

Interface is down/down:

Symptom: Whenever you check the status of an interface it is labeled down/down which prevents any packets from traveling through the link.

Likely root cause: The root of this cause is most likely due to a faulty cable, mismatch speed/duplex, and or the end device it is connecting to has an interface that is down or the device itself is powered off.

Command to verify: show ip interface brief and show interface [g0/0]

How to fix it: In order to fix this situation make sure there is no faulty cabling, replace any cable if possible. Make sure both end devices have the same speed and duplex. Lastly, make sure that the end device it is connected to is powered on.

Port has err-disabled:

Symptom: The status of a port has err-disabled due to a security measure that took place to protect the network.

Likely root cause: The many root causes for this situation can be due to a security measure that is placed with ports on a device to not allow an unknown Mac-Address to access the infrastructure, BPDU guard, or stops unidirectional links from forming.

Command to verify: show interface status err-disabled or show port-security [g0/0]

How to fix it: In order to fix the situation you have to look at the cause of the err-disabled message and fix the problem from there, so for example if it was a Mac-Address problem then either place the original computer back into its port or update the new computer's Mac-address as a static entry and just shutdown/no shutdown the port.

Duplex Mismatch:

Symptom: The status of a port has down/down or whenever you check the interface status itself it has many collisions in it.

Likely root cause: The root cause of this can only be due to manually applying the speed/duplex of interfaces. Most network devices automatically determine the duplex and speed.

Command to verify: show interface [g0/0]

How to fix it: In order to fix the situation you have to go into interface configuration mode of the interface that is affected and use the command “duplex auto” and “speed auto”

VLAN Mismatch trunk:

Symptom: The switchport status of an interface is “trunk” but a group of VLANs can’t pass through the link.

Likely root cause: The root cause of this can be that not the right VLANs are allowed on the trunk or there is a mismatch native VLAN on both devices

Command to verify: show interfaces trunk

How to fix it: In order to fix the situation just take a look at the output of both end devices and if there is a native VLAN mismatch then use the command “switchport trunk native vlan []” or if the right VLANs are not on the trunk the use the command “switchport trunk allowed vlan []”.

Wrong port mode:

Symptom: The interface is not doing its job properly like allowing a host to access the internet or not allowing VLANs to pass through.

Likely root cause: The root cause of this is an access port acting like a trunk port or vice versa a trunk port acting like an access port.

Command to verify: show interfaces [g0/0] switchport, switchport mode access, and switchport mode trunk

How to fix it: In order to fix the situation just make sure what you want the interface to act like and apply the right command to it. Keep in mind access ports are for end hosts and trunk ports are for carrying VLANs.