

Dell™ PowerVault™ DL Backup to Disk Appliance powered by Symantec™ Backup Exec™ 2010 R3 dramatically reduced backup time and data storage needs



compared to disk-based backup without deduplication



Companies of all sizes are looking to move away from traditional inefficient and costly backup technologies. Such methods back up data indiscriminately, failing to differentiate between new and previously saved data. This is particularly problematic with remote offices, where the dutiful transfer of all backup data to the central office wastes time, WAN bandwidth, and storage resources. By comparison, source deduplication methods back up only changed or new data to the central office, saving time, improving bandwidth utilization, using storage more efficiently, and thus lowering storage costs.

Symantec Backup Exec 2010 R3 includes powerful source deduplication technologies that let companies back up their data efficiently. Symantec Backup Exec 2010 R3, combined with the Dell PowerVault DL Backup to Disk Appliance, is a full-featured data protection solution that eliminates the waste of less efficient systems.

We measured firsthand the advantages that the Dell-Symantec solution delivers when using source deduplication to back up databases, mail, and other files. The solution drastically reduced both backup time and data storage needs in our tests, compared to data backup without source deduplication. For instance, in our database server testing, we experienced an average deduplication ratio of 24.6 to 1. We also experienced an average time reduction of 1.8 hours to complete the backup.

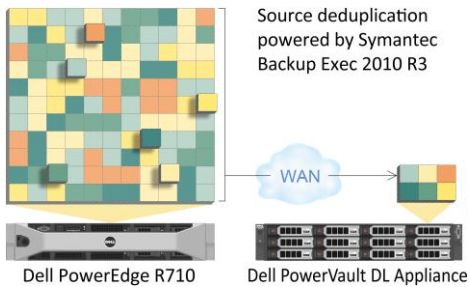
These results show the types of storage and time savings that the Dell-Symantec solution can deliver.

To read the full report, visit

http://principledtechnologies.com/clients/reports/Symantec/BackupExec2010R3_0711.pdf.



DATA BACKUP 101: SOURCE DEDUPLICATION EXPLAINED



Source deduplication eliminates backup inefficiencies by transferring only unique blocks of data across the WAN.

Source deduplication offers an efficient way for companies to back up their data. After an initial full back up, deduplication software searches for duplicate data in subsequent backups and then only backs up blocks of data that are new or changed. “Source” means the data is deduplicated at its source, likely a server or desktop at a remote location, before it is passed to the central backup site.

Because the large majority of data typically remains constant from day to day, transferring only new or changed blocks of data from the remote office to the central office with source deduplication is the wise choice when bandwidth, time, and space are at a premium.

THE DELL-SYMANTEC ADVANTAGE

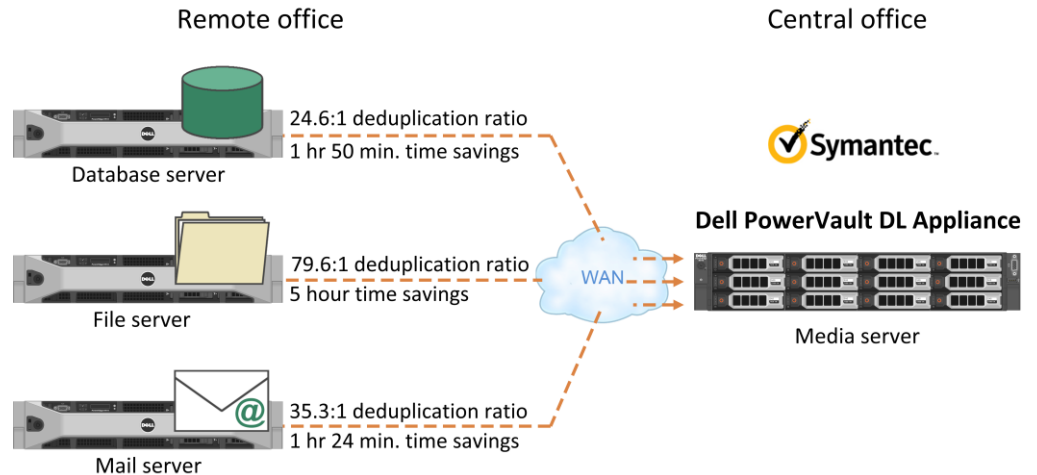
Dell and Symantec have partnered to offer an integrated disk-based backup solution. Symantec Backup Exec 2010 R3 is already fully installed on the Dell PowerVault DL Appliance, and an automated setup wizard guides you through setup, configuration, and deployment. This solution offers features such as granular recovery (allowing you to back up specific files without running a full restore) and remote backup, monitoring, and maintenance. For a full list of features, see <http://i.dell.com/sites/content/shared-content/data-sheets/en/Documents/ss703-powervault-dl-backup-to-disk-appliance-symantec.pdf>.

