

ExaGrid Disk-Based Backup and Oracle RMAN: Backup, Channels Failover, and Restore

DATA SHEET

Gartner

ExaGrid Named "Visionary" in the 2015 Magic Quadrant for Disk Backup with Deduplication Appliances



DCIG Rates ExaGrid #1 "Recommended Deduplicating Backup Appliance" in 2018 Buyer's Guide



ExaGrid Wins Storage Awards' "Enterprise Backup Storage Vendor of the Year – 2018"



ExaGrid Voted SVC's "Product of the Year, Hyper-converged Backup and Recovery/Archive – 2017"



Storage Magazine Names ExaGrid "Product of the Year, Backup & DR Hardware Finalist – 2017"

ExaGrid Reduces Primary Storage Costs for Oracle Administrators

The use of primary storage as a backup target adds tremendous cost and complexity to protecting corporate databases. ExaGrid eliminates the need to use expensive primary storage for database backups without affecting the ability to leverage familiar built-in database protection tools.

Databases often represent the most critical assets in a data center, including customer information, corporate financials, human resources information, and a variety of other critical elements. Database administrators must rely on their organization's backup policies and procedures to ensure that the databases they manage can be recovered in the event they are corrupted or lost. Inadequate protection policies can lead to:

- Loss of productivity to run disruptive backup agents on production database servers
- Extra cost from allocating primary storage as a "dump" area for temporary backups
- Financial loss and downtime due to reliance on tape for database restores
- Loss of data due to reliance on tape to store historic copies of database backups
- Long recovery times from offsite tape backups

While built-in database tools for Oracle and SQL provide the basic capability to back up and recover mission-critical databases, most administrators use standard primary storage to hold additional database backups.

Better Database Backups

Using an ExaGrid disk-based backup appliance allows backup and database administrators to gain control over their data protection needs, at a lower cost and with less complexity, while still using familiar built-in database protection tools.

ExaGrid's zone-level deduplication allows database administrators to store more database copies and logs in a smaller footprint than storing just one copy using primary storage. With ExaGrid, you can achieve:

- Fast, simple disk-based database backups
- Quick and reliable restores
- Dramatic cost savings of 50% to 90% over using primary storage for database backups
- WAN-efficient replication of database backups to an offsite location
- Cost-effective scalability as databases grow with ExaGrid's unique architecture

Increased Backup Flexibility

With an ExaGrid disk-based backup appliance for databases, administrators can augment their existing backup and recovery policies and procedures using a turn-key, cost-effective storage appliance. Backup and database administrators who deploy an ExaGrid appliance can determine:

- The type of backups that will be run and when
- The amount of disk storage allocated to database protection
- Total retention of the database backups

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ExaGrid and Oracle RMAN: Backup, Channels Failover, and Restore

Fast, Simple Backup of Databases

The combination of familiar built-in database protection tools and an ExaGrid disk-based backup appliance delivers fast database backups. ExaGrid's unique adaptive data deduplication occurs in parallel with backup and allows database backups to land a full copy in a landing zone before performing data deduplication. Deduplicating the database backup in this way provides a greater performance advantage as well as an additional layer of protection by always having a full undeduplicated copy of the last database backup accessible in the landing zone.

Quick and Reliable Restores

Effective database protection requires keeping multiple days of copies to avoid ever having to attempt recovery from tape backups. ExaGrid's unique zone-level deduplication allows organizations to keep days, weeks, or even months of database copies in less space than it would take to keep one to two copies using expensive primary storage. By moving those staged database backups off of expensive primary storage, organizations can repurpose that primary storage for a more appropriate use and defer the need to expand it.

Cost-Effective Scaling as Databases Grow

The aggregate performance of the ExaGrid appliances scales to match data growth. Each appliance brings with it all the elements needed to maintain high backup and recovery performance, keeping database backup times short as data grows. With ExaGrid, there is never a forklift upgrade required to expand the overall capacity of the system or to simply maintain backup performance.

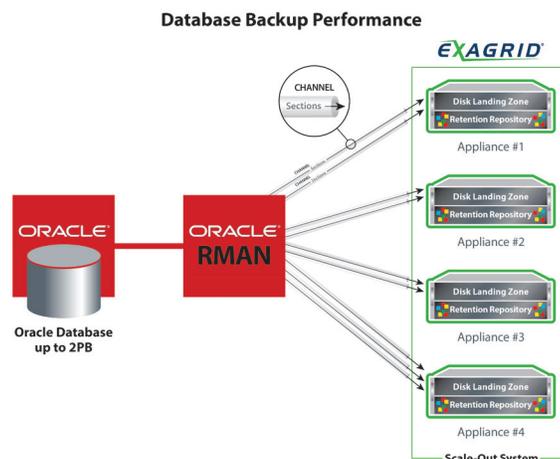
ExaGrid with Oracle RMAN Channels

ExaGrid supports full Oracle RMAN Channels. RMAN Channels are set up to each ExaGrid appliance in the system with sections of data being sent in parallel to each appliance. As the data transfer completes on a particular channel, the next section of data is sent resulting in performance load balancing. The sections of data are sent to ExaGrid's landing zone in each appliance without inline deduplication so the backups are fast. ExaGrid is three times faster for backups than the traditional inline approach and can back up a 2PB database at 432TB/hr. Additionally, since the most recent RMAN backups are in the landing zone in an unduplicated form, restores are up to 20 times faster than inline deduplication appliances that store all data in a deduplicated form.

ExaGrid is the only solution that not only scales out with full appliances in a single system to keep the backup window fixed in length as data grows but also provides for automated failover. ExaGrid can combine up to 32 appliances in a single system. If any appliance goes offline for any reason, RMAN Channels will continue to send sections of data to the remaining operational appliances, ensuring that all backups will complete. With the scale-up deduplication appliance approach, there is a single front-end controller and if it goes offline for any reason, all backups fail.

Summary

The database environment needs to be online and available 24/7/365. Backups and restores need to be fast, and the environment need to be predictable as data grows. The offsite recovery point has to be up-to-date for offsite disaster recovery backups. And lastly, if any storage goes offline, the backups still need to complete. ExaGrid has the only backup storage with deduplication that can meet the demands of Oracle Database Administrators.



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