

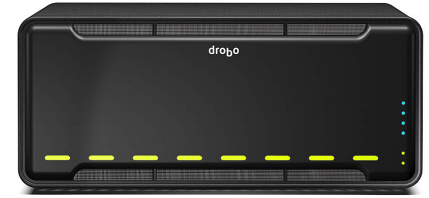
drobo

Small Box | Big Storage

Crushing Data with Dedup without Crushing SMB Budget

Optimizing an SMB backup strategy using Symantec
Backup Exec 2010 Deduplication Suite

Solution Overview



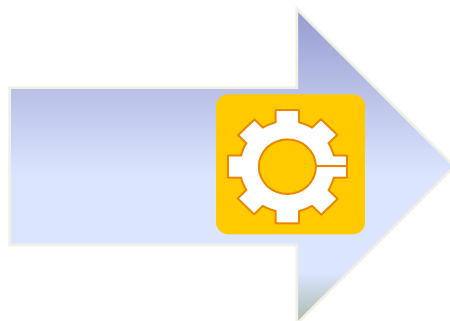
- Deduplication has primarily been an enterprise-class technology, but SMBs also want to minimize backup windows and reduce storage costs
- For those that are protecting data using backup, the cost and complexity deduplication options have prevented them from doing it for most data
- Symantec Backup Exec with Dedup along with the Drobo B80i provides a cost-effective and storage-efficient solution for the fast backup and recovery of your data

Optimizing Backup for SMBs: Defining the Right Strategy

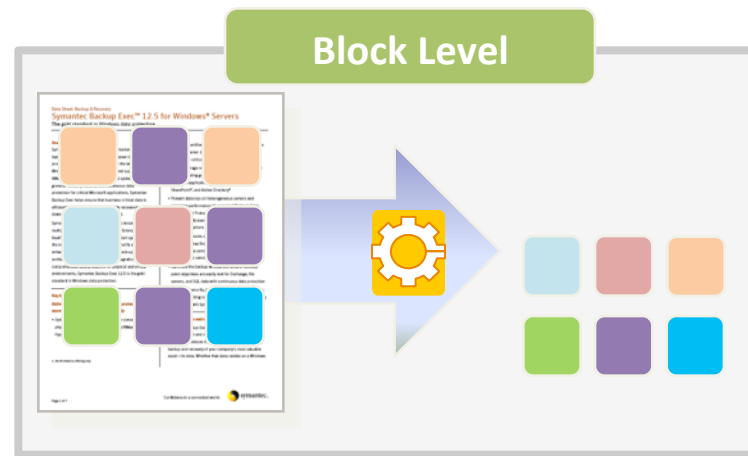
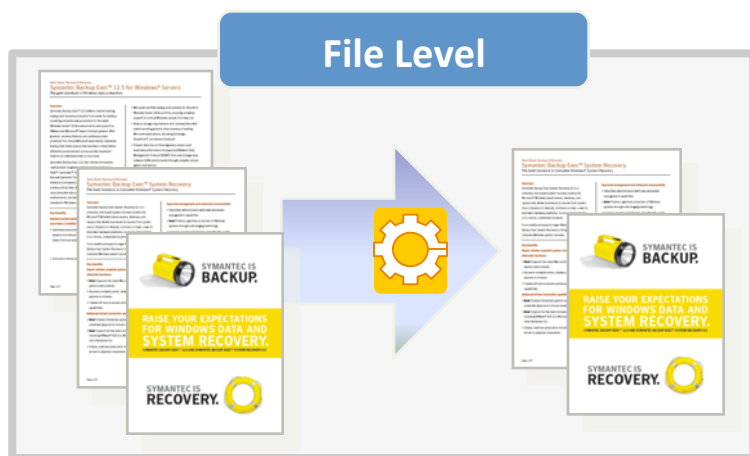
- Start with reliable primary storage
- Deploy a backup software solution for SMBs
 - Repeatability and recoverability are key
 - Affordability and ease-of-use are a must
 - Enterprise features are an added benefit
- Utilize disk-to-disk-to-tape architecture
 - Faster backup and recovery with disk vs. tape by eliminating tape media loading and positioning
- Adopt deduplication to best meet your needs

What Is Deduplication?

