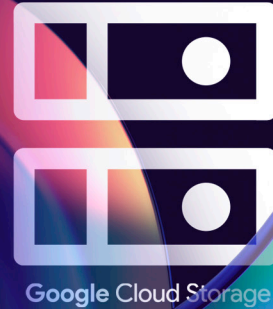


Cost-Efficient, Resilient Data Protection for Google Cloud Storage



The Challenge

- ↓ **Google Cloud Storage often holds hundreds of terabytes of mission-critical data.** But that data is constantly at risk from security threats and misconfigurations to provider-side issues and unmanaged lifecycle policies.
- ↓ **Recreating lost or corrupted data means replaying streams, re-ingesting sources, and re-running ETL at scale;** in many cases the original sources no longer exist.
- ↓ **Native tools make it difficult to orchestrate petabyte-scale, point-in-time backups.** Enforcing immutability consistently across buckets and projects adds even more complexity and resource overhead.
- ↓ **Full-copy replication across regions and projects increases egress costs and accelerates storage growth.** Retaining multiple versions only adds to the overhead.

Protect Google Cloud Storage with HYCU + Dell

Capabilities

- **Immutable, Air-gapped Copies**
Backups sit outside Google Cloud IAM and lifecycle policies, landing on DDVE with Retention Lock for immutability.
- **Granular Recovery**
HYCU enables recovery of selected objects, prefixes, buckets, or an entire Google Cloud Project from known-good points.
- **Dedupe-Aware Replication**
HYCU with DD Boost eliminates duplicates before transfer, sending only unique segments and cutting egress costs by avoiding full-copy replication.
- **Storage Reduction on Dell DDVE**
DDVE applies post-ingest deduplication and compression, delivering up to a 40:1 data reduction ratio, depending on workload.
- **Comprehensive Protection**
SLAs and policies simplify immutability at scale, RBAC limits changes, and audit trails help demonstrate compliance.
- **Secure, Customer-Owned Backups**
Backup copies on DDVE can reside in your environment (Google Cloud, AWS, or Azure), ensuring multi-cloud portability and strong data resilience.

Value

Optimize Backup Costs

Use deduplication and compression to minimize storage and egress, and avoid costly customer-managed full-copy replication.

Minimize Downtime

Recover fast to avoid extended outages and revenue loss.

Protect Irreplaceable Data

Preserve long-lived object datasets so you don't re-ingest or rebuild.

Ensure Continuity

Maintain portable backup copies in another cloud or region to stay resilient during provider outages or disruptions.

Strengthen Compliance

Enforce governance with policy-driven SLAs and Retention Lock, ensuring enterprise-grade immutability.

Protecting Google Cloud Storage: What makes HYCU + Dell unique?



Optimized Backup Operations and Cost Control

- **Reduce Egress.** DD Boost-powered source-side deduplication sends only unique data from Cloud Storage, avoiding unnecessary full-copy transfers.
- **Optimize Backup Storage.** DDVE deduplication and compression deliver up to 40:1 savings.
- **Shorten Backup & Restore Windows.** Moving less data speeds backups and large-scale restores.



Quick Recovery and High Resilience

- **Search and Target Restores.** Select specific buckets or objects, or use prefix matching to restore only what's required.
- **Restore Fast.** Restore specific objects, prefixes, or entire buckets in minutes.
- **Keep Consistency.** Use point-in-time backup sets across buckets for clean restores.



Improved Security and Compliance Posture

- **Lock Backups.** DDVE Retention Lock enforces immutability or WORM (Write Once, Read Many) on backup copies.
- **Ensure Data Integrity.** Encryption in transit and at rest with ongoing integrity checks.
- **Govern Access.** SLA policies, RBAC, and audit trails support compliance.



Strong Control and Multi-Cloud Portability

- **Own Your Backup Copies.** Keep backups in your Google Cloud projects, or in other clouds you control.
- **Protect Dozens of Related Services.** Many GCP workflows land in Cloud Storage, such as database exports, analytics extracts, GKE backups, and logs. HYCU + Dell DDVE apply immutability and retention across these datasets and Compute Engine, enabling app-level protection.
- **Recover Anywhere.** Restore to any bucket, project, or region you control.

