

ExaGrid®

Appliance Product Line Configurations



Storage Magazine Product of the Year
Award: Gold Medal Winner

"ExaGrid remains one of the few vendors thinking about how a system grows with the customer. Kudos on taking it to the next level."



InfoWorld 100 Award Winner

"Being recognized for one of the most innovative IT projects of the year by InfoWorld is a great honor for GreenBank, we are very proud to have received this for our use of ExaGrid's disk-based backup technology."



Best Deployment Scenario Winner -
Data Recovery

"ExaGrid's disk-based backup solution saves Gardner Trucking an estimated \$200K 24-hours after installation."



ExaGrid Named a Gartner "Cool Vendor" in Data Protection

"Companies named 'Gartner Cool Vendors' are Innovative, Impactful, and Intriguing."

High Performance Disk-Based Backup with Data Deduplication

ExaGrid's disk-based backup with deduplication product line revolutionizes how organizations back up and protect their data. By leveraging your current backup application and replacing tape in your nightly backup process, ExaGrid's simple, turnkey appliance can:

- Reduce the disk space required by at least 10:1, and up to 50:1
- Shorten your backup window by 30-90%, ensuring your data is fully protected
- Improve your disaster recovery plan through off-site retention of your data
- Reduce the amount of time your IT staff spends on managing backups
- Scale easily and cost-effectively with your data growth
- Fully protect your virtualized environment
- Reduce other costs associated with tape-based backup
- Encrypted (SED) drives ensure data at rest is always protected (Encrypted models only).

Simple, Turnkey Appliances

ExaGrid's disk backup appliances work seamlessly with the industry's leading backup applications, and the appliance typically installs in about one hour. The product line's multiple appliance models can be combined into a GRID configuration of up to 320TB raw capacity, allowing full backups of up to 130TB.

Multiple Mix and Match Appliances

ExaGrid Model	Raw Capacity	Usable Capacity	Capacity for Weekly Fulls		Capacity for Daily Fulls		Backup
			Copies	Total backup data	Copies	Total backup data	
EX1000	3.5 TB	2 TB	16	16 TB	75	75 TB	480 GB/hr.
EX2000	5.5 TB	4 TB	16	32 TB	75	150 TB	480 GB/hr.
EX3000	9.0 TB	6 TB	16	48 TB	75	225 TB	720 GB/hr.
EX4000	11.0 TB	8 TB	16	64 TB	75	300 TB	1.08 TB/hr.
EX5000	13.0 TB	10 TB	16	80 TB	75	375 TB	1.80 TB/hr.
EX7000	16.0 TB	13 TB	16	104 TB	75	488 TB	1.80 TB/hr.
EX10000E	23.0 TB	20 TB	16	160 TB	75	750 TB	1.80 TB/hr.
EX13000E	32.0 TB	26 TB	16	208 TB	75	975 TB	2.40 TB/hr.
EX7000SEC	16.0 TB	13 TB	16	104 TB	75	488 TB	1.80 TB/hr.
EX10000SEC	23.0 TB	20 TB	16	160 TB	75	750 TB	2.40 TB/hr.
EX13000SEC	32.0 TB	26 TB	16	208 TB	75	975 TB	2.40 TB/hr.

ExaGrid appliances are comprised of Intel Quad Core XEON processors, enterprise SATA drives, RAID 6 hot spare, and ExaGrid software. Since each appliance includes the appropriate amount of processor, memory, disk and bandwidth for the data size, as each appliance is plugged into the switch and virtualized into the GRID, performance is maintained and backup times do not increase as data is added. This combination of capabilities in a turnkey appliance makes the ExaGrid system easy to install, manage, and scale.



System Configuration Examples

Examples of several common ExaGrid appliance GRID configurations between 5TB (13TB raw capacity) and 130TB (320TB raw capacity).

ExaGrid Model	Raw Capacity	Usable Capacity	Capacity for Weekly Fulls		Capacity for Daily Fulls		Backup Throughput
			Copies	Total backup data	Copies	Total backup data	
5 TB 1x EX5000	13 TB	10 TB	16	80 TB	75	375 TB	1.80 TB/hr.
10 TB 1x EX10000E	23 TB	20 TB	16	160 TB	75	750 TB	1.80 TB/hr.
13 TB 1x EX13000E	32 TB	26 TB	16	208 TB	75	975 TB	2.40 TB/hr.
20 TB 1x EX13000E + 1x EX7000	48 TB	39 TB	16	312 TB	75	1463 TB	4.20 TB/hr.
30 TB 2x EX13000E + 1x EX4000	75 TB	60 TB	16	480 TB	75	2250 TB	5.88 TB/hr.
52 TB 4x EX13000E	128 TB	104 TB	16	832 TB	75	3900 TB	9.60 TB/hr.
78 TB 6x EX13000E	192 TB	156 TB	16	1248 TB	75	5850 TB	14.40 TB/hr.

Post-Process Deduplication Provides Faster Backups and Restores

The ExaGrid disk backup appliance uses post-processing to perform its deduplication. This means that the backup data is written directly from the backup server to ExaGrid's landing zone (disk) at the highest possible rate with no inline processing to interfere, resulting in the smallest possible backup window. Once the backup job is complete and off the network, the data is protected and immediately available for restore or tape copy. Then the appliance deduplicates (and simultaneously replicates) the data in the background.

Scalable GRID Architecture

Multiple core ExaGrid disk-based backup appliances include GRID computing software which allows them to virtualize into one another when plugged into a switch. As a result, any of the multiple appliance models can be mixed and matched into a single GRID configuration of up to 320TB raw capacity and allowing full backups of up to 130TB. Once virtualized, they appear as a single pool of long-term capacity. Capacity load balancing of all data across servers is automatic, and multiple GRID systems can be combined for additional capacity. Even though data is load-balanced, deduplication occurs across the systems so that data migration does not cause a loss of effectiveness in deduplication.

ExaGrid's unique approach to scalability provides the following benefits:

- Performance is maintained as your data grows - each additional ExaGrid appliance added to a system provides disk, processor, memory and bandwidth
- Plug and play expansion - adding an additional ExaGrid appliance is as simple as plugging it in and letting ExaGrid's automatic virtualized GRID software do the rest
- Cost-effective and flexible solution with no "forklift" upgrades - no need to over-buy storage capacity up front - modular systems are easily combined into a virtualized GRID to smoothly scale up for larger capacities as needed with no painful "forklift" upgrades
- Capacity utilization is load-balanced across appliances - as a single appliance reaches full utilization, it can leverage space available on other servers in the GRID