Written Lab 3: Intro to TCP/IP

Key Networking Terms:

1. Telnet- Protocol to remotely simulate a command line terminal. There is no encryption.
2. Secure Shell (SSH)- similar to telnet, but in encrypted. This connection can do logins, run programs remotely, and move files between systems.
3. Automatic Private IP Addressing (APIPA)- A feature that allows clients to automatically assign an IP and subnet mask, when DHCP isn’t available. IP ranges= 169.254.0.1 to 169.254.255.254 with a mask of 255.255.0.0 (Class B).

Procedures:

3.1 Question 6: How do you find the broadcast address from a listed IP address?

One would change all the host bits (the bits not associated with the network) to 1’s, which results in 255 if the entire octet is the host’s.

3.1 Question 7: Class A PRIVATE address range= 10.0.0.0 to 10.255.255.255

3.1 Question 8: Class B PRIVATE address range= 172.16.0.0 to 172.31.255.255

3.1 Question 9: Class C PRIVATE address range= 192.168.0.0 to 192.168.255.255

Conclusions and Discussion:

The readings in this chapter reinforced/solidified some of the information I previously have learned. In one of my CSC classes we are going over TCP and how it functions with timeouts and packet loss. Also, I learned more about the protocols and features I constantly hear about, like APIPA, DHCP, Telnet, SSH. I think one thing I am definitely going to have to study is everything that is in the TCP header; there is just so much AND so many things that can be in each category.

I am curious if the broadcast domains change if you get an address like 192.168.1.0/24. I remember changing addresses address allocated bits to hosts and network bits differently; I will have to look this up later.

Feedback

Good lab writeup, clearly demarcated sections, and succinct responses provided for all questions.

The reflection connecting the studies in your CSC classes with the networking protocols we are discussing in class, is helpful in learning about how these offer different network services needed for specific network aware applications.

Very good reflective comments about the "curiosity" you have regarding the nuances of broadcasts in software addressing. This is especially for testing/troubleshooting purposes. Researching answers to questions you are raising will further deepen and expand learning about these topics.