

* → Agile Methodology *

Agile :- Agile has two roles major

- ▷ PO :- Product owner is that who make decision development of products. Mostly product owner will be from the product based company.
- ▷ Scrum master :- It is a profile mostly it is non-technical. meeting arrangement and agile methodology right use should be done is managed by scrum master.

Eg:-

Accenture

Scrum Meeting

Buynow

- ▷ Sprint planning :- There are 1 hour meeting 2 week in one sprint. Total 26, 27 sprint in 1 year.
In 1 sprint there are 10 working days. Decide how much can we deliver in one sprint a particular task.

- (DS) 1) Daily Standup :- Daily meeting of all employee who are in project.
Daily we need to give answer of 3 questions
 - 1) What did you do yesterday?
 - 2) Today — , — today?
 - 3) Blocker or Impediments?

(KT) :- knowledge Transfer

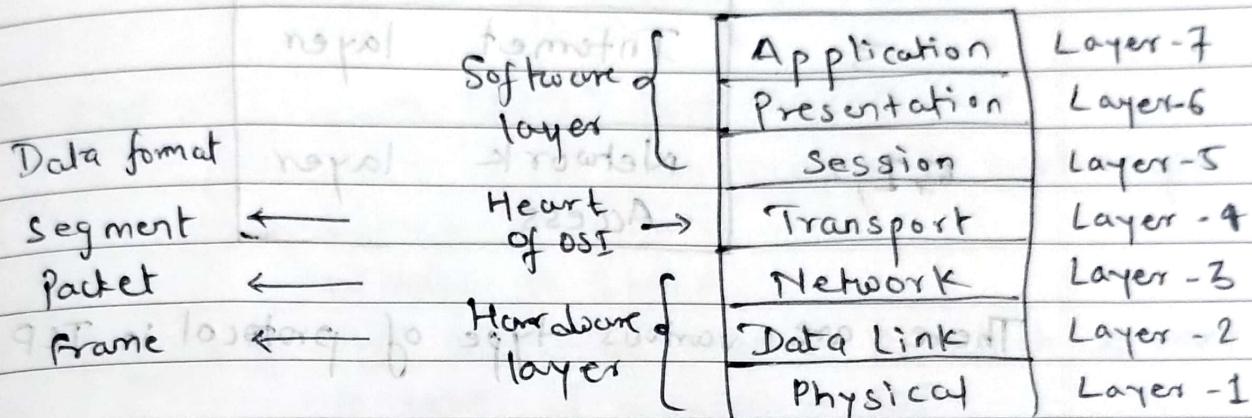
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- 3) Demo :- the work you done in sprint that work you need to show to the product owner or the stake holders. 1 hour
- 4) Retrospective :- All members will give feedback to each other. This is done in the last of sprint.
- 1) What went well?
 - 2) What didn't go well?
 - 3) Happiness Factor (3 to 5) rating
- * Spillover :- If any task is not completed in one sprint. Then that should be completed in next sprint.
- * buffer :- The extra sprint which is reserved time period for any complication or to complete remaining work.



* Networking *

- * OSI :- Open System Interconnection. This model is imp for communication. This model is 7 layer model.



Please Do Not Throw Sausage Pizza Away

- If one comp. to communicate to another computer start will be from app layer only.

* IP :- Internet Protocol (set of rule for communication)
 (v4, v6) wind (ipconfig) → cmd linux (ifconfig) → cmd

* ISP :- Internet Service Provider (which is connected to router)

layer 3 Network ex :- Router (frwd data packet b/w com & net)

