

SQL Server Redundancy for SMBs

Introduction

In the past fifteen years, the face of business has changed dramatically. With the advent of new enterprise technology solutions, business models now include data-driven processes and applications that promote faster growth and foster a better understanding of the business. This data, in short, provides new insight to the intricate process of creating and maintaining business relationships and augments traditional business methodology. The future of such successful businesses depends on the continued growth and development of these enterprise solutions, including the relevant data that these solutions rely on.

As a result, business applications and client requirements demand highly available data to enhance productivity. More and more, businesses realize the benefits of utilizing real-time data analysis. By generating on-the-fly data reports, companies gain an understanding of their current business practices and grasp any existing execution deficiencies. Ultimately, companies adapt their business models and make mission critical decisions to direct their efforts towards more profitable avenues.

Unfortunately, performing these reporting jobs on database solutions pulls valuable resources from database clients that are normally reserved for regular business transactions. Database Administrators (DBAs) are constantly struggling to provide 24 hours a day, 7 days a week database availability. With the added load stemming from building these business reports, DBAs are forced to build strategic infrastructure growth plans that consider larger loads being placed on their database servers. One of the common solutions that these DBAs turn to is Clustering. This particular option involves upgrading both hardware and software to maintain high availability in order to balance load and allow for failover environments. Given the management complexities as well as the additional resources required, this approach becomes very expensive as companies continue to grow over time.

Inexpensive solutions do exist to address this problematic issue, one of which is SQL Server Redundancy.

What is SQL Server Redundancy?

SQL Server Redundancy is a process in which a specialized tool replicates data directly from the database to an auxiliary system that is independent from mainline production environments. With an isolated environment, performing

complicated reporting tasks on the same data set will not degrade the performance of normal business operations.

Moreover, SQL Server Redundancy allows business information to be gathered quickly and cost-effectively. Typically, production servers tend to be very robust to handle the increasing load of user transactions on a day-to-day basis. With an isolated data reporting system, companies have the option of cutting costs by creating a less-available environment as determined by business needs. Furthermore, with a one-to-many capability, businesses can set up multiple replication environments for a single database, instance or entire server to help balance resource usage across multiple users who all require readable access to the same data set.

Additionally, this redundancy can provide a standby capability, proactively replicating data at a user-defined interval, and thereby preserving valuable business data.

The process, depending on implementation, involves entire SQL Server replication, entire SQL instance replication or even single SQL database replication.

A suitable solution provider of redundancy, Microsoft SQL Server Log Shipping allows for database replication with both one-to-one and one-to-many log shipping plans. However, Microsoft's approach remains lacking as it is difficult to create and monitor multiple database replications. Additionally, Microsoft SQL Server Log Shipping does not provide network resiliency, compression or multithreaded backups, which increases storage costs and backup time. Given the fact that this feature is already bundled in Microsoft SQL Server 2000 Enterprise Edition, many SMBs will find value in this solution in an effort to increase their Return on Investment of Microsoft's SQL Server Enterprise software.

A third-party solution provider, Sonasoft Corporation implements SQL Server Redundancy and seeks not only to increase ROI, but also to limit Total Cost of Ownership by automating the entire redundancy process.

Sonasoftware® One-to-Many Standby Solution

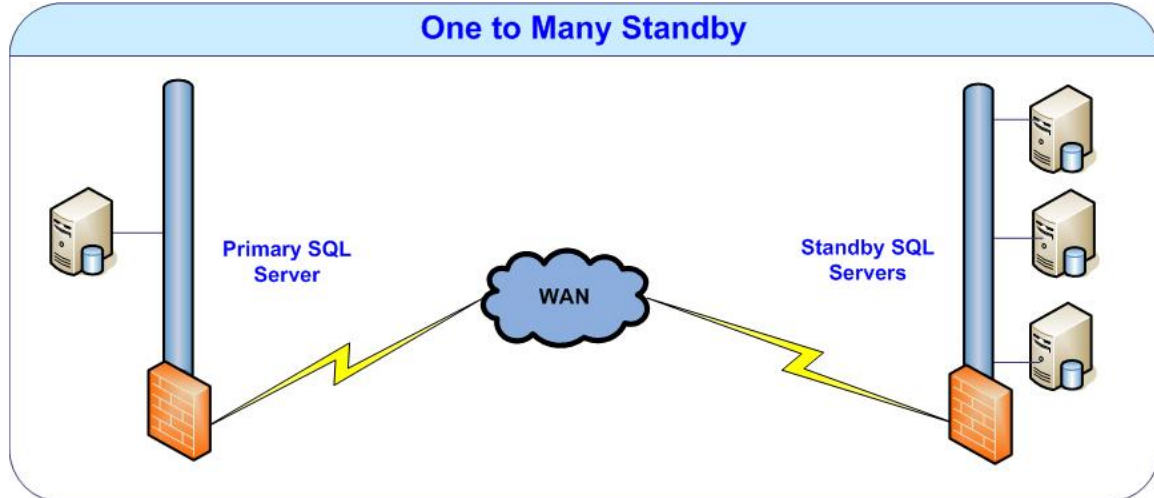


Figure 1: Sonasoftware's SonaSafe for SQL Server One-To-Many Standby Scenario. These Standby SQL Servers can also be geographically distinct and connected through different WANs.

As part of SonaSafe for SQL Server, Sonasoftware offers a Standby capability that allows for one-to-many live replication of a single database, instance or entire SQL Server database. Its completely automated solution removes the headaches associated with traditional Microsoft SQL Server Log Shipping and with complicated SQL scripts that are difficult to manage. The following features outline some of the benefits of the Sonasoftware approach to solving this important business requirement.

- Users have the option to specify separate intervals over which to apply logs to each replicated database.
- Only one backup set is maintained to supply data to each of the replicated databases. This reduces storage costs by a factor of n , where n is the number of replications per database.
- Maintaining multiple replications allows for remote and local standbys that will survive and maintain high-availability in the event of natural disaster or network failure.
- Centralized management console that consolidates monitoring of the processes associated with performing these replication tasks.
- Read only access to standby databases on SQL Server Enterprise Edition.
- Replicated databases can exist in both LAN and WAN environments.

The combination of these features provides a highly available database solution for Microsoft SQL Server that is cost-effective, while also ensuring data security by allowing geographical data redundancy over WANs. Meanwhile, it is easily manageable and configurable through its web-based User Interface.

Summary

As companies grow and data becomes more and more prevalent, users of all types, either internal or external, require access to all this information. When seeking to satisfy all individuals' resource needs, cost becomes the limiting factor that often prevents obtaining technology that is vital to the efficiency of the organization. Here, we have discussed a simple software solution that limits cost while maintaining high-availability of data while also creating persistent standby environments that can assume production roles at a moment's notice.

About Sonasoft®

Sonasoft, Corp. automates the disk-to-disk backup and recovery process for Microsoft Exchange, SQL and Windows Servers with its groundbreaking SonaSafe® Point-Click Recovery® solutions. Designed to simplify, automate, and eliminate human error in the backup and recovery process, SonaSafe solutions also centralize the management of multiple servers and provide a cost-effective turnkey disaster recovery strategy for companies of all sizes. For more information, please visit <http://www.sonasoft.com/>.