

STP OPTIONAL FEATURES (STP TOOLKIT)

PORTRFAST:

- Can be Enabled on INTERFACES which are connected to END HOSTS

 PORTRFAST allows a PORT to move immediately to the FORWARDING state, bypassing LISTENING and LEARNING

- If used, it MUST be ENABLED only on PORTS connected to END HOSTS
- If ENABLED on a PORT connected to another SWITCH, it could cause a LAYER 2 LOOP

```
SW1(config)#interface g0/2
SW1(config-if)#spanning-tree portfast
%Warning: portfast should only be enabled on ports connected to a single
host. Connecting hubs, concentrators, switches, bridges, etc... to this
interface when portfast is enabled, can cause temporary bridging loops.
Use with CAUTION

%Portfast has been configured on GigabitEthernet0/2 but will only
have effect when the interface is in a non-trunking mode.
SW1(config-if)#[
```

You can also ENABLE PORTRFAST with the following command:

 **SW1(config)# spanning-tree portfast default**

This ENABLES PORTRFAST on ALL ACCESS PORTS (not TRUNK PORTS)

BPDU GUARD:

- If an INTERFACE with BPDU GUARD ENABLED receives a BPDU from another SWITCH, the INTERFACE will be SHUT DOWN to prevent loops from forming.

```
SW1(config)#interface g0/2
SW1(config-if)#spanning-tree bpduguard enable
SW1(config-if)#[
```

You can also ENABLE BPDU GUARD with the following command:

 **SW1(config)# spanning-tree portfast bpduguard default**

This ENABLES BPDU GUARD on all PORTRFAST-enabled INTERFACES

ROOT GUARD / LOOP GUARD:

Root Guard	If you enable root guard on an interface, even if it receives a superior BPDU (lower bridge ID) on that interface, the switch will not accept the new switch as the root bridge. The interface will be disabled.
Loop Guard	If you enable loop guard on an interface, even if the interface stops receiving BPDUs, it will not start forwarding. The interface will be disabled.