

# Tasks for Lab Assignment 3: Hardening file systems, quotas

- 1 Establish quotas in their home directories for all the users in the system. These quotas are to remain active after a system reboot
  - no user can use more than 20 Mbytes for more than 10 days. Under no circumstances can any of them use more than 23 Mbytes
  - user018 and user019 together can never have more than 50 files. They can exceed 40 files for as long as 10 days.
    - **NOTE:** debian quota utilities assume that if an ext4 filesystem is being used for quotas it has already been formatted with quotas. We should create the quota files with the options `-c` and `-m`
- 2 using *ac/s*, allow user001 and user009 to read and modify `/boot/grub/grub.cfg`. Allow members of the group *password* to modify `/etc/shadow`

# Tasks for Lab Assignment 3: Hardening file systems, crypting

- 3 create two partitions with all the remaining space on the first disk
- 4 create 4 partitions on the second disk (`/dev/sdb1`, `/dev/sdb2`, `/dev/sdb3` and `/dev/sdb4`)
- 5 create a crypted file system on `/dev/sdb1` *plain mode*. Mount it onto `/crypt1`.
- 6 create a crypted file system on `/dev/sdb2` *LUKS mode*. Mount it onto `/crypt2`.
  - add three more passphrases to it

## Tasks for Lab Assignment 3: Hardening file systems, crypting

- 7 create a crypted volume comprising the available (just created) partitions in `/dev/sda`, `/dev/sdb3` and `/dev/sdb4`. Use the recommended method to create the physical volumes on the crypted devices. Mount it and copy files onto it
  - `/dev/sdb3` should be plain type, the others should be LUKS type
  - use the same passphrase for all the physical volumes. Change the *passphrases*.
- 8 reboot and access the crypted device. Check that the files are in it
- 9 Using *encfs*, create a crypted directory `$HOME/.safe` that can be accessed under `$HOME/private`.
  - copy files to `$HOME/private` and check de contents of `$HOME/.safe`
  - unmount `$HOME/private` (with `fusermount -u`). Change the passphrase and check that the files can be accessed with the new passphrase

## Lab Assignment 3: Work submission

- After performing the corresponding tasks of the lab assignment, a pdf document, describing what has been done (including screenshots showing the behaviour of the virtual machine, changes made to configuraton files, output from commands. . . ) should be sent to
  - antonio.yanez@udc.es. (students at udc)
  - yolanda@det.uvigo.es. (students at uvigo)
- The subject of the mail should be *FSO: practica-3*
- The attachment should be named with the lab assignment number and the surname and name of the student, in the form P3-Surname-Name.pdf, avoiding non-ascii caracteres (á, é, ñ . . . )
  - For example, for this lab assignigment, the work submitted by student *Donald Trump Núñez* should come as an attached file named P3-TrumpNunez-Donald.pdf to a mail with the subject *FSO: practica-3*
- The work must be submitted within 15 minutes of the end of the lab assignment class