Datasheet

NetApp StorageGRID

Metadata-based management of high-value content in repositories that span platforms, technologies, and sites

**The Challenge**

Today’s enterprises are experiencing significant growth in the size and complexity of their content libraries. To effectively manage very large repositories, IT teams need a storage infrastructure that intrinsically manages content from multiple sources, distributed across different geographies. They must serve the needs of many different user groups with unique access requirements. They also must be able to isolate and manage content by type, to comply with corporate policy and industry regulations on its storage, and to protect content from unauthorized access, alteration, or deletion.

Companies across many industries now manage multiple petabytes of content and many billions of assets for longer periods of time, and must do so cost effectively while complying with strict requirements for the manner in which assets are stored. For example:

- Healthcare organizations must store very large patient content files, including patient records, CT and MRI scans and other imaging files, and diagnostic reports, for time frames as long as the lifetime of the patient.
- Financial institutions must process and archive copies of mortgage applications and related documents and financial transactions, and must process millions of customer check and deposit images every day.
- Insurance companies must manage large amounts of policy data and retain copies of insurance claims and related photos for many years to serve in litigation support.
- Telecommunications and cable companies must store customer usage and billing records for longer periods of time, as well as offer growing libraries of downloadable media content to their subscribers.
- Digital media studios, news agencies, publishers, and broadcasters need to store and easily retrieve extremely large libraries of film footage, broadcast programming, and new Web and mobile streaming video and audio files.
- Service providers require massively scalable and automated storage infrastructures in order to offer competitive cloud storage services with policy-based automation, Web-based self-service interfaces, and charge-back capabilities.

Monolithic storage architectures are no longer adequate for these large, globally distributed content repositories. Existing storage constructs are typically too complex for large-scale content management. The administrative burdens are prohibitively expensive, and the requirement for geographically distributed content has increased management...
complexity to a point where traditional storage products are no longer effective.

**The Solution**

NetApp StorageGRID® is an object-based storage solution that delivers the efficiency of NetApp platforms along with metadata-based data management to enable content to be stored and accessed across many sites.

NetApp StorageGRID eliminates the constraints of mapping data into predefined containers as blocks or volumes, allowing repositories to accommodate billions of files or objects and many petabytes of capacity in a single, unbounded repository that span platforms, technologies, and sites. By providing a new metadata-based data management approach, StorageGRID transcends the limitations of traditional storage containers and hierarchical organization structures, allowing data to be organized, accessed, and managed using multiple user-defined criteria.

NetApp StorageGRID provides the foundation for global data availability anytime, anywhere, to facilitate non-stop operations. Configurations can be designed for resilience to one or multiple simultaneous faults, even to entire site losses and regional disasters. NetApp StorageGRID is suitable for single data centers or multi-data center deployments with many sites across the globe.

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**FUNCTIONALITY NEEDED BY APPLICATION DEVELOPERS**

**NETAPP STORAGEGRID PROVIDES:**

### Application Interfaces

- Massively parallel transaction engine with:
  - Integrated load balancing
  - Transaction multi-thread pipelining

- Global access:
  - Local and remote access
  - NFS, CIFS file services interfaces
  - Multiple file system shares and multiple profiles per gateway
  - Native HTTP object interface with API compression for reduced bandwidth consumption

- API services:
  - Object store, retrieve, and query
  - Object metadata attachment
  - Comprehensive metadata query

- Versioned file recovery:
  - Access to multiple previous versions of files
  - Can be enabled or disabled for individual profiles
  - Full audit support for previous versions of files

### Reporting, Provisioning, and Management

- Advanced reporting and provisioning capabilities:
  - Provisioning via GUI or API
  - Storage efficiency options: encryption, compression, single instance storage
  - AES-256 and SHA-256 encryption supported
  - Mixed-mode AES-256 and SHA-256 support for strong encryption and CPU-efficient integrity protection
  - Centralized installation
  - Rolling upgrades without downtime
  - Mixed software versions supported for multi-tenant gateway deployments
  - Comprehensive ad-hoc real-time, rolling-period, and historical usage query capability
“NetApp StorageGRID is a proven, object-based storage software solution designed to manage petabyte-scale globally distributed repositories of images, video, and records for enterprises and service providers.”

