



ExaGrid and Commvault Intelligent Hyperconverged Storage for Backup

DATA SHEET



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 "Hyper-convergence Company of the Year - 2018"



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

Commvault Customers Can Add ExaGrid to Improve the Storage Economics of their Backup Environments

Intelligent Hyperconverged Storage for Backup requires close integration between the backup software and the backup storage. Together, Commvault and ExaGrid provide a cost-effective hyperconverged backup solution that scales to meet the needs of demanding enterprise environments.

ExaGrid improves the storage economics of Commvault environments by working with Commvault deduplication to provide a **20:1** reduction in storage consumption – **a 3x storage savings over using just Commvault deduplication**, dramatically improves restore performance, and solves scaling challenges.

Since Commvault Has Deduplication, Why Do I Need ExaGrid?

ExaGrid supports both Commvault deduplicated and undeduplicated backups, allowing you to choose the best approach for your environment. If you choose to leave Commvault deduplication on, ExaGrid can greatly reduce storage costs for longer-term retention. If, however, you decide to turn Commvault deduplication off, ExaGrid can decrease storage costs while increasing restore performance.

Each enterprise is unique and must determine what works best for their environment. At the core of the decision is performance. Commvault deduplication is performed inline and only deduplicated data is stored on disk. This approach reduces the amount of data being replicated thereby reducing network utilization, but it does come with backup, storage, and restore implications.

Advantages of using Commvault deduplication include:

- Support for Commvault data management.
- Less traffic from the client across the LAN for client-side deduplication as well as from the media agent to the storage for client-side deduplication.
- Allows for the use of DASH copy for different retention onsite versus offsite.

Disadvantages of using Commvault deduplication include:

- Media agent resources are used for deduplication, which can slow down backups.
- A low 6:1 deduplication ratio, which uses more storage and bandwidth than alternative solutions.
- Slower restores as data is only stored in deduplicated form, which impacts restore performance because it has to be rehydrated for each request.
- Lack of scalability. Each Commvault database can handle a 90TB full backup (750M deduplicated records). Once the size limit has been exceeded, additional databases need to be created and managed.



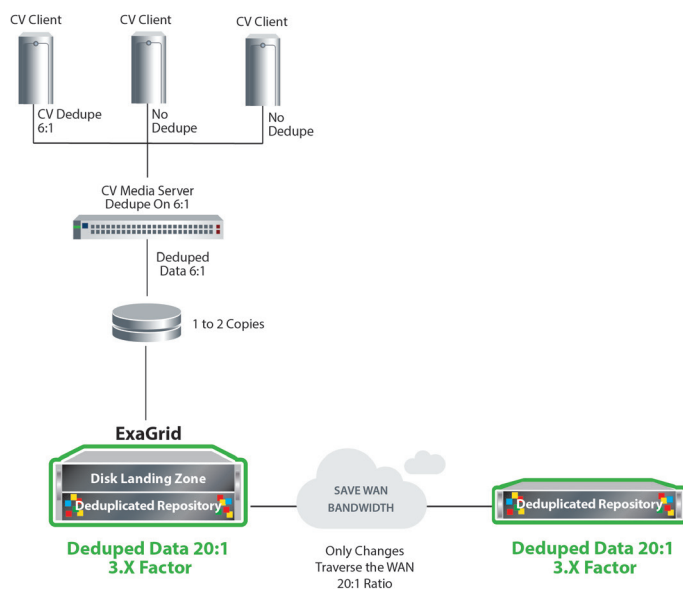
ExaGrid and Commvault

How Does ExaGrid Enhance Commvault if I Leave Commvault Deduplication On?

Two ways: storage reduction and scalability.

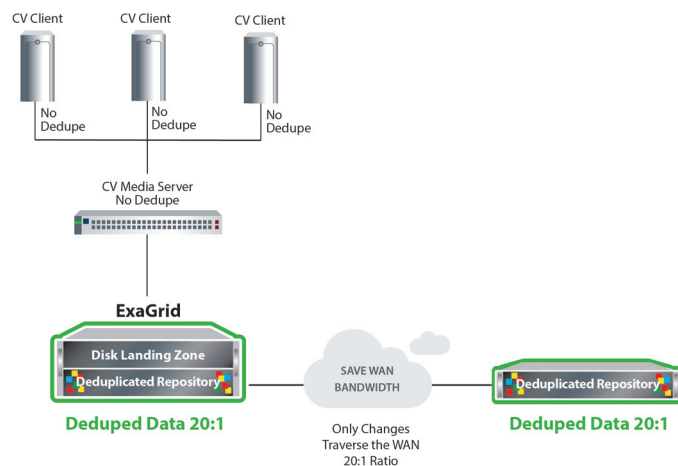
Commvault deduplication typically uses larger fixed-length blocks and achieves a deduplication ratio on average of 6:1. This means that with longer term retention, a greater amount of storage is required to store data onsite and offsite, and additional WAN bandwidth is required to replicate data offsite versus simply using more aggressive deduplication.

By combining Commvault and ExaGrid, enterprises can maintain the advantages of using Commvault deduplication, including data management and reduced network utilization. Customers store the most recent backups in Commvault deduplicated form, then store all longer term retention, weeklies, monthlies and yearlies on an ExaGrid intelligent hyperconverged appliance.



This gives enterprises 3x additional savings through deduplication, a ratio of 20:1 versus 6:1. ExaGrid optionally replicates the 20:1 optimized data offsite to second hyperconverged appliance reducing WAN bandwidth utilization.

How Does ExaGrid Enhance Commvault if I Turn Commvault Deduplication Off?



Many enterprises choose to use ExaGrid's deduplication instead of Commvault's. With this implementation, they can achieve:

- Faster backups due to avoiding inline media agent deduplication.
- 20x faster VM boots and restores with full backup copy in ExaGrid's landing zone in undeduplicated form, avoiding the lengthy data rehydration process.
- Scale-out linear growth with ExaGrid, providing significant short- and long-term cost savings over disk or traditional deduplication appliances.
- Massive storage savings due to 20:1 deduplication ratio.

Restore Implications of Commvault Deduplication

Commvault deduplication is performed inline, and only deduplicated data is stored. Less data being sent to storage reduces network utilization. As ninety-five percent or more of restores, VM boots, and offsite tape copies come from the most recent backup, keeping the most recent backup in only deduplicated form requires a compute-intensive, time-consuming data "rehydration" process that slows down restores. VM boots can take hours from deduplicated data.

In contrast, ExaGrid writes full backups directly to its disk landing zone. This means that the most recent backups are kept in their full, undeduplicated, native form. All restores, VM boots, and offsite tape copies are disk-read fast as the overhead of the data rehydration process is avoided. In most cases, ExaGrid is at least 20x faster than any other solution, including deduplication performed in backup applications or target-side deduplication appliances.

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