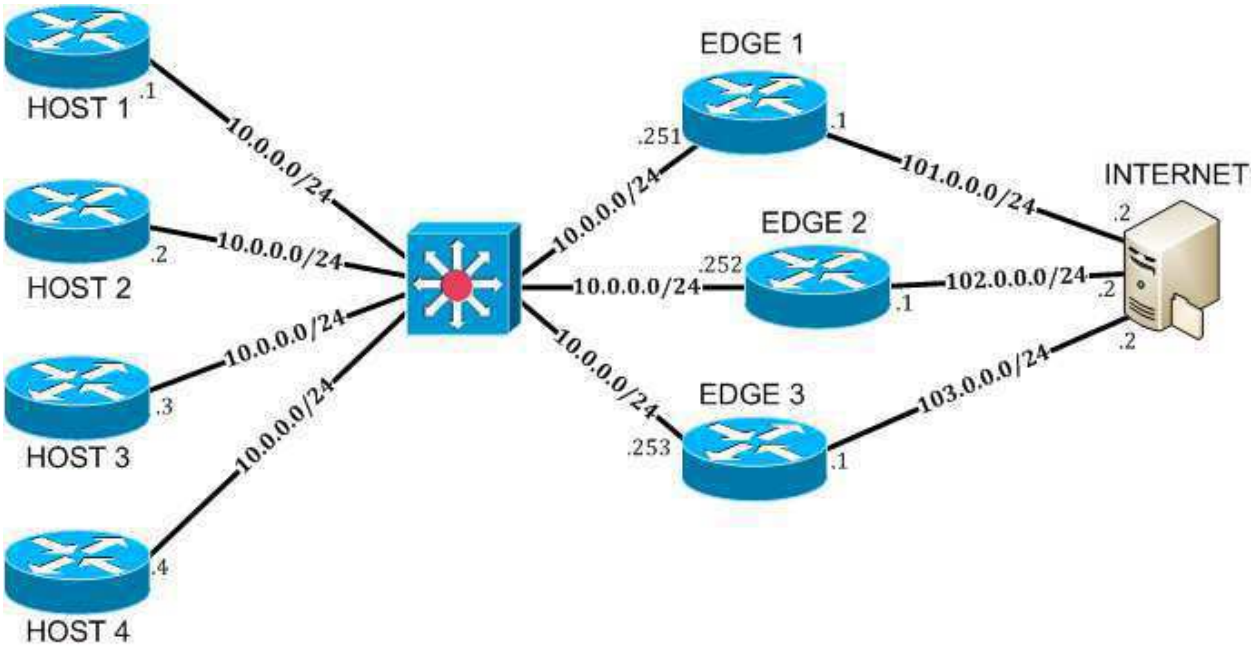

Routing
Switching
Tigers
Forum
HSRP
www.rstforum.net

HSRP Topology



Task 1: Configure HSRP

Step 1 Configure Initial Configuration

R1:

```
hostname EDGE_1
ip route 0.0.0.0 0.0.0.0 101.0.0.2
interface ethernet 0/0
ip address 10.0.0.251 255.255.255.0
no shutdown
ip nat inside
interface ethernet 0/1
ip address 101.0.0.1 255.255.255.0
no shutdown
ip nat outside
ip nat inside source list 1 interface ethernet 0/1 overload
access-list 1 permit any
exit
```

R2:

```
hostname EDGE_2
ip route 0.0.0.0 0.0.0.0 102.0.0.2
interface ethernet 0/0
ip address 10.0.0.252 255.255.255.0
ip nat inside
no shutdown
interface ethernet 0/1
ip address 102.0.0.1 255.255.255.0
ip nat outside
no shutdown
ip nat inside source list 1 interface ethernet 0/1 overload
access-list 1 permit any
exit
```

R4:

```
hostname INTERNET
interface ethernet 0/1
ip address 101.0.0.2 255.255.255.0
no shutdown
interface e0/2
ip address 102.0.0.2 255.255.255.0
no shutdown
interface loopback 0
ip add 200.0.0.1 255.255.255.255
exit
```

R5:

```
hostname HOST1
interface ethernet 0/0
ip add 10.0.0.1 255.255.255.0
no shutdown
ip route 0.0.0.0 0.0.0.0 10.0.0.254
exit
```

