

Q: How to utilize the scratch space on Turing?

KEEP A BACKUP COPY OF ALL YOUR FILES ON /STORAGE/SCRATCH!!!!

1. Context: The CO Department has RAID>0 storage on babbage:/home and thompson:/new-home only. These two partitions are mounted to every server as NFS. Every other storage partition is under the risk of data loss if a drive fails.
2. The speed of accessing data for ML workflows increases as NFS < Local HDD < Local SSD.
3. /storage/scratch is a local SSD on Turing. It is advisable to move your files here for best performance in training workflows.
4. We intend to clean all the files on /storage/scratch/ that are not accessed within a month automatically. Therefore, you should always keep a backup of the files somewhere out of the scratch.
5. As of 2026/Feb/26 – we have not implemented this sort of scratch on other servers. We will do it in a few weeks after testing how students like this on Turing. You are welcome to email [E/14/Gihan](#) and let him know what you think.
6. A general workflow
 - a. Keep your code and data in your /home
 - b. Give read/write rights to your group members to this project folder inside your home.
 - c. Copy your data into scratch.
 - d. Create your conda environment and other temporary files inside the scratch.
 - e. Run the code to use the data from scratch.
 - f. Copy final artifacts (final checkpoint, log files) back from scratch to your home.
7. Read how [tmpreaper](#) works if that interests you.

How we (admins) set up /storage/scratch/

```
chmod 1777 /storage/scratch/
```

```
crontab -e
```

```
0 12 * * * (date; find /storage/scratch/ -mindepth 1 -type f -mtime +30 -print -delete; find  
/storage/scratch/ -mindepth 1 -type d -empty -print -delete) >>  
/localhome/servermonitoring/logging/turing-scratch-deletions/${date +%Y%m%d}.log  
2>&1  
00 00 1 * * (date; tmpreaper --showdeleted -a 29d23h /storage/scratch/) >>  
/localhome/servermonitoring/logging/turing-scratch-deletions/${date +%Y%m%d}.log  
2>&1
```

How you (students) should use /storage/scratch/

mkdir /storage/scratch/e14-4yp-low-light-images

Copying the files to scratch

cp -r /home/e14158/4yp/* /storage/scratch/e14-4yp-low-light-images/

Removing the permission from the default e14 group

ls -all /storage/scratch/ | grep e14-4yp

chmod -R 700 /storage/scratch/e14-4yp-low-light-images

ls -all /storage/scratch/ | grep e14-4yp

Giving write access to the other project group members

setfacl -R -m u:e14339:rwX /storage/scratch/e14-4yp-low-light-images

setfacl -R -m u:e14379:rwX /storage/scratch/e14-4yp-low-light-images

getfacl /storage/scratch/e14-4yp-low-light-images

file: storage/scratch/e14-4yp-low-light-images

owner: e14158

group: e14

user::rwX

user:e14379:rwX

user:e14339:rwX

group::---

mask::rwX

other::---

How to keep different temp files on scratch?

1. VSCode Server [[Read](#)]
 - a. Set up the remote.SSH.serverInstallPath variable
2. Torch hub [[Read](#)]
3. Conda environments [[Read](#)]