Cyber laws in Different Countries

Country Name	Laws/Acts	Website
United States	Section 107 of the Copyright Law mentions the doctrine of " fair use"	http://www.copyright.gov
	Online Copyright Infringement Liability Limitation Act	
	The Lanham (Trademark) Act (15 USC §§ 1051 - 1127)	http://www.uspto.gov
	The Electronic Communications Privacy Act	https://www.fas.org
	Foreign Intelligence Surveillance Act	https://www.fas.org
	Protect America Act of 2007	http://www.justice.gov
	Privacy Act of 1974	http://www.justice.gov
	National Information Infrastructure Protection Act of 1996	http://www.nrotc.navy.mil
	Computer Security Act of 1987	http://csrc.nist.gov
	Freedom of Information Act (FOIA)	http://www.foia.gov
	Computer Fraud and Abuse Act	http://energy.gov
	Federal Identity Theft and Assumption Deterrence Act	http://www.ftc.gov

Cyber laws in Different Countries

Country Name	Laws/Acts	Website
Australia	The Trade Marks Act 1995	http://www.comlaw.gov.au
	The Patents Act 1990	
	The Copyright Act 1968	
	Cybercrime Act 2001	
United Kingdom	The Copyright, Etc. and Trademarks (Offenses And Enforcement) Act 2002	http://www.legislation.gov.uk
	Trademarks Act 1994 (TMA)	
	Computer Misuse Act 1990	
China	Copyright Law of People's Republic of China (Amendments on October 27, 2001)	http://www.npc.gov.cn
	Trademark Law of the People's Republic of China (Amendments on October 27, 2001)	http://www.saic.gov.cn
India	The Patents (Amendment) Act, 1999, Trade Marks Act, 1999, The Copyright Act, 1957	http://www.ipindia.nic.in
	Information Technology Act	http://www.dot.gov.in
Germany	Section 202a. Data Espionage, Section 303a. Alteration of Data, Section 303b. Computer Sabotage	http://www.cybercrimelaw.net

Cyber laws in Different Countries

Country Name	Laws/Acts	Website
Italy	Penal Code Article 615 ter	http://www.cybercrimelaw.net
Japan	The Trademark Law (Law No. 127 of 1957), Copyright Management Business Law (4.2.2.3 of 2000)	http://www.iip.or.jp
Canada	Copyright Act (R.S.C., 1985, c. C-42), Trademark Law, Canadian Criminal Code Section 342.1	http://www.laws-lois.justice.gc.ca
Singapore	Computer Misuse Act	http://www.statutes.agc.gov.sg
South Africa	Trademarks Act 194 of 1993	http://www.cipc.co.za
	Copyright Act of 1978	http://www.nlsa.ac.za
South Korea	Copyright Law Act No. 3916	http://home.heinonline.org
	Industrial Design Protection Act	http://www.kipo.go.kr
Belgium	Copyright Law, 30/06/1994	http://www.wipo.int
	Computer Hacking	http://www.cybercrimelaw.net
Brazil	Unauthorized modification or alteration of the information system	http://www.mosstingrett.no
Hong Kong	Article 139 of the Basic Law	http://www.basiclaw.gov.hk

Introduction to Network and Cyber Security

Network:

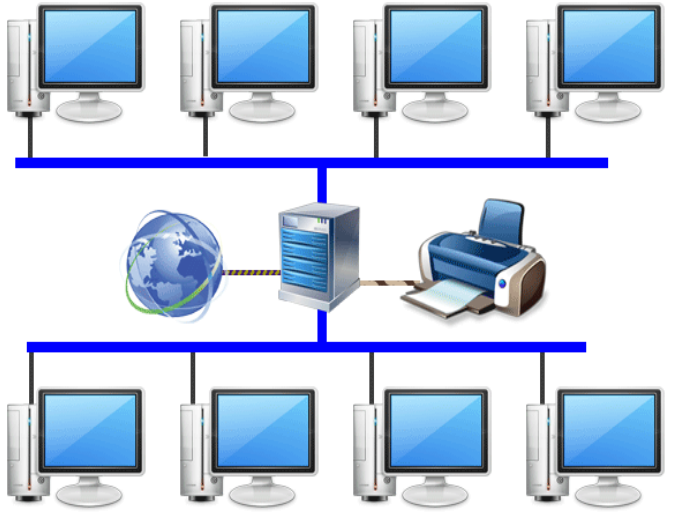
Network is a collection of Computer and Electronic Devices connected to one another to allow sharing of data, files and other computing resources.

The smallest form of Network is LAN (Local Area Network) which is used by small infra organizations for creating Network which then muzzle ups to MAN (Metropolitan Area Network) which generally covers a geographical region of the size of a metro area which then lifts up to WAN (Wide area Network).

Introduction to Network and Cyber Security

Internet:

Internet is worldwide network of computer networks



How does it work:

- Most computers aren't connected directly to internet
- They are connected to smaller networks
- Which are connected through gateways(Routers/Switches) to the internet backbone

Networking Devices

Network devices are devices used to connect computers or other electronic devices together so that they can share files or resources. These devices move and control network.

Network devices are :

- Network Interface Card
- Switch
- Hub
- Router

Networking Devices

Network Interface Card

Switch

Hub

Router

What is Protocol

- A Protocol is a established set of rules that determine how data is transmitted between different devices in the same network.
- It Defines the Format of Data that is being Sent and Received.
- Some protocols are Designed for Reliable and High-Performance Network communication by Compressing Data.
- Applications like Web Browsers contains a list of software that supports Advance Protocols, necessary for Application to Function.