layer 2 Data Link ex :- Switch (which has ports) 12, 24, 36, 48

* DHCP :- Dynamic Host Configuration Protocol

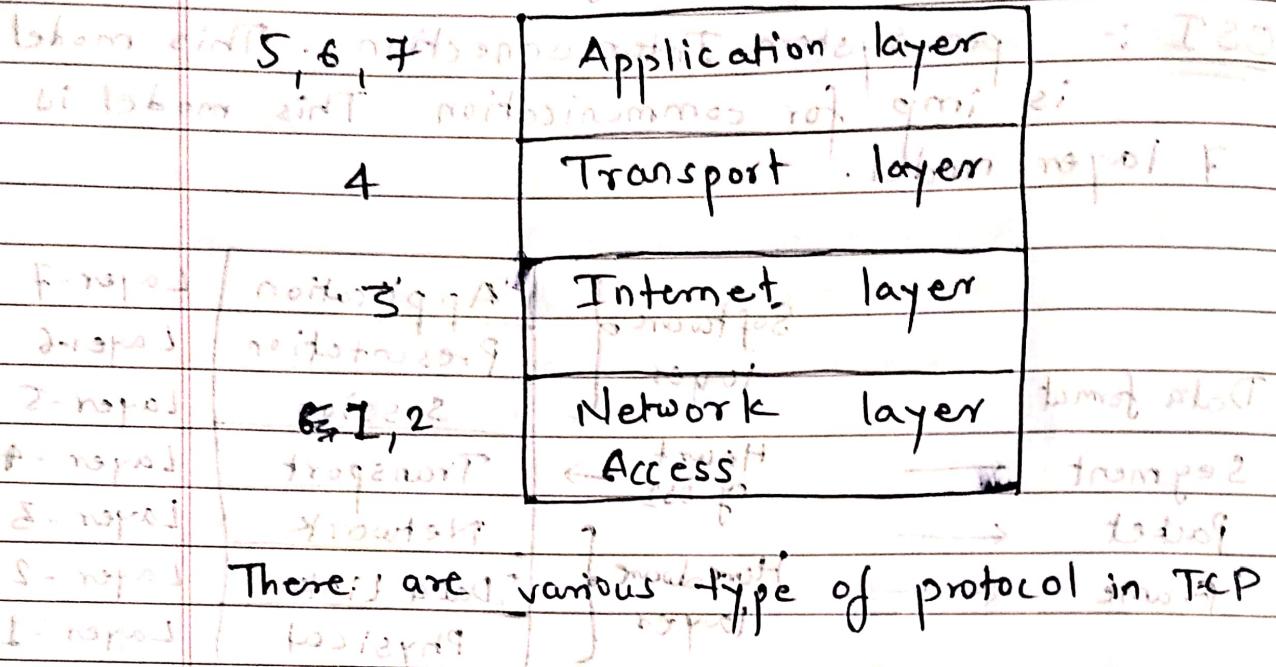
It provides IP address to the computer.

(Private)

* Intranet :- Internally communication

* Internet :- Over the routers communication

* TCP/IP Model :- Transfer Control Protocol



1) FTP :- (file transfer protocol). Port No. 21

It is used to transfer files from one pc to another.

2) SMTP :- (Simple mail Transfer Protocol) Port No. 25

For Email configuration. The email which we send to another that will transfer

through port No. 25.

3) TELNET :- (Teletype Network) Port No. 23

To check connectivity of one server from another server.

4) DNS :- (Domain Name System) Port No. 53

It binds the domain name and IP address of servers. Basically IP becomes domain name.

5) HTTP :- (Hypertext Transfer Protocol) Port No. 80

Allows access to data on world wide web (www) transfer data in form of plain text, audio, video & less secure.

2) HTTPS: (Hyper Text Transfer Protocol Secure) (443)
Highly secured & certified.

3) RDP :- (Remote Desktop Protocol) Port No. (3389)
To take access of one pc to another pc.
but both ports should be same.

4) SSH :- (Secure Shell) Port No. (22)
To take access from one pc to another pc.

* formular :- The access of another PC which we want
to take if Window → RDP
if Linux → SSH

** IP V4 :- There are five classes A B C D E F.

- (decimal format)
- A → 0 to 126 → 256/1 = 1
- B → 128 to 191 → Med Comp
- C → 192 to 223 → Small Comp
- D → 224 to 239 → Reversed, for multicasting
- E → 240 to 255 → Future Use

127 :- loop back IP add reserved for our PC.

255 :- all max level binary 11111111 = 255 decimal.

32 bits.

* IOT :- Internet of Things (Internet of silly things)

* TCP :- Layer(4) communicate b/w app on diff device

* TCP :- Layer(3) Internet Control Message ports.

