VASAVI COLLEGE OF ENGINEERING

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DEPARTMENT OF : ECE

NAME OF THE LABORATORY : Computer Networks

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2.7.6 - Implementation of Basic Connectivity

Aim:- To implement basic connectivity between switches and PC

Objectives:-

part 1: Perform a basic configuration on S_1 and S_2

part 2: Configure the PCs

part 3: Configure the switch management interface

Requirements:- A P.C loaded with CISCO packet tracer

Procedure:-

Part 1:- Perform a basic configuration on S_1 and S_2.

Complete the following steps on S_1 and S_2

Step 1:- Configure S_1 with a hostname

a) Click on S_1 and then click the CLI tab.

b) Enter the correct command to configure the hostname as S_1

Step 2:- Configure the console and encrypted privileged EXEC mode passwords.

a) Use "cisco" for the console password.

b) Use "class" for the privileged EXEC mode password

step 3:- Verify the password configurations for S_1

step 4:- Configure an MOTD banner

Use an appropriate banner text to warn unauthorized access. The following text is an example:

Authorized access only. Violators will be prosecuted to the full extent of the law

Addressing Table :-

Device	Interface	IP Address	Subnet Mask
S1	VLAN1	192.168.1.253	255.255.255.0
S2	VLAN2	192.168.1.254	255.255.255.0
PC1	NIC	192.168.1.1	255.255.255.0
PC2	NIC	192.168.1.2	255.255.255.0

step 5 :- Solve the configuration file to NVRAM
step 6 :- Repeat steps 1 to 5 for S_2

The above steps require following coding for switches S_1 & S_2.

```
switch>enable
switch# show running-config
switch# configure terminal
switch(config)# hostname S1
S1(config)# exit
S1# configure terminal
S1(config)# line console 0
S1(config-line)# password cisco
S1(config-line)# login
S1(config-line)# exit
S1(config)# exit
S1# exit.
```

User Access Verification:

```
password :                    (Give cisco)
S1>enable
S1# config
S1(config)# enable secret class
S1(config)# exit
S1# show run
```

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S1# config t
S1(config)# banner motd "Authorized access only. Violaters will be prosecuted to the full extent of the law"
S1(config)# exit
S1# copy running-config startup-config
Repeat the same steps for switch S2 to configure

Part 2 :- Configure the PCs.

Step1 :- Configure PC1 and PC2 with IP addresses

a) Click PC1 and then click on desktop tab.
b) Click IP configuration. In the Addressing table, we have the IP address of ~~PC0~~ PC1 as 192.168.1.1 and the subnet mask is 255.255.255.0. Enter this information for PC1 in the IP configuration window.
c) Repeat steps 1a and 1b for PC2.

Step2 :- Test connectivity to switches

a) Click on PC1. Close the IP configuration window. In the Desktop tab, click on command prompt
b) Type the ping command and the IP address for S1 and press
Enter

packet Tracer PC command line 1.0

PC> Ping 192.168.1.253

part 3: Configure the switch Management Interface
Configure S_1 and S_2 with an IP address

step 1:- Configure S_1 with an IP address
Use the following commands to configure S_1 with an IP addres
S1# configure terminal
S1# (config)# interface vlan1
S1 (config-if)# ip address 192.168.10.253 255.255.255.0
S1 (config-if)# no shutdown
S1 (config-if)#
S1 (config-if)# exit
S1#

step 2:- Configure S_2 with an IP address
Using the information in the addressing table and following above commands, configure S_2 with an IP addres.

step 3:- Verify the IP address configuration on S_1 and S_2.
Use the "show ip interface brief" command to display the IP address and status of all the switch ports and interfaces. You can also use the "show running-config" command.

Step 4:- Save configurations for S_1 and S_2 for NVRAM
S1# copy running-config startup-config.

Step 5 :- Verify network connectivity

Network connectivity can be verified using the ping command It is very important that connectivity exists throughout the network. corrective action must be taken if there is a failure. Ping S_1 and S_2 from PC_1 and PC_2.

a) Click PC_1 and then click the Desktop tab
b) Click command prompt
c) Ping the IP address for PC_2
d) Ping the IP address for S_1
e) Ping the IP address for S_2

Note:- You can also use the ping command on the switch CL and on PC_2.

Result:- Configured switches, PCs and verified the network connectivity between the PCs and switches.