TEIN3 Internship Program Weekly Report

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This is my internship report for the first week. The subject/topics which I learned during the first week (2^{nd} -6^{th} July) are on:

1. OSI - TCP/IP - Application Layer Services,
2. Basic Router Configuration,
3. Password Recover of Cisco Router 2811,
4. IP Addressing and
5. Subnetting.

1. OSI – TCP/IP – Application Layer Services

OSI Model (Open Systems Interconnection) model .The OSI Model is used to describe networks and network application. There are seven Layers of OSI Model. Each layer takes care of a very specific job, and then passes the data onto the next layer. They are:

I. Application Layer
II. Presentation Layer
III. Session Layer
IV. Transport Layer
V. Network Layer
VI. Data Link
VII. Physical Layer

2. Basic Router Configuration

Here Mr. Duy nm my instructor taught me how to do basic router configuration and the some of the basic commands which I used for router configuration are:

- To configure terminal

  Router>enable
  Router#configure terminal
  Router(config)#

- To configure Router Name

  Router(config)#**hostname Cisco-**here Cisco is the hostname
  Router(config)#

- Set a console password

  Router(config)#**line con 0**
  Router(config-line)#**login**
  Router(config-line)#**password Cisco** –Cisco is the password

- Set a telnet password

  Router(config)#**line vty 0 4**
  Router(config-line)#**login**
  Router(config-line)#**password cisco**

- Enable an interface

  Router(config-if)#**no shutdown**

- To disable an interface

  Router(config-if)#**shutdown**

- To add an IP address to a interface

  Router(config-if)#**ip addr 10.1.1.1 255.255.255.0**

I also did some activity on basic router configuration using the command which I have learned.

Configuration example

Router>enable
Router#show ip int br ------ Here it will show the name of the interfaces in brief

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	unset	administratively down	down
FastEthernet1/0	unassigned	YES	unset	administratively down	down
Serial2/0	unassigned	YES	unset	administratively down	down
Serial3/0	unassigned	YES	unset	administratively down	down
FastEthernet4/0	unassigned	YES	unset	administratively down	down
FastEthernet5/0	unassigned	YES	unset	administratively down	down

Router#configure terminal
Router(config)#hostname Boston
Boston(config)#enable password 1234
Boston (config)#enable secret 123456
Boston (config)#interface 0/0
Boston (config-if)#ip add 192.168.10.1 255.255.255.0
Boston (config-if)#clock rate 56000
Boston (config-if)#no shutdown
Boston (config-if)#exit
Boston (config)#interface 1/0
Boston (config-if)#ip add 192.168.20.1 255.255.255.0
Boston (config-if)#no shutdown
Boston (config-if)#exit

Boston #copy running-config startup-config ----------saves the running configuration to NVRAM

3. Password Recovery for Cisco 2811

I also learned how to reset Cisco router password.

4. IP Addressing

Here I learned about:

IP addressing

IP Address – Internet Protocol Address is a address that is assigned on every computer (also routers and switches) to identify them. *An IP address is a 32-bit address. There are different types of classes namely classes A, B, C, D and E:*

- ✓ Classful IP addressing
- ✓ The IPv4 Classful Addressing Structure
- ✓ Classless IP addressing
- ✓ CIDR – Classless Inter-Domain Routing and
- ✓ VLSM – Variable Length Subnet Masking.

5. How to subnet

Here I learned subnetting Class A, B and C using binary. I also learned how to convert Decimal into Binary and Binary into Decimal. I also did activity on Basic VLSM Calculation and Addressing Design.

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