LPI - 103.2 Process text streams using filters

Curs 2021 - 2022

ASIX M01-ISO 103 GNU and unix commands

Process text streams using filters

Description

Candidates should be able to apply filters to text streams.

Key Knowledge Areas:

Send text files and output streams through text utility filters to modify the output using standard UNIX commands found in the GNU textutils package

The following is a partial list of the used files, terms and utilities:
- ☐ bzcat
- ☐ cat
- ☐ cut
- ☐ head
- ☐ less
- ☐ md5sum
- ☐ nl
- ☐ od
- ☐ paste
- ☐ sed
- ☐ sha256sum
- ☐ sha512sum
- ☐ sort
- ☐ split
- ☐ tail
- ☐ tr
- ☐ uniq
- ☐ wc
- ☐ xzcat
- ☐ zcat

Show file content

- cat file…
- cat f1 f2 f3 > concatenated
- cat -n file

- less (less commands)
- more

- head, head -n nº, head -n -nº
- tail [-n nº]
- tail -f file

Numbering lines and counting

- nl
- wc [-lwcm]
- pipes:
  - command | command
  - command | wc -l

Hex and Octal

- od [-cjnAw]
- hexdump -C

Text Filters

- cut -c1-10
- cut -d: -f1,3,5-8,12-
- grep "regex" file
- grep -i "regex" file

Postponed Content

The next command will be explained in the next chaters
- tr
- grep
- sort
- uniq
- sed
- expand / unexpand
- join

- paste
- split
- zcat…

Example Exercises

- Realitza els exercicis indicats a: 103.2 Process text streams using filters
- Realitza els exercicis del Question-Topics 103.2

Exercices

1. Show the contents of the file /etc/passwd
2. Show the contents of the file /etc/os-release and /etc/issue.
3. Show the contents of the file /etc/group page by page.
4. Using the cat command show the contents of the file /etc/os-release numbering the lines.

[ ]

5. Show the first 8 lines of the file containing the user's accounts.
6. Show the last 12 lines of the file containing the group's accounts.
7. Show all the lines of the file /etc/group except the 5 last lines.

[ ]

8. Count the lines of the file containing the user's accounts.
9. Count the line, words and characters of the file containing the group's accounts.
10. Use the command "ps ax" to show all the processes. Then count them.
11. Show the first 10 lines of the file /etc/passwd numbering the lines.
12. Show the file /etc/os-release numbering the lines.

[ ]

13. Show the contents of the last 3 lines of the file /etc/group in octal.
14. Show the contexts in HEX using hexdump command of the first 10 lines of the file /etc/passwd.
15. Locate the executable file of the command date. Issue the command "file /usr/bin/date" and then "hedump -C /usr/bin/date | head".

[ ]

16. Show the contents of the file /etc/passwd ordered.

17. Show all the lines of the file /etc/service containing the string HTTP.
18. Show all the lines of the file /etc/service containing the strings FTP or ftp.
19. Show only the first column of the system users.
20. Show the login (1), uid(3) and (gid) information of the first 10 users.
21. Show the first 10 characters listing (long list) the root directory.

[ ]

22. Calculate the SHA512 sum of the file /etc/services
23. Calculate the md5sum of the word "patata".