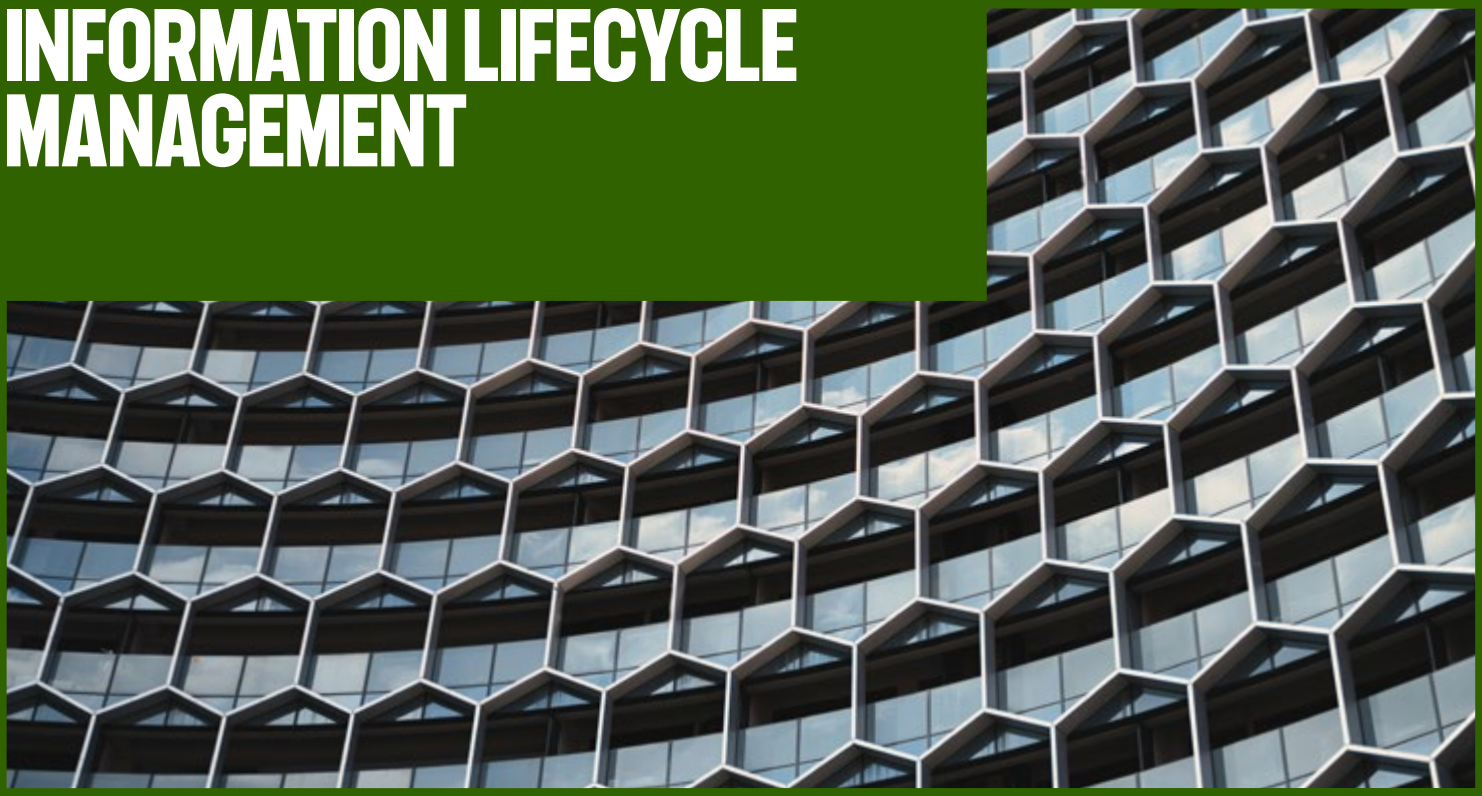
DATASHEET

NETAPP STORAGEGRID INFORMATION LIFECYCLE MANAGEMENT



Optimize efficiency, performance, and durability with dynamic, policy-driven data management

Overview

NetApp® StorageGRID® Information Lifecycle Management (ILM) is a sophisticated feature designed to manage objects throughout their entire lifecycle. ILM is the foundational engine of NetApp StorageGRID, driving data efficiency, durability, availability, and performance—down to the individual object level.

StorageGRID administrators create intelligent policies that automatically and dynamically apply rules at key moments: when data is ingested, when it is accessed, and as it ages. The value of data and how it is used changes over time and with business events. ILM helps you to optimize your data to meet these requirements.

