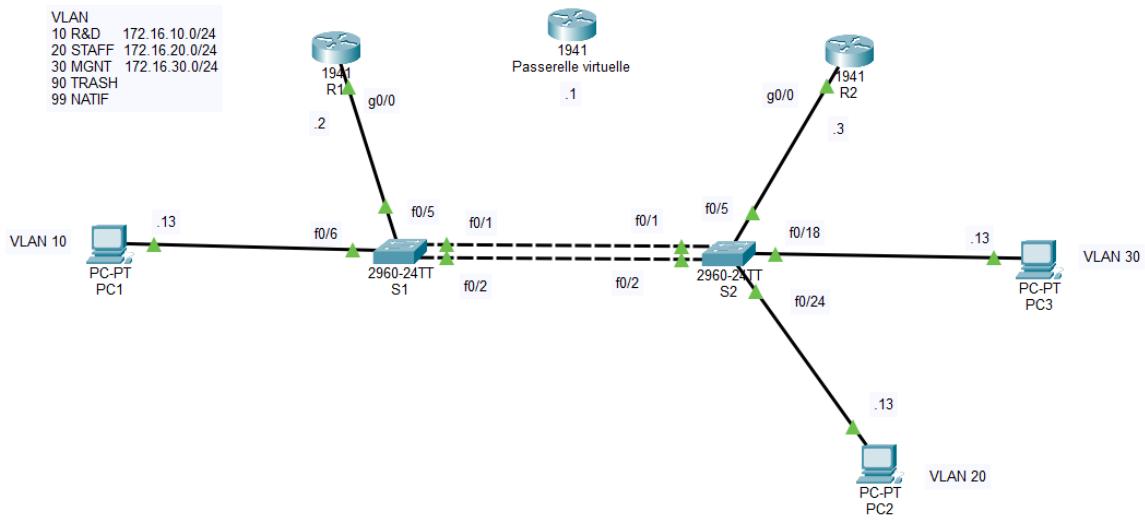


ALSHAHoud Mohamed

Labo DHCP - HSRP



ping depuis PC1 vers PC2

```
C:\>ping 172.16.20.129

Pinging 172.16.20.129 with 32 bytes of data:

Reply from 172.16.20.129: bytes=32 time<1ms TTL=127

Ping statistics for 172.16.20.129:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC1 vers PC3

```
C:\>ping 172.16.30.129

Pinging 172.16.30.129 with 32 bytes of data:

Reply from 172.16.30.129: bytes=32 time<1ms TTL=127
Reply from 172.16.30.129: bytes=32 time<1ms TTL=127
Reply from 172.16.30.129: bytes=32 time=1ms TTL=127
Reply from 172.16.30.129: bytes=32 time=1ms TTL=127

Ping statistics for 172.16.30.129:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC1 vers s1

```
C:\>ping 172.16.30.11

Pinging 172.16.30.11 with 32 bytes of data:

Reply from 172.16.30.11: bytes=32 time<1ms TTL=254
Reply from 172.16.30.11: bytes=32 time=7ms TTL=254
Reply from 172.16.30.11: bytes=32 time<1ms TTL=254
Reply from 172.16.30.11: bytes=32 time<1ms TTL=254

Ping statistics for 172.16.30.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 1ms

C:\>
```

ping depuis PC1 vers s2

```
C:\>ping 172.16.30.12

Pinging 172.16.30.12 with 32 bytes of data:

Reply from 172.16.30.12: bytes=32 time<1ms TTL=254

Ping statistics for 172.16.30.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC1 vers R1

```
C:\>ping 172.16.10.2

Pinging 172.16.10.2 with 32 bytes of data:

Reply from 172.16.10.2: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC1 vers R2

```
C:\>ping 172.16.10.3

Pinging 172.16.10.3 with 32 bytes of data:

Reply from 172.16.10.3: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.10.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC1 vers la passerelle virtuelle (HSRP)

```
C:\>ping 172.16.10.1

Pinging 172.16.10.1 with 32 bytes of data:

Reply from 172.16.10.1: bytes=32 time<1ms TTL=255
Reply from 172.16.10.1: bytes=32 time=8ms TTL=255
Reply from 172.16.10.1: bytes=32 time<1ms TTL=255
Reply from 172.16.10.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>
```

ping depuis PC2 vers S1

```
C:\>ping 172.16.30.11

Pinging 172.16.30.11 with 32 bytes of data:

Request timed out.
Reply from 172.16.30.11: bytes=32 time<1ms TTL=254
Reply from 172.16.30.11: bytes=32 time=1ms TTL=254
Reply from 172.16.30.11: bytes=32 time<1ms TTL=254

Ping statistics for 172.16.30.11:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC2 vers S2

```
C:\>ping 172.16.30.12

Pinging 172.16.30.12 with 32 bytes of data:

Reply from 172.16.30.12: bytes=32 time<1ms TTL=254
Reply from 172.16.30.12: bytes=32 time<1ms TTL=254
Reply from 172.16.30.12: bytes=32 time=1ms TTL=254
Reply from 172.16.30.12: bytes=32 time<1ms TTL=254

Ping statistics for 172.16.30.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC2 vers PC1

```
C:\>ping 172.16.10.11

Pinging 172.16.10.11 with 32 bytes of data:

Reply from 172.16.10.11: bytes=32 time<1ms TTL=127

Ping statistics for 172.16.10.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC2 vers PC3

```
C:\>ping 172.16.30.129

Pinging 172.16.30.129 with 32 bytes of data:

Reply from 172.16.30.129: bytes=32 time<1ms TTL=127
Reply from 172.16.30.129: bytes=32 time=1ms TTL=127
Reply from 172.16.30.129: bytes=32 time=1ms TTL=127
Reply from 172.16.30.129: bytes=32 time=1ms TTL=127

Ping statistics for 172.16.30.129:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC2 vers la passerelle virtuelle (HSRP)

```
C:\>ping 172.16.20.1

Pinging 172.16.20.1 with 32 bytes of data:

Reply from 172.16.20.1: bytes=32 time<1ms TTL=255
Reply from 172.16.20.1: bytes=32 time<1ms TTL=255
Reply from 172.16.20.1: bytes=32 time=1ms TTL=255
Reply from 172.16.20.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC2 vers R1

```
C:\>ping 172.16.20.2

Pinging 172.16.20.2 with 32 bytes of data:

Reply from 172.16.20.2: bytes=32 time<1ms TTL=255
Reply from 172.16.20.2: bytes=32 time=1ms TTL=255
Reply from 172.16.20.2: bytes=32 time=1ms TTL=255
Reply from 172.16.20.2: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC2 vers R2

```
C:\>ping 172.16.20.3

Pinging 172.16.20.3 with 32 bytes of data:

Reply from 172.16.20.3: bytes=32 time<1ms TTL=255
Reply from 172.16.20.3: bytes=32 time=1ms TTL=255
Reply from 172.16.20.3: bytes=32 time<1ms TTL=255
Reply from 172.16.20.3: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.20.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC3 vers PC1

```
C:\>ping 172.16.10.11

Pinging 172.16.10.11 with 32 bytes of data:

Reply from 172.16.10.11: bytes=32 time<1ms TTL=127
Reply from 172.16.10.11: bytes=32 time<1ms TTL=127
Reply from 172.16.10.11: bytes=32 time=1ms TTL=127
Reply from 172.16.10.11: bytes=32 time=1ms TTL=127

Ping statistics for 172.16.10.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC3 vers PC2

```
C:\>ping 172.16.20.129

Pinging 172.16.20.129 with 32 bytes of data:

Reply from 172.16.20.129: bytes=32 time<1ms TTL=127
Reply from 172.16.20.129: bytes=32 time<1ms TTL=127
Reply from 172.16.20.129: bytes=32 time=5ms TTL=127
Reply from 172.16.20.129: bytes=32 time<1ms TTL=127

