ExaGrid Product Overview

Hyper-converged Secondary Storage for Backup with Data Deduplication Appliance

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 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 Wins Storage Awards' "Product of the Year, Storage Efficiency & Optimisation – 2017"

ExaGrid's unique approach to backup storage delivers the fastest backups, restores, VM boots, and offsite tape copies as well as the only fixed-length backup window as data grows. In addition, ExaGrid's scale-out architecture and various size appliances allows customers to buy what they need as they need it, avoiding disruptive and costly forklift upgrades. Customers are able to mix older and newer appliances in the same scale-out system, eliminating product obsolescence and protecting their IT investment up front and over time.

Fastest Backups for the Shortest Backup Window

ExaGrid provides advanced and aggressive data deduplication, matching the high deduplication ratios in the industry of 10:1 to as high as 50:1 data reduction, with an average of 20:1, depending on retention periods and data types. However, ExaGrid understands that data deduplication is highly compute intensive and should not be performed during the backup window as the deduplication will slow down ingest performance and, as a result, will lengthen the backup window. ExaGrid provides a unique disk landing zone in each appliance where backups are written directly to disk so that the compute-intensive data deduplication process doesn't impact ingest speed. This approach provides the fastest backup ingest rate of any other deduplication solution. ExaGrid uses "adaptive" deduplication to deduplicate and replicate data to the disaster recovery (DR) site during the backup window (in parallel with the backups) but not inline between the backup application and the disk. This unique combination of a landing zone with adaptive deduplication provides for the fastest backup performance, resulting in the shortest backup window as well as a strong disaster recovery point (RPO).

Fastest Restores, VM Boots, and Offsite Tape Copies

Ninety-five percent or more of the total volume of restores, VM boots, and offsite tape copies come from the most recent backup, so keeping the most the most recent backup in only deduplicated form will require a compute-intensive, time-consuming data "rehydration" process that will slow down restore requests. VM boots can take hours from deduplicated data. Since ExaGrid writes directly to the disk landing zone, the most recent backups are kept in their full, undeduplicated, native form. All restores, VM boots, and offsite tape copies are fast since the overhead of the data rehydration process is avoided. As an example, ExaGrid can provide the data for a VM boot in seconds to single-digit minutes versus hours for inline data deduplication backup storage appliances that only store deduplicated data. ExaGrid maintains all long-term retention (weeks, months, years) in a deduplicated format for storage efficiency.

Fixed-Length Backup Window

Since data deduplication uses a lot of processor and memory resources, as data grows, the amount of data deduplication to be performed grows as well. The first generation of deduplication storage appliances utilize a "scale-up" storage approach with a fixed resource front-end controller and disk shelves. As data grows, they only add storage capacity. Because the compute, processor, and memory are all fixed, as data continues to grow, so does the time it takes to deduplicate the data. The backup window becomes so long that the front-end controller has to be upgraded (called a "forklift" upgrade) to a larger/faster controller, which is disruptive and costly. Similarly, deduplication that is built into the backup software is far less aggressive, uses a larger amount of disk, and is much slower for backups and restores.

EXAGRID

Product Overview: Hyper-converged Secondary Storage for Backup

ExaGrid provides full appliances in a scale-out system. Each appliance has landing zone storage, deduplicated repository storage, processor, memory, and network ports. As data volumes double, triple, etc., ExaGrid doubles, triples, etc. all required resources to maintain a fixed-length backup window. If the backup window is six hours at 100TB, it is still six hours at 300TB, 500TB, 800TB, etc. Expensive forklift upgrades are avoided, and the aggravation of chasing a growing backup window is eliminated.

Highest Performance for Backups

- Fastest backup performance for the shortest backup window by writing directly to a disk landing zone, avoiding compute-intensive inline data deduplication
- Backup windows kept permanently short as data grows by adding full servers (with processor, memory, disk, and bandwidth) in a single scale-out system

Fastest Restores and VM Boots for Instant Recovery

- Fastest restore and tape copy performance from the most recent backup kept in its whole form. No reassembly from small blocks and large hash tables is required.
- Fast VM boots for instant recoveries from a high-speed landing zone, which maintains a non-deduplicated copy of the most recent backup. This approach avoids the time-consuming data rehydration required when using solutions that only store deduplicated data.

Most Cost-Effective Solution with No "Forklift" Upgrades

- Scalable next-generation architecture with full appliances provides plug-and-play expansion. To add an ExaGrid appliance, you simply plug it in and let ExaGrid's scale-out software virtualize the backup capacity pool.
- Multiple appliances allow full backups per appliance of 3TB, 5TB, 7TB, 10TB, 13TB, 21TB, 32TB, 40TB, and 63TB. Appliances can be mixed and matched with up to 32 appliances in a single scale-out system, allowing you to pay as you grow. Newer appliances can be added to older appliances in the same system to eliminate product obsolescence. With thirty-two 63TB appliances, a single system can support 4PB of usable storage and can ingest a 2PB full backup.
- 50% lower total system cost up front vs competing systems. Over time, the total system cost is also 50% lower because the costly "forklift" upgrades associated with a first-generation front-end controller/disk shelf architecture are eliminated.

Advanced Features

- Scale-out architecture allows for cost-effective growth, eliminates product obsolescence, and maintains a fixed-length backup window as data grows.
- Unique landing zone reduces downtime by keeping a full copy of the most recent backup in complete form for instant recovery of VMs, full systems, and files. Competing solutions must rehydrate the most recent backup from millions or billions of deduplicated chunks causing much longer recovery time.
- Adaptive deduplication performs deduplication and replication in parallel with backups while providing full system resources to the backups for the shortest backup window and an optimal recovery point (RPO) at the disaster recovery site.
- Plug and play expansion – various sized appliance models allow full backups of up to 63TB per appliance at an ingest rate of 432TB per hour. Combining up to 32 appliances in a single scale-out system allows for scalability up to a 2PB full backup (4PB usable storage). In addition, ExaGrid supports second-site repository storage of up to 4PB for DR and long-term retention.
- ExaGrid includes replication to an offsite ExaGrid for disaster recovery, cross replication for multi-site disaster recovery, and supports offsite tape copy creation.
- Private, hybrid, and public cloud DR support.
- Global deduplication across all appliances in a system.
- Bandwidth throttling for WAN efficiency.
- Management software notifies via SNMP or email that the system is reaching capacity thresholds.
- RAID6 guards against up to two simultaneous disk failures.
- Self-Encrypting Drive (SED) technology (encrypted models only) ensures that data at rest is always protected.
- WAN encryption for secure data transfer.
- Support of Oracle RMAN Channels for multi-hundred terabyte databases with automated performance load balancing and failover.
- Support of the Veeam Data Mover for synthetic fulls that are six times faster.
- Support of Veeam SOBR for automated end-to-end scale-out backups to backup storage.
- Support of Veritas Backup Exec and NetBackup OST.
- Support of Comtrade Software HYCU for Nutanix AHV.
- A comprehensive listing of over 25 supported backup apps and utilities can be found at **www.exagrid.com**.

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