

How to Configure SQL Server 2005 to Allow Remote Connections

By Shafqat Tanzeel



Shafqat Tanzeel

About the Author

Shafqat Tanzeel has been teaching IT related courses for the last ten years.

Presently he is working as a lecturer in Department of Computer Science at the Sir Syed University of Engineering and Technology, Karachi, in Pakistan.

His main field of interest is distributed databases.

When you try to connect to an instance of Microsoft SQL Server 2005 from a remote computer, you may receive an error message. This problem may occur when you use any program to connect to SQL Server. For example, you receive the following error message when you use the SQLCMD utility to connect to SQL Server:

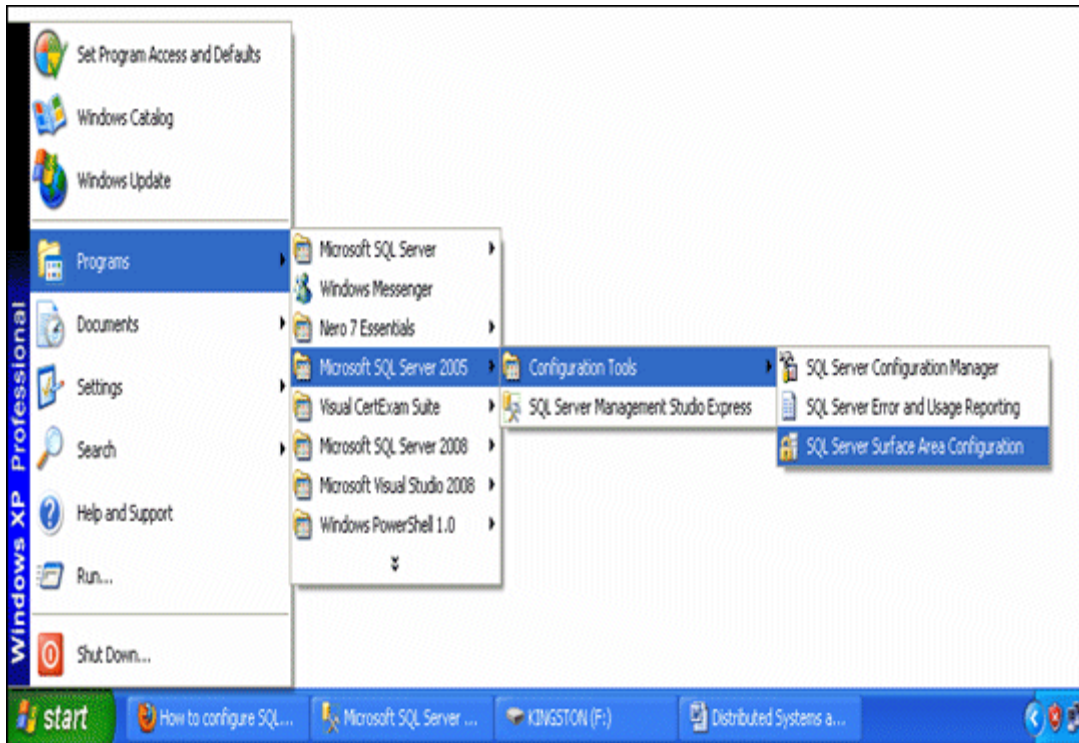
Sqlcmd: Error: Microsoft SQL Native Client: An error has occurred while establishing a connection to the server. When connecting to SQL Server 2005, this failure may be caused by the fact that under the default settings SQL Server does not allow remote connections.

This problem may occur when SQL Server 2005 is not configured to accept remote connections. By default, SQL Server 2005 Express Edition and SQL Server 2005 Developer Edition do not allow remote connections. To configure SQL Server 2005 to allow remote connections, complete all the following steps:

- **Enable remote connections** on the instance of SQL Server that you want to connect to from a remote computer.
- **Turn on the SQL Server Browser service.**
- **Configure the firewall** to allow network traffic that is related to SQL Server and to the SQL Server Browser service.

To enable remote connections on the instance of SQL Server 2005 and to turn on the SQL Server Browser service, use the **SQL Server 2005 Surface Area Configuration tool**. The Surface Area Configuration tool is installed when you install SQL Server 2005.

