

## Keep SQL Service Running On Replica Member While Replicating Data In Realtime

ClusterReplica Enterprise resolves the issue by redirect the data in real-time data replication to a temporary location, and update the data to the SQL data location in a pre-set time period.

When adding a Replication Set for database replication, the ClusterReplica provided **SQL Server** template is recommended to use. The steps of configuration for achieving the goal is listed below:

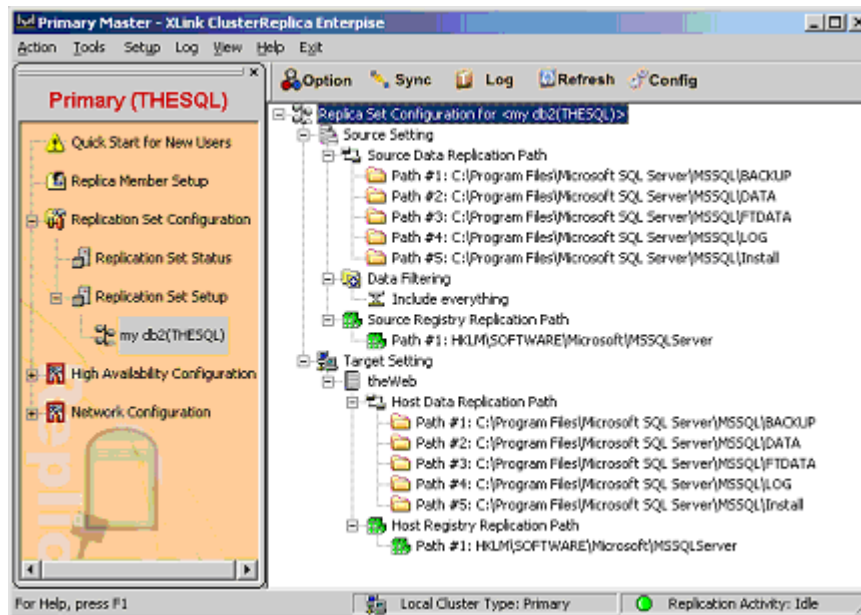
- **Step 1:** [Redirect data path when setup the Replication Set for SQL](#)
- **Step 2:** If the Replica Member is to keep different databases from the Primary Master, remove the default entry of **HKLM\SOFTWARE\Microsoft\MSSQLServer** in the Registry Replication of the Replication Set definition.
- **Step 3:** Remove the default entry of **MSSQLServer** from the Service to be Stopped on Replica list so that the SQL server service will not be stopped for real-time data replication.
- **Step 4:** [Update new data on the Replica Member from the redirected data location to the SQL data location](#)

With this set, the Replica Member station can function as an independent SQL server while it is bind to another machine for data replication and Failover purposes. The time used for data update (in above step 4) is very brief (a couple of seconds) that it should not seriously interfere with normal server functions.

## Why SQL Service Is Stopped On The Replica Member Stations By Default

When a data Replication Set is added using the default SQL server template, ClusterReplica Enterprise will stop the MS SQL server service on the Replica Member station. This is done because the real-time data replication requires the stop of the SQL server service to write data into the database locations.

This picture shows the data paths of a SQL data replication definition.

