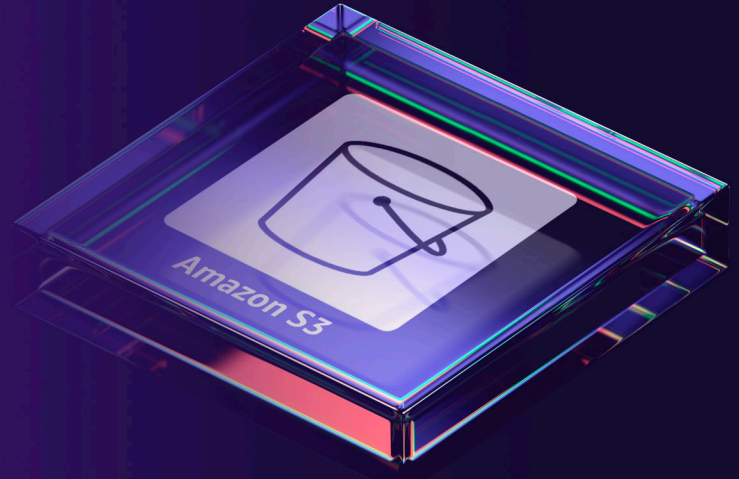


Cost-Efficient, Resilient Data Protection for Amazon S3



The Challenge

- ↓ **Amazon S3 often holds hundreds of terabytes or more of mission-critical data.** This data is constantly at risk due to security threats, misconfigurations, accidental deletions, and mismanaged 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.
- ↓ **With native tools, orchestrating petabyte-scale, point-in-time backups is challenging.** Enforcing consistent immutability across buckets and accounts adds even more complexity and resource demands.
- ↓ **Full-copy replication between regions or accounts inflates egress fees and accelerates storage costs.** Multi-version retention only compounds the issue.

Protect Amazon S3 with HYCU + Dell

Capabilities

- **Immutable, Air-gapped Copies**
Backups are created outside of S3 IAM and lifecycle controls, landing on DDVE with Retention Lock for immutability.
- **Granular Recovery**
HYCU enables recovery of selected objects, prefixes, buckets, or an entire S3 account from known-good points.
- **Source-side Deduplication with DD Boost**
HYCU, powered by DD Boost, removes duplicates before transfer, replicating only unique segments, and cutting network traffic and egress costs.
- **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 can be stored in Azure, AWS, GCP, and customer-managed data centers (on-premises or co-location), ensuring multi-cloud/hybrid portability and strong data resilience.

Value

Optimize Backup Costs

Deduplicate at the source and replicate only unique segments to reduce egress costs and avoid costly 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 backups across clouds or regions to stay resilient during provider outages or service disruptions.

Strengthen Compliance

Simplify compliance-scale immutability with policy-driven SLAs and DDVE Retention Lock, without disrupting operations.

Protecting Amazon S3:

What makes HYCU + Dell unique?



Optimized Backup Operations and Cost Control

- **Reduce Egress.** DD Boost-powered source-side deduplication sends only unique data from Amazon S3, avoiding 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 AWS account, or in other clouds you control.
- **Protect Dozens of Related Services.** Many AWS app workflows land in S3 (RDS, Redshift, EMR/Glue, EKS, logs). HYCU + Dell DDVE apply immutability and retention across these datasets alongside EC2 and databases to support app- and service-level protection.
- **Recover Anywhere.** Restore to any bucket, account, or region you control.

