nexsan TECHNOLOGIES FalconStor Software

DeDupe SG™

Highly Efficient Deduplication Storage

You expect deduplication to save storage, but what if a system was fast enough to save time, green enough to save energy and dense enough to save space?

Deduplication has just been redefined

*The only dedupe with "SG" - **Speed** with **Green***

First generation deduplication systems focused on saving storage. Nexsan and FalconStor are redefining what you expect from a deduplication solution by delivering an ultra-efficient system that saves more than just capacity. DeDupe SG is faster to save time on backup and restore, greener to save energy between backups, simpler to save management resources and more dense to save space. Introducing DeDupe SG, the only highly efficient deduplication solution.

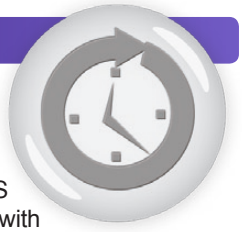
DeDupe SG

DeDupe SG Advantage

With growing capacity needs, shorter backup windows, escalating energy costs, shrinking datacenter space, tighter budgets and the need for faster restore, IT professionals need a new kind of deduplication solution. It's not just about saving storage anymore. It's about saving time, energy, space and resources - a more holistic approach to storage efficiency.

DeDupe SG™ is a complete, turn-key solution with all the necessary software and hardware leveraging Nexsan's highly efficient storage combined with FalconStor's high performance deduplication software engine (File-interface Deduplication System - FDS). DeDupe SG represents the next generation in data deduplication by reducing capacity costs while greatly improving operational efficiency.

Save Time



DeDupe SG delivers performance that is 20% to 100% faster than competitive systems wth the ability to ingest data up to 750MB/s via CIFS and NFS protocols (up to 1500MB/s with OST).

Whereas other vendors choose a path of CPU or disk to achieve speed, Nexsan has answered the obvious question - why not both? By combining the latest high speed processor technology with Nexsan's high speed RAID subsystem, the DeDupe SG represents the next evolution in deduplication performance.

DeDupe SG is not just faster deduplication, it's smarter deduplication. By first writing and storing backups on its high speed disk cache (deduping at a later time or concurrently), DeDupe SG reduces the amount of time needed to backup.

Unlike other dedupe systems, DeDupe SG has its own independent, high performance RAID subsystem which can scale up to 8GB cache and up to 8 RAID engines. With RAID tasks off-loaded to the subsystem, CPU processing power can be solely dedicated to deduplication allowing users to backup and restore faster.

Moreover, DeDupe SG:

- supports multiple streams from multiple applications
- delivers industry leading restore performance for fast retrieval of files to their native format
- offers an optional "hot" standby DeDupe SG appliance for high availability

Save Time

- 20-100% faster than competitive vendors
- Write and store backups to high speed disk cache and dedupe later or concurrently
- Independent, high speed RAID subsystem frees CPU processing power for faster backup/restore performance
- Supports multiple streams from multiple applications
- Symantec OST and 10Gbit support

Save Energy

- AutoMAID™ technology delivers speed with green by spinning down DeDupe SG storage between backups while delivering near instantaneous access to data when required
- Reduce energy costs as much as 95% when compared against normal disk storage
- Reduce energy costs as much as 60% when compared against other dedupe solutions

Save Storage

- Deduplication ratios of 10-30x and greater
- Works with popular backup or archive software
- Replication with global dedupe

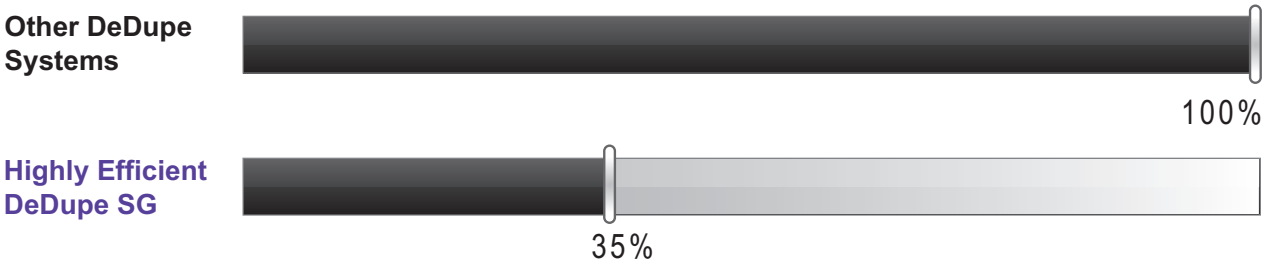
Save Resources

- NAS interface for ease of deployment and management
- Intuitive configuration wizard
- Manage all local and remote DeDupe SG functions from a central interface
- Self-optimizing energy saving technology

Save Space

- High density solution delivers 7TB usable capacity in 5U, 26TB in 6U, 68TB in 10U

Energy Consumption Comparison
(Energy Consumed During **Idle Time** Between Backups)



DeDupe SG Product Family

Nexsan DeDupe SG Models	Usable Capacity (TB)	Logical Data Capacity (TB) at 20:1
DDSG-4	4	80
DDSG-7	7	140
DDSG-12	12	240
DDSG-18	18	360
DDSG-26	26	520
DDSG-52	52	1040
DDSG-70	68	1360

Save Energy

Dedupe storage is primarily a backup target used only during the backup window. The typical backup window is 2-8 hours a day, yet all other dedupe solutions spin disks at full speed for the remaining 16-22 hours.