Elimination of redundant data



What is the difference between file level and block level?



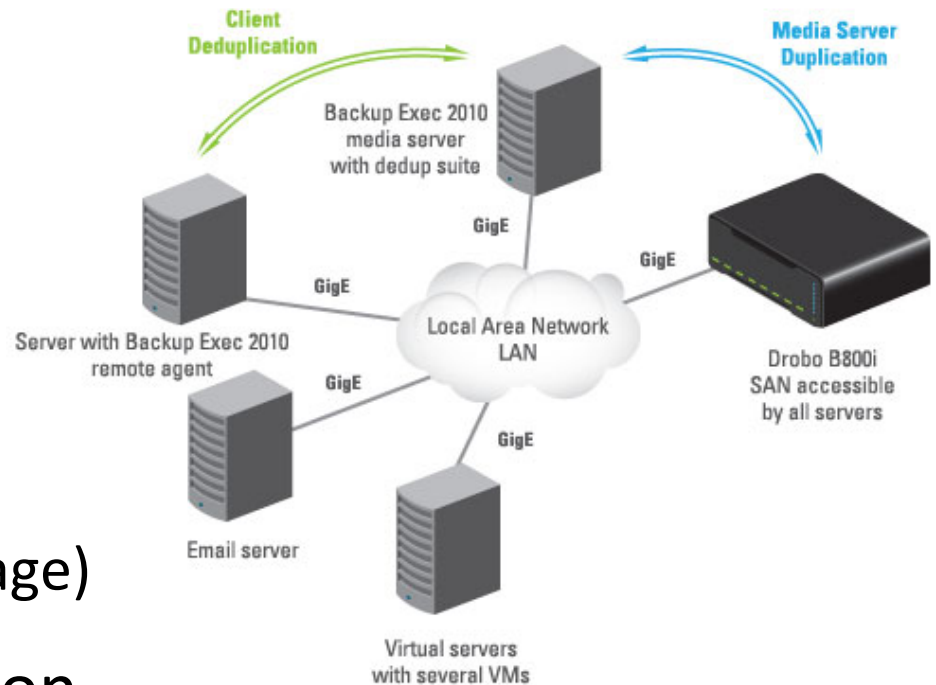
Comparing Approaches to Deduplication

	Media Server Deduplication	Client / Source Deduplication	Deduplication Appliance
Backup Data Reduction	Good	Good	Very Good
Network Traffic Reduction	Between Backup Server and SAN	From clients to backup server	Between Backup Server and SAN
Client CPU impact	Lower	Higher	Lowest
Management	Centralized	Centralized	Per appliance
Entry Cost	\$	\$	\$\$\$ - \$\$\$\$

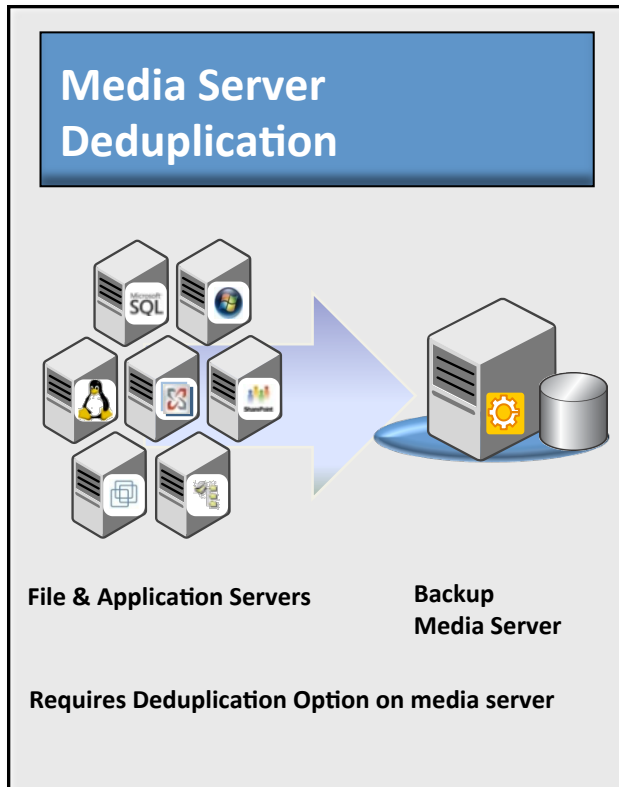
- Symantec Backup Exec 2010 supports all three approaches
- Client/Source deduplication is available only for Windows Agents
 - Exchange, Agent for Windows, SQL Agent, etc.

