

Update about the Cholesky cluster

February 5, 2026

This presentation is mainly aimed at members of the CPHT. If you work in another lab, please get in touch with your local IT correspondent.

1. Summary of the incident

November 2025

- Users noticed data loss and inconsistencies in their data on Cholesky
- Users reported that some of their SLURM jobs were disappearing.
- IDCS Team → Call for BeegFS support
- **Several hardware problems** (memory) and **network interruptions**
- Lost synchronization between master and slave BeegFS storage nodes

2. Where to get surviving data ?

From CPHT SSH gateway (pascal) :

- **HOMEDIR**: /tmp_mnt/backup_cholesky/firstname.lastname
- **WORKDIR**:
/tmp_mnt/backup_work_cholesky/firstname.lastname
- **WORKDIR_NAS (storage for montblanc, hedin, tianlong clusters partitions)**:
/tmp_mnt/backup_nas01_cholesky/firstname.lastname

3. Best practices

There is **no backup** of the data stored on Cholesky. Any removed file is lost forever. It is the user's responsibility to keep a copy of the content of their `home` and `workdir` in a safe place.

Where to backup ?

- `/home`, and `/work{pmc, laser, phymath, ...}`, access from CPHT SSH gateway
- `/WORKPMC*` : a PMC storage at Ecole Polytechnique, access from CPHT SSH gateway
- **IDCS High Capacity Storage** (planned mid-2026), access from * by SSH/FTP/SCP
- Gitlab forges : <https://gitlab.in2p3.fr> or <https://plmlab.math.cnrs.fr>

4. Training sessions

- Every year we organize **three training sessions**.
 - One session is focused on the usage of Cholesky
 - Another one on the usage of git
 - The last one about LINUX fundamentals
- It is important to attend them, especially for new PhD students and postdocs.
- In the future, they will become mandatory to access the HPC clusters.

5. Online documentation

CPHT : www.cpht.polytechnique.fr (-> IT service Menu)

- IT general resources : <https://docs.idcs.ip-paris.fr>
- Dedicated Cholesky resources : <https://docs.idcs.mesocentre.ip-paris.fr/>

6. Future of Cholesky

- Reminder of end of Cholesky's warranty : **2024**
- Since 2024, IDCS team has worked to find new infrastructure solutions for HPC and storage, and gathered funding from Ecole Polytechnique, E4C (IP Paris).
- Proposal of a new architecture with StackHPC company (several europeans academic clusters : Cambridge, Oxford, Cineca, etc.)
- Expected to be online by the **end of March 2026** at IDRIS CNRS.

