



Award #: 1659282

# CSSI Element: The South Dakota Data Store (SDDS), a Modular, Affordable Platform to Enable Data-Intensive Research and Education

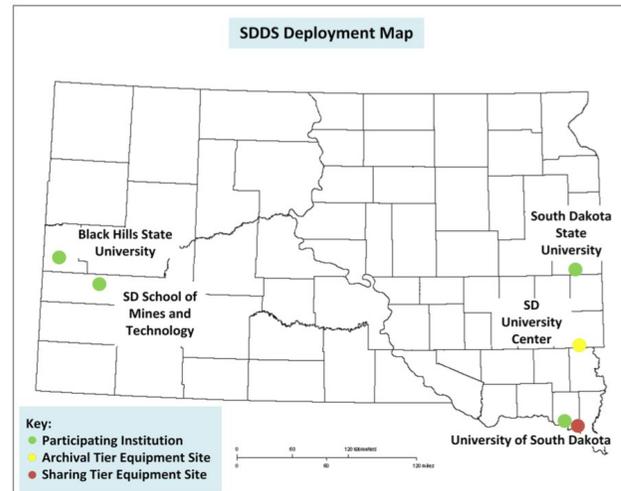
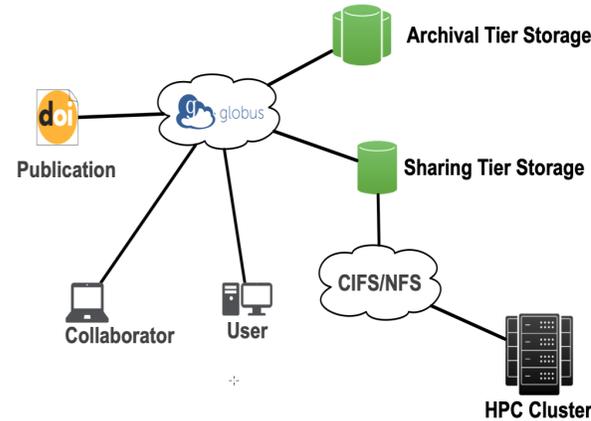
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## The Problems

1. There is a **growing need** for retention of both long-term archival data sets as well as 'active archives' of data accessed periodically to revisit, revise, and share results.
2. Many labs store data on consumer-grade media **not reliable or performant** enough for research data, *OR* on enterprise-grade storage systems which are **not cost effective** at the required capacity.
3. Maintaining separate storage at each SD research institution is **not cost effective**.
4. Many SD institutions, especially PUIs, **lack the staff or support infrastructure** to separately maintain distributed research-grade storage.

## Architecture



## New Capabilities

*The South Dakota Data Store (SDDS) provides high-reliability, high-availability, network-accessible storage for research requiring persistent access to large quantities of data.*

## The Sharing Tier

- 430TB disk-based storage
- High-reliability, high-availability, network-accessible
- Persistent access to large quantities of data
- USD main campus - Vermillion, SD

## The Archival Tier

- 1050TB tape-based storage
- Long-term offsite archival-grade storage
- USD CCSF - Sioux Falls, SD