



# CornerstoneMFT

## Configuring Microsoft Clustering Services Quick Start Guide

## Notices

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**NOTE:** The following instructions will help you to configure Cornerstone MFT for Active/Passive Cluster failover using Microsoft Clustering Services. If you need additional assistance, the [Cornerstone MFT User Guide](#) is available on line. In addition, a listing of Frequently Asked Questions (FAQ) is available at our [Knowledgebase Support Center](#).

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## System Requirements

### Operating System Requirements

Microsoft Clustering Services as available on:

- Windows Server 2003 R2 Enterprise Edition
- Windows Server 2003 Datacenter Edition

### Cornerstone MFT Hardware & Resources

- A 2GHz Pentium class processor
- 1GB of RAM is required, 2-4GB is recommended, especially if SQL Server is installed on the same computer
- Minimum 100MB of disk space for the Cornerstone program and 100MB for each server configuration
- Minimum SVGA (800x600) resolution is required to run the Administration program
- All Windows Service Packs and Hot Fixes must be applied to the PC prior to installing Cornerstone MFT



All Windows Service Packs and Hot Fixes must be applied to the computer before you install Cornerstone FTP Server.

## Clustering Hardware & Resources

- A complete system for each node of the cluster (minimum of two)
- A shared disk resource such as DAS, or SANS, preferable configured as a RAID 5 redundant array
- A disk quorum for disk and resource management.
- A minimum of two adapters per system (one for internal cluster communications, and another for public access)
- Internet access to for each node required because you will need to activate the license for Cornerstone MFT

If you have Microsoft Clustering Service (MSCS) deployed you can use MSCS's built-in Resource Monitor to manage the availability of the Cornerstone MFT. Cornerstone MFT can be managed by MSCS as a generic service. The following provides an overview of how to set up Cornerstone MFT in a fail-over Server Cluster using MSCS.



- Install Cornerstone MFT on the active node. When the install completes, Cornerstone will launch. Connect to the server using the Cornerstone MFT administrative username and password you provided during installation.
- Activate the software using your Regcode for Cornerstone MFT. You must use a **unique registration code** for **each** Cornerstone server.

**NOTE:** Clustering setups vary between operating systems, hardware resources used, and various other factors. If you have never set up a server cluster before, please consult your Windows documentation or the Cluster Administrator help file for detailed instructions on setting up server cluster prior to proceeding.

## Part 1: Configuring the Nodes

1. Create an account for the cluster in AD with a non-blank password and assign the account to the administrators group. Switch over to the second node and join it to the Domain. Reboot, and then switch over to the first node and login with the cluster account.
2. Launch the Cluster Configuration Manager from Start | Programs | Administrative Tools | Cluster Administrator and create a new cluster.
3. Your Cluster Administration will setup the cluster.
4. Verify that the two nodes are set up properly from the cluster administrator window. You can now access the cluster administrator from Start > Programs > Administrative Tools > Cluster Administrator.
5. Select the Resources folder from the left-hand view, right-click and select New Resource and create the shared IP that the Cornerstone MFTs will listen to. Note that Cornerstone MFT captures the IP address when its Cornerstone MFT Service starts, so if the IP is changed after that, the Service must be restarted in order to capture it.

## Part 2: Installing Cornerstone MFT

1. Make sure you have the most recent version of Cornerstone MFT. You can use the “Check for Program Update” utility, found in the Cornerstone MFT Program group.
2. Double-click the installation file to start the installation process. The installer will give you the option to either install SQL Server Express 2005 during the Cornerstone MFT install process, or you can choose use an existing SQL database or install SQL later. If you select Install SQL Server Express 2005 now, the installation wizard will guide you through the process. **NOTE:** You must have administrative rights to install.
3. Once the installation process is complete, you will need to **restart Windows**.

After Windows has restarted, the Cornerstone MFT Service will be running. The Cornerstone MFT Service runs as a system service and starts when the operating system loads. You can monitor the status of the Cornerstone MFT Service using the Windows Services applet in the Administrative Tools folder of the Windows Control Panel.

4. Once Cornerstone MFT has been installed, you can begin to configure your MFT Servers. This is done using the Cornerstone Administrator program located in the Cornerstone MFT program group.



- Install Cornerstone MFT on the active node. When the install completes, Cornerstone will launch. Connect to the server using the Cornerstone MFT administrative username and password you provided during installation.
- Activate the software using your Regcode for Cornerstone MFT. You must use a **unique registration code** for **each** Cornerstone server.

