



GreenBytes Solution Brief

GreenBytes' GB-X Series Storage Appliances with OST by Symantec

Symantec's OpenStorage Technology (OST) interface for the industry's leading data protection software unlocks superlative performance, efficiency and recoverability with GreenBytes GB-X Series inline deduplication storage appliances.



Overview

By using GreenBytes' GB-X Series storage appliances with Symantec OST, customers will benefit from the advantages of high-performance disk-based backup in conjunction with line speed data deduplication and restore, ensuring the most efficient and effective data protection environment. GreenBytes high-performance storage appliances not only significantly reduce the capacity of your full and incremental backups with inline deduplication and warespeed compression, but they also work in harmony with NetBackup (NBU), enhancing remote replication for maximum disaster recovery performance.

GreenBytes and Symantec customers benefit from the OST integration by utilizing the NBU interface, which provides a single point of management for all data protection operations. This integration allows users to manage end-end client/server backups and electronic vaulting DR (disaster recovery) copies off-site. While leveraging the NBU management interface, customers will also realize significant performance gains, reduced backup times, enhanced data reduction, and off-host replication copies, while maintaining NBU catalog awareness for all copies.

GB-X Series appliances dramatically boost storage and deduplication performance by incorporating native inline deduplication into the enterprise-scale GreenBytes File System (GBFS) to permit real-time, line speed deduplication of file blocks as they are stored. The GB-X Series' GB-1000, GB-2000 and GB-4000 appliances are easily scalable, with the GB-2000 ranging from 12 TB up to 33 TB; GB-4000 offering a 24 TB base that can be scaled up to 108 TB; and the GB-1000 offering 4 TB with further scalability via enhanced disk drive densities.

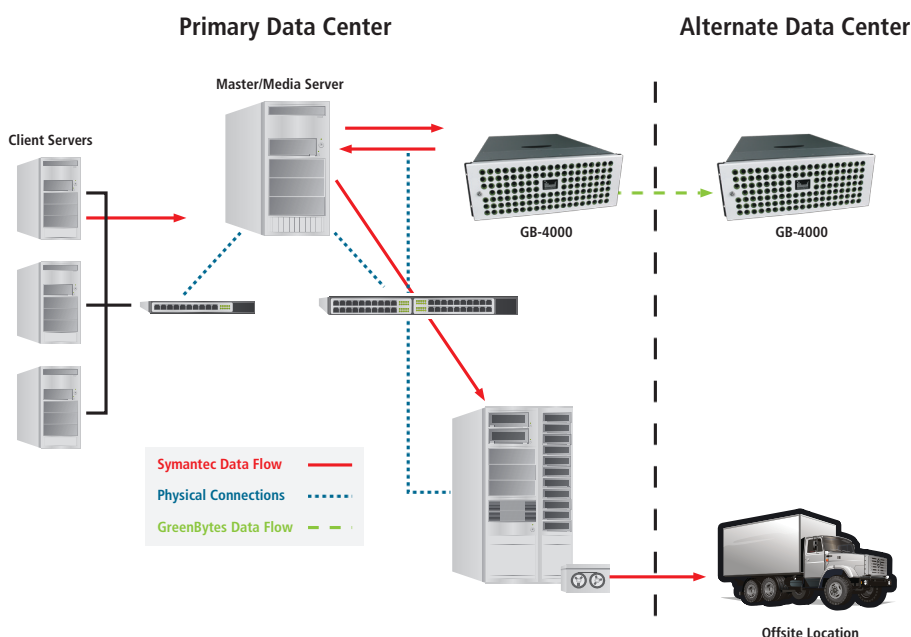
With OST, customers can create policy-based backup jobs that optimize network resources and therefore reduce backup windows significantly.

OST-based backup architectures also benefit from Symantec's duplication and optimized synthetic-full backup features, using one or more GreenBytes systems for primary and duplication targets.

GreenBytes supports media server configurations for Windows and Linux operating systems.

