

Operational concerns are driving enterprises to prioritize simplicity, efficiency, visibility, productivity, and performance improvements in their IT environments. Automating critical tasks through AIOps can lower risks and costs.

AIOps Brings Efficiency, Simplicity, and Productivity to IT Operations

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Introduction

Modern IT operations face a convergence of pressures that challenge enterprise agility and resilience. Across industries, organizations must navigate increasingly complex hybrid and multicloud environments while contending with a shortage of specialized talent and mounting cybersecurity obligations. Enterprises must safeguard sensitive data, integrate heterogeneous platforms, contain costs, and deliver fast-changing, data-intensive services. Against this backdrop, the application of AIOps to primary storage is shifting operations from dashboards and scripts to predictive analytics, decision support, and autonomous remediation. The objective is to support technical teams, reduce incidents and effort, and improve resilience, utilization, and service quality. Security and talent shortages are among the top operational challenges IT operations teams face. In detail:

- » **Security and compliance:** Breach risk, regulatory compliance, and auditability requirements increase the cost of failure while multiplying control points. According to IDC's most recent *EMEA CloudOps and Cloud Governance Survey*, nearly half of organizations cite the inability to meet security and compliance requirements as a top challenge in hybrid cloud adoption. Many industries and regions face complex, varied, and evolving regulatory mandates, which amplifies the need for continuous, auditable controls across distributed data environments.
- » **Skills shortages and talent gaps:** Roughly one-third of organizations report difficulty maintaining adequate operational expertise. The redeployment of experienced infrastructure engineers to higher-order analytics or AI projects is increasing, leaving operational continuity to a smaller cohort. IDC's 2024 *Worldwide Digital Infrastructure Sentiment Survey* found that 67% of organizations planned to maintain or cut IT administration head count, despite the growing capacity and complexity of infrastructure portfolios. Automation and operational simplicity that can elevate a broader set of generalist practitioners with capabilities normally held by specialists can amplify their ability to manage more with less.

AT A GLANCE

KEY STATS

- » 67% of organizations surveyed in IDC's *Worldwide Digital Infrastructure Survey* plan to freeze (47%) or reduce (20%) administrative head counts.
- » Only 15% of organizations indicated that they have full observability across their IT environments, limiting their ability to simplify, predict, optimize, or protect their assets.

- » **Operational complexity and integration:** Hybrid and multicloud adoption contribute to infrastructure sprawl and fragmented toolchains. Silos across the enterprise infrastructure portfolio hinder visibility and management, and traditional tooling for static workloads struggles to correlate telemetry across heterogeneous stacks.
- » **Cost management and budget pressure:** About 31% of IDC survey respondents cite cost management as a top issue. Elastic consumption without automated guardrails undermines forecast accuracy; CFOs' demand transparency, showback/chargeback, and measurable ROI from tooling.
- » **Keeping up with change:** Continuous deployment pipelines and AI-driven workloads shorten technology refresh cycles. Operations teams face pressure to reconcile legacy storage arrays, new GPU-dense clusters, and ephemeral cloud instances under a single governance plane.
- » **Lack of visibility and observability:** Only 15% of enterprises report full observability across their networks, without which proactive optimization and anomaly detection remain elusive.
- » **Legacy system modernization:** Nearly one-third of enterprises struggle to align traditional IT architectures with modern workloads that expect dynamic scaling, low latency, and AI-ready performance. According to IDC's November 2024 *Future Enterprise Resiliency and Spending Survey*, application and infrastructure modernization spending will increase for 30% and 20% of respondents, respectively, regardless of their budgetary plans.

The Impact of Modern Data-Intensive Workloads

The emergence of AI and GenAI has fundamentally shifted what end users expect from IT operations. These workloads are computationally intensive and data hungry, demanding consistent throughput, minimal latency, and continuous availability. In addition, these workloads have the following characteristics:

- » Unpredictable data growth (large model checkpoints, vector embeddings, and simulation logs)
- » Sensitivity to latency and throughput, demanding intelligent tiering and caching
- » Persistent demand for data protection and immutability to ensure reproducibility and regulatory compliance

When selecting AI-ready storage hardware, end users prioritize resilience, latency, and data protection, according to IDC's 2025 *AI-Ready Data Storage Infrastructure Survey*. In addition, they expect:

- » Predictable performance across workloads
- » Autonomous scaling to meet fluctuating compute or storage demand
- » Native integration of security and compliance automation into the data layer
- » Contextual insight paired with actionable guidance

To meet these expectations, IT operations must evolve from reactive management to predictive, self-optimizing systems — the foundational premise of AIOps.

