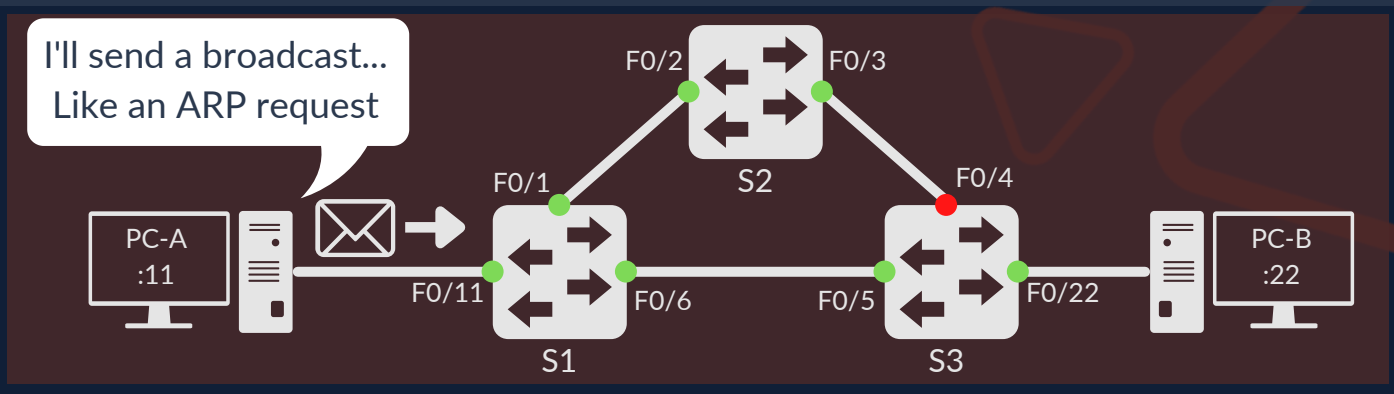
THE LOGIC BEHIND

# Spanning Tree Protocol

## STOPPING THE STORM *Part 2*

Now, rewind, start again, but this time STP is running. It has detected that the 3 switches connect and have formed a dangerous loop.
As a result of an election and some calculations, STP has decided that a single interface should be put into a blocking state. F0/4 on S3

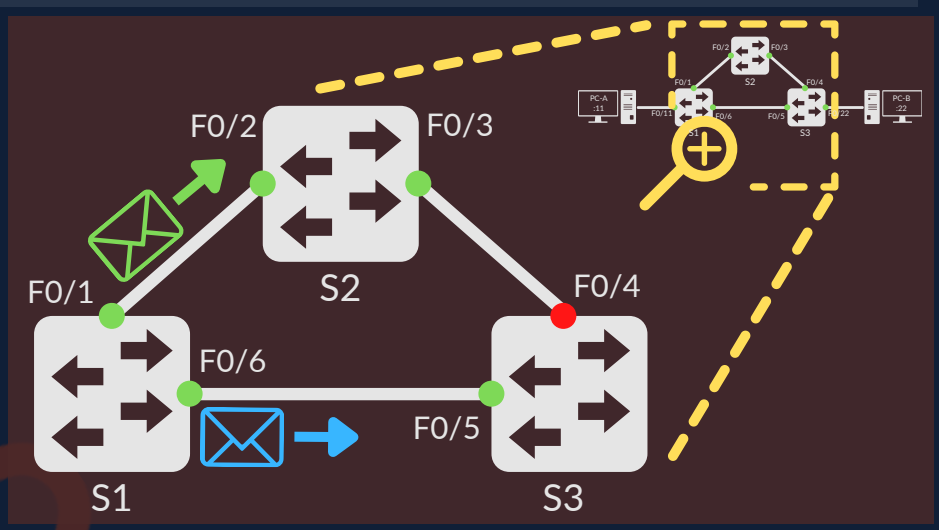



Like before, S2 and S3 receive the frames and populate their Mac-Address-Tables accordingly. Like S1 they will now duplicate the frame and flood them.