* IP v6 :- This IP will be in the form of Hexa Decimal form.

$$2^1 \cdot 128 =$$

* Private IP :- This is an internal add of your device which are not routed to the internet.

No exchange of data will take place b/w private & the internet.

* Public IP :- The add is available publicly & it is assigned by your network provider to your router, which further divides to your devices.

* Cloud :- Vast networks of remote servers, storage systems and databases owned by and operated by cloud service provider. AWS, Google, Azure etc. There are 3 types of clouds

- * Three type of Clouds *
- 1) Private
 - 2) Public
 - 3) Hybrid

1) Private :- private cloud is particularly allocated to that organisation only. Highly secured. ex:- banks, etc

2) Public :- public cloud can be access by all organization or individuals. less secured. ex:- AWS, Google, Azure etc.

3) Hybrid :- Public + Private

AWS

* Account (created: Root User)

- * Data center :- Availability Zone
- * Region :- Multiple of availability zone
- * (EC2) :- Elastic Cloud Compute
- * IIS :- The term IIS stands for Internet Information Services, which is general purpose webserver that runs windows OS.

* Linux * Linus Torvalds (1991)

→ cd :- change directory

* ssh :- user_name@hostname/IP (Linux user = root)

-i :- for input " " ↳ (Public IP + AWS)

ex :- ssh -i "butth-23.pem" ubuntu@Public DNS /hostname/20

9) \$:- less privilege user login

3) sudo -i :- root user login

4) # :- privilege user - " " ↳ (super user)

5) id :- to check which user login.

6) ls :- listing of files.

7) pwd :- present / print working directory.

8) exit :- logout from user.

OS :- Os is software that enables the communication
btwn hardware and software of computer.

* Advantage of Linux :- Open source, Security, Free
light weight, Performance etc.
Community support, Multitasking.
Open Source :- code is open

* Version of Linux :- Amazon linux, Ubuntu, Redhat,
Suse, Debian, cent OS etc

* Top level root directory :- Like C drive in the
windows

9) command :- cd /

Ctrl+C :- to interrupt git bash command line.

- 10) `mkdir` :- make directory / folder.
- 11) `rmdir` :- delete ~~file~~ ~~files~~ + prob - b
ex:- `rmdir bg` → type bg and press tab button
ex:- `rmdir folder*` → delete all folder and star
. ~~assuming~~ will be all files name after folder.
- 12) `mkdir -p batch-13/batch-14/batch-15/batch-16`
↳ parent (inside folders)
- 13) `cd ..` :- to go back one directory.
ex:- `cd ../../` → to go two folder back.
(+) ex:- `cd /batch-13/` → to go batch-13 folder from pwd.
- 14) `cd .` :- to stay in the present folder.
- 15) `cd ~` :- to go into root user directory. (login user)
- 16) `touch filename` :- to create a empty file.
- 17) `cat filename` :- to see data of that file or read file.
- 18) `vim filename` :- to edit your file
ex:- Shift + i → to insert into file...
csc → to go back from insert.
Shift + :wq! → to save and quit.
- 19) `touch filename.txt` :- to create text file
- 20) `ping www.xyz.com` :- to check the connectivity of website.
- 21) `tree` :- to check all folder in the form of hierarchy.
- 22) `echo " "` :- to print the written inside the colons.
- 23) `echo " " > file2.txt` :- to print inside the file at the end.
- 24) `echo " " > file 2.txt` :- file overwrite old content deleted.
- 25) `history` :- to check which commands we run from login.
- 26) `cp <source> <destination>` :- to copy files.
- 27) `rm filename` :- remove file.
- 28) `mv <source> <destination>` :- to move file or cut file..
- 29) `mv oldfilename newfilename` :- rename file.

26) ls -lrt :- l-list r-reverse t-sort by time.

d-directory * latest file will be last.

noted out files of * we can see user of file.

note here -l-link & * link & then ↗

command line argument.

27) man command :- to see the manual of that command.

28) wget link :- to download any file from the url.

