Experiment – 2.4

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Branch: 20BCC1 **Section/Group: A**
Semester: 5th
Subject Name: Computer Networks Lab
Subject Code: 20CSP-342

1. Experiment Title/Problem Statement:

1. Configure the interfaces between the switches as trunks.

2. Configure switch Switch--1 to be the VTP server

3. Configure switch Switch--3 to be the VTP client

4. Configure switch Switch--2 so it does not synchronize itself to the latest VTP information, it should forward advertisements to switch Switch--3 though.

5. Change the VTP domain name to "<name>"

6. Use the password "<your UID>".

7. Remove the password from Client & make sure Server and Client do not synchronise by creating vlan200 : Test200

8. Configure vlan300 : Test in Transparent mode Switch & confirm that the newly created VLAN is locally known.

9. Make sure VLAN created in Transparent mode are shown in running-config.

2. Requirements:

Cisco Packet Tracer software, Computer System

3. Theory:

VTP: VLAN Trunk Protocol (VTP) reduces administration in a switched network. When you configure a new VLAN on one VTP server, the VLAN is distributed through all switches in the domain. This reduces the need to configure the same VLAN everywhere. VTP is a Cisco-proprietary protocol that is available on most of theCisco Catalyst series products.

4. Steps for experiment/practical:

- Connect 3 switches with each other.
- To configure interfaces between the switches as trunks, run following commands:
  Switch enable
  Switch# config t
  Switch(config)# fa0/1
  Switch(config-if)# switchport mode trunk

- Run the same command in all three switches and in switch 2 configure both fa0/1 and fa0/2.
- Every switch is vtp server by default. To configure switch 1 as vtp server, click on switch 1 and run the following commands:
  Switch enable
  Switch# config t
  Switch(config)# vtp mode server

- To configure switch 3 as vtp client, click on switch 3 and run the following commands:
  Switch enable
  Switch# config t
  Switch(config)# vtp mode client

- A transparent vtp forwards the vtp advertisement to other switches but it doesn't synchronize itself to the latest vtp information. To config a switch to transparent mode, click on switch and tun the following commands:
  Switch enable
  Switch# config t
  Switch(config)# vtp mode transparent

- To change vtp domain name, click on switch and run the following commands:
  Switch enable
  Switch# config t
  Switch(config)# vtp domain Utpal

- To change the vtp password, click on switch and run the following commands:
  Switch enable
  Switch# config t
  Switch(config)# vtp password 20bcs4160

- To remove the password, run the following commands.
  Switch enable
  Switch# config t
  Switch(config)# no vtp password
  Switch# show vtp password //to check the password
  Switch(config)# vlan 200

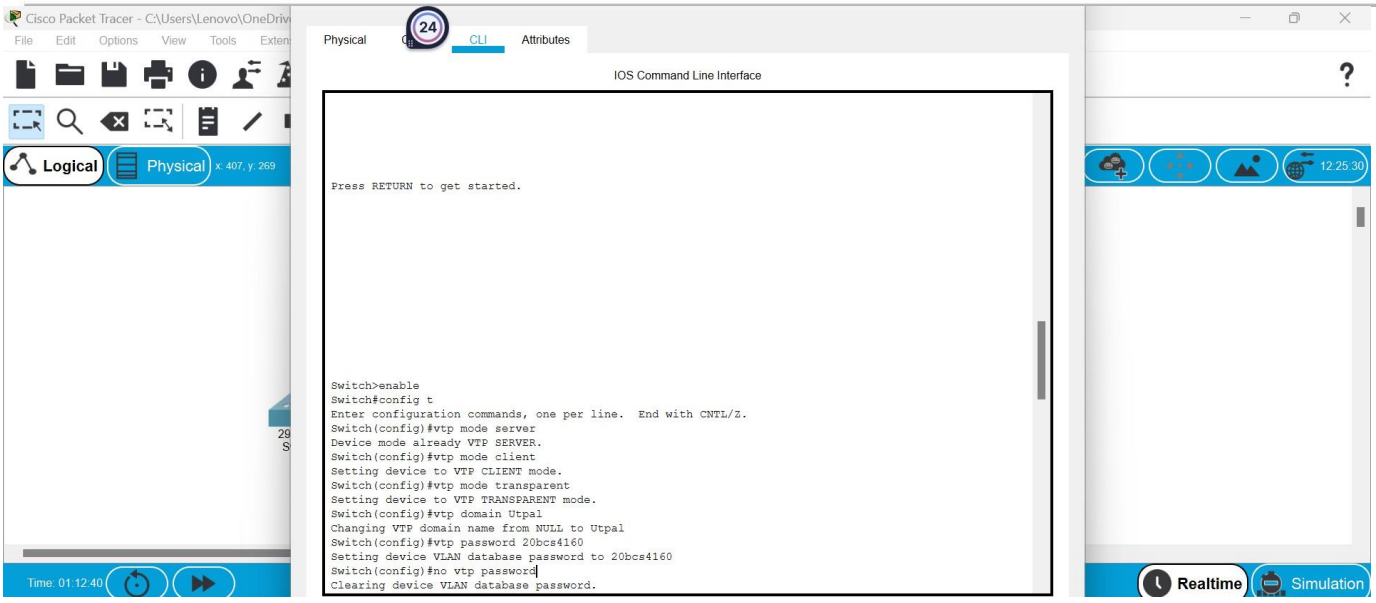
- To configure vlan300, test in Transparent mode Switch & confirm that the newly created VLAN is locally known run the following commands:

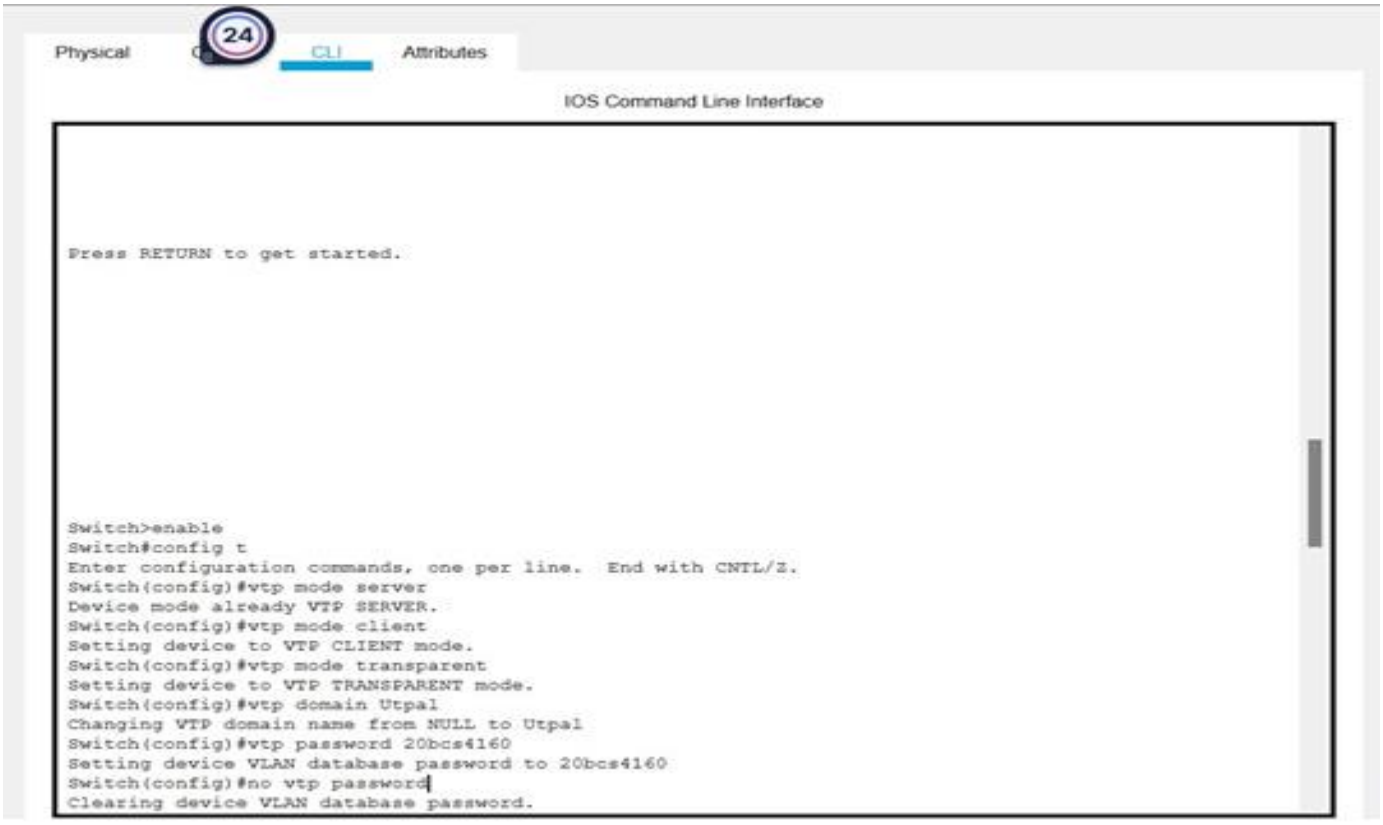
  Switch(config)# vlan 300

  Switch# show vlan //to check all active VLANs

- To show running-config, run
  Switch# show running-config

5. Result/Output/Writing Summary:


Cisco Packet Tracer - C:\Users\Lenovo\OneDriv
File Edit Options View Tools Exten
Logical
Physical
x: 407, y: 269
Time: 01:12:40
Physical
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vtp mode server
Device mode already VTP SERVER.
Switch(config)#vtp mode client