Proactive, Autonomous IT Operations with AIOps

AIOps applies ML and data science to the telemetry, logs, and events that digital infrastructure generates to create an autonomous feedback loop between monitoring, analysis, and action. Elements of this approach include:

- » **Automation and simplicity:** By establishing performance baselines and conducting real-time anomaly detection, AIOps can triage millions of signals per second. The system highlights root causes rather than symptoms, translating raw metrics into human-readable diagnostics. This yields a faster mean time to resolution and allows operations teams to manage sprawling hybrid estates with smaller staff complements.
- » **Augmented user experience:** Through context-aware guidance and persona-based dashboards, AIOps elevate the skill level of every operator. For example, a junior engineer can access the distilled insights once reserved for seasoned SREs. This approach can help mitigate an organization's skills shortage while improving morale and retention.
- » **IT optimization:** ML models can predict workload behavior and automate resource provisioning, scaling up GPU storage pools during model training and releasing capacity once inference stabilizes. This predictive elasticity reduces idle spend, supports cost transparency, and informs strategic capacity planning.
- » **Security and compliance:** AI-driven policy engines continuously enforce encryption, access control, and immutability rules while automated log correlation accelerates threat detection and compliance reporting. As 56% of enterprises rank data security among their top investment priorities, according to IDC's 2025 *AI-Ready Data Storage Infrastructure Survey*, AIOps' capacity for autonomous enforcement saves cost and enhances governance.
- » **Performance and reliability:** AIOps platforms maintain holistic observability across compute, network, and storage and preempt service degradation by mapping causal dependencies. Anomaly detection models flag deviations and recommend configuration changes or firmware updates, ensuring sustained reliability.
- » **Service-level agreement (SLA) commitments:** AIOps can play a crucial role in supporting and enabling SLAs in IT and data storage environments. By leveraging ML and advanced analytics, AIOps continuously monitors system performance, predicts potential issues before they impact users, and automates remediation processes. By proactively identifying and/or remediating failures before they impact business operations, organizations can reduce downtime, ensure service reliability, and speed up incident response for SLA compliance.

Considering AIOps for HPE Alletra Storage MP B10000

Hewlett Packard Enterprise (HPE) has a long legacy of data infrastructure innovation, unifying compute, storage, and networking under an intelligent operations model. The new capabilities of HPE Alletra Storage MP B10000 represent the company's next evolution, offering a modular, scale-out platform combining unified block and file storage on a disaggregated architecture with AI-driven management.

The AIOps capabilities of the B10000 rely on four interlocking pillars that HPE articulates as simplify, predict, optimize, and protect. Together, they express the company's intent to transform storage operations from a manual, device-centric activity into a cloud-delivered, intent-driven service.

- » **Simplify** refers to reducing friction and removing repetitive, expert-driven tasks. The B10000 achieves this through its cloud management layer — the Data Services Cloud Console (DSCC). DSCC provides a single, SaaS-based interface to deploy, monitor, and update storage resources across on-premises and cloud environments. It automates array discovery, presents guided configuration wizards, and handles nondisruptive life-cycle updates across entire fleets. By consolidating control into one platform and abstracting low-level configuration, it shortens time to value and lowers the skill threshold for operating mission-critical storage.
- » **Predict** captures the system's use of telemetry and analytics on the GreenLake cloud to anticipate and prevent problems before they affect workloads. Continuous monitoring of latency, I/O patterns, and hardware health feeds into cloud analytics, which can detect anomalies, correlate issues across storage and virtualization layers, and initiate preemptive actions. Signature-based predictive wellness capabilities parse system telemetry metadata to identify issues and provide remediation recommendations via a wellness board, as well as create support cases automatically, without administrator intervention, which may include proactive part dispatch for customers to self-repair. This results in a storage environment that learns from fleetwide behavior rather than local events, turning collective insight into specific recommendations for each deployment. Integrated with agentic AI-powered GreenLake Intelligence, an AI-driven copilot is available to respond to queries, deliver insights, and suggest targeted remediation actions.
- » **Optimize** focuses on aligning storage behavior dynamically to the intent of each workload. This pillar is most visible in the B10000's intent-based provisioning engine. Instead of defining volumes by technical parameters, administrators simply select the workload, the number of volumes and capacity needed, the hosts that need to access the storage, and the system determines the optimal placement while guiding the user in selecting protection and quality-of-service settings. It classifies workloads using host and application metadata, and it applies policy-driven defaults. Intent-based provisioning is designed to preemptively optimize capacity and performance for new workloads and can reduce planning and provisioning time for organizations. Workload Planner provides additional "what-if" simulations, and headroom analysis take the guesswork out of strategic planning to optimize resources and cut costs.
- » **Protect** highlights cybersecurity enhanced by AIOps. The B10000's integrated, machine learning–powered ransomware detection continuously monitors and analyzes storage I/O patterns to identify anomalies that signal malicious encryption, all in real time and without impacting system performance or capacity. This system orchestrates a cyber-resilience workflow in DSCC, aligned with the NIST Cybersecurity Framework, including essential framework functions: govern, identify, protect, detect, respond, and recover. This end-to-end workflow merges anomalous encryption detection, automated response, and tamper-proof immutable snapshot features, enabling proactive ransomware defense to facilitate guided recovery through a fully automated process. The 100% data availability guarantee backed by credits provided by HPE is offered as a standard benefit for mission-critical workloads

