

Practical No.1

AIM: Installation and Configuration of virtual machine

A) Installation of virtual machine software

Step 1:

- Download the VMWARE WORKSTATION 11.0 software from the official Website or Google
- Save it on the local disk of your machine.

Step 2:

- Double click on Downloaded exe file. It will show you Next and cancel button.
- Select Next button.
- In next window select the first radio button to accept terms and conditions then click on Next button.

Step 3:

- New window "Setup Type" will appear. Here we have to select Typical Installation (default) as shown below.

Step 4

- Next window "Software Update" ask for automatic update selection. We can skip it. So we have uncheck the checkbox and click on next button.
- Next window "User experience Improvement Program" will appear. Here also we can uncheck Help Check box and click on next button as shown below

Step 5:

- Next window "Shortcut" will appear. Here you have to keep the default values as it is and then click on next button as shown below.
- Next window "Ready to perform the Requested Operations" will appear. Here click on continue button as shown below.

Step 6:

- Wait for some moment till the window indicates finishing installation.
- Next window will ask for entering License Key. If you have license Key then enter it or Click on Skip button as shown below

Step 7:

- Next window "Setup Wizard Complete" indicates installation is finished so click on Finish button.
- To start using the VMWare workstation. From start menu select "VMWare workstation" or from desktop, double click on "VMWare workstation" icon.

Step 8:

- Your windows might ask your permission to continue. Accept all requests and then your "VMWare workstation" is ready to use.

B) Installation of Windows OS

For this we need the ISO file of Windows 8.1.

Step 1:

- Open VMWARE-> File -> New Virtual Machine
- In Welcome wizard Select the installation type as Typical.
- In next window give the path of Windows 8.1 OS ISO file for installation. Then Click on Next.

Step 2:

- In next window will ask the information about windows License Key. If you don't have it then keep it blank, fill the other information about user Full name and Password and then click on Next button as shown below(optional).
- As we have not provided the License Key, a message box will prompt indicating that in future we have to provide Windows License key. Here Click on Yes button.
- The Next window will ask for Name of virtual machine, we can change it or we can keep it as default and then click on Next button as shown below.
- Next window will prompt for disk space we can modify it or keep it unchanged and the click on Next button as shown below.

Step 3:

- Next window informs us that virtual machine creation is done after clicking the Finish button.
- Then wait for moment as VMWare creates the Disk space for installation.
- Then it starts with windows initial installation screen.
- In next window it shows the progress of installation

Step 4

- We have to wait until the VMware finishes the installation of windows.
- After finishing the installation on next screen, enter password if we have created otherwise click on login or it will directly login.
- After that our Windows Operating system on Virtual Machine is ready to use.

C) Installation of Linux OS

To install Red Hat operating system on virtual machine software, we must have either installation disk or ISO installation file.

Step 1:

Open VMWARE-> File => New Virtual Machine In Welcome wizard Select the installation type as Typical.

- In next window give the path of RedHat Linux OS ISO file for installation. Then Click on Next.

Step 2:

- In next window "Easy Install Information it asks some information about Full Name, username and password. Enter this information and click on Next button.

- In Next window "Name the Virtual Machine", it asks for the name of your choice, you can change it or keep the default name as it is as shown below.

Next window ask about disk capacity. Here we can select default, also we can modify the disk space and then click on next

Step 3:

- Next window "Ready to create Virtual Machine" Inform us about finishing the creation Job after clicking the Finish.

- Then again we have to go back to VMWare Workstation. Where we can find our newly created Virtual Machine Name and Click the option "Power on this Virtual Machine".

- The Installation of RedHat Linux will begin inside the VMWare Workstation

Step 4:

- Next Window will show the progress of RedHat Linux Installation process.

- After Completion of Installation, next window will ask Selection of Username and also we have to provide appropriate password which we have already set in Step 2.

Step 5: Now we all set to use and explore the RedHat Linux Operating system.

Practical No.2

AIM: Windows (DOS) Commands

How to open windows DOS prompt?

- Right-click on the Start button in the lower-left corner of the screen and select the Command Prompt option from the Power User menu.

A) Date, time, md, cd, rd, path.

1. Date :

To find the current date, MS-DOS provides the DATE commands.

