**Net 1060 Introduction to Networks Lab: # 2.9.2**

**Name: Andrew Koenig**

**Follow the instructions down below for the lab itself. For this lab, all answers need to be in blue font. For the questions right below, answer in complete sentences. You will also have to copy and paste your running configurations of each device configured to the bottom of this document. Let the instructor know if you have any questions.**

***Lab Analysis Report***

1. Using complete sentences summarize work you completed during the lab.

I set up a small network and configured the switches and pc’s on it.

2. Using complete sentences describe what you learned from the lab. Hint; look at the lab objectives listed at the top of the lab section.

I became more familiar with setting up a basic network and configuring it.

***Problems Encountered***

1. Using complete sentences describe any problem(s) experienced during lab.

No problems

2. Using complete sentences describe how you solved your problem(s).

No problems

3. Using complete sentences explain if you needed any assistance with the lab; then list what you learned from that assistance.

No problems

Lab - Basic Switch and End Device Configuration

# Topology



# Addressing Table

|  |  |  |  |
| --- | --- | --- | --- |
| Device | Interface | IP Address | Subnet Mask |
| S1 | VLAN 1 | 192.168.1.1 | 255.255.255.0 |
| S2 | VLAN 1 | 192.168.1.2 | 255.255.255.0 |
| PC-A | NIC | 192.168.1.10 | 255.255.255.0 |
| PC-B | NIC | 192.168.1.11 | 255.255.255.0 |

# Objectives

* Set Up the Network Topology
* Configure PC Hosts
* Configure and Verify Basic Switch Settings

# Background / Scenario

In this lab, you will build a simple network with two hosts and two switches. You will also configure basic settings including hostname, local passwords, and login banner. Use **show** commands to display the running configuration, IOS version, and interface status. Use the **copy** command to save device configurations.

You will apply IP addressing for this lab to the PCs and switches to enable communication between the devices. Use the **ping** utility to verify connectivity.

**Note**: The switches used are Cisco Catalyst 2960s with Cisco IOS Release 15.0(2) (lanbasek9 image). Other switches and Cisco IOS versions can be used. Depending on the model and Cisco IOS version, the commands available and output produced might vary from what is shown in the labs.

**Note**: Make sure that the switches have been erased and have no startup configurations. Refer to Appendix A for the procedure to initialize and reload a switch.

# Required Resources

* 2 Switches (Cisco 2960 with Cisco IOS Release 15.0(2) lanbasek9 image or comparable)
* 2 PCs (Windows with terminal emulation program, such as Tera Term)
* Console cables to configure the Cisco IOS devices via the console ports
* Ethernet cables as shown in the topology

# Instructions

## Set Up the Network Topology

In this step, you will cable the devices together according to the network topology.

* + 1. Power on the devices.
    2. Connect the two switches.
    3. Connect the PCs to their respective switches.
    4. Visually inspect network connections.

## Configure PC Hosts

* + 1. Configure static IP address information on the PCs according to the Addressing Table.
    2. Verify PC settings and connectivity.

## Configure and Verify Basic Switch Settings

* + 1. Console into the switch. Enter the global configuration mode.

Open Configuration Window

* + 1. Give the switch a name according to the Addressing Table.
    2. Prevent unwanted DNS lookups.
    3. Enter local passwords. Use **class** as the privileged EXEC password and **cisco** as the password for console access.
    4. Configure and enable the SVI according to the Addressing Table.
    5. Enter a login MOTD banner to warn about unauthorized access.
    6. Save the configuration.
    7. Display the current configuration.
    8. Display the IOS version and other useful switch information.
    9. Display the status of the connected interfaces on the switch.

Close Configuration Window.

* + 1. Configure switch S2.
    2. Record the interface status for the following interfaces.

| Interface | S1 Status | S1 Protocol | S2 Status | S2 Protocol |
| --- | --- | --- | --- | --- |
| F0/1 | up | up | up | up |
| F0/6 | blankup | up | down | blank |
| F0/18 | blankdown | down | up | up |
| VLAN 1 | up | up | up | up |

* + 1. From a PC, ping S1 and S2. The pings should be successful.
    2. From a switch, ping PC-A and PC-B. The pings should be successful.

# Reflection Question

Why some FastEthernet ports on the switches are up and others are down?

Only the ones being used need to be up.

What could prevent a ping from being sent between the PCs?

Incorrect connections between the devices, or incorrect ip configuration.

End of Document

Graphical user interface

Description automatically generated with medium confidence

S2#show running-config

Building configuration...

Current configuration : 1196 bytes

!

version 15.0

no service timestamps log datetime msec

no service timestamps debug datetime msec

service password-encryption

!

hostname S2

!

enable secret 5 $1$mERr$1cIyfB.IbL/RECQDADkZL0

!

!

!

!

!

!

spanning-tree mode pvst

spanning-tree extend system-id

!

interface FastEthernet0/1

!

interface FastEthernet0/2

!

interface FastEthernet0/3

!

interface FastEthernet0/4

!

interface FastEthernet0/5

!

interface FastEthernet0/6

!

interface FastEthernet0/7

!

interface FastEthernet0/8

!

interface FastEthernet0/9

!

interface FastEthernet0/10

!

interface FastEthernet0/11

!

interface FastEthernet0/12

!

interface FastEthernet0/13

!

interface FastEthernet0/14

!

interface FastEthernet0/15

!

interface FastEthernet0/16

!

interface FastEthernet0/17

!

interface FastEthernet0/18

!

interface FastEthernet0/19

!

interface FastEthernet0/20

!

interface FastEthernet0/21

!

interface FastEthernet0/22

!

interface FastEthernet0/23

!

interface FastEthernet0/24

!

interface GigabitEthernet0/1

!

interface GigabitEthernet0/2

!

interface Vlan1

ip address 192.168.1.2 255.255.255.0

!

banner motd ^CAuthorized Users only^C

!

!

!

line con 0

password 7 0822404F1A0A

!

line vty 0 4

login

line vty 5 15

login

!

!

!

!

end

S2#

S1#show running-config

Building configuration...

Current configuration : 1198 bytes

!

version 15.0

no service timestamps log datetime msec

no service timestamps debug datetime msec

service password-encryption

!

hostname S1

!

enable secret 5 $1$mERr$YwBF8DxiCS7BCooHahYIq/

!

!

!

!

!

!

spanning-tree mode pvst

spanning-tree extend system-id

!

interface FastEthernet0/1

!

interface FastEthernet0/2

!

interface FastEthernet0/3

!

interface FastEthernet0/4

!

interface FastEthernet0/5

!

interface FastEthernet0/6

!

interface FastEthernet0/7

!

interface FastEthernet0/8

!

interface FastEthernet0/9

!

interface FastEthernet0/10

!

interface FastEthernet0/11

!

interface FastEthernet0/12

!

interface FastEthernet0/13

!

interface FastEthernet0/14

!

interface FastEthernet0/15

!

interface FastEthernet0/16

!

interface FastEthernet0/17

!

interface FastEthernet0/18

!

interface FastEthernet0/19

!

interface FastEthernet0/20

!

interface FastEthernet0/21

!

interface FastEthernet0/22

!

interface FastEthernet0/23

!

interface FastEthernet0/24

!

interface GigabitEthernet0/1

!

interface GigabitEthernet0/2

!

interface Vlan1

ip address 192.168.1.1 255.255.255.0

!

banner motd ^CAuthorized Persons Only^C

!

!

!

line con 0

password 7 0802404F1A0A

!

line vty 0 4

login

line vty 5 15

login

!

!

!

!

end

S1#