COIT11238 – Networked Infrastructure Foundations

Term 1, 2022

**Assessment 1 Portfolio Draft 1**

**Version 2**

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Week 01

1. What is the difference between bits and Bytes?

A bit is data that is stored on a computer as binary digits or "bits" for short, and holds a value of '1' or '0'. A byte is a collection of 8 bits and can store one character.

2. What is the difference between decimal, binary and hexadecimal number systems?

The difference between the three is that all use a different amount of digits to represent a number. Decimal uses any 10 digits between 0-9, binary uses any 2 digits between 0-1, and hexadecimal uses 10 digits between 0-9 and 6 characters between A-F.

3. Remind yourself of the definition of common prefixes in computer. That is, kilo, mega, giga and tera, as well as milli, micro and nano. Perform conversions between them, e.g. convert 12,345,678 Bytes to MB, convert 0.04567 s to ms.

12,345,678 bytes to MB = 12.345678

4. Identify the manufacturer, model and speed (in Hz) of your computers CPU. Does the CPU have multiple cores? If so, how many?

Intel Core i7-8700 @3.20GHz 6 cores

5. Hard Drive - $499

Advantages are that it is cheap however it is slow compared to others

SSD - $1370

Advantages is that it is a lot faster however very expensive

Dropbox - $363/year

Advantages are that it is cheap and safe, however the speed will be unmatched to the SSD.

6. Internet connection is Aussie Broadband, Fibreoptic

speeds are:

Download – 920.53 mbps

Upload – 47.51 mbps

7. The processes that use the most memory and RAM are google chrome, task manager, and antimalware service executable. To stop a process or program using task manager you right click on the program that you wish to stop and press "end task".

**Part 2:**

So far I am feeling quite good with my understanding of the networking tasks that have been handed out for week 1. This is due to my background knowledge of computers and networks being quite intermediate and the understanding coming quite easily. Ways to improve understanding would definitely be to just keep practising with scenarios and to apply knowledge from the lecture slides to assist you in competition of the tasks.

Week 02(the same style of summary as Week01)

Q2.

Diagram

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3.

IP Address: 192.168.1.247

Default Gateway: 192.168.1.1

Physical Address: F4-26-79-B3-91-23

4. Packets sent = 4, Packets received = 4

100% of Packets sent were received.

5. Download is the speed that data enters the network and Upload is the speed of which it leaves the network.

e.g. downloading and streaming television and sending an email.

Part 2:

My overall feeling from week 2 is good. The learning goals that were provided were able to be met and the functions that we learnt this week seemed to be straight forward enough to be able to get a grasp of and be able to use in practise activities. In order to improve my understanding on this topic and these functions, I could continue to use examples and work through activities that require this knowledge to be demonstrated and applied.

Week 03

A picture containing text, electronics, computer, desk

Description automatically generated**Lab exercise report: To Build a Simple Network with Two Computers**

|  |  |
| --- | --- |
| Desktop | Laptop |
| IP: 169.254.60.92 | IP: 169.254.134.42 |
| MAC: 04-D4-C4-04-3D-CD | MAC: 58-82-A8-8D-C6-82 |

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Steps to creating a file sharing service:

* After network has been established and file has been shared with other device
* Create a new folder on computer 1, it should have a green cable to show the network is connecting
* After the file is created you should be able to access the contents from both peer to peer devices
* Check by opening on both computers
* To ensure the file sharing service is working on both computers you can drop something from each computer in the file and extract it with the other computer.

**Summary:**Overall, this task was quite challenging at the start. However, after obtaining a grasp of the network concept and how it all was working together, seemed quite simple. The most difficult part was creating the file sharing service and getting the two computers to work together, this is because my desktop is windows 10 and the laptop that I’m currently working on is windows 11. The shared file just wasn’t working across the two devices at first. I think in the future with more practice I certainly will be able to become proficient in creating more complex networks and solving problems along the way.