

Fast backup and recovery and high availability for Microsoft SQL Server databases.



IBM System Storage N series with SnapManager for Microsoft SQL Server



The challenge: Provide for the high availability of Microsoft SQL Server databases while reducing management complexity

Microsoft® SQL Server is used as the database of choice for several enterprise applications today. Typically, these applications are deployed on top of an SQL Server to serve different departments within an enterprise, which can result in a complex, fragmented SQL Server deployment.

The complexity of an enterprise SQL Server environment may increase further with the rise in the number of Microsoft Windows® servers storing SQL Server databases on direct-attached storage subsystems. Managing numerous servers requires many resources across the various departments within an enterprise. It also involves the time-consuming task of backing up the databases stored on each individual device and, if necessary, restoring not only the most recent full

Highlights

- **Near-instantaneous full backups and rapid restores—** *Designed to help provide rapid backup and recovery times, from hours or even days, to as little as minutes.*
- **Storage task automation with wizards—** *Helps you streamline management and automate routine tasks, enabling your administrators to spend more time on value-added tasks.*
- **On-the-fly scalability—** *Designed to allow you to easily expand or reduce storage capacity while avoiding taking the SQL Server or N series storage system offline.*

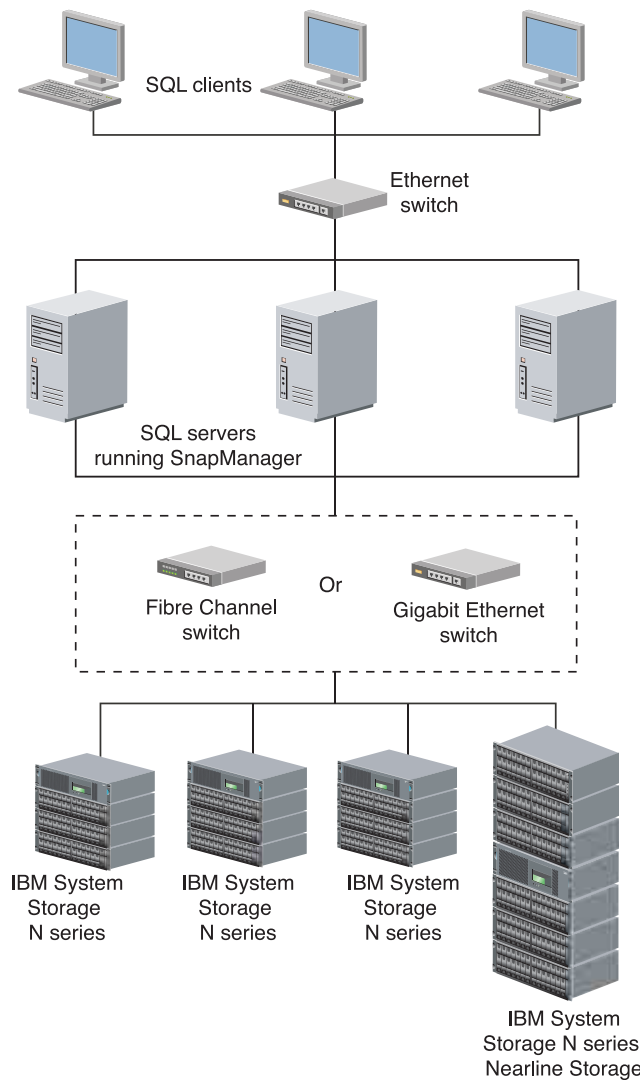
backup but also multiple incremental backups. Incrementally scaling storage to address growing demand is time-intensive and may require SQL Server downtime. This downtime reduces the availability of SQL Server-based applications and degrades both user productivity and customer experience.

The solution: IBM System Storage N series with SnapManager for Microsoft SQL Server

Server

IBM System Storage™ with SnapManager® software is designed to help you achieve significant savings from a time and resource perspective by streamlining database storage while simplifying configuration, backup, and restore operations for SQL Server databases. SnapManager supports rapid SQL Server backup times, from hours to as little as seconds, and is designed to make each backup a complete and consistent copy of the original.

Backups are based on Snapshot™ copies, which are designed to require minimal disk space for each additional full backup. This capability can help you achieve availability, scalability, and reliability for SQL Server environments.



SnapManager in a Fibre Channel/iSCSI environment

Helps reduce the complexity of SQL Server database storage

Consolidating all of your SQL Server databases on scalable, highly reliable N series storage systems can help you

reduce the number of devices you need to manage. N series systems are designed to allow your administrators to back up several databases—or restore

them—simultaneously. They are also designed to allow you to easily expand volumes and quickly change configurations, helping you adapt to shifting storage requirements.

To help you further simplify administration, SnapManager software provides wizards to help you automate routine storage management tasks such as configuration and backup. Storage on the SAN appears as local disks on the SQL Server, and the management of SAN storage is accomplished through the native Windows environment. E-mail alerts can be generated for proactive SQL Server management. A readily available online event log tracks database configuration changes and presents them in an easy-to-read format to help you determine the optimal configuration for peak SQL Server performance.

Helps achieve high SQL Server availability

SnapManager for SQL Server is designed to help IT organizations address stringent service-level agreements. When deployed in concert with N series storage systems, SnapManager supports a reduction in downtime by enabling your

administrators to add storage while SQL Servers remain online. SnapManager is designed to help shrink restore times to minutes, enhance application availability and avoid downtime.

SnapManager software is also designed to integrate with the SQL Server application to automate the process of validating the consistency of data backup and checking that the data is available for restoration. Automation helps enable more rapid database backups, which allow you to perform them more frequently, helping to reduce the exposure for data loss. Integration with SnapMirror technology supports your performing remote replication of SQL Server data, thus helping to speed data recovery in the event of a disaster.

Helps achieve a low total cost of ownership

Server consolidation is designed to eliminate pools of unused, rapidly depreciating storage. The ability to add storage while SQL Servers remain online can help you further enhance storage utilization. Streamlined storage management features support reduced

administrative time and expense, and reduced application downtime lessens the risk of lost business opportunities and productivity.

The ability to automatically migrate older backups to less expensive disk storage using SnapVault® software can help you achieve further cost savings while still providing the performance and flexibility of disk-based storage.

Finally, the ability to support both Ethernet and Fibre Channel environments can help you leverage your current network investment while deploying a long-term, highly scalable storage solution.

System Requirements

SnapManager for SQL Server requires:

- *SnapDrive™ software*
- *SnapRestore® software*
- *Windows 2000 Server/Advanced Server SP2, SP3, SP4*
- *Windows 2003 Server/Advanced Server*
- *Microsoft SQL Server 2000 Standard/Enterprise Edition*
- *Microsoft SQL Server 2005 Standard/Enterprise Edition*
- *FCP or iSCSI protocol*

For more information

Contact your IBM representative or
IBM Business Partner or visit:

ibm.com/storage/network/



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MB, GB and TB equal 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, where referring to storage capacity. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology.

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