**Please Note:** Some screens in this instruction contain options that do not pertain to clustering/load balancing support. If you need additional information regarding these steps, please see the [Cornerstone MFT User Guide](#). For the purpose of this clustering/load balancing quick start guide, we will guide you through these options without configuring additional settings.

A complete listing of SRT quick start guides is also available on our [Web site](#).

## Cornerstone MFT Clustering/Load Balancing Overview

Cornerstone FTP Server, when used in conjunction with an ODBC Database and an Advanced User Authentication Engine, can be scaled to handle an unlimited number of users. Cornerstone includes an option during the *New Server Wizard* process to create or connect to an existing Clustered Cornerstone Server.

### Key steps to building a Clustered Cornerstone Server are:

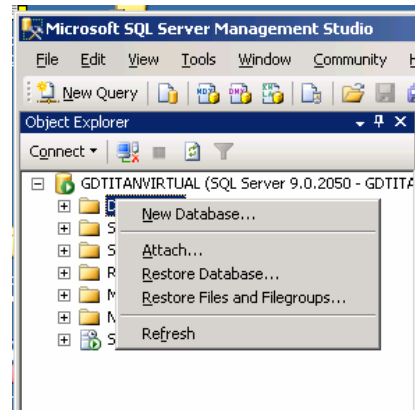
- Create your database for ODBC connectivity.
- When creating the primary/first server of the cluster, choose to store the Server Configuration information in an *ODBC database*, not in the system registry. Storing the configuration information in an ODBC database will ensure that other members of the cluster will have access to the same server configuration.
- Use a UNC for data directories and log files. For more information, see our quick start guide for [UNC Data Storage and scalability](#).
- Install Cornerstone on the other member machines and run the *New Server Wizard*.
- Choose to create a Member Server of the cluster, which will allow you to tie in to the existing configuration.

Once the multiple servers have been configured, they will all share the same server, user, and group configuration settings. **Please Note:** Using a Load Balancing Utility, such as Microsoft Load Balancing, will allow the load to be balanced across multiple servers. Once the multiple servers have been configured, they will all share the same server, user, and group configuration settings.

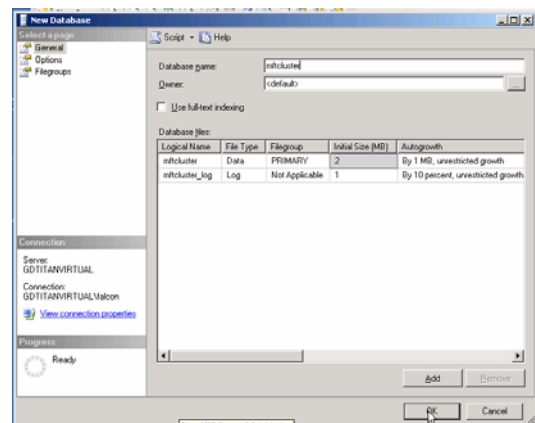
## Step 1: Create your Database, Security Login, and User Login for Database

These instructions assume you are using SQL Server 2005, please refer to instructions relative to your particular database program if you are not using SQL2005.

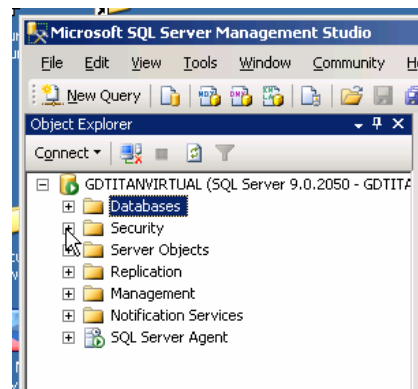
1. Run the *MS SQL Server Management Studio*. Right-click on **Database** and then click **New Database**.



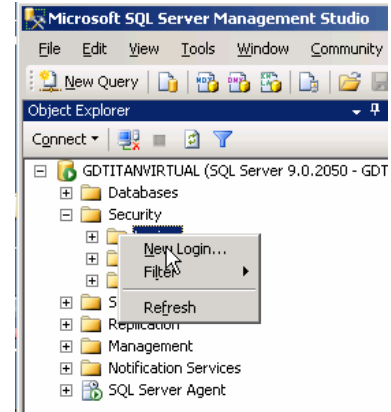
2. Give your database a name and then click **OK**.