Introduction to IP Address

- Internet Protocol is a set of rules governing the format of data sent over the internet or the network.
- An IP Address is a 32-bit sequence contains 1's and 0's
- IP is used to identify machines on a network
- IP address consist of four sections
- Each section is 8 bits long
- Each section has range from 0 to 255

Types of IP Address

There are 2 types of IP address

- Static IP Address → IP Address assigned to host manually
- Dynamic IP Address → IP Address assigned by server when host boots

Classification of IP Address

Class	Address Range	Supports
Class A	1.0.0.1 to 126.255.255.254	Supports 16 million hosts on each of 127 networks.
Class B	128.1.0.1 to 191.255.255.254	Supports 65,000 hosts on each of 16,000 networks.
Class C	192.0.1.1 to 223.255.254.254	Supports 254 hosts on each of 2 million networks.
Class D	224.0.0.0 to 239.255.255.255	Reserved for multicast groups.
Class E	240.0.0.0 to 254.255.255.254	Reserved for future use, or Research and Development Purposes.

Concept of Ports

The term Port can check with either physical or virtual connection points

Example of physical connection port:

Ethernet Port

USB Port

Virtual Port - A port is associated with an IP address of host as well as the type of protocol used for communication. The purpose of ports is uniquely identify different applications or services running on a single computer.

Total number of ports in a computer range from 1 to 65535 (port number 0 is reserved and can't be used)

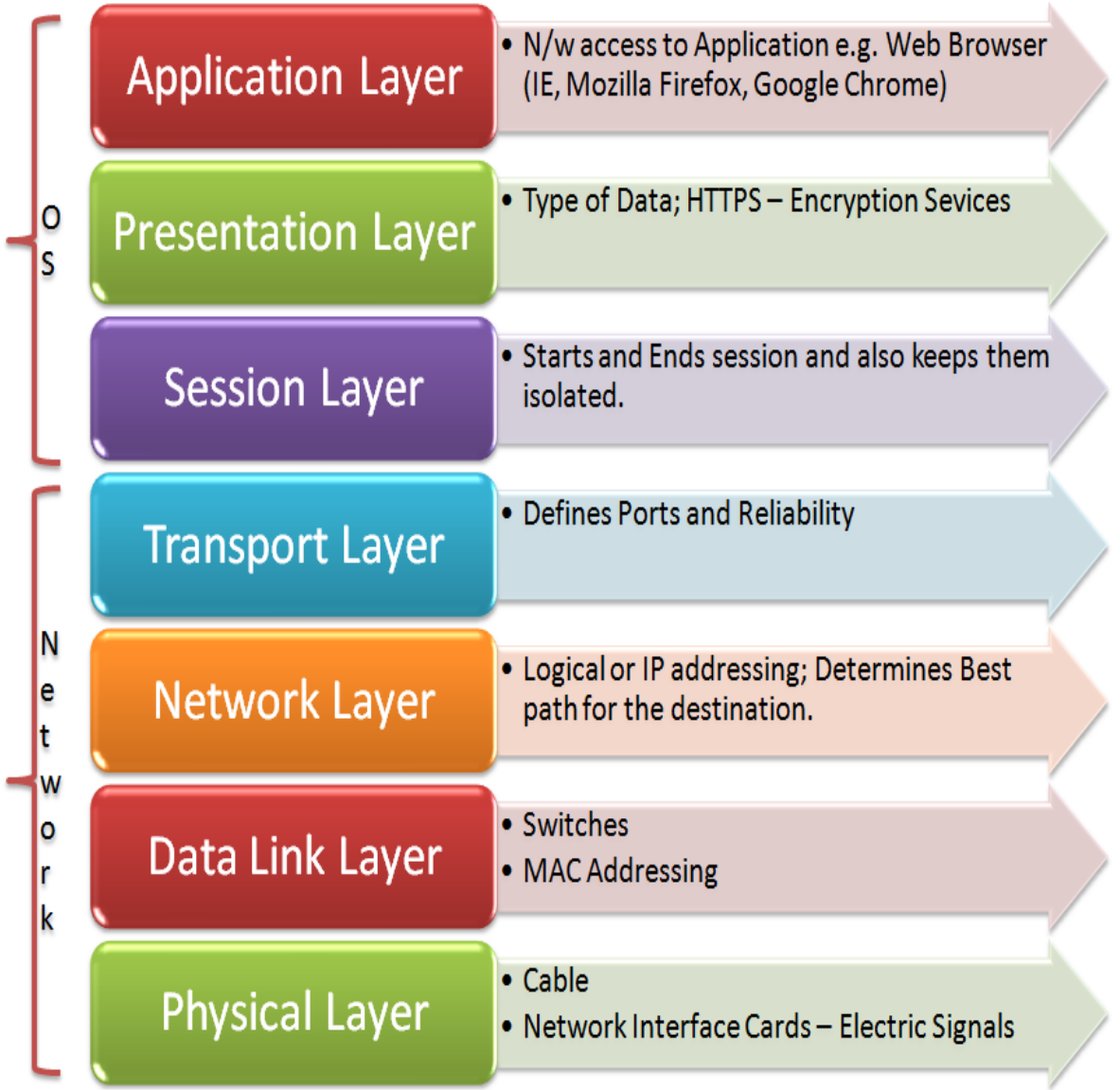
Important Port numbers and Services

ftp	21/tcp	#FTP. control
Ssh	22/tcp	#SSH Remote Login Protocol
telnet	23/tcp	
Smtp	25/tcp	#Simple Mail Transfer Protocol
http	80/tcp	#World Wide Web
kerberos	88/tcp	#Kerberos
pop3	110/tcp	#Post Office Protocol - Version 3
imap	143/tcp	#Internet Message Access Protocol
ldap	389/tcp	#Lightweight Directory Access Protocol
https	443/tcp	#HTTP over TLS/SSL
ftps	990/tcp	#FTP control, over TLS/SSL
telnets	992/tcp	#Telnet protocol over TLS/SSL
imaps	993/tcp	#IMAP4 protocol over TLS/SS

