redhat

SERVER ADMINISTRATORS MANAGE DATA GROWTH WITH RED HAT STORAGE

TECHNOLOGY OVERVIEW

> "*Our business is based on a technology that produces a large amount of data, requiring constant uptime in order to monitor and produce wind and energy estimates. With the way we're using the system now, it's supporting our day-to-day operations, meeting time constraints, and allowing forecasts to run automated on the system. Overall, Red Hat Storage is providing us with an extremely stable system with outstanding uptime and is allowing us to run our business more efficiently.*"
>
> **CHAD RINGLEY**
> MANAGER OF
> ATMOSPHERIC MODELING,
> PATTERN ENERGY

facebook.com/redhatinc
@redhatnews
linkedin.com/company/red-hat

redhat.com

INTRODUCTION

Linux® and server administrators have been at the center of the migration of enterprise workloads from proprietary servers to affordable, industry-standard x86 machines. The same shift is now happening for storage, with software-based storage displacing traditional enterprise storage devices for key use cases such as cloud, containers, rich media, big data, virtualization, and file sync and share.

To navigate this transition, system administrators must use their knowledge of Linux and server technologies to create reliable, scalable storage environments that simplify data access throughout the enterprise. Red Hat® Storage—which includes Red Hat Ceph Storage and Red Hat Gluster Storage—helps enterprises easily create and manage this storage in physical, virtual, or cloud environments.

ADMINISTRATORS NEED AN OPEN, SOFTWARE-DEFINED DATA PLATFORM

The shift to software-defined storage is largely motivated by the growing amount of data being generated, collected, and managed by enterprises. With unstructured data volumes expected to continue to increase by several orders of magnitude, the complex, fragmented environments of traditional storage systems will make it more difficult for enterprises to manage their data.

Traditional storage devices offer administrators little visibility, impede integration, and limit tool choices to proprietary options. This lock-in increases risk, reduces agility, and limits the enterprise's ability to adopt newer, better technologies.

To reduce complexity, simplify management, and support rapid delivery of new applications, server administrators need a scalable, open, and extendable data storage platform that:

- Provides a common repository for all unstructured data.

- Unifies the enterprise's various environments, including physical and virtualized servers in public clouds, private clouds, and traditional datacenters.

- Supports a wide range of common enterprise use cases and all standard data access mechanisms, including file, object, and block application programming interfaces (APIs) and protocols.

- Uses common management tools for both servers and storage, helping Linux and server administrators support faster provisioning and troubleshooting cycles and, in turn, accelerate innovation.

- Scales easily in capacity and performance by adding off-the-shelf hardware.

Industry-standard x86 servers and the Linux operating system have become the foundation of modern IT. Using these common components as the basis for enterprise storage lets system administrators apply their extensive knowledge to storage.

RED HAT STORAGE ENABLES CONFIDENT DEPLOYMENT AND MANAGEMENT

Red Hat Storage pairs flexible, open source storage software solutions with industry-standard x86 servers to create a future-ready storage environment that is easily deployed and managed by Linux system administrators using their existing skills and tools.

The Red Hat Storage portfolio includes:

- **Red Hat Gluster Storage:** A scalable, reliable, cost-effective data management platform that streamlines file and object access across physical, virtual, and cloud environments.

- **Red Hat Ceph Storage:** A robust, highly scalable block and object storage platform for enterprises deploying public or private clouds.

Red Hat Storage products run on physical, virtual, or cloud-based servers, pooling their storage capacities to create a common information repository across data types, access methods, and deployment environments. As a result, enterprises can use existing infrastructure more effectively while establishing the foundation for flexible, limitless, and cloud-compatible storage.

By bringing together proven open source technologies such as Gluster, Ceph, and Red Hat Enterprise Linux, Red Hat Storage delivers cost, scalability, performance, and other benefits.

