rubrik

Rubrik for Oracle

Empowering DBAs with Zero Trust Data Security

INTRODUCTION

Oracle relational database is the leading enterprise-grade database platform, powering mission-critical applications across industries—banking institutions, airline reservation systems, retail operations, telecom billing, government agencies, global supply chains, and more. As enterprises drive digital transformation initiatives, developers continue to rely on relational databases to build differentiated services and innovative customer experiences. According to Gartner, relational database technology will continue to be used for at least 70% of new applications and projects through 20201.

To deliver successful business outcomes, enterprises need a powerful data protection solution that protects their Oracle database data while delivering business uptime, on-demand access, and self-service automation for their large-scale Oracle environments.

TOP THREE DATA PROTECTION CHALLENGES FOR ORACLE DATABASES

Backup and Recovery Performance for Large-Scale Databases

As enterprises embrace digital transformation, they face relentless data growth, manifested not only in database proliferation but also in the size of individual database instances. A decade ago, a database measured in GBs was considered extremely large. Today, it's common to see databases in terabytes or even tens of terabytes.

Traditional data protection solutions are not built to accommodate the modern requirements of large database environments, resulting in prolonged backup windows and a high impact on production environments. To make matters worse, recovering or providing clones of multi-terabyte databases could take days. DBAs often spend an unnecessary amount of time building and maintaining thousands of scripts, tuning for performance, and troubleshooting issues.

With inadequate performance for their large, multi-terabyte databases, DBAs run the risk of lengthy RPOs and RTOs, impacting the availability of mission-critical data to business units and the productivity of application developers and data scientists.

Multi-Step Workflows and Manual Scripting

Data management operations are mission-critical to guarantee business uptime and accelerated application development. Oracle Recovery Manager (RMAN) has been widely adopted by DBAs as their primary backup and recovery tool for Oracle databases. However, with thousands of options and hundreds of scripts, mastering Oracle RMAN is a steep learning curve. For example, DBAs must have extensive knowledge of Oracle database terminology, data protection strategies, and production environments.

How do you protect tablespaces? When do you implement full versus incremental backups or advanced techniques, such as incremental merge, to deliver high performance versus space efficiency? How do you allocate storage, servers, and networking to scale backup in line with data growth? For many DBAs, these tasks detract valuable time from database design and development and performance management of their production database environments. To make matters worse, management complexity only increases as databases are added and the amount of data grows.

Operational Inefficiencies between Database and Backup Admins

How do you empower DBAs, developers, and data scientists to self-service data recovery and cloning needs while ensuring governance and compliance? This is a question database and backup teams often struggle with.

Database teams prefer controlling backup schedules and operational recoveries from end to end to meet RPO/RTO SLAs. They also have intimate knowledge on how to minimize performance impact on the production environment. On the other hand, backup admins prefer

1 Gartner's Magic Quadrant for Operational Database Management Systems, 2017

centralized management of all their enterprise applications to easily manage reporting, capacity planning, and data immutability while maintaining data governance, compliance, and security across all their mission-critical enterprise applications. When Oracle data protection is siloed from the rest of the data management operations, the lack of effective coordination between DBAs and backup admins poses potential data governance and compliance risks as well as increases the challenge of meeting aggressive RPO/RTO SLAs.

THE DIFFERENCE WITH RUBRIK FOR ORACLE

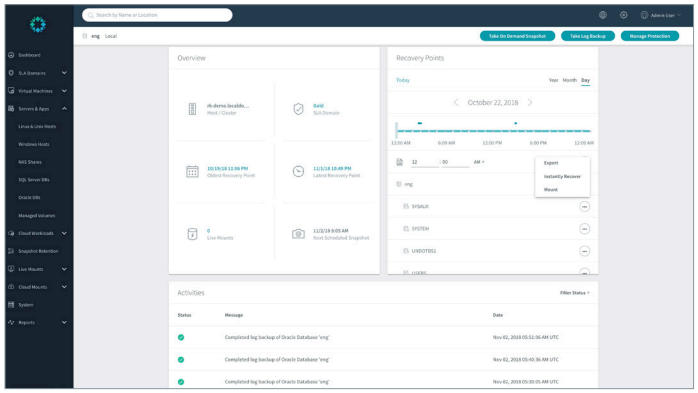
Rubrik drastically improves data protection for Oracle by delivering automated backups and flexible restore options. DBAs can now eliminate tedious backup and recovery tasks while retaining the restore control they need to effectively protect one of their organization's most vital systems.

