

## Networked PC Data Synchronization, Backup and Recovery

*“The need for continuous operations is created from the ongoing deployment of mission critical applications on the distributed network. Downtime is no longer acceptable. One of the keys to the elimination of downtime (for both enterprise and individual worker) is data redundancy. But today’s backup processes do not provide the online, direct access redundancy required for continuous operations. This inadequacy is causing a transformation. Backup, as we know it, will be relegated to a tertiary process in mission critical environments. Disk rather than tape or optical is the front end to this new data protection strategy.” Strategic Research Corporation, a market research firm in the storage management field, states the above in their report titled “Backup to the Future”.*

### Lack of Access to PC Data can be Extremely Expensive

A huge amount of mission critical business data is stored on individual user’s PCs. A significant percentage of these PCs are portable or “laptop” PCs. When a desktop PC disk crashes or a laptop PC is dropped, or worst yet lost or stolen, lack of access to this business information can be extremely expensive. Yet in many companies and government organizations today the responsibility to do regular backups of this PC data is left to the individual. In today’s competitive business environment, those responsible for the design of information systems for their organizations must strive for zero downtime and 100% data availability.

### Proposed PC Data Backup & Recovery Solution

Recovery from loss of PC data storage can be quick if there is ready access to a second copy of data stored on the network. To IT system administrators this means that the backup of the individual’s PC data should be automatic insuring that the backups are current. To achieve this goal, PC backup software with tools to centrally setup and monitor the PC backup and recovery process are needed. This white paper presents a proposed PC Data Backup and Recovery process with an example of one such tool.



### Changing Landscape of Data Backup & Recovery

With the continuing decrease of disk cost-per-MB and the increase in the cost of data unavailability, the Cost/Benefit Analysis of disk-to-disk backup has turned very favorable. The trend in information systems is to provide PC users with quick access to redundant data backed-up to Network Servers or NAS File Servers. Users can quickly access the backup copy from another PC attached to the network and continue working virtually uninterrupted. This has given rise to systems designed to automatically backup PC data to a second disk on the network as illustrated below.

### Proposed Data Backup & Recovery System

The proposed PC data backup and recovery is a tertiary process, that backs-up PC data to a Server and then backs-up the Server to Storage Libraries. The front-end process is a disk-to-disk backup that is incremental and performed automatically. This insures that the users PC are backed up to the Network Server or the NAS File Server. Access to redundant files and data is now continuously available. Since this is an automatic process, user backups are no longer left to chance. They are incremental and take place in the background without need for user intervention. If the user is unable to access his/her data on their PC, they have ready access to that data from the Network Server or the NAS File Server and can continue to work uninterrupted.

The back-end disk-to-tape or optical disk process is responsible for maintaining the required time-to-data and archiving of data. Multiple copies or versions of users data can also be stored on the tape or optical disk Storage Library.

### PC Data Backup & Recovery Software Requirements

The PC Backup & Recovery software must provide an automatic incremental disk-to-disk backup to maintain a current copy of the user's data for ready access from a network server. This software should perform this task transparent to the users, who will be unaware that the data backup is even taking place. Their data is automatically backed up, synced and protected while they work uninterrupted. This software should contain the tools to provide central setup and monitoring of the backup and recovery process.

### LinkPro's PC Backup and Synchronization Software Product Overview

PowerSync® 5.0 WS provides a disk-to-disk automatic backup solution for desktop and laptop PCs connected to the network. PowerSync 5.0 WS can be setup to automatically back-up and sync files between portable, desktop, and servers. It does this over network connections. These automatic operations can run unnoticed, allowing work to continue uninterrupted. Central System Administration is also supported.



### Product Description

PowerSync 5.0 WS is a Windows client software program that runs on the user's desktop or portable PC. PowerSync can be easily set up to automatically backup and replicate user files to a server's disk or RAID. Only the changed files are transferred during the backup. This has the advantage of providing an incremental backup while maintaining a complete redundant replica of the user's data on a network drive. This field-proven software provides end users and system administrators with a simple and intuitive way to set-up and schedule automatic backup operations. This version runs on Windows Me, NT, 2000 & XP. Systems Administrators can setup the automatic backup "scripts" for their users and distribute and install them over the network. PowerSync clients will automatically recognize a new or modified "script". This facility provides system administrators central control to insure that all users' data will be backed up on a regular basis.

## LinkPro Technologies - White Paper – Continuous Data Backup

### LinkPro's Server Replication Products

Today many organizations have enterprise data distributed across multiple file and web servers throughout their network. IPReplicator® provides scalable, secure & automated data movement over LANs, WANs, & Internet while minimizing & controlling bandwidth usage - even thru firewalls. It automatically replicates Windows NT, 2000 & 2003 server directories and files from a source server to one or more target servers. IPReplicator supports real-time and scheduled, one-to-many and many-to-one, file replication.

Capabilities include:

- Concurrent operation - real-time and scheduled
- Scaleable – can support up to hundreds of servers
- Secure – encrypted connections
- Conserves - network bandwidth
- Central administration – setup, monitor and control

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