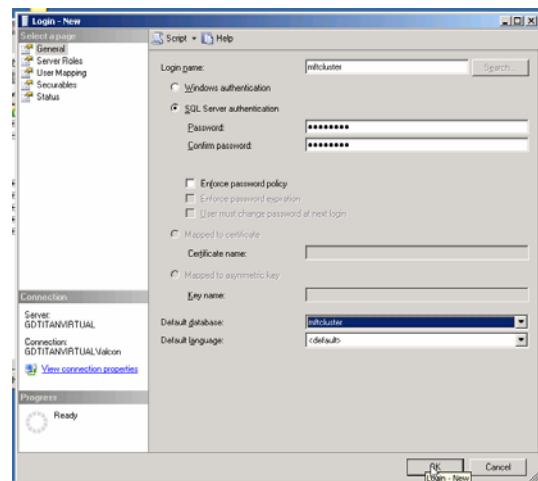
3. Expand **Security>Logins**.



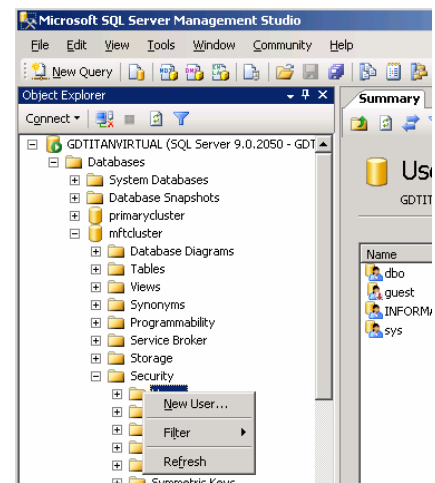
- Right-click to display the context menu and then click **New Login**.



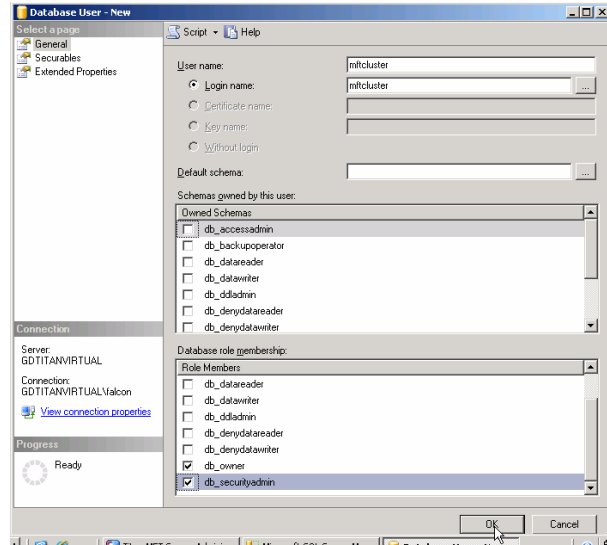
- Type the **Login name**. Use the radio button to select **SQL Server authentication**. Clear **Enforce password policy** and then click the drop down menu to choose the database for login.



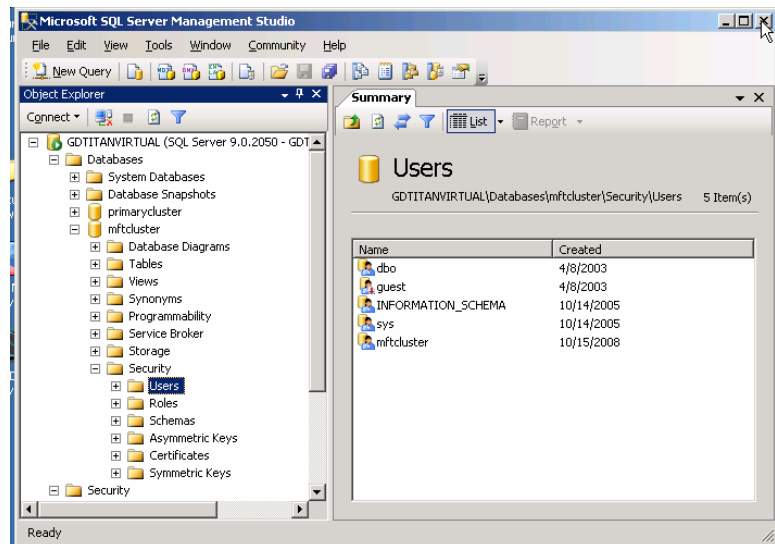
- Expand your newly created database, expand **Security** under your database, and then right-click **New User** to create your new user.



