

Cohesity Converged Data Protection Solution for Oracle Databases



Application owners and database admins face the challenge of protecting a large numbers of databases with data volumes ballooning due to a) growth in database size and b) compliance & regulatory mandates requiring older snapshots to be retained for longer periods of time. It is prohibitively expensive and almost impractical to retain this data on production storage. At the same time, having an effective data protection strategy with fast RTOs and RPOs is paramount, especially for mission-critical applications that can withstand only minimal downtime windows.

Cohesity's hyperconverged secondary storage platform provides a simple, fast, and cost-effective backup and recovery solution for growing Oracle database environments. Cohesity natively integrates with Oracle Recovery Manager (RMAN) to provide application-consistent backup and recovery for both Oracle single instance or Real Application Clusters (RAC).

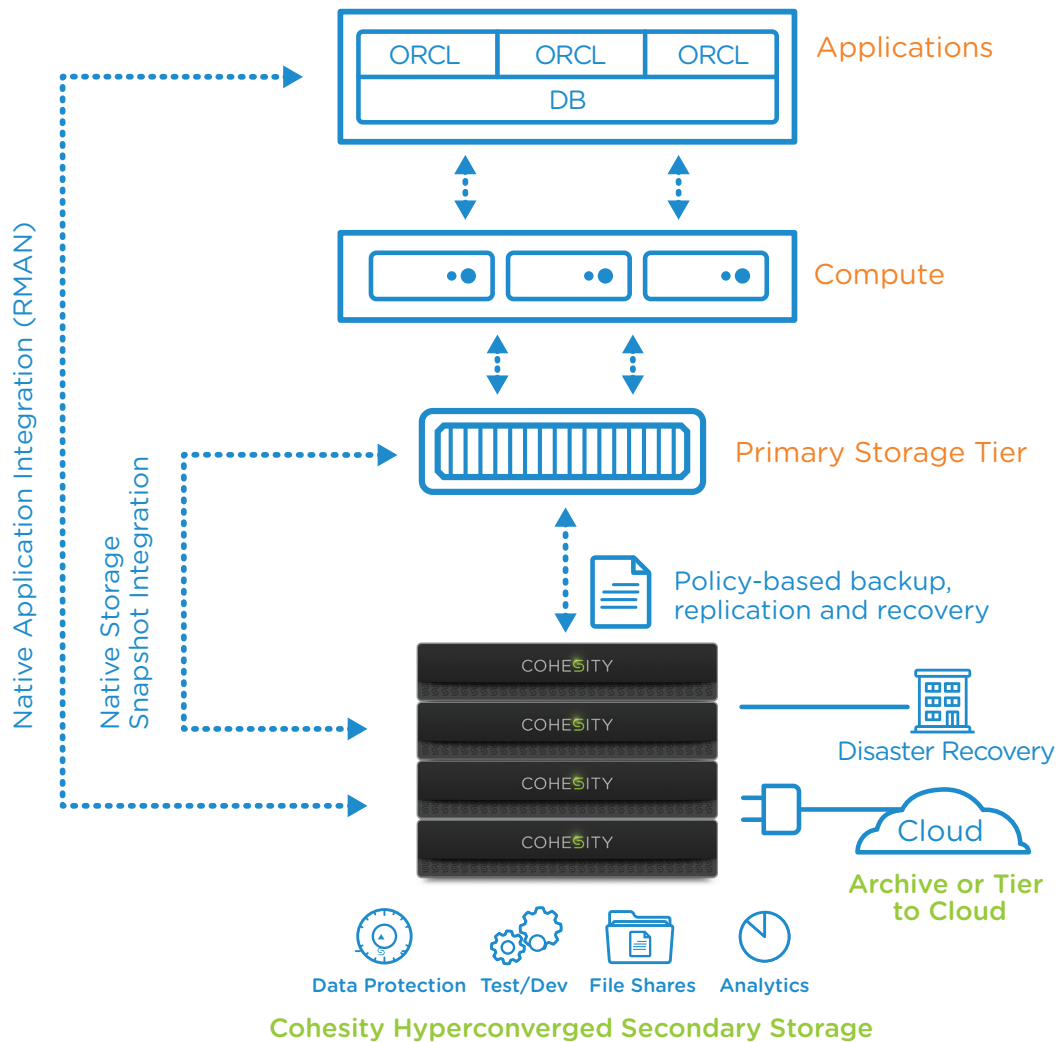
Challenges with Traditional Backup Software and Target Storage for Oracle Databases

- Application performance impact when running disruptive backup agents on production database servers
- Expensive use of primary storage as “dump” area for temporary backups
- Complex data protection environments including media servers, master servers, and target storage
- Difficult to scale backup software and target storage to accommodate growing data volumes
- Long RTOs which can lead to revenue and productivity losses
- Long RPOs, as backups are typically taken on a daily basis due to overhead on production servers
- Inability to leverage public cloud for long-term retention instead of tape