SQL Server 2005 Surface Area Configuration tool



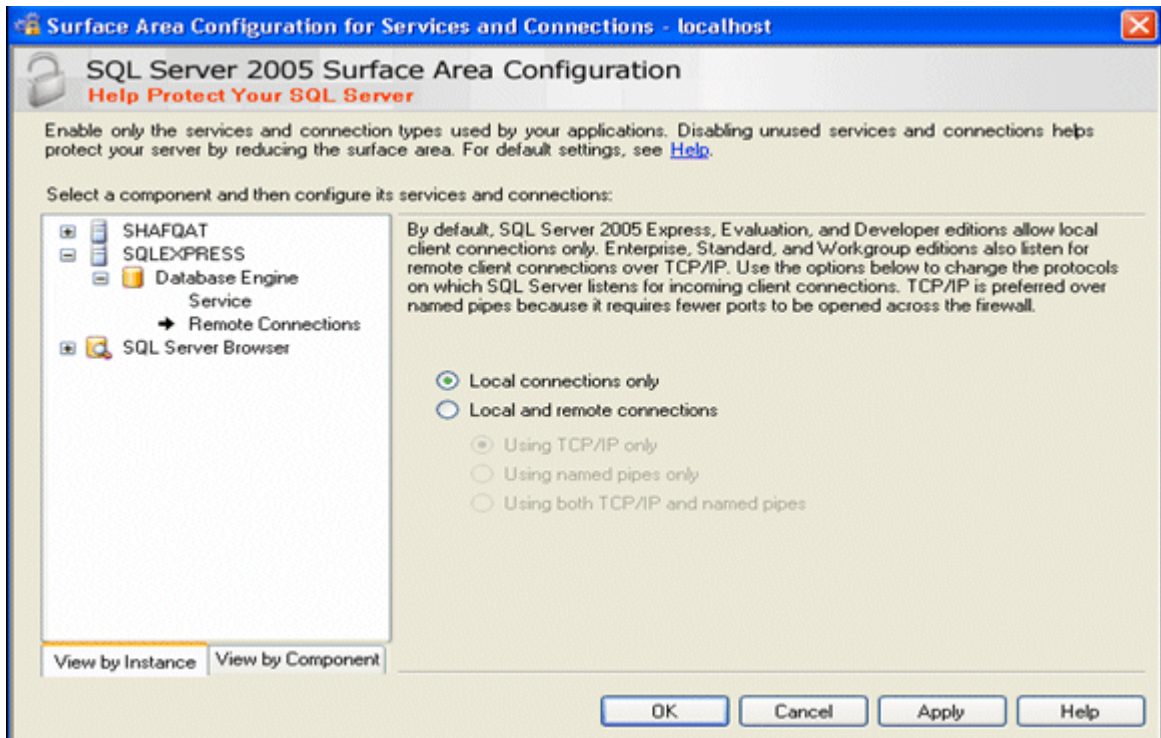
Enable remote connections for SQL Server 2005 Express or SQL Server 2005 Developer Edition

