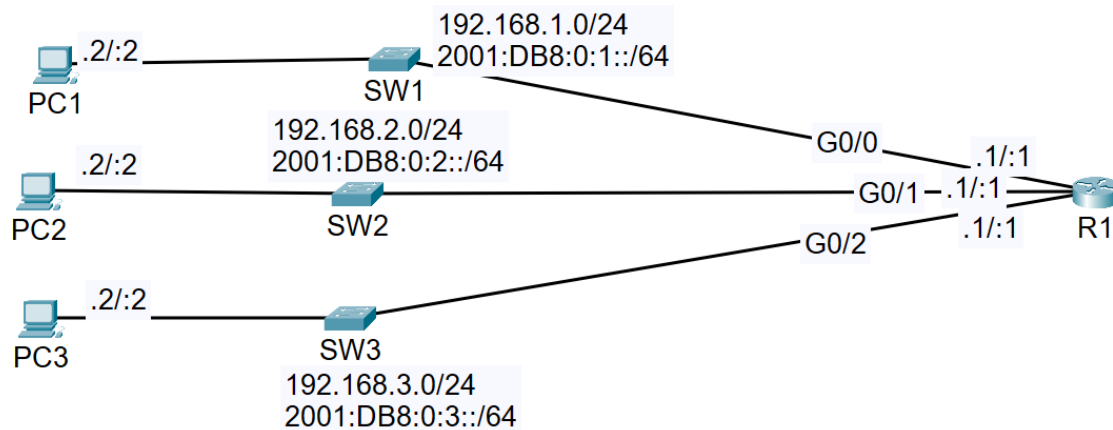


Starting IPv6 addressing

Network Topology:



R1 CLI:

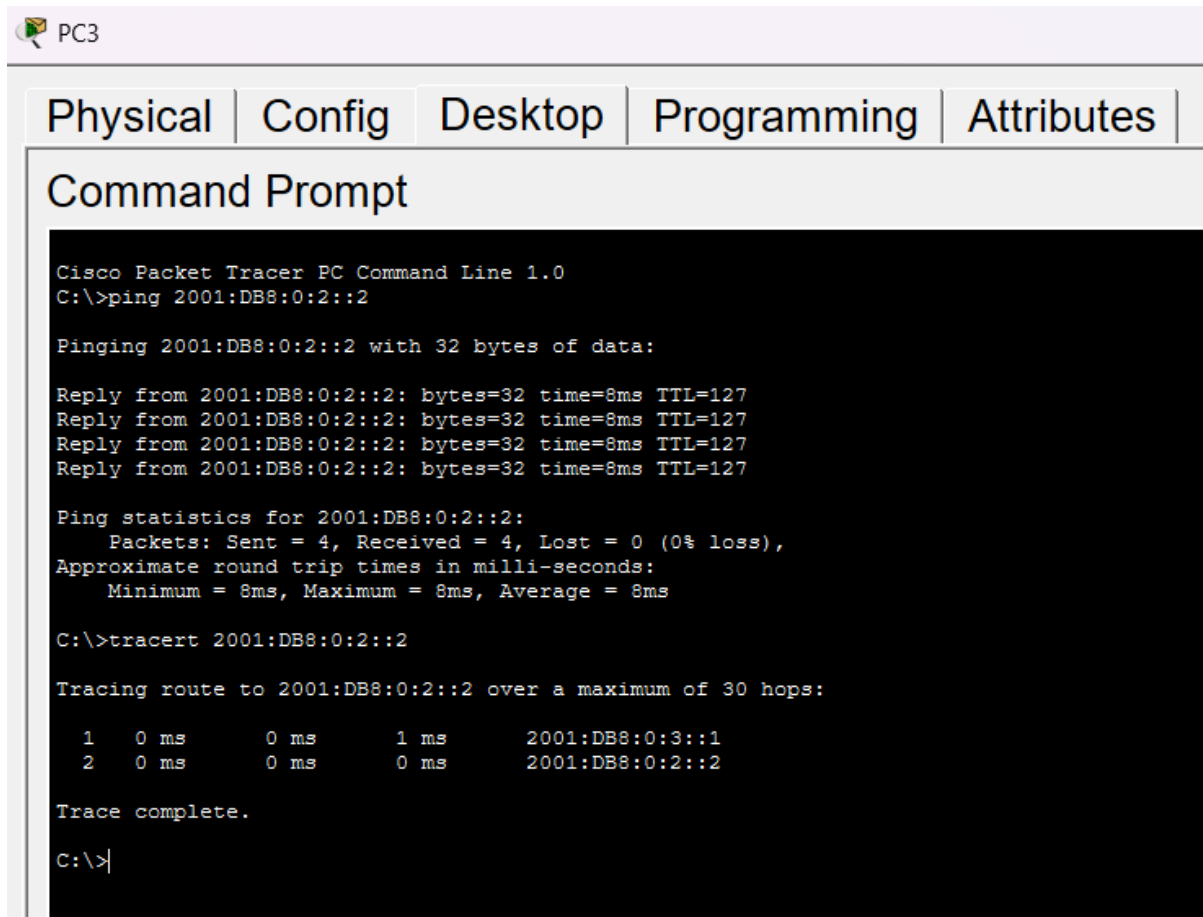
```
R1>en
R1#sh ip int br
Interface                IP-Address      OK? Method Status        Protocol
GigabitEthernet0/0       192.168.1.1     YES manual up             up
GigabitEthernet0/1       192.168.2.1     YES manual up             up
GigabitEthernet0/2       192.168.3.1     YES manual up             up
Vlan1                    unassigned      YES unset  administratively down down
R1#ipv6 unicast-routing
^
% Invalid input detected at '^' marker.

R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#ipv6 unicast-routing
R1(config)#int g0/0
R1(config-if)#ipv6 address 2001:DB8:0:1::1/64
R1(config-if)#no shutdown
R1(config-if)#int g0/1
R1(config-if)#ipv6 address 2001:DB8:0:2::1/64
R1(config-if)#no shutdown
R1(config-if)#int g0/2
R1(config-if)#ipv6 address 2001:DB8:0:3::1/64
R1(config-if)#no shutdown
R1(config-if)#do sh ipv6 int br
GigabitEthernet0/0      [up/up]
FE80::201:97FF:FE9A:AC01
2001:DB8:0:1::1
GigabitEthernet0/1      [up/up]
FE80::201:97FF:FE9A:AC02
2001:DB8:0:2::1
GigabitEthernet0/2      [up/up]
FE80::201:97FF:FE9A:AC03
2001:DB8:0:3::1
Vlan1                  [administratively down/down]
unassigned
R1(config-if)#
```

Default gateways and IPv6 addresses on PC1, PC2 and PC3 are configured.

PC's are able to ping each other using IPv6 addresses.

PC3 CLI:



The screenshot shows the PC3 configuration window in Cisco Packet Tracer. The 'Command Prompt' tab is active, displaying the results of a ping and a traceroute command. The ping command was successful, showing 4 packets sent and received with 0% loss. The traceroute command shows a path of two hops: the first hop is the router default gateway (2001:DB8:0:3::1) and the second hop is the destination address (2001:DB8:0:2::2).

```
PC3

Physical | Config | Desktop | Programming | Attributes |

Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 2001:DB8:0:2::2

Pinging 2001:DB8:0:2::2 with 32 bytes of data:

Reply from 2001:DB8:0:2::2: bytes=32 time=8ms TTL=127
Reply from 2001:DB8:0:2::2: bytes=32 time=8ms TTL=127
Reply from 2001:DB8:0:2::2: bytes=32 time=8ms TTL=127
Reply from 2001:DB8:0:2::2: bytes=32 time=8ms TTL=127

Ping statistics for 2001:DB8:0:2::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 8ms, Maximum = 8ms, Average = 8ms

C:\>tracert 2001:DB8:0:2::2

Tracing route to 2001:DB8:0:2::2 over a maximum of 30 hops:

  1  0 ms    0 ms    1 ms    2001:DB8:0:3::1
  2  0 ms    0 ms    0 ms    2001:DB8:0:2::2

Trace complete.

C:\>|
```

The first IPv6 address is the router default gateway for PC3, and the second is the destination address, i.e., PC2.