

# Data Protection for Modern Databases in Virtualized Environments

Rubrik NoSQL Protection is the first cloud-scale, application-centric, data protection for NoSQL that enables organizations to protect, mobilize, and monetize all of their application data across private cloud, hybrid cloud, and public cloud environments.

## KEY BENEFITS

### Application-Centric Data Protection

- Application-consistent backup of non-relational NoSQL databases
- Single-click, fast recovery to reduce application downtime

### Minimize Application Downtime

- Near-zero RPOs and RTOs
- Single-click orchestrated recovery
- Granular table-level recovery, option 3. Homogeneous environment

### Increased Storage Efficiency

- Industry-first semantic deduplication for a reduction in backup storage requirements

### Simplify Deployment

- Software-based solution easily deployed on VMs
- VMware-ready certified solution
- Complete API set for integration with VMware orchestration

## THE DATA PROTECTION CHALLENGE

Rapid proliferation in social, mobile, cloud, and the Internet of Things (IoT) are driving enterprises to deploy hyperscale, distributed, data-centric applications on modern, NoSQL databases.

These applications and use cases include analytics, e-commerce, security, surveillance, and business intelligence (BI). Enterprises are rapidly adopting massively scalable and nonrelational databases to handle the data requirements of these high-volume, high-ingestion-rate, and real-time applications. Likewise, enterprises utilize VMware-based converged and hyper-converged infrastructures to increase their agility in deploying scalable applications.

Like any business-critical application, these databases require robust data protection requirements that are standard for enterprise applications. These include application-consistent backup; near-zero recovery point objectives (RPOs) and recovery time objectives (RTOs); granular, repair-free recovery; failure handling; backup storage efficiency; and software-only deployment for cloud-first environments. However, given the hyperscale, distributed nature of these databases, traditional backup and recovery products (infrastructure centric or virtual machine [VM] centric) don't support these requirements, leaving a critical data-protection gap. Native VMware data-protection methods don't deliver the tools or methods to meet these protection requirements for distributed and NoSQL databases.

## THE SOLUTION: RUBRIK FOR APPLICATION-CONSISTENT BACKUP AND RECOVERY

VMware has certified Rubrik as a VMware-ready solution to provide application-centric data protection for cloud-native applications and distributed NoSQL databases. Enterprises can now take advantage of the agility, flexibility, and scalability of deploying cloud-native applications on VMware with the continuous data protection capability of Rubrik. With this solution, enterprises can scale business-critical applications on Cassandra and MongoDB databases and be confident in the recoverability of data and the ability to maintain high application uptime.

## Scale-Out Architecture

Rubrik NoSQL protection is based on cloud-first, scale-out architecture that enables customers to harness the cloud for next-generation data protection.

## Scalable Versioning

By using native application intelligence, Rubrik creates application-consistent, point-in-time backups at user-specified intervals. Because the backups are application-consistent, no repair is needed when a version is restored, thus reducing RTO.

## Fully Orchestrated and Granular Recovery

Rubrik simplifies the operational burden of refreshing QA/Test/Dev in Continuous Development (CD) DevOps environments. Further, the recovery process deals only with the logical data, making it faster than with traditional approaches. During recovery, data is directly transferred from secondary storage into target databases, an orchestrated media serverless architecture, resulting in very low RTO.

## Industry-First Semantic Deduplication

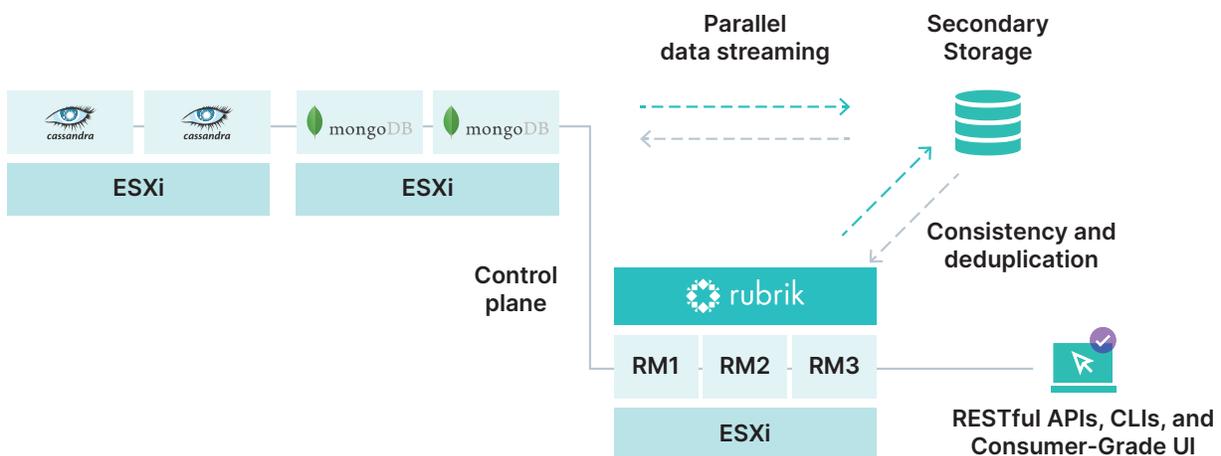
Semantic deduplication is an industry-first capability developed by Rubrik to reduce the cost of storing backups. As part of versioning, Rubrik deduplicates all the replicas of a primary dataset, thus greatly increasing storage savings without losing native formats.

## VMware Deployment

Rubrik is a software-only data-protection solution designed to be deployed to cloud environments. Hosting Rubrik on VMware enables rapid and flexible deployment.

- Because memory, CPU, and disk resources are virtual, it is simple to provision and configure VMs with machine resources appropriate for a NoSQL protection deployment.
- Virtual networking makes it simple to assign networking to NoSQL protection and enable connectivity to the data sources it will be used to protect.
- VMware monitoring makes it easy to monitor resource use of NoSQL protection and plan for growth.

The figure that follows shows a sample deployment of Rubrik in a VMware environment.



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Rubrik is on a mission to secure the world's data. With Zero Trust Data Security™, we help organizations achieve business resilience against cyberattacks, malicious insiders, and operational disruptions. Rubrik Security Cloud, powered by machine learning, secures data across enterprise, cloud, and SaaS applications. We help organizations uphold data integrity, deliver data availability that withstands adverse conditions, continuously monitor data risks and threats, and restore businesses with their data when infrastructure is attacked.

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