# Priority and Pre-emption

As you have seen so far, there is no mechanism in place to define which of the two devices becomes the **active** router. Whichever device is **active** remains so until it goes down.

With the **priority** and **pre-emption** functionality, it is possible to force **HSRP** to choose specific devices as the **active** and **standby** routers when functioning normally.

> **Alert**: During this Exercise, **NYCORE1#** and **NYCORE2#** may be displayed in the lab as **Switch#** during certain tasks. The steps do not include this change for the sake of clarity.

## Learning Outcomes

After completing this exercise, you will be able to:

- Manipulate HSRP and its parameters

## Your Devices

You will be using the following devices in this lab. Please make sure these are powered on before proceeding.

- **NYCORE1** (Cisco 3750v2-24PS Switch)
- **NYCORE2** (Cisco 3750v2-24PS Switch)
- **NYACCESS1** (Cisco 2960-24 Switch)



### Task 1 - Configuring Priority and Pre-emption

In this task, you will implement the **priority** and **pre-emption** functionality on the **NYCORE1** and **NYCORE2** devices.

## *Step 1*

You may have noticed in the output to some of the commands you issued, the default priority for an HSRP implementation is 100. The higher the priority, the more likely a device will become the active router.

Here you will define a priority of **110** for the **HSRP** group **10** on the VLAN **1** interface of the **NYCORE1** device. Remember, at this point, the **NYCORE2** device is **active**.

Issue the following commands to implement this:

```
NYCORE1#configure terminal
Enter configuration commands, one per line.  End with
CNTL/Z.
NYCORE1(config)#interface vlan 1
NYCORE1(config-if)#standby 10 priority 110
NYCORE1(config-if)#
```

You will notice that no syslog messages appear to indicate a change in **HSRP** state. This is to be expected because this command just defines the **priority** and will not actually make the devices renegotiate their **HSRP** states.

## *Step 2*

Next, you will configure the **pre-empt** functionality on **HSRP** group **10** on the **NYCORE1** device. **Pre-empt** will make the local device assume the **active** state if its **priority** is higher than the other members of the group. Configure **pre-empt** on the **NYCORE1** device like so:

```
NYCORE1(config-if)#standby 10 preempt
NYCORE1(config-if)#exit
NYCORE1(config)#exit
NYCORE1#
```

So at this point, **NYCORE1** has a higher **priority** and has been configured to **pre-empt**. Therefore, it should be forced to take over as the **active** device in this **HSRP** group.

## Step 3

Examine the syslog messages that appear on both the **NYCORE1** and **NYCORE2** devices. On the **NYCORE1** device, you should see something like this:

```
*Mar  1 02:29:29.988: %HSRP-5-STATECHANGE: Vlan1 Grp 10
state Standby -> Active
```

The **NYCORE1** device is now **active**.

On the **NYCORE2** device, you should see something like this:

```
*Mar  1 02:29:32.228: %HSRP-5-STATECHANGE: Vlan1 Grp 10
state Active -> Speak
*Mar  1 02:29:43.318: %HSRP-5-STATECHANGE: Vlan1 Grp 10
state Speak -> Standby
```

Keep all devices that you have powered on in their current state and proceed to the next exercise.