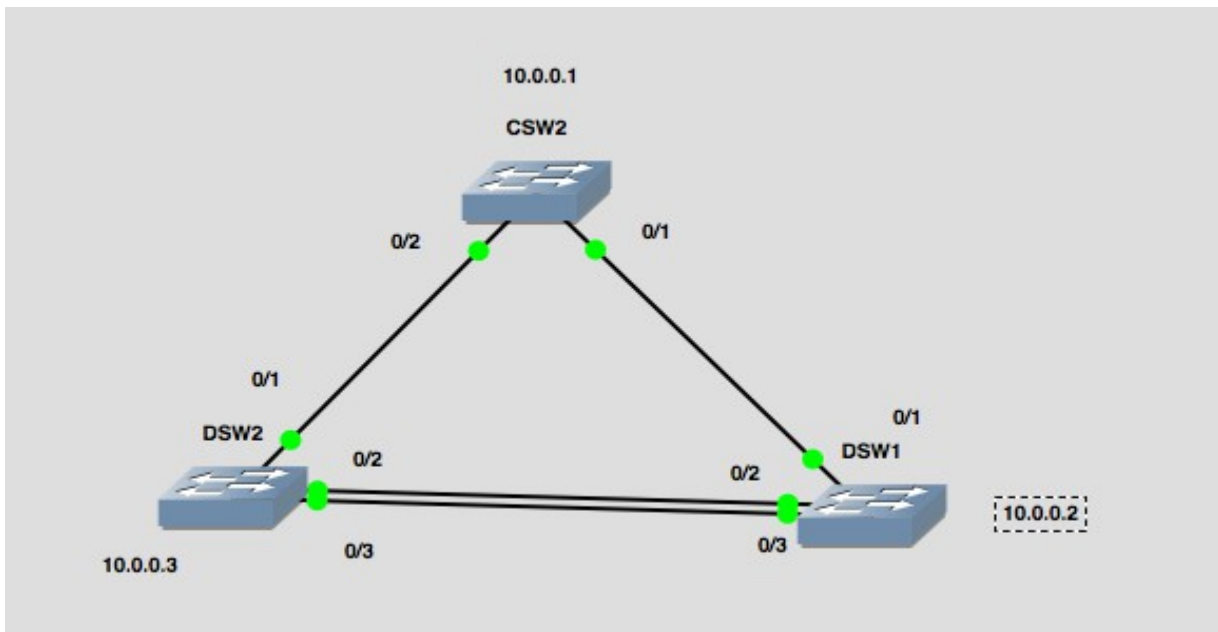


A Cisco FLEXLINK STUDY

Here I have csw2 → dsw1 → dsw2 → csw2 so there is L2 redundancy / a L2 loop.



So for flexlinks, on DSW2, e 0/1 will become active. 0/2 will become backup (0/3 is down)
Initially, ALL 3 switches are running R-PVST+

BUT... when I turn 0/1 and 0/2 into FLEXlinks, they both STOP STP! (no sending of BPDUs etc)

Configure a Flexlink on fa0/1:

```
DSW2#sh run int fa0/1
switchport backup interface Fa0/2
```

---->>> effectively DISABLES STP on fa0/1 and fa0/2! <<<<<-----

```
DSW2#show spanning-tree vlan 1
Spanning tree instance(s) for vlan 1 does not exist.
```

It also disables the forwarding on fa0/2 however, so it breaks the loop.

DESPITE that “sh ip int br” will show that fa0/1 AND fa0/2 are UP, on the switch the light for fa0/2 is ORANGE so **not forwarding**.

```
DSW2# show interfaces switchport backup
```

Switch Backup Interface Pairs:

Active Interface	Backup Interface	State
FastEthernet0/1	FastEthernet0/2	Active Up/Backup Standby

Now let's disable 0/1 on DSW2 with a “SHUT”. (=FLEXlink active)

The light on fa0/1 goes OUT, fa0/2 is immediately UP (light = green). THIS is NOT FLEXLINK, as FLEXLINK will not respond to a “shut”, this is R-PVST+ behaviour.

“debug spanning-tree bpdu” shows NOTHING on DSW2.

Here is the explanation:

“Note•Local administrative shut down or a link that starts forwarding again due to preemption is not considered a link failure. In those cases, the feature flushes the dynamic hosts and and does not move them.

•Static MAC addresses configured on a Flex Link port are restored when it starts forwarding again.”

Let's remove a cable now:

```
DSW2(config-if)#do sh int switch backup
```

Switch Backup Interface Pairs:

Active Interface	Backup Interface	State
FastEthernet0/1	FastEthernet0/2	Active Down/Backup Up

-Does it by default FALLBACK? NO because pre-emption is NOT configured. For this use on fa0/1:

```
DSW2(config-if)#switchport backup interface Fa0/2 preempt mode forced
```

Effect:

```
*Mar  1 00:59:31.231: %BACKUP_INTERFACE-5-PREEMPT: Preempting interface Fa0/2 in backup pair (Fa0/1, Fa0/2), preemption mode is forced
```

My conclusion: in this simpel setup.. this is a good example where Flexlink server a purpose. IF I plan my active – and backup links carefully than I can get fast L2 redundancy without the hassle of SPT.

Does the STANDBY link become active when the neighbor switch reloads? The answer is YES unequafically:

```
DSW2(config-if)#do sh int switch backup
```

Switch Backup Interface Pairs:

Active Interface	Backup Interface	State
FastEthernet0/1	FastEthernet0/2	Active Standby/Backup Up