LESS DATA SAVED, LESS TIME SPENT

By deduplicating the data at the source, the Dell-Symantec solution was far more efficient than disk-based backup without source deduplication, which we also tested. The Dell-Symantec solution reduced the amount of data traveling over the WAN by a factor of more than 24 when backing up a database server, a factor of more than 79 when backing up a file server, and a factor of more than 35 when backing up a mail server.

By backing up only new data, the Dell-Symantec solution reduced the database backup window from 2 hours to an average of 21 minutes, reduced the file server backup window from almost 6 hours to an average of 47 minutes, and reduced the mail server backup window from almost 4 hours to an average of 2 hours 21 minutes.

Figure 1: The Dell PowerVault DL Appliance powered by Symantec Backup Exec 2010 R3 made good on its promise to significantly reduce the amount of data storage and time needed during data backups.



The Symantec Remote Agent compared the data on the remote server to the existing backup data on the media server. When it found a duplicate, it sent only a marker to the media server at the central office. As a result, the remote server transmitted far less data to the media server. This not only saved WAN bandwidth, but also decreased the volume of data the media server had to store—both of which add up to savings. In a straightforward process, we used the Symantec Backup Exec console to simply select the deduplication storage folder and select the option for remote access of the media server while configuring the backup job.

The difference between the volume of data and the volume of data actually stored increases over time, benefiting the business by requiring significantly less long-term storage capacity.

Database server backup scenario

The Symantec Backup Exec console made backing up data from a remote location easy.

The initial complete database backup took roughly 1 hour and 35 minutes. Subsequent full database backups using source deduplication took an average of 21 minutes, achieving a deduplication ratio of at least 23.8:1. For comparison, we ran a single backup using a backup-to-disk storage device on the Dell PowerVault DL Appliance without source deduplication, which took roughly 2 hours and 11 minutes.

Figure 2 shows the comparison of protected data versus actual deduplication data stored for our database server scenario.