Basic Architecture: What You'll Need

- Media Server (Backup server)
- SAN storage for disk backup (Fibre Channel* or iSCSI)
- Shared network (* = plus FC fabric if FC storage)
- Deduplication software on server or server + clients



Combining Approaches for Optimization: When to use media server & client/source

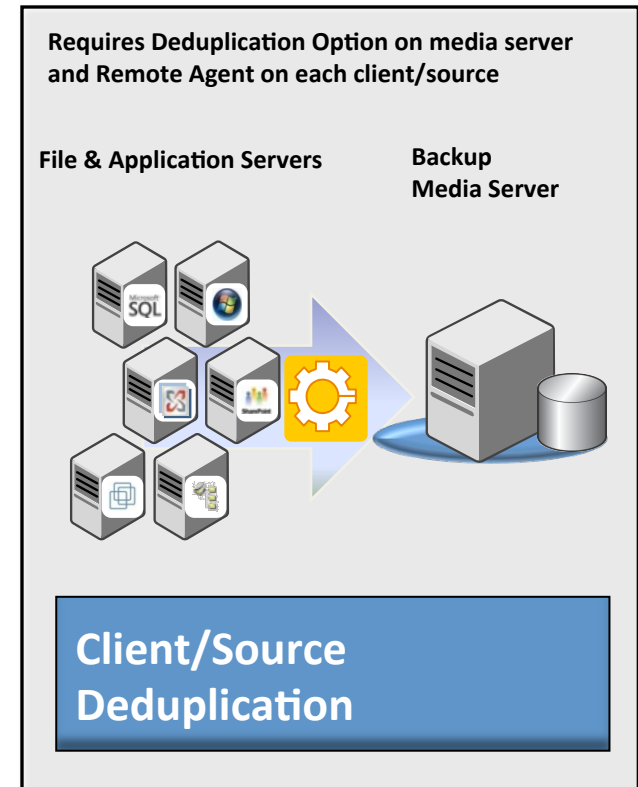


Media Server

- Reduced impact on production servers by implementing a media server
- Useful where client deduplication is not possible: VMware, RALUS, MAC, ...
- Ideal for SAN environments

Client / Source

- Faster backup times, decreased network usage
- Ideal for WAN environments
- Lets client computers do the work for deduplication



Deduplication is CPU and memory intensive - Client/Source deduplication provides the benefit of reducing network traffic, but may not be practical if those systems are 32-bit with slower CPUs and/or less memory

Client/Source Deduplication is only available for Windows Agents (Exchange, Agent for Windows, SQL Agent, etc.)