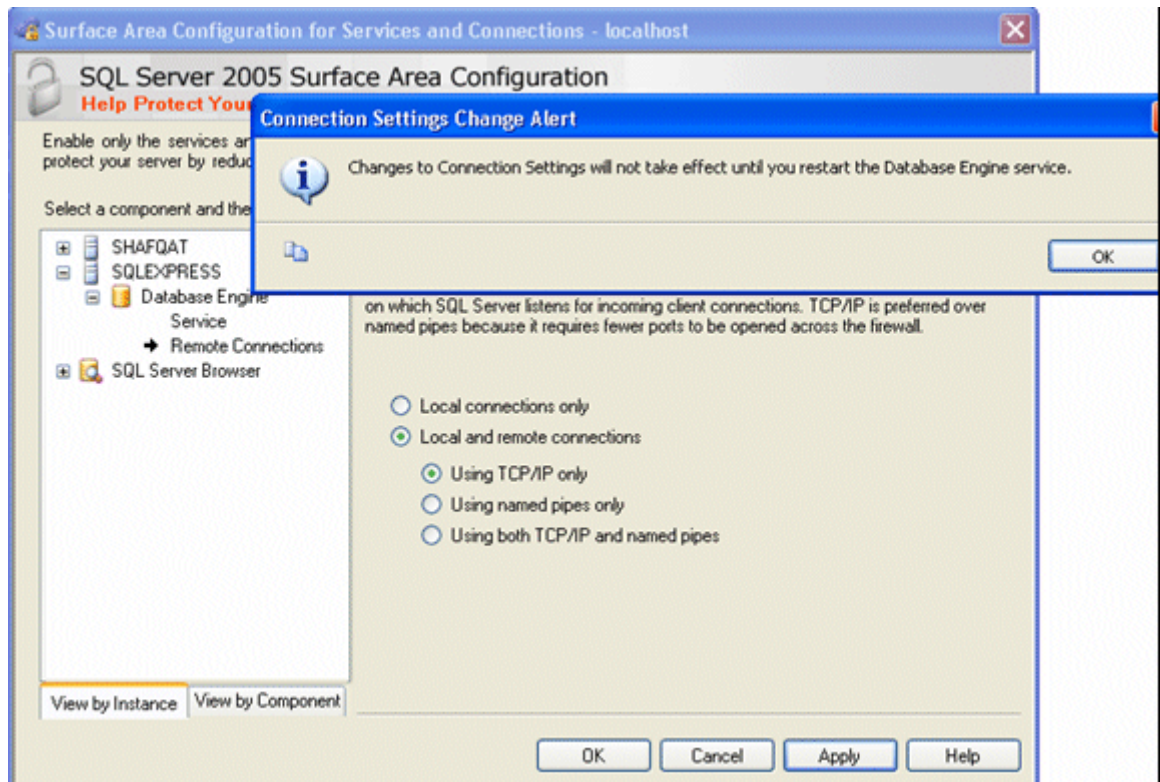
You must enable remote connections for each instance of SQL Server 2005 that you want to connect to from a remote computer. To do this, follow these steps:

1. Click **Start**, point to **Programs**, point to **Microsoft SQL Server 2005**, point to **Configuration Tools**, and then click **SQL Server Surface Area Configuration**.
2. On the **SQL Server 2005 Surface Area Configuration** page, click **Surface Area Configuration for Services and Connections**.



3. On the **Surface Area Configuration for Services and Connections** page, expand **Database Engine**, click **Remote Connections**, click **Local and remote connections**, click the appropriate protocol to enable for your environment, and then click **Apply**.

