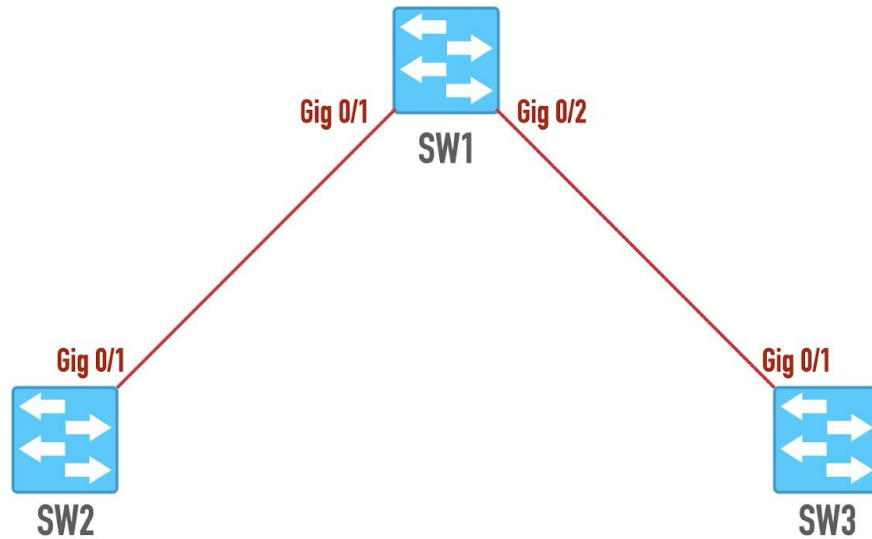


# Trunking Lab

## Topology



## Initial Configuration Commands

### SW1:

```
enable
conf t
no ip domain-lookup
line con 0
logging synchronous
exec-timeout 0 0
hostname SW1
end
copy run star
```

## SW2:

```
enable
conf t
no ip domain-lookup
line con 0
logging synchronous
exec-timeout 0 0
hostname SW2
end
copy run star
```

## SW3:

```
enable
conf t
no ip domain-lookup
line con 0
logging synchronous
exec-timeout 0 0
hostname SW3
end
copy run star
```

## Lab Tasks

- On switch SW1, enter interface-range configuration mode for interfaces Gig 0/1-Gig 0/2, and configure IEEE 802.1Q as the trunking encapsulation for those ports.
- Still in interface-range configuration mode, configure the trunking mode for “dynamic desirable.”
- On switch SW2, configure interface Gig 0/1 for IEEE 802.1Q trunking encapsulation and a trunking mode of “dynamic auto.”
- On switch SW3, configure interface Gig 0/1 for IEEE 802.1Q trunking encapsulation and a trunking mode of “trunk.”
- On switch SW1, verify interfaces Gig 0/1 and Gig 0/2 are trunking.

## Solution

**Step 1:** On switch SW1, enter interface-range configuration mode for interfaces Gig 0/1-Gig 0/2, and configure IEEE 802.1Q as the trunking encapsulation for those ports.

```
SW1>enable
SW1#conf t
SW1 (config)#int range Gig 0/1-2
SW1 (config-if-range)#switchport trunk encapsulation ?
dot1q   Interface uses only 802.1q trunking encapsulation when trunking
isl     Interface uses only ISL trunking encapsulation when trunking
negotiate Device will negotiate trunking encapsulation with peer on
        Interface
SW1 (config-if-range)#switchport trunk encapsulation dot1q
```

**Step 2:** Still in interface-range configuration mode, configure the trunking mode for “dynamic desirable.”

```
SW1 (config-if-range)#switchport mode ?
access   Set trunking mode to ACCESS unconditionally
dot1q-tunnel set trunking mode to TUNNEL unconditionally
dynamic  Set trunking mode to dynamically negotiate access or trunk mode
private-vlan Set private-vlan mode
trunk    Set trunking mode to TRUNK unconditionally
SW1 (config-if-range)#switchport mode dynamic ?
auto     Set trunking mode dynamic negotiation parameter to AUTO
desirable Set trunking mode dynamic negotiation parameter to DESIRABLE
SW1 (config-if-range)#switchport mode dynamic desirable
SW1 (config-if-range)#end
```

**Step 3:** On switch SW2, configure interface Gig 0/1 for IEEE 802.1Q trunking encapsulation and a trunking mode of “dynamic auto.”

```
SW2>en
SW2#conf t
SW2 (config)#int gig 0/1
SW2 (config-if)#switchport trunk encapsulation ?
dot1q   Interface uses only 802.1q trunking encapsulation when trunking
isl     Interface uses only ISL trunking encapsulation when trunking
negotiate Device will negotiate trunking encapsulation with peer on
        interface
SW2 (config-if)#switchport trunk encapsulation dot1q
SW2 (config-if)#switchport mode ?
access   Set trunking mode to ACCESS unconditionally
dot1q-tunnel set trunking mode to TUNNEL unconditionally
dynamic  Set trunking mode to dynamically negotiate access or trunk mode
private-vlan Set private-vlan mode
trunk    Set trunking mode to TRUNK unconditionally
```

```
SW2 (config-if) #switchport mode dynamic ?
auto      Set trunking mode dynamic negotiation parameter to AUTO
desirable Set trunking mode dynamic negotiation parameter to DESIRABLE
```

```
SW2 (config-if) #switchport mode dynamic auto
SW2 (config-if) #end
```

**Step 4:** On switch SW3, configure interface Gig 0/1 for IEEE 802.1Q trunking encapsulation and a trunking mode of "trunk."

```
SW3>en
SW3#conf t
SW3 (config) #int gig 0/1
SW3 (config-if) #switchport trunk encapsulation ?
dot1q     Interface uses only 802.1q trunking encapsulation when trunking
isl       Interface uses only ISL trunking encapsulation when trunking
negotiate Device will negotiate trunking encapsulation with peer on
          interface
```

```
SW3 (config-if) #switchport trunk encapsulation dot1q
SW3 (config-if) #switchport mode ?
access    Set trunking mode to ACCESS unconditionally
dot1q-tunnel set trunking mode to TUNNEL unconditionally
dynamic   Set trunking mode to dynamically negotiate access or trunk mode
private-vlan Set private-vlan mode
trunk     Set trunking mode to TRUNK unconditionally
```

```
SW3 (config-if) #switchport mode trunk
SW3 (config-if) #end
```

**Step 5:** On switch SW1, verify interfaces Gig 0/1 and Gig 0/2 are trunking.

```
SW1#show interfaces trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Gi0/1	desirable	802.1q	trunking	1
Gi0/2	desirable	802.1q	trunking	1

```
Port      Vlans allowed on trunk
Gi0/1     1-4094
Gi0/2     1-4094
```

```
Port      Vlans allowed and active in management domain
Gi0/1     1
Gi0/2     1
```

```
Port      Vlans in spanning tree forwarding state and not pruned
Gi0/1     1
Gi0/2     1
```