



ORCD – basic data storage services

The ORCD basic data storage service (BDSS) provides several flavors of base storage. The different offerings are designed to meet different use cases and funding models.

Data transfer services based on the widely used Globus tool and on generic data transfer node computers are also available.

A secure data storage service is also being developed to meet needs of data subject to regulatory requirements.

The details of the current services are listed in the pages below. If you have questions about these services please reach out to us at orcd-help@mit.edu.

BDSS Storage Types Table

Storage Type	Space allocation	Time duration	Cost	DR Backup	Encryption/compression at rest	Usage	Status
Home directory	500GiB	account duration	no direct charge	Y	Y/Y	Source code and user files	active
Per account pool	1TiB	account duration	no direct charge	N	Y/Y	Personal near-line datasets	active
Per PI pool	5TiB	account duration	no direct charge	N	Y/Y	PI group near-line datasets	coming soon
Ephemeral scratch storage	N/A	old content purged as needed	no direct charge	N	N/N	Fast I/O for ensemble/HPC modeling, large data analysis/ML training/inference.	under test
Direct charge disk array hardware	500TiB increments	5 year hardware life	~\$50,000 capital purchase	Y	configurable	Research group near-line datasets	active
Direct charge flash array hardware	270 TiB increments	5 year hardware life	~\$100,000 capital purchase	Y	configurable	Fast I/O for ensemble/HPC modeling, large data analysis/ML training/inference.	active
Disk storage rental	20 TiB increments	indefinite	\$20/TiB/year ¹	Y	Y/Y	Research group near-line datasets.	active
Flash storage rental	20 TiB increments	indefinite	\$80/TiB/year ¹	Y	Y/Y	Fast I/O for ensemble/HPC modeling, large data analysis/ML training/inference.	coming soon

¹ FY25 rate



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ORCD - Globus service

Associated with its storage ORCD supports Globus data transfer and sharing services. ORCD funds a standard Globus subscription. This provides mechanisms for transferring data to and from ORCD systems with collaborators all over the world and supports integrations with numerous cloud storage services.

A default Globus service allows any researcher to easily upload and download data from their personal storage to another Globus subscription based or Globus personal endpoint location. This service can be used to automate transfers to/from remote systems and to/from laboratory instruments.

The Globus subscription also supports more advanced features for data sharing and for data processing automation.

For details and example on Globus capabilities please see <https://orcd-docs.mit.edu> or <https://globus.org> or email orcd-help@mit.edu .

ORCD also funds a high-assurance Globus subscription. A storage capability that aims to meet SOC2 compliance requirements is under development using this subscription. If you have a project that might benefit from this service please feel free to contact us at orcd-help@mit.edu.



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ORCD Data Transfer Nodes (DTN)

The ORCD shared cluster also includes a set of data transfer nodes (DTNs). These can be used to bulk transfer data to/from the ORCD shared cluster using tools such as rsync and rclone.

For details and examples on ORCD DTN capabilities please see <https://orcd-docs.mit.edu> or email orcd-help@mit.edu .