SW9:

```
hostname ACCESS_SWITCH
no ip domain-lookup
interface range ethernet0/0-3,ethernet1/0-3
switchport mode access
switchport access vlan 10
exit
```

Step 2 Configure Basic HSRP Configuration

Configure HSRP on R1 & R2. Use Virtual address of 10.0.0.254. R1 should be the Active router

R1:

```
interface ethernet 0/0
standby 10 ip 10.0.0.254
standby 10 priority 200
exit
```

R2:

```
interface ethernet 0/0
standby 10 ip 10.0.0.254
exit
```

Task 2: Verification

Step 1 Verify Active and Standby State in HSRP

R2:

```
EDGE_1#sh standby
Ethernet0/0 - Group 10
State is Active
2 state changes, last state change 01:43:29
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.176 secs
Preemption disabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 8.768 sec)
Priority 200 (configured 200)
Group name is "hsrp-Et0/0-10" (default)

EDGE_2#show standby
Ethernet0/0 - Group 10
State is Standby
1 state change, last state change 01:45:52
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.528 secs
Preemption disabled
Active router is 10.0.0.251, priority 200 (expires in 10.256 sec)
Standby router is local
Priority 100 (default 100)
Group name is "hsrp-Et0/0-10" (default)

EDGE_1#debug standby
HSRP debugging is on
*Jun 16 09:58:47.604: HSRP: Et0/0 Grp 10 Hello  in  10.0.0.252 Standby pri 100 vIP
10.0.0.254
*Jun 16 09:58:48.341: HSRP: Et0/0 Grp 10 Hello  out 10.0.0.251 Active  pri 200 vIP
10.0.0.254
EDGE_1#
*Jun 16 09:58:50.341: HSRP: Et0/0 Grp 10 Hello  in  10.0.0.252 Standby pri 100 vIP
10.0.0.254
*Jun 16 09:58:50.879: HSRP: Et0/0 Grp 10 Hello  out 10.0.0.251 Active  pri 200 vIP
```

10.0.0.254
It is possible to have more than 2 routers in a HSRP group. If a 3rd router were to be introduced, then it would assume LISTEN STATE.

Even though preemption is disabled for active routers by default, it is enabled for a standby router. If a higher ip address or priority router will come up than EDGE_2 which is in standby state, it will transition to standby and EDGE_2 will transition to LISTEN state.

Configure EDGE_3 with an IP Address of 10.0.0.253/24 and introduce it to the group.

R3:

```
hostname EDGE_3
interface e0/0
ip add 10.0.0.253 255.255.255.0
no shutdown
standby 10 ip 10.0.0.254
exit
```

```
EDGE_2#
*Jun 16 06:26:18.517: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Standby -> Listen
```

```
EDGE_3#
*Jun 16 06:26:29.729: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Speak -> Standby
```

Even though Preemption is not configured, standby router can change on basis of priority. In this case, EDGE_3 moved to STANDBY and EDGE_2 moved from STANDBY to LISTEN because Ip address of EDGE_3 was higher

```
EDGE_1#show standby
Ethernet0/0 - Group 10
State is Active
2 state changes, last state change 02:40:51
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 2.160 secs
Preemption disabled
Active router is local
Standby router is 10.0.0.253, priority 100 (expires in 10.736 sec)
Priority 200 (configured 200)
Group name is "hsrp-Et0/0-10" (default)
```

```
EDGE_2#show standby
Ethernet0/0 - Group 10
State is Listen
4 state changes, last state change 00:03:50
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Preemption disabled
Active router is 10.0.0.251, priority 200 (expires in 9.280 sec)
Standby router is 10.0.0.253, priority 100 (expires in 10.320 sec)
Priority 100 (default 100)
Group name is "hsrp-Et0/0-10" (default)

EDGE_3#show standby
Ethernet0/0 - Group 10
State is Standby
1 state change, last state change 00:04:17
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.176 secs
Preemption disabled
Active router is 10.0.0.251, priority 200 (expires in 9.904 sec)
Standby router is local
Priority 100 (default 100)
Group name is "hsrp-Et0/0-10" (default)
```

Task 3: Understanding HSRP Failover for Active Routers

By Default, Preemption is not enabled. Which means that an active router will remain in active state even if a higher priority router is introduced into the network

```
EDGE_1#show standby
Ethernet0/0 - Group 10
State is Active
Preemption disabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 9.216 sec)
Priority 200 (configured 200)

EDGE_2#show standby
Ethernet0/0 - Group 10
State is Standby
Preemption disabled
Active router is 10.0.0.251, priority 200 (expires in 8.608 sec)
Standby router is local
Priority 100 (default 100)
```

