

Scalable Storage: Hybrid Cloud Data at Scale



ALWAYS ON



**PETABYTE-
SCALE**



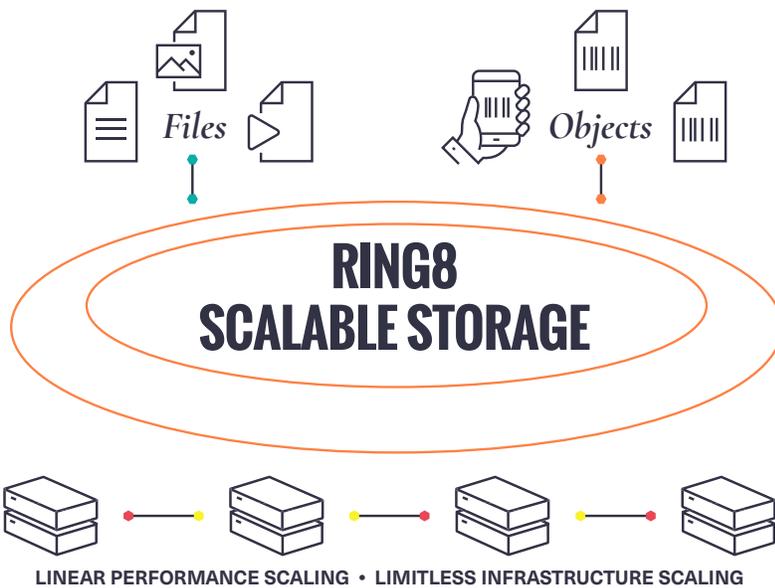
**HYBRID
CLOUD-READY**



LOW TCO

Software-defined Scality RING Scalable Storage enables enterprises and cloud service providers to run petabyte-scale, data-rich services like web applications, VOD, active archives, compliance archives, and private storage clouds.

The RING deploys on any standard x86 servers of your choice, taking immediate advantage of server and media innovation over time. Acting as a single, distributed system, the RING scales linearly across thousands of servers, multiple sites, and an unlimited number of objects. Data is protected with policy-based replication, erasure coding and geo-distribution, achieving up to 14x9s of durability and 100% availability. Regarded as a 'Leader' in file and object storage by both IDC and Gartner, and with integrated support for native file, object, and AWS IAM & S3 interfaces, the RING provides high performance across a variety of workloads at up to 90% lower TCO than legacy storage.



Key Features

Highlights

- Enterprise-ready scale-out file and object storage
- Software-defined — turns industry-standard x86 servers into storage nodes
- Unlimited capacity and performance scaling
- Guaranteed data availability
- No single point of failure
- Native data protection and self-healing
- All-Flash support for optimized performance and expanded use cases

Distributed File System

- Scale-out capacity and performance via NFS v4, SMB & LinuxFS (fuse)
- Shared access to file data over AWS S3 API
- Stretched (synchronous) multi-site deployment for site failure protection
- Asynchronous geo-replication for disaster recovery
- Concurrent multi-site file access

Distributed Object Storage

- AWS IAM & S3-compatible API
- Multi-use replication to secondary site or AWS S3; with fully S3-compatible API
- Location control for data sovereignty
- Geo-replication for disaster recovery
- Object encryption for ironclad security
- Simple multi-tenant management interface for secure access control.
- Built-in S3 Browser
- S3 Monitoring and Status
- Federated authentication
- S3 Service Management Console

Extended Data Management (XDM)

- Data orchestration and mobility across RING & public clouds: lifecycle policies, 1-Many replication
- Global metadata namespace, visibility & search across RING & public clouds

Enterprise Security

- Key Management System (KMS) integration via KMIP 1.2
- Deployment on SE Linux & elimination of root-level processes
- Kerberos KDC authentication for NFS v4
- Ransomware protection through AWS S3 Object Lock

Multi-Tenancy for Service Provider Deployments

- S3 based quotas for STaaS

Scality Use Cases

RING enables both data-rich custom and packaged applications aggregating multiple workloads into a single storage environment. This eliminates silos, drives increased utilization and creates cloud-like economies of scale. The RING supports use cases across many industries, including service providers, media & entertainment, public sector, financial services, healthcare and R&D-intensive industries like manufacturing and research.