7. Type the **User Name** and click the **Browse** button to browse to the Login name that you created. Select the Database role memberships: **db\_owner** and **db\_securityadmin**, and then click **OK**.



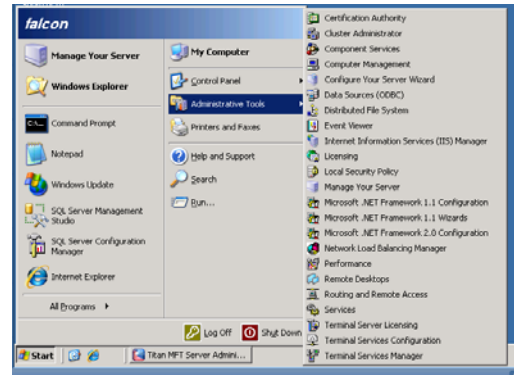
8. Close the *MS SQL Server Management Studio*.



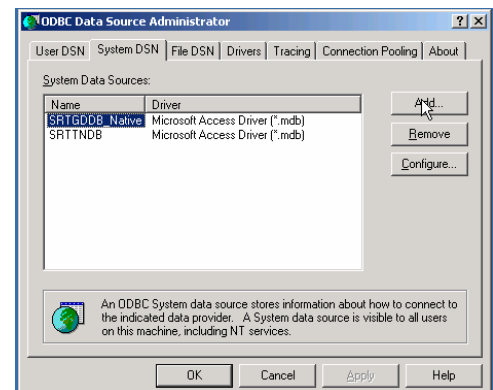
## Step 2: Create your Data Source on your Primary Cornerstone Server

Use the following steps to create your data source on the primary Cornerstone Server, which will connect to your SQL database. You will repeat this process when you create your secondary/member server.

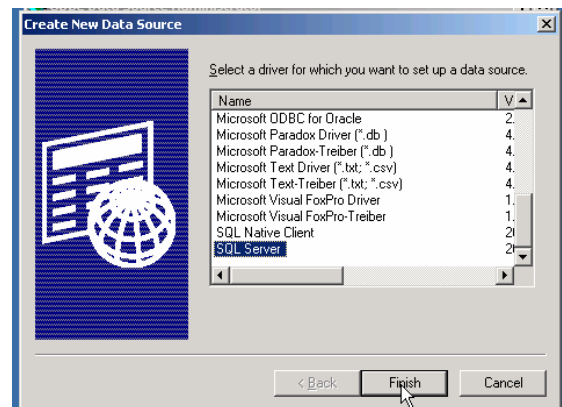
1. Click **Start>Administrative Tools>Data Sources (ODBC)**.



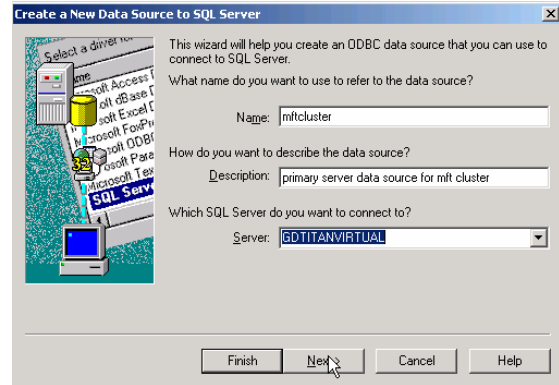
2. Click the **System DSN** tab and then click **Add**.



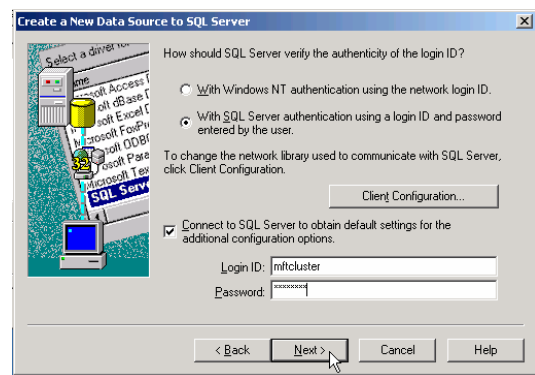
3. Select **SQL Server** and click **Finish**.