Step 1 Shutdown the Active router to initiate failover

```
R1:
interface e0/0
shutdown

*Jun 16 09:06:02.861: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Active -> Init
*Jun 16 09:06:04.855: %LINK-5-CHANGED: Interface Ethernet0/0, changed state to
administratively down

EDGE_2#
*Jun 16 09:06:02.855: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Standby ->
Active

R1:
interface e0/0
no shutdown

*Jun 16 09:08:35.785: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up
*Jun 16 09:08:57.484: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Speak ->
Standby
```

The standby preempt command enables the Hot Standby Router Protocol (HSRP) router with the highest priority to immediately become the active router. When a higher priority router preempts a lower priority router, the router sends a Coup message. When a lower priority active router receives a Coup message or a Hello message from an active, higher priority router, the router changes to the Speak state and sends a resign message.

Enable Preemption on EDGE_1 such that it becomes ACTIVE once it will initialize.

Step 2 Preempt to claim status

R1:
interface e0/0
standby 10 preempt
exit

Step 3 Verify HSRP Failover for Active Router form Standby state to Active state

*Jun 16 11:33:46.590: HSRP: Et0/0 Grp 10 Standby: h/Hello rcvd from lower pri Active router (100/10.0.0.252)

*Sep 10 11:33:46.590: HSRP: Et0/0 Grp 10 Active router is local, was 10.0.0.252

*Jun 16 11:33:46.590: HSRP: Et0/0 Nbr 10.0.0.252 no longer active for group 10 (Standby)

*Jun 16 11:33:46.590: HSRP: Et0/0 Nbr 10.0.0.252 Was active or standby - start passive holddown

*Jun 16 11:33:46.590: HSRP: Et0/0 Grp 10 Standby router is unknown, was local

*Jun 16 11:33:46.590: HSRP: Et0/0 Grp 10 Standby -> Active

*Jun 16 11:33:46.590: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Standby -> Active

EDGE_1#sh standby
Ethernet0/0 - Group 10
State is Active
2 state changes, last state change 00:01:56
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 2.256 secs
Preemption enabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 10.016 sec)
Priority 200 (configured 200)
Group name is "hsrp-Et0/0-10" (default)

Task 4: Verify HSRP Failover using HSRP Tracking

If Eth0/1 on EDGE_1 would go down, failover would not take place and all packets would be dropped on EDGE_1. Solution to this problem would be to track the interface pointing towards Service Provider. If the link would fail, then priority could be decreased on EDGE_1 to an extend that EDGE_2 would move to ACTIVE state.

Step 1 Configure HSRP Track

R1:
int e0/0
standby 10 track ethernet 0/1 101
exit

EDGE_1#show standby
Ethernet0/0 - Group 10
State is Active
2 state changes, last state change 04:02:54
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.048 secs
Preemption enabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 9.024 sec)
Priority 200 (configured 200)
Track interface Ethernet0/1 state Up decrement 101
Group name is "hsrp-Et0/0-10" (default)

R1:
int e0/1
shutdown
exit

*Jun 1615:50:34.286: %TRACKING-5-STATE: 1 interface Et0/1 line-protocol Up->Down
*Jun 1615:50:34.286: HSRP: Et0/0 Grp 10 Track 1 object changed, state Up -> Down
*Jun 1615:50:34.286: HSRP: Et0/0 Grp 10 Priority 200 -> 99
*Jun 16 15:50:37.288: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/1, changed state to down

EDGE_1#show standby
Ethernet0/0 - Group 10
State is Active
4 state changes, last state change 00:12:14
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 2.544 secs
Preemption enabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 9.920 sec)
Priority 99 (configured 200)
Track interface Ethernet0/1 state Down decrement 101
Group name is "hsrp-Et0/0-10" (default)

Failover did not take place as Preemption is not enabled on EDGE_2

R2:
interface ethernet 0/0
standby 10 preempt
exit

*Jun 16 16:06:14.552: HSRP: Et0/0 Grp 10 Standby: h/Hello rcvd from lower pri Active router (99/10.0.0.251)