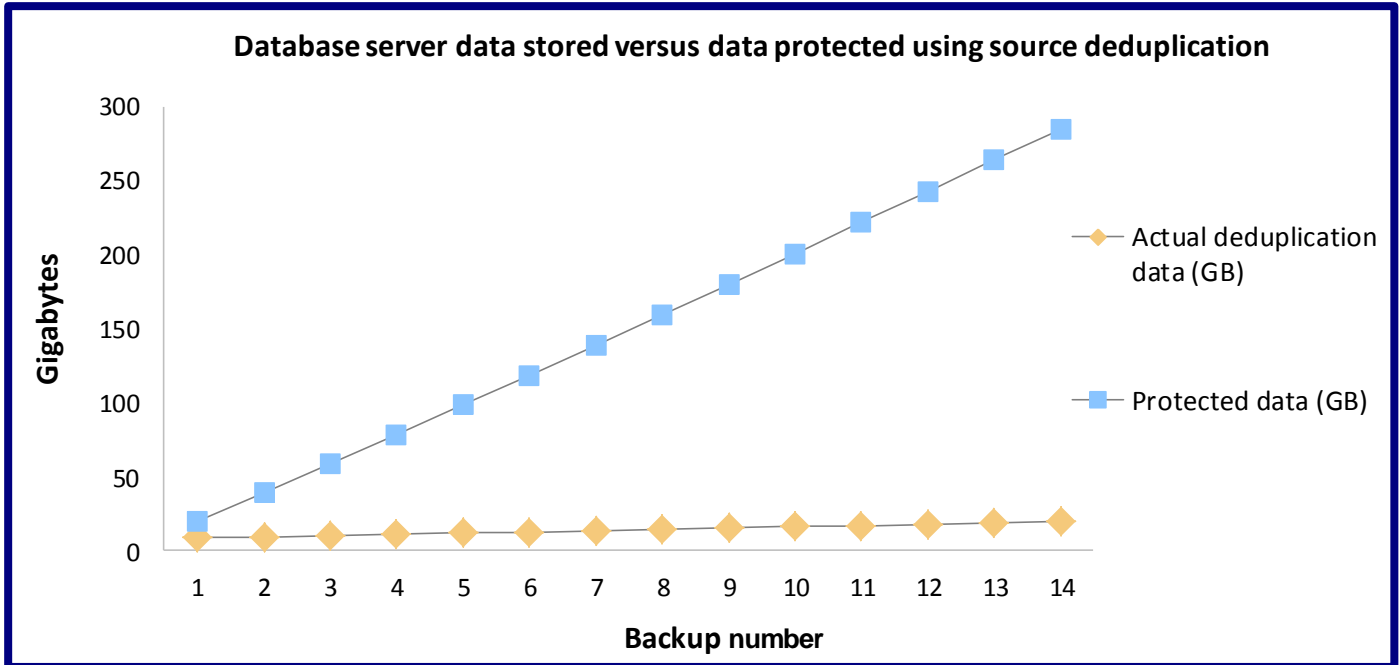


Figure 2: Comparison of protected data versus the actual data stored from our 2-week database backup simulation of a SQL Server database.

File server backup scenario

The initial complete backup took just over 5 hours. Subsequent full file server backups using source deduplication took an average of just over 47 minutes, achieving a deduplication ratio of at least 24.4:1 up to 117.4:1 and an average of 79.6:1. For comparison, we ran a single backup using a backup-to-disk storage device on the Dell PowerVault DL Appliance without source deduplication, which took almost 6 hours.

Figure 3 shows the comparison of protected data versus actual deduplication data stored for our file server scenario.

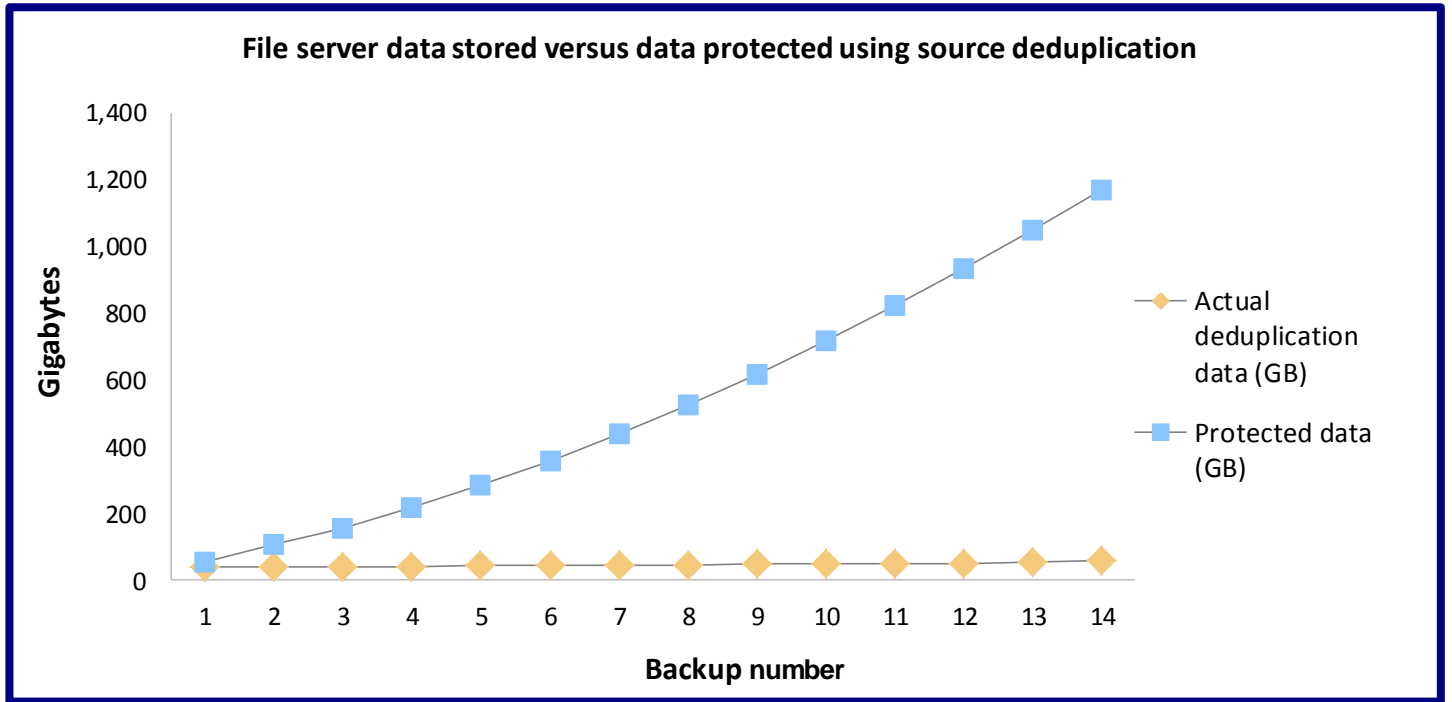


Figure 3: Comparison of protected file server data versus the actual data stored from our 2-week file server backup simulation.