Other GreenBytes features that benefit OST customers include:

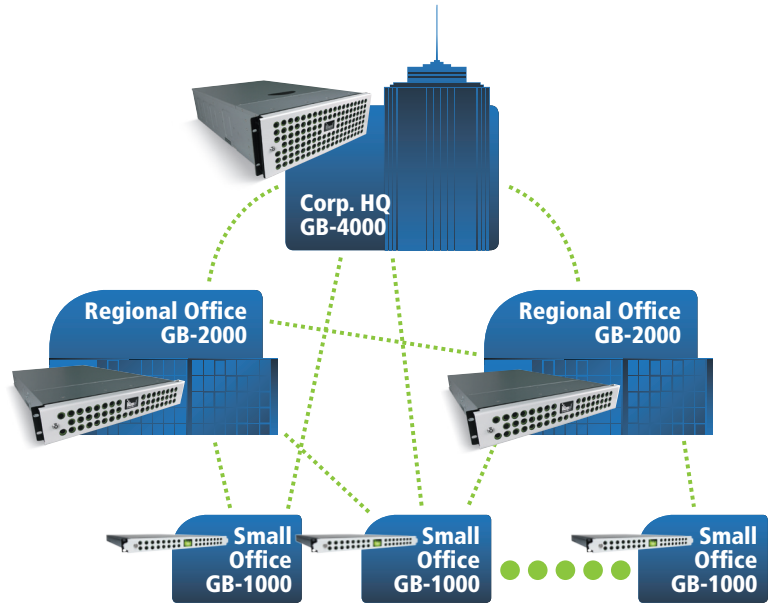
- Cutting-edge inline deduplication technology avoids the need to over provision storage common to post process deduplication solutions.
- Tunable deduplication and compression technologies enabling individualized data set efficiencies.
- Powerful and highly scalable I/O performance, combined with a rich feature set, makes GreenBytes the right choice for both data protection and primary storage environments.
- Feature set highlights include: SAN and NAS capability; MAID energy efficiency; asynchronous mirroring; space efficient snapshots; filesystem cloning; thin provisioning; virtualized storage pool; 10GbE connectivity.
- Easy to use, Windows MMC based interface for GreenBytes setup and usage monitoring.



N-to-N Replication

Asynchronous data replication down to one-minute increments is supported between GreenBytes system instances. Once the initial mirror replica is established, only changes to index/metadata and new data segments are replicated to the target site. As a result, WAN bandwidth requirements may be reduced significantly, as well as the corresponding time to replicate.

Replication is configured using GreenBytes Storage Manager and allows any single GreenBytes system instances, both NFS and OST, to be configured in a source-target relationship, with one-way replication. Fabric replication supports many-to-one configurations. This topology features bidirectional replication between GreenBytes system instances, which is ideal for various DR architectures, including hub-spoke implementations for remote offices.



FEATURE	GREENBYTES GB-X SERIES	OTHER ALTERNATIVE
Target-based deduplication	GreenBytes deduplication is global, across your entire NBU topology, all clients and all media servers. If duplicate data exists, it will be consolidated.	Source-based deduplication engines do not have visibility across media servers, missing an opportunity for data reduction.
Capacity scaling with virtual storage pools	Even with deduplication, your backup policies may require capacity expansion over time. GreenBytes systems can be expanded to 108 TB of physical data.	Legacy OST deduplication appliances will require either forklift upgrades or separate storage namespaces to accommodate large-scale deployments.
High-performance restore	With GreenBytes' high-performance architecture, file level restores are fast, with speed equal to or better than our data ingest rates.	Performance matters when you really do need to restore a file in a data recovery scenario!
Optimized Duplication	GreenBytes' replication capability, driven by OST's duplication feature, optimizes network resources by intelligently sending unique blocks to the replication target.	Systems that re-hydrate your data for delivery to replication targets waste valuable network resources and increase backup windows.
Acquisition Price	On a per-TB basis, GreenBytes systems cost significantly less than the competition. GreenBytes systems come with our complete software suite, including OST powered NBU interface.	Combined with high acquisition costs, some vendors charge for replication and OST licensing which complicates ROI justifications. Further, existing competitive products do not have the performance and feature set required should customers wish to expand investment to primary storage or iSCSI modes.

GreenBytes product is backed by a strong warranty and a world-class 7x24x365 customer support network.



Hopkinton Industrial Park
15 Gray Lane
Ashaway, RI 02804, USA
www.GetGreenBytes.com

(877) GRN-BYTE Sales
(401) 315-5580 Phone
(401) 315-7267 Fax

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