# ExaGrid Product Overview
## Encrypted Disk-Based Backup

**Gartner®**

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

**CTR Computer Technology Review MVP AWARDS Most Valuable Products 2015**

*Computer Technology Review Awards ExaGrid "Most Valuable Product (MVP) Award – 2015"*

**NETWORKcomputing AWARDS 2015 ★ WINNER ★ THE RETURN ON INVESTMENT AWARD**

*ExaGrid Receives Network Computing "Return on Investment Award – 2015"*

**DEDUPLICATING 2014-15 DCIG BUYER'S GUIDE BACKUP APPLIANCE UNDER $100K**

*"Best-in-Class" Disk Backup Solution in Under $50k and "Recommended" in Under $100k 2014 Buyer's Guide Reports*

**STORAGE AWARDS THE STORRIES XI WINNER**

*ExaGrid Wins "Disk Based Product of the Year: Small/Mid-range - 2014"*

**InfoWorld.com ★2013 AWARDS★ TECHNOLOGY OF THE YEAR**

*InfoWorld.com Awards ExaGrid "Technology of the Year - 2013"*

## Protecting Data at Rest

Data security is a growing requirement for businesses of all sizes today. While many companies have invested heavily in methods to thwart network-based attacks and other virtual threats, most do not protect their business against potentially costly exposures of proprietary data resulting from a hard drive being physically stolen, misplaced, retired, or redeployed.

ExaGrid encrypted systems offer improved data security with enterprise-proven, industry-standard Self-Encrypting Drive (SED) technology. SEDs provide a high level of security for data at rest and can help reduce IT drive retirement costs in the data center. All data on the disk drive is encrypted automatically without any action required by users. Encryption and authentication keys are never accessible to outside systems where they can be stolen. Unlike software-based encryption methods, SEDs typically have a better throughput rate, particularly during extensive read operations.

## Protecting Data on the WAN

Data can be encrypted during replication between ExaGrid sites. Encryption occurs on the sending ExaGrid site, is encrypted as it traverses the WAN, and is decrypted at the target ExaGrid site. This eliminates the need for a VPN to perform encryption across the WAN. Separately, ExaGrid also offers data encryption at rest.

## The ExaGrid Appliance

The ExaGrid system is a cost-effective, scalable, plug-and-play disk-based backup appliance. Its patented zone-level deduplication technology minimizes the amount of data to be stored by storing only the unique bytes across backups instead of storing the redundant data. This unique approach reduces the amount of disk space needed by a range of 10:1 to as high as 50:1 or more, delivering unparalleled performance in a cost-effective solution.

ExaGrid works seamlessly with all major backup applications. With ExaGrid, backup jobs are sent directly from the backup application to the ExaGrid appliance for onsite disk-based backup. The backup application can create copies from the ExaGrid system directly to an existing tape library for offsite storage, or a second-site ExaGrid system can be deployed at an alternate location to reduce or replace offsite tape.

With ExaGrid, you can preserve your existing investment and keep your current backup application(s) and processes. Using ExaGrid is as simple as pointing existing backup jobs to a share on the ExaGrid appliance using the best interface like CIFS, NFS, OST, the ExaGrid-Veeam Accelerated Data Mover, etc. The system scales as required by adding ExaGrid appliances, which virtualize into the GRID architecture automatically, adding capacity and processing power while acting like and being managed as one unified system.

## The ExaGrid Advantage

**Highest Performance for Backup, Restore, and Tape Copy**

- Fastest backup performance using adaptive deduplication so nothing interferes with the data writing directly to disk, at the speed of disk.
- Fastest restore and tape copy performance with zone-level data deduplication, which keeps the most recent backup in its whole form. No reassembly from small blocks and large hash tables is required.

**EXAGRID®**

# ExaGrid Product Overview - Encrypted Disk-Based Backup

## Scalable GRID Architecture

- Performance scales and backup times are maintained with data growth because complete ExaGrid appliances – including disk, processor, memory, and network capacity – are added to the system.

- ExaGrid provides plug-and-play expansion; adding an ExaGrid appliance is as simple as plugging it in and letting ExaGrid's GRID software virtualize the pool of backup capacity. No splitting of data or loss of deduplication efficiency across separate systems occurs.

- ExaGrid eliminates the costly "forklift" upgrades associated with other disk backup systems.  With ExaGrid, modular systems are easily combined in a virtualized GRID to smoothly scale up to a 1PB full backup plus retention (2.4PB raw capacity, 1.9PB usable capacity).

## Most Cost-Effective and Flexible Solution with No "Forklift" Upgrades

- No need to over-buy storage capacity up front – modular systems can be easily combined in a virtualized GRID to smoothly scale out for larger capacities as needed with no painful "forklift" upgrades.

- ExaGrid encrypted appliances allow full backups of 7-40TB with corresponding raw capacities of 20-96TB.  They can be mixed and matched in multiple different configurations with up to 25 servers combined into a single GRID configuration of up to 2.4PB raw capacity (1.9PB usable) and allowing full backups of up to 1PB.

## Built-In Data Security

- Uses Seagate's FIPS 140-2 Validated Self-Encrypting Drives (SEDs) to ensure that data at rest is always encrypted with 256-bit AES and is never in the clear on the disk storage.  All data, configuration settings, etc. are encrypted.

- Key management is seamless and performed via integration with many of the leading backup applications.

- Drive theft protection – The drives cannot be read outside of the host system where encryption was enabled.

- System theft protection – System booting and access to data can be restricted with a password. This can be enabled as an option (no extra charge).

## Features

- Turnkey cost-effective disk-based backup solution with all hardware and software included.

- Zone-level deduplication technology reduces the amount of disk space needed by as much as 50:1.

- 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 at the disaster recovery site.

- Global deduplication across all NAS shares and appliances in a GRID.

- 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 reassemble the most recent backup from millions or billions of deduplicated chunks causing much longer recovery time.

- Scalable GRID computing architecture allows for cost-effective growth and eliminates obsolescence.

- Plug and play expansion – various sized appliance models allow full backups of up to 40TB per appliance. Combining up to 25 appliances in a single GRID allows for scalability from a 7TB full backup to a 1PB full backup (1.9PB usable storage).

- Single primary site system allows for existing offsite tape strategy if desired, and support for two-site or multi-site topologies can supplement or eliminate offsite tape with a disk-based system.

- Support of Oracle RMAN Channels for multi-hundred terabyte databases with the fastest backup, fastest restore performance, and failover.

- 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.

- A comprehensive listing of supported backup apps and utilities can be found at **www.exagrid.com**.