



LaunchIT Updates: Object Storage and PDS

LC User Meeting
March 2026

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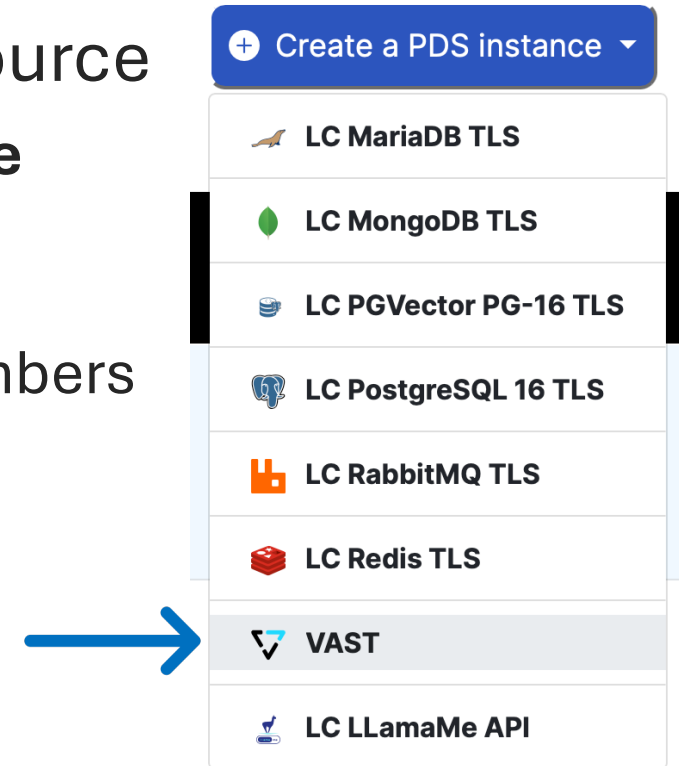
Prepared by LLNL under Contract DE-AC52-07NA27344.



Object Storage

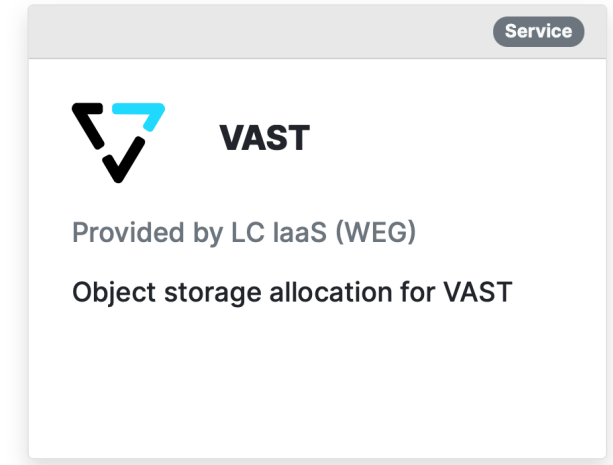
Group Object Storage, now available in LaunchIT

- Object storage is now treated as a workspace resource
 - now appears on the **catalog page** and **workspace page**
- Provision once, share with the team,
 - one allocation can be accessed by multiple group members
- Getting started
 - Create/open your group workspace in LaunchIT
 - Select **VAST** from the catalog drop down



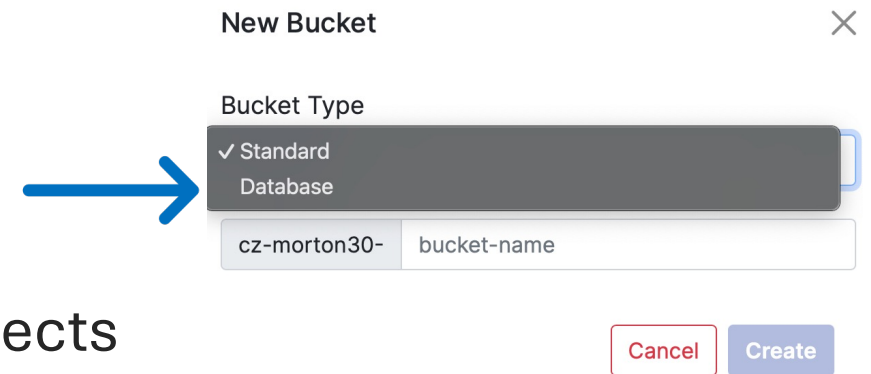
S3 Provider Change, StorageGRID to VAST

- We are switching Object Storage providers
 - From: on-prem StorageGrid
 - To: on-prem Vast
- What is changing
 - Users should **already** have migrated data from StorageGRID to VAST
 - We will begin **turning off StorageGRID** access soon
- Why VAST
 - Leverages the existing VAST storage cluster
 - Better performance than StorageGRID



VAST DB, Database-like access to data in S3

- Provisioning: Special S3 bucket created via LaunchIT
- What you get: SQL database-like access patterns
- Capabilities:
 - Queryable fields
 - Column and row level access
 - Retrieve only the data you need, not entire objects
- Best for: High-capacity datasets, including TB-scale
- Performance: Fast ingestion, low-latency queries, efficient retrieval at scale





Helpful Links

- LaunchIT Docs
 - <https://hpc.llnl.gov/services/cloud-services/launchit>
- Object Storage Docs
 - <https://hpc.llnl.gov/services/cloud-services/object-storage>
- VastDB example
 - <https://lc.llnl.gov/gitlab/weg/examples/vastdb-demo>



PDS Updates

New Service: PGVector

- PDS managed **PostgreSQL** database with the **PGVector** extension enabled
- **Same PostgreSQL benefits:** Familiar Postgres features, tooling, and SQL support (same as standard PostgreSQL in PDS)
- Store and query **vector embeddings** for **RAG-based workflows**
- **How to request:** Provision **PGVector** from PDS in LaunchIT
- Example:
 - <https://lc.llnl.gov/gitlab/weg/examples/pgvector-example>

Service



LC PGVector PG-16 TLS

Provided by LC IaaS (WEG)

PostgreSQL database service with persistent storage and the postgres vector extension.



Upgrades and Downtimes

- Quarterly service updates: PDS services in OCF and SCF are updated at least once per quarter
- Scope: These are service upgrades (not just underlying hardware maintenance, which may have separate downtime)
- Expected impact: Intermittent connection issues and possible service outages during maintenance windows
- Occasional action required: Some services may need to be manually migrated to the newest version
- What to do: Watch for maintenance notifications, plan workflows around windows, contact support if you need migration help

End of Life (EOL) Announcements, Action Required

- MySQL (OCF and SCF), EOL
 - Action: Migrate all MySQL instances to MariaDB
 - Deadline: April 30
- RabbitMQ 3.8 (SCF), EOL
 - Action: Migrate to RabbitMQ 4.2
 - Deadline: April 30
- StorageGRID Object Storage, EOL in progress
 - Action: Migrate off StorageGRID now (StorageGRID access will be disabled soon)