BACKUP

- Unified repository for capacity and performance

MEDIA WORKFLOWS

- Media Nearline Archive
- Origin Server (Video/Content distribution, VOD)
- Cloud Media Workflows

BIG DATA

- HPC / AI / ML archives
- Analytics, Data Lakes
- Forensics / Digital Evidence archives
- Genomics archives

CLOUD NATIVE APPS

- Email/Messaging
- Consumer Web Portals (i.e. B2C)
- Mobile Apps
- SaaS (Business Apps) (i.e. B2B)

MEDICAL IMAGING

- Medical Image Archives and Primary PACS Storage
- Unified repository for capacity and performance

CONTENT REPOSITORIES

- NAS Offload
- Enterprise File Sync & Share / ROBO
- CCTV
- Digital Library

File and Object Performance

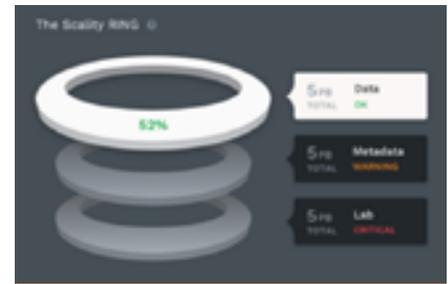
RING offers superior performance over legacy storage and other object-based systems, ensuring high throughput across the board. The platform's access and storage layers can scale independently from as few as three to thousands of servers, all of which can be accessed directly and concurrently. RING Connectors scale performance nearly linearly to achieve 10's of gigabytes per second throughput and beyond.

Scale-Out File and Object Storage

Access all of your data at petabyte scale. Scality RING Scalable Storage is the only storage platform that natively supports file and object access in one consolidated system. Each access point can be independently configured for high availability.

FILE STORAGE SPECIFICATIONS

- Fully parallel, scale-out with POSIX- style file system
- New cache for shared folder view
- Integrated load balancer for NFS and SMB connectors
- Volume quotas and space reporting
- File undelete (Recycle Bin)
- Volume protection
- Asynchronous metadata and data replication NFS v4 with Kerberos KDC authentication, and IPv6 support



Webscale System Management

With RING, you can operate and manage extremely large-scale, globally dispersed storage operations simply and cost-effectively, automating many common storage operations. RING Supervisor UI is a comprehensive, unified portal for all aspects of monitoring, management, and maintenance of RING's native AWS S3 and file (NFS, SMB) storage interfaces.

Comprehensive Monitoring

- Browser-based administrative interface with full topology view, monitoring, reporting, and graphing
- RING status with Zone, Server and Node details
- Support for monitoring and alerting via SNMP, MIB and traps
- "At-a-glance" dashboard with REST API, unified trending and forecasting metrics and KPIs, monitoring, alerts, server and disk monitoring

Intuitive Operations and Management

- Full management and control with rich and scriptable CLI
- System capacity and performance expansion
- Automated disk failure detection and handling framework
- Automatic rebuild of failed drive data on remaining drives
- Automated storage rebalancing
- Integrated server management
- Integrated zone management
- Easy point-and-click provisioning of S3 and file system services
- UI private labeling and branding

- SMB 2.0 (based on Samba 3.5 and later)
- Linux FUSE (supports data compatibility with REST)

OBJECT STORAGE SPECIFICATIONS

- AWS S3-compatible API (supports Bucket, Object & MPU APIs, AWS IAM, AWS Signature v4/v2 authentication, SAML 2.0 for SSO with Active Directory)
- AWS S3 Object Lock API

Local and Geographical Data Protection and Self-Healing

RING is designed to maintain 100% data availability and require no downtime during planned and unplanned events, including hardware failures, capacity upgrades and software upgrades. With the RING, IT organizations have fine-grain data protection control on a per object basis, and customizable failure domains to protect against disk, server, rack, and site failures.