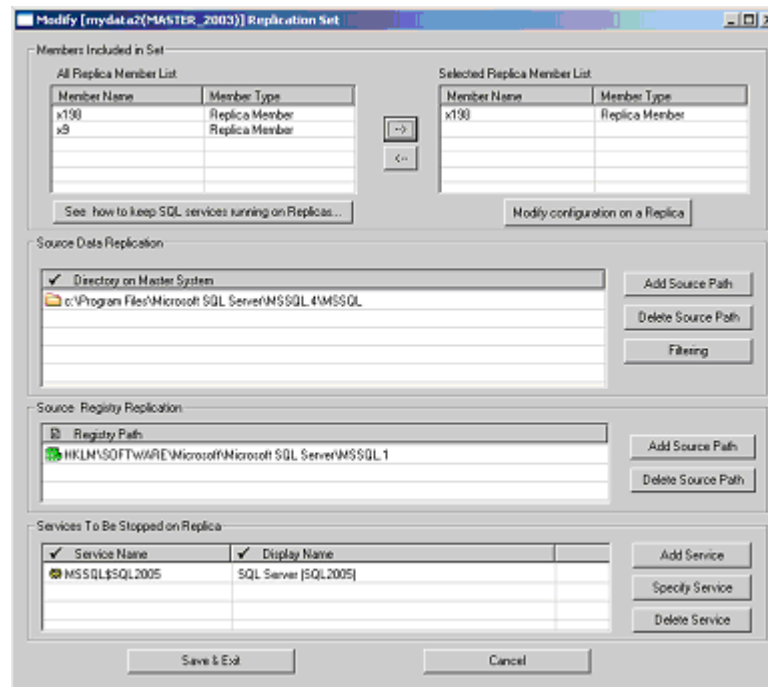


Since all new data are written directly into the SQL database location on the Replica Member station, the SQL server service must be stopped to carry out the process. This configuration is determined by the design of the MS SQL. If the SQL service on the Replica Member station needs to be running, there are [ways to get around](#).

## Modify Services To Be Stopped on Replica

Some data files require their application services to be stopped to write new data in. A typical example is the MS SQL database files. For this reason, ClusterReplica Enterprise maintains a **Services to be stopped on Replica** list.

In most configurations, service names for the same service on the Primary Master and the Replica Member are identical. In some special situations, the same services may have different names on the Primary Master and the Replica Member stations. This page explains how to add Services to be stopped on the Replica Members.



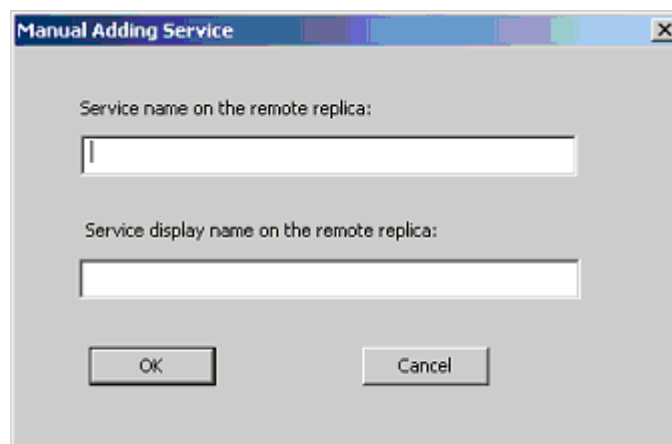
The two ways of adding the services are:

1. Using **Add Service** when the service name on the Primary Master and the Replica Member stations are the same.
2. Using **Specify Services** when the service name on the Primary Master and the Replica Member stations are not the same.