Ping statistics for 172.16.20.129:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 5ms, Average = 1ms

C:\>
```

ping depuis PC3 vers s1

```
C:\>ping 172.16.30.11

Pinging 172.16.30.11 with 32 bytes of data:

Request timed out.
Reply from 172.16.30.11: bytes=32 time<1ms TTL=255
Reply from 172.16.30.11: bytes=32 time=7ms TTL=255
Reply from 172.16.30.11: bytes=32 time=1ms TTL=255

Ping statistics for 172.16.30.11:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 2ms

C:\>
```

ping depuis PC3 vers s2

```
C:\>ping 172.16.30.12

Pinging 172.16.30.12 with 32 bytes of data:

Request timed out.
Reply from 172.16.30.12: bytes=32 time<1ms TTL=255
Reply from 172.16.30.12: bytes=32 time<1ms TTL=255
Reply from 172.16.30.12: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.30.12:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC3 vers R1

```
C:\>ping 172.16.30.2

Pinging 172.16.30.2 with 32 bytes of data:

Reply from 172.16.30.2: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.30.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

ping depuis PC3 vers R2

```
C:\>ping 172.16.30.3

Pinging 172.16.30.3 with 32 bytes of data:

Reply from 172.16.30.3: bytes=32 time<1ms TTL=255
Reply from 172.16.30.3: bytes=32 time<1ms TTL=255
Reply from 172.16.30.3: bytes=32 time=1ms TTL=255
Reply from 172.16.30.3: bytes=32 time=1ms TTL=255

Ping statistics for 172.16.30.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

ping depuis PC3 vers la passerelle virtuelle (HSRP)

```
C:\>ping 172.16.30.1

Pinging 172.16.30.1 with 32 bytes of data:

Reply from 172.16.30.1: bytes=32 time<1ms TTL=255
Reply from 172.16.30.1: bytes=32 time=8ms TTL=255
Reply from 172.16.30.1: bytes=32 time<1ms TTL=255
Reply from 172.16.30.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.30.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>
```

show etherchannel summary sur S1 :

```

S1>show etherchannel summary
Flags: D - down      P - in port-channel
      I - stand-alone S - suspended
      H - Hot-standby (LACP only)
      R - Layer3       S - Layer2
      U - in use       f - failed to allocate aggregator
      u - unsuitable for bundling
      w - waiting to be aggregated
      d - default port

Number of channel-groups in use: 1
Number of aggregators: 1

Group  Port-channel  Protocol    Ports
-----+-----+-----+
1      Po1 (SU)      PAgP        Fa0/1 (P)  Fa0/2 (P)
S1>

```

show etherchannel summary sur S2 :

```

S2>show etherchannel summary
Flags: D - down      P - in port-channel
      I - stand-alone S - suspended
      H - Hot-standby (LACP only)
      R - Layer3       S - Layer2
      U - in use       f - failed to allocate aggregator
      u - unsuitable for bundling
      w - waiting to be aggregated
      d - default port

Number of channel-groups in use: 1
Number of aggregators: 1

Group  Port-channel  Protocol    Ports
-----+-----+-----+
1      Po1 (SU)      PAgP        Fa0/1 (P)  Fa0/2 (P)
S2>

```

show interfaces trunk sur S1 :

```
S1>show interfaces trunk
Port      Mode       Encapsulation  Status      Native vlan
Po1       on        802.1q         trunking   99
Fa0/5     on        802.1q         trunking   99

Port      Vlans allowed on trunk
Po1       1-1005
Fa0/5     1-1005

Port      Vlans allowed and active in management domain
Po1       1,10,20,30,90,99
Fa0/5     1,10,20,30,90,99

Port      Vlans in spanning tree forwarding state and not pruned
Po1       1,10,20,30,90,99
Fa0/5     1,10,20,30,90,99

S1>
```

