

Índice:

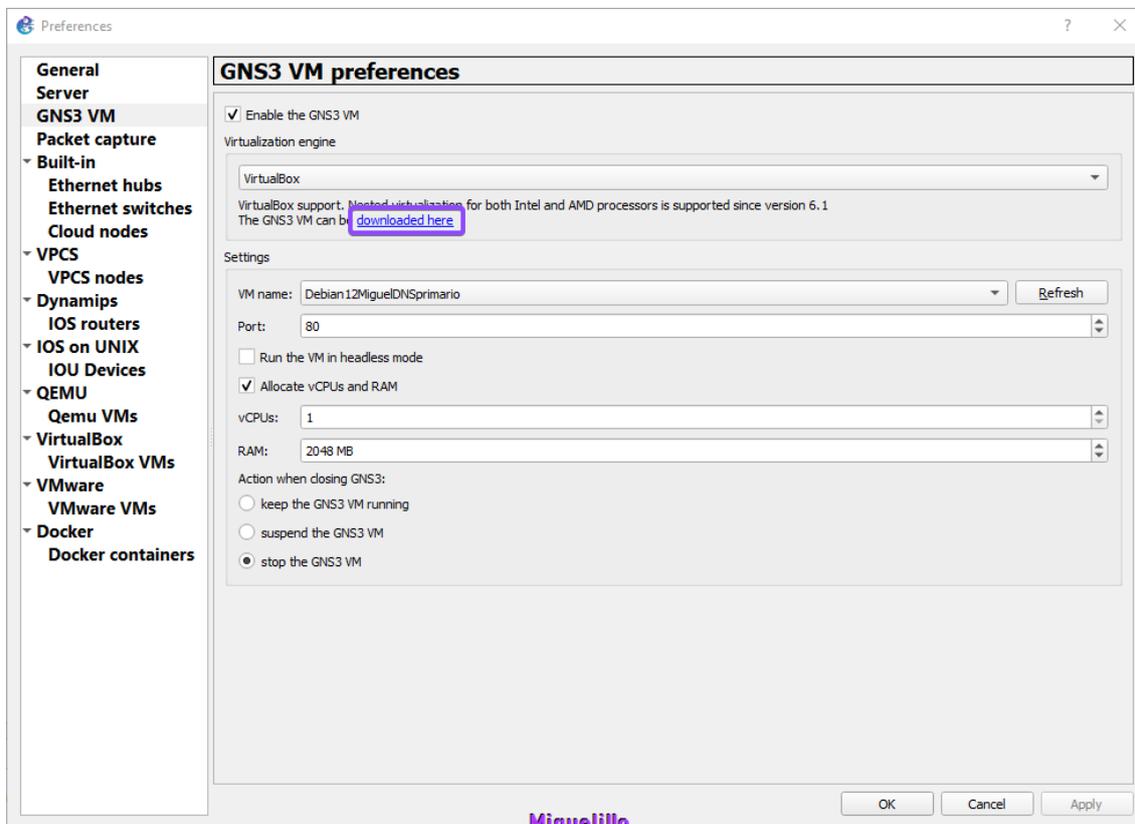
Ejercicio 1	2
a) Instalamos el ASA	2
b) Configuración ASA 1 ASA 2 y R1	4
c) Failover ASA	7

Ejercicio 1

a) Instalamos el ASA

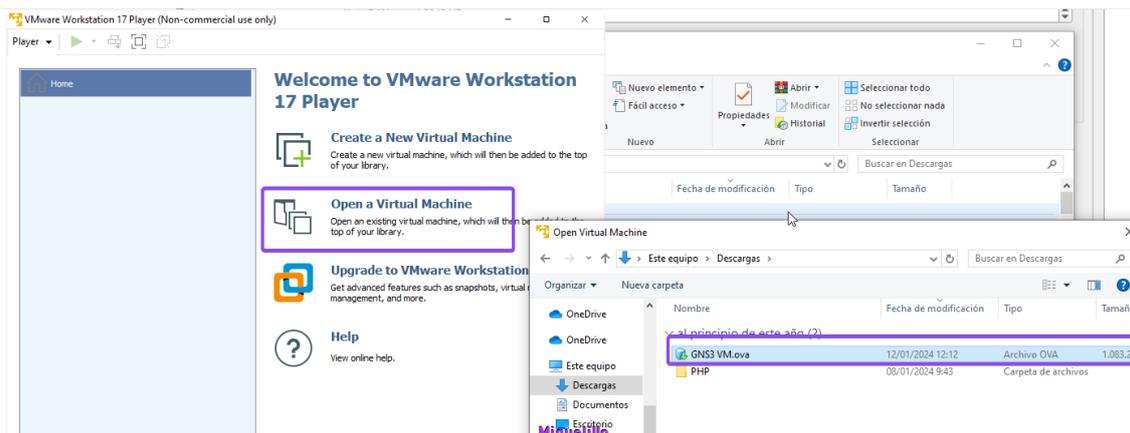
Solución:

Vamos a preferentes y descargamos



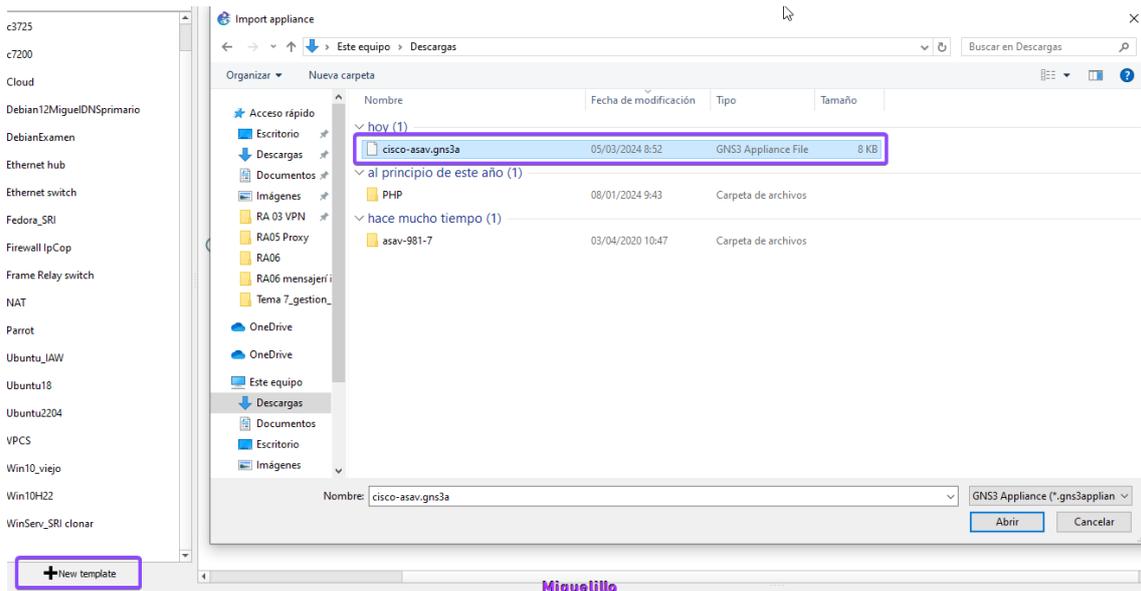
Miguelillo

Creamos la máquina virtual con el ASA



Miguelillo

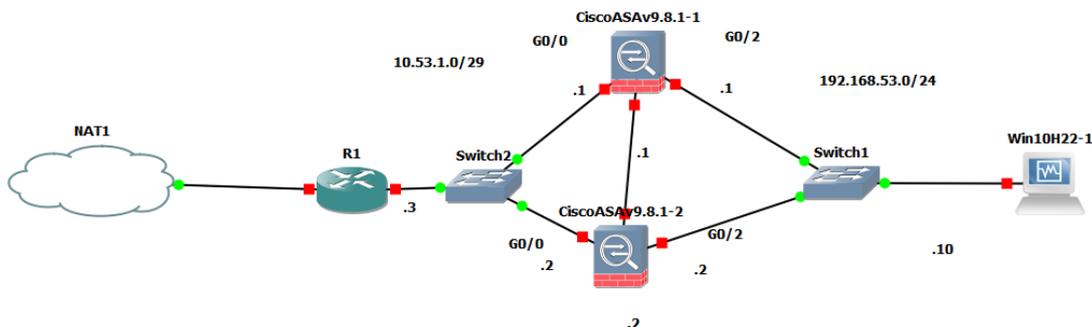
Lo instalamos



b) Configuración ASA 1 ASA 2 y R1

Solución:

Escenario



Miguelillo

Configuramos el router

```

R1
R1(config)#interface fa0/0
R1(config-if)#ip add dhcp
R1(config-if)#no sh
R1(config-if)#interface fa2/0
R1(config-if)#ip add 10.53.1.3 255.255.255.0
R1(config-if)#no sh

```

Miguelillo

Configuramos el NAT

```

R1
R1(config)#access-list 1 permit 10.53.1.0 0.0.0.255
R1(config)#access-list 1 permit 10.2.2.0 0.0.0.255
R1(config)#ip nat inside source list 1 int f2/0 overload
R1(config)#int f2/0
R1(config-if)#ip nat outside
R1(config-if)#int f0/0
R1(config-if)#ip nat inside
R1(config-if)#

```

Miguelillo

Configuramos la interfaz de la red interna

```

QEMU (CiscoASAv9.8.1-1) - TightVNC Viewer
ciscoasa(config)# int g0/2
ciscoasa(config-if)# ip add 192.168.53.1 255.255.255.0 standby 192.168.53.2
ciscoasa(config-if)# nameif inside
ciscoasa(config-if)# no sh
ciscoasa(config-if)# exit

```

Miguelillo

Configuramos el interfaz de la red externa

```

QEMU (CiscoASAv9.8.1-1) - TightVNC Viewer
ciscoasa(config)# int g0/0
ciscoasa(config-if)# ip add 10.53.1.1 255.255.255.0 standby 10.53.1.2
ciscoasa(config-if)# nameif outs
ciscoasa(config-if)# nameif outside
INFO: Security level for "outside" set to 0 by default.
ciscoasa(config-if)# no sh
ciscoasa(config-if)# exit

```

Miguelillo

Configuramos el NAT en el ASA

```
QEMU (CiscoASAv9.8.1-1) - TightVNC Viewer
ciscoasa(config)# nat (inside,outside) source dynamic any interface
ciscoasa(config)#
```

Configuro DHCP para la red interna

```
QEMU (CiscoASAv9.8.1-1) - TightVNC Viewer
ciscoasa(config)# dhcpd add 192.168.53.10-192.168.53.20 inside
ciscoasa(config)# dhcpd enable inside
ciscoasa(config)# ping 8.8.8.8
```

Comprobamos que haga ping

```
QEMU (CiscoASAv9.8.1-1) - TightVNC Viewer
ciscoasa(config)# ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 50/492/1120 ms
ciscoasa(config)# ping 10.53.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.53.1.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 10/16/40 ms
ciscoasa(config)#
```

ASA-2

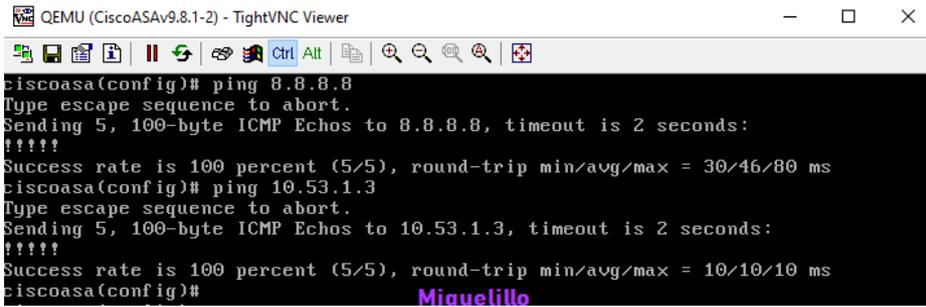
Configuramos interfaces internas y externas

```
QEMU (CiscoASAv9.8.1-2) - TightVNC Viewer
ciscoasa(config)# int g0/2
ciscoasa(config-if)# ip add 192.168.53.1 255.255.255.0 standby 192.168.53.2
ciscoasa(config-if)# nameif inside
INFO: Security level for "inside" set to 100 by default.
ciscoasa(config-if)# no sh
ciscoasa(config-if)# exit
ciscoasa(config)# int g0/0
ciscoasa(config-if)# ip add 10.53.1.1 255.255.255.0 standby 10.53.1.2
ciscoasa(config-if)# nameif outside
INFO: Security level for "outside" set to 0 by default.
ciscoasa(config-if)# no sh
ciscoasa(config-if)# exit
```

