

Cisco CCNA (200-301)

Configuring and Verifying FHRPs

Learning Objective: Configure and verify FHRPs

Description: Redundancy for outbound routing is key to any organization. You will learn about FHRPs: HSRP, VRRP and GLBP and how to configure them for your business.

Q: What are First Hop Redundancy Protocols?

- a group of technologies use to provide a mechanism to protect a single point of failure for the default gateway and/or load balancing

Q: What are the First Hop Redundancy Protocols we should know how to configure?

- They include
 - HSRP (Hot Standby Router Protocol)–Cisco Proprietary
 - 2 versions–use version 2 (default is version 1)
 - VRRP (Virtual Router Redundancy Protocol)–Non Cisco Proprietary
 - GLBP (Global Load Balancing Protocol)–Cisco Proprietary

Q: Which one are we going to configure today?

- HSRP

- Configuration HSRP NYCORE1

```
NYCORE1(config)#interface vlan 1
NYCORE1(config-if)#ip address 192.168.16.21 255.255.255.0
NYCORE1(config-if)#standby version 2
NYCORE1(config-if)#standby 10 priority 110
NYCORE1(config-if)#standby 10 ip 192.168.16.20
*Mar  1 00:34:42.018: %HSRP-5-STATECHANGE: Vlan1 Grp 10 state Standby -> Active
```

- Configuration HSRP NYCORE2

```
NYCORE2(config)#interface vlan 1
NYCORE2(config-if)#ip address 192.168.16.22 255.255.255.0
NYCORE2(config-if)#standby 10 preempt
NYCORE2(config-if)#standby 10 ip 192.168.16.20
*Mar  1 00:40:55.739: %HSRP-5-STATECHANGE: Vlan1 Grp 10 state Speak -> Standby
```

- Verify HSRP

```
NYCORE1(config-if)#do show standby
NYCORE1(config-if)#shutdown [not the log messages]
```

```
NYCORE2(config-if)#do show standby [Look at log messages to see what happens.]
```

- VRRP

- Configuration VRRP NYEDGE1

```
NYEDGE1(config)#interface gigabitethernet0/0
NYEDGE1(config-if)#ip address 192.168.16.1 255.255.255.0
NYEDGE1(config-if)#vrrp 10 ip 192.168.16.10
```

- Configuration VRRP NYEDGE2

```
NYEDGE2(config)#interface gigabitethernet0/0
NYEDGE2(config-if)#ip address 192.168.16.2 255.255.255.0
NYEDGE2(config-if)#vrrp 10 preempt
NYEDGE2(config-if)#vrrp 10 ip 192.168.16.10
```

- Verify HSRP

```
NYEDGE1(config-if)#do show vrrp
NYEDGE1(config-if)#shutdown [not the log messages]
```

```
NYEDGE2(config-if)#do show vrrp [Look at log messages to see what happens.]
```

- GLBP

- Configuration GLBP NYEDGE1

- ```
NYEDGE1(config)#interface gigabitethernet0/0
NYEDGE1(config-if)#ip address 192.168.16.1 255.255.255.0
NYEDGE1(config-if)#glbp 10 ip 192.168.16.20
```

- Configuration VRRP NYEDGE2

- ```
NYEDGE2(config)#interface gigabitethernet0/0
NYEDGE2(config-if)#ip address 192.168.16.2 255.255.255.0
NYEDGE2(config-if)#glbp 10 ip 192.168.16.20
```

- Verify HSRP

- ```
NYEDGE1(config-if)#do show glbp 10
NYEDGE1(config-if)#shutdown [not the log messages]
```

- ```
NYEDGE2(config-if)#do show vrrp [Look at log messages to see what happens.]
```

External, Endnotes, and Etc.

- 3.5 Describe the purpose of first hop redundancy protocol