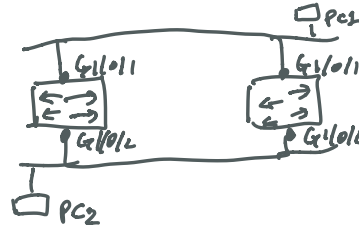
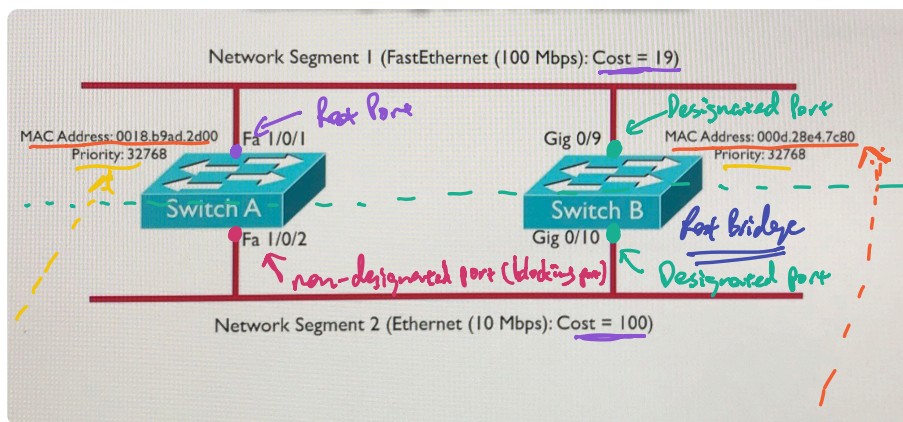


- To prevent L2 loops, because L2 frames do not have TTL values
 - To prevent MAC address table corruption, Broadcast storm,
- in a redundant switch setup i.e.



STP Port States



Network segment 1

Network segment 2

① Root Bridge :

- Only one root bridge

- Lowest bridge ID

- Bridge ID
 - Bridge priority (0-61440), default is 32768
 - MAC address (tie breaker): lower the better

The root bridge is B in this case. Because bridge priority is the same for the 2 switches, but B has a lower MAC address.

② Port State

Identifying STP Port States

Port State	Description
Root Port	The port on a non-root bridge that is closest to the root bridge, in terms of cost
Designated Port	The port on a network segment that is closest to the root bridge, in terms of cost
Non-Designated Port	Ports that block traffic in order to preserve a loop-free Layer 2 topology
Disabled Port	A port that is administratively shut down

Port Speed	STP Port Cost
10 Mbps	100
100 Mbps	19
1 Gbps	4
10 Gbps (T)	2

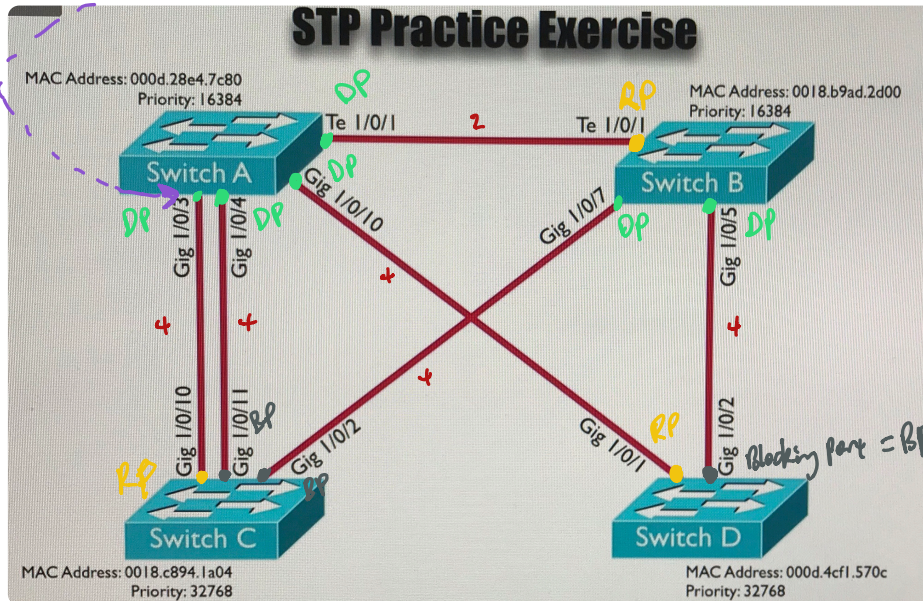
All remaining ports (serve as backup path)

exist on all network segments

if cost equals, the lowest port ID on RB wins G1/0/3 takes over G1/0/4

Ex.

But you can
also change the
port priority, default
128. i.e. 128.5, 128.6



Te = 10G

Root Bridge : Switch A

Root port : RP

Designated port DP

non-designated port : BP