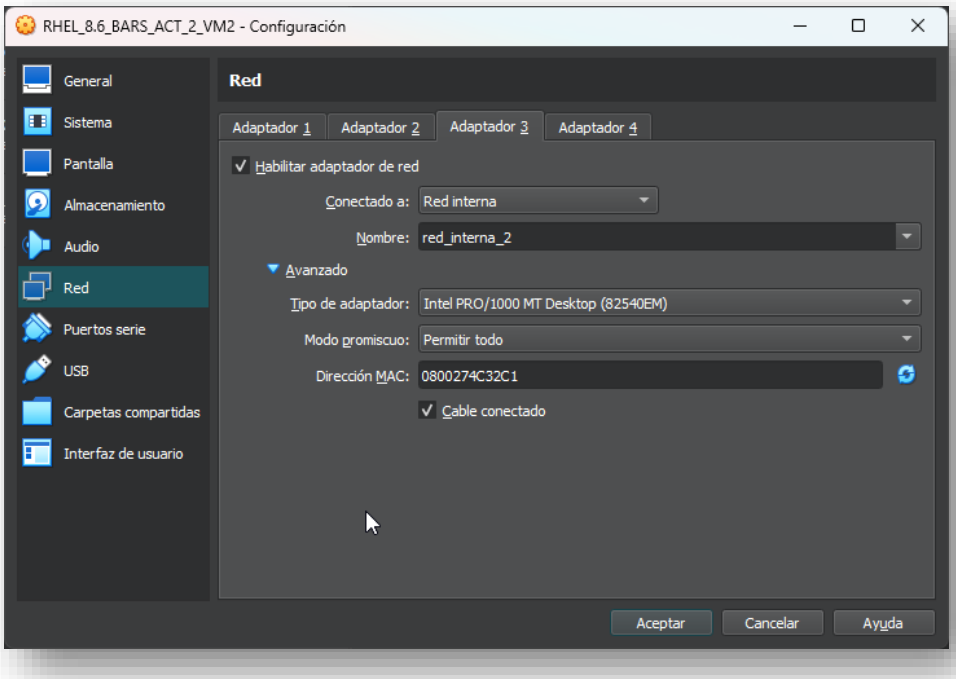
Adaptadores de red en VM2

Los adaptadores de red en VM2 van a ser:

- Adaptador 1: conectado a NAT.
- Adaptador 2: conectado a red interna, nombre “red_interna_1”
- Adaptador 3: conectado a red interna, nombre “red_interna_2”



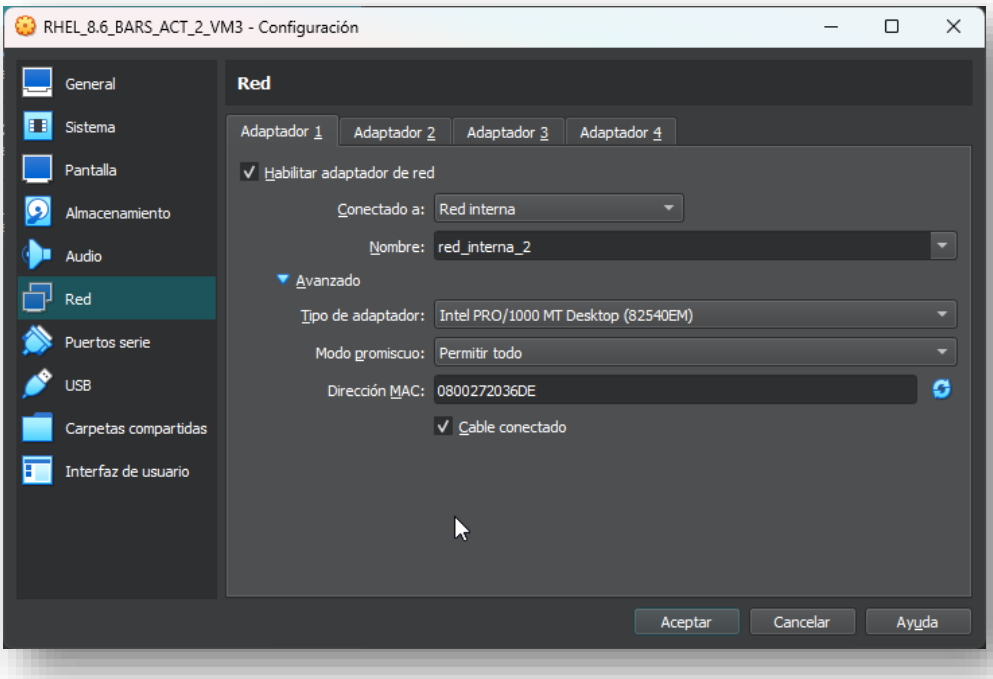




Adaptadores de red en VM3

Los adaptadores de red en VM3 van a ser:

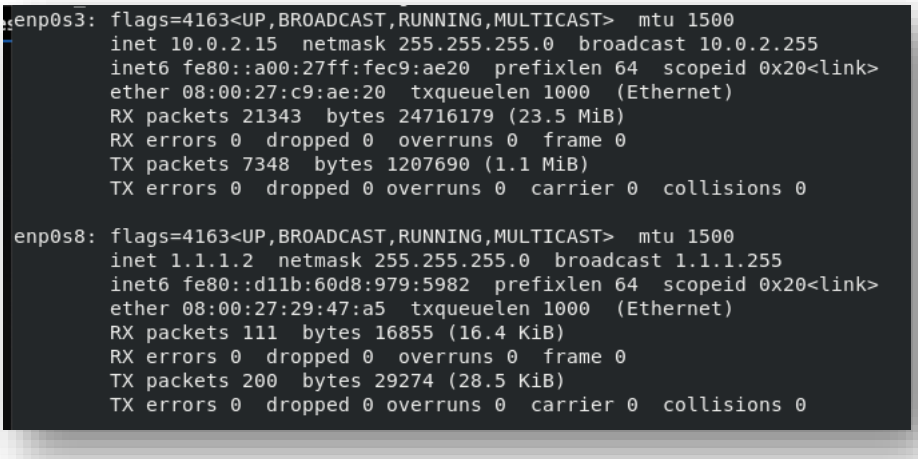
- Adaptador 1: Conectado a red interna, nombre "red_interna_2"

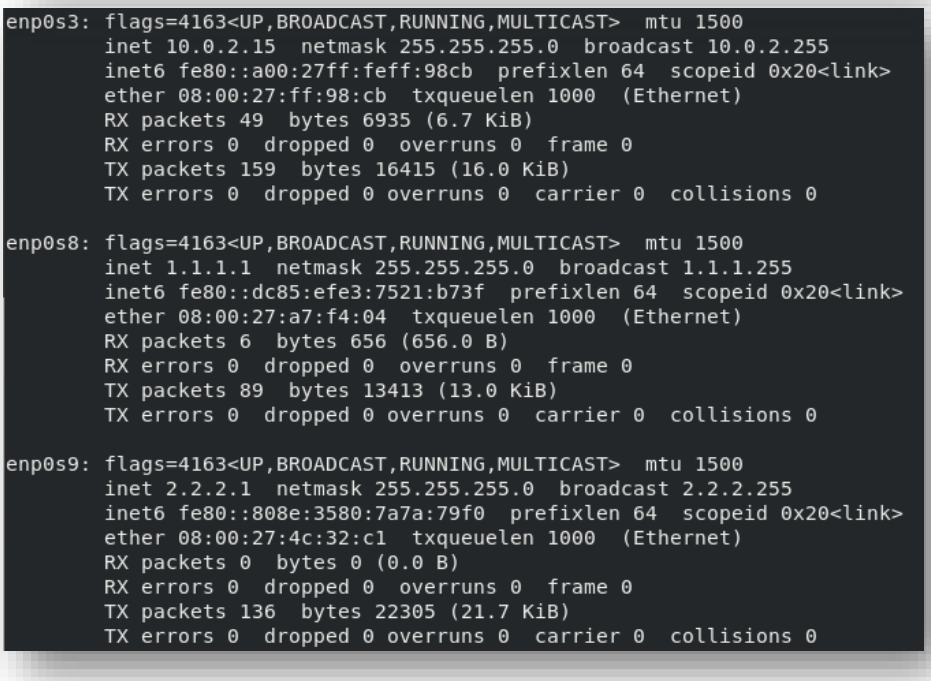


Pruebas de funcionamiento

Tabla de IPs

MÁQUINA	INTERFAZ	DIRECCIÓN IP
VM1	enp0s3	10.0.2.15/24
	enp0s8	1.1.1.2/24
VM2	enp0s3	10.0.2.15/24
	enp0s8	1.1.1.1/24
	enp0s9	2.2.2.1/24
VM3	enp0s3	2.2.2.2/24



