

OPERATING SYSTEM LABORATORY WORK
ASSIGNMENT MODUL 5



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1) Explain the current linux distributions (minimum 5).

1. Red hat

Red hat is one of the linux distributions developed by a company called red hat inc. And often also called red hat linux, but in 2003 it was changed to red hat enterprise linux specifically for the corporate environment. This operating system was also the first to popularize the use of the rpm package manager system.

2. Centos

Centos stands for community enterprise operating system and is an example of a linux distribution developed by the centos project. This operating system was created using source code originating from red hat. Therefore, in terms of centos this product is very similar to red hat enterprise linux.

3. Fedora

Fedora is one of the linux distributions developed because it is sponsored and supported by red hat but created by a special team called the fedora project. Even the name fedora is taken from one of the characters in the red hat logo itself. Similar to red hat, the fedora operating system also uses the rpm package manager system.

4. Opensuse

Opensuse is also one of the operating systems established above the linux kernel or commonly called linux distributions. Opensuse project as the developer created this operating system with the aim that the use of linux can be more advanced with a stable and user-friendly performance. Opensuse is more often used as a desktop / server operating system.

5. Mandrake (mandriva)

Mandrake operating system or which can also be called Mandriva Linux is one type of Linux distribution that this time was developed by a company called Mandriva. Similar to fedora, the mandrake operating system also uses the rpm package manager system.

6. Debian

The naming process of one of these linux distributions is arguably quite unique. The originator of the first time that is Ian Murdock named Debian because it is a combination of his name and former lover. One of the reasons why Debian is one of the most widely used Linux distributions is because of its good security.

7. Ubuntu

Ubuntu is an operating system based on Debian and was developed by a company from South Africa called Canonical Ltd. The origin of the naming of Ubuntu is also derived from the South African language which means humanity. By its nature as an open source OS, ubuntu is deliberately prioritized for the public or server.

8. Mint

If you know beforehand that a Linux distro called Ubuntu is based on Debian, so this time there is a Linux distribution based on Debian and Ubuntu. The name is mint or commonly called linux mint.

9. Zorin

Zorin is one linux distro that has a graphical appearance very similar to windows, even including its applications. Since the beginning the purpose of making this operating system is so that users who are familiar with Windows can enjoy the features of Linux without having to experience difficulties.

2) Explain the same 20 commands between each distro.

1. login: Used to log in as another user, but must be root first to be able to run this command.

2. date: See the current date and time

cal-y: See the calendar this year

3. hostname: See the distro used

4. who: Prints all the usernames that are currently logged in

whoami: Prints the current user's name and ID

5. pwd: Used to show in the directory where we are now.

6. man [syntax]: Displays help for some commands

7. clear: Cleans / deletes commands at the terminal

8. whatis [syntax]: Obtain information from a brief command.

9. ls [option]: This command functions to display the contents of a directory along with the file attributes.

10. touch [filename]: Used to create a new file.

11. mkdir [directory_name]: Used to create a directory.

12. MV: Used to move, cut or rename files.

13. more [filename]: Used to display the contents of a file

14. cat> [filename]: We will use the cat command which is available by default in the linux shell.

cat> [filename]: Creates a file with the name test

cat [filename]: View the contents of the test file

cat>> [filename]: Added to the test file

cat file1 file2 file3> file4: Entering a contents of a file into another file.

15. cut [option] file: Defines a file that contains data based on columns

The command below will display the contents of ila_file.txt in columns 1 to 10

16. ln -s / path / to / source target: The purpose of this command is to link from one file / directory to another file / directory.

17. dir: Has the same function as the ls command, which displays is directory. You can open manually from the dir command. Giving options and arguments is the same as the ls command.

18. sort [option] [filename]: If you want to display the contents of the text file in order. Use this command.

19. logout: Used to log out from the system.

20. su [options] [Username]: The sudo su command is used if you want to switch from a normal user (\$) to a super user or root (#)Bottom of Form

3) Explain the meaning of the commands 'init 0', 'init 1', 'init 2', 'init 3', 'init 4', 'init 5', and 'init 6'.

- ♣ init 0 => Used for maintenance, diagnostic hardware, booting other than disk for example from cdroom.
command: init 0, shutdown -i0
- ♣ init 1 => Single user mode, used to add patches, backup / restore systems. at this level we can run / access all files but other users cannot log into our system.
command: init 1, shutdown -i1
- ♣ init 2 => multiuser mode, usually for use in networks. but here there are no resources shared.
command: init2, shutdown -i2
- ♣ init 3 ==> expanding multiuser mode, we can make local resources share on our network. so we can share this level of data on the network.
command: init 3, shutdown -i3
- ♣ init 4 ==> for alternative multiuser mode but currently cannot be used.
command: init4, shutdown -i4
- ♣ init 5 ==> for shutdown / power off.
command: init5, shutdown -i5
- ♣ init 6 ==> stop the operating system then reboot and return to the initdefault in / etc / inittab
command: init 6, shutdown -i6

4) Explain the meaning of the 'quota' command

Quota is limit values set to manage access to system and network resources or the amount of storage used by a particular User or Group

Disk quota can be applied per user or per group.

- ❖ If it is applied per user then the quota applied is absolutely the user's property. For example: Ical users have a 5 MB quota disk, then the total 5MB is absolutely the property of Ical users.
- ❖ If the disk quota is applied per group then the specified capacity is shared by the group. e.g. users Ical and RedHat are members of the Linux group. If the Linux group is given a quota of 10MB, then that capacity belongs to Ical and RedHat users. So suppose Ical users use 6MB, there are still 4MB to be used by RedHat users.

Disk quota restrictions are determined by two categories namely hard and soft limits,

- 🌈 Hard limit limit is a limit that cannot be exceeded, if the user has reached the hard limit limit then the user cannot enter data again to the hard disk, for example if the optimus user has a quota of 5 MB and has been used 4.9 MB so the remaining 0.1 MB remaining if then he tries to save a file of 0.4MB then the system will reject it.

Soft limit is a limit that can be crossed, but only in certain periods, the period is called the grace period, the default value of the grace period is 7 days, generally the hard limit value is greater than the soft limit. for more clearly consider the following example, for example, the optimus user is given a soft limit of 10 MB, a hard limit of 15 MB, and a grace period of 3 days, if the optimus user has used a hard disk capacity of 12 MB then the soft limit value has been exceeded, thus the grace calculation the period starts, if within 3 days the optimus user has not reduced his disk usage to below the soft limit, then he cannot use the disk again even though the hard limit value has not been reached, if the optimistic user reduces the disk usage limit to below 10 MB then the value of grace the period is reset again to 3.