

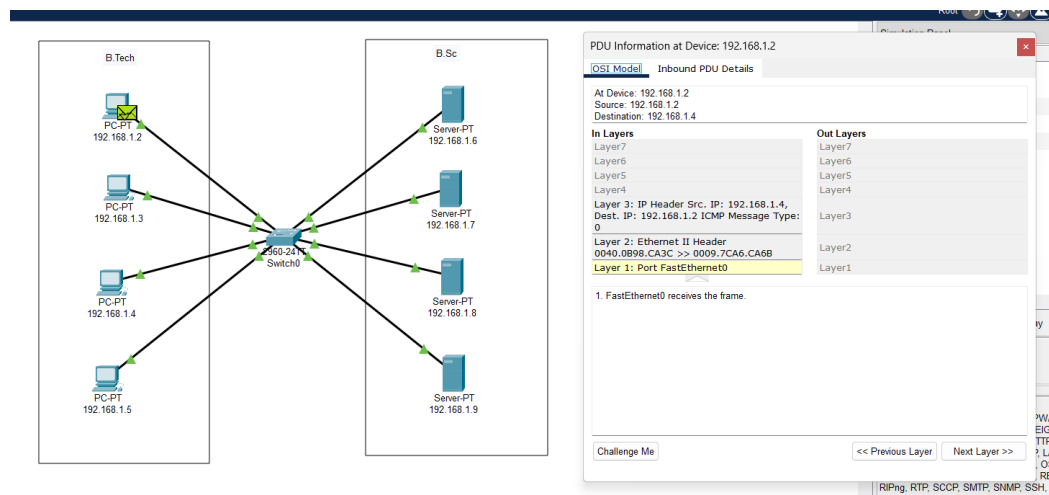
Date: 02/07/2025

Lab Practical #05:

Study the concept of VLAN using packet tracer.

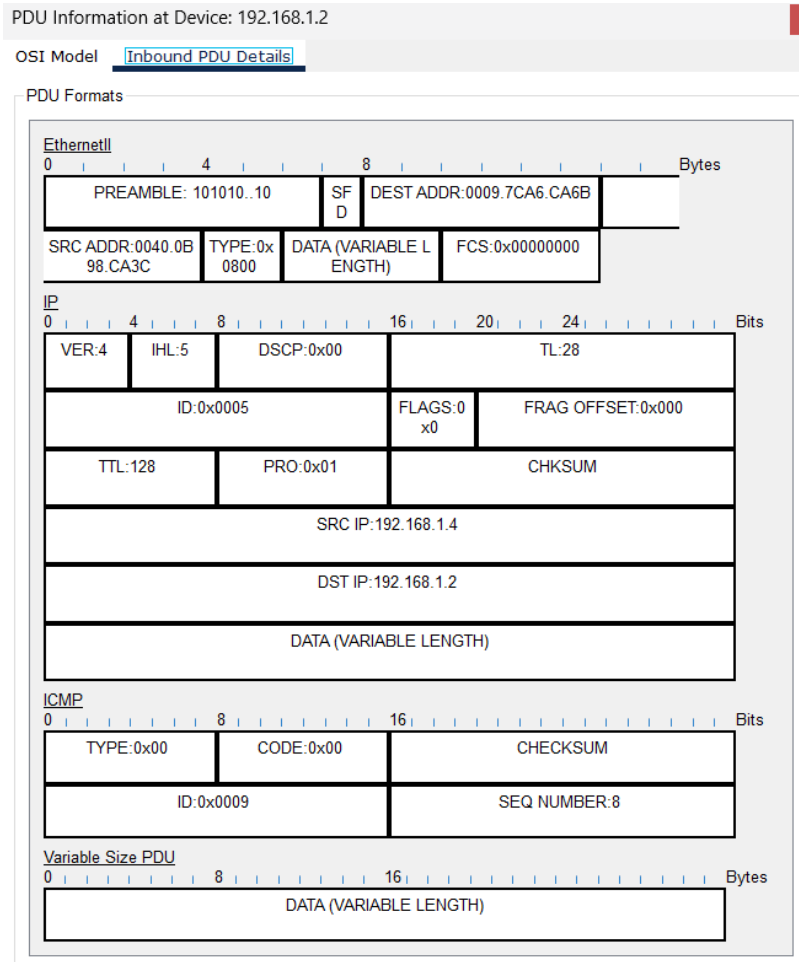
Practical Assignment #05:

1. Implement the different network structures in VLAN and VLAN trunking. Also check connectivity between them using ping command or PDU utility.

