

ADVANTAL BACKUP MANAGER

Enterprise Backup, Recovery and Long-Term Retention Platform

Overview

Advantal Backup Manager is an enterprise backup and recovery platform designed to protect physical servers, virtual machines, containerized workloads, enterprise databases, file systems, and storage-backed applications through a centralized management framework. It is built for large-scale data center and disaster recovery environments that require resilient protection, controlled retention, secure recovery, and operational governance across primary and secondary sites.

The solution follows a modular architecture that separates backup software, backup storage repository, and archive tier, allowing organizations to align performance, retention, cyber resilience, and long-term preservation requirements without creating isolated protection silos. The platform supports policy-based backup operations, centralized administration, secure access control, automated retention handling, and recovery orchestration across mixed infrastructure estates.

Advantal Backup Manager is suited for enterprise and government environments where backup continuity, compliance-oriented retention, ransomware resilience, disaster recovery readiness, and scalable storage growth are key operational requirements.

Supported Workload Coverage

- Physical and bare metal servers
- Virtual machines and hypervisor-based environments
- Container platforms and Kubernetes workloads
- Enterprise databases and application-aware workloads
- File systems, volumes, and storage-backed application data

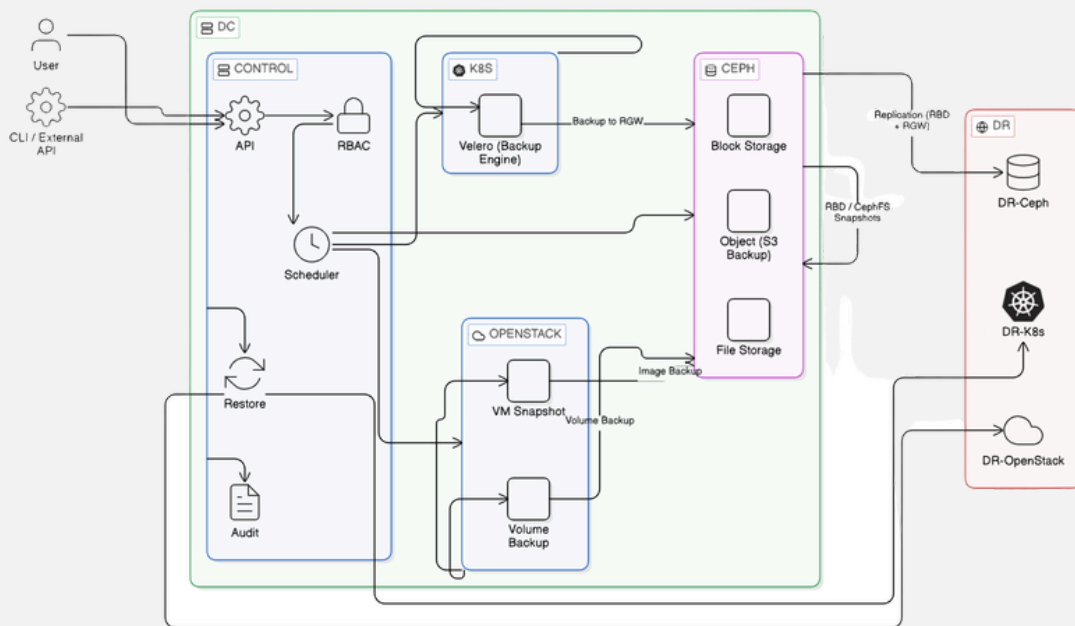
Key Highlights

- Centralized backup, restore, policy, audit, and reporting operations from one management plane
- Modular separation of backup software, primary repository, and long-term archive tiers
- Support for disk, S3-compatible object, tape, and cold archive integration

- Retention lifecycle automation with immutable and air-gapped protection options
- Granular recovery, Instant VM Recovery, and DR-ready replication architecture
- Secure administration through RBAC, MFA, AD/LDAP integration, and audit logging
- REST API-driven automation, auto-discovery, SIEM integration, and operational reporting
- Scale-out design for growing enterprise backup estates

ARCHITECTURE OVERVIEW

Advantal Backup Manager operates through a centralized control plane that coordinates backup, restore, policy enforcement, catalog management, retention execution, and audit tracking across protected environments. This design helps standardize backup procedures, administrative controls, storage lifecycle handling, and recovery workflows across mixed infrastructure environments.