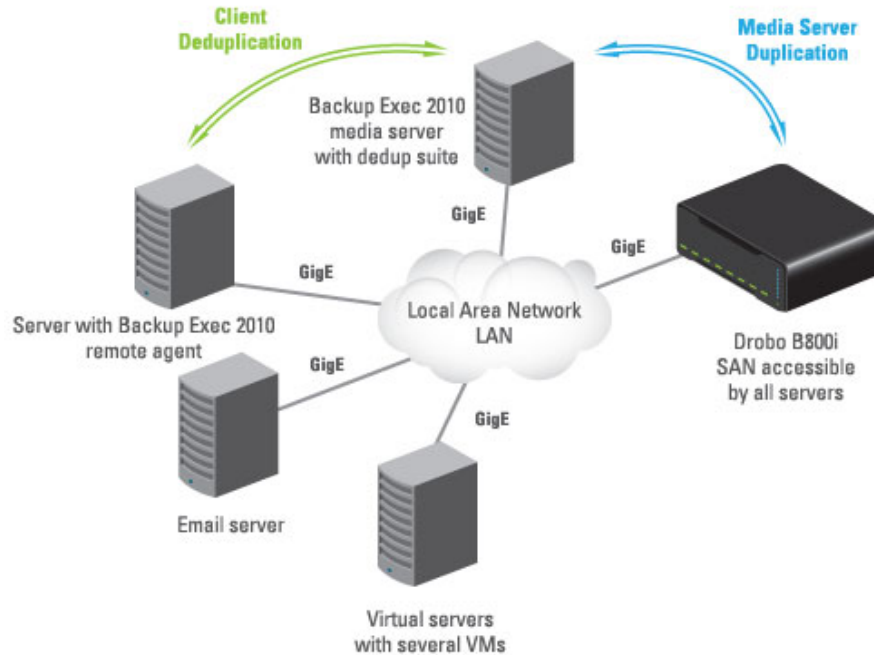
Indicates where dedup is performed

Leveraging Deduplication in Backup

- Addressing concerns
 - Impact on systems (CPU/memory)?
 - Multi-core systems: quad core systems with > 8GB RAM for ~\$2,200
 - Short-term cost
 - Bundles software: media server with deduplication option in a suite for ~\$2,700
 - Long-term scalability
 - Support for appliance approach built in: add appliance-based deduplication with the environment grows large enough to support the investment



Putting It Together: 8TB of SAN with Dedup



DroboElite + Backup Exec 2010 Deduplication Suite				First-time SAN + Deduplication Appliance			
Component	Qty	Price	Total	Component	Qty	Price	Total
DroboElite 4x2TB = 8TB	1	\$5,199.00	\$5,199.00	Entry model, 4x2TB = 8TB	1	\$9,525.00	\$9,525.00
Backup Server hardware *	1	\$2,200.00	\$2,200.00	DeDup appliance **	1	\$12,500.00	\$12,500.00
BE2010 Deduplication Suite	1	\$2,708.00	\$2,708.00	BE2010 Media Server	1	\$1,174.00	\$1,174.00
BE Agent for VMware	1	\$1,882.00	\$1,882.00	BE Agent for VMware	1	\$1,882.00	\$1,882.00
BE Agent for MSFT Exchange	1	\$1,174.00	\$1,174.00	BE Agent for MSFT Exchange	1	\$1,174.00	\$1,174.00
Total			\$13,163.00				\$26,255.00
Savings % and Total		50%	\$13,092.00				

NOTE - x64-bit Media Server, one Quad-core or 2x dual-core processor, 8-16Gb physical memory required

NOTE - All Backup Exec licenses shown with Basic support option

* - Estimated price for entry server with required specs running Windows Server 2008SP2 Standard x64, can be higher or lower

** - Minimum configuration prices for deduplication appliances from different vendors range from \$12,500 to over \$20,000



Certified Solution for SMBs

- Software and hardware designed for SMBs
 - Certified for SAN, also DAS to media server
- Installation and configuration is easy as 1-2-3
 - Install option, define dedup location, target backups

Device	Connectivity	Basic B2D	GRT Tested	BEDEDUP
Drobo	UCB	✓	✓	
B800i	iSCSI	✓	✓	✓
DroboPro	iSCSI	✓	✓	✓
DroboPro	USB	✓	✓	

Top Questions & Key Takeaways

- Top questions
 - How much reduction can be expected: 5 – 20 x reduction?
 - How is performance affected by deduplication?
 - How does deduplication affect the restoration process?
- Key takeaways
 - Deduplication was exclusively for enterprises, but SMBs can also minimize backup windows and reduce storage costs with Dedup
 - Symantec Backup Exec 2010 Deduplication Suite provides an easy solution to protect more, store less, and save more than before
 - Disk-to-disk backup with deduplication can be done easily and affordably with Drobo B800i and Backup Exec 2010

drobo

Small Box | **Big Storage**

Questions?

Feedback and comments also welcome
@ tv@drobo.com or on twitter @ drobo

Thank you!