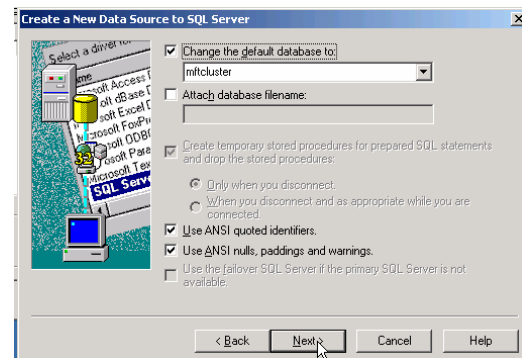
4. Type the data source name and a description. Type the SQL Server name and then click Next. **NOTE: Do not** press Enter or click Finish or you will get a silent fail when you create your server cluster.



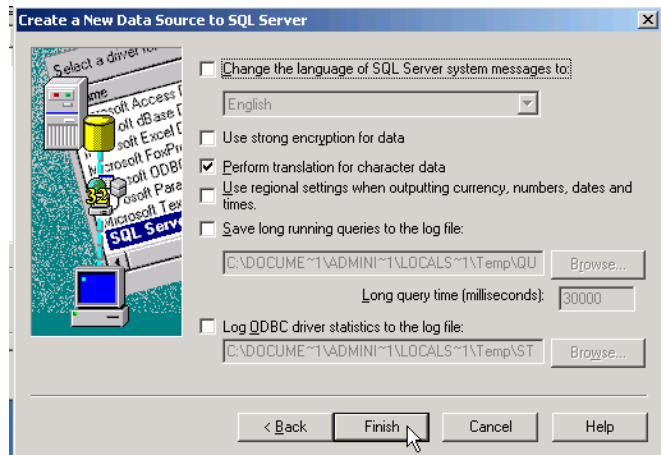
5. Click **With SQL Server authentication using a login ID and password entered by the user**. Type your SQL **Login ID** and **Password** and then click **Next**.



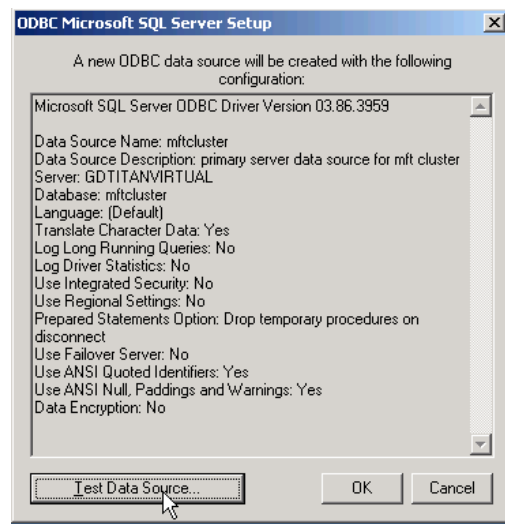
6. Select **Change the default database to** and use the drop-down arrow to choose your newly created database. Click **Next**.



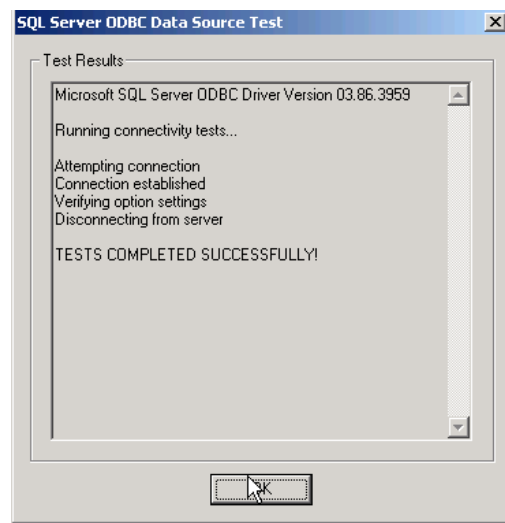
7. Click **Finish**.



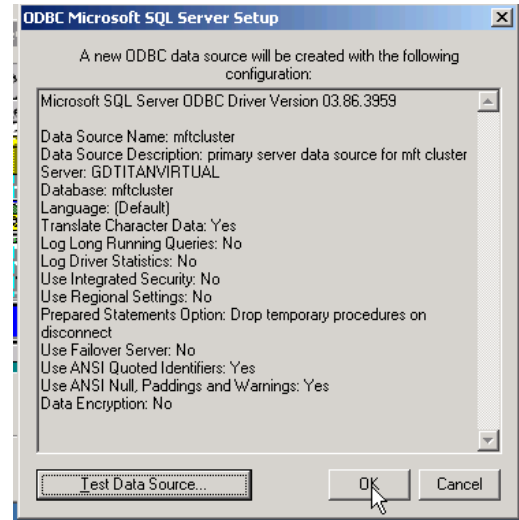
8. Click **Test Data Source**.