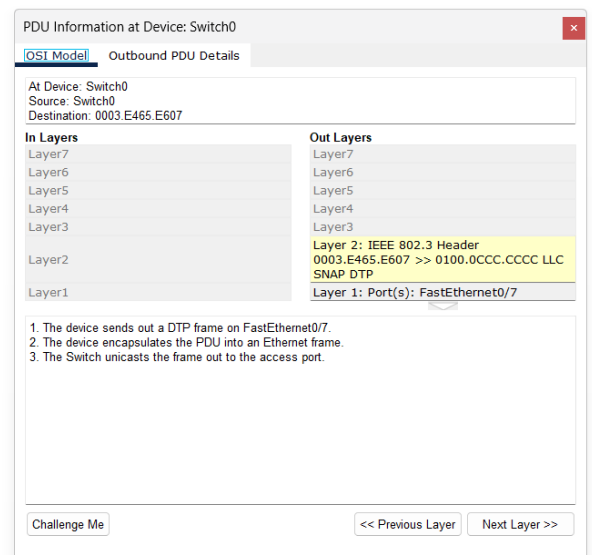
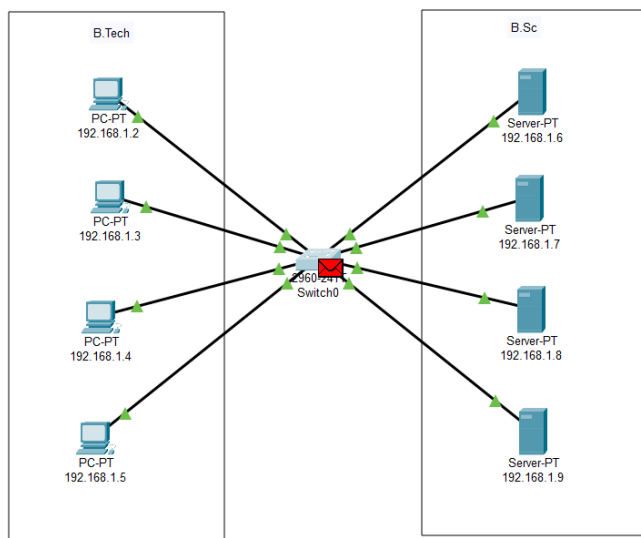


1.1 VLAN Circuit and OSI Model

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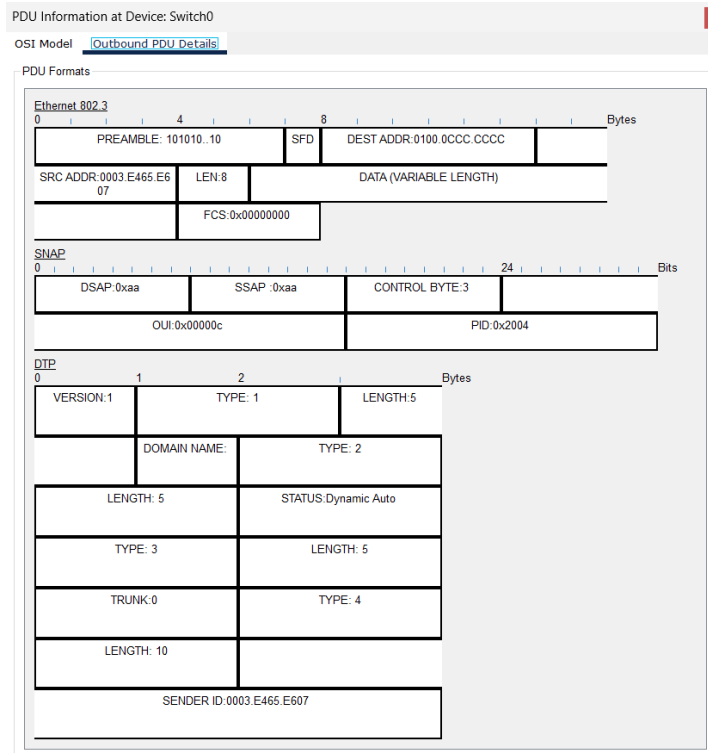


1.2 VLAN PC PDU Formats



1.3 Data share switch

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1.4 VLAN Switch PDU Formats

Switch0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

FastEthernet0/7

FastEthernet0/8

FastEthernet0/9

FastEthernet0/10

FastEthernet0/11

FastEthernet0/12

FastEthernet0/13

FastEthernet0/14

FastEthernet0/15

FastEthernet0/16

FastEthernet0/17

VLAN Configuration

VLAN Number

VLAN Name

Add Remove

VLAN No	VLAN Name
1	default
10	B.Tech
20	B.Sc.
1002	fdi-default
1003	token-ring-default
1004	fdinet-default
1005	trnet-default

