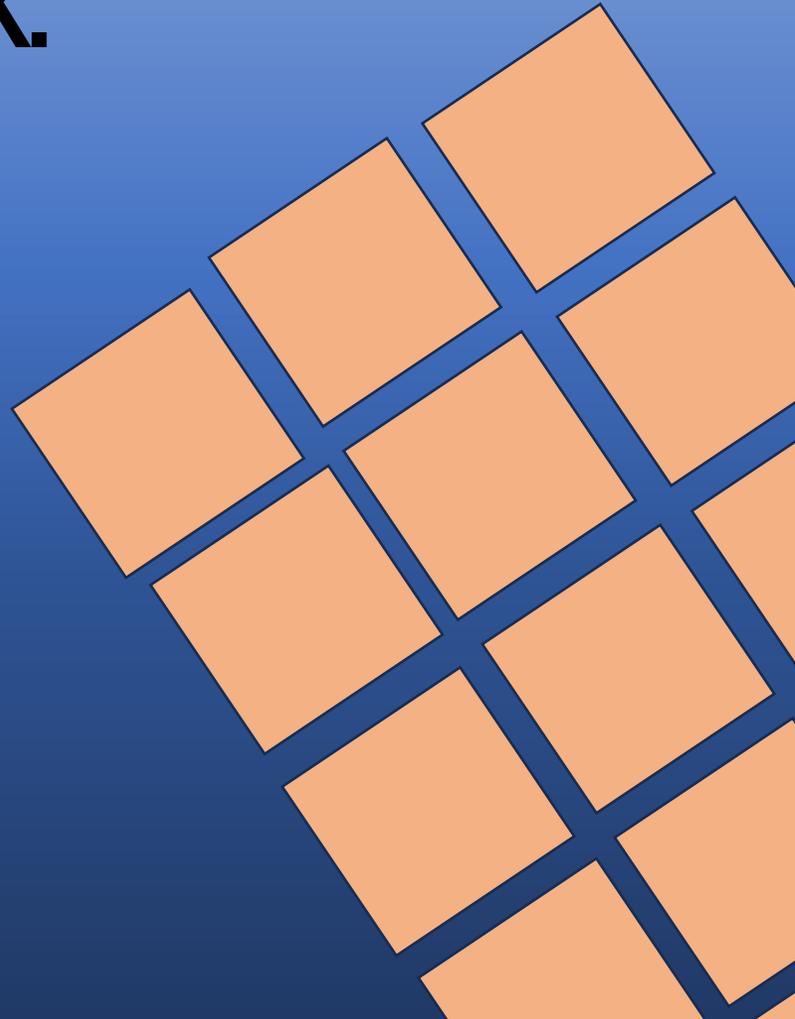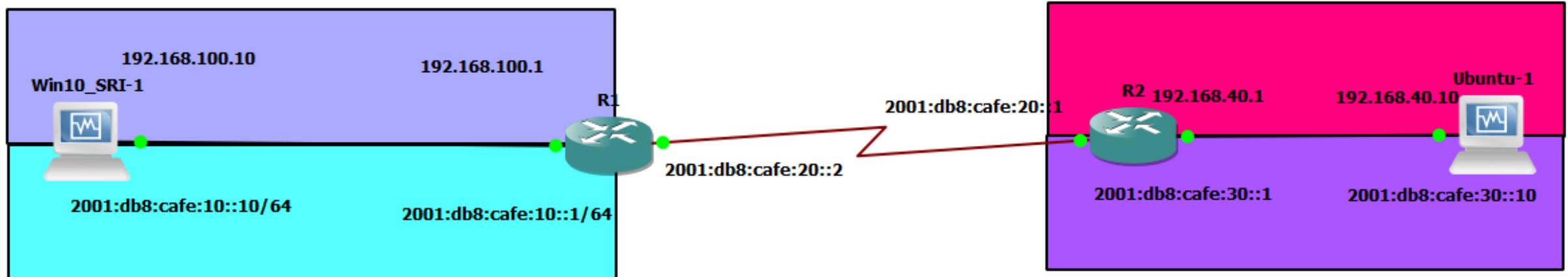# Tema 1 Practica 15 SRI: Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Miguel Lillo Romero 2º ASIR

Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Escenario

Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Configuración del Router 1

Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Configuración del Router 2


```
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#interface FastEthernet0/0
R2(config-if)#ip address 192.168.40.1 255.255.255.0
R2(config-if)#ipv6 address 2001:db8:cafe:30::1/64
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#interface Se1/0
R2(config-if)#ipv6 address 2001:db8:cafe:20::1/64
R2(config-if)#ip address 192.168.30.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#ipv6 unicast-routing
R2(config)#ip route 192.168.100.0 255.255.255.0 Se1/0
R2(config)#ipv6 route 2001:db8:cafe:10::/64 Se1/0
R2(config)#do wr
```

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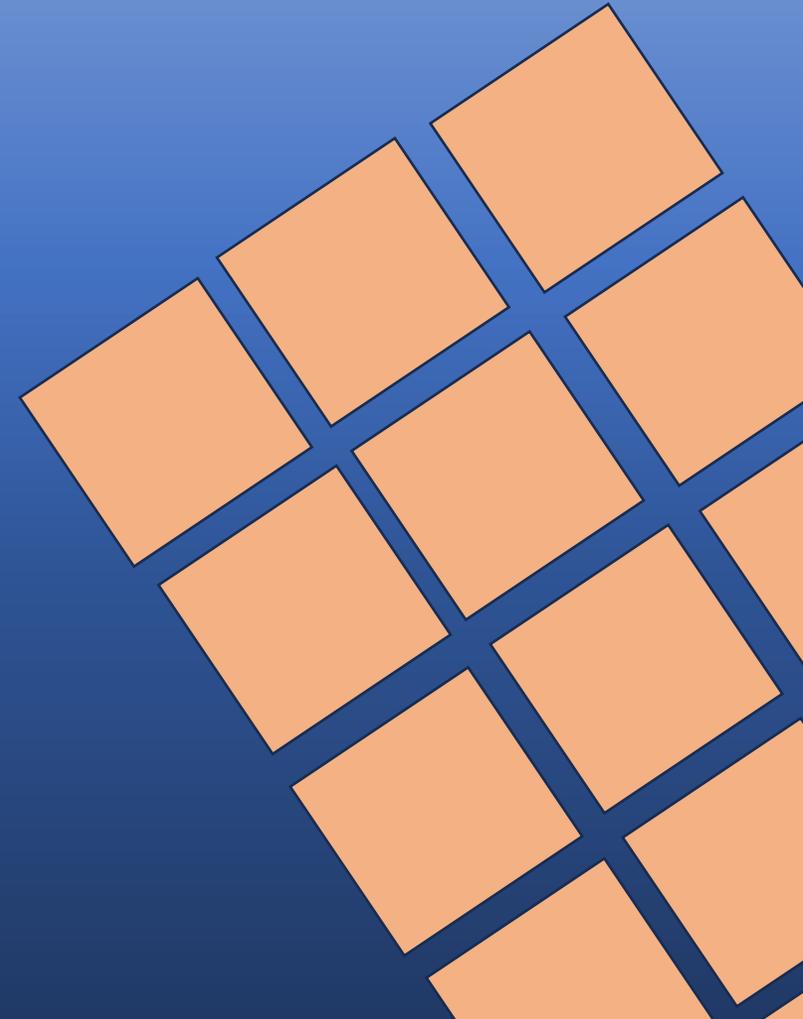
Configuración R1


```
        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, H - NHRP, l - LISP
        + - replicated route, % - next hop override

Gateway of last resort is not set

      192.168.30.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.30.0/24 is directly connected, Serial1/0
L        192.168.30.2/32 is directly connected, Serial1/0
S     192.168.40.0/24 is directly connected, Serial1/0
      192.168.100.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.100.0/24 is directly connected, FastEthernet0/0
L        192.168.100.1/32 is directly connected, FastEthernet0/0
R1#show ipv6 route
IPv6 Routing Table - default - 6 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
       B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP
       H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea
       IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO
       ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect
       O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
       ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP
C   2001:DB8:CAFE:10::/64 [0/0]
     via FastEthernet0/0, directly connected
L   2001:DB8:CAFE:10::1/128 [0/0]
     via FastEthernet0/0, receive
C   2001:DB8:CAFE:20::/64 [0/0]
     via Serial1/0, directly connected
L   2001:DB8:CAFE:20::2/128 [0/0]
     via Serial1/0, receive
S   2001:DB8:CAFE:30::/64 [1/0]
     via Serial1/0, directly connected
L   FF00::/8 [0/0]
     via Null0, receive
```

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Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Configuración R2


```
                            R1                    ● R2                       ×        ⊕                                              –  ☐  ✕

           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, H - NHRP, l - LISP
           + - replicated route, % - next hop override

     Gateway of last resort is not set

           192.168.30.0/24 is variably subnetted, 2 subnets, 2 masks
     C         192.168.30.0/24 is directly connected, Serial1/0
     L         192.168.30.1/32 is directly connected, Serial1/0
           192.168.40.0/24 is variably subnetted, 2 subnets, 2 masks
     C         192.168.40.0/24 is directly connected, FastEthernet0/0
     L         192.168.40.1/32 is directly connected, FastEthernet0/0
     S         192.168.100.0/24 is directly connected, Serial1/0
     R2#show ipv6 route
     IPv6 Routing Table - default - 6 entries
     Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
            B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP
            H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea
            IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO
            ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect
            O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
            ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP
     S   2001:DB8:CAFE:10::/64 [1/0]
          via Serial1/0, directly connected
     C   2001:DB8:CAFE:20::/64 [0/0]
          via Serial1/0, directly connected
     L   2001:DB8:CAFE:20::1/128 [0/0]
          via Serial1/0, receive
     C   2001:DB8:CAFE:30::/64 [0/0]
          via FastEthernet0/0, directly connected
     L   2001:DB8:CAFE:30::1/128 [0/0]
          via FastEthernet0/0, receive
     L   FF00::/8 [0/0]
          via Null0, receive

     solarwinds ⚡  │  Solar-PuTTY free tool                    © 2019 SolarWinds Worldwide, LLC. All rights reserved.
```
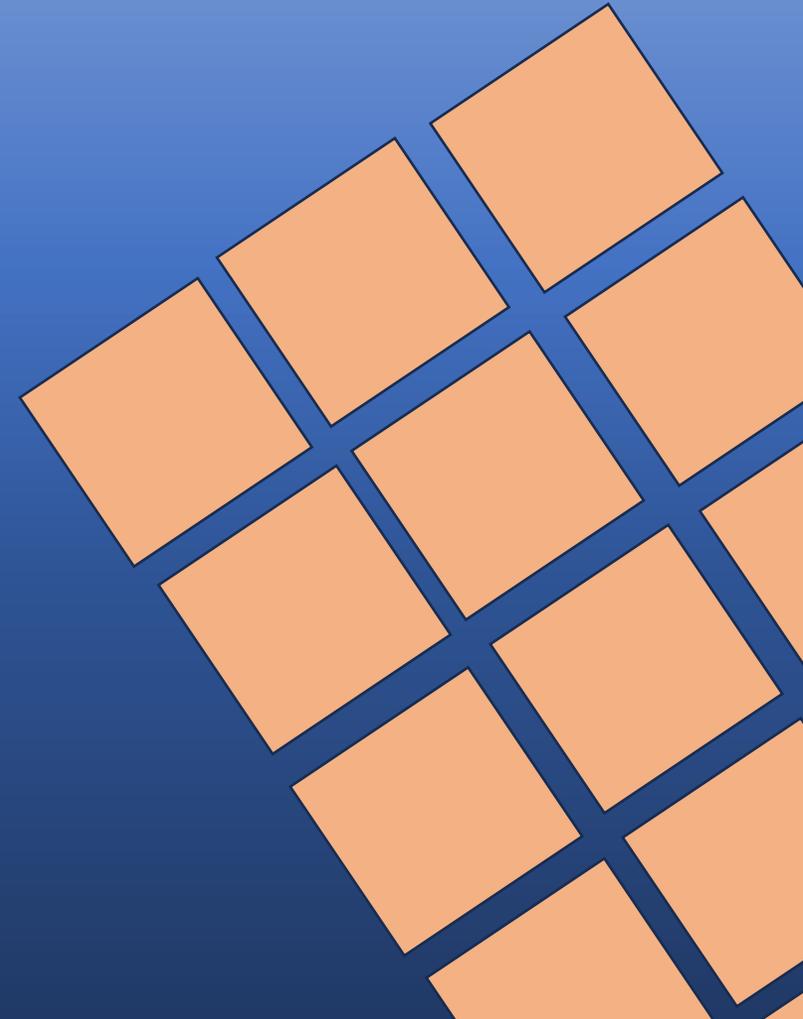
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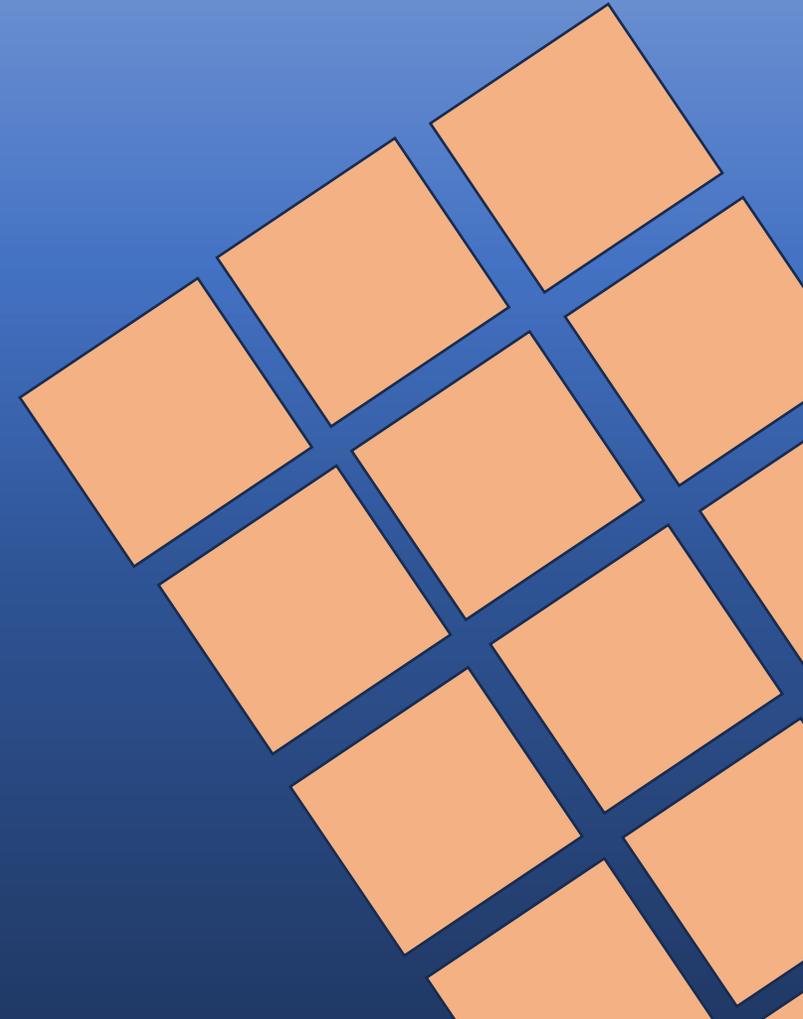
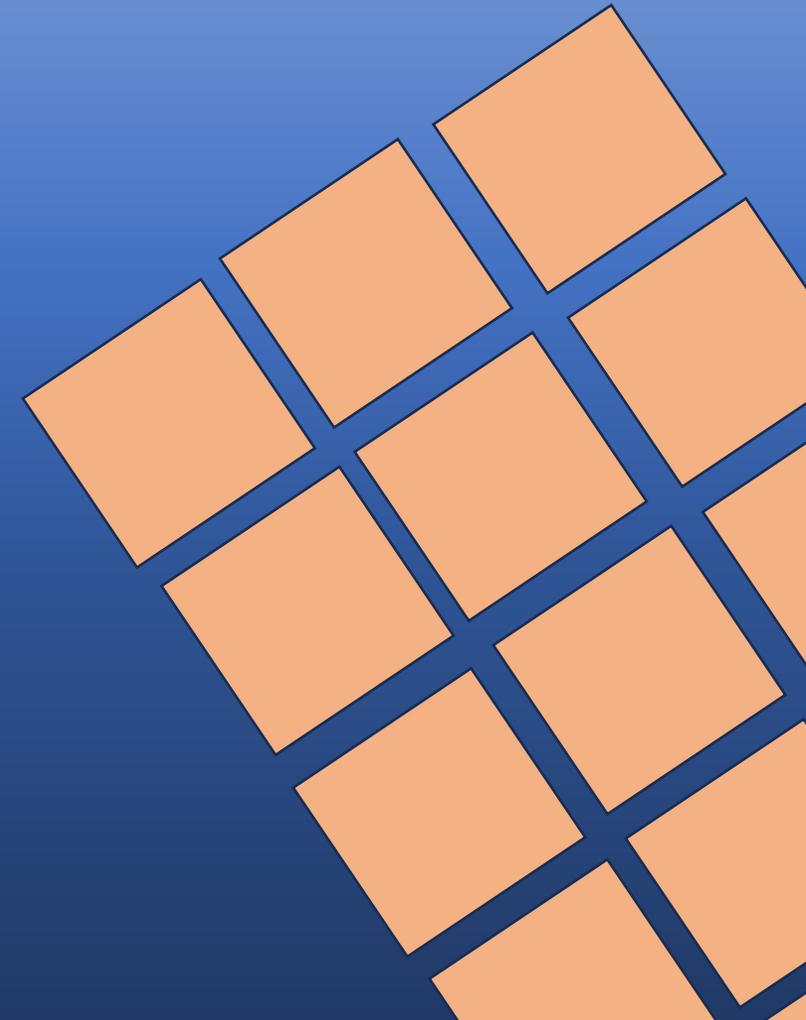## Configuración R1


```
interface FastEthernet0/0
 ip address 192.168.40.1 255.255.255.0
 duplex half
 ipv6 address 2001:DB8:CAFE:30::1/64
!
interface Serial1/0
 ip address 192.168.30.1 255.255.255.0
 ipv6 address 2001:DB8:CAFE:20::1/64
 serial restart-delay 0
!
```
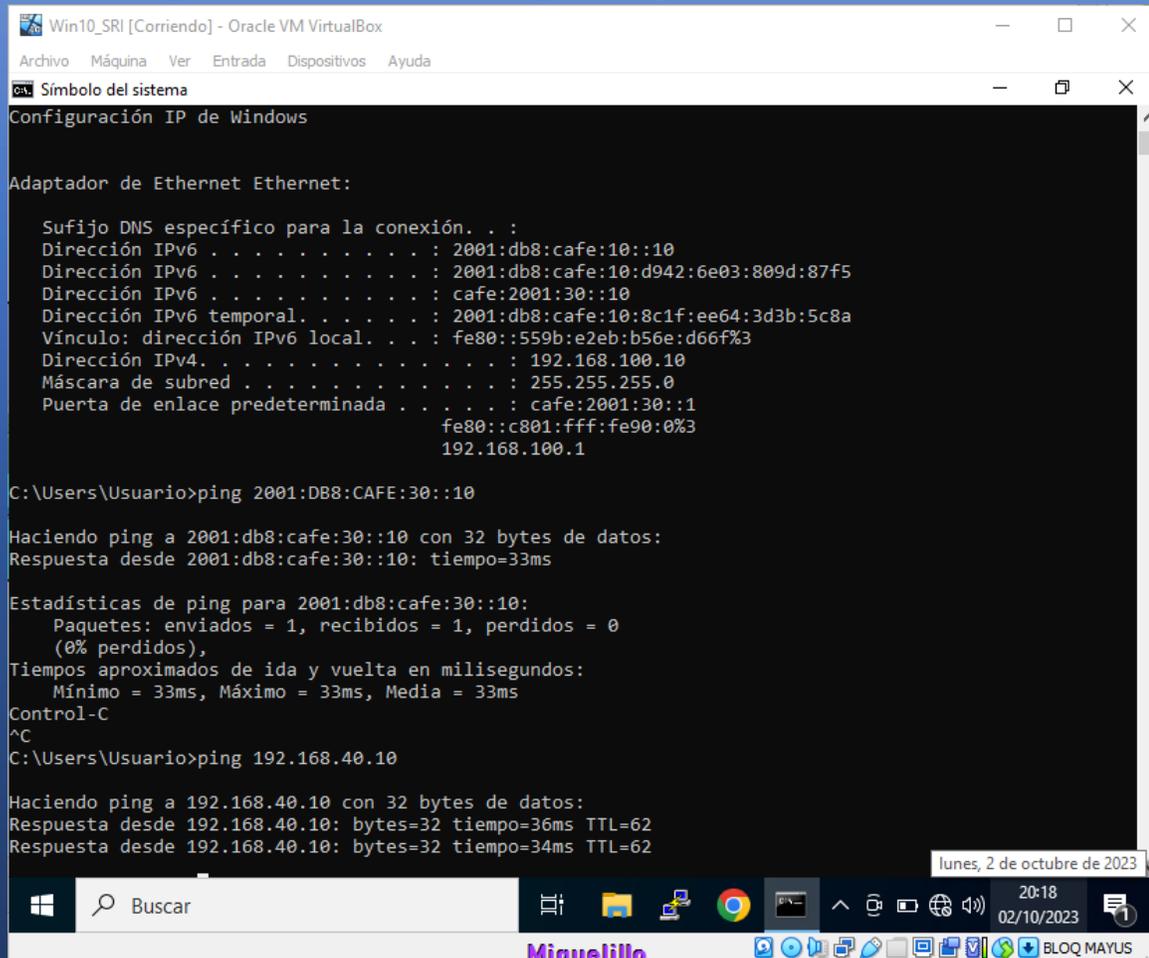
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```
!
ip route 192.168.100.0 255.255.255.0 Serial1/0
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:CAFE:10::/64 Serial1/0
!
!
```

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Configuración R1


```
R1 ×    R2    ⊕

interface FastEthernet0/0
 ip address 192.168.100.1 255.255.255.0
 duplex half
 ipv6 address 2001:DB8:CAFE:10::1/64
!
interface Serial1/0
 ip address 192.168.30.2 255.255.255.0
 ipv6 address 2001:DB8:CAFE:20::2/64
 serial restart-delay 0
!
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```



```
R1 ×    R2    ⊕

!
ip route 192.168.40.0 255.255.255.0 Serial1/0
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:CAFE:30::/64 Serial1/0
!
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```

Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Comprobación ping Windows

Implementación de Dual Stack: Un enfoque práctico para la transición IPv4 a IPv6

Comprobación ping Ubuntu