

Some Questions from 2003

- Given that `/etc/passwd` contains:

```
majordom:*:30:31:Majordomo:/usr/lib/majordomo:/bin/sh
postgres:*:31:32:postgres:/var/lib/postgres:/bin/sh
www-data:*:33:33:www-data:/var/www:/bin/sh
backup:*:34:34:backup:/var/backups:/bin/sh
mysql:*:36:36:Mini SQL Database Manager:/var/lib/mysql:/bin/sh
operator:*:37:37:Operator:/var:/bin/sh
list:*:38:38:SmartList:/var/list:/bin/sh
irc:*:39:39:ircd:/var:/bin/sh
gnats:*:41:41:Gnats Bug-Reporting System:/var:/bin/sh
```

Some Questions from 2003

- What does the following python program display when run? Give a line by line commentary for this program.

```
#!/usr/bin/python

import sys, string

for line in open('/etc/passwd').readlines():
    words = string.split(line, ':')
    if len(words) >= 5:
        print words[0], words[2:4], words[-1]
```

12 marks

Some Questions from 2003

- Using an example show clearly and explain how a GNU/Linux client and server are configured such that the client can import a filesystem from the server using NFS.

11 marks

- For the three scripting languages: `expect`, `python` and `bash` give a practical example of how each language might be used to automate a task. Choose a different example for each language and say why the language is suitable for such a task.

9 marks

Homework

- Comment on some of the security issues surrounding maintaining an ftp server on GNU/Linux.

8 marks

- Describe two methods of restricting ftp access on a GNU/Linux ftp server and discuss their merits.

12 marks

Practice exam question from 2005

```
#!/usr/bin/expect

log_user 0
set localdir foo
spawn ssh -l root linuxserver
expect "Password: "
send "wxyz1234\r"
expect "\\$"
send "cd $localdir"
expect "\\$"
send "[lindex $argv 0]\r"
interact
```

- (a) Provide a line by line commentary of how the above script operates. Ignore the first line.

8 marks

Practice exam question from 2005

- (b) Give an example of how the above script might be invoked at the command line. Also mention the advantage and disadvantage of using this script. Comment on security implications of using this script as a system administrator.

12 marks

Revision guidelines

- revise **all** topics
- but special attention should be given to the following: ftp server, expect, cracking, encryption etc, python, nfs