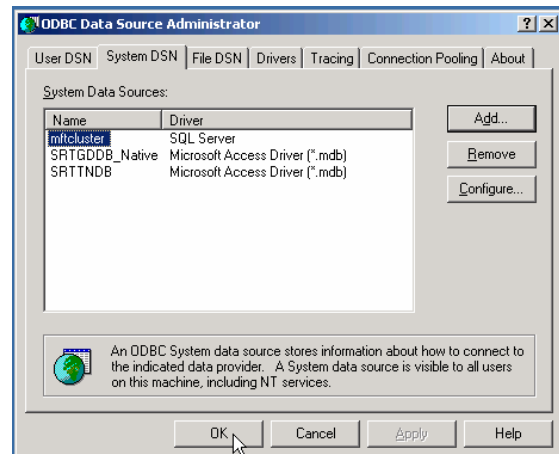
9. If the test is successful, Click **OK**. Please Note: If the test does not complete successfully, begin by creating a new data source.



10. Once your test is successful, click **OK**.

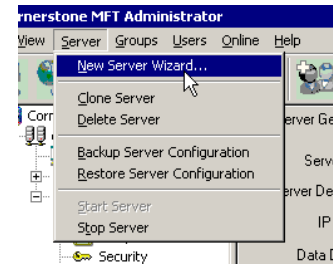


11. Click **OK** to finish creating your data source.



### Step 3: Create your Primary Cornerstone Server

1. Run the Cornerstone MFT Administrator. Right-click on your server domain and click **New Server Wizard**.

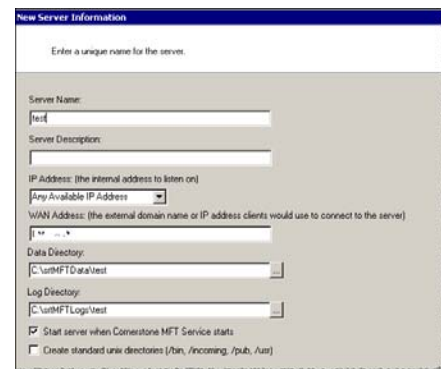


2. Select **This server will be the primary server in a clustered environment** and click **Next**.

Select the type of server to be created

This server will be a standard standalone, non-clustered server  
 This server will be the primary server in a clustered environment  
 This server will be a new member server in an existing clustered server environment

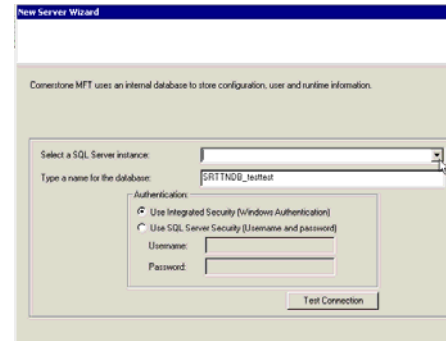
3. Type your **Server Name** and **Description**. Click the drop-down arrow to choose your **IP Address**. (Any available IP address indicates that the server will listen on all IP addresses that are configured on the PC along with the local IP address of 127.0.0.0, also known as localhost.) Type the WAN address. You do not need to type “http”, for example, “myserver.com”. Type the **UNC Data Directory\*** path and the **UNC Log Directory** path. Select the check box if you would like to start this server when Cornerstone MFT starts. When you are finished, click **Next**.



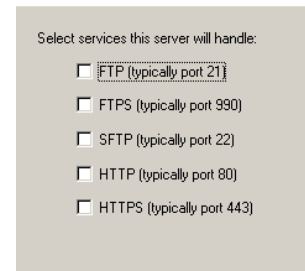
\*For more information about UNC shares, see our quick start guide: [Cornerstone MFT Using UNC Paths for Data Storage & Scalability](#).

If you need to create standard UNIX directories, you can find additional information in the [Cornerstone MFT User's Guide](#).