* Permission *

r :- read → to read file or folder. (4)

w :- write → modification in that file. (2)

(x) execute → to install the software. (1)

Owner, permission (group perm) & id other permission

7 (7) mod. chod op (5) (5)

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- Whenever you create a file by default the permission are rw- or -r--. similarly dir (6) or (4) mod. perm. (4) ex. www page

- default permission when you create folder are

rw-rwx or r-x or -r-x

7 (7) object (5) : file. 8 (8) object

batch 7 (7) object 8 (8) : file. 9 (9) object

29) chmod 755 filename :- to modify the permissions.
ex:- chmod 777 batch23 → all permissions

given to that folder.

30) chown new owner filename :- to change the owner

ex:- chown ubuntu batch23 of file or folder

shift + :q → exit vim editor without saving

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- 31) chgrp **ubuntu** filename :- to change group of files.
- 32) useradd **username** :- to add the new users.
- 33) passwd -u -l :- to set password for users.
- 34) su <username> :- to switch user.
- 35) cat /etc/passwd :- to see all the user you added. (file location)
- 36) userdel <username> :- to delete the users.
- 37) vim passwd :- to see all passwd count.
- 38) :set nu :- to see number before files in vim.
- 39) groupadd <groupname> :- to add the group new.
- 40) cat /etc/group :- to see all the groups.
- 41) usermod -g 1002 <to add new grp name> :- to add one user (old grp id) <from one grp to another>
- 42) groupdel <grpname> :- to delete groups.
- 43) cat /etc/group :- to see all groups
- 44) var/log :- to see logs of system.
- 45) /etc :- configuration.
- 46) cat auth.log :- access taken and what work done.
- 47) cat auth.log | grep "user" :- to see particular user (any filename) (root, ubuntu) work done or filter data
- 48) ex:- cat auth.log | grep "Jan 30" :- Jan 30+ data will be filter out.

ex:- cat file | grep -i "hello" :- (-i) case insensitive.

- 49) head filename :- to see top 10 lines.
- 50) tail -n - :- to see bottom 10 lines.
- 51) head -15 filename :- top 15 lines.
- ex:- head -10 auth.log | grep "root" :- top 10 root fil more filename :- It show how much percent of fil is open.

* Networking Commands

- 50) ifconfig :- to know IP address and config details.
- 51) hostname -i :- to know only IP.
- nic card :- network interface card
- 52) traceroute <url> :- network tool that traces the path a packet from our comp. to a IP or host.
- 53) tracepath <url/domain> :- same as traceroute.
- 54) dig <domain> :- to know info about domain.
- 55) nslookup <domain> :- (longer) — in more detail
- * 56) find . -name " " :- to find specific context by name.
ex. find . -name "*log" → to find .log in ending.
(current file) (remaining before .log)
- 57) locate :- same as find command / to locate path.
- 58) date :- to see date and time in UTC.
* all servers always will show time in UTC and difference b/w UTC and IST is +5:30 hrs.

* Packages * (Software / Applications) (Ubuntu)

There are three type of repository :

- 1) local repo :- Our laptop / pc repository.
- 2) remote repo :- repo available in organizations.
Ex- Jfrog.
- 3) Global / central repo :- repo available on internet.

- APT :- Advance Packaging Tool for ubuntu only.

- 53) apt update -y :- to get latest update of all packages
- 60) apt -get update -y :-
- 61) apt install nginx :- to install particular package
- 62) apt list :- to see all packages
- 63) apt info <packagename> :- to get info of packages
- 64) apt remove -- " " :- to remove the packages

- Jfrog :- a remote repository which stores the
 - 1) packages
 - 2) plugins
 - 3) Artifacts
 - 4) Docker images
 - 5) Dependencies

- 65) apt list --installed :- to see all installed packages.

* Amazon (Linux/EC2) *

- yum :- yellowdog updaters modified

- 66) yum check-update :- check update
- 67) yum install <packagename> :- to install package
- 68) yum remove -- " " :- to remove -- " "
- 69) yum list all :- to see all packages
- 70) yum info <packagename> :- to see info
- 71) yum upgrade :- to update package
- 72) <packagename> -v :- to check version of package in (ubuntu)

cd /var/www/html
Vim index.htm

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73) `systemctl <action> <servicename>` :- to check status of service.
ex:-

`systemctl status nginx`
`systemctl start nginx`
`systemctl stop nginx`
`systemctl restart nginx`

* Currently Version running in Organisation *

Windows - 2019

Ubuntu - 18

20

* Linux Filters *

74) `cut -d " " -f2 filename` :- to cut the specific data
+ delimiter is space from the line.
→ only 2 word of all lines. (f) field and there no.