Mail server backup scenario

The initial complete backup took just over 7 hours. Subsequent full mail-storage-group backups using source deduplication took an average of just over 2 hours, achieving a deduplication ratio of at least 29.1:1. For comparison, we ran a single backup using a backup-to-disk storage device on the Dell PowerVault DL Appliance without source deduplication, which took roughly 3 hours and 45 minutes.

Figure 4 shows the comparison of protected data versus actual deduplication data stored for our mail server scenario.

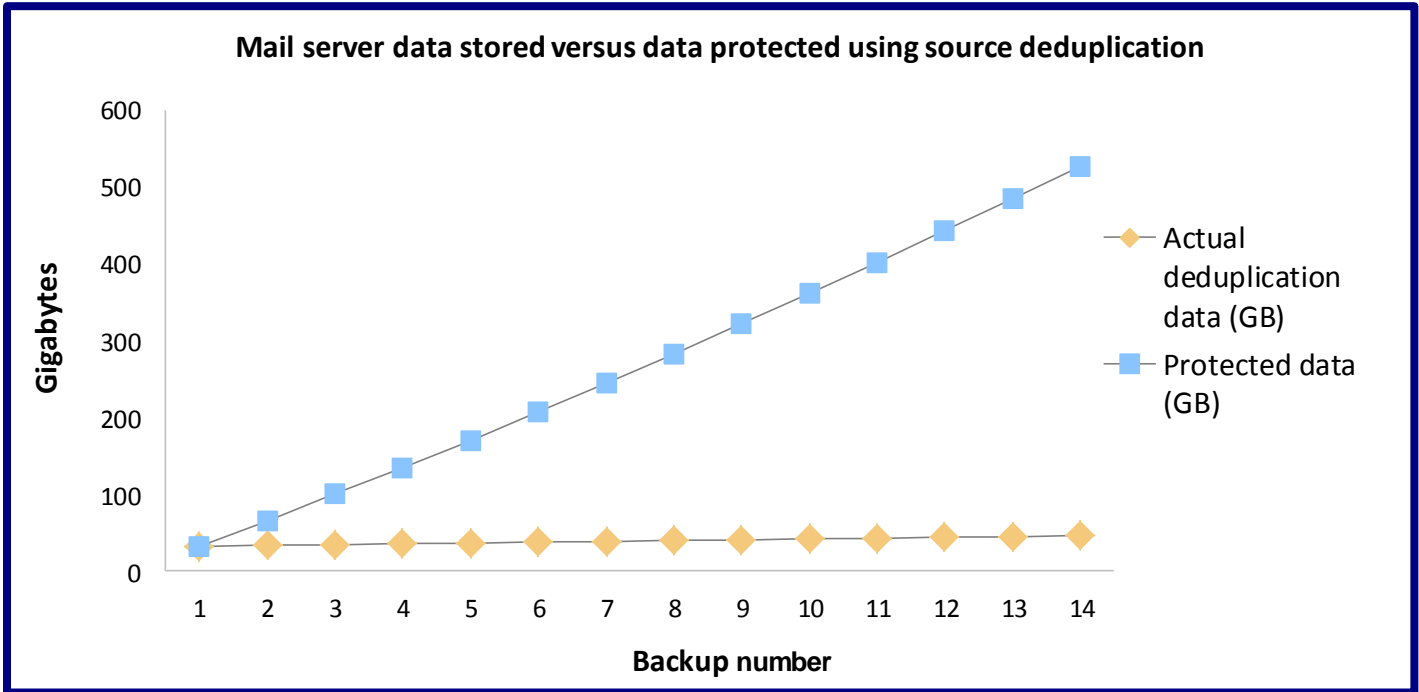


Figure 4: Comparison of protected mail server data versus the actual data stored from our 2-week Exchange 2007 backup simulation.

SUMMARY

The Dell PowerVault DL Appliance powered by Symantec Backup Exec 2010 R3 saved considerable amounts of storage space, bandwidth, and time in our tests. Compared to backup without source deduplication, it reduced the amount of data transmitted over the WAN by an average factor of 46.5 to 1 and saved an average of 2.8 hours.



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