show interfaces trunk sur S2 :

```
S2>show interfaces trunk
Port      Mode       Encapsulation  Status      Native vlan
Po1       on        802.1q         trunking   99
Fa0/5     on        802.1q         trunking   99

Port      Vlans allowed on trunk
Po1       1-1005
Fa0/5     1-1005

Port      Vlans allowed and active in management domain
Po1       1,10,20,30,90,99
Fa0/5     1,10,20,30,90,99

Port      Vlans in spanning tree forwarding state and not pruned
Po1       1,10,20,30,90,99
Fa0/5     1,10,20,30,90,99
```

```
S2>
```

show vlan brief sur S1 :

```
S1>show vlan brief

VLAN Name          Status    Ports
---- -----
1     default       active    Fa0/18, Fa0/24, Gig0/1, Gig0/2
10    R&D           active    Fa0/6
20    STAFF          active
30    MGNT           active
90    TRASH          active    Fa0/3, Fa0/4, Fa0/7, Fa0/8
                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                Fa0/17, Fa0/19, Fa0/20, Fa0/21
                                Fa0/22, Fa0/23
99    NATIF          active
1002 fddi-default   active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default   active
S1>
```

show vlan brief sur S2 :

```
S2>show vlan brief

VLAN Name          Status    Ports
---- -----
1     default       active    Fa0/6, Gig0/1, Gig0/2
10    R&D           active
20    STAFF          active    Fa0/24
30    MGNT           active    Fa0/18
90    TRASH          active    Fa0/3, Fa0/4, Fa0/7, Fa0/8
                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                Fa0/17, Fa0/19, Fa0/20, Fa0/21
                                Fa0/22, Fa0/23
99    NATIF          active
1002 fddi-default   active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default   active
S2>
```

sh ip int br sur S1 :

```
S1>sh ip int br
Interface          IP-Address      OK? Method Status      Protocol
Port-channel1     unassigned      YES manual up           up
FastEthernet0/1    unassigned      YES manual up           up
FastEthernet0/2    unassigned      YES manual up           up
FastEthernet0/3    unassigned      YES manual administratively down down
FastEthernet0/4    unassigned      YES manual administratively down down
FastEthernet0/5    unassigned      YES manual up           up
FastEthernet0/6    unassigned      YES manual up           up
FastEthernet0/7    unassigned      YES manual administratively down down
FastEthernet0/8    unassigned      YES manual administratively down down
FastEthernet0/9    unassigned      YES manual administratively down down
FastEthernet0/10   unassigned      YES manual administratively down down
FastEthernet0/11   unassigned      YES manual administratively down down
FastEthernet0/12   unassigned      YES manual administratively down down
FastEthernet0/13   unassigned      YES manual administratively down down
FastEthernet0/14   unassigned      YES manual administratively down down
FastEthernet0/15   unassigned      YES manual administratively down down
FastEthernet0/16   unassigned      YES manual administratively down down
FastEthernet0/17   unassigned      YES manual administratively down down
FastEthernet0/18   unassigned      YES manual down         down
FastEthernet0/19   unassigned      YES manual administratively down down
FastEthernet0/20   unassigned      YES manual administratively down down
--More--
```

sh ip int br sur S2:

```
----- -----
S2>sh ip int br
Interface          IP-Address      OK? Method Status      Protocol
Port-channel1     unassigned      YES manual up           up
FastEthernet0/1    unassigned      YES manual up           up
FastEthernet0/2    unassigned      YES manual up           up
FastEthernet0/3    unassigned      YES manual administratively down down
FastEthernet0/4    unassigned      YES manual administratively down down
FastEthernet0/5    unassigned      YES manual up           up
FastEthernet0/6    unassigned      YES manual down         down
FastEthernet0/7    unassigned      YES manual administratively down down
FastEthernet0/8    unassigned      YES manual administratively down down
FastEthernet0/9    unassigned      YES manual administratively down down
FastEthernet0/10   unassigned      YES manual administratively down down
FastEthernet0/11   unassigned      YES manual administratively down down
FastEthernet0/12   unassigned      YES manual administratively down down
FastEthernet0/13   unassigned      YES manual administratively down down
FastEthernet0/14   unassigned      YES manual administratively down down
FastEthernet0/15   unassigned      YES manual administratively down down
FastEthernet0/16   unassigned      YES manual administratively down down
FastEthernet0/17   unassigned      YES manual administratively down down
FastEthernet0/18   unassigned      YES manual up           up
FastEthernet0/19   unassigned      YES manual administratively down down
FastEthernet0/20   unassigned      YES manual administratively down down
--More-- |
```