OSI Reference Model

OSI Model:

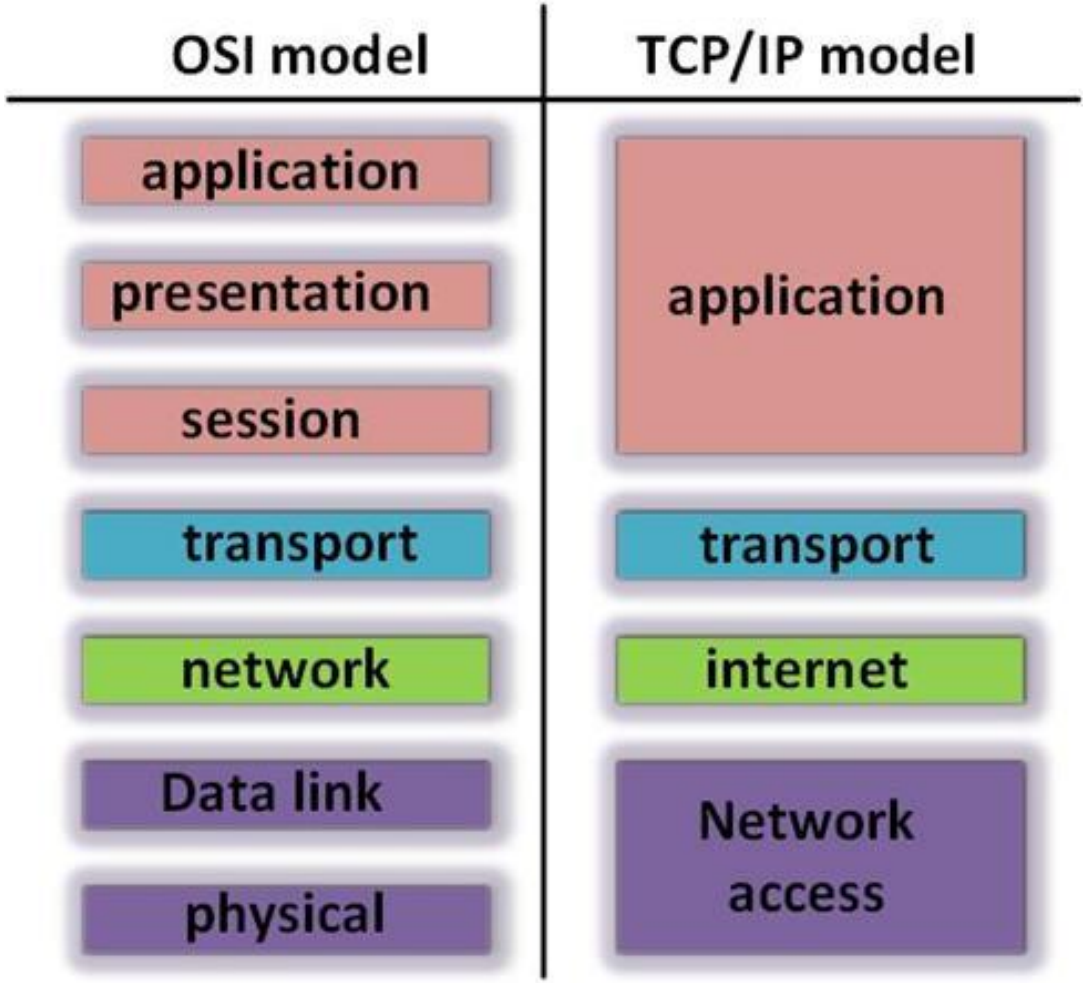
- Open Systems Interconnect (OSI) Model
- Who Made : International standard Organization (ISO)
- OSI isn't a protocol, it's a model for understanding and designing a architecture that's flexible and robust
- The OSI model describes how data flows from one computers, through a network to another computer
- It Consist of 7 Layers



TCP/IP Model

TCP/IP Model:

Networking professionals are differ in their opinions on which model to use. because of the character of the industry it's necessary to become aware of both. Both the OSI & TCP/IP models are going to be mentioned throughout the curriculum. the main target are going to be on the follow: TCP as a OSI Layer 4 protocol IP as a OSI Layer 3 protocol Ethernet as a Layer 2 & Layer 1 technology Remember that there's a difference between a model and an actual protocol that's utilized in networking. The OSI model are going to be wont to describe TCP/IP protocols.



Introduction to Kali Linux

- Kali Linux is a Debain based Linux distribution and flavor of Unix OS family
- This OS is maintained and Funded by Offensive Security Limited
- Kali is a Open source and can be download from www.kali.org
- OS is designed for Penetration Testing and Digital Forensics which was developed by Mati Aharoni and Devon Kearns of Offensive Security
- It was Rewrite of Backtrack

