



ENTORNO DE LABORATORIO

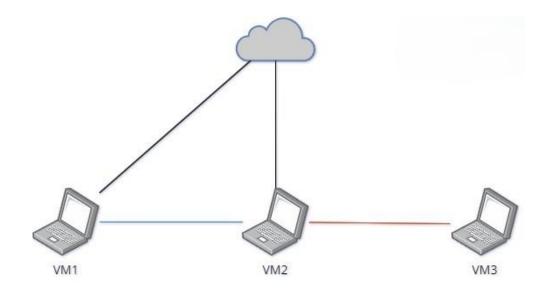
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Introducción

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



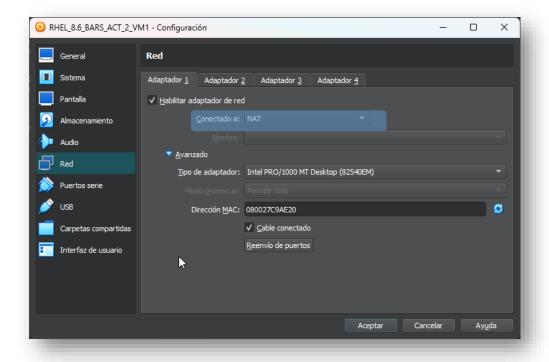
- VM1: Deberá tener conexión a internet y conexión con la VM2, pero no con la VM3.
- VM2: Deberá tener conexión tanto a internet, como a ambas VMs.
- VM3: Solo deberá tener conexión con VM2.

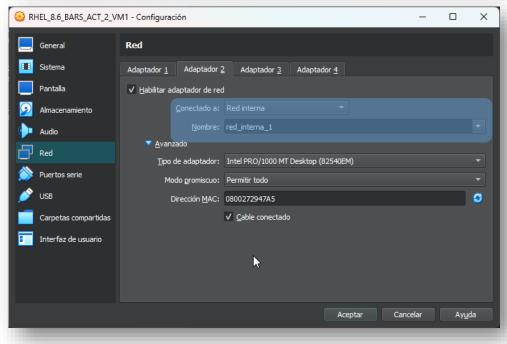
Configuración

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"

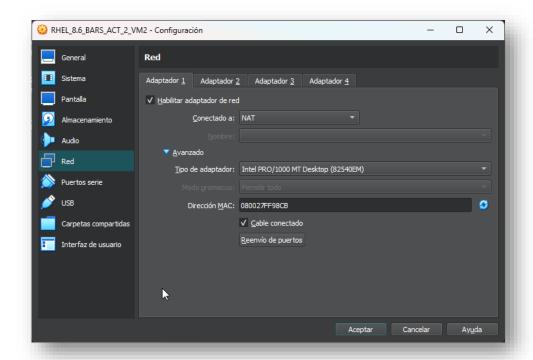


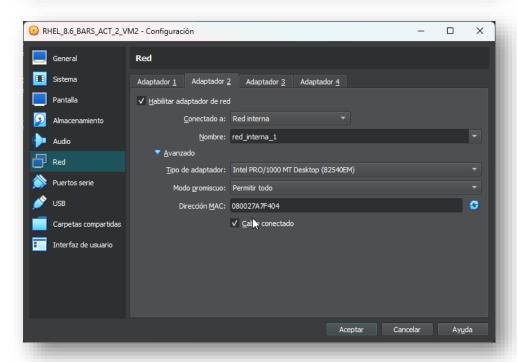


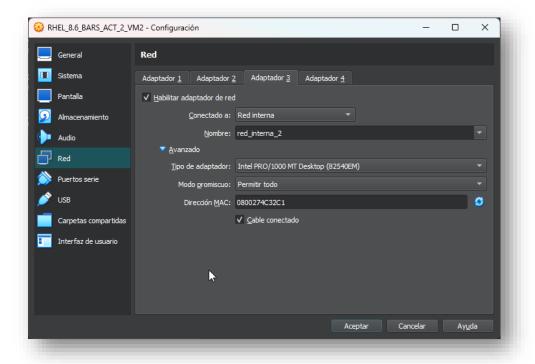
Adaptadores de red en VM2

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"



