Windows Backup Tutorial

Windows Backup is possibly one of the simplest utilities included with Windows Server 2003. We'll walk you through the process of making a basic backup and then restoring files from that backup.

First, however, you need to decide where you want your backups to go. Windows Backup supports backing up to a file or to a tape drive, provided that the tape drive is attached directly to the server running Windows Backup. File-based backups are fine, as long as you have a batch job or some other means of moving the backup file to a safe location. After all, if the backup file is located on the sever when the server crashes, the backup won't do you much good.

To create a backup, simply launch Windows Backup and select the option to create a backup. You'll be able to select the files you want to back up, and you'll also have the option of backing up the system state, which includes the server's registry. On domain controllers, the system state also includes the Active Directory database. After you've selected the files you want to back up, you can save your selections for future use. Saving your selections makes it easier to reselect the same files for future backups. Here's a tip: If you're using the Backup Wizard, select **All Information on This Computer** to back up everything, including the system state.

You'll also have the option to schedule your backup job to occur on a regular basis. The scheduling relies on the Windows Task Scheduler service, which must be running so that your backup schedule will work correctly.

The biggest decision you'll have to make for your backup is the type of backup. You have several options:

- **Normal**—This backup includes all selected files in the backup and marks each file as having been backed up.
- **Copy**—This backup includes all selected files in the backup but does not mark the files as having been backed up.
- **Incremental**—This backup includes all selected files that have been modified since the last backup. It does not back up any files already marked as having been backed up because those files haven't changed. This backup type marks files as having been backed up.
- **Differential**—This backup is like an incremental backup, except that it doesn't mark files as having been backed up.
- **Daily**—This backup backs up all selected files that were changed that day.

A typical backup scheme might include a normal backup each weekend and then incremental backups each weeknight. The incremental backups contain only the files that changed that day. Were you to use a differential backup instead, each evening's differential would be

cumulative back to the most recent normal backup, meaning that each evening's differential backup would continue to grow throughout the week.

Generally speaking, the larger the backup, the easier a restore will be if one is needed. How you perform a restore depends on how you performed your backups. Here are the guidelines:

1. Start by restoring the most recent normal backup.
2. Then, restore the most recent incremental backup since the normal backup was made.
3. Finally, restore any differential backups since the last incremental or normal backup (whichever is most recent) was made.

Note that copy backups are not usually part of a regular backup schedule; they are normally used only to create a copy of a server for non-archival purposes. Daily backups are a bit like incremental backups, in that you have to start with the most recent normal backup and apply all daily backups made since then, in the order they were made. Daily backups are less useful at completely restoring a server, but they do make it easier to capture an entire day's changes, in case you need to restore a specific file to a specific point in time.

Actually performing a restore is easy: Just launch Windows Backup and run the Restore Wizard. You'll answer many of the same questions as you did for a backup, and Windows Backup will prompt you for the necessary backup files or tapes.