Networking II Week 2 – Switch in Class Exercise – Spanning Tree

This in class exercise uses ending configurations from Switch Lab 1 and focuses on spanning tree.

1. **Spanning Tree**

Check your switches – what version of spanning tree is currently running by default?

Is the root bridge the same for all vlans? Which is the root bridge and why?

2. **Port Fast**

Run a continuous ping from R4 to R5. Shut down switch port to R5 and re-enable it. How many pings did you drop?

On the switch port to R5 enable spanning-tree portfast. Run a continuous ping from R4 to R5. Shut down switch port to R5 and re-enable it. How many pings did you drop?

3. **BPDU Guard/Root Guard**

Configure SW1 to be root bridge for vlan 26, SW2 should be secondary.

Configure SW2 to be root bridge for vlans 46 and 235. SW1 should be secondary.

Configure root guard on all links from SW1 => SW3, SW4. Also on all links from SW2 => SW3, SW4.

As a test configure SW3 to be root for vlan 26. What happens?

4. **Change STP mode to Rapid per vlan spanning tree on all 4 switches**

Do a “show spanning-tree”

Change spanning tree mode on all 4 switches to rapid per vlan spanning tree plus.

What changes in a “show spanning-tree”?

5. **MST**

Change spanning tree configuration to MST with a name of Week2. There should be two instances – one with vlan 26, the other with vlans 46 and 235. Make SW1 root for instance 1 and SW2 root for instance 2.