75) `cut -b 2 filename` :- to cut by the byte by byte
byte

ex: `cut -b 2 batch-23` → only 2 letter of all lines.

76) `cut -c 2,4 filename` :- to cut by character.
character ex: `cut -c 2,4 batch-23` → only 2 & 4 letter

subsequent `cut -c 2-6` → 2 to 6 words

77) `comm filename1 filename2` :- to find common things in both files or more files

78) `echo <word> | sed 's/word/new-word/g'`
→ to replace/substitute something.
→ _____ " _____ in files also. sed :- (editor)

(global)



79) `sed '3s/old/new/g'` filename :- to replace only
 we can change more lines by than 1 in line no. 3.
 but these changes are only on console; file not changed.

- if we want to make change on file add insert.

`sed -i '00' filename`

(line 1) (line 2) (line 3)

80) `sed '3c>new thing to add'` filename :- to replace whole 3 line by new things.

81) `wc filename` :- to count line, words, alphabets of one or more than 1 file.

82) `wc -l filename` :- to see only no. of lines.

83) `wc -w` :- no. of words.

* AWK Command :- AWK is a scripting language helpful when working on command line. It's also widely used for text processing.

84) `awk '{ print $0 }'` filename :- to print the file as it is.

85) `awk '{ print $1 }'` :- to print 1st column of file.

86) `awk '{ print $1, $2 }'` :- to print 1st and 2nd column.

87) `awk '{ print $NF }'` :- to print nth field / last.

* 88) `df` :- to see the disk space used in file system.

89) `df -h` :- to see in human readable form.

* 90) `du` :- to see usage.

91) `mail -s " " <recipient email>` :- to send mail to someone
 subject ex:- `mail -s "Welcome" ygminds.com`

* 92) `ls -a` :- to see all hidden files.

93) `mkdir filename` :- to make hidden files.

* 94) `ls -lra` :- cmd line argument + hidden files + human readable

- 95) `ps aux` :- to see all the process running and details.
- * 96) `kill -9 <processid>` :- to kill/stop process immediately.
- *** 97) `top` :- to see live all process running as task manager (Windows)
- * load average :- $0.00 \quad 0.00 \quad 0.00$
 (1min) (5min) (15min)

The load on the system is average in certain time of intervals. It is calculated in percentage.

- 98) `yes > /dev/nw1&& t` :- to run artificial load.

- kernel :- The core component of OS that provides essential services for other parts of system responsible for managing sys resource, CPU, memory.

* Linux Inodes

An Inode number is a uniquely existing number for all the files in Linux. Whenever a file is created on a system a file name & inode number is assigned to it.

- Inode Content :- An inode is a structure data containing metadata of files.

- 1) User Id of file
- 2) Group Id
- 3) Device
- 4) file size
- 5) Date of creation
- 6) Permission
- 7) Owner of file

- Soft links :- shortcut of files / apps / software
 If main file get deleted softlink also get deleted.

- Hard link :- Hard link is basically a file which stores a backup of particular file.

99) In filename hardlinkfilename :- to create hardlink
ex:- In file1 hardlinkfile1 files.

100) rm -rf file1 :- to remove the file forcefully.

101) ln -s filename softlinkfilename :- to create softlink or
ex:- ln -s exm softlinkexm shortcut of files.

* Tar :- In linux Tar used for archive (compressed) files and dir.

102) tar -czvf targetfilename filename :- to create tar file
ex:- tar -czvf file1.tar.gz file1 → zip file created.

• gz :- gunzip (to create zip file)

103) zcat filename :- to see data of the zip files.

104) tar -xvzf filename :- to extract or unzip files.

* 105) init 0 :- to shutdown VM.

***106) scp -i pemfile filenameto copy server location :- to copy a file from our computer to server.

• tmp :- a location or file which have full permission or access. If we want to transfer one file to another server then its recommended to transfer in temp.

* 107) free :- to see free memory available total.

108) rename :- to rename the files.