To connect your Visual Studio Project with a remote database, please follow the steps. Note that, some of these steps may not be necessary for your case, however, it was required for my machine. But if you follow all the steps sequentially, I hope it would work for you as well!

I have assumed that you have following softwares installed in your

Local machine:

* Visual Studio 2012
* Web developer tool for VS

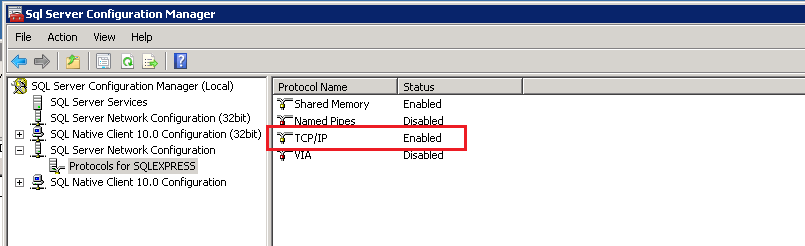
Remote cloud instance:

* OS: Microsoft Windows Server 2008 R2
* SQL Express 64bit
* SQL Management Studio 64bit

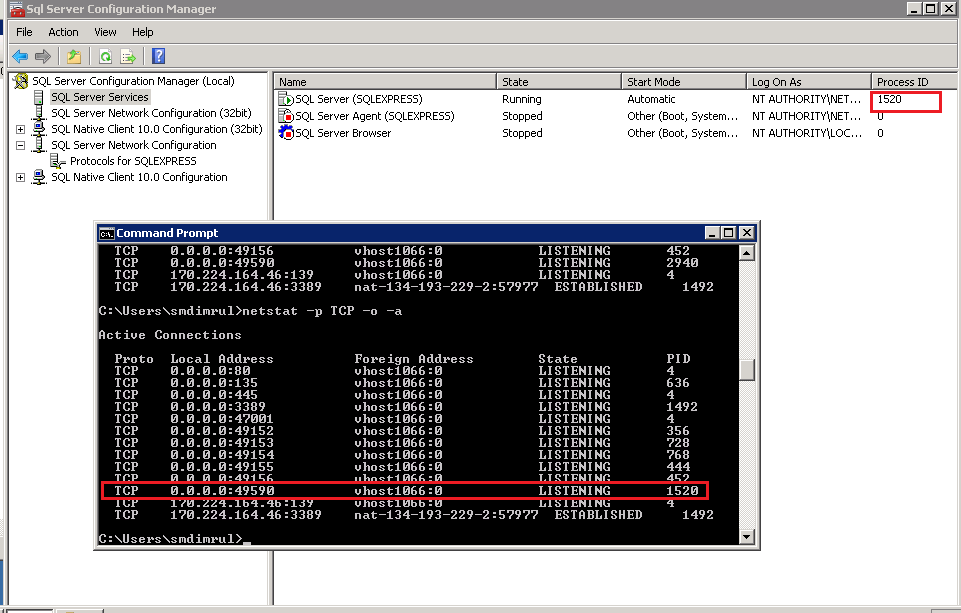
Steps:

Do the following in your **remote machine:**

1. Go to “Sql Server Configuration Manager>Sql…Network Configuration”. Enable the TCP/IP protocol.



1. Next you have to find out the port which SQL Server Express is listening. Go to Sql Server Configuration Manager again. Now check the **Process ID** from “SQL Server Services”. Then open command prompt and type “netstat –p TCP –o –a”. It will show you a list of open TCP ports. Find out the entry that has the same process id. For example, in my case, the process id is 1520. In tcp list the entry with process id 1520 has local address: 0.0.0.0:49590. Therefore, **49590** is the port address that SQL Server Express using. Hopefully it would be same for you.

