

SOLUTION OVERVIEW



USING DOUBLE-TAKE FOR ENHANCED TAPE BACK UP

The rapid growth in storage brought on by the Internet and distributed computing has placed nearly impossible demands on administrators responsible for protecting corporate data assets. The “backup window” has shrunk to nearly zero and production servers and networks are already overloaded making tape backup a major concern. Double-Take can enhance the backup process by continuously replicating critical data to centralized servers and using tape backup systems to backup the *replica* rather than the production servers.

Offload the Burden

Tape Backup systems can introduce significant overhead to a production server, seriously impacting its performance. While the impact of periodic full system backups may be obvious, even nightly incremental backups must “walk the file system” to examine every file system object and then read any file that has changed in its entirety for backup. Performing this process across a network adds additional overhead as this entire process must happen “across the wire”.

Double -Take can offload the burden of periodic tape backup from multiple production servers to a dedicated backup server and make centralized tape backup a reality, *significantly reducing management cost and improving reliability.*

File Delta Transmission

Double-Take transmits only the *changes* made within a file (for example a new record in a database) rather than sending the whole file across the network every time it changes. This can greatly reduce the amount of network bandwidth required for data replication, particularly for large files like databases, video captures and activity logs.

Transmission Control

Double-Take allows control over when and where data is replicated to the target servers. Bandwidth can be limited to a fixed amount, certain times or triggered by events such as time or amount of data to be sent. Data can even be directed at a specific NIC allowing a

“dedicated” link for replication without impacting incoming user traffic.

No Open File Issues

Regardless of a file’s state on the source, on the target every file is closed and available for consistent backup at any point in time. During the backup process, any changes to that file are queued on the target until the backup is complete and then applied automatically. It is also possible to use the Double -Take command line interface to completely stop transmission during the backup process and re-start it when the backup process is complete.

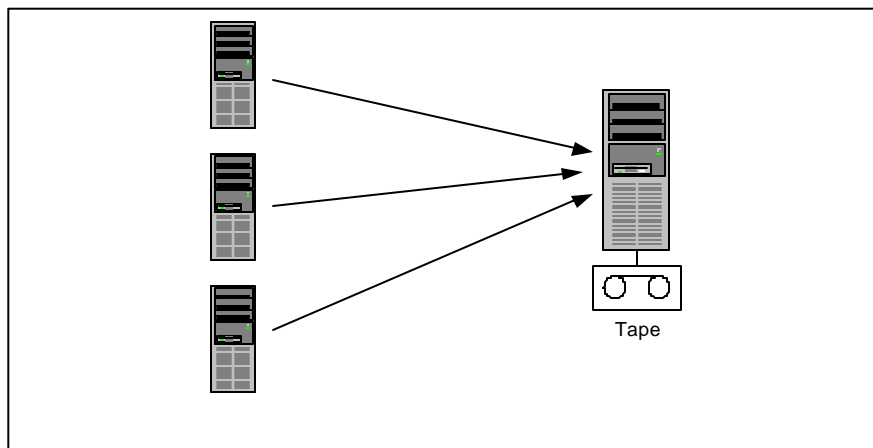
How It Works

The Double -Take replication process includes all security information (trustees, ACL’s, permissions) and attributes providing a true mirror image of the original file set.

As changes are received by the target they are written in the exact order received and each file is closed after the “transaction” is applied making it available for backup at any time.

Other Issues

Since Double-Take does not replicate machine configuration (e.g. Windows O/S or Registry), this information should be protected using other means. For example, the Windows Registry can be exported to a file that is in turn replicated to the centralized backup server. Another alternative is to use a remote backup agent to backup registry information alone but skip the data itself.



Double-Take Solutions

Double-Take's real-time data replication and server failover technology enables IT organizations to solve many critical business problems:

High Availability
and/ Failover
Disaster Recovery

Backup Enhancement

Web Content Replication

Data Distribution

Platform Migration

Change Management and
Testing

- ✓ Windows NT, 2000 and Solaris Servers
- ✓ Virtually any application including Exchange, SQL and Oracle
- ✓ Off-Site / Cross-Site
- ✓ Long Distance, WAN speeds
- ✓ Shared Bandwidth
- ✓ Use existing backup software
- ✓ Enables 24x7 Backup Window
- ✓ Open-file backup
- ✓ Centralized and continuous
- ✓ Distributed intranet servers
- ✓ Web Servers in IP Balanced Server Farm
- ✓ One to many to many fan out
- ✓ Hundreds to Thousands of servers
- ✓ Mirror "live" data to new OS version, server or storage hardware
- ✓ Consolidation or Relocation
- ✓ Fast Failover / Switchover
- ✓ Test changes on target server
- ✓ Software upgrades
- ✓ Hardware upgrades
- ✓ Year 2000 conversions

Solution Components:

- ✓ Double-Take license for each machine acting as either a source or target.
- ✓ Third party tape backup hardware and software.

For more information on NSI Software's products, please contact NSI.

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