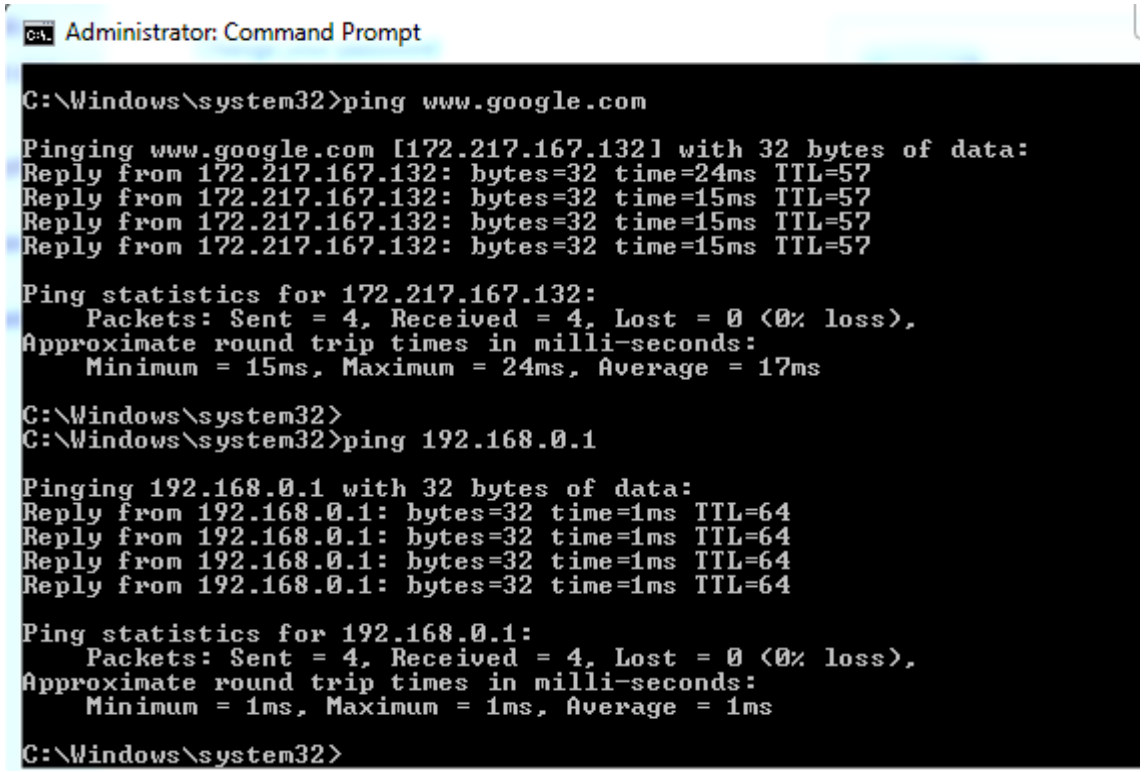
Windows / Linux Commands

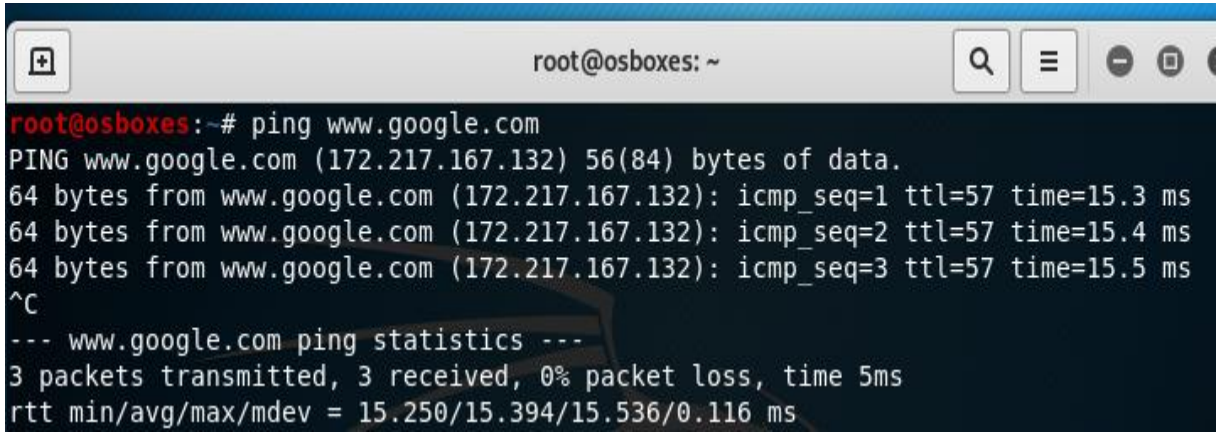
Below are the list of Basic commands using in Windows / Linux

Ping Command:

This command will help you to know the whether host is live or not

Syntax: ping www.google.com (or) ping <ip>





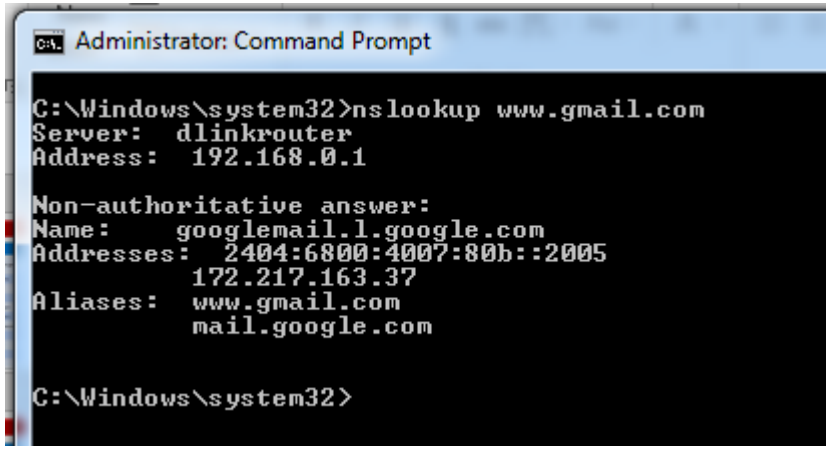
Windows / Linux Commands

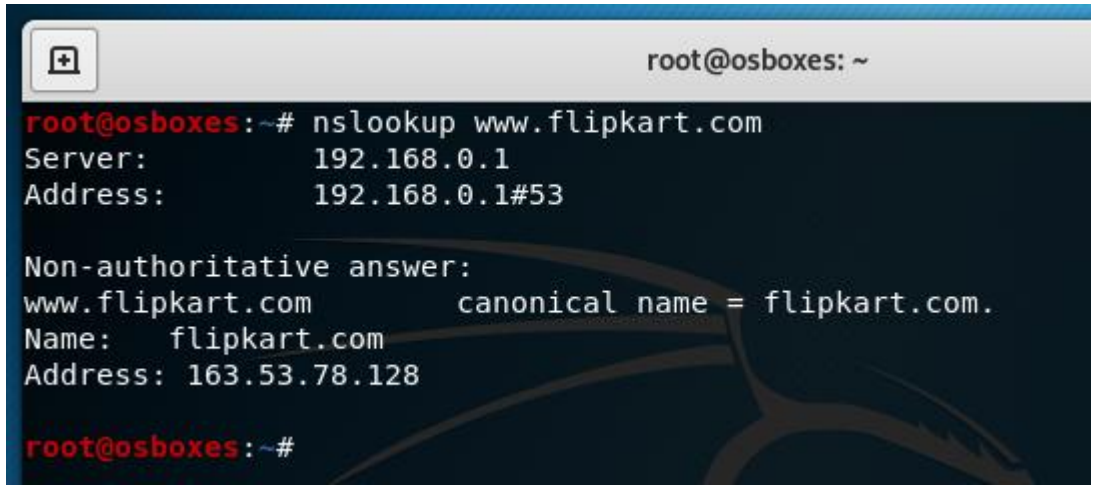
Below are the list of Basic commands using in Windows / Linux

nslookup Command:

This command will help you to resolve DNS to IP, let say if you don't know the ip address of website you can use this command

Syntax: nslookup www.google.com





Windows / Linux Commands

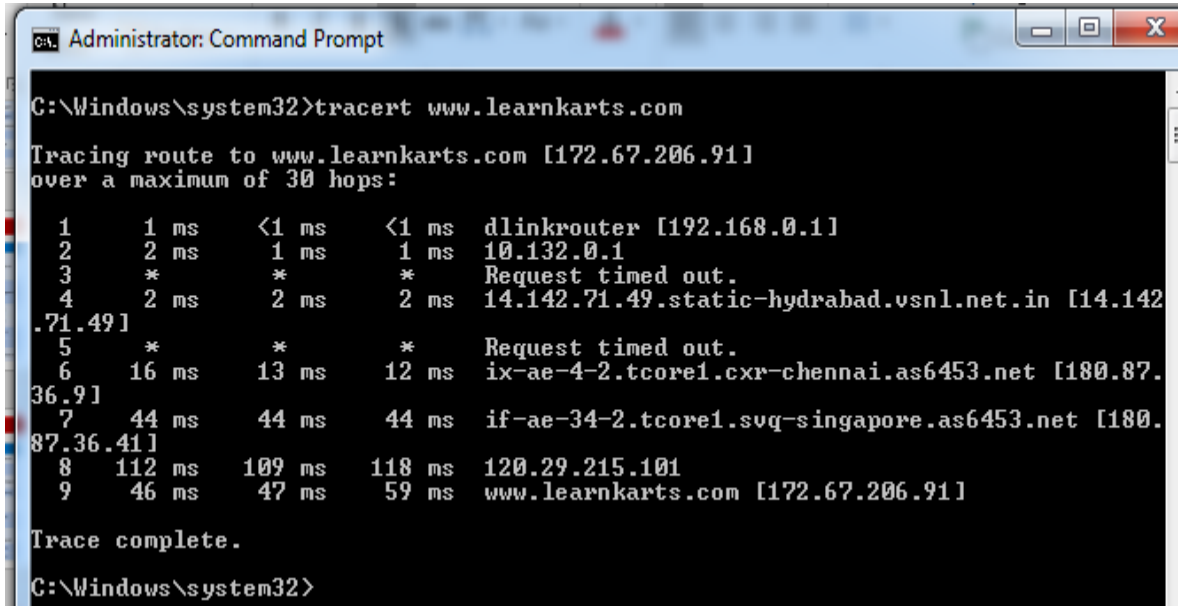
Below are the list of Basic commands using in Windows / Linux

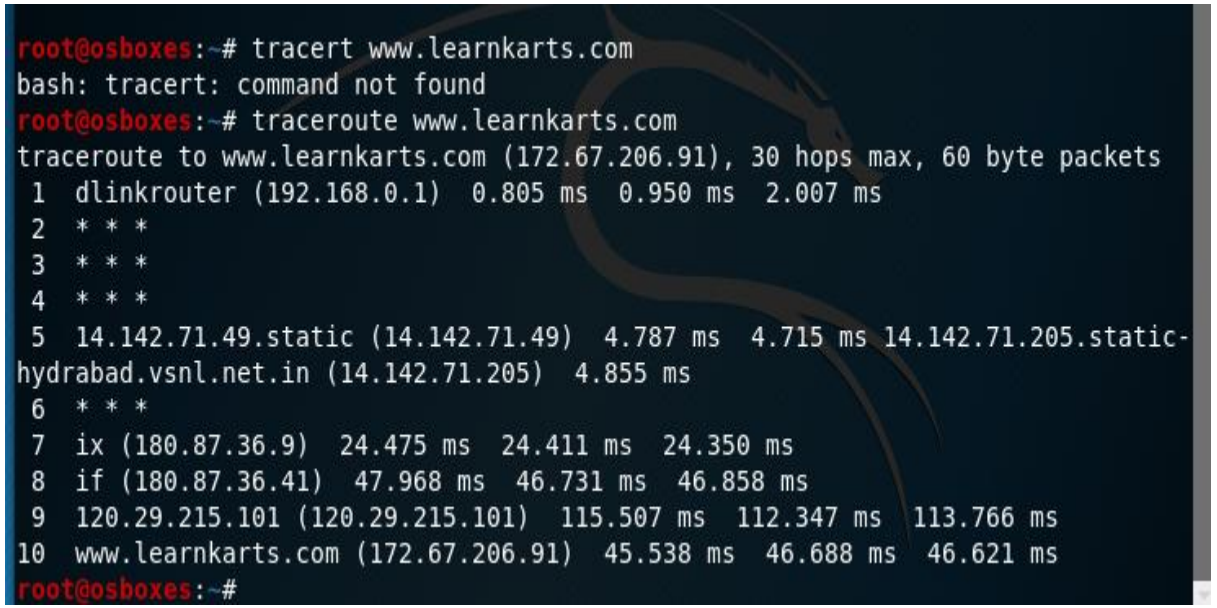
tracert Command:

This command will give you the nodes that packet travels to reach the final destination

Syntax: tracert www.gmail.com (Windows)

Syntax : traceroute www.gmail.com (Linux)





Windows / Linux Commands

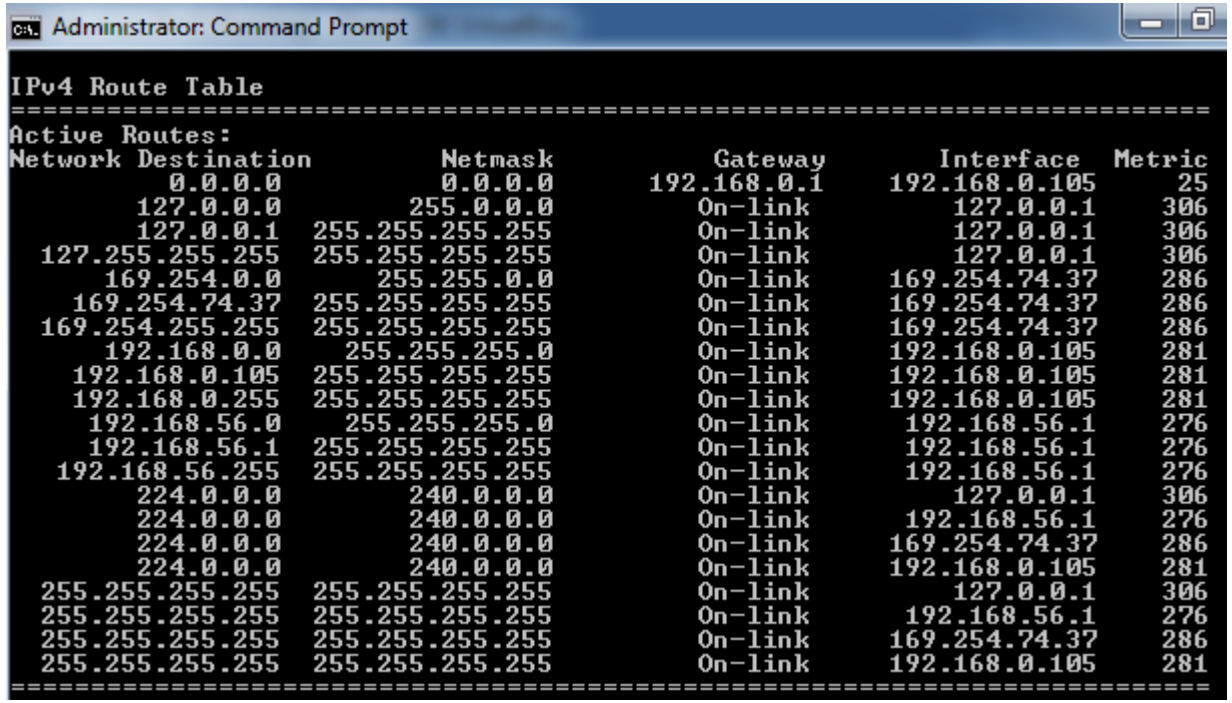
Below are the list of Basic commands using in Windows / Linux

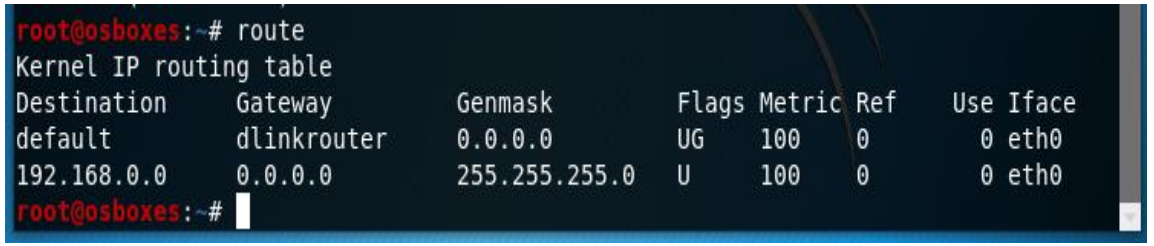
route Command:

This command will give you the routing table , gateways, interfaces and metric of host in a network

Syntax: route print (Windows)

Syntax : route (Linux)





Windows / Linux Commands

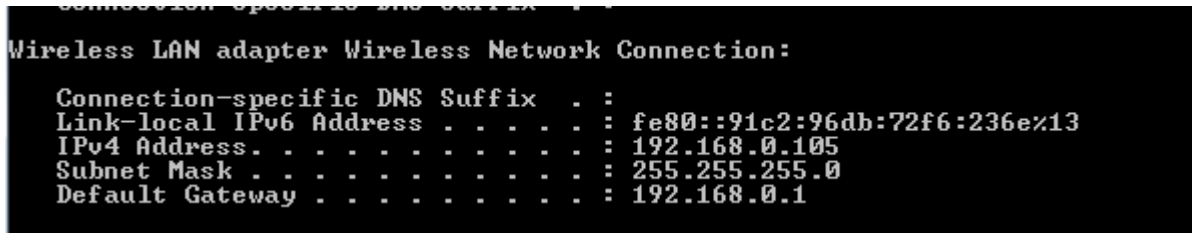
Below are the list of Basic commands using in Windows / Linux