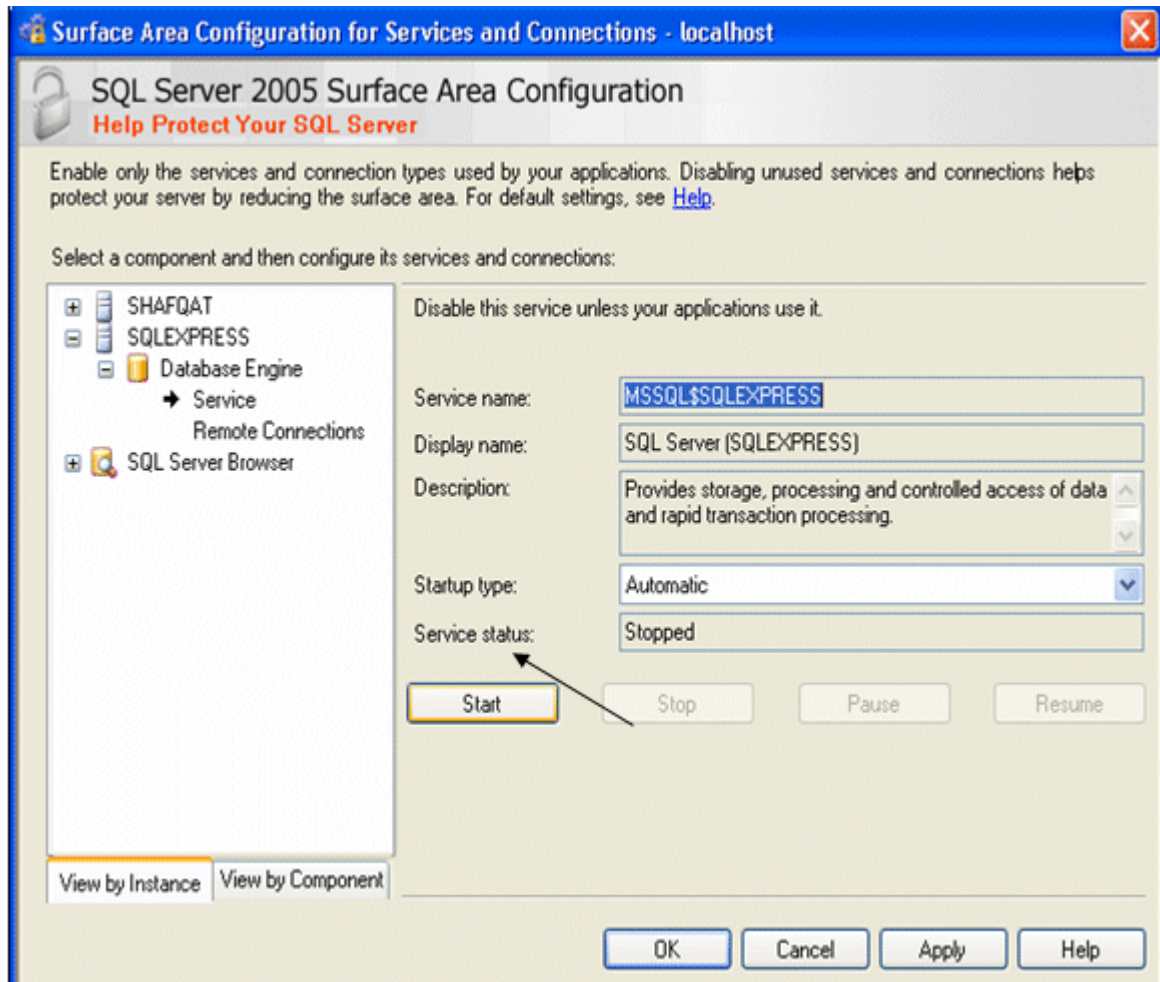
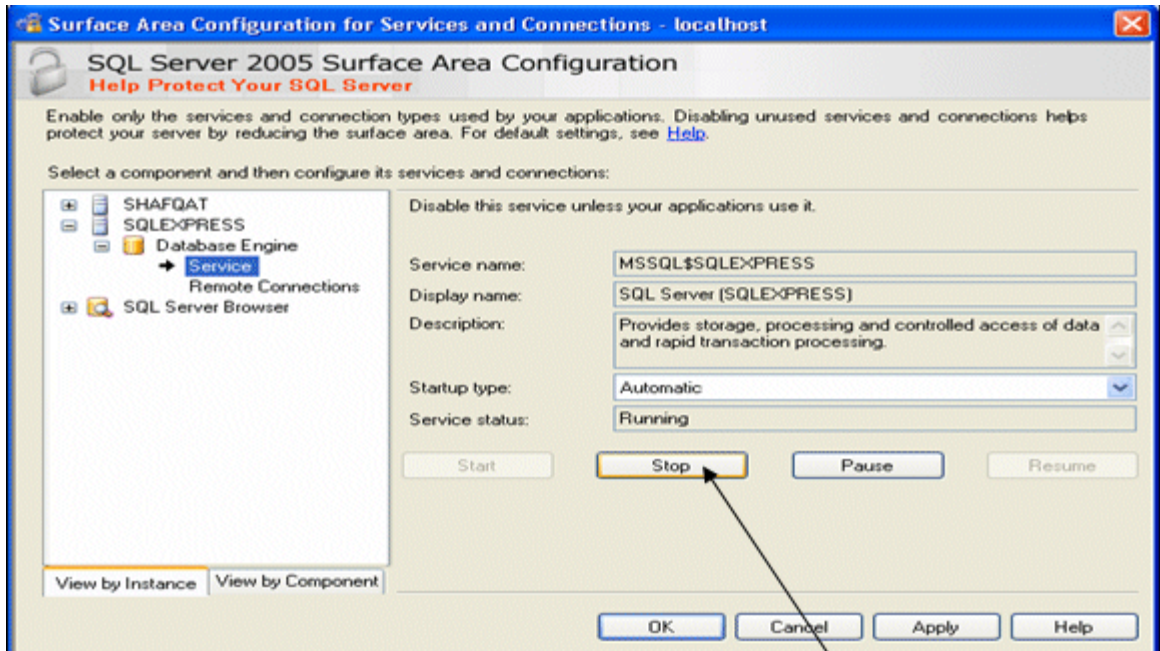




Note Click **OK** when you receive the following message:

Changes to Connection Settings will not take effect until you restart the Database Engine service.