POLICY-BASED DATA PROTECTION WITH NATIVE MULTI-SITE CAPABILITIES

- Replication up to six copies (object-level replicas)
- Erasure coding to ensure resiliency while reducing overhead for large objects
- Single or Multi-RING Sync and Replication at the object level

SELF-HEALING

- Distributed self-healing processes to resolve disk and server failures
- Replacement of failed disks as scheduled process
- Data integrity assurance through integral CRC checksums

Scale-Out Storage with Advanced Routing

RING is designed to scale to exabytes of capacity and trillions of objects as a single system with guaranteed response and continuous availability even at massive scale.

- Scalable peer-to-peer architecture, with full system level redundancy,
- Integrated Scale-Out-File-System (SOFS) with POSIX semantics
- Unique native distributed database – full scale-out support of object key values, file system metadata and POSIX methods
- Unlimited namespace and virtually unlimited object capacity
- No size limit on objects (including multi-part upload for S3 REST API)

Agile Deployment

With RING, you're free to deploy in ways that best suit your infrastructure. RING connectors and storage servers are independently scalable. You can run the connectors co-located with customer application servers, on virtual machines, or on the storage servers. Deploy a RING environment on a single site or stretched over multiple sites. You can also choose to replicate locally, across sites, or both. RING's unified installer with silent (unattended) mode enables customers to deploy RING easily in under an hour on any of 45 reference platform architectures, including new 3-server entry point configurations.

Extended Data Management (XDM)

DATA ORCHESTRATION AND MOBILITY FEATURES

Metadata-driven, policy-based data orchestration engine for data mobility across private and public clouds

- 1-Many Replication
- Lifecycle Expiration
- Lifecycle Transition

METADATA NAMESPACE AND SEARCH

- Global metadata namespace, visibility & search across RING & public clouds
- Support for both system- and user-defined metadata
- Custom metadata key/value attributes via S3 x-amz-meta headers
- Custom Tags

SUPPORTED STORAGE AND CLOUDS

- Scalify RING
- Amazon S3
- Azure Blob Storage
- Google Cloud Storage
- Digital Ocean Spaces
- Wasabi
- CEPH

Ransomware Protection

Scality RING8 offers enhanced ransomware protection with support for S3 Object Lock API, which was designed to render data immutable by preventing it from being deleted or overwritten for a period of time or indefinitely, thereby thwarting ransomware attacks. Scality RING8 provides for air-gapped, tamper-proof backup data that stays immune to ransomware, offering a robust and swift recovery path in case of an attack.

All-Flash Support

RING8 now supports all-flash storage servers, paving the way for a new level of performance for file and object storage, with both higher throughput and lower latency. This not only improves existing workloads Scality customers have long relied on the RING for, but it greatly expands the portfolio of use-cases the RING could be deployed for.

Licensing

Licensing is based on usable capacity (unique data, not replicas). It includes a range of file and object connectors. Options include multi-geo configuration and email connectors.

Software Warranty

Worldwide, 24-hour support is available, including services such as installation services, proactive health checks and migration assistance.

ABOUT SCALITY Scality® storage propels companies to unify data management no matter where data lives — from edge to core to cloud. Our market-leading file and object storage software protects data on-premises and in hybrid and multi-cloud environments. With [RING](#) and [ARTESCA](#), Scality's approach to managing data across the enterprise accelerates business insight for sound decision-making and maximum return on investment. To compete in a data-driven economy, IT leaders and application developers trust Scality to build sustainable, adaptable solutions. Scality is recognized as a leader by Gartner and IDC. Follow us [@scality](#) and [LinkedIn](#). Visit www.scality.com, or subscribe to our company [blog](#).

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