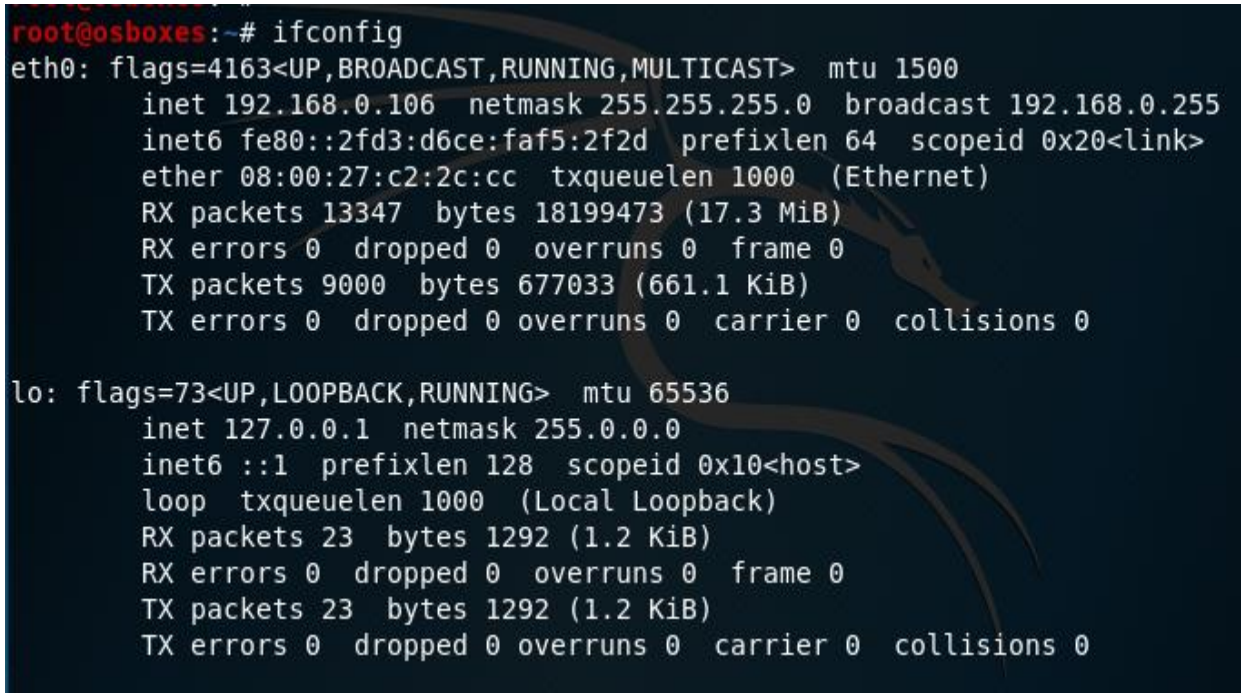
Ipconfig / ifconfig Command:

This command will show you ip address of host and gateway, DNS etc.

Syntax: ipconfig(Windows)

Syntax : ifconfig (Linux)





Windows / Linux Commands

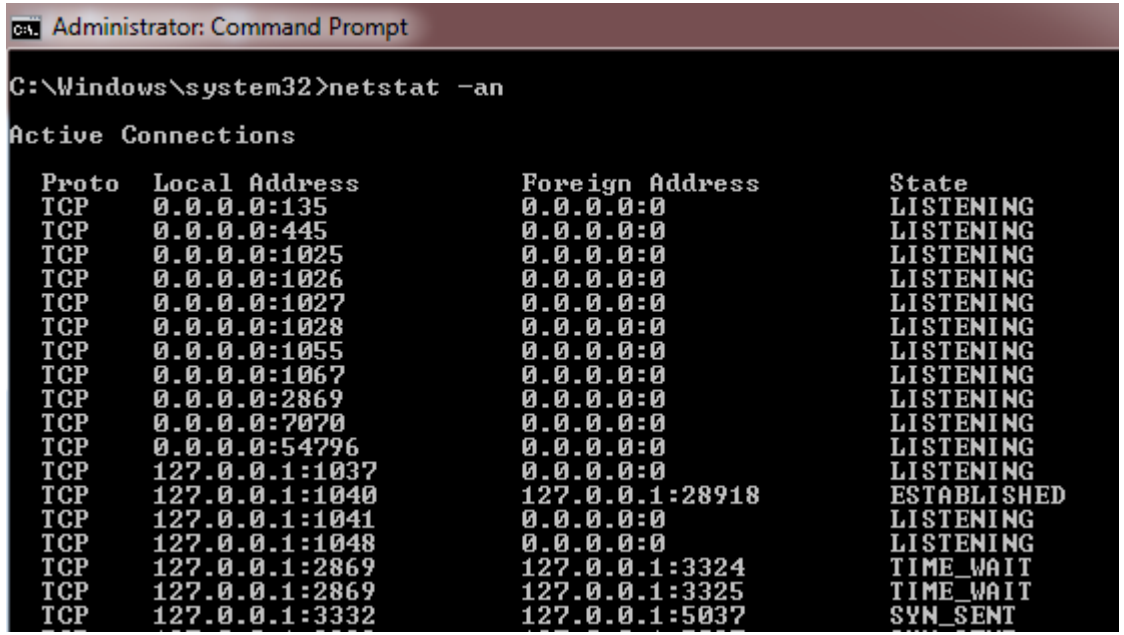
Below are the list of Basic commands using in Windows / Linux

