

DAY1 : Started :-

linux --- top

nice - a program to control time usage of (access of) cpu by a program

****(important)**** niceness value ranges from -20 to +19 (high pr to low pr)

shared memory - the memory shared by two or more programs

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Processes

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- An instance of a program is called a process.
- Any command given to Linux kernel starts a new process.
- There can be multiple processes (instances) of the same program.

```
graph TD
    A[Processes] --> B[Foreground Processes]
    A --> C[Background Processes]
```

\$ top

PID	USER	PR	NI	VRT	RES	SHR	S	% CPU	% MEM	TIME+	COMMAND
Process ID	User Name	Priority	Niceness Value	Virtual Memory	Physical Memory	Shared Memory	Status	CPU Time	Physical Memory Used	Total CPU Time	Command

processes and their PID their user username their priority

08:25 / 11:18:27 Processes | Call us at IN: 9606058406 / US: 18338555775 or visit www.edureka.co

ps and top list the process

ps -ax ---> list all the process

ps -ux ---> list the process started by current user

ps -ef ----> full format

pstree ---> hierrachy format

1. -aX

This option lists all the currently running processes.

2. -ef

This option lists the currently running processes in full format.

3. -u <username>

This option lists the process for the user that you specified.

5. -C <command>

This option lists the process for the command you specified.

6. -p<PID>

This option lists the processes with the (PID) process identity you specified.

7. -ppid <PPID>

This option lists the processes with the PPID you specified.

8. Pstree

This option shows the process in the hierarchy.

9. -L

This option lists all the threads for a particular process.

10. -sort pmem

This option finds the memory leak if there is any.

11. -eo

This option shows the security information.

12. -U root -u root

This option shows the process running by the root.

(**NEW**) pidof - command

```
$ sudo useradd user-name // Adding a new user
```

```
$ sudo passwd user-name // Setting a password for that user
```

```
$ sudo userdel user-name // Deleting that user
```

```
$ sudo groupadd group-name // Adding a new group
```

```
$ sudo groupdel group-name // Deleting that group
```

```
$ sudo usermod -g group-name user-name // Adding a user to a primary group
```

Completed :

DAY-2 Started :

(NEW)-ip addr show

(Head and tail command)

new commands:

1. tac (reverse of cat)
2. id and gid
3. comm
4. sed same as tr
5. tee used with pipe ----
6. uniq -remove duplicates succeeding lines
7. wc ---- words,lines,characters

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Basic Commands

Commands		
pwd	cp	cd
echo	mv	sort
su, su <username>	rm	mkdir,rmdir
sudo	grep	man
clear	cat	touch
gedit/vi/nano/ vim	ls	install
whoami	whereis	whichis

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Linux File Content Commands

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Frequently used commands

Commands	
chmod	chown
ls	cut
id	sed
head	find
tar	diff
zip,unzip	uniq
watch	eval
locate	find
lslookup	grep

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Settings

Fullscreen

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Frequently used commands

Commands		
history	rpm	tr
tail	telnet	env
passwd	netstat	sort,merge
htop	nslookup	ps
free	ifconfig	kill
sestatus	curl	iptables
dd	awk	apt-get
ip	ssh,	df,du
	ssh-keygen	

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Frequently Used Commands

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Settings

Fullscreen

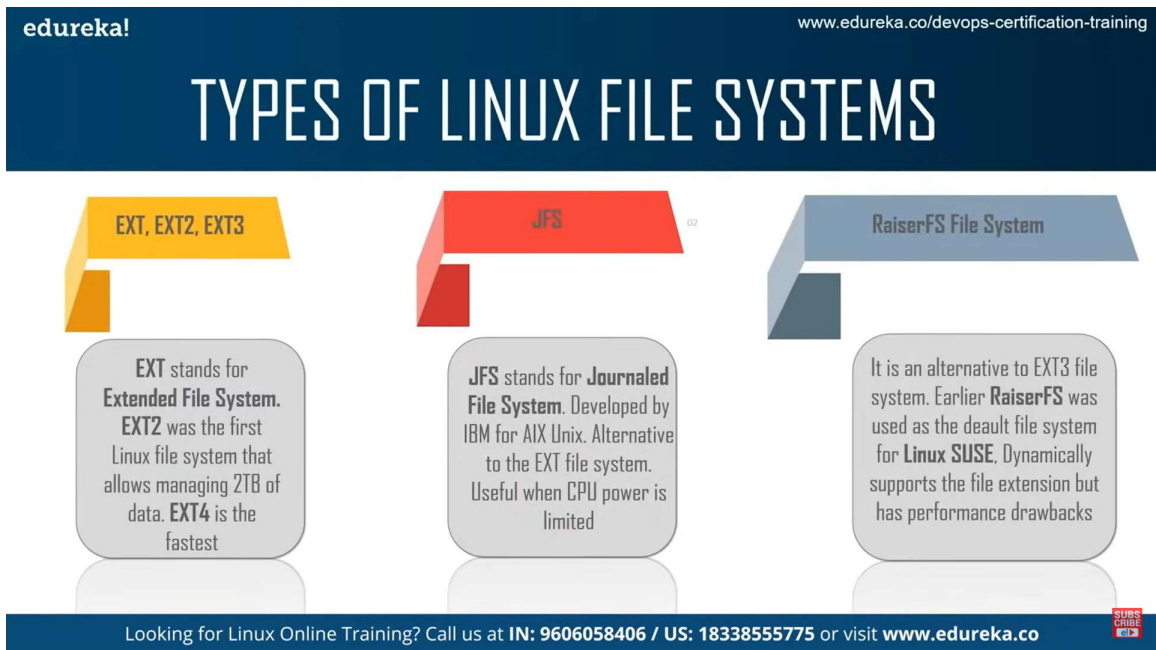
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COMPLETED