A key aspect of this evolution is the relationship between AIOps provided by DSCC built on GreenLake cloud and HPE InfoSight, which many customers associate with predictive analytics in previous-generation HPE arrays. While InfoSight offered AIOps and advanced analytics, DSCC integrated all of the key capabilities of InfoSight and built upon that foundation by extending it with the operational and orchestration layer that translates analytics into actionable steps. While InfoSight primarily provided reporting, insights, and recommendations, DSCC closes the loop by executing those recommendations in near real time: provisioning new resources, simplifying troubleshooting, automating software

updates, and enforcing policies directly from the same interface. In short, DSCC absorbs InfoSight's intelligence into a broader control plane, unifying management, analytics, and automation under a single, secure SaaS experience.

Through the four pillars of simplify, predict, optimize, and protect, HPE Alletra Storage MP B10000 aims to change the conversation about storage from focusing on capacity and performance metrics to emphasizing outcomes: agility, reliability, and continuous alignment between business intent and infrastructure behavior. These AIOps capabilities have led HPE to offer robust SLAs to indicate its goal of consistently protecting IT environments from downtime and cyberthreats to support business continuity.

Challenges

Organizations are inundated with signals. IDC's 2024 *AIOps and Observability Survey* reveals that 49% collect too much observability data. HPE needs to make the case that HPE Alletra Storage MP B10000 can reduce noise, not add another stream over the long run. With only 35% of organizations using observability pipeline management tools (according to the same IDC survey), out-of-the-box data curation, routing, and policy templates must be turnkey or adoption will stall. As cross-stack correlation and closed-loop automation raise questions about trust, governance, and data residency, HPE needs to communicate the criticality of clear controls, auditability, and safe-automation guardrails.

To realize the promise of the B10000's AIOps, HPE is extending its capabilities across the full storage portfolio and into customers' broader estates with HPE OpsRamp Software, not just within a single platform. Many customers run mixed vendors, legacy arrays, and cloud storage, creating a fragmented telemetry picture and uneven automation controls. Moreover, industrial adoption is uneven, as risk tolerance and process rigidity slow AIOps rollout despite clear ROI in several regulated or asset-heavy sectors.

Addressing the "too much data" problem with native pipeline policies turns the pain half of enterprises feel into a key benefit; packaged integrations fill the existing gaps and accelerate time to value. Intent-based provisioning and unified block/file storage create a land-and-expand approach, from storage to operational outcomes. Telemetry network effects at HPE scale enable benchmarks, advisories, and proactive part dispatch that competitors could struggle to match.

Conclusion

It has generally been the case that IT environments outgrow the ability to manage them over time, due to the rapid proliferation of workloads, constantly increasing capacity, and threats to operational resilience from both within and outside the organization. Now, the advent of the data-intensive era has put additional stress on storage and infrastructure administrators. Humans simply don't scale the way that data grows, applications multiply, and cyberthreats increase in both number and sophistication. Automation is critical for IT organizations today, amplifying both the capacity and the abilities of IT administrators.

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Complexity and unpredictability are the bane of planning processes. Operational inefficiencies and cyberthreats directly impact companies' ability to function in a safe and optimized way, affecting both business continuity and financial outcomes. The model that HPE has introduced with the AIOps capabilities of its HPE Alletra Storage MP B10000 are a direct response to the needs of IT organizations, aiming to help make IT a value-add to business operations rather than a

cost center. With no letup in sight for capacity growth in this data-driven era, administrators will continue to have to "do more with less" and modern AIOps solutions will continue to be key to their transformation.

About the Analyst



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Dave Pearson is research vice president within IDC's Worldwide Infrastructure Research Organization and global research lead for the Storage and Converged Systems practice. Dave is also the research lead for IDC Canada's Infrastructure Solutions practice. He manages a team of analysts that cover both research domains. For the storage and converged systems practice, Dave and his team provide global insights on storage, integrated, hyperconverged, and composable infrastructure technology trends, vendor strategies, and market adoption. It includes storage for performance-intensive computing use cases like high-performance computing, artificial intelligence, and analytics. It also includes cloud-enabled infrastructure and infrastructure used for cloud deployments.

MESSAGE FROM THE SPONSOR

AI-driven autonomous storage management from HPE

Streamlining storage management is crucial as enterprises contend with complex environments and evolving demands. HPE AIOps addresses these needs through AI-powered self-service, predictive analytics, and proactive remediation, allowing IT teams to activate services quickly, prevent disruptions, and optimize resources. AI-driven, intent-based provisioning transforms workload deployment from hours to minutes, saving up to 99% of operational time. Predictive wellness analysis and remediation resolve up to 86% of issues before they occur, while cross-stack insights into performance and contention accelerate troubleshooting. With HPE's intelligent storage management, organizations can simplify operations, boost resilience, achieve greater efficiency, and enhance informed decision-making.

Find out more:

[HPE Alletra Storage MP B10000](#)



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