

Regulations for the Use of SISSA Storage Space

Introduction

In the context of European research projects, especially those funded under Horizon Europe and similar frameworks, the FAIR principles—Findable, Accessible, Interoperable, and Reusable—are essential for ensuring that research data is managed responsibly and shared effectively. These principles not only enhance the transparency, reproducibility, and impact of scientific research but are also increasingly required by funding agencies.

SISSA is committed to supporting its researchers in aligning with the FAIR principles—Findable, Accessible, Interoperable, and Reusable—through dedicated policies, training, and infrastructure. Effective data and information management is not only foundational to FAIR compliance but also crucial for the success of research projects, particularly those funded through European grants. Proper data storage ensures the security and integrity of information, facilitates collaboration among researchers, and supports compliance with data management regulations and best practices—often essential for securing and maintaining funding. The institutional storage system described in this regulation is designed to facilitate these goals.

Purchasing storage involves acquisition costs, operational costs, and costs related to the space occupied in the data room. To optimize these costs, SISSA has implemented high-capacity, expandable storage, through which space can be allocated to each research group upon request.

The School has decided to establish a central archive to support Principal Investigators (PIs). This strategy aims to streamline data management and optimize resources by discontinuing the acquisition of NAS or other types of storage for individual groups or projects.

1. Storage Space

- a) Storage space is allocated to PI upon request. PI can request any amount of space they need. The first 5TB are provided free of charge. Additional space beyond the initial 5TB is charged 50% to funds owned by the PI and 50% to the School's budget.

2. Cost of Allocated Space

- a) The cost per TB is defined annually by the computing committee based on the estimated cost for upgrading the storage itself. The budget for requesting space must be fully available at the time of the request, and the rate defined at the time of the request is applied for the entire requested period.
- b) The budget for storage space is used to purchase new storage nodes, to replace failing ones and grow storage capacity, not to cover the cost of already purchased storage nodes. Each year, ITCS checks how much it would cost to purchase new storage nodes and adjusts the cost requested from the PIs' budgets based on the current cost. This allows for better planning of the financial resources needed for the next purchase without facing a significant gap between available and planned resources and the actual cost of new storage nodes.

3. Data Ownership

- a) The use of storage is reserved for research data. The ownership of the data is attributed to the PI who requested the allocation of space, regardless of who recorded it.
- b) In the case of data or folders that become inaccessible because a student or researcher is no longer affiliated with the School, the PI who requested the allocation of space can request their attribution.
- c) In case of data or folders that become inaccessible because the PI is no longer affiliated with the School, then the ownership of the data automatically passes to the Director of the School, who can dispose of them as needed, either marking them for deletion, moving to another storage or assigning them to a new PI for the continuation of the research.

4. When to pay for the requested space

- a) The budget for the requested space must be available at the time of the request, and the corresponding amount is allocated upfront at the time of the request.

5. Request for Free Space Beyond 5TB

- a) If a research group lacks its own funds, it can request the allocation of free space beyond the initial 5TB, provided a description of the intended use and research purposes is given.

- b) Requests for free space beyond 5TB will be reviewed by the computing committee.

6. Duration of Allocation

- a) The allocated space typically has a duration of 5 years. It is possible to allocate the space for longer periods, and it is always possible to request an extension at the end of the term, provided the necessary budget is available for the subsequent years.

7. How to modify the amount of allocated space

- a) It is always possible to extend the capacity of the allocated space, provided the necessary budget is available to cover the period up to the end date set by the initial request. Alternatively, a new separate allocation can be requested, for example, if the sharing is between different work groups. Normally, it is not possible to reduce the allocated space before the end of the 5-year term or the period requested at the time of the initial request if longer.

8. Request Procedure

- a) The application must indicate how the data should be managed at the end of the allocation period (deleted, exported, etc.).
- b) The application must indicate whether the data contains personal or sensitive information, even if anonymized. If so, a data impact analysis must be attached in accordance with the research project's requirements.

9. What to do if you have special needs

- a) If special needs arise (need for space for a period shorter than 5 years, need to reduce space before the end of the term, or any other unforeseen situation), it is always possible to submit a request for evaluation, which will be reviewed by the computing committee.

10. How the allocated space is guaranteed

- a) The initial allocation of space is nominal, and physical space is not immediately allocated. When the actual physical space occupied on the institutional storage reaches the threshold of 80% of the available physical space, ITCS initiates procedures to increase capacity by purchasing new storage nodes. New storage nodes can also be purchased by ITCS for technological renewal, typically when the guaranteed maintenance period provided by the supplier ends. ITCS always requests a 5-year maintenance

period from suppliers of IT equipment, which corresponds to the amortization period stipulated by the School's accounting regulations. For the purchase of new storage nodes, ITCS uses the budget quotas set aside by the Pls at the time of the space allocation request. This allows for sufficiently precise purchase planning.

11. How the backup of institutional storage works

- a) The institutional storage does not have a backup. However, the system is highly redundant and distributed across multiple storage nodes. The storage policy allows for the simultaneous loss of 2 disks or an entire storage node without losing data.
- b) ITCS is evaluating the costs and feasibility of activating a backup at a remote data center. The size of the backup will be compatible with the actual space occupied, regardless of the nominal allocated space.
- c) ITCS is also considering the possibility of cloud backup or setting up cloud space for long-term archiving at the end of the allocation period on the institutional storage.

12. Access to the storage

- a) Access to this storage will be allowed only from SISSA network and with a valid SISSA account, so users outside of SISSA will need to use the VPN. Also, users and groups will be the same as on SISSA workstations.