SCALE STORAGE ON X86 INFRASTRUCTURE

Red Hat Storage lets administrators easily add capacity to existing storage volumes without down-time or application disruptions. Organizations can start with small deployments and scale incrementally as applications grow. Adding nodes to Red Hat Gluster Storage or Red Hat Ceph Storage environments expands storage capacity and also increases performance by providing additional I/O bandwidth.

Red Hat Storage is compatible with more than 75 off-the-shelf server models, letting projects benefit from the shorter acquisition cycles of commercial off-the-shelf (COTS) infrastructure. By supporting a wide variety of server configurations, Red Hat Storage gives administrators the freedom to select the right hardware for the each use case and, as a result, meet a broad range of application and business requirements.

SUPPORT A VARIETY OF ENTERPRISE USE CASES

With Red Hat Gluster Storage and Red Hat Ceph Storage, administrators can easily construct a software-defined data platform that supports all unstructured and semi-structured data needs, including file, object, and block storage via traditional storage protocols such as Common Internet File System (CIFS) and Network File System (NFS). Native HTTP object-based access is also supported for new web, mobile, and social applications.

Both Red Hat Gluster Storage and Red Hat Ceph Storage provide support for big data applications as well, offering plug-ins for compatibility with the Hadoop Distributed File System (HDFS). Hadoop and other data-intensive applications can run directly on Red Hat Storage nodes for low-latency and high-throughput access to stored files and objects.

Red Hat Storage is easily deployed wherever an enterprise's data must be stored—including behind the corporate firewall and in the cloud—to create a unified enterprise storage cloud that eliminates the need for disparate tools and platforms and simplifies the management of server and storage environments.

EXTEND EXISTING SKILLS AND EXPERTISE

Because Red Hat Storage solutions are deployed on off-the-shelf servers running Red Hat Enterprise Linux, administrators can be productive quickly, using their existing skills and expertise to overcome storage challenges.

Tight integration with familiar Linux management tools lets administrators operate a complete environment of both servers and storage through one unified interface—improving productivity and efficiency while accelerating troubleshooting.

INNOVATE FASTER AND ELIMINATE LOCK-IN

Since the release of the Apache web server in 1995, open source software has generated rapid enterprise IT innovation, including the development of modern cloud computing. With lengthy product release cycles, proprietary vendors rarely deliver the innovation companies need to gain a competitive advantage.

Community-based development helps administrators exchange ideas, share expertise, and participate directly in the process of creating solutions that best suit their needs. With Red Hat, administrators get the best of both worlds: the innovation of the open source community along with a commitment to the quality standards required for reliable, 24x7 datacenter operations.

## SOFTWARE-DEFINED STORAGE SIMPLIFIES STORAGE ADMINISTRATION

With Red Hat Storage, Linux system and server administrators can deliver scalable, reliable, and flexible storage solutions using the skills and tools they already have.

Red Hat Gluster Storage and Red Hat Ceph Storage can be used individually or in coordination to support a variety of data-centric use cases, including:

- Cloud infrastructure and object storage.

- Containers.

- Rich media and archival storage.

- Big data and analytics.

- Enterprise virtualization and hyperconvergence.

- Enterprise sync and share.

Red Hat Storage serves as the foundation for agile applications by unifying file, object, and block data onto one platform that can span physical, virtual, and cloud-based resources. With Red Hat Storage, Linux and server administrators can help their organizations move beyond legacy storage technologies to a scalable, flexible, and cost-effective software-defined data platform.

For more information, visit redhat.com/storage.
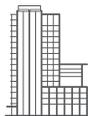
ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

facebook.com/redhatinc
@redhatnews
linkedin.com/company/red-hat

NORTH AMERICA
1 888 REDHAT1

**EUROPE, MIDDLE EAST,
AND AFRICA**
00800 7334 2835
europe@redhat.com

ASIA PACIFIC
+65 6490 4200
apac@redhat.com

LATIN AMERICA
+54 11 4329 7300
info-latam@redhat.com

redhat.com
INC0371586_0616