Syntax

```
C:\Users\Tushar>date  
Current date is: 05-09-2016  
Enter new date (mm-dd-yy):
```

2. Time:

To find the current time, MS-DOS provides the TIME commands.

Syntax

```
C:\Users\Tushar>time  
The current time is: 12:21:06.72  
Enter the new time:
```

3. MD:

Allows you to create your own directories in MS-DOS.

Syntax:
MKDIR [drive:]path
OR
MD [drive:]path

Example

```
C:\>mkdir "sir"  
Or  
C:\>md sir  
It will create a folder named "sir"
```

4.cd:

CD (Change Directory) is a command used to switch directories in MS-DOS and the Windows command line.

CD Goes to the highest level, the root of the drive.
CD. Goes back one directory. to C:\Users> directory.

Syntax:
C:\Users\sandeep>cd ..
C:\Users>

```
C:\Users\sandeep>cd abc  
C:\Users\sandeep\abc>
```

5. rd:

Removes an empty directory in MS-DOS.

Example

C:\>rmdir c:\test

Or

C:\>rd test1

Remove the test directory, if empty.

6.Path

Path is used to specify the location where MS-DOS looks when using a command.

Syntax

D:\>path

PATH=C:\ProgramData...

B) Chkdsk, copy, format, fidsk, cls, defrag, del, move.

1. chkdsk:

- Chkdsk is a utility that checks the computer's hard drive status for any cross-linked or any additional errors with the hard drive.

- Run this command in Administrative mode. Open it by right click on windows button and select Command Prompt(Admin)

Syntax

C:\WINDOWS\system32>chkdsk c:

The type of the file system is NTFS.

Stage 1: Examining basic file system structure...

Progress: 80703 of 201728 done; Stage: 40%; Total: 13%; ETA: 0:00:30

2. copy:

Allows you to copy one or more files to an alternate location.

Syntax

C:\abc\>copy abc.txt D:\

3. format:

Format is used to erase information of a computer diskette or fixed drive.

Syntax:

C:\>format d:

This would erase the contents of your D:

4. fdisk:

Fdisk is used to delete and create partitions on the hard drive in earlier versions of MS-DOS and Windows.

Syntax:

C:\>Fdisk

Open the fdisk option screen that you can see in the fdisk simulation.

5. cls:

Cls is a command that allows you to clear the complete contents of the screen and leave only a prompt.

Syntax: C:\>cls

6. defrag:

Microsoft Defrag was first introduced with MS-DOS 6.0 and is a software utility capable of organizing and optimizing the files on the hard drive to improve system performance.

D:\>defrag c:

Defrag the main hard drive and correct any fragmented files.

7. del:

Del is a command used to delete files from the computer.

Syntax:

C:\>del test.txt

8. Move

Allows you to move files or directories from one folder to another, or from one drive to another

Syntax:

c:\windows\user> move abc.txt desktop

C) Diskcomp, echo , Edit, find, rename

1. Diskcomp:

Compares the contents of a floppy disk in the source drive to the contents of a floppy disk in the target drive.

Example

C:\>diskcomp a: b: /1

Compares the first side of A: with B:

2. echo

echo is one of the most commonly and widely used built-in command that typically used in scripting language and batch files to display a line of text/string on standard output or a file.

Example

```
C:\>echo "hi"  
hi
```

3. Edit:

The MS-DOS editor is a command line text editor that allows you to view, create, or modify any file on your computer

Example

```
C:\>edit myfile.txt
```

This would bring up a blank edit screen, as long as the file is saved upon exit this will create the file myfile.txt.

4. find:

Allows you to search for text within a file.

```
D:\>find "Frame" TText.java  
-----TTEXT.JAVA
```

5. rename:

Used to rename files and directories from the original name to a new name.

Syntax

```
C:\>rename D:\Test NewTest
```

Rename the directory Test to NewTest.

Practical no.3

AIM : Linux commands

A) pwd, cd, absolute and relative paths, ls, mkdir, rmdir

1. pwd:

This command display current working directory!

```
[Abhinav@localhost ~]$ pwd
/home/Abhinav
```

2 cd:

This command is used to change the directory for working.