The architecture is designed around distinct functional layers:

Backup Software Layer

Provides centralized administration, policy engine, scheduler, metadata catalog, audit services, reporting, and API-based automation.

Backup Storage Repository Layer

Uses disk-based backup storage for operational recovery and short-to-medium term retention. The repository supports deduplication-enabled design with inline or post-process deduplication depending on workload and infrastructure profile.

Archive Tier

Extends long-term retention to S3-compatible object storage, tape, or cold cloud archive tiers for multi-year preservation and lifecycle-based storage optimization.

DR Replication Layer

Maintains protected backup copies, metadata continuity, and replication workflows between DC and DR environments to support recovery readiness and continuity validation.

Sizing and Capacity Planning

The solution can be sized for a minimum of **500 TB front-end protected data** with a documented sizing methodology that considers workload mix, backup frequency, retention policy, backup window, restore expectations, **10% year-on-year growth**, and **2% daily change rate**.

Backend capacity calculations are based on clearly defined deduplication ratio assumptions, retention overhead, metadata footprint, repository reserve, and archive tier requirements. This enables proper sizing of operational backup storage and long-term retention capacity.

CORE CAPABILITIES

- Unified inventory of physical, virtual, container, database, and storage assets
- Centralized backup procedures for scheduling, retention, execution, and recovery
- Storage target selection across disk, object, tape, and archive tiers
- Backup catalog and metadata control for fast lookup and structured recovery
- Central dashboard for backup posture, storage utilization, trends, and reporting
- Scale-out repository design that supports growth beyond 400 TB without forklift upgrade

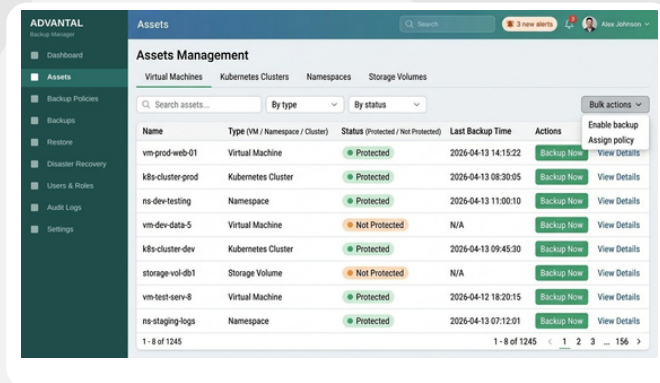
UNIFIED BACKUP OPERATIONS

The platform combines estate-wide visibility, workload onboarding, policy creation, job execution, and recovery monitoring through a single operational workflow

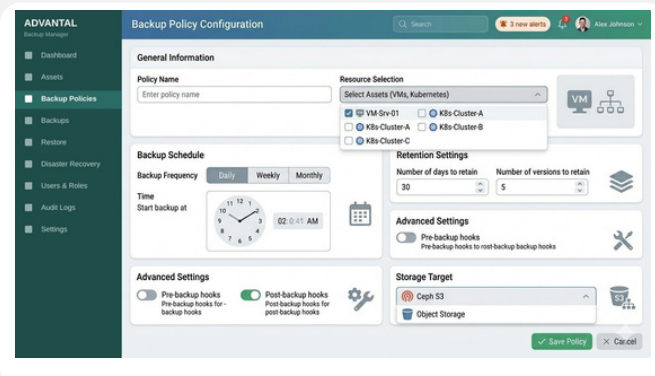
Backup jobs can be executed through scheduled or on-demand policies across physical, virtual, container, and database environments. Policies support full and incremental protection models, including block-based incremental-forever backup methodology with synthetic full capability where applicable. This improves backup efficiency, optimizes storage consumption, and supports controlled protection of large data estates.



