Solution brief

Predictable petabyte-scale protection for the AI era

Commvault Flex with HPE Alletra Storage MP X10000

Executive summary

Ransomware increasingly targets backups first while AI-driven growth and hybrid sprawl strain protection platforms and inflate cost. Organizations need a cyber recovery foundation that scales predictably, simplifies operations, and reduces financial and regulatory risk—not another point solution.

Commvault Flex with HPE Alletra Storage MP X10000 provides a hardened, validated, and disaggregated architecture where compute and storage scale independently—helping avoid overprovisioning while keeping backup and restore performance consistent at petabyte scale. Built with multilayer immutability and isolated clean-recovery validation, it helps shorten backup windows, accelerate restores, and produce evidence of recoverability for audits and cyber readiness programs.

Challenges: Backups at risk

Data protection is under unprecedented pressure: ransomware targets backup infrastructure to eliminate recovery options while AI/ML and other high-velocity workloads accelerate growth and make recovery demand harder to predict across hybrid estates.

As environments sprawl, teams accumulate tools, patches, and exceptions—driving operational cost and inconsistent controls that attackers exploit and auditors scrutinize. Regulations such as GDPR, DORA, HIPAA, and NIS2 raise the bar from we have backups to demonstrable governance, immutability, and recoverability. Enterprises need a platform approach that improves RTO/RPO predictability, reduces blast radius, and controls unit economics for protection at scale—while enabling evidence-based recovery exercises that stand up to audits and executive oversight.

The solution: Recovery readiness, appliance-like simplicity

Commvault Flex with HPE Alletra Storage MP X10000 combines Commvault's cyber recovery orchestration with HPE proven all-flash storage in a prehardened, validated configuration—delivering appliance-like simplicity without sacrificing flexibility. This disaggregated architecture separates compute from storage, enabling each to scale independently; add capacity as retention grows without touching the compute layer, or handle demanding workloads without buying excess storage.

The all-flash NVMe architecture with 100GbE networking delivers up to 1.2 PB/hour[1] backup ingest throughput and 22x[2] faster restore—with less DIY integration risk and faster, predictable performance at petabyte scale.

1.

Scale without complexity: Petabyte-class performance

Growing environments shouldn't mean growing complexity. As AI/ML pipelines grow, virtual environments expand, and retention requirements increase, Commvault Flex architecture adapts—without redesign, without forklift upgrades, and without performance degradation. Performance scales with the business, not against it.

2.

No overprovisioning: Disaggregated architecture that adapts

Decoupling storage from compute minimizes the overprovisioning trap. Commvault Flex lets organizations grow in step with actual demand—adding storage or compute capacity, when and where needed, without excess expenses or idle resources. This helps every infrastructure dollar work harder.

3.

Foundational security: Hardening, immutability, and isolation

VaultOS™ hardened platform

Every component runs on VaultOS, a hardened Linux® operating system purpose built to strengthen cyber resilience and help defend against targeted attacks that legacy tools were never designed to withstand. One security posture, one patch cycle, and one audit across different deployment scales.

[1, 2] "HPE Alletra Storage MP X10000 with the Data Protection Accelerator Node: Backup without the Bottleneck," StorageReview, February 2026.

Multilayer immutability

Commvault Flex applies protection across software, operating system, and filesystem layers—so, there's no single toggle an attacker could flip to eliminate recovery options.

Physically separate storage with WORM

With Object Lock (WORM) enabled, backup object versions can't be deleted or overwritten until retention expires. Commvault's Compliance Lock adds protection against destructive actions—including when credentials are compromised—and pairing this with an air gapped copy strengthens recovery resilience.

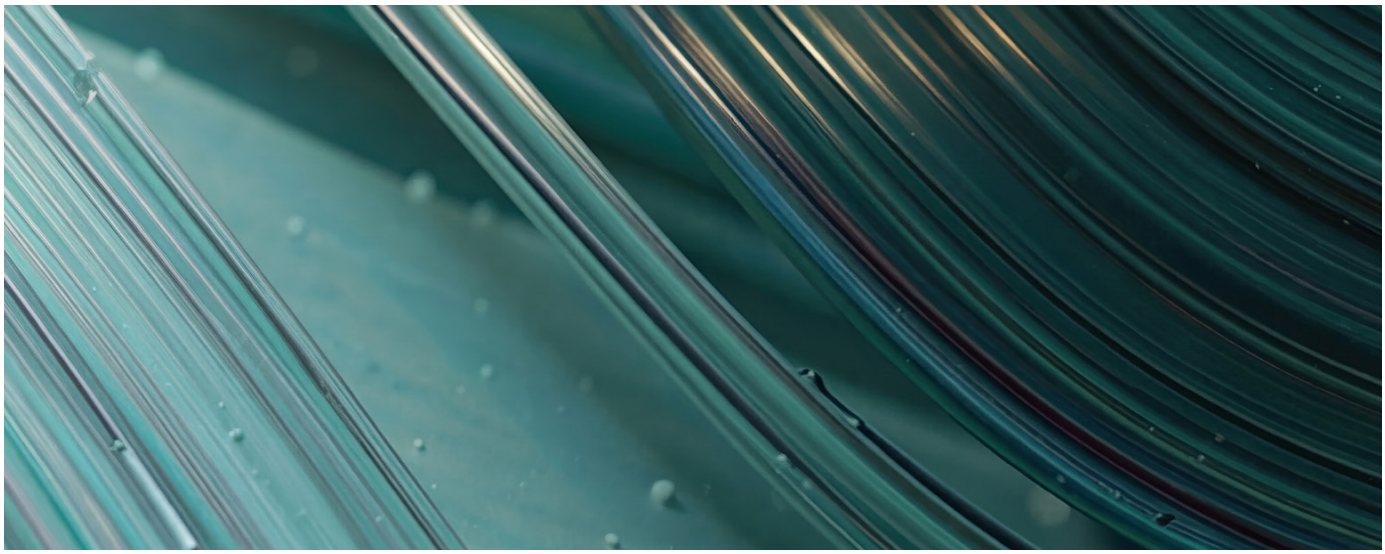
4.

Clean recovery: Prove you can restore

Immutability reduces tampering risk, but executive confidence comes from repeatable proof. Commvault Flex supports clean-recovery validation in an isolated environment so teams can confirm that critical applications and data restore as expected—before a crisis. Combined with physically separate, immutable storage, this reduces uncertainty and provides auditable evidence of readiness. Operationalize recovery exercises with defined runbooks, success criteria, and reporting.

— Provide board- and audit-ready evidence of recoverability (not just backup completion)

— Reduce business downtime risk by validating restore integrity and dependencies



Ready to build a high-performance backup foundation that scales without redesign?

Start Building

Why HPE and Commvault together

HPE and Commvault bring together joint engineering and validated configurations, so teams can deploy faster with tested interoperability, fewer integration points, and a single support experience. The result is less deployment risk and simpler day-to-day operations—backed by Commvault cyber recovery capabilities and HPE Alletra Storage MP X10000 all-flash performance and scalability.

The bottom line

In the AI era, performance is essential—and cyber resilience is mandatory. This joint solution delivers petabyte-scale protection with predictable performance to shrink backup windows and restore critical services quickly. With disaggregated scaling to avoid overprovisioning, plus hardened, immutable, and isolated recovery capabilities, it supports confident, auditable cyber recovery aligned to modern compliance demands.

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