4. On the **Surface Area Configuration for Services and Connections** page, expand **Database Engine**, click **Service**, click **Stop**, wait until the MSSQLSERVER service stops, and then click **Start** to restart the MSSQLSERVER service.



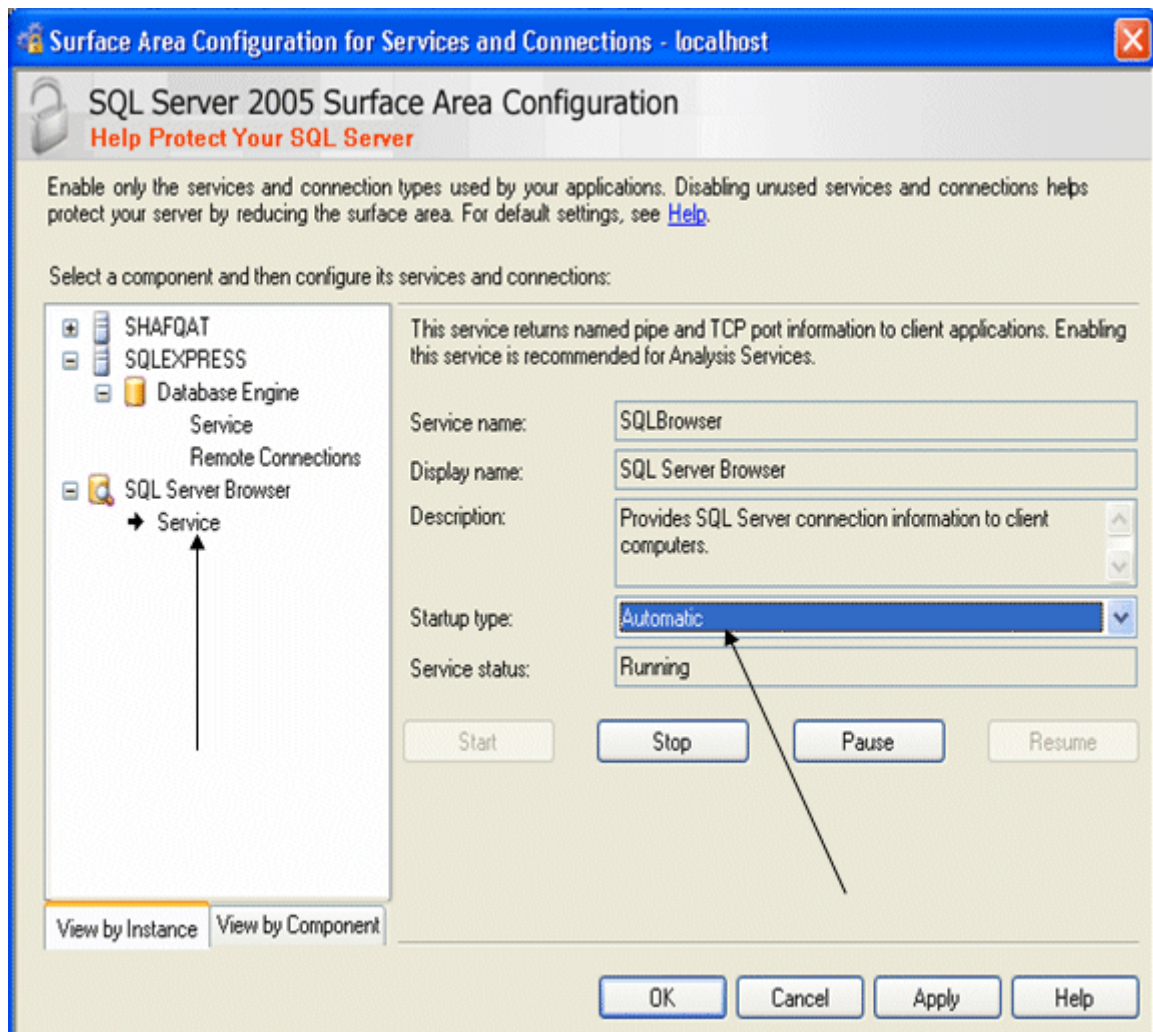
Enable the SQL Server Browser Service

Provides SQL Server connection information to client computers. To enable the SQL Server Browser service, follow these steps:

1. Click **Start**, point to **Programs**, point to **Microsoft SQL Server 2005**, point to **Configuration Tools**, and then click **SQL Server Surface Area Configuration**.