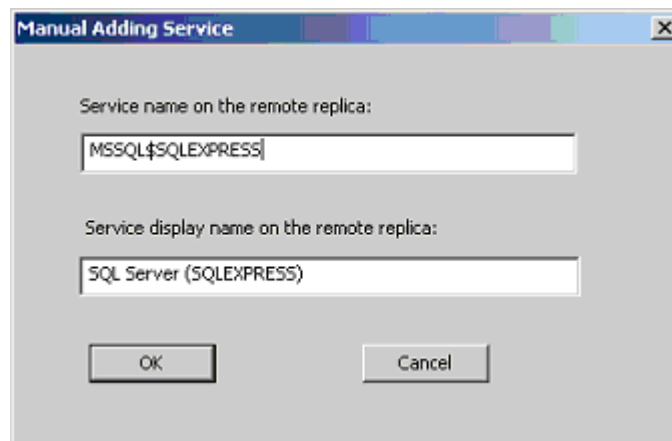
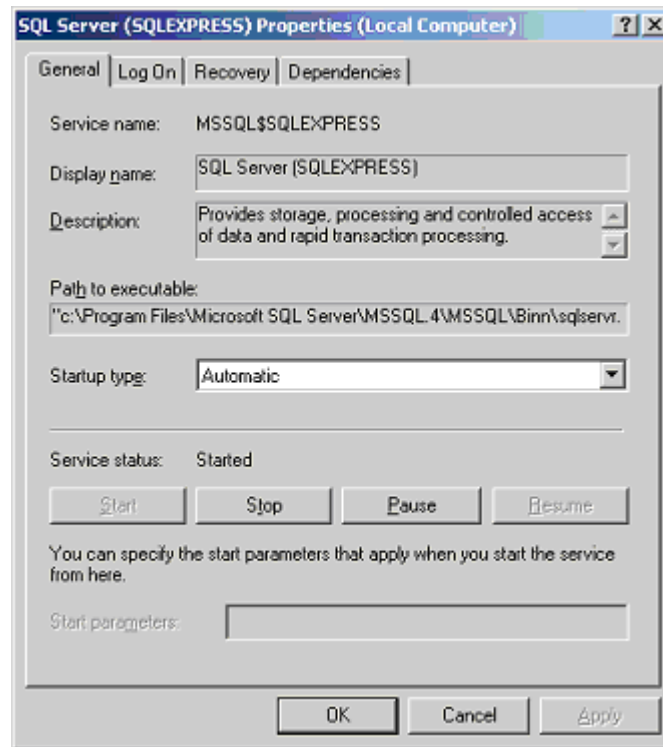
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Following is an example on how to add service name using **Specify Services**. Here data replication is set for MS SQL database files. The Primary Master is running SQL 2005 and the Replica Member is running SQLExpress.

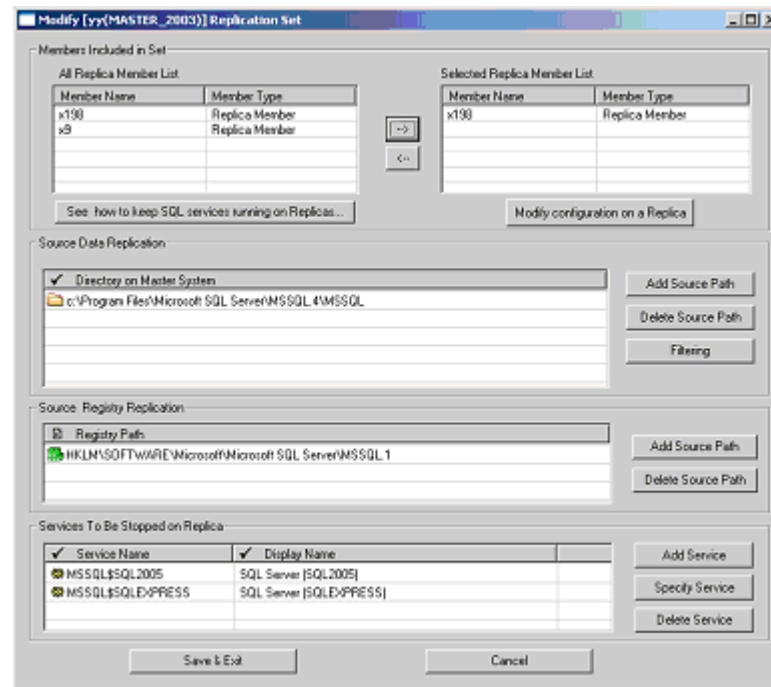
- Click Button **Specify Services** to open the configuration box:



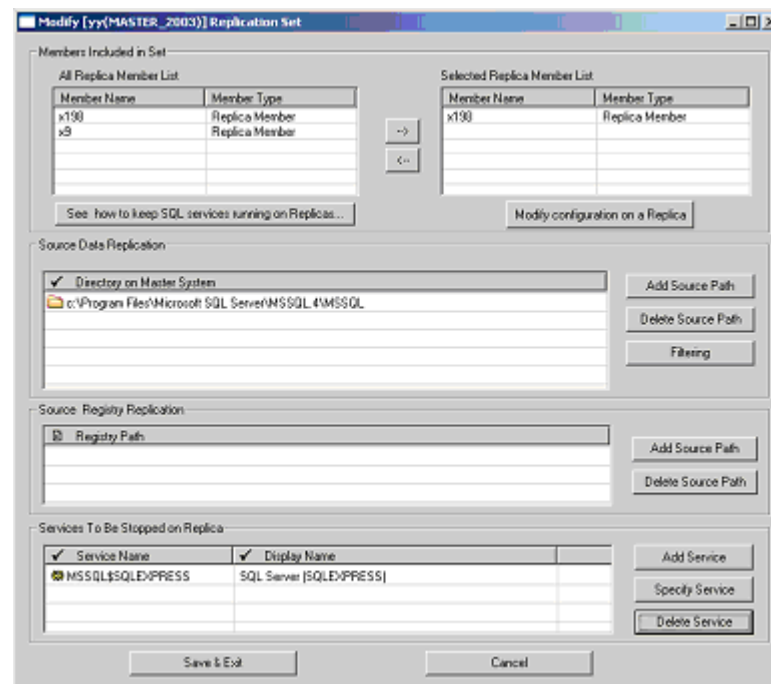
- Type in the **Service Name** and the as show in the Windows **Services** listing.



- Click **OK** to have it saved in the list.



- Remove the entry in **Source Registry Replication** and the **MS SQL 2005** service in the stop service list.

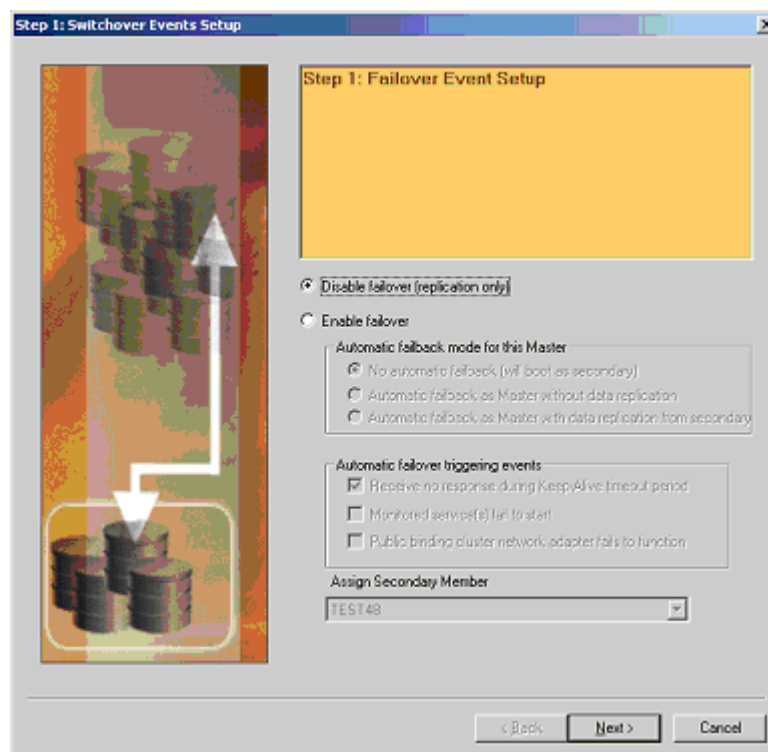
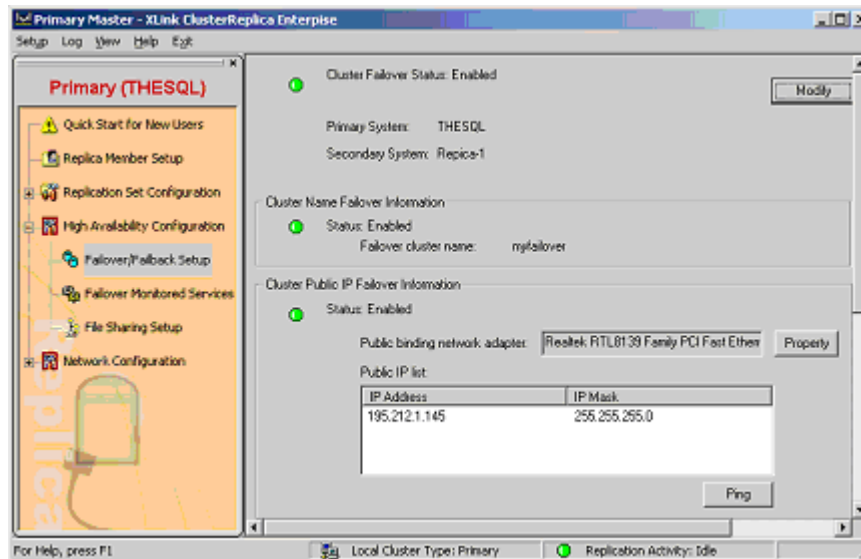