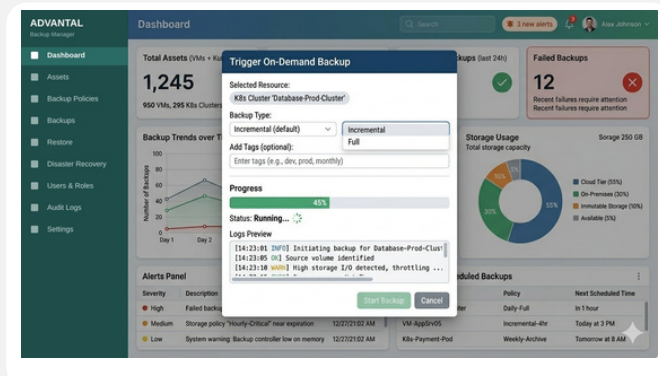
Unified dashboard for backup posture, trends, alerts and upcoming jobs.



Assets inventory with protection status, last backup time and bulk policy actions.



Backup policy configuration with schedule, retention, hooks and storage selection.



On-demand backup execution with progress indicator and live log visibility.

Retention and Lifecycle Automation

The policy engine supports structured retention profiles including:

- **Daily** retention for **1 week**
- **Weekly** retention for **4 weeks**
- **Monthly** retention for **12 months**
- **Yearly** retention for **5 years**

Lifecycle automation supports movement of protected data between primary repository and archive tiers in line with retention stage, recovery value, and storage economics.

Immutability and Air-Gap Protection

To protect against ransomware and destructive administrative events, the solution supports:

- **Immutable backup (WORM/Object Lock)** to protect against ransomware
- Logical air-gap through isolated backup domains or logically segregated object storage
- Physical air-gap through offline media or removable archive workflows where required
- S3-compatible object storage for long-term retention and immutable storage
- Tape or cold cloud archive integration for 5-year retention

Recovery and Restore

The platform supports granular recovery across multiple restore scenarios including file-level, table-level, item-level, volume-level, workload-level, and alternate-target recovery.

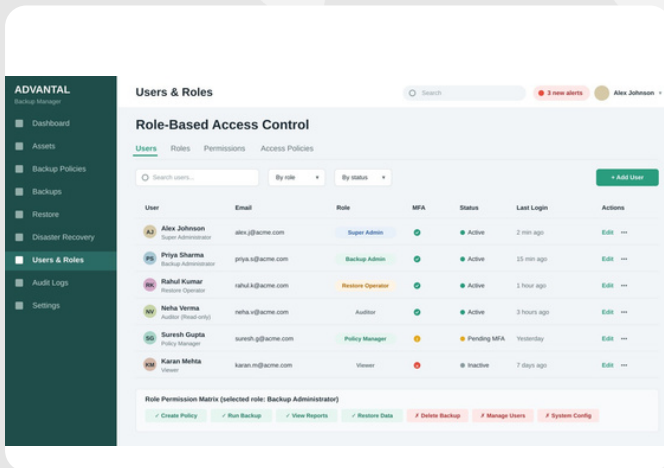
It also supports **Instant VM Recovery capability with defined RTO** for rapid restoration of virtualized workloads. Backup and replication policies are aligned to workload-specific **RPO and RTO metrics** based on application criticality, business continuity needs, and recovery design.

Recovery Readiness

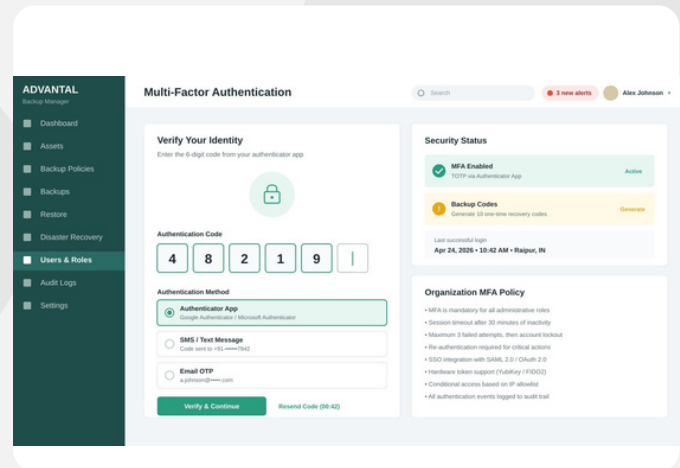
- Granular restore preparation through catalog visibility and job-level tracking
- Restore workflows to same location or alternate environment
- Validation-ready recovery processes for operational resilience
- Long-term retention and short-term operational recovery through coordinated tiering

ACCESS, CONTROL & AUDIT

Advantal Backup Manager is designed with secure administration, identity integration, and auditability embedded into the operating model.