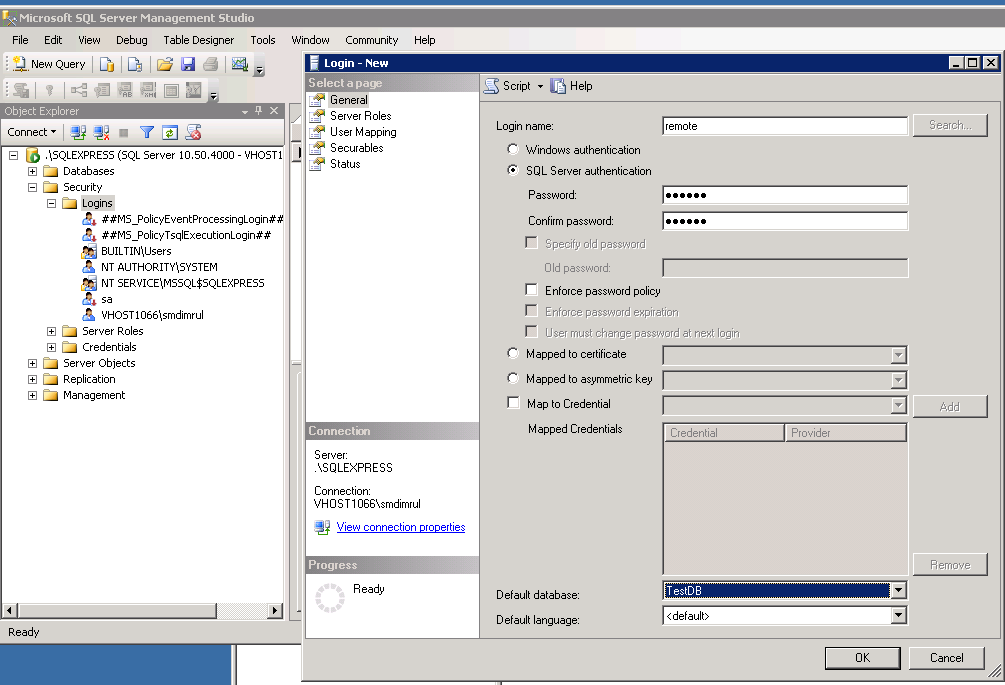


1. Now to allow remote database access, you have to add a firewall rule. From this link <http://msdn.microsoft.com/en-us/library/ms175043.aspx>, follow the “**To open a port in the Windows firewall for TCP access**” section only. Remember to specify the same port you just got from previous step.
2. After that, restart your SQL server (SQLEXPRESS).
3. Now open **SQL Server Management Studio**. If you are not connected to your database you may get this window:



Fill up the Server name and Authentication fields.

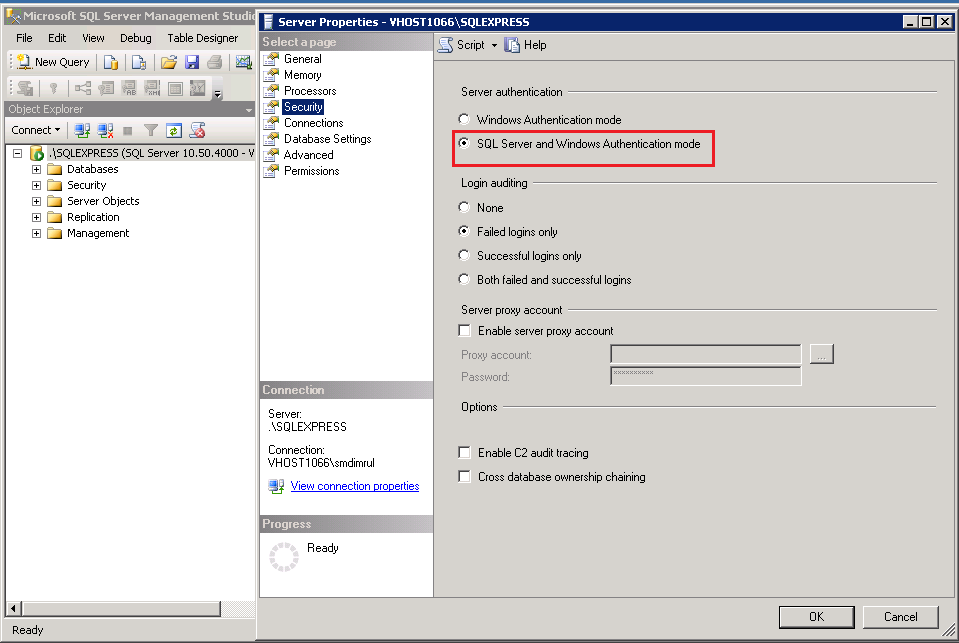
1. If you are connected successfully, then go to **Security>Logins**. Create a new Login. Fill up the name, password. Don’t press ok right now.



1. Go to User Mapping tab. On right you will see a list of database names. Check your database with this login name. Now click ok.

So you have a new login name to connect. You will use it to connect from you project. (Note: if you haven’t created a database yet, you can do this mapping later).

1. Now right click on the .\SQLEXPRESS. Go to **properties > Security**. Check the radio “*SQL server and Windows Authentication mode*” and save.



Now come back to your local machine and open your Visual Studio. Inside your **Web.config** file add this line:

<connectionStrings>

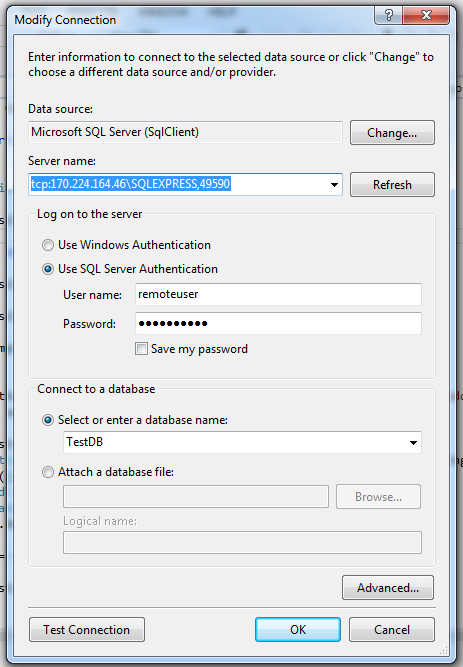
<add connectionString="Data Source=tcp:[remote-machine-ip]\SQLEXPRESS,[port-no];Initial Catalog=[database]; User ID=[the login you created];Password=[password of the login]" name="dbString" providerName="System.Data.SqlClient"/>

</connectionStrings>

If you already have a connectionString section, replace it with the above one.

Test your connection from Visual Studio:

By default when you add a connectionString property in web.config file, a database connection gets created by name ‘dbString’. However if it’s not there, restart your visual studio. Hopefully you will see it then. Click the refresh button and if the icon changes from a red-cross to a green plug then it’s successful. You may also try this: right click on the connection name > modify connection.



In the above window, if you click the “Test Connection”, it will show you the success or error message.