Configuro el NAT

```
QEMU (CiscoASAv9.8.1-1) - TightVNC Viewer
ciscoasa(config)# nat (inside,outside) source dynamic any interface
ciscoasa(config)#
```

Probamos el ping

A screenshot of a QEMU terminal window titled "QEMU (CiscoASAv9.8.1-2) - TightVNC Viewer". The terminal shows two ping commands being executed. The first command is "ping 8.8.8.8", which results in a success rate of 100 percent (5/5) and a round-trip time of 30/46/80 ms. The second command is "ping 10.53.1.3", which also results in a success rate of 100 percent (5/5) and a round-trip time of 10/10/10 ms. The terminal prompt is "ciscoasa(config)#". The name "Miguelillo" is written in purple text at the bottom of the terminal output.

```
ciscoasa(config)# ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 30/46/80 ms
ciscoasa(config)# ping 10.53.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.53.1.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 10/10/10 ms
ciscoasa(config)# Miguelillo
```

c)Failover ASA

Solución:

En el primario habilitamos el interfaz

```
QEMU (CiscoASAv9.8.1-3) - TightVNC Viewer
ciscoasa(config)# interface g0/1
ciscoasa(config-if)# in
ciscoasa(config-if)# no shu
```

Miquelillo

Configuramos el failover

```
ciscoasa(config)# failover lan unit primary
ciscoasa(config)# failover lan interface MIGUEL G0/1_
```

Miquelillo

```
QEMU (CiscoASAv9.8.1-3) - TightVNC Viewer
ciscoasa(config)# failover interface ip MIGUEL 10.2.2.1 255.255.255.0 standby $
ciscoasa(config)# failover key inves
ciscoasa(config)# failover
```

Miquelillo

En el secundario habilitamos el interfaz

```
QEMU (CiscoASAv9.8.1-2) - TightVNC Viewer
ciscoasa(config)# interface G0/1
ciscoasa(config-if)# no shu
```

Miquelillo

Configuramos el failover

```
QEMU (CiscoASAv9.8.1-2) - TightVNC Viewer
ciscoasa(config)# failover lan unit secondary
ciscoasa(config)# failover lan interface MIGUEL G0/1
INFO: Non-failover interface config is cleared on GigabitEthernet0/1 and its sub-interfaces
ciscoasa(config)# failover interface ip MIGUEL 10.2.2.1 255.255.255.0 standby $
ciscoasa(config)# failover key inves
ciscoasa(config)# failover
```

Miquelillo

Vemos que detecta al primario

```
Detected an Active mate
Beginning configuration replication from mate.
WARNING: Disabling auto import may affect Smart Licensing
WARNING: Local user database is empty and there are still 'aaa' commands for 'LOCAL'.
Creating trustpoint "_SmartCallHome_ServerCA" and installing certificate...
Trustpoint CA certificate accepted.
WARNING: Trustpoint _SmartCallHome_ServerCA is already authenticated.
Warning: ASAv platform license state is Unlicensed.
Install ASAv platform license for full functionality.
End configuration replication from mate.
```

Miquelillo

En el primario

```
ciscoasa(config)# Beginning configuration replication: Sending to mate.
End Configuration Replication to mate

Warning: ASA9 platform license state is Unlicensed.
Install ASA9 platform license for full functionality.
Miguelillo
```

Apagamos el primario y probamos aparece que cambia a activo

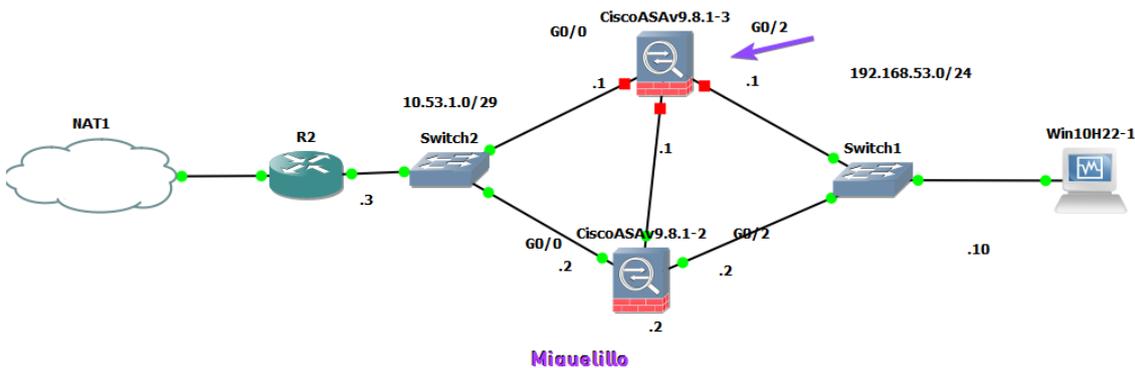
```
QEMU (CiscoASAv9.8.1-2) - TightVNC Viewer
ciscoasa# ping 8.8.8.8
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 8.8.8.8, timeout is 2 seconds:
?????
Success rate is 0 percent (0/5)
ciscoasa# ping 10.53.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.53.1.3, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 10/10/10 ms
ciscoasa# Building configuration...
Cryptochecksum: e5456378 3c50a11c 9f33245c 8b5c0396

7628 bytes copied in 0.360 secs
[OK]

ciscoasa# write
Building configuration...
Cryptochecksum: e5456378 3c50a11c 9f33245c 8b5c0396

7629 bytes copied in 0.310 secs
[OK]
ciscoasa#
Switching to Active
Miguelillo
```

Aparece Apagado



Probamos a hacer ping

```
Win10H22 (Correo funcional) [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Simbolo del sistema
C:\Users\miguel>ping 8.8.8.8

Haciendo ping a 8.8.8.8 con 32 bytes de datos:
Respuesta desde 8.8.8.8: bytes=32 tiempo=47ms TTL=127
Respuesta desde 8.8.8.8: bytes=32 tiempo=53ms TTL=127
Respuesta desde 8.8.8.8: bytes=32 tiempo=29ms TTL=127
Respuesta desde 8.8.8.8: bytes=32 tiempo=46ms TTL=127

Estadísticas de ping para 8.8.8.8:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
              (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 29ms, Máximo = 53ms, Media = 43ms

C:\Users\miguel>ping 8.8.8.8

Haciendo ping a 8.8.8.8 con 32 bytes de datos:
Respuesta desde 8.8.8.8: bytes=32 tiempo=34ms TTL=127
Respuesta desde 8.8.8.8: bytes=32 tiempo=23ms TTL=127
Respuesta desde 8.8.8.8: bytes=32 tiempo=38ms TTL=127
Respuesta desde 8.8.8.8: bytes=32 tiempo=33ms TTL=127

Estadísticas de ping para 8.8.8.8:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
              (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 23ms, Máximo = 38ms, Media = 32ms

C:\Users\miguel>_
```