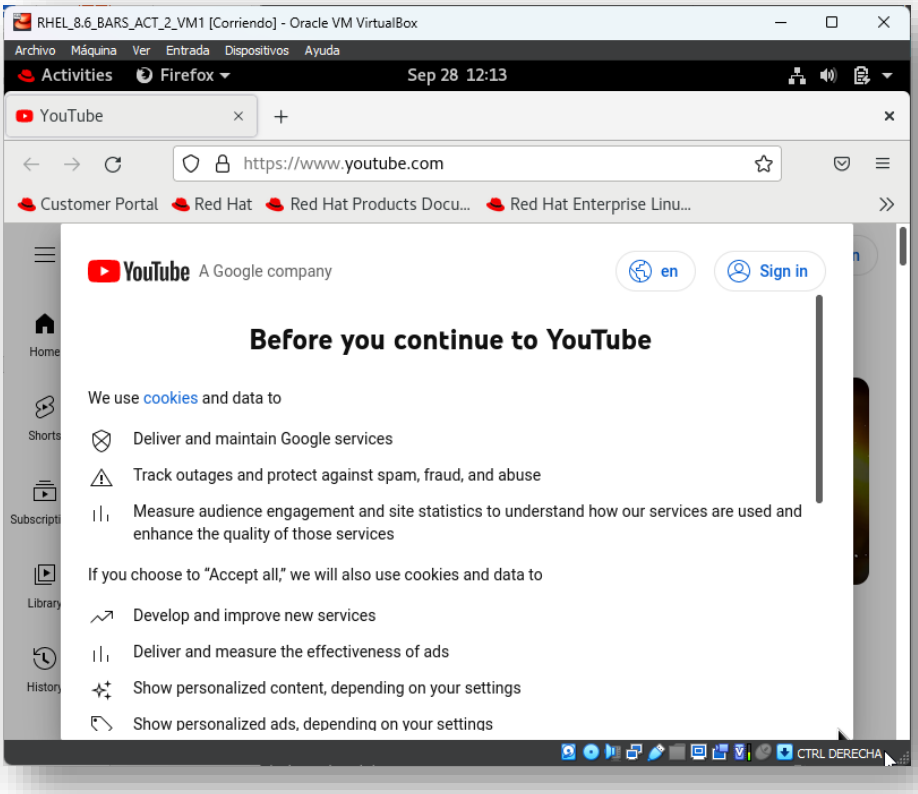


```
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 2.2.2.2  netmask 255.255.255.0  broadcast 2.2.2.255
        inet6 fe80::a00:27ff:fe20:36de  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:20:36:de  txqueuelen 1000  (Ethernet)
        RX packets 357  bytes 40895 (39.9 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 922  bytes 87810 (85.7 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

Pruebas de conectividad

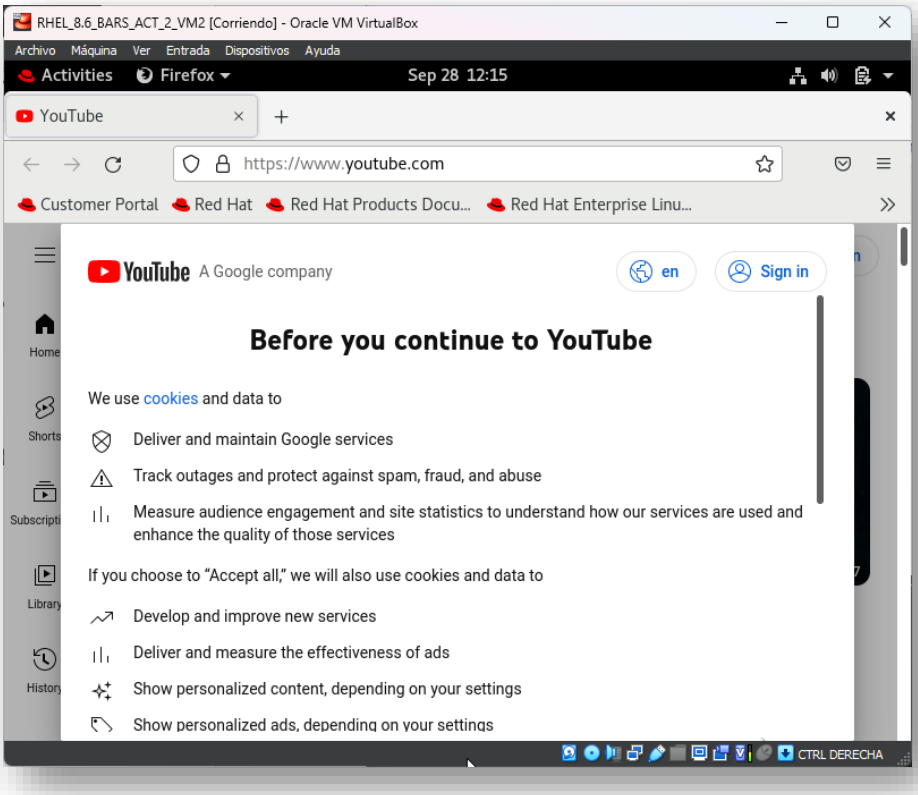
VM1

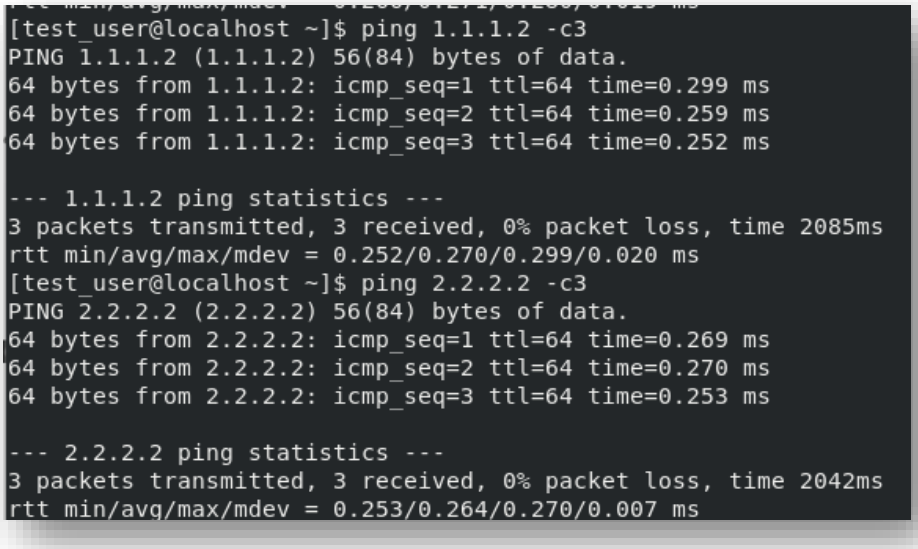
```
[test_user@localhost ~]$ ping 1.1.1.1
PING 1.1.1.1 (1.1.1.1) 56(84) bytes of data.
64 bytes from 1.1.1.1: icmp_seq=1 ttl=64 time=0.277 ms
64 bytes from 1.1.1.1: icmp_seq=2 ttl=64 time=0.253 ms
64 bytes from 1.1.1.1: icmp_seq=3 ttl=64 time=0.253 ms
```




