

Aim: Installation of Virtual Machine Software

Steps:-

1. Open VMWare installation Software
2. Click next
3. Select typical and next
4. Select next
5. Select next
6. Click install
7. Wait for the installer to install the VMWare
8. VMWare installer will ask for username and Serial number, provide username & serial number and then click on continue.
9. The installer will say installation wizard completed of VMWare Software. Then click on finish.
10. After restarting the PC, VMWare software is completely installed.

Aim: Installation of Linux operating system (Redhat/Ubuntu) on Virtual Machine.

Steps:-

1. To install Linux operating system on virtual machine, open VMware Workstation.
2. VMware Workstation will open.
 - Whenever VMware workstation is opened, it provides useful tips, after reading tips, tap on Close.
3. Select file from the top left hand side
4. Then click on new Virtual Machine or Press CTRL+N
5. A new dialogue box will appear to install virtual machine and click on next.
6. Select typical and click on next
7. Select Linux & then select version Red Hat Linux & the next.
8. Give name to VM and give location, then click on next.
9. Select Do not use network connection then click next
10. Click on finish
11. Our VM is created successfully. - click close.
12. Click on file >> Open
13. Browse & select Red Hat/Ubuntu for Linux & click on Open
14. Then click on Start this Virtual Machine
15. It will give a hint, click on OK.
16. Now it will load the desired Linux OS.
17. Now Linux OS is loading
18. Now add the username & password for user to login on Linux OS (username: root Password: root/23)
19. After adding username & password, the system will start Linux OS.

Aim: Installation of Windows OS on Virtual Machine.

Steps:-

1. To install windows OS on virtual machine, open VMware Workstation
2. VMware Workstation will open
3. Select file from the top left hand side.
4. Then click on new VM or press CTRL+N
5. New dialogue box will appear to install VM & click on next.
6. Select Typical and click on next.
7. Click on next
8. Tap on Browse
9. Locate "windows7.iso" file
10. Click on Open and then next
11. Provide the product key, username & password
12. Click on next (x3)
13. Click on Finish
14. After creating disk, it will start windows7 installation
15. After completing installation, windows7 will start
16. Setup will update registry settings and start services.
17. The system will check video performance.
18. Setup will continue after restarting the computer
19. Now it will prepare the Desktop
20. The Setup will prepare installation
21. Now it will set network location
22. It will automatically VMware tools and shut down.
23. It will start the windows
24. Installation of windows OS on Virtual Machine is completed.

Aim: Linux Command: Working with Directories

1. pwd

- "pwd" stands for "print Working Directory".
- As the name states, command "pwd" prints the current working directory or simply the directory user is, at present.
- It prints the current directory name with the complete path starting from root (/).

2. cd

- "cd" is a linux command to change the directory / folder of the terminal's shell.
- We can press the tab button in order to auto complete the directory name.

3. ls

- "ls" is a linux shell command that list directory contents of files and directories.

4. mkdir

- The "mkdir" (make directory) command in linux is used to make a new directory.

5. rmdir

→ The "rmdir" utility removes the directory entry specified by each directory argument, provided the directory is empty.

6. file

→ The "file" command is used to determine a file's type.
→ It tests each argument in an attempt to classify it

7. touch

→ The "touch" command is the easiest way to create new, empty files.
→ It is also used to change the time stamps (i.e., dates & times) of the most recent access and modification on existing files and directory.

8. rm

→ The "rm" command removes (deletes) files or directories
→ It removes each specified FILE.

9. cp

→ To copy files and directories, we use the "cp" command under Linux OS.

10. mv

→ The "mv" command is used to move or rename files

→ It renames files SOURCE to DESTINATION, or moves the source files to destination

11. rename

→ "rename" command will rename the specified files by replacing the first occurrence of files from in their name by to.

12. head

→ The "head" command reads the first few lines of any text given to it as an input and writes them to standard output (by default, display screen)

13. tail

- "tail" prints the last 10 lines of each FILE to Standard Output.
- With more than one FILE, it preceeds each set of Outputs with a header giving the file name

14. cat

- "cat" stands for "Catenate".
- It reads data from files, and outputs their contents
- It is the simplest way to display the contents of files at the command line

15. tac

- "tac" (cat backwards) concatenates each file to Standard Output just like the cat command but in reverse: line-by-line last to first

16. more

- "more" is a filter for paging through text on screen at the time.
- It does not provide as many options or ~~enhance~~ enhancements as less, but is never the less quite useful and simple use.

17. less

- "less" is a simple, feature-rich command-line file viewer
- "less" is a program similar to more, but it has many more features.

18. Strings

- The "Strings" command returns each string of printable characters in files.
- Its main use is to determine the contents of and to extract text from binary files.

19. chmod

- "chmod" is the command and system call which may change the access permissions to file system objects (files & directories)

Aim: Linux command : Working with files.

1. ps

- "ps" gives a snapshot of the current process.
- It will "capture" the system condition at a single time

2. top

- The "top" program provides a dynamic real-time view of a running system.
- It can display system summary information, as well as a list of processes or threads currently being managed by the kernel.

3. kill

- The "kill" command in UNIX or Linux OS is used to send a signal to the specified process or group.
- If we don't specify any signal, then the kill command passes the SIGTERM signal.

4. grep

- The "grep" command is used to search text or searches the given file for lines containing at least one of the given strings or words.