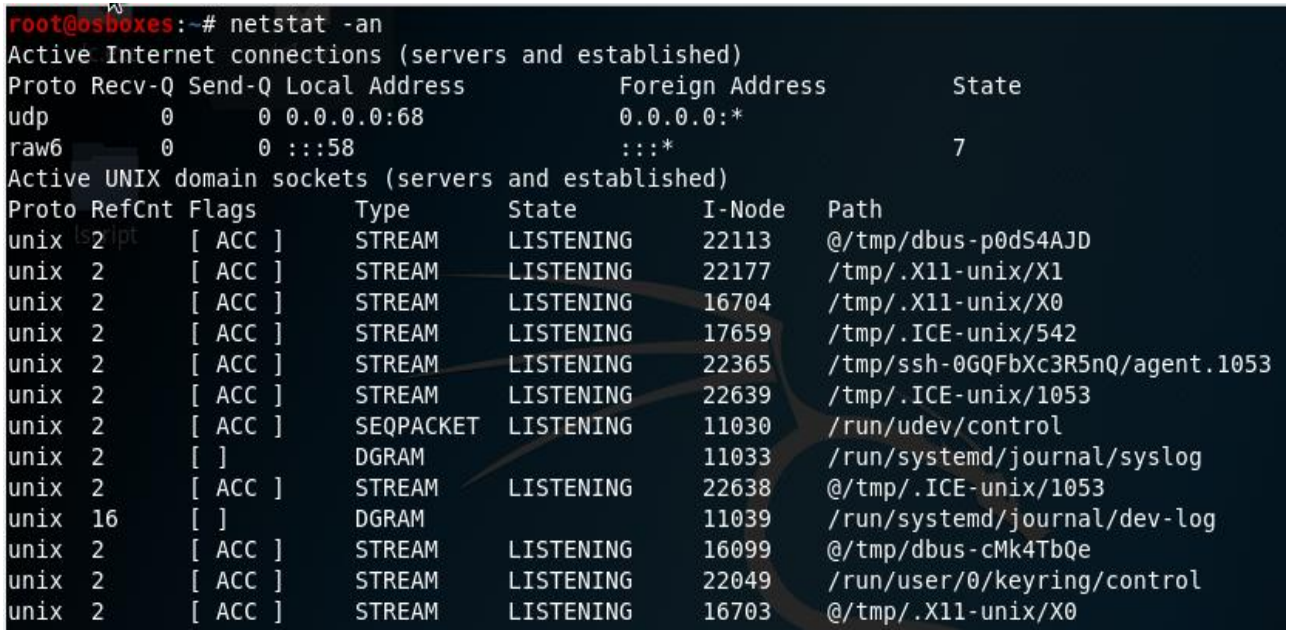
Netstat Command:

This command will show you all statistics of network which are connected to host

Syntax: netstat –an

this will combined both of the above





Windows / Linux Commands

Below are the list of Basic commands using in Windows / Linux

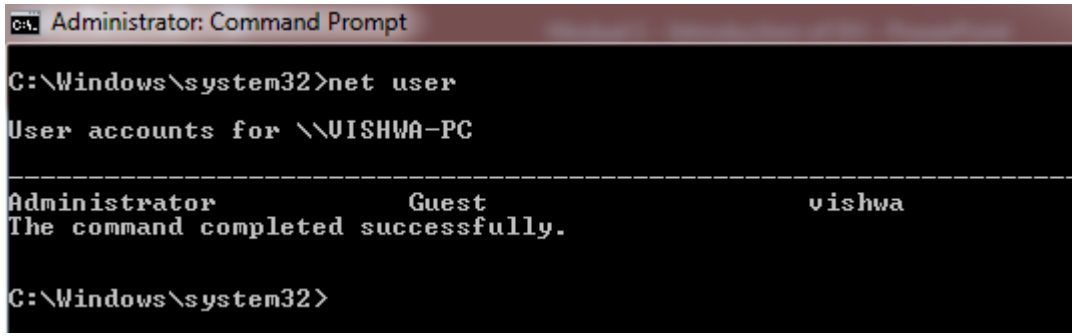
Netuser Command:

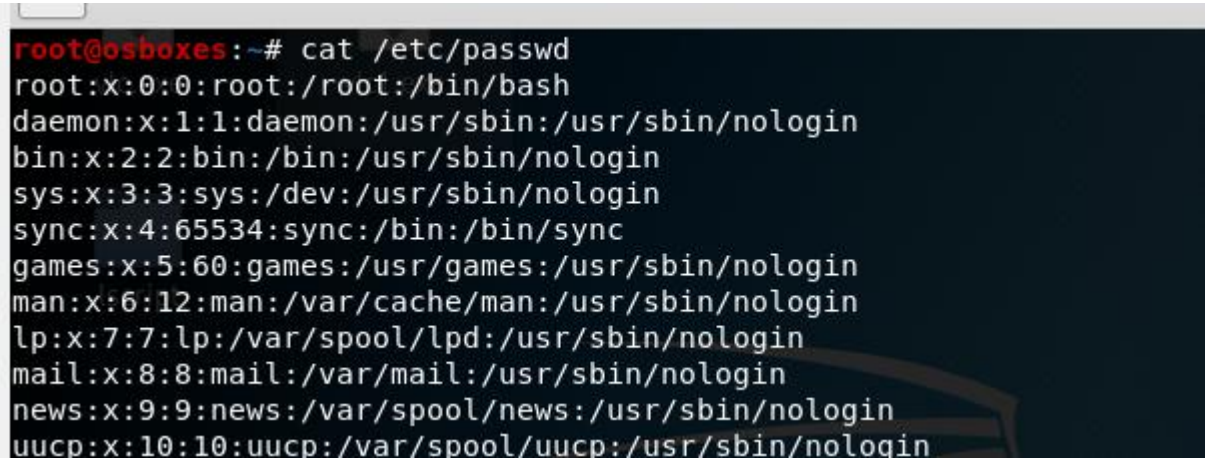
This command will show you user account in a system

Syntax: net user (winodws)

Syntax: cat /etc/passwd (Linux)

In Linux passwd file stores all the local user accounts in host





Different OS for hacking Environments

To Learn Ethical Hacking we need to have basics knowledge of different operating system.
In our Course will going to use Windows / Kali Linux

Operating Systems: