



Rubrik Mosaic™ and Public Cloud

Rubrik Mosaic provides the industry's first cloud-scale, application-centric, data management platform, enabling organizations to protect, mobilize, and monetize all of their application data across private cloud, hybrid cloud, and public cloud environments.

RUBRIK MOSAIC AND PUBLIC CLOUD

Enterprise growth, innovation, and, occasionally, even competition require that today's organizations adopt new, high-value, data-centric applications such as content-management systems, customer analytics, Internet of Things (IoT), and digital advertising. To handle the data requirements of this new generation of high-volume, high-ingestion-rate, and real-time applications, enterprises are turning to scalable, eventually consistent storage systems (such as Apache Cassandra, MongoDB, Amazon DynamoDB, Google BigTable, and others) instead of traditional scale-up database and storage approaches. In addition, enterprises are onboarding and transitioning their applications from on-premises, legacy infrastructure to natively run in the cloud.

However, this fundamental shift raises critical issues in the life cycle of data management. Traditional backup and recovery products were originally designed for small-scale databases, tape-based storage media, and legacy architectures designed for on-premises deployments. This leaves the next generation of distributed, reliable recovery solutions underneath modern database architectures with a critical gap.

Rubrik understands this changing nature of the data-centric infrastructure and has developed Rubrik Mosaic, the industry's first cloud-scale data management platform for next-generation applications deployed on nonrelational, cloud databases.

CLOUD BACKUP USE CASES

If your database is in a public cloud, Rubrik Mosaic cloud backup solutions enable you to natively protect your data in the cloud. And if you're like most other enterprises and have your databases in a public cloud and on-premises, Rubrik Mosaic enables data portability across both environments. Finally, if you're already using multiple cloud providers, Rubrik Mosaic operates in a multicloud environment and supports data movement.

- **Cloud-Native Backups:** For enterprises that deploy their applications in a public cloud and want to protect these applications with backup and recovery "in" the cloud.
- **Data Portability:** For enterprises that run their applications in a public cloud but want to restore the data back to an on-premises environment for IT compliance.
- **Multicloud:** For enterprises that run their applications in multiple clouds and want data portability across those clouds (restore from one cloud to another cloud).

