



Configuring HSRP

Hot Standby Router Protocol (HSRP) provides high network availability because it routes IP traffic from hosts without relying on the availability of any single router. You can deploy HSRP in a group of routers to select an active router and a standby router. (An active router is the router of choice for routing packets; a standby router is a router that takes over the routing duties when an active router fails, or when preset conditions are met).

Each router uses only three timers in HSRP. The timers time the hello messages. When a failure occurs, the HSRP convergence depends on how the HSRP hello and hold timers are configured. By default, these timers are set to three and ten seconds respectively, which means that a hello packet is sent between the HSRP standby group devices every three seconds. The standby device becomes active when a hello packet is not received for ten seconds. You can lower these timer settings to speed up the failover or preemption, but, to avoid increased CPU usage and unnecessary standby state flapping, do not set the hello timer below one second or the hold timer below four seconds.

HSRP is enabled on an interface by entering the **standby** [*group-number*] **ip** [*ip-address* [**secondary**]] command. The standby command is also used to configure various HSRP elements. This document does not discuss more complex HSRP configurations. For additional information on configuring HSRP, see the HSRP section of the Cisco IP Configuration Guide publication that corresponds to your Cisco IOS XE software release. In the following HSRP configuration, standby group 2 on Gigabit Ethernet port 0/1/0 is configured at a priority of 110 and is also configured to have a preemptive delay should a switchover to this port occur:

```
Router(config)# interface GigabitEthernet 0/1/0
Router(config-if)# standby 2 ip 120.12.1.200
Router(config-if)# standby 2 priority 110
Router(config-if)# standby 2 preempt
```

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Verifying HSRP

To verify the HSRP information, use the **show standby** command in EXEC mode:

```
Router# show standby

Ethernet0 - Group 0
Local state is Active, priority 100, may preempt
Hello time 3 holdtime 10
Next hello sent in 0:00:00
Hot standby IP address is 198.92.72.29 configured
Active router is local
Standby router is 198.92.72.21 expires in 0:00:07
```

```
Standby virtual mac address is 0000.0c07.ac00  
Tracking interface states for 2 interfaces, 2 up:  
UpSerial0  
UpSerial1
```