Click **Save and Exit** to complete the configuration.

## Adding A New Database In SQLExpress Server

When adding a new database in the MS SQLExpress server, some manual maneuver is required to add it for ClusterReplica data replication. This procedure is not required for MS SQL 2005/2000 servers.

First, if **Failover** is set in ClusterReplica, disable it before proceed.



### On the Primary station

1. Using SQL Enterprise Manager to create a new database and save it in a Windows local folder – it can be the SQL server's default data location or any folder of your choice
2. Create a data **Replication Set** in ClusterReplica to include the newly created database – initial file sync on the **Replication set** will run automatically

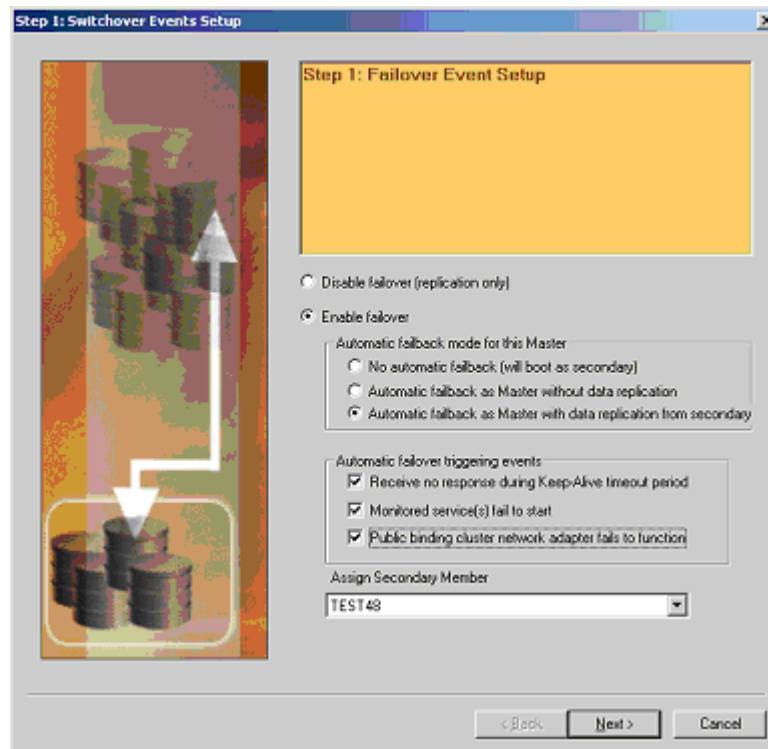
### On the Secondary station

1. From Windows **Services** (under Control Panel/Administrative Tools) **Start** SQLEXPRESS service
2. From SQL Enterprise Manager, **Delete** the newly created database
3. Using **Attach** of SQL Enterprise Manager to attach the newly created database

#### 4. **Stop** the SQLExpress service in Windows **Services**

### On the Primary station

1. If disabled Failover, Enable it now.



The completion of this procedure will allow ClusterReplica to successfully replicate data in real-time in the future.