*Jun 16 16:06:14.552: HSRP: Et0/0 Grp 10 Active router is local, was 10.0.0.251

*Jun 16 16:06:14.552: HSRP: Et0/0 Nbr 10.0.0.251 no longer active for group 10 (Standby)

*Jun 16 16:06:14.552: HSRP: Et0/0 Nbr 10.0.0.251 Was active or standby - start passive holddown

*Jun 16 16:06:14.552: HSRP: Et0/0 Grp 10 Standby router is unknown, was local

*Jun 16 16:06:14.552: HSRP: Et0/0 Grp 10 Standby -> Active

*Jun 16 16:06:14.552: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Standby -> Active

*Jun 16 10:06:42.738: HSRP: Et0/0 Grp 10 Hello in 10.0.0.251 Standby pri 99 vIP 10.0.0.254

*Jun 16 10:06:43.616: HSRP: Et0/0 Grp 10 Hello out 10.0.0.252 Active pri 100 vIP 10.0.0.254

EDGE_2#

*Jun 16 10:06:45.337: HSRP: Et0/0 Grp 10 Hello in 10.0.0.251 Standby pri 99 vIP 10.0.0.254

*Jun 16 10:06:46.299: HSRP: Et0/0 Grp 10 Hello out 10.0.0.252 Active pri 100 vIP 10.0.0.254

R1:
int e0/1
no shutdown
exit

*Jun 16 16:11:03.261: %TRACKING-5-STATE: 1 interface Et0/1 line-protocol Down->Up

*Jun 16 16:11:03.261: HSRP: Et0/0 Grp 10 Track 1 object changed, state Down -> Up

*Jun 16 16:11:03.261: HSRP: Et0/0 Grp 10 Priority 99 -> 200

*Jun 16 16:11:04.612: HSRP: Et0/0 Grp 10 Standby: h/Hello rcvd from lower pri Active router (100/10.0.0.252)

*Jun 16 16:11:04.612: HSRP: Et0/0 Grp 10 Active router is local, was 10.0.0.252

*Jun 16 16:11:04.612: HSRP: Et0/0 Nbr 10.0.0.252 no longer active for group 10 (Standby)

*Jun 16 16:11:04.612: HSRP: Et0/0 Nbr 10.0.0.252 Was active or standby - start passive holddown

*Jun 16 16:11:04.612: HSRP: Et0/0 Grp 10 Standby router is unknown, was local

*Jun 16 16:11:04.612: HSRP: Et0/0 Grp 10 Standby -> Active

*Jun 16 16:11:04.612: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Standby -> Active

*Jun 16 16:11:04.612: HSRP: Et0/0 Grp 10 Redundancy "hsrp-Et0/0-10" state Standby -> Active

R2:

*Jun 16 16:11:04.620: HSRP: Et0/0 Grp 10 Active: j/Coup rcvd from higher pri router (200/10.0.0.251)

*Jun 16 16:11:04.620: HSRP: Et0/0 Grp 10 Active router is 10.0.0.251, was local

*Jun 16 16:11:04.620: HSRP: Et0/0 Nbr 10.0.0.251 active for group 10

*Jun 16 16:11:04.620: HSRP: Et0/0 Grp 10 Standby router is unknown, was 10.0.0.251

*Jun 16 16:11:04.620: HSRP: Et0/0 Nbr 10.0.0.251 no longer standby for group 10 (Active)

*Jun 16 16:11:04.620: HSRP: Et0/0 Grp 10 Active -> Speak

*Jun 16 16:11:04.620: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Active -> Speak

*Jun 16 16:11:14.812: HSRP: Et0/0 Grp 10 Standby router is local

*Jun 16 16:11:14.812: HSRP: Et0/0 Grp 10 Speak -> Standby

*Jun 16 16:11:14.813: %HSRP-5-STATECHANGE: Ethernet0/0 Grp 10 state Speak -> Standby

Task 5: Verify HSRP Authentication

Step 1 Configure HSRP Authentication

R1:
interface ethernet 0/0
standby 10 authentication cisco
exit

EDGE_1#sh standby
Ethernet0/0 - Group 10
State is Active
2 state changes, last state change 02:48:26
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 2.368 secs
Preemption disabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 9.952 sec)
Priority 200 (configured 200)
Group name is "hsrp-Et0/0-10" (default)

This proves that the peer is still authenticated if the password is cisco sent in clear text.
If the key were to be sent via md5, authentication would fail.

