



GII - Administración de Sistemas Operativos

Convocatoria ordinaria - primera parte - 13 de enero de 2014

Full name

DNI/NIE/ID

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*You have 90 minutes to complete this exam. You must send yours solutions in a PLAIN TEXT file. You must load this file to Campus Virtual. Other file formats, such as: PDF, Word, OpenOffice, **are not allowed**. Make you sure to write your full name at the beginning of the file and numerate the solutions..*

Complete this page with your personal data and return it back at the end of the exam.

1 (3 points) Write a KSH script that prints the user accounts with a UID in a given range and with a home directory whose path doesn't match with the username. For example, if user **pepe** has **/home/pepe** or **/Users/pepe** as home directory, it will be discarded.
The script will be invoked as: **./obten_usuarios uid0 uid1**, being **uid0** and **uid1** two numbers greater than or equal to zero. **uid1** must be greater than **uid0**.
The script shall use only KSH built-in commands.

2 (3 points) Implement the following backup plan:

- Files to copy: regular files owned by users with UID and GID both greater than or equal to 500, size lower than 20 megabytes and located anywhere, except under the **/proc** folder.
- Every Saturday at 3 p.m., a Level Zero full backup will be made.
- For other days, if the month day is an odd number, a Level 1 backup will be launched at 7 p.m. If the month day is even, a Level 2 backup will run at 7 p.m.
- Backups will be stored with a compressed format.
- The backup filename will contain the backup date, formatted as "D_YYYYMMDD", where D is the weekday number (0=Sunday; 1=Monday...; 6=Saturday), YYYY is the 4-digit year, MM is the 2-digit month number and DD is the 2-digit day number. For example, a backup for Thursday, November 21, 2013 will contain the string "4_20131121"; the following would be a valid filename: **backup_4_20131121.tar.gz**
- Backups will be stored in the already existing folder **/root/copiasusers**.

3 (4 points, each item scores 0,80) Answer the following questions:

- a) The current working directory stores plain text files only. Get the total number of words contained in all these files.
- b) Print the processes owned by user **root**, showing this information for each process: PID, command name and elapsed time in the system. The list will be sorted by PID, in ascending order.
- c) Delete all files under the current user's home directory (recursively) whose filenames end with a «~» and have not been modified in the last two months.
- d) Get the pathnames of all files in **/bin** and **/usr/bin** that are scripts. We will consider as a script any regular file whose two first characters are «#!».
- e) What is the purpose of the files that you can find at **/etc/rc5.d** ?