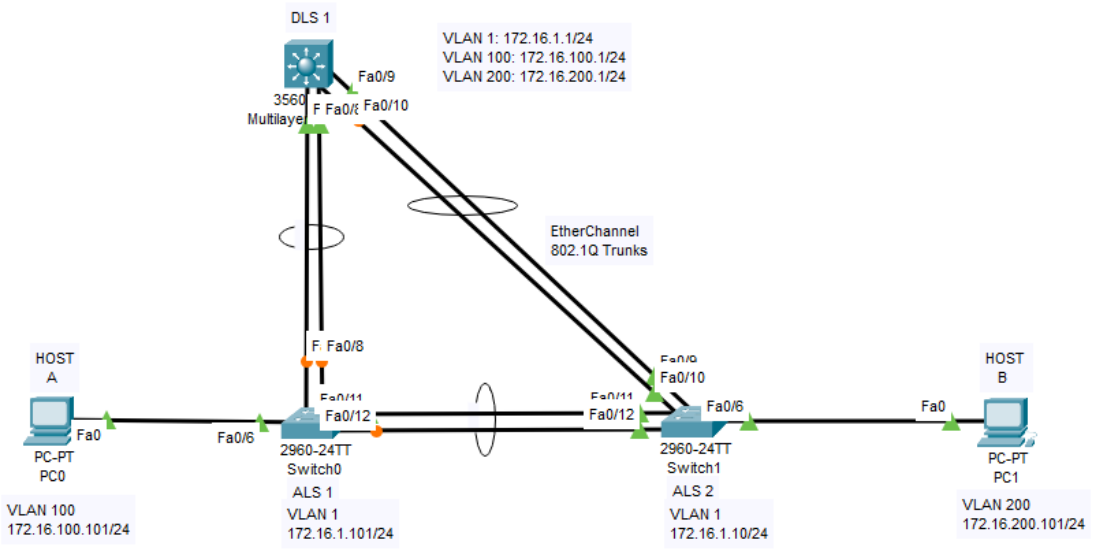

STEP 1→ Configuring the basic switch parameter.

```
ALS1(config)#int vlan 1
ALS1(config-if)#ip add 172.16.1.101 255.255.255.0
ALS1(config-if)#no shut

ALS1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```

```
ALS2(config)#int vlan 1
ALS2(config-if)#ip add 172.16.1.102 255.255.255.0
ALS2(config-if)#no shut

ALS2(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```

```
DLS1(config)#int vlan 1
DLS1(config-if)#ip add 172.16.1.1 255.255.255.0
DLS1(config-if)#no shut

DLS1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```

Step 2: Configure default gateways on the access layer switches

```
ALS1(config-if)#exit
ALS1(config)#ip default-gateway 172.16.1.1
ALS1(config)#
```

```
ALS2(config-if)#exit
ALS2(config)#ip default-gateway 172.16.1.1
ALS2(config)#
```

Step 3: Configure Trunks and EtherChannel between the switches

```
DLS1(config-if)#exit
DLS1(config)#int range fa0/7-8
DLS1(config-if-range)#switchport trunk encapsulation dot1q
DLS1(config-if-range)#switchport mode trunk


DLS1(config-if-range)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/8, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/8, changed state to up

DLS1(config-if-range)#channel-group 1 mode desirable
DLS1(config-if-range)#
Creating a port-channel interface Port-channel 1

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/8, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/8, changed state to up
```

Step 4: Configure VTP(VLAN TRUNKING PROTOCOL) on ALS 1 and ALS2

```
ALS1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
ALS1(config)#vtp mode client
Setting device to VTP CLIENT mode.
ALS1(config)#
%LINK-5-CHANGED: Interface Port-channel1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel1, changed state to up
```

```
DLS1#
DLS1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
DLS1(config)#vtp domain SWLAB
Changing VTP domain name from NULL to SWLAB
DLS1(config)#vtp version 2
DLS1(config)#vlan 100
DLS1(config-vlan)#name Finance
DLS1(config-vlan)#vlan 200
DLS1(config-vlan)#name Engineering
DLS1(config-vlan)#
```

```
DLS1#sh vtp status
VTP Version capable             : 1 to 2
VTP version running             : 2
VTP Domain Name                 : SWLAB
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : 0000.0C1C.A680
Configuration last modified by 172.16.1.1 at 3-1-93 00:41:24
Local updater ID is 172.16.1.1 on interface Vl1 (lowest numbered VLAN interface found)

Feature VLAN :
--------------
VTP Operating Mode                : Server
Maximum VLANs supported locally   : 1005
Number of existing VLANs          : 7
Configuration Revision            : 5
MD5 digest                        : 0xB2 0x18 0x3B 0x9F 0xC6 0x27 0x5E 0x20
                                    0x29 0x18 0xB9 0xA9 0xA4 0x92 0x1D 0xF7
DLS1#
```

Step 5: Cofigure the Ports on ALS 1 and ALS2

```
ALS1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
ALS1(config)#int fa0/6
ALS1(config-if)#switchport mode access
ALS1(config-if)#switchport access vlan 100
ALS1(config-if)#
```

Step 6: Configure Vlan Interfaces and Enable Routing.

```
DLS1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
DLS1(config)#int vlan 100
DLS1(config-if)#
%LINK-5-CHANGED: Interface Vlan100, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan100, changed state to up

DLS1(config-if)#ip add 172.16.100.1 255.255.255.0
DLS1(config-if)#no shut
DLS1(config-if)#int vlan 200
DLS1(config-if)#
%LINK-5-CHANGED: Interface Vlan200, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan200, changed state to up

DLS1(config-if)#ip add 172.16.200.1 255.255.255.0
DLS1(config-if)#no shut
DLS1(config-if)#exit
DLS1(config)#ip routing
DLS1(config)#
```

Verify

```
C:\>ping 172.16.200.101

Pinging 172.16.200.101 with 32 bytes of data:

Reply from 172.16.200.101: bytes=32 time<1ms TTL=127
Reply from 172.16.200.101: bytes=32 time<1ms TTL=127
Reply from 172.16.200.101: bytes=32 time<1ms TTL=127
Reply from 172.16.200.101: bytes=32 time<1ms TTL=127

Ping statistics for 172.16.200.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Fire	Last Status	Source	Destination	Type	Color	Time(sec)
	Successful	PC0	PC1	ICMP		0.000

Step 7: Enable CEF

```
DLS1#sh ip CEF
%IPv4 CEF not running
DLS1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
DLS1(config)#ip cef distributed
DLS1(config)#^Z
DLS1#
%SYS-5-CONFIG_I: Configured from console by console

DLS1#sh ip cef summary
IPv4 CEF is enabled for distributed and running
VRF Default:
 19 prefixes (19/0 fwd/non-fwd)
 Table id 0
 Database epoch:        4 (19 entries at this epoch)
DLS1#
```