5. find

→ 'find' is a command-line utility that searches one or more directory trees of a file system, locates files based on some user specified criteria & applies a user specified action on each matched file.

6. date

→ The "date" command is used to print out, or change the value of, the system's time & date information.

7. cal

→ Display a conveniently-formatted calendar from command line.

8. uptime

→ "uptime" tells us how long the system has been running.

9. w

- The 'w' command is quick way to see who is logged on & what they are doing.
- 'w' displays information about the users ~~to~~ currently on the machine, & their processes.

10. whoami

- 'whoami' prints the effective user ID.
- This command prints the username associated with the current effective user ID.

11. ~~fig~~ finger

- ~~finger~~ is a program we can use to find information about computer users.
- It usually lists the log in name, the full name, & possible other details about the user we ~~are~~ fingered.

12. uname

- Prints information about the current system

13. man

- On linux and other UNIX-like operating system, 'man' is the interface used to view the system's reference manuals.

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→ On Linux and other UNIX-like operating system "man" is the interface used to view the system's reference manuals.

14. df

→ The 'df' command reports the amount of available disk space being used by file systems.

15. du

→ "du" estimates and displays the disk space used by files.

16. free

→ It displays the total amount of free and used physical and swap memory in the system, as well as the buffers used by the kernel.

17. whereis

→ It locates the binary, source, and manual page files for a command.

18. which

→ "which" returns the path names of the filter files or links which would be executed in the current environment, had the file name (or file names) been given as commands (or commands) in a strictly POSIX-conformant shell.

19. tar

→ The "tar" program is used to create, maintain, modify, and extract files that are archived in the tar format.

Aim: Windows (DOS) Command

→ Start the command prompt program.

1. date

→ It displays the system date and prompts the user to enter a date.

→ Date will be shown when we use the DIR command to display information about files new date.

2. time

→ It displays the system time & waits for the user to enter a new time.

→ "time" is a command in DOS that is used to display & set the current system time of the OS.

3. Prompt

→ The "prompt" command allows us to change the MSDOS prompt to display more or less information.

→ It is an internal command that is available in the Microsoft OS.

4. mkdir

→ It makes a directory.

→ The parent of the directory specified will be created if it does not already exist.

5. cd and chdir

→ The "cd" (or alternate "chdir") command either display or change the current working directory.

6. rmdir

→ It removes a directory (delete a directory) by default the directory must be empty of files for the command to succeed.

→ The del tree command in some versions of MS-DOS and all versions of Windows removes non-empty directory.

7. path

→ It displays or sets a search path for executable files.

8. chkdsk

→ "chkdsk" verifies a storage volume (e.g. hard disk, disk partition, or floppy disk) for file system integrity.

→ The command has the ability to fix errors on a volume & recover information from defective disk sectors of a volume.

9. copy

- It copies files from one location to another.
- The destination defaults to the current directory.
- If multiple source files are indicated, the destination must be a directory, or an error with result.

10. xcopy

- It copies entire directory trees.
- "xcopy" is a version of the "copy" command that can copy files & directories from one location to another.

11. dir

- It is used to list out all the files & folders.

12. cls

- The "cls" or "clrscr" command clears the terminal screen.

13. del

→ "del" (or alternative form "erase") is used to delete one or more files.

14. move

→ It moves files or renames directories

→ It allows us to move files or directories from one folder to another, or from one drive to another.

Aim: Windows (DOS) Command 2

1. echo

→ "echo" is used to repeat the text type in back to the screen and can be used to echo to a peripheral on the computer, such as a com port.

2. fc

→ "fc", or file compare, is used to compare two files against each other.

→ Once completed, it returns lines that differ between the two files.

3. edit

→ It is a command line text editor that allows us to view, create or modify any file on our computer.

4. find

→ The "find" command is a filter to find lines in the input data stream that contain or don't contain a specified string and send the set on the output data stream.

→ It may also be used as a pipe.

5. rename

- It is used to rename files & directories from the original name to a new name.
- In earlier releases of MS-DOS, "move" command was used instead of "rename" to rename files or directories.

6. Set

- It allows us to change one variable or string to another

7. type

- It allows the user to see the contents of a file
- To edit the files, the user would need to use either "edit" or "copy" command.

8. ver

- It displays the version of MS-DOS or if running Windows 95 or above the version of Windows.

Aim: Working with windows desktop and utilities

1. notepad

→ To open windows notepad

2. write

→ To open the windows wordpad

3. mspaint

→ To open the my paint

4. calc

→ To open the calculator

5. ipconfig

→ To open the ip address of PC

6. hostname

→ To know the host name of PC

7. Control

→ To open the control Panel of the System

8. Control fonts

→ To open the font Setting of the System

9. ~~Color~~ Control color

→ To open the color setting of the system

10. Control desktop

→ To open the desktop setting of the system

11. Control printers

→ To open the printer setting of the system

12. diskpart

→ To partition the system disk

13. edit

→ TO create new file in the system

14. explorer

→ TO open the windows explorer of the system

15. narrator

→ TO start MS narrator

16. netstat

→ TO display all network active connections

17. Osk

→ To show on screen keyboard of system

18. ping

→ To send data to specified IP or host of system

19. Sysedit -

→ To edit the system start up files like
(SYSTEM.INI, WIN.INI, CONFIG.SYS, AUTOEXEC.BAT)

20. timedate.cpl

→ To open the system date and time

21. taskmgr

→ To open the windows task manager.

22. net share

→ To create and share the user