

## Disk-to-Disk Backup Using Direct Attached Storage

### INTRODUCTION

The cost of disk storage has been dropping so substantially that it is now economical to replace optical and tape products with on-line disk storage for backup and restore functions.

Archiving to removable media can still be performed to move data off-site for disaster recovery but will not be needed for everyday data restore.

Storage costs per megabyte for Fibre Channel and SCSI products have come down from over a dollar per megabyte to just 2 - 4 cents per megabyte in the last several years. The latest Serial ATA products that now are available to departmental and enterprise storage environments as secondary storage devices cost under a penny per megabyte. Terabytes of data can easily and inexpensively be backed up every day at 3 to 5 *times* the speed of tape and optical backups. A 12-hour backup can be accomplished in 2 to 3 hours. Backup windows are dramatically shortened, data availability time is sharply increased, substantial system administrator time is saved avoiding the fuss with tapes, file recoveries are much faster and end users are much happier. Finally, backup and restore success rates are near 100% rather than the typical 40 - 60% from tape - thus increasing reliability significantly as well.

### HOW IT WORKS

*This solution is a relatively easy one to implement. The first step is to acquire the correct amount of storage for the backup copy.*

*The additional storage, whether it be SATA, SCSI or Fibre Channel disk storage, should be installed and connected to the server as shown in the diagram to the right, so the server can read/write to both storage devices.*

*Now that the server is able to access the newly installed storage, the administrator must set up the backup software, create scripts/batch processes, or some other method that will do the scheduled copy from the primary application data to the secondary backup copy.*

### WHY DO DISK-TO-DISK BACKUPS

- Tape backups take far too long
- Frequent requests to retrieve data
- File restores are needed quickly
- Increased reliability

### REQUIREMENTS

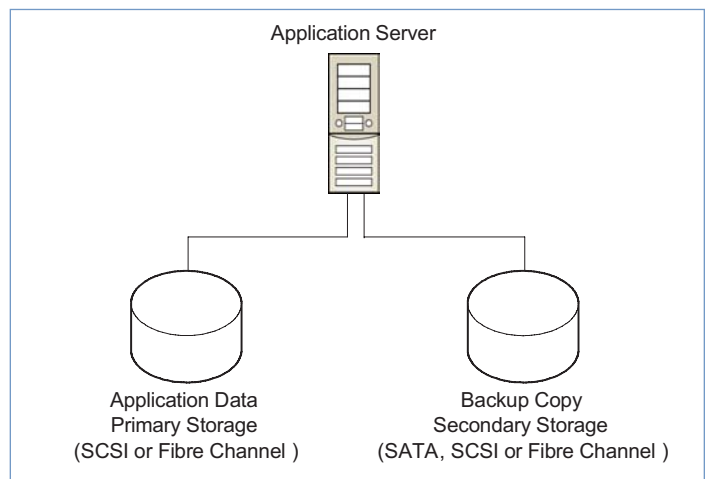
- High speed
- Low cost
- High bandwidth
- Supports all backup software such as Veritas, Legato, ARCserv and others

### TYPICAL APPLICATIONS

- Large number of users or files
- Replace optical near-line storage
- Replace tape for backups and restores
- Large databases
- 24x7 operation

### BENEFITS

- Cuts backup window
- Fast file restores from disk instead of tape
- Saves system administrator time
- Satisfies end-users
- Reliable Restore



**The diagram shows how easy it is to perform disk-to-disk backup to direct attached storage using your standard backup procedure.**