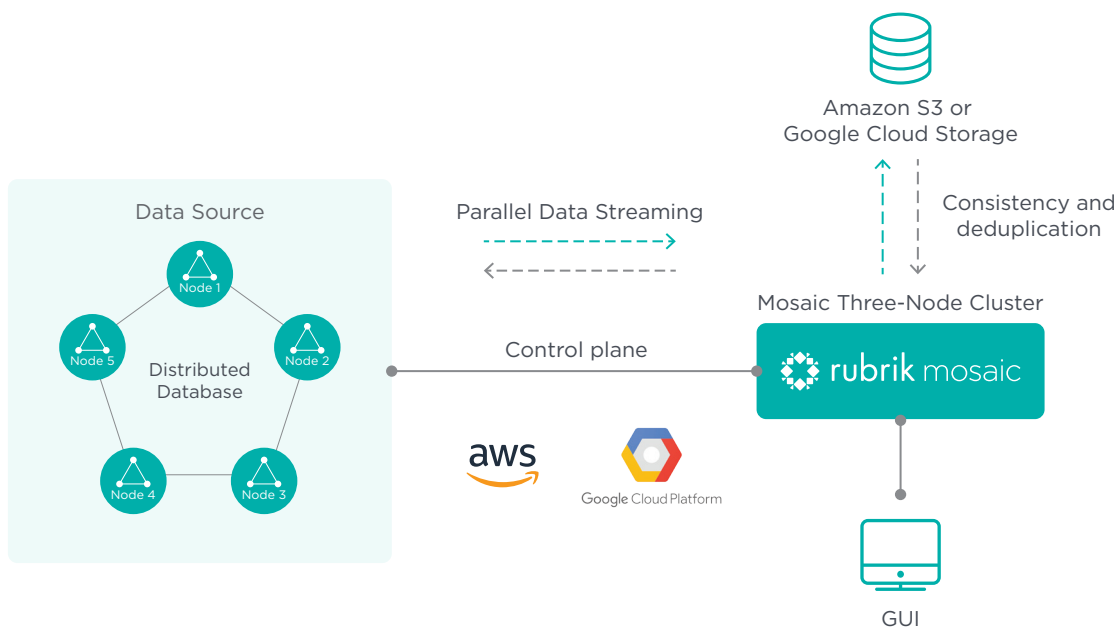
RUBRIK MOSAIC FEATURES

Rubrik Mosaic provides scalable backup, one-click recovery, industry-first semantic deduplication and a software-only scale-out platform for next-generation databases such as Apache Cassandra, DataStax Enterprise and MongoDB.

- **Scale-Out Software:** Rubrik Mosaic is built to scale out horizontally to ensure high availability of data protection infrastructure as well as an increase in performance (recovery point objective [RPO] and recovery time objective [RTO]) to meet the growing application needs. You can deploy Rubrik Mosaic in a single-node or three-node configuration.
- **Scalable Versioning:** Rubrik Mosaic allows enterprises to protect their scale-out databases (such as Apache Cassandra, DataStax Enterprise, and MongoDB) at any point-in-time and recover the data in the event of data loss or to refresh their Test/Dev clusters.
- **Reliable Recovery:** Orchestrated and reliable recovery enables enterprises to restore database tables from a point-in-time version to a running database, which could be of a different topology than the original source cluster. Recovery operations are repair-free, allowing you to satisfy a low RTO.
- **Semantic Deduplication:** Rubrik Mosaic software brings industry-first *semantic deduplication*, which disrupts the traditional notion of block-level deduplication by providing space-efficient backups for scale-out databases. This is achieved by comparing and reducing semantic equivalents of data spread across a database cluster, resulting in up to 70% reduction in storage costs.

REFERENCE DEPLOYMENT

The diagram that follows shows Rubrik Mosaic protecting next-generation databases in a public cloud environment such as Amazon Web Services (AWS) or Google Cloud Platform.



DATA SOURCE

A data source is the database cluster that is protected by Rubrik Mosaic. The deployment in the illustration on the previous page shows a six-node database running on Amazon Elastic Compute Cloud (EC2) instances or Google Compute Engine. In addition to Apache Cassandra, you also can use Rubrik Mosaic to protect DataStax Enterprise and MongoDB databases.

SECONDARY STORAGE

This is the secondary storage where the backups of the data source are stored and managed over their life cycle. Secondary storage can be Amazon Simple Storage Service (Amazon S3) or Google Cloud Storage when deploying Rubrik Mosaic in a public cloud.

DATA PROTECTION SOFTWARE (RUBRIK MOSAIC)

You can deploy Rubrik Mosaic software on a three-node c3.2xlarge EC2 instance cluster or Standard GCE 8vCPU cluster. It is responsible for all operations related to backup and recovery of protected databases as well as any internal and background maintenance operations. Lightweight application listeners that communicate with the data source nodes through standard database interfaces are automatically deployed and managed by Mosaic, freeing customers from the operational hassles of managing backup agents.

SUMMARY

As enterprises deploy and scale their applications on public clouds and across multiple clouds, they have critical requirements for data protection at scale and for data portability across clouds. Rubrik Mosaic software is designed to easily deploy within your existing public cloud infrastructure (infrastructure-as-a-service [IaaS] and platform-as-a-service [PaaS]) and uses cloud-native compute and cloud storage resources.



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Rubrik delivers a single platform to manage and protect data in the cloud, at the edge, and on-premises. Enterprises choose Rubrik's Cloud Data Management software to simplify backup and recovery, accelerate cloud adoption, and enable automation at scale. As organizations of all sizes adopt cloud-first policies, they rely on Rubrik's Polaris SaaS platform to unify data for security, governance, and compliance. For more information, visit www.rubrik.com and follow [@rubrikinc](https://twitter.com/rubrikinc) on Twitter.

20190626_v1