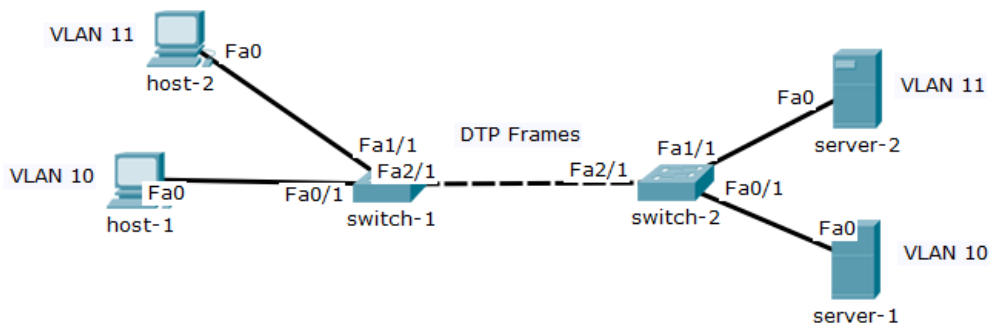


Dynamic Trunking Protocol (DTP)

Lab Summary

Configure Dynamic Trunking Protocol (DTP) between switches and verify.

Figure 1 Lab Topology



Lab Configuration

Start Packet Tracer File: **DTP**

Switch-1:

Click on the *switch-1* icon and select the *CLI* folder. Hit the <enter> key for user mode prompt (>).

Step 1: Enter global configuration mode.

```
switch-1> enable  
Password: cisconet  
switch-1# configure terminal
```

Step 2: Enable Fastethernet2/1 as a trunk interface and send DTP negotiation frames to any connected upstream neighbor.

```
switch-1(config)# interface fastethernet2/1  
switch-1(config-if)# switchport mode dynamic desirable
```

Step 3: Change native VLAN to 100 and allow all VLANs across the trunk.

```
switch-1(config-if)# switchport trunk native vlan 100  
switch-1(config-if)# end  
switch-1# copy running-config startup-config
```

Switch-2:

Click on the *switch-2* icon and select the *CLI* folder. Hit the <enter> key for user mode prompt (>).

Step 4: Enter global configuration mode.

```
switch-2> enable  
Password: cisconet  
switch-2# configure terminal
```

Step 5: Enable Fastethernet2/1 with DTP auto mode to listen for DTP frames from any connected neighbor switch.

```
switch-2(config)# interface fastethernet2/1  
switch-2(config-if)# switchport mode dynamic auto
```

Step 6: Change native VLAN to 100 and allow all VLANs across the trunk.

```
switch-2(config-if)# switchport trunk native vlan 100  
switch-2(config-if)# end  
switch-2# copy running-config startup-config
```

Step 7: Verify Lab

Verify the trunk is operational and the native VLAN is 100 on both switches. Confirm all VLANs are allowed across the trunk interface.

switch-1# **show interfaces trunk**

Port	Mode	Encapsulation	Status	Native vlan
Fa2/1	desirable	n-802.1q	trunking	100

Port	Vlans allowed on trunk
Fa2/1	1-1005

Port	Vlans allowed and active in management domain
Fa2/1	1,10,11

Port	Vlans in spanning tree forwarding state and not pruned
Fa2/1	1,10,11

switch-2# **show interfaces trunk**

Port	Mode	Encapsulation	Status	Native vlan
Fa2/1	auto	n-802.1q	trunking	100

Port	Vlans allowed on trunk
Fa2/1	1-1005

Port	Vlans allowed and active in management domain
Fa2/1	1,10,11

Port	Vlans in spanning tree forwarding state and not pruned
Fa2/1	1,10,11

Lab Notes

Dynamic Trunking Protocol (DTP) automatically negotiates trunking between neighbor switches. The default for Cisco switches is DTP enabled with **auto** mode per interface so that trunking is disabled. Cisco defaults (auto mode) are not listed in the configuration script however they are configured. DTP **desirable** mode must be configured on one or both switch interfaces to turn up the switch trunk. There is an **n-802.1q** denoting that trunk is negotiated.

DTP Modes

DTP Mode	Result
auto mode - auto mode (default)	no trunk
auto mode - desirable mode	trunk negotiated
desirable mode - desirable mode	trunk negotiated
nonegotiate mode	no trunk

* on mode = static trunking (DTP turned off)