LPI - 103.3 Perform basic file management

Curs 2021 - 2022

ASIX M01-ISO 103 GNU and unix commands

Perform basic file management

Description

Candidates should be able to use the basic Linux commands to manage files and directories.

Key Knowledge Areas:

- [ ] Copy, move and remove files and directories individually.
- [ ] Copy multiple files and directories recursively.
- [ ] Remove files and directories recursively.
- [ ] Use simple and advanced wildcard specifications in commands.
- [ ] Using find to locate and act on files based on type, size, or time.
- [ ] Usage of tar, cpio and dd.

The following is a partial list of the used files, terms and utilities:
- [ ] cp
- [ ] find
- [ ] mkdir
- [ ] mv
- [ ] ls
- [ ] rm
- [ ] rmdir
- [ ] touch
- [ ] tar
- [ ] cpio
- [ ] dd
- [ ] file
- [ ] gzip
- [ ] gunzip
- [ ] bzip2
- [ ] bunzip2
- [ ] xz
- [ ] unxz
- [ ] file globbing

List & change & create & delete directories

- ls [-aAlhR][--full time] [file]…
  - type perm link user group size date name
  - type: d l s p b c
  - perm: rwx, user, group, others
- pwd
- cd, cd ~, cd .., cd relativePath, cd absolutaPath
- tree
- mkdir [-p] dir…
- rmdir dir (empty)

- file file (magi cookie)(type)
- touch -t timestamp file
- timestamps:
  - modified, accessed, changed, birth
  - stat

Copy & move & delete files and directories

- cp
  - copy, copy and chage destination name, copy multiples files to dir destination. Recursive with -r or -R.
  - cp [options] source destination
  - cp source destination/newname
  - cp source… dirdestination
  - cp -R source destination
- mv
  - change name to file o directory. Move file or directory. Move file or directory and change destination name. Move multiple files or directories to directory destination.
  - mv [options] source destination
  - mv source destination/newname
  - mv source… dirdestination
  - [no use of -r or -R, move directories recursively automatically]
- rm
  - remove files or directories
  - rm file…
  - rm -r directory
  - rm [-rf] [-i]

File Globbing

- *

- ?
- [char]
- [^char]
- [a-z][A-Z][0-9]

Example Exercises

- Realitza els exercicis indicats a: 103.3 Perform basic file management
- Realitza els exercicis del Question-Topics 103.3

Exercises (1):

1. Show the current directory.
2. Change to the root directory.
3. Change to the user's home directory.
4. Go to the parent directory. Show the current working directory.
5. Go to the directory /tmp
6. Create the directory lpi and make it the active directory

[ ]

[create & delete directories] (active directory is /tmp/lpi)

7. Create the directory system.
8. Create the directories monday, tuesday and test.
9. Delete the directories monday, tuesday.
10. Create the directories network/captures (in one shot).

[ ]

[copy] (active directory is /tmp/lpi)

11. Using the tree command to show the directory structure.
12. Copy the file /etc/services to the active directory
13. Copy the file /etc/issue to the active directory and call it benvinguda.txt.
14. Copy the file benvinguda.txt to the directory /tmp/lpi/network/captures.
15. Copy the file /usr/bin/date tho the directory network //tmp/lpi/network).

[ ]

[move & rename] (active directory is /tmp/lpi)

16. Change the name of the file services for myservices.txt.

17. Change the directory name network for mynet
18. Move directory capture (/tmp/lpi/mynet/captures) to test (/tmp/lpi/test). Verify the contents of test, using ls and tree.
19. Move the directory test /tmp/lpi/test) to mynet (/tmp/lpi/mynet) changing his name to mytest. Verify the directory structure using tree /tmp/lpi.

[ ]

[delete files & directories] (active directory is /tmp/lpi)

20. Using rmdir remove the directory /tmp/lpi/mynet/mytest/captures. Is possible?
21. Using rm -r (caution!) remove the directory captures (/tmp/lpi/mynet/mytest/captures).
22. Remove the contents of the directory mytest (/tmp/lpi/mynet/mytest) but not the directory.
23. Remove the directory mynetwork, the directory and all its contents.

[ ]

[file globbing] (active directory is /tmp/lpi)

24. Use: touch file1.txt file2.txt file35.txt file1a.txt file1b.txt filea.txt filea1.txt filename.pdf carta.pdf oldcarta.pdf to create the requested files.
25. Show all the filenames with txt extension.
26. Show all the filenames beginning with f.
27. Show all the filenames containing carta in the name.
28. Show all the filenames beginning with the letter c or o or m and pdf extension.
29. Show all the filenames beginning with file followed by 2 characters and txt extension.
30. Show all the filenames with exactly 5 characters in the name and whatever extension.
31. Show the filenames beginning with file followed by two digits and txt extension.
32. Show the filenames containing two digits in the name and txt extension.

Exercises (2):

33. Make active the home directory
34. Using find search for the file .bash_history. Show a long list.
35. Using find search for the files in the /usr/sbin directory starting with user.
36. As user root find the files in the /etc and /usr/sbin directories containing user in the filename.

[ ]

37. Find the files in /tmp owned by your user.
38. Find the files in the /tmp directory uned by root.
39. Using find list the directory entries of /etc directory.
40. Using find list the block devices entries in the /dev directory. Idem as char devices. Is there any socket device?

[ ]

41. List the /boot directory using long and human options.
42. Using find list the files in the /boot directory less than 15M.
43. Using fins list the files in the /boot directory with size between 5M and 20M.
44. List all the files in the system greater than 200M. Send the stderr to /dev/null.

[ ]

45. Using find list the files newer than 5 days in the /var directory (mtime).
46. Using find list the files in /tmp newer than 1h (mmin).
47. Using find list the files in your home newer than the file .bashrc (newer).

[ ]

48. Use updatedb to create de locate database.
49. Using locate list all the files with the string ifcfg in the name.
50. Using locate list all the filenames containing the string user.
51. Using locate identify the file containing the filesystem tabulation information: fstab.

Exercices(3)

52. Change to the /tmp/lpi directory, create if doesn't exist.
53. Copy the file /usr/bin/date to the directory.
54. Split the file in three parts.
55. Concatenate the three parts again in a file called mydate.
56. Compare date and mydate.

[ ]

57. Copy the file /etc/passwd and rename the copy as passwd.txt
58. Using gzip compress the file. Observe the new name, where is the original?
59. Use file to show information of the new file. Use ls -lh tho show the size.
60. Use zcat to show the contents of the compressed file.
61. Using gunzip decompress the file. Use the command file to show information of passwd.txt. Use ls -ls to show the size.
62. Repeat the last two exercicis using bzip2 and bunzip2.

63. Locate the man page of the date command. Show the contents of the file containing the man page.

[ ]

64. Create a copy of the file date and call it date.original.
65. Using the local copy of the file date, compress it using gzip.
66. Split the compressed file in 20K portions. How many chunks are created?
67. Join the portions concatenating them in a new file called newdate.gz.
68. Compare that file with the compressed one.
69. Uncompress the file newdate.gz and compare it with the original.

Exercices (4)

tar cpio dd