

ND Center for Research Computing

Storage Policy

Updated: June 2026

This document defines the CRC's storage policy (SP) for ND Faculty regarding storage acquisition, installation, secure operation, performance tuning, maintenance and support. The SP will be reviewed annually and revised in line with CRC Faculty Advisory Council feedback.

Our HPC storage infrastructure is built to support research computing data and workflows. Optimized for high-throughput, parallel I/O, and large datasets, this environment is dedicated to active computational research initiatives, simulations, and data-intensive analysis. The table below summarizes our current storage options.

	Primary Group Storage	User Home Directory	Legacy Data	Legacy Data
Mount point	/groups	/users	/goldfs	/bluefs
Default quota	5TB	100GB	0	0
Nightly snapshot	Yes	Yes	Yes	No
Additional cost	\$230/TB/year	N/A	\$140/TB/year	\$70/TB/year
Notes		Fixed size	Limited access	Limited access

To maximize performance and fiscal responsibility, our storage is engineered into two distinct tiers based on data lifecycle needs:

1. Primary Storage Tier (Active Data)

The Primary Tier is the go-to for your active research. It is designed for maximum speed, concurrency, and reliability to keep up with the demands of our high-performance compute nodes.

- **Audience:** Current research and tenure track faculty may request an initial startup allocation of 5TB at no cost. Accounts sponsored by the faculty will automatically be given access to this location.
- **Intended Use:** All active project data, running simulations, code compilation, staging datasets, and immediate pipeline outputs.

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814 Flanner Hall, Notre Dame, IN 46556 USA • Phone 574-631-2400 • CRCsupport@nd.edu

- **Performance:** Ultra-low latency and massive parallel bandwidth designed to prevent I/O bottlenecks during large-scale compute jobs.
- **Access:** Direct, high-speed mount across all HPC cluster compute and login nodes.
- **Policy Note:** Because this is premium, high-performance space, once a specific phase of research concludes, faculty should consider migrating data to the Legacy Tier or offsite.

2. Legacy Storage Tier (Inactive Data)

The Legacy Tier represents our cost-optimized storage solution. By utilizing more economical storage media, we can offer massive capacity for long-term data preservation without draining institutional resources.

- **Intended Use:** Completed project data, inactive datasets, post-publication retention, and historical research baselines that are no longer actively being computed against.
- **Cost Efficiency:** Highly economical, allowing the faculty to scale storage capacity sustainably over time.
- **Accessibility Constraints: Limited accessibility.** This tier is optimized for capacity and cost rather than speed. Data is not directly mountable for live compute jobs. Retrieving or restoring data from this tier involves a delay (latency) and should be planned in advance.

Frequently Asked Questions

- Am I able to mount or otherwise attach CRC storage directly to my local workstation?
 - CRC storage is not directly accessible outside of CRC-owned and maintained servers. You may use file transfer tools to manage data. We recommend using Cyberduck or FileZilla for internal use and Globus for larger or external transfers.
- Can I store restricted and/or confidential data on the CRC?
 - In general, restricted and/or confidential data can never be stored in the primary access storage pool. The CRC can help direct you to the right resource (such as ND SECURE). Please reach out to discuss your specific use cases.
- Where can I find more specific details about storage and each filesystem?
 - Additional details can be found online: <https://docs.crc.nd.edu>