2. On the **SQL Server 2005 Surface Area Configuration** page, click **Surface Area Configuration for Services and Connections**.
3. On the **Surface Area Configuration for Services and Connections** page, click **SQL Server Browser**, click **Automatic** for **Startup** type, and then click **Apply**.

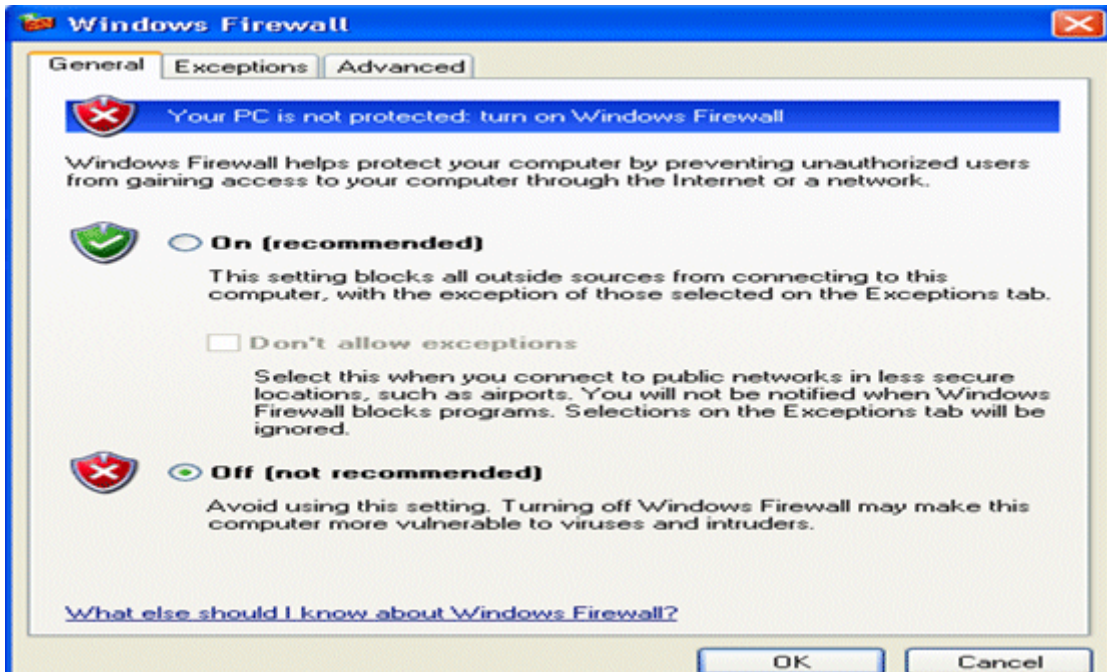
Note When you click the **Automatic** option, the SQL Server Browser service starts automatically every time that you start Microsoft Windows.

