



ATTIX⁵
BACKUP PROFESSIONAL

SERVER RECOVERY

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Attix5 Backup Professional is a secure, automated disk-to-disk data backup and recovery solution, which is unique in both its approach and its service offering. This solution is targeted at servers and users who operate both inside and outside the confines of corporate IT networks. It provides an effective and efficient platform for totally automating and securing the backup and recovery of business critical information stored on various platforms (servers, database, desktop or laptop devices). It eliminates the risks of human error and especially tape failure in the backup process, factors which have historically been responsible for the majority of data loss.

Whilst a lot of conventional backup solutions still use the tape infrastructure for system recovery, disk-to-disk solutions have proved in the last years that it is much more effective and faster. The problem with traditional tape backups is that you must either do full backups every night or rely on a differential (changes since the last full backup) or incremental (changes since the last backup) backup process. While backing up using these techniques helps to reduce the data backed up on a nightly basis it slows the restore process down tremendously and adds additional risk.

Restoring from a differential backup requires first restoring from the last full backup and then restoring the last differential. Restoring from an incremental requires first restoring from the last full backup but then having to restore every incremental sequentially since then. The increase in recovery time is obvious but what is not so obvious is that every separate recovery increases the risk associated with data corruption from faulty processes or media. A single error introduced will affect every backup made after that but will not be apparent until recovery is attempted.

Backup Professional uses an enhanced backup strategy. This means that a full backup of the selected data is created every day. Rather than transfer the full backup to disk every day, the system extracts just the changes to the file(s) since the previous backup on a binary or block level. Data transfer and storage is thus minimised as well as the storage requirements to keep a number of versions available online. This is known as sub-file incremental. During the restore process the user chooses a specific backup date from which to recover and the server is able to deliver a single full backup copy as per that date by dynamically adding all sub-file incrementals before sending to the user. This process is transparent to the user and has all the advantages of reduced daily backups combined with the rapid restore benefits of daily full backups.

THE RESTORE PROCESS

When data must be recovered, the Backup Client connects to the Storage Platform and retrieves the list of all the available backup dates. The administrator then selects the required date and the file(s) to be restored. This could either be a complete restore by selecting all data protected, or only a selection of the most critical data. The list is sent to the Storage Platform and it goes through a process of finding the right files, applying any applicable patches, and then compressing the files after which the files are transmitted back to the Backup Client. Options to restore to the original location, recreate directory structure, restore empty folders, overwrite, and restore folder and file permissions are available. Compression can also be disabled in the Backup Client to speed up the restore process on a LAN.

Applications like Exchange and SQL can be protected by using application specific Backup Professional plug-ins. During the restore process, this application data can be recovered in a few easy steps from within the Backup Client. Using Exchange as an example, options are available to do a full Exchange Server restore, or only a selection of the available Storage Groups.

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The Windows System State can also be included and provides you with a single point in time server snapshot. This enables you to restore the operating configuration files and settings. In Windows 2003 Server the System State backup includes the following:

- Active Directory (if it is a domain controller)
- System Volume
- Certificate Server Database (if installed)
- COM+ database
- Windows Registry
- System and boot files

The Backup Professional System State plug-in is only supported up to Windows 2003 as it uses NTBackup that was removed in Windows Server 2008. The VSS Database plug-in can be used for the interim until an updated plug-in is available.

STEPS TO FOLLOW WHEN RECOVERING A SERVER

(Including the System State and using Windows as an example):

- Install the Windows Operating System as well as the applicable Service Packs
- Install all Applications; including all patches
- Install Backup Professional Server Edition backup client (include required plug-ins).
- Run the Backup Client and reconnect to the Backup Account.
- Use the Backup Client and restore the required System State backup to the local drive. Open the Windows Backup and Recovery application, start the Restore Wizard and import the restored System State file. Follow the on screen commands to recover the System State.
- After the System State has been recovered, open the Backup Client and select the data that you want to restore.
- Click Restore and wait for the process to complete.
- Additional step if required: use the Backup Professional application plug-ins to restore application specific data.

For assistance on specific plug-in recovery please refer to the applicable user manual.

BACKUP CLIENT REMOTE MANAGEMENT

The Storage Platform Console, introduced in Backup Professional v4.4 enables you to remotely connect to, and manage any Server Edition Backup Client in your organisation. This includes the ability to restore files and folders to the remote server.