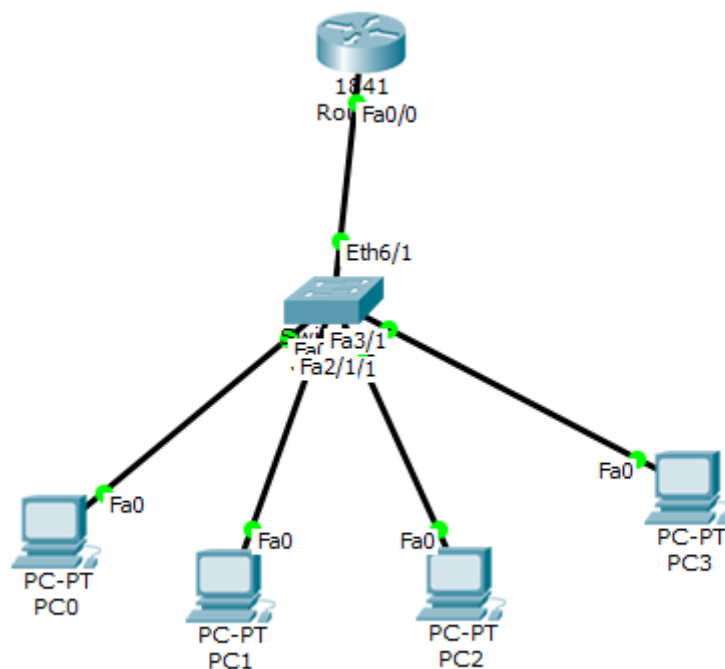


Aim: To construct a VLAN and make the PC's communicate among a VLAN.

Topology:



Adding newvlan to switch VLAN database

Switch0

Physical Config CLI

GLOBAL

- Settings
- Algorithm Settings

SWITCH

- VLAN Database

INTERFACE

- FastEthernet0/1
- FastEthernet1/1
- FastEthernet2/1
- FastEthernet3/1
- FastEthernet4/1
- FastEthernet5/1
- Ethernet6/1

VLAN Configuration

VLAN Number: 2

VLAN Name: newvlan

Add Remove

VLAN No	VLAN Name
1	default
2	newvlan
1002	fddi-default
1003	token-ring-default
1004	fddinet-default
1005	trnet-default

Equivalent IOS Commands

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#
```

Recognizing the device with newvlan for the switch

The screenshot shows the configuration window for Switch0, specifically the configuration for FastEthernet3/1. The left sidebar shows the configuration tree with the following sections: GLOBAL, Settings, Algorithm Settings, SWITCH, VLAN Database, and INTERFACE. Under the INTERFACE section, the following interfaces are listed: FastEthernet0/1, FastEthernet1/1, FastEthernet2/1, FastEthernet3/1, FastEthernet4/1, FastEthernet5/1, and Ethernet6/1. The main configuration area for FastEthernet3/1 shows the following settings: Port Status is checked (On), Bandwidth is set to 100 Mbps, Duplex is set to Full Duplex, Access is selected, VLAN is set to 2, and Tx Ring Limit is set to 10. The bottom section, Equivalent IOS Commands, shows the following commands:

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#
Switch(config)#interface FastEthernet3/1
Switch(config-if)#
```

The screenshot shows the configuration window for Switch0, specifically the configuration for FastEthernet2/1. The left sidebar shows the configuration tree with the following sections: GLOBAL, Settings, Algorithm Settings, SWITCH, VLAN Database, and INTERFACE. Under the INTERFACE section, the following interfaces are listed: FastEthernet0/1, FastEthernet1/1, FastEthernet2/1, FastEthernet3/1, FastEthernet4/1, FastEthernet5/1, and Ethernet6/1. The main configuration area for FastEthernet2/1 shows the following settings: Port Status is checked (On), Bandwidth is set to 100 Mbps, Duplex is set to Full Duplex, Access is selected, VLAN is set to 2, and Tx Ring Limit is set to 10. The bottom section, Equivalent IOS Commands, shows the following commands:

```
Switch(config-if)#exit
Switch(config)#interface FastEthernet3/1
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet3/1
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet2/1
Switch(config-if)#
```

newvlan for the router

The screenshot shows the Router3 GUI with the 'Config' tab selected. On the left sidebar, the 'VLAN Database' option is highlighted under the 'SWITCHING' section. The main area is titled 'VLAN Configuration' and contains two input fields: 'VLAN Number' with the value '2' and 'VLAN Name' with the value 'newvlan'. Below these fields are 'Add' and 'Remove' buttons. A table lists existing VLANs:

VLAN No	VLAN Name
1	default
2	newvlan
1002	fddi-default
1003	token-ring-default
1004	fddinet-default
1005	trnet-default

Below the table, the 'Equivalent IOS Commands' section shows the following commands in a text area:

```
Router>enable
Router#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.
Router(vlan)#
```

The screenshot shows the Router3 GUI with the 'CLI' tab selected. The main area is titled 'IOS Command Line Interface' and displays a text area with the following commands and output:

```
Router(config-subif)#ip address 192.168.2.1 255.255.255.0
Router(config-subif)#no shut
Router(config-subif)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

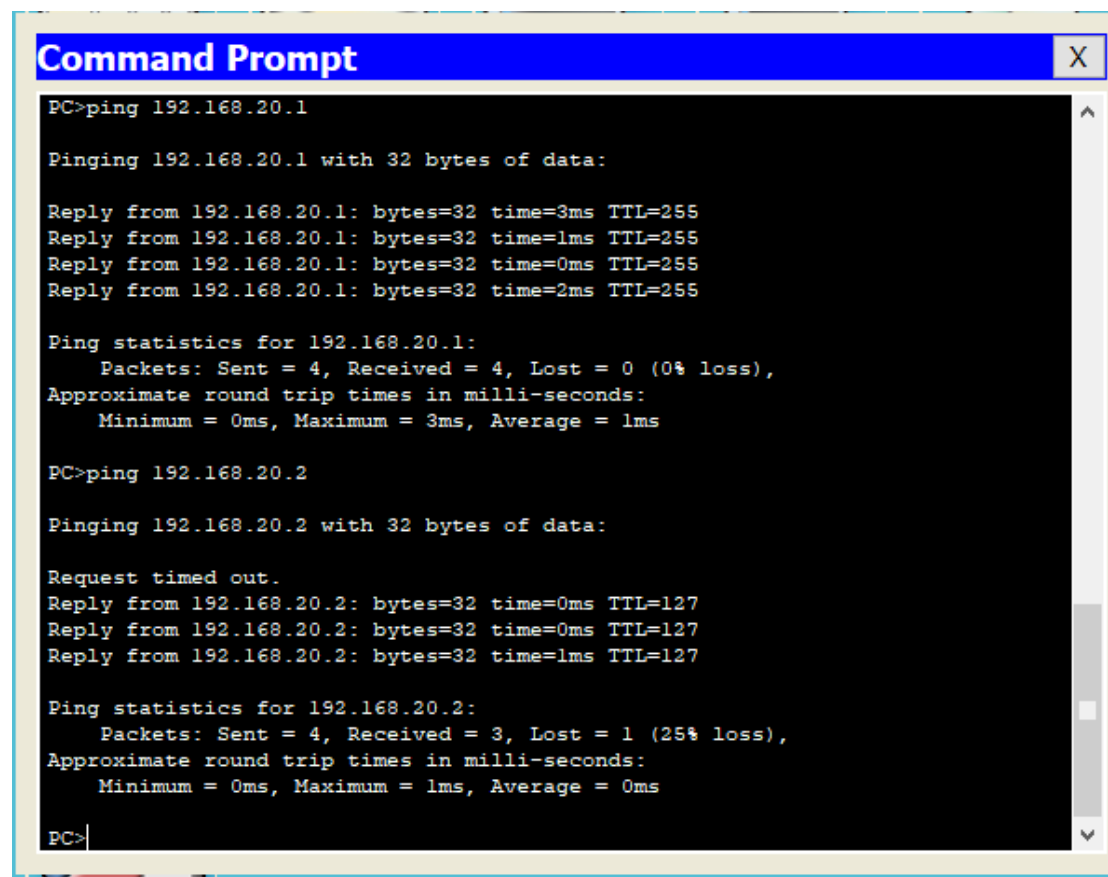
Router#
Router#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Router(vlan)#exit
APPLY completed.
Exiting....
Router#
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fastethernet0/0.1
Router(config-subif)#ip address 192.168.20.1 255.255.255.0
Router(config-subif)#no shut
Router(config-subif)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
```

At the bottom right of the CLI window, there are 'Copy' and 'Paste' buttons.

Ping output:



```
Command Prompt
PC>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time=3ms TTL=255
Reply from 192.168.20.1: bytes=32 time=1ms TTL=255
Reply from 192.168.20.1: bytes=32 time=0ms TTL=255
Reply from 192.168.20.1: bytes=32 time=2ms TTL=255

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

PC>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.20.2: bytes=32 time=0ms TTL=127
Reply from 192.168.20.2: bytes=32 time=0ms TTL=127
Reply from 192.168.20.2: bytes=32 time=1ms TTL=127

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>
```