DAY3: STARTED

different file system

- 1.ext
- 2.jfs-jounaled file system
- 3.raiserfs
- 4.xfs
- 5.swapfs



TYPES OF LINUX FILE SYSTEMS

XFS

XFS was considered as high speed JFS which is developed for parallel I/O processing. Used by NASA

BTRFS

BTRFS stands for B-tree file system. It is used for fault tolerance, repair systems etc.

SWAP FILE SYSTEM

Swap file system is used for memory paging in Linux OS during system hibernation. A system that never goes to hibernate is required to have swap space equal to RAM.

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Quora

What is the difference between all of the different ext file systems?

Bohdan Horbeshko
Debian GNU/Linux user since 2013 · Author has 173 answers and 345.7K answer views · 4y

In general, those are backwards compatible versions of the same filesystem, adding some new features. ext2-ext4 can definitely be handled with the same ext4 driver, not sure about the first version though. This allows me to still use ext3 filesystem, even though the following driver was removed from the kernel a long time ago — as I find it more stable than ext4, and it justifies this opinion by working for many years.

ext2 added support for new timestamp types, and for inode modification. In ext, the existing files had to be created in new inodes, and only then old inodes were marked unused. So it was not possible to modify a file if there was no free space of at least the same size as the modified file has. Also, this led to fast fragmentation.

ext3 added journaling, which allowed to fix the state of filesystem after accidental outages, panics or drive detaching. The less notable features are better indexing of large directories and support of enlarging the filesystem on-the-fly.

ext4 introduced a lot of new features, and it's still in development, so some features may be theoretically added in the future. The most notable ones are extents — the inodes of variable size, — the support of preallocated files of certain size, and the support of quotas for certain files and directories that share some project ID.

Which is even more brilliant, almost all of the features can be enabled or disabled during filesystem creation. So, even if you're creating an ext4 filesystem, it is possible to make it completely compatible with ext3 by disabling all of ext4-specific features, and even compatible with ext2, by disabling ext3-specific features too.

489 views · Answer requested by Nathan Carnegie

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What are different file management systems?

What are the different types of file systems available to me?

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FILE SYSTEM ARCHITECTURE

Has a hierarchical file structure

Can manage and provide for non-volatile storage data

Namespace describes logical structure of file

Stores advanced information about partitions

```

graph TD
    ROM[ROM] --> Kernel[Kernel]
    Kernel --> VFS[Virtual File System]
    VFS --> EXT3((EXT3))
    VFS --> HPFS((HPFS))
    VFS --> VFAT((VFAT))
    VFS --> EXT4((EXT4))
    VFS --> FreeBSD((Free BSD))
    VFS --> Hardware[Hardware]
    
```

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FILE SYSTEM DIRECTORIES

```

graph TD
    Root[" / "] --> bin[" bin/ "]
    Root --> dev[" dev/ "]
    Root --> etc[" etc/ "]
    Root --> usr[" usr/ "]
    Root --> home[" home/ "]
    Root --> lib[" lib/ "]
    Root --> sbin[" sbin/ "]
    Root --> tmp[" tmp/ "]
    Root --> var[" var/ "]
    usr --> usr_bin[" bin/ "]
    usr --> usr_man[" man/ "]
    usr --> usr_lib[" lib/ "]
    usr --> usr_local[" local/ "]
    usr --> usr_share[" share/ "]
    var --> var_log[" log/ "]
    var --> var_lock[" lock/ "]
    var --> var_tmp[" tmp/ "]
    
```

any of these other directories that are there from the root directory itself you

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(etc-everything to configure)

var -log files

rpm -i (installing) -h-hash printing

-v verbose

-q query

COMPELTED

DAY4 : Started

--checksig i rpm

rpm -qa --last(view last installed file)

-e remove

completed

DAY5: Started

exiftool