4. Click **Start**, and then click **OK**.

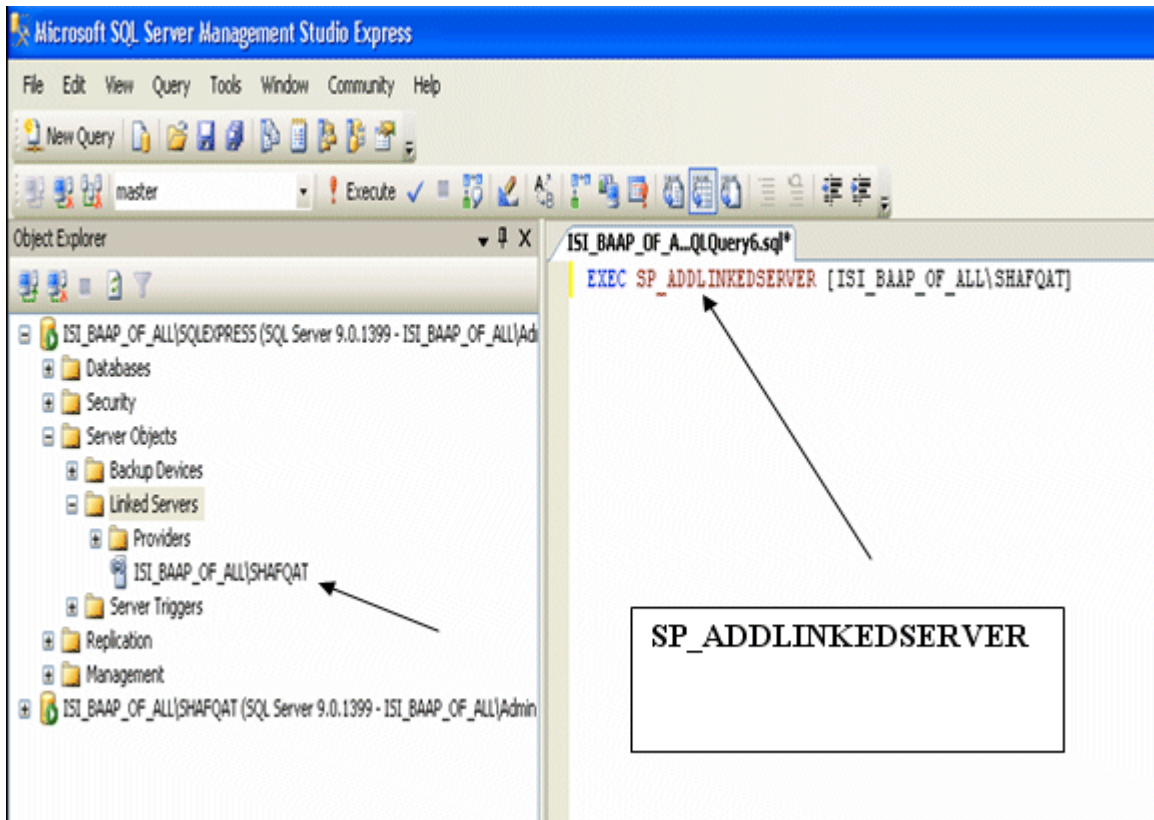


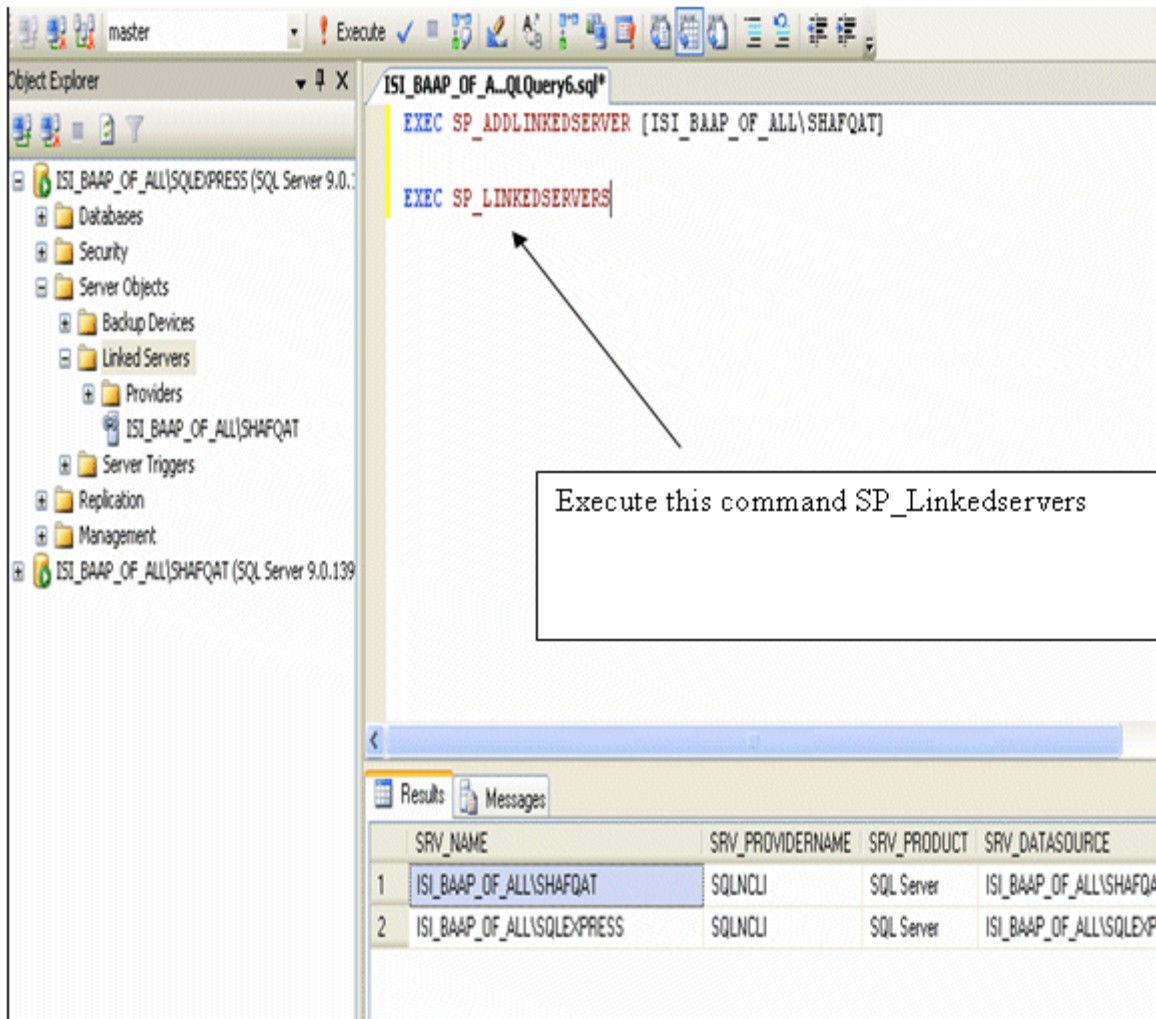
Windows Firewall – Turn off Firewall

To open Windows Firewall, click **Start**, click **Run**, type `firewall.cpl`, and then click **OK**.









Now let us execute some queries on the remote instance, specifically on the database bank. You can issue distributed queries referring to linked server name by using the following syntax.

[linked_server_name].[catalog].[schema].[object_name]

select * from [ISI_BAAP_OF_ALL\SHAFQAT].bank.dbo.account

The screenshot displays the Microsoft SQL Server Management Studio Express interface. The Object Explorer on the left shows the server hierarchy for 'ISI_BAAP_OF_ALL\SQLSERVERPRESS (SQL Server 9.0 RTM)' and 'ISI_BAAP_OF_ALL\SHAFQAT (SQL Server 9.0.1314.1)'. The 'bank' database is expanded, showing the 'dbo.account' table with columns 'name' and 'amount'. The Query Editor window contains the following SQL script:

```
EXEC SP_ADDLINKEDSERVER [ISI_BAAP_OF_ALL\SHAFQAT]

EXEC SP_LINKEDSERVERS

select * from [ISI_BAAP_OF_ALL\SHAFQAT].bank.dbo.account
```

The Results pane shows the output of the query, displaying two rows of data:

	name	amount
1	shafqat	5000.00
2	tarzeel	1111.00

The status bar at the bottom indicates the query was executed successfully on the 'master' database, returning 2 rows in 00:00:15. The Windows taskbar at the bottom shows the Start button and several open applications, including 'How to configure SQL...', 'Microsoft SQL Server...', 'Distributed Systems a...', and 'untitled - Paint'. The system clock shows 9:41 PM.