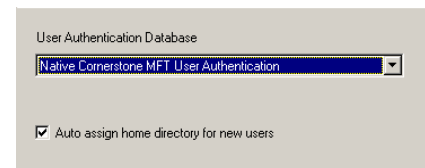
4. Cornerstone uses an internal database to store configuration, user, and runtime information. Use the drop-down arrow to select a **SQL Server instance**. Type a name for this database. Select Windows Authentication or SQL Server Security, and then click **Test Connection**. Once you connect successfully, click **Next**.



5. Select the **Services** that this server will handle. You must enable **FTP** access if you are using FTPS with explicit SSL (also known as **AUTH SSL**).

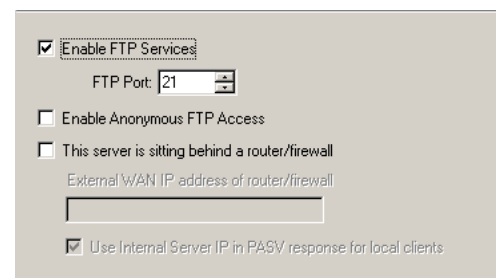


6. Select your **User Authentication Database** using the drop-down arrow. After you have configured your User Authentication Database, click **Next**.\*



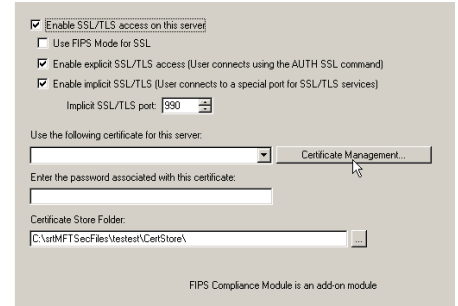
\*Once you select a User Authentication Database in Cornerstone, you cannot change to a different method after the server wizard has completed. If you need more information about configuring user authentication, please see the [Cornerstone MFT User's Guide](#) or the [Cornerstone User Authentication Quick Start Guide](#) for your specific user authentication database.

7. If you wish to enable FTP Services,\* select the **Enable FTP Services** check box. Select the **FTP Port number** by using the up/down arrows. To **enable anonymous FTP access**, select the check box. If your **server is sitting behind a router/firewall**, select this check box and type the **External WAN IP address** of router/firewall. You do not need to type "**http**", for example, **mywanaddress.com**. Click **Next**.



\*You must enable FTP access if you are using FTPS with explicit SSL (also known as AUTH SSL). For more detailed information pertaining to these configuration options see the [Cornerstone MFT User's Guide](#).

- To enable SSL/TLS access on this server, select the **Enable SSL/TLS access on this server** check box and then select either **Enable explicit SSL/TLS** or **Enable implicit SSL/TLS**.<sup>\*</sup> Use the drop-down arrow to select a certificate, or click **Certificate Management** to launch the *Certificate Wizard* to configure a certificate for this server, or use the "..." browse button to browse to your *Certificate Store Folder*. When you are finished configuring certificate options, click **Next**.

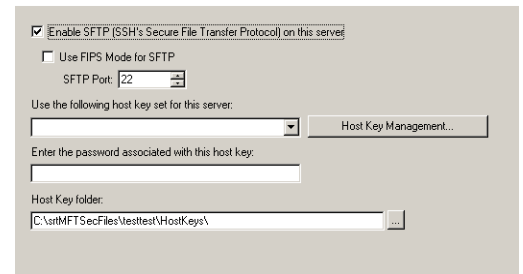


See [Appendix A](#) for the options available to you when you select **Certificate Management**.

**\*Explicit SSL**—When using Explicit SSL, Cornerstone MFT will allow SSL connections on the standard FTP port that was specified in [Step 7](#). This port will be used for both FTP connections and FTP/S connections. In order to enter into a secure SSL session, the FTP client will need to issue either the AUTH SSL or AUTH TLS command prior to establishing the secure connection.

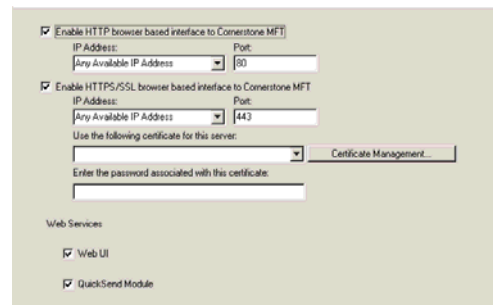
**\*Implicit SSL**—When using implicit SSL, Cornerstone MFT will listen on a specific port that will only be used for SSL connections. By default this is port 990; however, any port may be used. Change your port number by using the up/down arrows.

