



Applies to: Staff, Student Employees, Primary Investigators, Users, OSC Affiliates

**Responsible Department**

**Client Services**

## POLICY

**Version:1.2**

Issued: 06/17/2024

This policy defines standards for utilization and maintenance of the project filesystem by OSC clients and staff. The project filesystem provides additional long-term storage than what is available in a home directory, with a higher level of performance and capacity.

### Purpose of the Policy

To define OSC procedures related to the project filesystem (including space creation, data ownership, data recovery and space reclamation), to maintain good performance and to ensure correct billing. The policy also specifies proper usage expectations for OSC clients.

### Definitions

Term	Definition
Disaster recovery (DR)	Provide the recovery of data stored in OSC's storage in the event of a natural disaster.
PI	Principal Investigator. The lead for an OSC project. Responsible for managing project activities with regards to project data storage.
Data is permanently deleted	All data and its backup are completely deleted from OSC's filesystems; data will not be recoverable once it is permanently deleted.
Archive	Move data from disk to tape.
Data is unmounted from disk	The data will not be visible to users; billing will be stopped after the data is unmounted. By retaining it on disk it can be very quickly made available to clients upon reactivation of the service.

### Policy Details

OSC provides a project filesystem as high-performance, high-capacity, long-term storage space. The storage systems and a copy of the backup data are in a data center in Columbus, and a replica of the data is kept in a geographically remote data center for disaster recovery. OSC makes no warranties about data preservation beyond the backup and retention practices described in this document.

Below defines the proper usage of the project filesystem:





- I. Namespace of project directories will be consistent in the format of /fs/ess/<project-code>.
  - A. The PI of the project is the ultimate owner of the data stored in the project directory, unless a different agreement is in place.
  - B. The quota including both disk and number of files on the project storage is shared by all members of the project.
  - C. The default permissions on a project directory allow read and write access by all members of the group, with deletion restricted to the file owner and PI.
- II. Data Backup
  - A. All files in the project directories are backed up daily, with a single copy written to tape.
  - B. The retention period is 90 days for any deleted/overwritten data.
  - C. OSC retains up to 14 versions for overwritten data; additional versions will be deleted in chronological order.
  - D. OSC Replicates the backups to an offsite data center for DR purposes.
  - E. Core files (identified by the pattern “core.\*” in the filename) are not backed up.
  - F. OSC’s backup software cannot support certain characters. In the event a user creates a file with the following characters in the name, OSC will proactively rename the files so that backups may complete.
    - 1. Prohibited characters: Newline, Carriage return/linefeed, Ctrl+X, Ctrl-Y
- III. Data Security
  - A. OSC staff will not look at valid data stored in the project filesystem unless required to maintain proper system functionality or authorized by the user.
  - B. Protected Data Service is supported should you require additional protection. Please refer to the Protected Data Service page [1] if you need this service.
- IV. Data Retention
  - A. Once the project the storage is attached to has no active, unexpired budget, unless other arrangements have been made, the project data associated with academic projects (including both research and classroom) will be unmounted from disk for 30 days, then archived for 545 days (approximately 18 months) and then permanently deleted. Project data associated with non-academic projects will be unmounted from disk for 7 days, then archived for 30 days and then permanently deleted. Note: A project will be considered active when a budget is exhausted until it reaches its expiration date and will continue accruing storage fees unless the PI takes action, despite compute being restricted, until the active budget reaches its expiration date.
- V. Billing
  - A. The project storage is billed based on the disk quota (not the actual usage).
  - B. The storage charge is calculated daily.

## Policy Procedure

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## Maintenance:

### I. Space Reclamation

- A. When the PI or institution explicitly requests via OSC's ticket system the removal of an allocation on the filesystem, OSC staff will confirm the request and perform permanent deletion within 5 business days after the confirmation is received.
- B. When the project the storage is attached to has no active, unexpired budget (a project will be considered active when a budget is exhausted until it reaches its expiration date, and will continue accruing storage fees unless the PI takes action, despite compute being restricted, until the active budget reaches its expiration date), unless other arrangements have been made:
  - 1. OSC staff will notify the PI about the service termination.
  - 2. OSC staff will follow the terms defined in **Policy Details IV 'Data Retention'**; no user notification is sent when OSC performs the archival and deletion.

## Utilization of Service

### I. Request a new project space or modifications to current project space

- A. Only the PI (and project administrator) is eligible to request new or modifications to the project storage.
- B. The request can be sent to OSC at any time.
- C. The quota includes disk space and number of files.
- D. OSC retains the right to determine whether the request will be fulfilled.

### II. Request a change of data attributes

- A. The PI (and project administrator) or data owner is eligible to request the change of data attributes. Please contact OSC Help and include the following information:
  - 1. OSC username
  - 2. Path(s) of directories/files that need to be changed
  - 3. Detailed description of the changes to be made
  - 4. Justifications
- B. The request can be sent to OSC at any time.
- C. OSC retains the right to determine whether the request will be fulfilled.

### III. Request data recovery

- A. Users may request restoration of deleted or changed files. Please contact OSC Help and include the following information:
  - 1. OSC username
  - 2. Path(s) of directories/files that need to be recovered
  - 3. When the data was deleted/changed by user
- B. The data to be restored can be recovered following the terms defined in **Policy Details II 'Data backup'**.
- C. The user needs to work with OSC to ensure there is enough space in the project directory for the restored data when the restoration is performed.





## Responsibilities

Position or Department	Responsibilities
HPC Systems	Monitor project filesystem and perform the space creation, data recovery, archival and deletion
Client Services	Communicate with OSC clients regarding project storage

## Resources

[1] Ohio Supercomputer Center Protected Data Storage:  
[https://www.osc.edu/resources/protected\\_data\\_storage](https://www.osc.edu/resources/protected_data_storage)

## Contacts

Subject	Department	Telephone	E-mail/URL
Policy questions	Client Services	614-292-1800	<a href="mailto:policy@osc.edu">policy@osc.edu</a>

## History

Issued: 10/08/2021 Issued 'Project Filesystem Storage Policy'

Revised: 10/11/2022 Removed /fs/project syntax due to the DDN storage decommissioning

Revised: 06/17/2024 Added DR recovery site, unsupported backup characters, and updated retention periods

