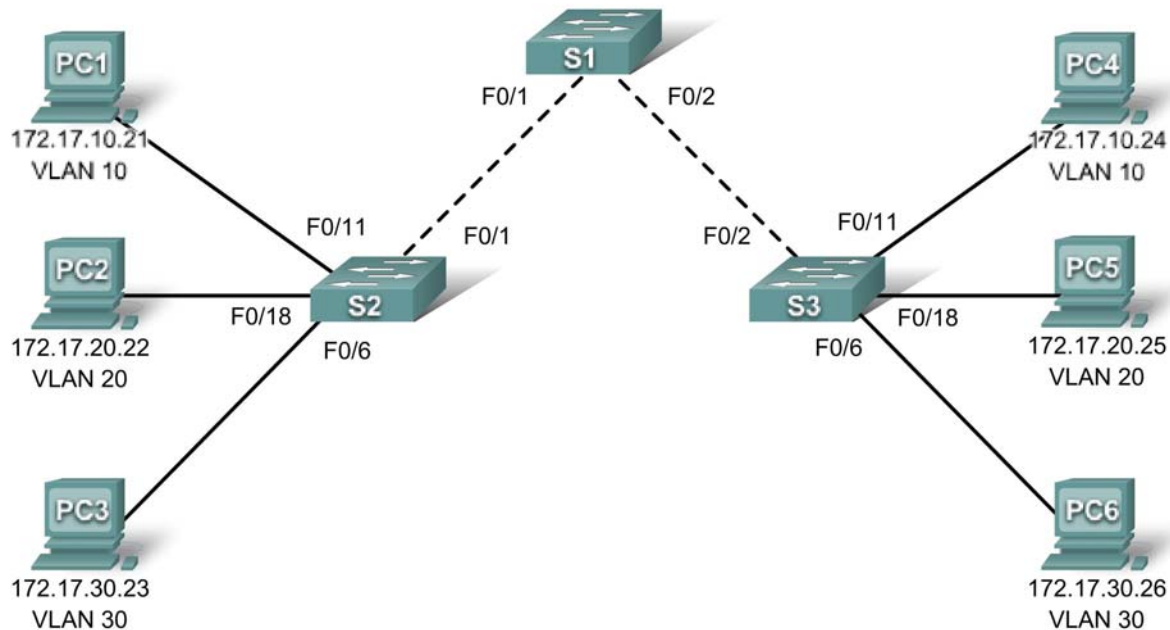


## PT Activity 4.4.2: VTP Configuration

### Topology Diagram



### Addressing Table

Device	Interface	IP Address	Subnet Mask
S1	VLAN 99	172.31.99.11	255.255.255.0
S2	VLAN 99	172.31.99.12	255.255.255.0
S3	VLAN 99	172.31.99.13	255.255.255.0
PC1	NIC	172.31.10.1	255.255.255.0
PC2	NIC	172.31.20.1	255.255.255.0
PC3	NIC	172.31.30.1	255.255.255.0
PC4	NIC	172.31.10.2	255.255.255.0
PC5	NIC	172.31.20.2	255.255.255.0
PC6	NIC	172.31.30.2	255.255.255.0

## Port Assignments (S2 and S3)

Ports	Assignment	Network
Fa0/1 - 0/5	802.1q Trunks	
Fa0/6 - 0/10	VLAN 30 - Administration	172.31.30.0 /24
Fa0/11 - 0/17	VLAN 10 - Engineering	172.31.10.0 /24
Fa0/18 - 0/24	VLAN 20 - Sales	172.31.20.0 /24
None	VLAN 99 – Network Mgmt	172.31.99.0 /24

## Learning Objectives

- Perform basic switch configurations
- Configure the Ethernet interfaces on the host PCs
- Configure VTP the switches

## Introduction

In this activity, you will perform basic switch configurations, configure VTP, trunking, learn about VTP modes, create and distribute VLAN information and assign ports to VLANs

### Task 1: Perform Basic Switch Configurations

Configure the S1, S2, and S3 switches according to the following guidelines and save all your configurations:

- Configure the switch hostname as indicated on the topology.
- Disable DNS lookup.
- Configure an EXEC mode password of class.
- Configure a password of cisco for console and vty connections.

### Task 2: Configure the Ethernet Interfaces on the Host PCs

Configure the Ethernet interfaces of PC1, PC2, PC3, PC4, PC5, and PC6 with the IP addresses indicated in the addressing table. Default gateway configurations are not necessary for this activity.

### Task 3: Configure VTP on the Switches

VTP allows the network administrator to control the instances of VLANs on the network by creating VTP domains. Within each VTP domain, one or more switches are configured as VTP servers. VLANs are then created on the VTP server and pushed to the other switches in the domain. Common VTP configuration tasks are operating mode, domain, and password. In this lab, you will be configuring S1 as a VTP server, with S2 and S3 configured as VTP clients.

**Step 1. Check the current VTP settings on the three switches.**

**Step 2. Configure the operating mode, domain name, and VTP password on all three switches.**

Set the VTP domain name to **access** and the VTP password to **lab4** on all three switches. Configure S1 in server mode, S2 in client mode, and S3 in transparent mode. Packet Tracer will initially grade the mode for S3 as incorrect. You will correct it later in the activity.

Note: The VTP domain name can be learned by a client switch from a server switch, but only if the client switch domain is in the null state. It does not learn a new name if one has been previously set. For that reason, it is good practice to manually configure the domain name on all switches to ensure that the domain name is configured correctly. Switches in different VTP domains do not exchange VLAN information.

**Step 3. Configure trunking and the native VLAN for the trunking ports on all three switches.**

On all switches, configure trunking and the native VLAN for FastEthernet interfaces 0/1-5.

**Step 4. Configure port security on the S2 and S3 access layer switches.**

Configure ports Fa0/6, Fa0/11, and Fa0/18 on S2 and S3 so that they allow a maximum of two hosts to connect to these ports and learn the MAC addresses of the hosts dynamically.

**Step 5. Configure VLANs on the VTP server.**

There are four VLANs required in this lab:

- VLAN 99 management
- VLAN 10 engineering
- VLAN 20 sales
- VLAN 30 administration

Configure these on the VTP server.

When you are done, verify that all four VLANs have been created on S1.

**Step 6. Check if the VLANs created on S1 have been distributed to S2 and S3.**

Use the **show vlan brief** command on S2 and S3 to determine if the VTP server has pushed its VLAN configuration to all the switches.

Are the same VLANs configured on all switches? \_\_\_\_\_

Why do S2 and S3 have different VLAN configurations at this point? \_\_\_\_\_

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**Step 7. Configure the management interface address on all three switches.**

Before proceeding, change the VTP mode on S3 to client. Then verify that S3 received VLAN configurations from S1 through VTP.

Configure all three switches with the IP addresses identified in the addressing table at the beginning of the lab. Assign these addresses to the network management VLAN (VLAN 99).

Verify that the switches are correctly configured by pinging between them. From S1, ping the management interface on S2 and S3. From S2, ping the management interface on S3.

Were the pings successful? \_\_\_\_\_

If not, troubleshoot the switch configurations and resolve.

**Step 8. Assign switch ports to VLANs.**

Refer to the port assignment table at the beginning of the lab to assign ports to VLANs. Note that port assignments are not configured through VTP. Remember that both S2 and S3 switches should be similarly configured. Save the configuration when you are done.

**Step 9. Verify that the trunks are operating correctly.**

From PC1, attempt to ping PC4, PC5, and PC6.

Were any of the pings successful? \_\_\_\_\_

Why did some of the pings fail?

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Which hosts could be reached from PC3? \_\_\_\_\_