

Document Name: HSRP

Hot Standby Routing Protocol or HSRP allows for default gateway fail over. This allows two or more routers to share a single virtual IP and MAC address that is used to facilitate fail over transparently. There is an election process which elects first on the highest numerical IPv4 address, this can be controlled with a priority. After the election process for the active router the standby will monitor the active in preparation to take over as the active router when it stops receiving hello packets from the active router.

A router with a higher priority number will take well priority and become active, the default priority is 100. Preemption will allow a router to re-initiate the election process.

	HSRPv1	HSRPv2
Timers	No msec support	Msec timer support
Group Range	0-255	0-4095
Multicast Range	224.0.0.2	224.0.0.102
MAC Address Range	0000.0C07.ACxx	0000.0C9F.F000 - 0000.0C9F.FFFF

Configuration

```
Router(config-if)# standby [group number] ip [Virtual IP]
Router(config-if)# standby [group number] preempt
Router(config-if)# standby [group number] priority [0-255 | (0-4095 with v2)]
Router(config-if)# standby version [1-2]
```

Timers

Millisecond timers are only supported with HSRPv2. Hold time needs to be minimum 3x the hello.

```
Router(config-if)# standby timers msec [hello timer 15-999] msec [hold timer 1-255]
```

Tracking

Tracking allows you to dynamically change the priority on an interface based on the line-protocol status. The command lowers the priority by a configured amount when the interface state goes down. This function also works with an IP SLA. Preemption needs to be enabled for tracking to function.

Sets the interface to track the line protocol status

```
Router(config)# track [object number] interface GigabitEthernet X/X line-protocol
```

Sets the HSRP interface you want to modify when the tracked interface does line protocol down. You can configure tracking to decrement the priority or shutdown the whole HSRP group.

```
Router(config-if)# standby [group number] track [object number] decrement [amount to lower priority]
Router(config-if)# standby [group number] track [object number] shutdown
```

Show Commands

```
Router# show standby
Router# show standby brief
Router# show track
```