| S1 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/11 |

| S2 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/2 |

| S3 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/5 |

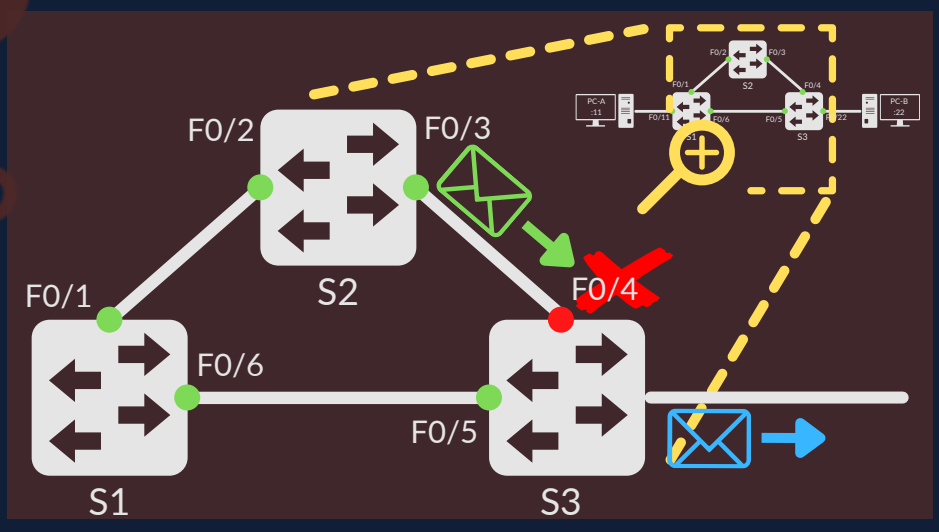



Previously at this stage the Mac table started to fluctuate. With F0/4 in a blocking state, the Green Frame sent by S2, will be dropped by S3 and no change will be mad to the Mac Table.
S3 will still duplicate and flood the Blue Frame, but as F0/4 is inactive, a frame will be forwarded out of it. Resulting in the broadcast only being sent to PC-B.

| S1 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/11 |

| S2 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/2 |

| S3 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/5 |

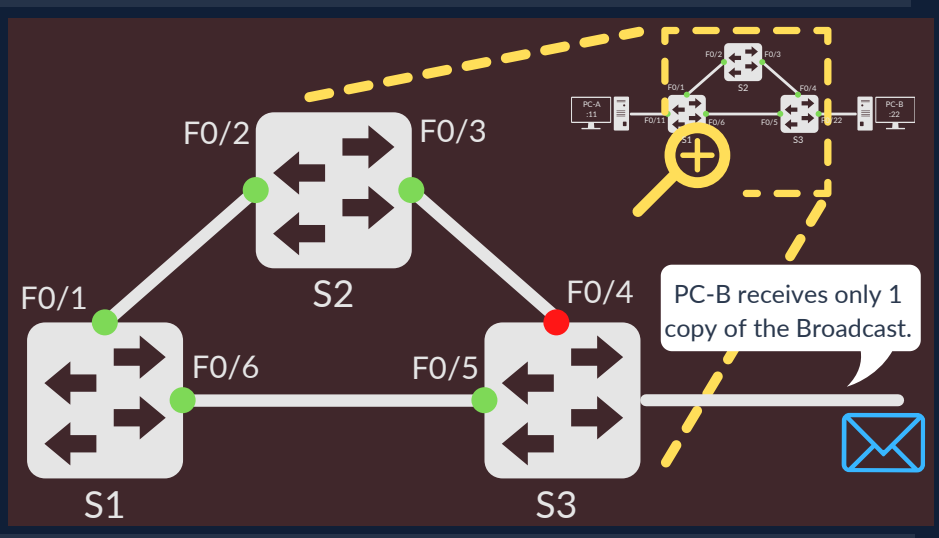



With S2 and S3 having processed everything, the broadcast frame has now been fully processed by all devices on the network once and is no longer in circulation of the network.

| S1 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/11 |

| S2 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/2 |

| S3 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/5 |




The Mac Address Tables on all 3 switches are now consistent and not fluctuating on a frame-by-frame basis.
Should something happen to the link between S1 and S3, STP will be able to detect that these two devices are no longer able to communicate and automatically bring the blocked interface into an active state. updating the MAC table accordingly

| S1 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/11 |

| S2 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/2 |

| S3 | Physical Address | Interface |
|---|---|---|
| | :11 | F0/5 |
| | :11 | F0/4 |