Instant Recovery for Near-Zero RTOs

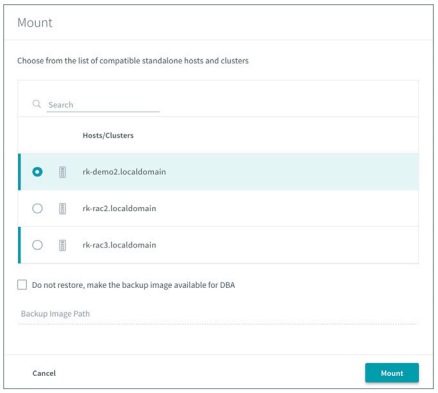
Rubrik pioneered the instant recovery of Oracle databases to deliver near-zero RTOs of Oracle databases running on physical and virtual servers. A virtual read-write copy of Oracle data files is generated on-demand and served directly to the production Oracle host via NFS. The Live Migration capability enables Oracle data files to be migrated back to production while Oracle database files are still being actively served by the Rubrik cluster, thus eliminating additional downtime.

Live Mount for Database Clones

DBAs provision database clones to perform a variety of tasks, such as testing a patch or an upgrade, verifying data recoverability, running point-in-time queries and historical reports, or even just to meet ad hoc developer requests. Traditional clones are often created on expensive primary storage and can impact production. Rubrik Live Mount provides DBAs with self-service access to database clones without impacting production or the need for additional storage. For greater control, Rubrik provides DBAs with advanced cloning options by allowing them to create database test/dev clones to dissimilar hosts, disk groups, or memory configurations. DBAs can also use SPFILE of the source database during a recovery to an alternate host as well use a custom PFILE.



Instant Recovery and Clones



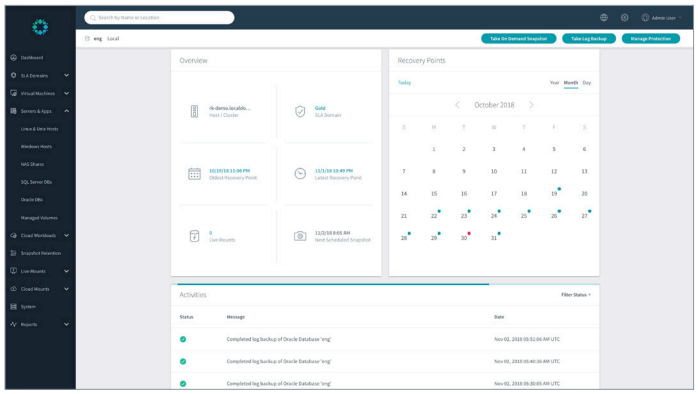
Live Mount

Recover Production for Emergency Scenarios

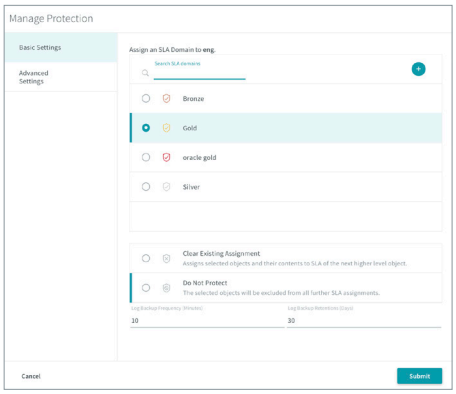
Similar to Instant Recovery, Recover Production copies data back to the source host from the latest backup, making it an invaluable asset during emergency recovery scenarios. Recover Production further streamlines the recovery of mission-critical systems by allowing DBAs to automatically leverage the latest backup at the click of a button.