Would you leave your car running at full speed in the driveway when not using it? Probably not. So why would you keep your storage running at full speed between backup windows? Not only is it wasting power to operate but wasting power to cool.

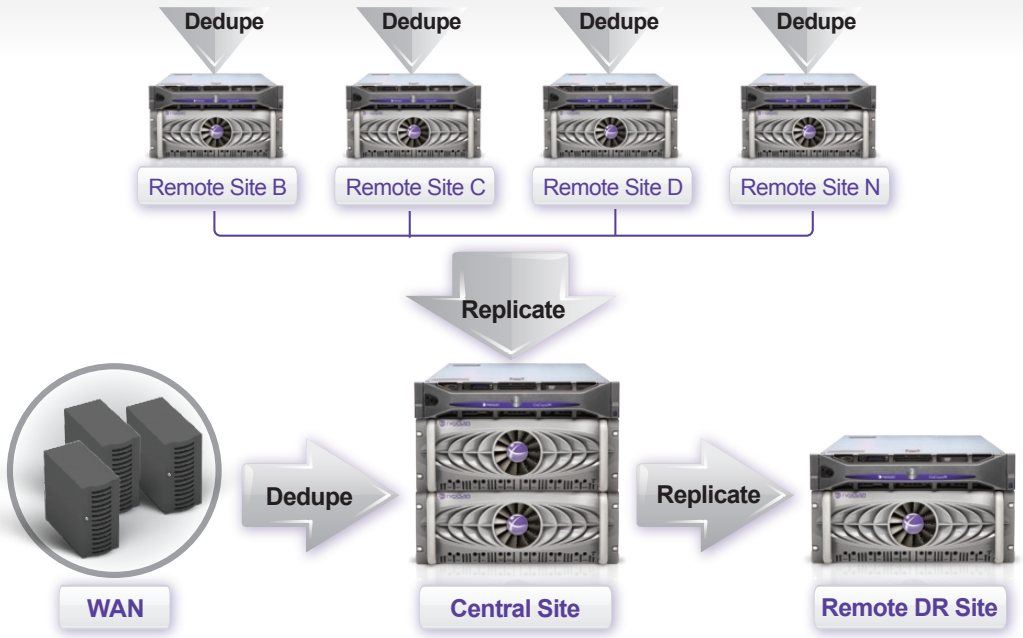
By leveraging the green efficiencies inherent to Nexsan storage components and energy saving AutoMAID™ technology, DeDupe SG users not only get better performance during their backups, they save energy and reduce costs every hour the system is idle.

AutoMAID operates transparently in the background and self-optimizes energy efficiency by looking for opportunities to save energy. By uniquely delivering speed with green, DeDupe SG will gradually slow down and ultimately turn off its drives to conserve power while providing near-instantaneous access to data when needed.

What this means to users is that DeDupe SG can reduce energy costs as much as 95% when compared to normal disk storage and 60% when compared to other dedupe solutions.

Replication with Global Deduplication

DeDupe SG's integrated, data replication services create an environment where data and sites are protected against loss. DeDupe SG can replicate all or some of your deduped data to another DeDupe SG system located across any LAN, MAN or WAN. DeDupe SG small office systems can also be installed at remote sites where they will dedupe and store data locally then replicate to a central DeDupe SG system for added protection.



DeDupe SG

DeDupe SG

Feature	DeDupe SG	Other Dedupe Systems
Block-level deduplication	●	●
Compatible with major backup software	●	●
Easy NAS interface	●	●
RAID-6 protection	●	●
OST Support	●	●
AutoMAID™ energy saving technology	●	
High speed RAID subsystem	●	
Fast write to disk cache	●	
Flexible dedupe exclusions	●	
High density	●	
Backup software hosting feature	●	
Replication with global dedupe	●	
"Hot" standby appliance for availability	●	

Save Storage

Deduplication reduces the amount of disk storage needed to retain and protect data by ratios of 10-30x and greater. By consolidating to a common, disk-based target, users can avoid creating islands of data and storage.

A single DeDupe SG system can be used for high speed backup and recovery protecting enterprise applications to include both structured data (databases) and unstructured data (files). DeDupe SG uses a NAS interface and works seamlessly with popular backup or archive software. Simply put, if you can write it to NAS, you can dedupe it and store it.

Save Resources

Deployment and management couldn't be easier. Simply rack the system, plug-in DeDupe SG, power up and walk through a configuration wizard to set up storage volumes and associated file systems. Connect up to eight DeDupe SG Ethernet ports to your LAN and assign them all to a single backup server or spread them across multiple servers.

With DeDupe SG, users have the flexibility to exclude some data streams from the deduplication process. The DeDupe SG policy engine enables 'set and forget' deduplication management while speeding up backup operations.

With a single-pane-of-glass view into the system, management is simple to learn and use. The management system enables administration and monitoring of all deduplication processes and services for 100s of TBs of logical data capacity. DeDupe SG systems can be accessed across any LAN, MAN or WAN.

DeDupe SG management services can be installed on any Windows or UNIX platform providing easy online access to all DeDupe SG systems. From a central interface, administrators can manage all DeDupe SG functions including NAS configurations, system monitoring, replication and recovery services.

Save Space

Aside from delivering data reduction through high speed deduplication and power reduction through AutoMAID, DeDupe SG boasts a sizeable footprint reduction by utilizing space efficient storage arrays.

DeDupe SG delivers the following usable capacity in a very compact solution:

- 4TB and 7TB in a 5U configuration
- 12TB, 18TB and 26TB in a 6U configuration
- 52TB, 68TB in a 10U configuration

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