Setting device to VTP CLIENT mode.
Switch(config)#vtp mode transparent
Setting device to VTP TRANSPARENT mode.
Switch(config)#vtp domain Utpal
Changing VTP domain name from NULL to Utpal
Switch(config)#vtp password 20bcs4160
Setting device VLAN database password to 20bcs4160
Switch(config)#no vtp password
Clearing device VLAN database password.
12:25:30
Realtime
Simulation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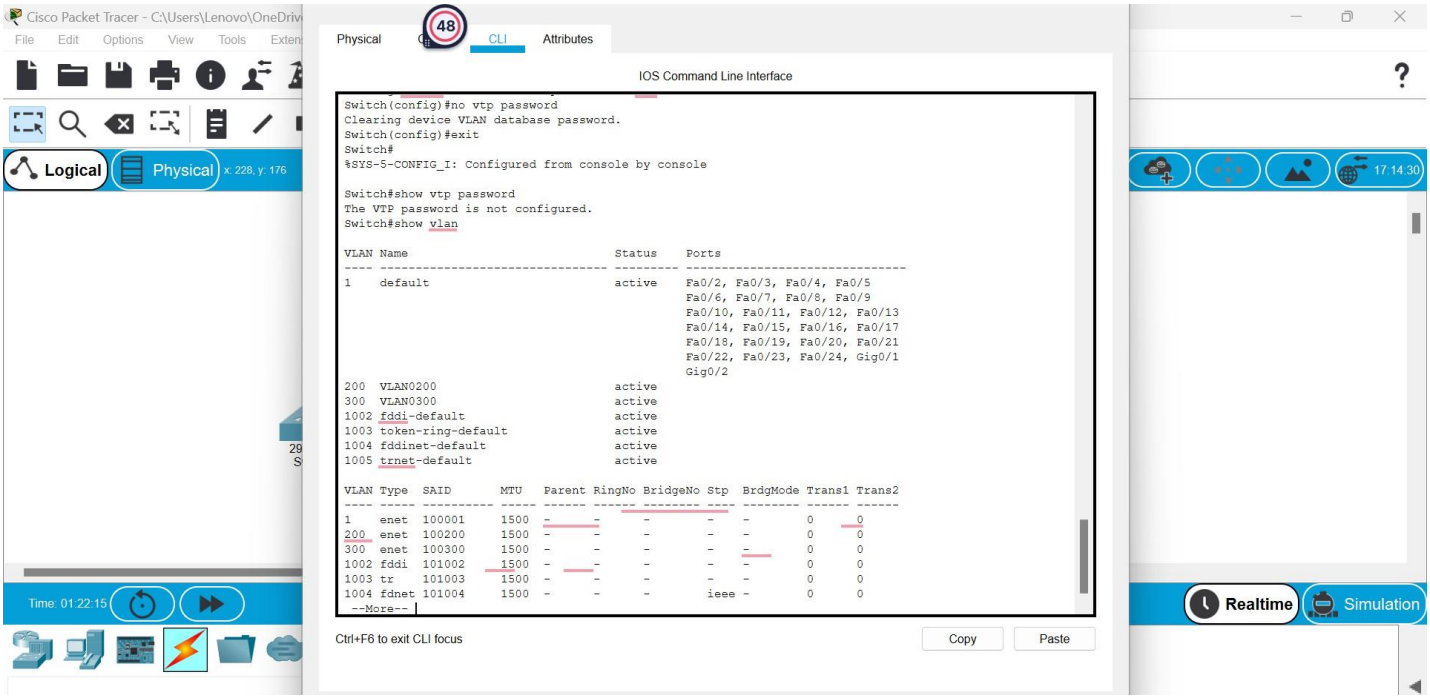
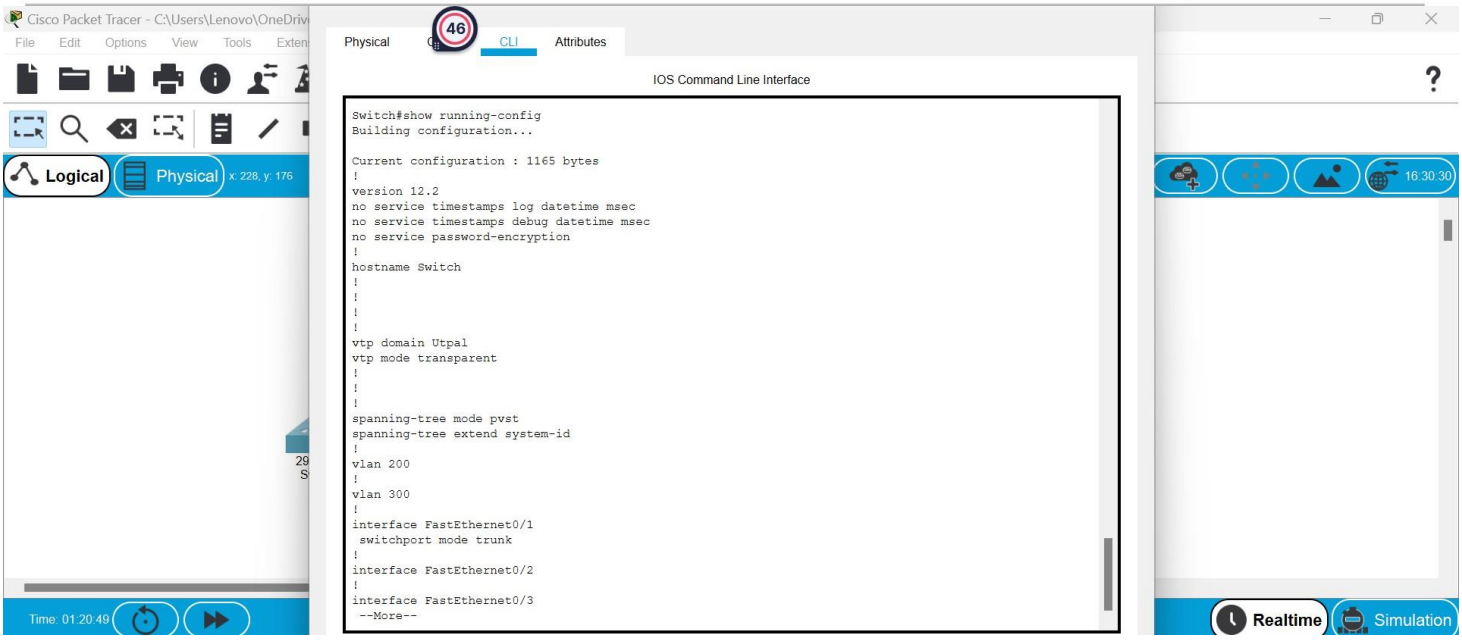