R1:
interface ethernet 0/0
standby 10 authentication md5 key-string cisco
exit

%HSRP-4-BADAUTH: Bad authentication from 10.0.0.252, group 10, remote state Active
*Sep 11 12:18:31.096: HSRP: Et0/0 Grp 10 Auth failed for Hello pkt from 10.0.0.252, MD5 confgd but no tlv

Configure EDGE_2 to match authentication configured previously on EDGE_1

R2:
interface ethernet 0/0
standby 10 authentication md5 key-string cisco
exit

Step 2 Verify HSRP Authentication

```
EDGE_1#show standby
Ethernet0/0 - Group 10
State is Active
2 state changes, last state change 02:57:10
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 1.808 secs
Authentication MD5, key-string
Preemption disabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 8.704 sec)
Priority 200 (configured 200)
Group name is "hsrp-Et0/0-10" (default)

EDGE_2#show standby
Ethernet0/0 - Group 10
State is Standby
7 state changes, last state change 00:00:49
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 1.472 secs
Authentication MD5, key-string
Preemption disabled
Active router is 10.0.0.251, priority 200 (expires in 10.320 sec)
Standby router is local
Priority 100 (default 100)
Group name is "hsrp-Et0/0-10" (default)
```

Task 5: Configure MHSRP (Multigroup Hot Standby Router Protocol)

Configure EDGE_1 and EDGE_2 such that

EDGE_1 --> ACTIVE FOR VLAN 10 / STANDBY FOR VLAN 20
EDGE_2 --> ACTIVE FOR VLAN 20 / STANDBY FOR VLAN 10

HOST 1 ---> VLAN 10 ---> 10.0.0.1/24 ---> DFG:10.0.0.254
HOST 2 ---> VLAN 10 ---> 10.0.0.2/24 ---> DFG:10.0.0.254
HOST 3 ---> VLAN 20 ---> 20.0.0.1/24 ---> DFG:20.0.0.254
HOST 4 ---> VLAN 20 ---> 20.0.0.2/24 ---> DFG:20.0.0.254

EDGE_1 --> E0/0.10 --> VLAN 10 --> IP 10.0.0.251/24 --> STNDBY IP 10.0.0.254 -->PRI=200
EDGE_1 --> E0/0.20 --> VLAN 20 --> IP 20.0.0.251/24 --> STNDBY IP 20.0.0.254 -->PRI=100
EDGE_2 --> E0/0.10 --> VLAN 10 --> IP 10.0.0.252/24 --> STNDBY IP 10.0.0.254 -->PRI=200
EDGE_2 --> E0/0.20 --> VLAN 20 --> IP 20.0.0.252/24 --> STNDBY IP 10.0.0.254 -->PRI=100

EDGE_1 ---> TRACK E0/1
EDGE_2 ---> TRACK E0/1

Step 1 Configure Initial Configuration

R1:

```
hostname EDGE_1
ip route 0.0.0.0 0.0.0.0 101.0.0.2
interface ethernet 0/0
no shutdown
interface ethernet 0/0.10
encapsulation dot1q 10
ip address 10.0.0.251 255.255.255.0
interface ethernet 0/0.20
encapsulation dot1q 20
ip address 20.0.0.251 255.255.255.0
interface ethernet 0/1
ip address 101.0.0.1 255.255.255.0
no shutdown
exit
```

R2:

```
hostname EDGE_2
ip route 0.0.0.0 0.0.0.0 102.0.0.2
interface ethernet 0/0
no shutdown
interface ethernet 0/0.10
encapsulation dot1q 10
ip address 10.0.0.252 255.255.255.0
interface ethernet 0/0.20
encapsulation dot1q 20
ip address 20.0.0.252 255.255.255.0
interface ethernet 0/1
ip address 102.0.0.1 255.255.255.0
no shutdown
exit
```

R4:

```
hostname OUTSIDE
interface ethernet 0/1
ip address 101.0.0.2 255.255.255.0
no shutdown
interface ethernet 0/2
ip address 102.0.0.2 255.255.255.0
no shutdown
interface ethernet 0/3
ip address 103.0.0.2 255.255.255.0
no shutdown
interface loopback 0
ip address 200.0.0.1 255.255.255.255
exit
```

R5:

```
hostname HOST1
no ip domain-lookup
interface ethernet 0/0
ip address 10.0.0.1 255.255.255.0
no shutdown
ip route 0.0.0.0 0.0.0.0 10.0.0.254
exit
```

