rubrik

Rubrik NAS Cloud Direct for IBM Spectrum Scale (GPFS)

Maximize security and efficiency for unstructured data in high-performance computing environments

IBM Spectrum Scale (GPFS) powers some of the world's most demanding computing environments, managing multi-petabyte datasets across thousands of nodes for mission-critical operations. From groundbreaking research and financial trading to sensitive healthcare records, organizations trust GPFS to handle their high performance computing needs. These environments can store large amounts of sensitive research data, personally identifiable information, and intellectual property that need to be safeguarded. While GPFS excels at high-performance data access and management, these environments face a critical challenge: protecting massive volumes of highly sensitive information.

- The rate of ransomware attacks against healthcare organizations has reached a four-year high since 2021, with 95% of organizations reporting that cybercriminals attempted to compromise their backups during the attack[1]

- Education was the second most likely sector to have backups successfully compromised during attacks in 2024, at 71%[2]

- Cryptocurrency payments to ransomware attackers hit $449.1 million in the first half of 2023[3]

Traditional backup approaches fall short—lacking the speed, performance, security controls needed to protect sensitive data, and the automation required for massive scale. Organizations are forced to rely on complex, manual processes that not only create security vulnerabilities but also burden specialized IT teams with time-consuming backup and recovery operations. Organizations need a robust unstructured data solution to protect their high-performance computing environments.

THE RUBRIK NAS CLOUD DIRECT SOLUTION

Rubrik NAS Cloud Direct is a SaaS-based offering designed to efficiently protect and manage petabyte-scale unstructured data. The solution supports a diverse range of on-premises and cloud-based data sources, including on-premises S3-compatible object stores, generic NAS storage, and API integration with storage providers such as Dell, Netapp, Pure Storage, Qumulo, Azure, Amazon, and more.

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1   Sophos The State of Ransomware in Healthcare 2024
2   Sophos The State of Ransomware in Healthcare 2024
3   https://www.reuters.com/technology/crypto-ransom-attacks-rise-first-half-2023-chainalysis-2023-07-12/

HIGH-PERFORMANCE ENVIRONMENTS POWERED BY GPFS

Enterprise Analytics
- Big data analytics
- Large-scale AI/ML training datasets
- Business intelligence reports
- Real-time data processing

Research & Higher Education
- Climate modeling simulations
- Genomic sequencing outputs
- Particle physics data experiments
- AI/ML research environments

Financial Services
- High-frequency trading data
- Risk analysis computations
- Market simulation results
- Historical trading records

Healthcare & Life Sciences
- Medical imaging archives
- Clinical trial datasets
- Genomic research data
- Patient record systems

Media & Entertainment
- 4K/8K video rendering
- Visual effects processing
- Animation projects
- Content delivery systems

Oil & Gas Exploration
- Seismic data processing and imaging
- Geophysical and geological research data
- Real-time drilling and production data
- Reservoir modeling and simulation outputs

Rapid Backup and Performance at Scale

NAS Cloud Direct ensures the protection of billions of files across several NAS technologies through highly efficient scanning, indexing, and data movement. It is powered by advanced engines that are designed to overcome the typical performance and scale limitations of traditional data-management tools.

The solution also enables rapid and efficient recovery and archival, offering the ability to quickly search through billions of files and recover to AWS, on-premises, or alternate targets. This allows businesses to maintain lower risk by adhering to Recovery Point Objectives (RPO), reduce the cost of infrastructure and storage required for backups, and decrease the time and resources needed to manage and maintain backups.

Cyber Resilience and Recovery

Using zero-trust principles, Rubrik provides centralized data backup and security policies across enterprise, cloud, and SaaS applications, ensuring secure data protection, recovery, and access. It implements strong authentication through Single Sign-On (SSO), Multi-Factor Authentication (MFA), Role-Based Access Control (RBAC), and SSO with SAML for customers to use their enterprise identity providers for authentication. Rubrik's immutable backup snapshots ensure that ransomware or unauthorized users cannot alter or delete backup data.

Rubrik's Anomaly Detection features proactively monitor data patterns to identify signs of ransomware and other threats. By detecting unusual activity early, Rubrik helps organizations respond swiftly to potential attacks, enhancing overall data security. In the event of a ransomware attack, Rubrik helps identify blast radius of the attack, and enables rapid data recovery from snapshots that are free of anomalies. This helps businesses mitigate revenue loss risks due to downtime, enhance data security and reduce recovery-related risks.

Sensitive Data Monitoring and Compliance

NAS Cloud Direct offers actionable insights into backup data, enabling proactive risk mitigation and storage cost reduction. It provides advanced backup reporting and analysis capabilities, including scanning backups to detect and report on sensitive data. By classifying petabytes of data, NAS Cloud Direct helps identify and protect sensitive information to ensure regulatory compliance effectively. This helps to enhance visibility into sensitive data locations and compliance status, reduce storage infrastructure costs and minimize risks of sensitive data exposure and fines for non-compliance.

HOW IT WORKS

Underlying the NAS Cloud Direct data-management services is a set of engines specifically designed to overcome traditional data-management tools' typical performance and scale limits, including:

- A scanning engine capable of discovering and indexing hundreds of thousands of files per second.

- A highly-scalable index engine engineered and optimized specifically for metadata-based tracking of billions of new and changed files.

- A data mover that uses parallel data streams to maximize available network bandwidth.