IOS Command Line Interface

```
Switch(config)#no vtp password
Clearing device VLAN database password.
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vtp password
The VTP password is not configured.
Switch#show vlan

VLAN Name                                Status    Ports
---- ----------------------------------- --------- -------------------------------
1    default                             active    Fa0/2, Fa0/3, Fa0/4, Fa0/5
                                                   Fa0/6, Fa0/7, Fa0/8, Fa0/9
                                                   Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                   Fa0/14, Fa0/15, Fa0/16, Fa0/17
                                                   Fa0/18, Fa0/19, Fa0/20, Fa0/21
                                                   Fa0/22, Fa0/23, Fa0/24, Gig0/1
                                                   Gig0/2
200  VLAN0200                            active
300  VLAN0300                            active
1002 fddi-default                        active
1003 token-ring-default                  active
1004 fddinet-default                     active
1005 trnet-default                       active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
200  enet  100200     1500  -      -      -        -    -        0      0
300  enet  100300     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
 --More--
```

Ctrl+F6 to exit CLI focus

Copy Paste



IOS Command Line Interface

```
Switch#show running-config
Building configuration...

Current configuration : 1165 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
vtp domain Utpal
vtp mode transparent
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
vlan 200
!
vlan 300
!
interface FastEthernet0/1
 switchport mode trunk
!
interface FastEthernet0/2
!
interface FastEthernet0/3
 --More--
```

6. Learning Outcomes:

- Learned about the concept of VTP.
- Learned about the various VTP commands and configurations.
- Learned about the implementation of VTP commands.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			