R6:

```
hostname HOST2
no ip domain-lookup
interface ethernet 0/0
ip address 10.0.0.2 255.255.255.0
no shutdown
ip route 0.0.0.0 0.0.0.0 10.0.0.254
exit
```

R7:

```
hostname HOST3
no ip domain-lookup
interface ethernet 0/0
ip address 20.0.0.1 255.255.255.0
no shutdown
ip route 0.0.0.0 0.0.0.0 20.0.0.254
exit
```

R8:

```
hostname HOST4
no ip domain-lookup
interface ethernet 0/0
ip address 20.0.0.2 255.255.255.0
no shutdown
ip route 0.0.0.0 0.0.0.0 20.0.0.254
exit
```

SW9:

```
hostname ACCESS_SWITCH
no ip domain-lookup
interface range ethernet1/0-1
switchport mode access
switchport access vlan 10
interface range ethernet1/2-3
switchport mode access
switchport access vlan 20
interface range e0/0-3
switchport trunk encap dot1q
switchport mode trunk
exit
```

Step 2 Configure Basic MHSRP

R1:

```
interface ethernet 0/0
no shutdown
exit
interface ethernet 0/0.10
encapsulation dot1q 10
ip address 10.0.0.251 255.255.255.0
standby 10 ip 10.0.0.254
standby 10 priority 200
standby 10 preempt
standby 10 track ethernet 0/1 101
interface ethernet 0/0.20
encapsulation dot1q 20
ip address 20.0.0.251 255.255.255.0
standby 20 ip 20.0.0.254
standby 20 preempt
exit
```

R2:

```
interface ethernet 0/0
no shutdown
exit
interface ethernet 0/0.10
encapsulation dot1q 10
ip address 10.0.0.252 255.255.255.0
standby 10 ip 10.0.0.254
standby 10 preempt
interface ethernet 0/0.20
encapsulation dot1q 20
ip address 20.0.0.252 255.255.255.0
standby 20 ip 20.0.0.254
standby 20 priority 200
standby 20 preempt
standby 20 track ethernet 0/1
exit
```

Task 2: Verification

Step 1 Verify MHSRP

```
EDGE_1#show standby
Ethernet0/0.10 - Group 10
State is Active
2 state changes, last state change 00:01:03
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.672 secs
Preemption enabled
Active router is local
Standby router is 10.0.0.252, priority 100 (expires in 8.736 sec)
Priority 200 (configured 200)
Track interface Ethernet0/1 state Up decrement 101
Group name is "hsrp-Et0/0.10-10" (default)
Ethernet0/0.20 - Group 20
State is Standby
4 state changes, last state change 00:00:49
Virtual IP address is 20.0.0.254
Active virtual MAC address is 0000.0c07.ac14
Local virtual MAC address is 0000.0c07.ac14 (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 2.304 secs
Preemption enabled
Active router is 20.0.0.252, priority 200 (expires in 7.680 sec)
Standby router is local
Priority 100 (default 100)
Group name is "hsrp-Et0/0.20-20" (default)

EDGE_2#show standby
Ethernet0/0.10 - Group 10
State is Standby
1 state change, last state change 00:29:13
Virtual IP address is 10.0.0.254
Active virtual MAC address is 0000.0c07.ac0a
Local virtual MAC address is 0000.0c07.ac0a (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.656 secs
Preemption enabled
Active router is 10.0.0.251, priority 200 (expires in 8.880 sec)
Standby router is local
Priority 100 (default 100)
Group name is "hsrp-Et0/0.10-10" (default)
Ethernet0/0.20 - Group 20
```

State is Active
1 state change, last state change 00:29:32
Virtual IP address is 20.0.0.254
Active virtual MAC address is 0000.0c07.ac14
Local virtual MAC address is 0000.0c07.ac14 (v1 default)
Hello time 3 sec, hold time 10 sec
Next hello sent in 0.992 secs
Preemption enabled
Active router is local
Standby router is 20.0.0.251, priority 100 (expires in 11.184 sec)
Priority 200 (configured 200)
Track interface Ethernet0/1 state Up decrement 10
Group name is "hsrp-Et0/0.20-20" (default)

All traffic for VLAN 10 will exit via EDGE_1 as it is the active router for that VLAN.
All traffic for VLAN 20 will exit via EDGE_2 as it is the active router for that VLAN.