Technical Note

Backing up your DATAIR SQL Database

Unlike file based databases, SQL Server databases can not be backed-up up using traditional backup software, or at least not without taking special steps.

The reason for this is that SQL Server continues to run, even when no DATAIR applications are running. This prevents access to the files that comprise the database from being accessed by traditional file-based backup software.

In this technical note, we will explore some of the options available to backup your SQL databases.

1) Special SQL Server-aware Backup Software

Backup software, such as Veritas Backup Exec for Servers, offer "SQL Agent" software that allows them to back up databases while they are in use. Approximate cost: $500 for add-on option only.

2) Shut Down SQL Server prior to traditional file-based backup

You can manually or automatically shut down the SQL Server service prior to doing a file-based backup and restart it after the backup is completed. Shutting-down the SQL Server services allows traditional file-based backup software to backup the database files. Of course, when the server is shut down, no users will have access to the databases. And, anyone running an application that's connected to the database at the time it is shut down will lose their work, and data loss may occur if the user were updating the database at the time it was shut down. It's extremely important to verify that there are no users accessing the database before taking it off-line.

You can shut down the server manually by using the NET START {service name} and NET STOP {service name} commands, or by using the SQL Server Service Manager in the System Tray. The Windows 2000/2003 Resource Kit also contains the NETSVC utility that allows administrator level users start and stop services on remote machines. It is beyond the scope of this Tech Note to go into great detail on how you might employ these options in your backup scheme.

3) Synchronize file-based backup with DATAIR's Automated Backup

DATAIR includes an automated database backup that runs every night at a predetermined time, if the computer is turned on. The backups that are made by this process are done on the local hard disk on the server, so are not to be depended on for disaster recovery, or where you need to recover a database going back more than 7 days.

If our Automated Backup runs at midnight every night, you could set your backup system to backup the backup files we created at, say, 1 AM.

4) SQL Server Enterprise Manager

If you are running the full version of SQL Server, you can use Enterprise Manager to create your own database Maintenance Plans which include backing up to local and network drives, or tape systems. It is beyond the scope of this document to discuss the details of this backup method.

In conclusion:

We've presented several options that you can use either individually or together to formulate and implement a backup strategy. You can decide what fits your environment the best. We urge you to consult with your IT department, computer consultant, or other technical resources for additional guidance.

The most overlooked aspect of any backup system is regular testing of that system's ability to actually recover data in case of disaster. The time to find out your system isn't working isn't after disaster strikes.

Backing up your database is of critical importance, and should not be overlooked. Being able to recover from data loss, whether due to human error, equipment failure, theft, fire, flood, or some other reason, will be necessary some day when you least expect it. Plan ahead.

For additional information, contact:

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