```
[test_user@localhost ~]$ ping 2.2.2.2
PING 2.2.2.2 (2.2.2.2) 56(84) bytes of data.
^C
--- 2.2.2.2 ping statistics ---
4 packets transmitted, 0 received, 100% packet loss, time 3154ms
```

VM2





```
[test_user@localhost ~]$ ping 1.1.1.2 -c3
PING 1.1.1.2 (1.1.1.2) 56(84) bytes of data.
64 bytes from 1.1.1.2: icmp_seq=1 ttl=64 time=0.299 ms
64 bytes from 1.1.1.2: icmp_seq=2 ttl=64 time=0.259 ms
64 bytes from 1.1.1.2: icmp_seq=3 ttl=64 time=0.252 ms

--- 1.1.1.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2085ms
rtt min/avg/max/mdev = 0.252/0.270/0.299/0.020 ms
[test_user@localhost ~]$ ping 2.2.2.2 -c3
PING 2.2.2.2 (2.2.2.2) 56(84) bytes of data.
64 bytes from 2.2.2.2: icmp_seq=1 ttl=64 time=0.269 ms
64 bytes from 2.2.2.2: icmp_seq=2 ttl=64 time=0.270 ms
64 bytes from 2.2.2.2: icmp_seq=3 ttl=64 time=0.253 ms

--- 2.2.2.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2042ms
rtt min/avg/max/mdev = 0.253/0.264/0.270/0.007 ms
```

VM3

```
[test_user@localhost ~]$ ping 2.2.2.1
PING 2.2.2.1 (2.2.2.1) 56(84) bytes of data.
64 bytes from 2.2.2.1: icmp_seq=1 ttl=64 time=0.247 ms
64 bytes from 2.2.2.1: icmp_seq=2 ttl=64 time=0.200 ms
64 bytes from 2.2.2.1: icmp_seq=3 ttl=64 time=0.237 ms
```

```
[test_user@localhost ~]$ ping 1.1.1.2
PING 1.1.1.2 (1.1.1.2) 56(84) bytes of data.
^C
--- 1.1.1.2 ping statistics ---
6 packets transmitted, 0 received, 100% packet loss, time 5118ms
```