Examples

Move to the etc folder

```
[Abhinav@localhost etc]$ cd /etc
[Abhinav@localhost etc]$ pwd
/etc
```

3.ls:

This command is used to list the details about the files.

```
[Abhinav@localhost ~]$ ls
example file1.txt file2.txt file3.txt
```

4. mkdir:

To create a directory, 'mkdir' command is used.

```
[Abhinav@localhost ~]$ mkdir Demo
[Abhinav@localhost ~]$ ls
```

Desktop Documents Downloads Music Pictures Public Demo Templates Videos

5. rmdir:

Remove directory, this command will only work if the folders are empty.

Syntax

```
[Abhinav@localhost ~]$ rmdir Demo
[Abhinav@localhost ~]$ ls
```

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B) file, touch, rm, cp. mv, rename, cat, tac.

1. File

The file utility determines the file type

```
[Abhinav@localhost ~]$ file demo.txt
Text file
```


2. touch:

To create an empty file is with touch.

```
[Abhinav@localhost ~]$ touch test1
```

```
[Abhinav@localhost ~]$ ls
```

Desktop Downloads Pictures Templates test1

Documents Music Public Videos

3. Rm

The rm command is used to remove the file permanently from the machine.

```
[Abhinav@localhost ~]$ ls
```

Desktop Downloads Pictures Templates Documents Music Public test1 Videos

```
[Abhinav@localhost ~]$ rm test1
```

```
[Abhinav@localhost ~]$ ls
```

Desktop Downloads Pictures Templates Videos

Documents Music Public

4. cp:

The cp is a Linux shell command to copy files and directories.

Copy single file main.c to destination directory demo:

```
[Abhinav@localhost ~]$ cp main.c demo
```

5. mv:

The mv command is used to move files and directories.

Syntax:

```
[Abhinav@localhost ~]$ mv demo desktop
```

6. rename:

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

Example

```
[Abhinav@localhost ~]$ rename abc.txt demo.txt
```

7. cat:

The cat command is used to display the content of text files and to combine several files to one file. The cat command does not accept directories

To View text file data:

```
[Abhinav@localhost ~]$ cat list1.txt
```

```
milk  
bread  
apples
```

```
[Abhinav@localhost ~]$ cat list2.txt
```

```
House  
car
```

```
[tushar@localhost ~]$ cat list1.txt list2.txt
```

```
milk  
bread  
apples  
house  
car
```

8. tac:

This command just work opposite of cat command. It displays the output of cat in reverse manner.

```
[Abhinav@localhost~]$ cat count
```

```
One  
Two
```

```
[Abhinav@localhost~]$ tac count
```

```
Two  
One
```

C) ps, top, kill, pkill, find

1. ps:

This command is used to report the process status. ps is the short name for Process Status.

Example:

Typing ps alone would list the current running processes:

```
[Abhinav@localhost ~]$ ps
```

```
PID TTY  
TIME CMD  
2671 pts/2 00:00:00 bash
```

3021 pts/2 00:00:00 ps

2. top:

The top command in linux is used to find CPU usage. It provides dynamic real- time view of a running system.

Example

```
[Abhinav@localhost ~]$ top -c
```

3. kill:

This command is used to kill the background process.

Example

```
[Abhinav@localhost ~]$ kill 1428
```

The kill command kills or terminates the background process with process id 1428.

4. pkill:

The pkill command is used to terminate or stop a running process immediately.

Example

```
[Abhinav@localhost ~]$ pkill chrome
```

5. find:

The find command finds one or more files assuming that you know their approximate filenames.

Example:

For searching any file named 'cal.txt' in the current directory and any subdirectory in system.

```
[Abhinav@localhost ~]$ find -name 'cal.txt'
```

D) date, cal, uptime, w, whoami

1. date:

The date command prints the date and time.

Example

```
[Abhinav@localhost ~]$ date
```

Tue Nov 11 21:52:45 PDT 2024

2. cal:

The cal command is used to display the calendar

Example

```
[Abhinav@localhost ~]$ cal
```

3. uptime:

The uptime command tells us how long the system has been running.

Example:

```
[Abhinav@localhost ~]$ uptime
```

```
22:05:34 up 2:34, 2 users, load average: 0.00, 0.00, 0.00
```

4. whoami: The whoami command is used to print current user's login name along with effective userid.

Syntax:

```
[Abhinav@localhost ~]$ whoami
```

```
Abhinav
```

Practical No. 4

Practical No. 5