ifconfig sur pc1 :

```
C:\>ipconfig

FastEthernet0 Connection: (default port)

  Connection-specific DNS Suffix...:
  Link-local IPv6 Address.....: FE80::202:4AFF:FE11:E1B9
  IPv6 Address.....: ::
  IPv4 Address.....: 172.16.10.11
  Subnet Mask.....: 255.255.255.0
  Default Gateway.....: ::
                      172.16.10.1

Bluetooth Connection:

  Connection-specific DNS Suffix...:
  Link-local IPv6 Address.....: ::
  IPv6 Address.....: ::
  IPv4 Address.....: 0.0.0.0
  Subnet Mask.....: 0.0.0.0
  Default Gateway.....: ::
                      0.0.0.0
```

C:\>

ifconfig sur pc2 :

```
C:\>ipconfig

FastEthernet0 Connection: (default port)

  Connection-specific DNS Suffix...:
  Link-local IPv6 Address.....: FE80::20C:CFEE:FEC7:6C7B
  IPv6 Address.....: ::
  IPv4 Address.....: 172.16.20.129
  Subnet Mask.....: 255.255.255.0
  Default Gateway.....: ::
                      172.16.20.1

Bluetooth Connection:

  Connection-specific DNS Suffix...:
  Link-local IPv6 Address.....: ::
  IPv6 Address.....: ::
  IPv4 Address.....: 0.0.0.0
  Subnet Mask.....: 0.0.0.0
  Default Gateway.....: ::
                      0.0.0.0
```

C:\>

ifconfig sur pc3 :

```
C:\>ipconfig

FastEthernet0 Connection: (default port)

  Connection-specific DNS Suffix...:
  Link-local IPv6 Address.....: FE80::230:A3FF:FE7C:2C8C
  IPv6 Address.....: ::
  IPv4 Address.....: 172.16.30.129
  Subnet Mask.....: 255.255.255.0
  Default Gateway.....: ::
                      172.16.30.1

Bluetooth Connection:

  Connection-specific DNS Suffix...:
  Link-local IPv6 Address.....: ::
  IPv6 Address.....: ::
  IPv4 Address.....: 0.0.0.0
  Subnet Mask.....: 0.0.0.0
  Default Gateway.....: ::
                      0.0.0.0

C:\>
```

sh ip inter br sur R1

```
R1>sh ip inter br
Interface          IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0  unassigned      YES  unset   up           up
GigabitEthernet0/0.10 172.16.10.2  YES  manual  up           up
GigabitEthernet0/0.20 172.16.20.2  YES  manual  up           up
GigabitEthernet0/0.30 172.16.30.2  YES  manual  up           up
GigabitEthernet0/1    unassigned      YES  unset   administratively down down
Vlan1               unassigned      YES  unset   administratively down down
R1>
```

sh ip route sur R1

```
R1>sh ip route
Codes: L - local, 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, E - EGP
      i - IS-IS, 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

      172.16.0.0/16 is variably subnetted, 6 subnets, 2 masks
C        172.16.10.0/24 is directly connected, GigabitEthernet0/0.10
L        172.16.10.2/32 is directly connected, GigabitEthernet0/0.10
C        172.16.20.0/24 is directly connected, GigabitEthernet0/0.20
L        172.16.20.2/32 is directly connected, GigabitEthernet0/0.20
C        172.16.30.0/24 is directly connected, GigabitEthernet0/0.30
L        172.16.30.2/32 is directly connected, GigabitEthernet0/0.30

R1>
```

sh ip inter br sur R2

sh ip route sur R2