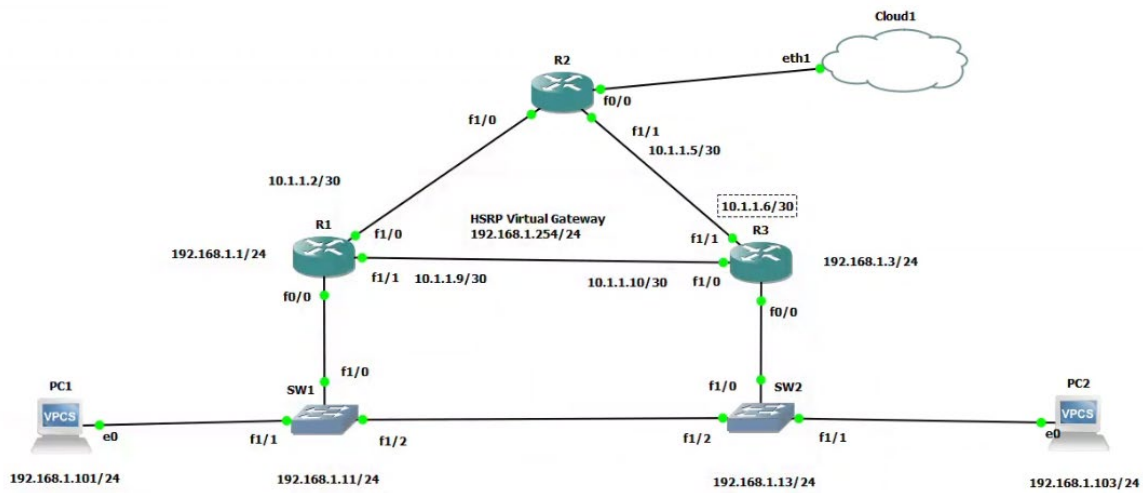# Topology

Trace and ping of PC1

```
PC1> trace 8.8.8.8
trace to 8.8.8.8, 8 hops max, press Ctrl+C to stop
1   192.168.1.1    13.926 ms   12.954 ms   9.771 ms
2   10.1.1.2    41.923 ms   54.987 ms   44.201 ms
3   10.164.0.1    40.807 ms   45.381 ms   43.368 ms
4   207.162.58.2    62.276 ms   51.266 ms   60.021 ms
5   132.202.51.245    29.529 ms   59.131 ms   40.974 ms
6   132.202.100.33    42.072 ms   40.393 ms   47.589 ms
7   *   *   *
8   192.77.55.209    40.591 ms   42.512 ms   42.537 ms

PC1> ping 8.8.8.8

84 bytes from 8.8.8.8 icmp_seq=1 ttl=116 time=61.643 ms
84 bytes from 8.8.8.8 icmp_seq=2 ttl=116 time=66.634 ms
84 bytes from 8.8.8.8 icmp_seq=3 ttl=116 time=75.368 ms
^C
PC1>
```

Trace and ping of PC2

```
PC2> trace 8.8.8.8
trace to 8.8.8.8, 8 hops max, press Ctrl+C to stop
 1   192.168.1.1    9.583 ms   39.029 ms   14.701 ms
 2   10.1.1.2      44.309 ms   32.062 ms   30.695 ms
 3   10.164.0.1    43.824 ms   50.536 ms   44.791 ms
 4   207.162.58.2  59.880 ms   52.165 ms   52.595 ms
 5   132.202.51.245   40.270 ms   44.750 ms   43.036 ms
 6   132.202.100.33   47.564 ms   39.576 ms   43.217 ms
 7    *   *   *
 8   192.77.55.209    37.544 ms   40.212 ms   41.276 ms

PC2> ping 8.8.8.8

84 bytes from 8.8.8.8 icmp_seq=1 ttl=116 time=47.100 ms
84 bytes from 8.8.8.8 icmp_seq=2 ttl=116 time=44.155 ms
84 bytes from 8.8.8.8 icmp_seq=3 ttl=116 time=92.120 ms
^C
PC2>
```

Standby R1

```
Group name is  hsrp-Fa0/0-1  (default)
R1#show standby
FastEthernet0/0 - Group 1 (version 2)
  State is Active
    2 state changes, last state change 00:21:15
  Virtual IP address is 192.168.1.254
  Active virtual MAC address is 0000.0c9f.f001 (MAC In Use)
    Local virtual MAC address is 0000.0c9f.f001 (v2 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.656 secs
  Preemption enabled
  Active router is local
  Standby router is 192.168.1.3, priority 100 (expires in 8.960 sec)
  Priority 150 (configured 150)
  Group name is "hsrp-Fa0/0-1" (default)
R1#
```

Standby R3

```
R3#show standby
FastEthernet0/0 - Group 1 (version 2)
  State is Standby
    1 state change, last state change 00:19:10
  Virtual IP address is 192.168.1.254
  Active virtual MAC address is 0000.0c9f.f001 (MAC Not In Use)
    Local virtual MAC address is 0000.0c9f.f001 (v2 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.336 secs
  Preemption enabled
  Active router is 192.168.1.1, priority 150 (expires in 10.768 sec)
    MAC address is ca01.2813.0000
  Standby router is local
  Priority 100 (default 100)
  Group name is "hsrp-Fa0/0-1" (default)
R3#
```

IP route R2

```
R2#show 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
       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 10.164.0.1 to network 0.0.0.0

S*    0.0.0.0/0 [1/0] via 10.164.0.1
      10.0.0.0/8 is variably subnetted, 8 subnets, 3 masks
C        10.1.1.0/30 is directly connected, FastEthernet1/0
L        10.1.1.2/32 is directly connected, FastEthernet1/0
C        10.1.1.4/30 is directly connected, FastEthernet1/1
L        10.1.1.5/32 is directly connected, FastEthernet1/1
O        10.1.1.8/30 [110/2] via 10.1.1.6, 00:44:14, FastEthernet1/1
                     [110/2] via 10.1.1.1, 00:44:45, FastEthernet1/0
S        10.162.240.52/32 [254/0] via 10.164.0.1, FastEthernet0/0
C        10.164.0.0/16 is directly connected, FastEthernet0/0
L        10.164.1.55/32 is directly connected, FastEthernet0/0
O     192.168.1.0/24 [110/2] via 10.1.1.6, 00:44:14, FastEthernet1/1
                     [110/2] via 10.1.1.1, 00:44:45, FastEthernet1/0
```