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<th>FUNCTIONALITY NEEDED BY APPLICATION DEVELOPERS</th>
<th>NETAPP STORAGEGRID PROVIDES:</th>
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| Reporting, Provisioning, and Management (continued) | • 200+ predefined monitoring, usage, and QoS reports  
• Event-based notification feed for third-party application, billing, and QoS monitoring  
• Event feed filtering, queueing, and bulk retrieval supported |
| Metadata and Content Awareness | Metadata-based data management:  
• Content-aware processing allows self-healing of rule-based retention during network disruptions  
• Resource-aware processing allows physical relocation of storage devices for rapid bulk data onboarding and movement  
• Query and retrieval of content based on user-defined or system-defined metadata |
| Audit and Compliance Capabilities | Comprehensive audit feed for:  
• Chargeback and billing  
• Search integration  
• Custom reporting  
• Security diagnostics  
• Compliance events  
Support for multiple audit repositories at multiple sites enables secure audit transport and storage |
| SLA and QoS Monitoring | Comprehensive performance feeds:  
• Access throughput  
• Replication throughput  
• Time to first byte  
• Time to policies achieved  
Support for synthetic transactions:  
• Demonstrate SLAs  
• Measure transaction round-trip time  
• Separate WAN, storage, gateway times |

**Key Business and IT Functionality**

NetApp StorageGRID software effectively solves the scaling, interface, and manageability needs of both application developers and administrators.

**Netapp Storagegrid Specifications**

**Storage protocols**
- Network file system interfaces for ubiquitous access: NFSv3, CIFS SMB1
- HTTP, HTTPS native object storage interface

**Storage systems supported**
- NetApp E2600 Series controllers
- DE1600 and DE6600 shelves with 2/3TB NL-SAS drives
- Over 500 models of tape drives, robotic libraries, and autoloaders

**Operating environment**
- VMware® vSphere 64-bit virtualized environments on third-party Intel architecture-based servers and blades

**Key Benefits**

**Federates storage across sites**

StorageGRID helps you grow without bounds to meet your global business needs while managing infrastructure complexity to make administration easier.

**Always-on data availability**

StorageGRID helps you to provide business continuity even in the event of disasters through multisite content
federation, allowing you to meet your SLAs with confidence.

**Metadata-based management**
StorageGRID uses metadata to automate the management of data, lowering your opex and management costs while allowing you to remain compliant with corporate, regulatory, or user requirements.

**Supports cloud initiatives**
StorageGRID provides support for large internal or external Internet cloud storage initiatives.

**Enables business innovation**
StorageGRID provides the ability to align IT infrastructure investments with ongoing business development and goals.

**Getting Started**
NetApp StorageGRID is a highly efficient, object-based software storage solution that leverages NetApp’s many years of content and storage expertise. Together with NetApp storage appliances, StorageGRID can help IT make the transition from a cost center to a strategic asset.

NetApp Professional Services can help you design and configure a tailored StorageGRID solution for your enterprise, enabling you to achieve maximum productivity and value from your StorageGRID software and associated storage systems. Our proven methodologies and best practices will enable a successful implementation with minimal disruption and risk.

NetApp Professional Services speeds the delivery and adoption of your object-based storage management solution through implementation planning, installation, and configuration of your StorageGRID software and NetApp storage systems hardware and software.

To learn more about StorageGRID and how it can help you manage billions of files or objects and petabytes of content, contact your NetApp sales representative or NetApp channel partner today.

**About NetApp**
NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate business breakthroughs. Discover our passion for helping companies around the world go further, faster at [www.netapp.com](http://www.netapp.com).

Go further, faster™