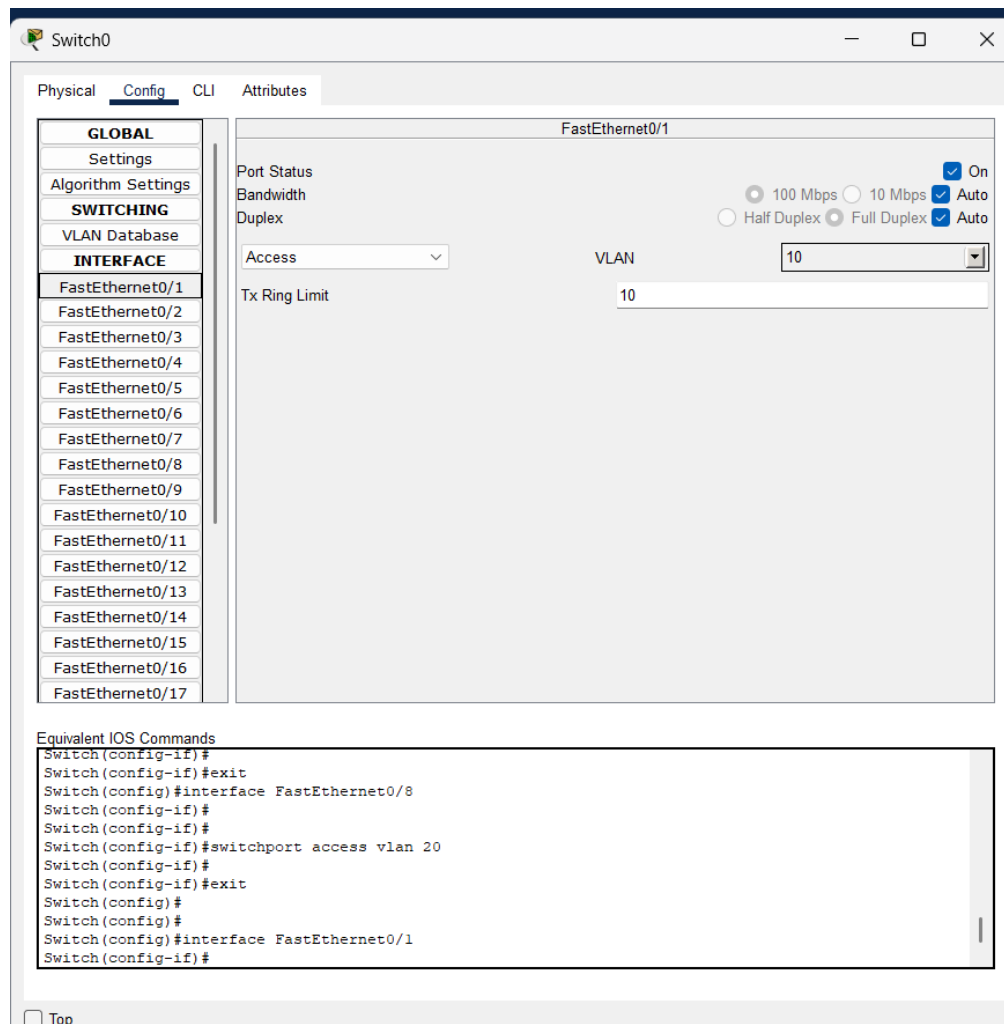
Equivalent IOS Commands

```
Switch(config-if) #
Switch(config-if) #switchport access vlan 20
Switch(config-if) #
Switch(config-if) #exit
Switch(config) #interface FastEthernet0/8
Switch(config-if) #
Switch(config-if) #switchport access vlan 20
Switch(config-if) #
Switch(config-if) #exit
Switch(config) #
Switch(config) #
```

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1.5 VLAN Switch Database

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Switch0

Physical Config CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9
- FastEthernet0/10
- FastEthernet0/11
- FastEthernet0/12
- FastEthernet0/13
- FastEthernet0/14
- FastEthernet0/15
- FastEthernet0/16
- FastEthernet0/17

FastEthernet0/1

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Tx Ring Limit

Equivalent IOS Commands

```
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/8
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#
Switch(config)#
Switch(config)#interface FastEthernet0/1
Switch(config-if)#
```

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1.6 VLAN Switch port configuration