– LPI 101 –

(Linux Professional Institute Certification)

104-4 Managing disk quota [1]

a

```
   .~.
   /V\      by: geoffrey robertson
  // \\         geoffrey@zip.com.au
  @._.@
```

$Id: 104-4.tex,v 1.2 2003/05/30 04:51:59 waratah Exp $

Objective—Managing disk quota

Candidates should be able to manage disk quotas for users. This objective includes setting up a disk quota for a filesystem, editing, checking, and generating user quota reports.

Key files, terms and utilities

- quota

- edquota

- repquota

- quotaon

Disk Quotas

Quotas are used to enforce a disk space limit or an inode maximum on individuals or groups.

Types of quota limits:

user hard: The maximum size for a user.

user soft: A user's warning threshold.

group hard: The maximum size for a group.

group soft: A group's warning threshold.

grace period: A soft limit time restriction.

Setting Up Quotas

You must configure your init script to check and turn on QUOTA at boot time.

The golden rule is turn on quota *after* your /etc/fstab has been mounted.

```
#check quota and then turn quota on.
if [ -x /usr/sbin/quotacheck ]; then
    echo "Checking quotas. This may take sometime. "
    /usr/sbin/quotacheck -avug
    echo "Done."
fi
if [ -x /usr/sbin/quotaon ]; then
  echo "Turning on quota."
  /usr/sbin/quotaon -avug
fi
```

Entries in `/etc/fstab`

No Quota :

```
/dev/hda2   /home   ext2   default                1   1
```

User Quota Set :

```
/dev/hda2   /home   ext2   default,usrquota    1   1
```

Group Quota Set :

```
/dev/hda2   /home   ext2   default,grpquota    1   1
```

Create a Quota Record

Go to the partition that you wish to restrict usage in and as root:

```
# touch /partition/quota.user
# touch /partition/quota.group
# chmod 600 /partition/quota.user
# chmod 600 /partition/quota.group
```

Then reboot (or remount the partition) to take affect.

Assigning quota for users and groups

Setup quota for a user/group

```
# edquota -u USER
```

This will bring you into vi:

```
----------------------------------------------------------
Quota for user USER:
(Quota for group GROUP:)
/dev/hda2:
block in use: 2594, limits (soft = 5000, hard = 6500)
inodes in use: 356, limits (soft = 1000, hard = 1500)
~

~

----------------------------------------------------------
```

block in use: is the total number of block(in kilobytes).

inodes in use: is the total of files.

limits (soft =) indicates the maximum amount of hdd usage combined with the GRACE PERIOD acts as the border. There is warning to tell you, that you are close to this limit

limits (hard =) only works when the GRACE PERIOD is set. This is the ABSOLUTE limit of disk usage

Grace period.

Setting the grace period is in the format sec(onds), min(utes), hour(s), day(s), week(s), and month(s).

Setting a Grace Period

Setting the grace period is in the format sec(onds), min(utes), hour(s), day(s), week(s), and month(s).

```
# edquota -t
-----------------------------------------------------------
Time units may be: days, hours, minutes, or seconds
Grace period before enforcing soft limits for users:
/dev/hda2: block grace period: 0 days,
file grace period: 0 days
~
~
~
-----------------------------------------------------------
```

Quota Commands

quotacheck

Quotacheck is used to scan the disk usage and update the "quota.user". This should be automated as a cronjob periodically (weekly).

-v   this will produce some useful information about what it is doing.

-d   debug (very detail -v).

-u   user (all files with uid).

-g   group (all file with gid).

-a   all.

-R   except root (when used with -a).

`repquota`

Repquota produces a summarised report on the quotas on the system.

-a all file system indicated in /etc/fstab.

-v report all quotas, even if there is no usage.

-g report group quotas.

-u report user quotas (default).

`quotaon / quotaoff`

Turn quota on.

-a all (as in /etc/fstab).

-v display message for each file system.

-g manipulate user quotas.

-u manipulate group quotas.