With ILM, organizations' data is stored efficiently, securely, and cost effectively, meeting both performance and compliance requirements. This datasheet takes a comprehensive look at how ILM operates, its benefits, and how it supports performance, compliance, and optimal data management and protection.

How ILM works
When data is ingested into the StorageGRID system, ILM rules are immediately applied to determine optimal placement. Placement includes decisions about where to store the data, how many copies to create, and the type of storage to use, balancing performance and cost efficiency from the start.

ILM is activated by several key triggers so that data is managed efficiently and securely throughout its lifecycle:

- **Time-based policies.** These policies specify data retention periods and expiration dates, specifying when data should be moved to different storage tiers or deleted. For example, data might be transferred to a lower-cost storage tier after a specified number of days or automatically deleted upon reaching its expiration date.
- **Data access patterns.** Frequently accessed data is kept in high-performance storage, while infrequently accessed data is moved to more cost-effective storage solutions. This dynamic adjustment means that storage resources are used efficiently.
- **Metadata changes.** Updates to tags or user-defined attributes can also trigger ILM actions. For instance, data tagged for archiving can be moved to long-term storage, so that it is stored in the most appropriate location based on its current status and usage.
- **Compliance requirements and legal holds.** Regulatory mandates trigger specific retention and protection policies, while legal holds prevent data from being deleted or moved until the hold is lifted, for compliance with legal and regulatory obligations.
- **Policy updates and system events.** When ILM policies are updated or new ones are activated, the system reevaluates existing data against the new rules, potentially triggering data movement, replication, or deletion.

These triggers mean that ILM in StorageGRID dynamically adapts to changing conditions, optimizing data management and protection throughout the data lifecycle.

Delivering performance
StorageGRID ILM supports performance and storage by optimizing data placement and tiering based on access patterns and performance needs. With ILM, frequently accessed data is stored on high-performance tiers, enabling quick access and efficient processing, while less frequently accessed data is moved to more cost-effective storage tiers.

This dynamic management maximizes system performance and storage efficiency, allowing organizations to handle large datasets and demanding applications seamlessly. Additionally, ILM continuous scanning and background verification maintain data integrity and availability, further enhancing overall performance and storage reliability.

KEY BENEFITS

- **Optimized storage costs.** Tailor data placement and retention to balance performance and cost, reducing overall storage expenses.
- **Enhanced data security.** Implement specific security measures and redundancy levels to protect sensitive data.
- **Improved compliance.** Meet regulatory requirements by customizing data retention and deletion policies.
- **Scalability.** Manage growing data volumes efficiently by adjusting policies to handle increased storage needs.
- **Performance tuning.** Optimize data access and retrieval times by placing frequently accessed data in high-performance storage.
- **Operational efficiency.** Simplify data management and reduce administrative overhead by automating lifecycle tasks with precise ILM rules.

Supporting compliance
StorageGRID ILM supports compliance by providing advanced data governance and retention capabilities. ILM enables organizations to create customized policies that define how data should be stored, accessed, and deleted, supporting adherence to regulatory requirements. With features like end-to-end encryption, legal holds, and retention periods, ILM means that sensitive data is protected and retained according to legal and industry standards.

Additionally, ILM's granular control over data placement and lifecycle management helps organizations meet specific compliance mandates, such as GDPR, HIPAA, and other data protection regulations, by automating and enforcing compliance policies across the data lifecycle.

StorageGRID was assessed by Cohasset Associates and was shown to meet the requirements need for SEC Rule 17a-4(f), FINRA Rule 4511(c), and CFTC Rule 1.31(c)-(d).

Secure data management
ILM supports data protection by implementing robust mechanisms such as redundancy, encryption, and continuous verification. ILM policies mean that multiple copies of data are stored in different locations, providing redundancy and safeguarding against data loss due to hardware failures or site outages. End-to-end encryption protects data from unauthorized access during transmission and at rest.

Continuous background verification enhances data integrity, automatically creating new copies or replacement fragments if corruption is detected. Additionally, ILM enforces retention and deletion policies for compliance with regulatory requirements. It also prevents premature data deletion, while legal holds protect data under specific legal constraints. These comprehensive measures keep data secure, available, and compliant throughout its lifecycle.

Conclusion
As a core element of NetApp StorageGRID, Information Lifecycle Management is part of a highly secure, scalable, and cost-effective object storage solution that is fully compatible with the Amazon S3 API. ILM supports modern data workloads, accelerates innovation, and provides efficient data management across your entire organization. By leveraging ILM rules and policies, organizations can optimize their storage infrastructure, meet compliance requirements, and achieve superior data protection and data governance.

For more information, or to take a test drive, visit www.netapp.com/storagegrid and contact us today.

Contact Us

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