**ITP 325 - Homework 02a**

**Deadline:**

1 minute before the next class.

**Submission:**

1. Answer the questions at the end of this file, and name the document hw02a.docx
2. Download the instructor’s GPG key from the following location:

<https://sites.google.com/a/usc.edu/chiso/files>

GPG encrypt the \*.docx with the instructor’s **and** your own GPG key.

1. Place the encrypted document into the repo and push to changes GitHub

**Procedure:**

1. Kali Linux is based off of Debian, so a lot of the documentation used for Ubuntu can be applied to Kali Linux as well. In order to practice working with Linux networking you will need to open up terminal in Kali and follow along the guide you are about to read.

<https://help.ubuntu.com/14.04/serverguide/network-configuration.html>

Skip over the section involving bridging.

<http://www.basicconfig.com/linuxnetwork/netcmd>

1. To answer some of the questions below you may need to use Google to help you find the answer. Remember that you can check you answers by just trying it within Kali Linux

**Question:**

1. What command would I use to test if Kali has access to the Internet? Write out the command that you would type into the terminal.
   1. You would use the ping command to test if Kali has access to the Internet so ping -c 4 google.com.
2. If trying to test the Internet connection failed, what are some things you will check to make sure they are configured correctly? Write out the command that you would type into the terminal.
   1. You can check the network interface with the command ifconfig. You can also use the tracepath command to show you where your connection is failing or where the slowness of the network is occurring.
3. If you’re using a virtual machine and without looking at the VM configuration, how can you tell what type of network setup you have for the Kali VM? Write out the command that you would type into the terminal, and explain how you would read it to figure the connection type.
   1. Command: ifconfig
4. If I wanted Kali Linux to use the OpenDNS servers, what are the different ways I can do this within Kali? Write out the command that you would type into the terminal.
   1. #echo nameserver 8.8.8.8 > /etc/resolv.conf
   2. This command will remove the current nameserver and set 8.8.8.8. It can be added alternate nameserver by using following syntax
   3. #echo nameserver 4.4.4.4 >> /etc/resolv.conf
5. If I’m having problems with DHCP, what is a command that I can command can I use to get networking up in Kali? What is the drawback with your solution? Write out the command that you would type into the terminal.
   1. You can set up static ip addresses with the following command: # ifconfig eth0

# ifconfig eth0 netmask

# ifconfig eth0 broadcast. The drawback with using static ip addresses is that you have to figure out what range is supported in your network as well as manually assign ip addresses from this range of numbers. It is time consuming and there is a large room for error.