Cohesity Converged Data Protection

Cohesity provides a converged, end-to-end data protection solution that replaces and simplifies traditional backup and recovery solutions. The Cohesity solution provides:

- Distributed web-scale platform designed for secondary data: Performance and capacity can be scaled linearly by simply adding nodes – eliminating the need for forklift upgrades. The system provides ‘always-on availability.
- Simple data protection: Replace multiple data protection silos (target storage, media servers, master servers, cloud gateways) with a single converged solution for backup, recovery, replication, cloud tiering, and target storage.
- Fast RPOs and RTOs
- Oracle integrations: Tight integration with Oracle for app-consistent backups.
- Global space efficiency: Global variable-length dedupe supporting both in-line and post-process dedupe, and compression.
- Cloud integration: Native cloud integration with Amazon Web Services, Google Cloud Platform, and Microsoft Azure. Support for CloudArchive (long-term retention) and CloudTier (tiering of active data)



Powerful Cohesity Integrations For Oracle Data Protection

Cohesity provides four powerful integrations to meet the data protection needs of the most demanding Oracle environments.

1. Direct mount of Cohesity DataPlatform to Oracle app servers

Cohesity is presented as an NFS volume, enabling direct mounting to Oracle database servers. No intermediate media servers are required. RMAN automatically leverages Cohesity’s QoS policy for optimal data tiering as well as global deduplication and compression to reduce secondary storage consumption and footprint.

2. Centralized management of RMAN scripts

Cohesity Remote Adapter delivers an integrated and centralized approach to manage Oracle backup jobs:

- Provides a single location for the customer to register all RMAN scripts
- Provides central scheduling for all RMAN scripts instead of scheduling across multiple Oracle servers
- Simplifies administration by providing a single pane of glass to manage backup attributes and reports including:
 - Adhering to blackout windows, pause for maintenance etc..
 - Tracking all backup tasks, schedules, alerts from one place
 - Reporting on all backup tasks

3. Source-side deduplication

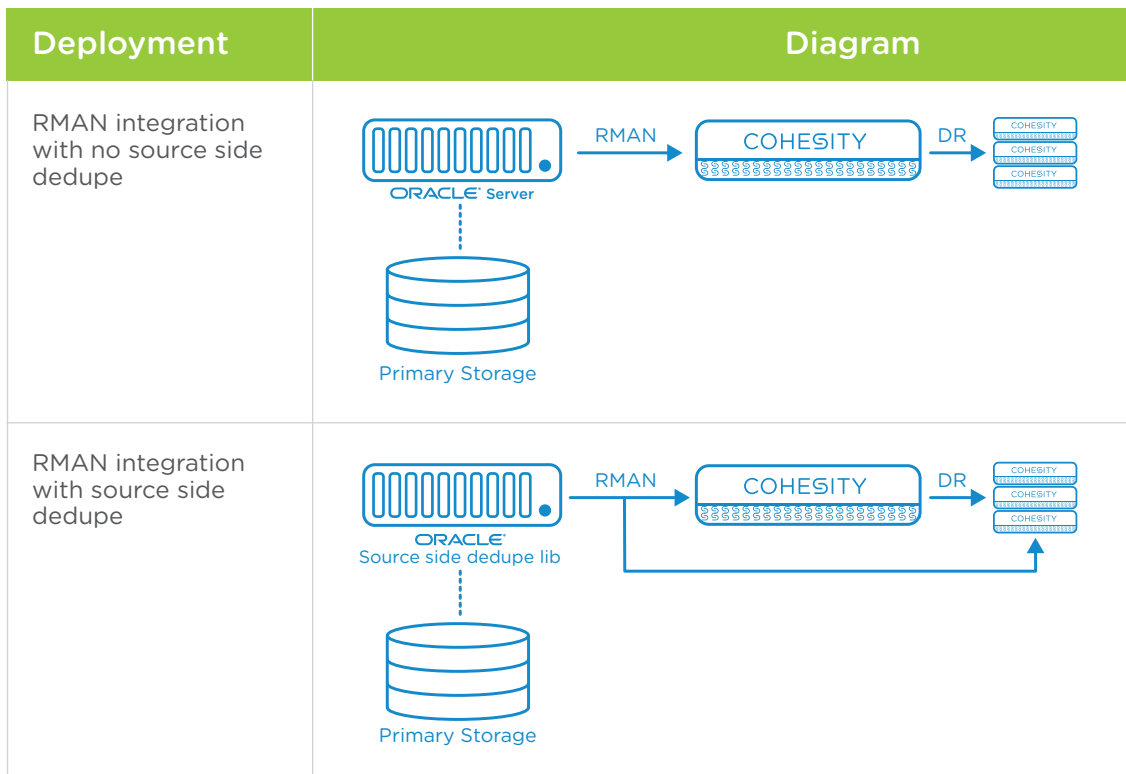
Cohesity source-side dedupe functionality for Oracle database servers provides backup admins with the following advantages:

- Faster backups to fit the ever-shrinking backup window
- More frequent backups that result in lower RPOs
- Reduced network traffic between host servers and backup target
- Less load on the backup target to handle parallel ingest streams
- Simple to use and deploy with existing Oracle instances
- Ability to write Oracle Backup sets simultaneously to more than one Cohesity Appliance, eliminating the need for asynchronous replication
- Supports 11g & 12c versions of Oracle DB deployed on Oracle Enterprise Linux and Redhat Linux
- Supported RMAN backups configurations are Full backups, Incremental backups with or without Oracle change block tracking turned on

4. Snapshot offload of primary storage arrays

Through integration with primary storage arrays, Cohesity can easily and quickly offload and restore array data & snapshots from and to production environments.

- Optimal snapshot movement using primary storage array snapshot API
- No disruption to database servers as all backups are taken directly from primary storage
- Faster backup and improved RTO & RPO over conventional app server backups
- Provide application-consistent backups
- Reduce storage requirements and overhead on production storage by moving older snapshots to secondary storage



Advantages of Cohesity Converged Data Protection

Cohesity secondary storage platform, when used in conjunction with Oracle RMAN, delivers unparalleled performance, and scale-out capabilities.

Simple data protection	<ul style="list-style-type: none"> • Customer can continue to backup the database using existing scripts resulting minimal change to the environment • Simplify backup environments by eliminating the need for media servers and master servers
Application Consistent Protection	<ul style="list-style-type: none"> • RMAN performs application consistent backups to ensure the database can recover faster and have no physical corruptions.
Distributed platform	<ul style="list-style-type: none"> • Scale capacity and performance linearly by simply adding nodes to the cluster • Eliminate the need for forklift upgrades and data migrations
Native cloud integration	<ul style="list-style-type: none"> • Integrate with AWS, Google Cloud, and Microsoft Azure for archival and data tiering
Copy data management	<ul style="list-style-type: none"> • Ability to spin up clone database copies from backups to run test and dev environments. Cohesity Secondary Storage platform acts as the NFS datastore for Oracle datafiles, control files & redo logs
Lower TCO	<ul style="list-style-type: none"> • Converged solution which consolidates backup software licenses, media & catalog servers, and backup targets • Global de-duplication, compression, and snapshots dramatically reduce physical storage usage • Pay-as-you-grow expandability which reduces need to over-provision

Technical Features & Capabilities

<p>Performance</p>	<p>Faster backups and restores in turn reducing the RPO and RTO. This is achieved using</p> <ul style="list-style-type: none"> • Source - Side Deduplication • Built-in QoS features to give higher priority for certain backup workloads. • High performance leveraging a distributed scale out platform. Unlike other solutions where customers have to scale up storage platform to meet performance needs, with Cohesity secondary storage platform, if you need faster backup just add more nodes to the cluster. • Leverage multiple RMAN Channels to automatically run Oracle backups in parallel <ul style="list-style-type: none"> o Multiple RMAN Channels for backups of a single database o Multiple RMAN Channels for backups of multiple databases simultaneously
<p>Encryption</p>	<ul style="list-style-type: none"> • Cohesity provides AES - 256 based encryption for data at rest. • The Cohesity platform can manage encryption keys or can integrate with third party key manager. • Replicated and archived datasets are also encrypted.
<p>High Availability</p>	<p>Databases run mission critical workloads and therefore the backup appliance must have built in redundancy.</p> <ul style="list-style-type: none"> • Availability with no single point of failure
<p>Single Repository for all RMAN backup</p>	<p>Centralize all backup workloads with Cohesity using Cohesity Remote Adapter</p> <ul style="list-style-type: none"> o External script management o Provides a centralized location for the customer to register all the backup scripts o Provides scheduling capability for all external scripts instead of scheduling separately on different servers o Simplifies backups by providing a single pane of glass to manage all workloads <ul style="list-style-type: none"> • Adhere to blackout windows, pause for maintenance etc.. • Track all backup tasks, schedules, alerts from one place • Report on all backup tasks

Summary:

Cohesity provides a simplified and scalable platform to solve the dual challenges of increasing database sizes and decreasing backup windows for Oracle database environments. With Cohesity, you can not only perform faster Oracle backups more reliably, but also deliver significant TCO savings through a more efficient and consolidated infrastructure.