**Linux for hackers 3 – analyzing and managing networks**

1)**ifconfig –** to see active network interfaces and get network information.

Eth0(first wired network connection and a hardware address) linux starts with 0 rather than 1 (eth1,eht2,…..)

2)**iwconfig –** checking wireless network devices with iwconfig.

3)changing your network information : **ifconfig eth0 192.168.247.129**

Above command will change the ip address

4)change network mask and broadcast address:

**ifconfig eth0 192.168.247.129 netmask 255.255.0.0 broadcast 192.168.1.255**

5)spoofing the MAC address : this is globally unique

**ifconfig eth0 down**

**ifconfig eth0 hw ether 00:11:22:33:44:55**

**ifconfig eth0 up**

now check ifconfig and see hw address has changed

6)Assigning new IP address from the DHCP server:

DHCP server: It assigns IP Addresses to all the systems on the subnet and keeps log files of which IP address is allocated to which machine at any one time. Usually to connect to internet from LAN. You must have a DHCP assigned IP. To request IP Address from the DHCP server call the DHCP server with the command dhcp client followed by interface you want the address assigned to. Kali on Debian uses **dhclient ($dhclient eth0)**

**DHCP discover 🡪 DHCP Offer 🡪 DHCP request 🡪 DHCP ACK**

If you **ifconfig** after the DHCP command, we should see that DHCP server assigned new IP address, new broadcast address, new netmask to eth0.

7) Manipulating the domain name system(DNS)

DNS translates domain names to IP addresses

Examining DNS with dig: what is dig? – It offers a way to gather DNS information about target domain. We can find target email server & potentially any subdomains and IP’s

**$dig hackers-arise.com ns** (here ns is the name server). This will reveal the IP address of the DNS server serving hackers-arise.com

**$dig hackers-arise.com mx** (mx is mail exchange server)