

Shaheen Storages Changes and policies

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SHAHEEN
SUPERCOMPUTING LABORATORY

Project storage

- New Project installed and in production since December 2021.
- Shaheen and Ibex storage extended with a new file system HPE E1000 with 37 PB capacity.
- It's available in `/lustre2/project/kxxxx`
 - Only space backed up to the tape system
- It's READ Only from compute node
 - This means that any jobs that are configured to write to `/project` directly will fail.
- Quota enforced :
 - 1M files per user
 - 80 TB per PI

Announcement

- Project filesystem update.

Please note that most of the projects have now been successfully migrated to the new filesystem.

The only impact on the users is that the new /project filesystem is now mounted read-only on the compute nodes. This means that any jobs that are configured to write to /project directly will fail.

Please see this link for the differences between project and scratch : <https://www.hpc.kaust.edu.sa/tips/scratch-vs-project>

- ➔ Update your job scripts
 - All the write **MUST** be in /scratch
- ➔ Copy the necessary data back to /project

Overview

File system	Space	# files	Purge time	Comments
home	200 GB per user			Only accessible on login snapshots
scratch	80 TB per PI	1M	60 days	R+W on compute node No backup
project	80 TB per PI	1M	6 months after expiration of project	R only Backup to Tape
Burst Buffer	Per job allocation		Scratch immediately after job completion Persistent: until system rebooted	Only approved project for heavy IO workload.

Useful commands

- Current usage: use command `kuq`

`kuq`

Disk quotas for Man Ana (uid 123456):

Filesystem	used	quota	limit	grace	files	quota	limit	grace
/lustre	487.4G	0k	0k	-	47689	0	1000000	-
/lustre2	5.954T	0k	0k	-	2778464	0	1000000	-

- Quota of PI: `kpq mypi@email.com`

Disk quotas for Man Antom (pid 1234):

Filesystem	used	quota	limit	grace	files	quota	limit	grace
/lustre	566.4G	0k	80T	-	1	0	0	-
/lustre2	28.1T	0k	80T	-	1854856	0	0	-

Tips

- Keep important data in /project
- Install libraries and dependencies in /project
- Copy executable and inputs to scratch
- Copy back necessary data to /project
- Check your quota. It can be a reason for failure (size and number of files)
- For archiving, compress data, and move them out to your local storage or Datawaha (IT)



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Thank You ! شكراً !

