UEEN3113 / 3413 Server Configuration and Management
Commands & Configurations

Quota Management

In order to enable quota management, the ***quota*** and ***quotatool*** packages need to be installed. To install the packages:

```
sudo apt install quota quotatool
```

Quota can be applied to a specific user or a group by specifying the corresponding parameter in the file **/etc/fstab**

The parameters:

- For user quota: **`usrquota`**
- For group quota: **`grpquota`**

Example, to enable user and group quota to the root file system, open **/etc/fstab** and add the parameters ***usrquota*** and ***grpquota*** to the option for the root file system.

```
 GNU nano 2.5.3                          File: /etc/fstab

# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point>   <type>  <options>       <dump>  <pass>
# / was on /dev/sda1 during installation
UUID=3fe41a20-839b-4083-9fcc-0837c5802ab5 /               ext4    errors=remount-ro,usrquota,grpquota 0       1
# swap was on /dev/sda5 during installation
UUID=1a1e0ef0-fb78-49ee-a6ab-5e70c4c65fc1 none            swap    sw              0       0
```

Remount to root file system (/) to enable the new options: **`sudo mount -o remount /`**

In order to enable the support to quota, run the **quotacheck** command.

```
quotacheck -avgum
```

This command will check the fstab file, scan for old quota files and create new quota files.

```
royal@polarbear:~$ ls -l /
total 108
-rw-------   1 root root  9216 Jan 29 17:02 aquota.group
-rw-------   1 root root  8192 Jan 29 17:02 aquota.user
drwxr-xr-x   2 root root  4096 Dec  2 20:34 bin
drwxr-xr-x   3 root root  4096 Jan 10 02:08 boot
```

As can be seen in the figure above, 2 quota files has been created in the root file system (/), namely **aquota.group** and **aquota.user**.

To configure quota of an user, run **edquota** command with the user name as the argument. For example, **edquota ken**

The file **aquota.user** will be opened with a text editor.

```
Disk quotas for user ken (uid 1002):
  Filesystem                   blocks       soft       hard     inodes     soft     hard
  /dev/sda1                         0          0          0          0        0        0
```

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The following configuration set the quota for Ken with soft limit 180MB and hard limit 200MB.

```
Disk quotas for user ken (uid 1002):
  Filesystem                  blocks       soft       hard     inodes     soft     hard
  /dev/sda1                        0     180000     200000          0        0        0
```

User will get warning when the usage exceeds the soft limit, and there will be a grace period (7 days by default) for user to reduce the usage.
However, the usage can't exceed the hard limit, definitely.

To change the grace period, run the command: **edquota -t**

```
Grace period before enforcing soft limits for users:
Time units may be: days, hours, minutes, or seconds
  Filesystem             Block grace period     Inode grace period
  /dev/sda1                       7days                  7days
```

To generate quota report, run the command: **repquota -avgu**

To turn off quota (on the root file system): **quotaoff -vug /**

```
royal@polarbear:~$ sudo quotaoff -vug /
/dev/sda1 [/]: group quotas turned off
/dev/sda1 [/]: user quotas turned off
royal@polarbear:~$
```

To turn on quota (on the root file system): **quotaon -vug /**

```
royal@polarbear:~$ sudo quotaon -vug /
/dev/sda1 [/]: group quotas turned on
/dev/sda1 [/]: user quotas turned on
royal@polarbear:~$
```

Edit quota for users / groups command:

- edquota -u royal (edit quota setting for user *royal*)
- edquota -p royal ken ben (impose quota setting in royal to others)
- edquota -g tester (set quota for group *tester*)