- If you would like to use *SSH/SFTP security settings* along with FTPS, enable SFTP using the check box.<sup>\*</sup> Click **Next**.



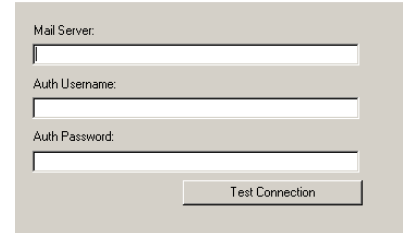
<sup>\*</sup> For more information see the [Cornerstone MFT SFTP & Host Key Authentication Quick Start Guide](#).

- To enable HTTP browser based interface to this server, select the check box. To enable HTTPS browser based interface to this server, select the check box and use the drop-down arrow to select a certificate or click **Certificate Management** to manage certificates. Select the **Web UI** check box if you would like to enable the Cornerstone Web User Interface on this server. Select **QuickSend Module** if you would like to enable ad-hoc transfer.



**NOTE:** QuickSend and the Cornerstone Web UI are optional modules. For more information, contact [sales@southerntech.com](mailto:sales@southerntech.com).

11. Type the **URL** or **IP address** of the SMTP mail server that will be used to send email notifications to users. You may test the connection by clicking **Test Connection**. (For more detailed information pertaining to these configuration options, see the [Cornerstone MFT User's Guide](#).) When you are finished, click **Next**. Click **Finish** to create the server.

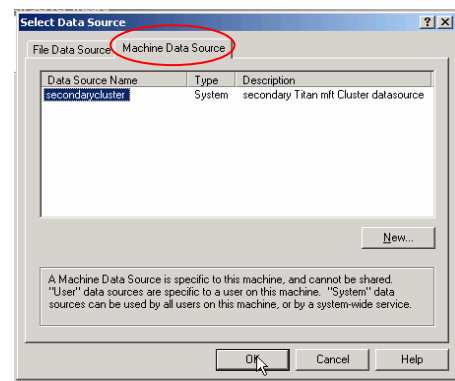
A screenshot of a web-based configuration form for an SMTP mail server. The form has a light gray background and contains three input fields: 'Mail Server:', 'Auth Username:', and 'Auth Password:'. Each field is followed by a white text input box. At the bottom right of the form is a button labeled 'Test Connection'.

12. Create a test user on your primary server using the *New User Wizard*. **Note:** You should see this test user after you create your member server.

## Step 4: Create your Member/Secondary Clustered Server

To create your secondary cluster/member server repeat the process, as outlined above, on your secondary/member server with the exception of making this server a **member server**. **Please note:** You must also create a data source for this member server. Please refer to [step 2](#) – creating your ODBC data source, if you have not already created a datasource on your secondary/member server.

1. Expand your secondary server domain, right-click and select **New Server Wizard**.
2. Select the **This server will be a new member server in an existing clustered server environment** radio button. Click **Next**.
3. Click **Machine Data Source** and highlight the data source that you created on your secondary/member server connecting to your SQL database. Click **OK**.



4. Type your **SQL Login ID** and **Password**.



5. Check your parameters and click **Test**. Click **OK** if successful and then click **Next**.
6. Highlight your primary server and click **Next**. Click Next again, and then click **Finish**.
7. Make sure that your primary Cornerstone server is running and then start your secondary/member server. Expand **Users** and make sure that the test user that you created on your primary server appears.

If your user appears, you have successfully created a Cornerstone MFT cluster. You can use a NLB (Network Load Balancing) Server on the front end of this cluster if you wish to use Load Balancing.

## About South River Technologies

South River Technologies (SRT) is an innovator in managed file transfer and basic content services software. SRT's software seamlessly integrates access to remote files into the desktop applications that users rely on, creating an instantly familiar interface for collaborating, sharing, and accessing files. SRT's enterprise class server products are built using industry standard encryption, highly granular security configuration controls, and technologies to reduce the risk of network intrusions. Over 60,000 customers, including more than 70 colleges and universities, government agencies such as NASA and FAA, and other blue chip companies in more than 110 countries rely on SRT's software to make remote file access and collaboration more efficient for their customers, partners, and distributed workforce. For more information, please visit [www.southernrivertech.com](http://www.southernrivertech.com).

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