SLA Policy Automation for Automated Protection

Rubrik simplifies management complexity via its trademark policy-driven automation. Once the entire Oracle environment is discovered, the user can assign policies at the host, instance, or database level. These policies are native to the Rubrik platform and can be leveraged across all enterprise applications. Within a Rubrik SLA domain policy, the user defines backup frequency, retention duration, and desired location. Oracle DBAs can also control how long Oracle archive logs are retained on the source and can even leverage the logs for other purposes like supporting a standby server. Once an SLA policy is mapped to business SLAs, Oracle databases will be automatically protected, replicated, and archived.



Backup Overview and Activities



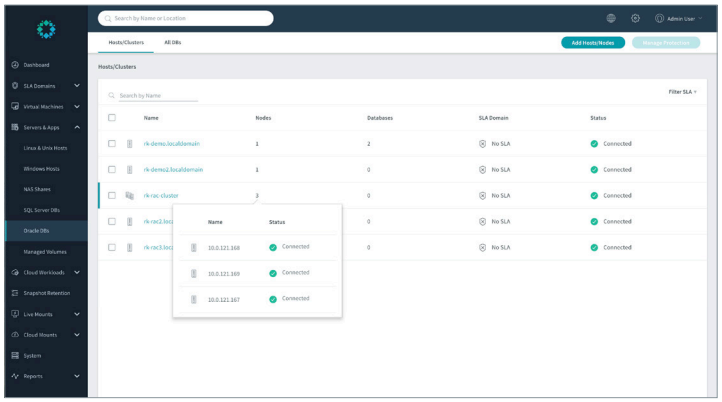
SLA Domain Policy

Rubrik Backup Service for Automated Discovery

Rubrik Backup Service, a lightweight connector, is deployed on Oracle database hosts or RAC nodes to automatically discover all Oracle clusters, hosts, databases, and tablespaces. To reduce operational overhead, connector upgrades after installation are automatic and completely transparent to the user. Rubrik leverages Oracle RMAN's Incremental Merge to deliver incremental-forever backups and applies high-performance data reduction to drive capacity savings and network efficiencies.

Recovery Validation for Peace of Mind

When it comes to data protection, having self-service access to data that you can count on is a must. Recovery Validation audits database, log, and control file backups from any point-in-time. During validation, a Live Mount is created and a validation job is run to test whether backups can be recovered from.



Automated Discovery

CONCLUSION

Rubrik for Oracle offers a game-changing approach to deliver high performance, self-service recovery, and greater collaboration between database and backup teams. Benefits include:

- Auto-discovery of entire Oracle database environments
- Auto-protection of databases via SLA policies
- Incremental-forever approach to drive network and capacity efficiencies
- Instant Recovery with live migration for production environments and Live Mount for self-service database clones
- Quickly identify the latest database recovery points at a glance with a near real-time dashboard that displays details about the last snapshots and log backups
- Mobilize data to the cloud for long-term retention or protect Oracle databases in the cloud with the same features as on-premises
- Self-service access and recoveries for DBAs and developers without compromising governance, compliance, and security
- Elastic App Service for RMAN script-driven data management, allowing DBAs to maintain full control while ensuring backup is compliant with business SLAs for backup admins
- Advanced Cloning Options give DBAs control to create database test/dev clones to dissimilar hosts, disk groups, or memory configurations. DBAs can also use SPFILE of the source database during a recovery of a database to an alternate host as well as a custom PFILE
- DBAs can control exactly how long archive logs are retained on the source
- Roll-forward recovery lets Oracle DBAs restore a damaged database to the most recent state by automatically applying archive logs on the Oracle host
- Recover Production for emergency recovery scenarios. Automatically copy data back to the source host from the latest backup

As enterprises face exponential database growth and fragmentation challenges, Rubrik Security Cloud enables organizations to achieve business agility and operational simplicity.

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