Microsoft® SQL Server Replication through PeerSync

Identifying Needs for Database Replication

Before beginning the process of testing database replication solutions, it is necessary to identify first the goals and requirements of the replication process. Database Replication can be used for disaster recovery, high availability, load balancing, local backup, duplication for analysis or testing, as well as many other uses. Identifying which uses your organization requires can help determine how tightly bound the solution must be to your needs. Beginning the process of defining these requirements is critical before asking how PeerSync can provide the right solution for SQL Server Database Replication.

Understanding How PeerSync can provide SQL Server Database Replication

PeerSync Professional Series Solutions provide the capability of replicating not only file and folder changes, but database changes as well. Utilizing the optional *Embedded Open File Manager* (EOFM), PeerSync can provide replication of current SQL data as often as every 30 minutes to one or more locations.

The guarantees provided by the PeerSync replication are:

- An accurate snapshot of the database will be replicated.
- No interruption of service to the databases will occur.
- A minimum amount of resources will be used in the process.

Requirements for PeerSync Replication of SQL Databases are:

- PeerSync is installed on the Source SQL Server.

- Replicated databases are not current attached and running on Target servers.

How PeerSync can transfer just the changes of a SQL Server Database

PeerSync offers the ability to replicate the entire database during transfer, or just the changes portions. Utilizing the ByteReplicator feature, PeerSync can analyze the database to determine and transfer just the changed portions of the database.

The ByteReplicator functionality guarantees:

- Every attempt will be made to transfer the minimum amount of data necessary to make the replicated database current.
- A minimum amount of resources will be used in the process.

Requirements for Byte-Level Replication of SQL Databases are:

- PeerSync is installed on the Source SQL Server.
- Additional ByteReplicator service is installed on the destination server(s).

The Role of PeerSync in the Replication of SQL Server Databases

In order to configure SQL Server Database Replication, it is necessary to identify the location of the SQL Database files (mdf + ldf files). The files can be located for a particular database by going to the SQL Enterprise Management console and selecting the properties for the desired database. This location will be the Source within a PeerSync job. The Target location must be a local folder, mapped drive or UNC Path.

Additional configuration necessary can be found in the EOFM configuration document: Configuring EOFM

Please keep in mind that during the replication process, it is **not necessary to shutdown any SQL Server services on the source server**.

The Role of PeerSync in the Restoration of SQL Server Database

During the replication of databases by PeerSync, the destination data will be stored identically to the Source data. This allows for restoration through PeerSync, through another tool, or manually. PeerSync can be used to restore a particular database by selecting its Job in the Profiler Window and reversing the Source/Target in the Folder Selection Window. Additionally the *Restore Files* Option should be enabled in the *Alterations Window*. Care should be taken to identify if there is other data replicated within that same Job that should not be restored.

Once PeerSync is configured, the source SQL Server must be prepared by detaching the database in need of restoration. This can be done through the SQL Enterprise Management console. If the database is attached on the Target, it will be necessary to detach it at that location as well. The Job can then be saved and launched to restore the data. Once the data has been restored, the database may be attached again to SQL Server.

The Role of PeerSync within your Organization

By providing efficient and fast replication of SQL Databases along with file replication, PeerSync continues to provide a critical line of solutions necessary for small, medium, and Enterprise organizations. PeerSync's replication capabilities extend beyond SQL Server into other packages such as Microsoft® Exchange. We recommend visiting our site or contacting us directly for information regarding any other database packages.