

Connecting To MS SQL Server 2012 DB through NETBEANS IDE

Instead of using Java DB/Derby connecting to database, let us systematically make JDBC Connection happen.

Softwares used:

NetBeans IDE 7.1

MS SQL Server 2012 Developer Edition

Microsoft JDBC Driver

Let's assume that you already have the softwares above. If not, feel free to download free versions of them.

1. Microsoft JDBC Driver:

Download this driver from official MSDN website. After you download, execute/unzip the file, copy the unzipped folder and paste it in the SQL Server installation folder so it will be easier to remember its path (or any other directory you want).

For example : C:\Program Files (x86)\Microsoft SQL Server\SqlDriver\sqljdbc_4.0\enu\sqljdbc4.jar

2. TCP Listening Port

Make sure your Server is listening on the correct port (Default port is 1433, but you can change that if needed). Follow these steps to make sure your server is listening on the right port:

- Open SQL Server Configuration Manager
- On the left column expand SQL Server Network Configuration
- Click on Protocols for <your server name>
- On the right column, right-click on TCP/IP and click properties
- In the protocol tab make sure that your TCP IP is enabled and listens to all
- In the IP Addresses navigate to IPAll section and make sure the Dynamic ports is set to 1433 (or the port you want), if not change it to that value.
- Click Ok and you will be prompted with a warning message indicating that the changes will not take effect until you restart the service.
- Now in the left column click on SQL Server Services.
- Find your server on the right column (SQL Server (<your server name>)).

- Right-click on the server and click Restart.

Make sure your TCP is listening to your port

You need to make sure that the port you have defined for SQL Server is listening. To do that open the command prompt and write the following command: netstat -a

You can track all the active ports on this list. Try to find your port from this list

3. Create DB Server

On the installation of MS SQL Server 2012 it will prompt you to create a server. Make sure you choose the SQL Server Authentication (in opposed to Windows Authentication mode) and assign a username ("sa" by default) and a password. This is because netbeans cannot establish connection with SQL Server through JDBC if it is on Windows Authentication mode. However, if you already have chosen your authentication mode to Windows Authentication you can change it by following the steps in the following section

4. Change Authentication Mode

- Open Microsoft SQL Server Management Studio.
- In the Object Explorer, Right-click your server and click Properties
- Select the security page
- Change the Server Authentication mode from Windows Authentication mode to SQL Server and Windows Authentication mode
- You will receive the warning message that changes will not take effect until you restart your server.
- Before you restart, you need to enable the login for the server.
- In the Object Explorer expand your server
- Expand the security folder.
- Expand logins folder
- Right-click "sa" and click properties
- In the status page, set the login "enabled"
- In the general page, you might have to create and confirm a password for the login.

5. Configuring JDBC Driver with Netbeans:

- Open netbeans and open the services tab.
- Right-click the database and click new connection
- From the driver drop down menu, select "New Driver"
- Click Add to add a driver file, the driver file would be the JDBC driver you have downloaded from MSDN. Navigate to the folder you have pasted in SQL installation folder (or any directory you have pasted in), choose "sqljdbc4.jar" and click open.
- The name and class name will be filled once you select the JDBC Driver file. The class name will be: "com.microsoft.sqlserver.jdbc.SQLServerDriver" click ok to make the new driver.
- Now with selected driver, click next
- Fill in the following information:
 - *Host: localhost
 - *Port: 1433 (or the port you have selected previously)
 - *Database: the name of the database you created
 - * Instance Name (MSSQL11.SQLEXPRESS for example?)
 - *User Name: sa
 - *Password: <<the password you have defined for the database authentication>>
- * Click next and make sure you receive no errors. If you received no errors that means NetBeans can successfully connect to the db.
- * Click next and choose the schema.
- * Click finish

You are successfully connected to MS SQL Server through NetBeans.IDE