Miguelillo

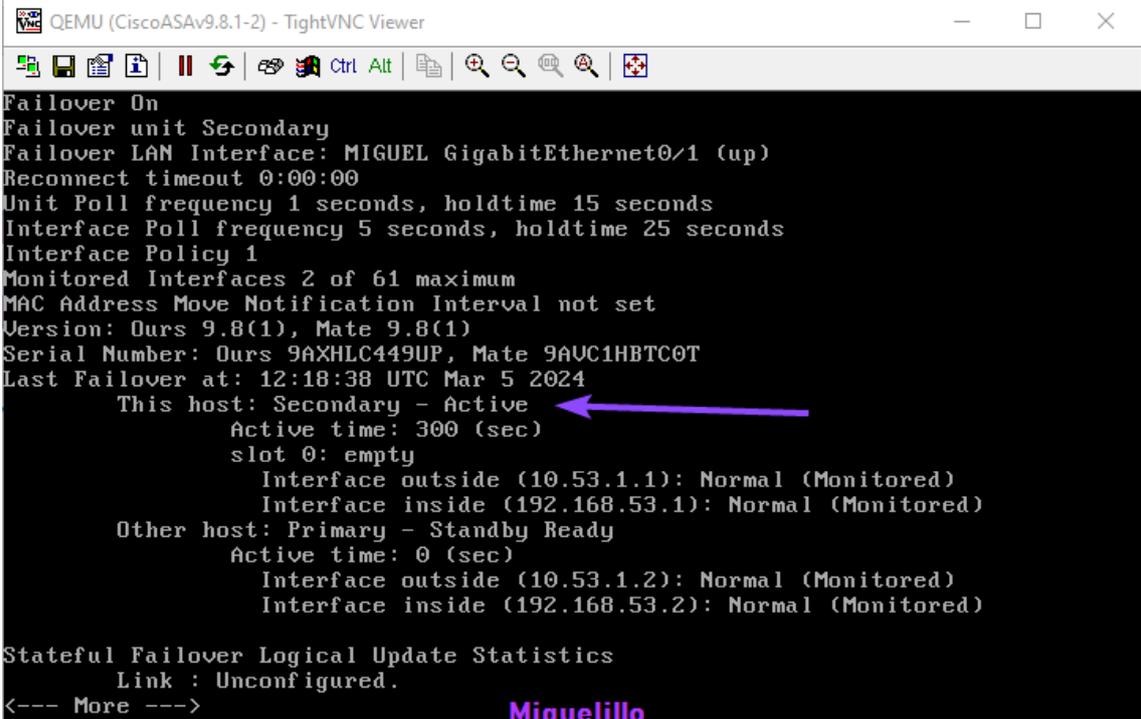
Comprobación primario con show failover

```
QEMU (CiscoASA9.8.1-3) - TightVNC Viewer
Failover On
Failover unit Primary
Failover LAN Interface: MIGUEL GigabitEthernet0/1 (up)
Reconnect timeout 0:00:00
Unit Poll frequency 1 seconds, holdtime 15 seconds
Interface Poll frequency 5 seconds, holdtime 25 seconds
Interface Policy 1
Monitored Interfaces 2 of 61 maximum
MAC Address Move Notification Interval not set
Version: Ours 9.8(1), Mate 9.8(1)
Serial Number: Ours 9AUC1HBTC0T, Mate 9AXHLC449UP
Last Failover at: 12:22:20 UTC Mar 5 2024
  This host: Primary - Standby Ready ←
    Active time: 0 (sec)
    slot 0: empty
      Interface outside (10.53.1.2): Unknown (Waiting)
      Interface inside (192.168.53.2): Unknown (Waiting)
  Other host: Secondary - Active
    Active time: 244 (sec)
      Interface outside (10.53.1.1): Normal (Waiting)
      Interface inside (192.168.53.1): Normal (Waiting)

Stateful Failover Logical Update Statistics
  Link : Unconfigured.
<--- More --->_
```

Miguelillo

Comprobación secundario con show failover



```
QEMU (CiscoASAv9.8.1-2) - TightVNC Viewer
Failover On
Failover unit Secondary
Failover LAN Interface: MIGUEL GigabitEthernet0/1 (up)
Reconnect timeout 0:00:00
Unit Poll frequency 1 seconds, holdtime 15 seconds
Interface Poll frequency 5 seconds, holdtime 25 seconds
Interface Policy 1
Monitored Interfaces 2 of 61 maximum
MAC Address Move Notification Interval not set
Version: Ours 9.8(1), Mate 9.8(1)
Serial Number: Ours 9AXHLC449UP, Mate 9AUC1HBTCOT
Last Failover at: 12:18:38 UTC Mar 5 2024
  This host: Secondary - Active
    Active time: 300 (sec)
    slot 0: empty
      Interface outside (10.53.1.1): Normal (Monitored)
      Interface inside (192.168.53.1): Normal (Monitored)
  Other host: Primary - Standby Ready
    Active time: 0 (sec)
      Interface outside (10.53.1.2): Normal (Monitored)
      Interface inside (192.168.53.2): Normal (Monitored)

Stateful Failover Logical Update Statistics
  Link : Unconfigured.
<--- More --->
```

Miguelillo