Users & Roles view with built-in and scoped role assignments.



MFA workflow with factor selection, status view and policy controls.

Role-Based Access Control and Identity Security

The solution supports:

- Role-based access control with scoped administrative privileges
- Multi-factor authentication for privileged and sensitive operations
- AD/LDAP integration for enterprise identity alignment
- Centralized access governance for backup, restore, audit, and operations teams
- Audit visibility for user actions, policy changes, restore operations, and administrative events

Encryption and Secure Data Handling

The platform supports AES-256 encryption for data at rest and in-flight, helping protect backup traffic, repositories, replicated data, and stored recovery points.

Automation, Discovery, and Integration

A centralized GUI with REST API provides administration, automation, reporting, and orchestration support across backup operations. The solution also supports **auto-discovery of VMs, databases and storage resources**, simplifying asset onboarding and policy application.

Backup events, alerts, operational logs, and security-relevant administrative actions can be forwarded to enterprise monitoring platforms through **SIEM integration and syslog export**.

Ransomware Detection and Operational Monitoring

The platform supports ransomware anomaly detection and reporting capabilities that identify unusual backup behavior, suspicious change patterns, or other indicators aligned to ransomware risk monitoring. Alerts and operational events can be integrated into broader SOC or SIEM workflows.

Network, Performance, and Repository Resilience

The solution supports **IPv4 and IPv6 networking** across its components and can be designed to provide **minimum 10 Gbps ingest performance**. Restore throughput figures are defined as part of final sizing and deployment design.

The architecture supports concurrent backup and restore operations through parallel execution control and performance-aware design so that operational recovery and protection activities can run simultaneously.

Backup storage is designed using **RAID-6 or erasure-coded architecture with no single point of failure**, improving repository durability and service continuity.

Deployment, Recovery & Continuity

Advantal Backup Manager is built for customer-controlled environments that require coordinated protection across primary and disaster recovery sites.

The platform supports **DC-DR replication with WAN optimization and deduplicated transfer**, reducing bandwidth overhead while maintaining recovery copies and metadata continuity between sites. Hybrid cloud tiering is also supported, including **S3 Object Lock compatibility**, allowing enterprises to combine operational recovery, immutable storage, and long-term retention in a unified design.

The solution supports operational continuity through DR testing workflows, restore validation, failover simulation, and reporting outputs that help confirm recoverability and readiness of protected environments.

Business Outcomes

- Centralized protection for physical, virtual, container, database, and storage workloads
- Long-term retention through disk, object, tape, and cold archive tiers
- Better cyber resilience through immutability, air-gap options, encryption, and anomaly detection

- Faster recovery confidence through granular recovery and Instant VM Recovery
- Scalable growth through capacity-based architecture and non-disruptive expansion
- Better governance through access control, MFA, audit logging, API automation, and SIEM integration

Licensing and Support

The solution is available with **transparent capacity-based licensing with scalability**, aligned to front-end protected data growth and enterprise expansion requirements.

Advantal Backup Manager can be delivered with **5-year 24x7 OEM support with defined SLA (response, resolution, RMA)** for software and associated infrastructure components, subject to final bid configuration.

Why Advantal

- Enterprise-grade backup and recovery design aligned to DC and DR environments
- Modular architecture covering backup software, repository, archive, and replication layers
- Strong fit for policy-driven retention, immutable storage, and cyber-resilient operations
- Centralized administration, automation, recovery, and audit in one operating model
- Scalable platform built for long-term retention, operational continuity, and controlled growth

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