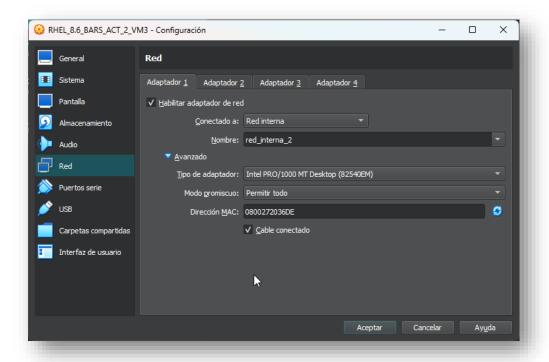




Adaptadores de red en VM3

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 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
inet6 fe80::a00:27ff:fec9:ae20 prefixlen 64 scopeid 0x20<link>
ether 08:00:27:c9:ae:20 txqueuelen 1000 (Ethernet)
RX packets 21343 bytes 24716179 (23.5 MiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 7348 bytes 1207690 (1.1 MiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 1.1.1.2 netmask 255.255.255.0 broadcast 1.1.1.255
inet6 fe80::d11b:60d8:979:5982 prefixlen 64 scopeid 0x20<link>
ether 08:00:27:29:47:a5 txqueuelen 1000 (Ethernet)
RX packets 111 bytes 16855 (16.4 KiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 200 bytes 29274 (28.5 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
         inet6 fe80::a00:27ff:feff:98cb prefixlen 64 scopeid 0x20<link>
        ether 08:00:27:ff:98:cb txqueuelen 1000 (Ethernet)
        RX packets 49 bytes 6935 (6.7 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
         TX packets 159 bytes 16415 (16.0 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
         inet 1.1.1.1 netmask 255.255.255.0 broadcast 1.1.1.255
        inet6 fe80::dc85:efe3:7521:b73f prefixlen 64 scopeid 0x20<link>
ether 08:00:27:a7:f4:04 txqueuelen 1000 (Ethernet)
        RX packets 6 bytes 656 (656.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 89 bytes 13413 (13.0 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
enp0s9: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
        inet 2.2.2.1 netmask 255.255.255.0 broadcast 2.2.2.255
        inet6 fe80::808e:3580:7a7a:79f0 prefixlen 64 scopeid 0x20<link>
        ether 08:00:27:4c:32:c1 txqueuelen 1000 (Ethernet)
        RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 136 bytes 22305 (21.7 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
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

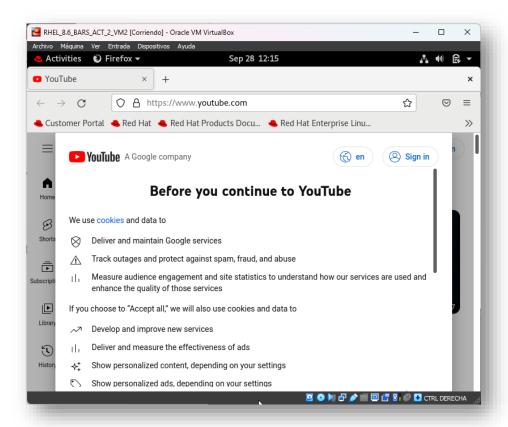
VM1

```
[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
RHEL_8.6_BARS_ACT_2_VM1 [Corriendo] - Oracle VM VirtualBox
                                                                                 ×
                                       Sep 28 12:13
   Activities ② Firefox ▼
                                                                             - (I)
                                                                                   € ▼
 YouTube
                      × +
                 ○ A https://www.youtube.com
                                                                                 \odot
 📤 Customer Portal 🔌 Red Hat 🤚 Red Hat Products Docu... 🔞 Red Hat Enterprise Linu...
                                                                                      >>
        YouTube A Google company
                                                             (₹) en
                                                                       Sign in
                        Before you continue to YouTube
  Hom
        We use cookies and data to
   8
        Deliver and maintain Google services
  Shorts
        \underline{\wedge} Track outages and protect against spam, fraud, and abuse
  \bar{\blacksquare}
            Measure audience engagement and site statistics to understand how our services are used and
            enhance the quality of those services
  D
        If you choose to "Accept all," we will also use cookies and data to
        Develop and improve new services
        | Deliver and measure the effectiveness of ads
  (1)

♦
† Show personalized content, depending on your settings

            Show personalized ads, depending on your settings
                                                      🗿 🧿 🌬 🗗 🤌 🔚 🖳 🚰 🛂 🕙 💽 CTRL DERECHA
 [test_user@localhost ~]$ ping 2.2.2.2
PING \frac{1}{2}.2.2.2 (2.2.2.2) 56(84) bytes of data.
  -- 2.2.2.2 ping statistics ---
  packets transmitted, 0 received, 100% packet loss, time 3154ms
```

VM₂



```
[test user@localhost \sim]$ 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 \frac{1}{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.
 --- 1.1.1.2 ping statistics ---
6 packets transmitted, 0 received, 100% packet loss, time 5118ms
RHEL_8.6_BARS_ACT_2_VM3 [Corriendo] - Oracle VM VirtualBox
                                                                     ×
 Archivo Máquina Ver Entrada Dispositivos Ayuda
 Activities ② Firefox ▼
                                                                  A •0 B ▼
                                  Sep 28 12:17
(i) Server Not Found
                  × +
 \leftarrow \rightarrow \sigma \rightarrow \sigma \rightarrow \sigma \rightarrow \sigma
                                                                      ⊘ ≡
 🕣 Import bookmarks... 📤 Customer Portal 📤 Red Hat 📤 Red Hat Products Docu...
       Hmm. We're having trouble finding that site.
```

We can't connect to the server at www.youtube.com.

• Try again later.

Check your network connection.

If that address is correct, here are three other things you can try:

• If you are connected but behind a firewall, check that Firefox has permission to access the

Try Again