

Vlans and VTP

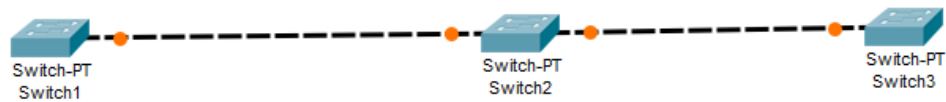
Kinshuk Jagdev

Steps

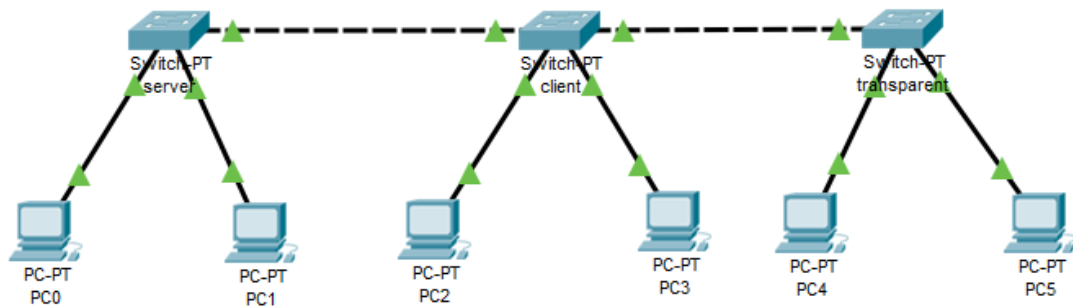
- Open a new file in cisco packet tracer
- Click on connection devices icon and place 3 PT-switches



- Connect fa ports



- Add end devices to switches



- Configuring the PCs

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 10.0.0.1

Subnet Mask: 255.0.0.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

PC1

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 10.0.0.2

Subnet Mask: 255.0.0.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

PC2

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 10.0.0.3

Subnet Mask: 255.0.0.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

PC3

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 10.0.0.4

Subnet Mask 255.0.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

PC4

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 10.0.0.5

Subnet Mask 255.0.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

PC5

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 10.0.0.6

Subnet Mask 255.0.0.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

- Setting switch-0 as server and setting up vtp

```
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vtp mode server
Device mode already VTP SERVER.
Switch(config)#vtp domain prac
Changing VTP domain name from NULL to prac
Switch(config)#vtp password 123
Setting device VLAN database password to 123
Switch(config)#vtp version 2
Switch(config)#
```

- Setting switch-1 as client and setting up vtp

```
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vtp mode client
Setting device to VTP CLIENT mode.
Switch(config)#vtp domain prac
Changing VTP domain name from NULL to prac
Switch(config)#vtp password 123
Setting device VLAN database password to 123
Switch(config)#vtp version 2
Cannot modify version in VTP client mode
Switch(config)#
```

- Setting switch-2 as transparent and setting up vtp

```
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vtp mode transparent
Setting device to VTP TRANSPARENT mode.
Switch(config)#vtp domain prac
Changing VTP domain name from NULL to prac
Switch(config)#vtp password 123
Setting device VLAN database password to 123
Switch(config)#vtp version 2
Switch(config)#
```

- Adding trunk mode for switch-0 and switch-1, switch-2 will automatically get set up

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#in
Switch(config)#interface fa 0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up

Switch(config-if)#
```

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#in
Switch(config)#interface fa 0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up
```

- Configuring vlans in server (using auto-creation for vlans)

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int
Switch(config)#interface fa 1/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#exit
Switch(config)#int
Switch(config)#interface fa 2/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
% Access VLAN does not exist. Creating vlan 20
Switch(config-if)#exit
Switch(config)#
```









- Configuring vlans in client

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int
Switch(config)#interface fa 2/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int
Switch(config)#interface fa 3/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#
```

- Configuring vlans in transparent (using auto-creation for vlans)

```
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int
Switch(config)#interface fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#exit
Switch(config)#int
Switch(config)#interface fa 2/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
% Access VLAN does not exist. Creating vlan 20
Switch(config-if)#
```

- Testing the vlan building in real time

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Failed	PC0	PC1	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC0	PC2	ICMP		0.000	N	1	(edit)	(delete)
	Failed	PC0	PC3	ICMP		0.000	N	2	(edit)	(delete)
	Successful	PC0	PC4	ICMP		0.000	N	3	(edit)	(delete)

(vlans working properly)

- Checking vlan status for switches

```
Switch#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	Fa3/1, Fa4/1, Fa5/1
10	VLAN0010	active	Fa1/1
20	VLAN0020	active	Fa2/1
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

```
Switch#
```

```
Switch#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	Fa4/1, Fa5/1
10	VLAN0010	active	Fa2/1
20	VLAN0020	active	Fa3/1
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

```
Switch#
```

VLAN	Name	Status	Ports
1	default	active	Fa3/1, Fa4/1, Fa5/1
10	VLAN0010	active	Fa0/1
20	VLAN0020	active	Fa2/1
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

```
Switch#
```

(vlans created properly)