

Description: Guide to SQL 2005 and 2008 database server installation and configuration

OS Requirement: Win 2000, XP Pro, Server 2003, Vista, Server 2008, Windows 7

General Requirement: At least 1 GB RAM

Introduction

This guide aims to help you setup remote communication to any edition of SQL Server 2005 and SQL Server 2008. We will also give you some tips to make the server work more smoothly with your GENESIS32 applications.

You should note that there are many editions of SQL Server 2005 and 2008. In this article, we will distinguish only between SQL Express – the free SQL Server edition that is the successor to MSDE – and others editions. You can find comparison of the various editions of SQL 2005 on the Microsoft website: <http://www.microsoft.com/sqlserver/2005/en/us/compare-features.aspx> and comparison of the SQL 2008 editions are on <http://www.microsoft.com/sqlserver/2008/en/us/editions-compare.aspx>.

SQL Server Installation

From an authentication point of view, we would recommend using SQL Server authentication. This will reduce issues involved with lack of permissions of NT accounts over a network.

During installation of your server, you can select between **Windows Authentication Mode** (default for the Express edition) and **Mixed Authentication Mode** (Windows + SQL Server Authentication). Select Mixed Authentication and give a password for the SA administrator.

NOTE: This question will always appear during installation of **Non - Express editions**. SQL server **Express Edition** installation tends to be as simple as possible and the advanced options such as authentication mode, instance, or collation type are hidden by default. In order to set these options you need to uncheck **Hide advanced configuration options** (checked by default) at the Registration Information screen.

The next decision you need to make is to install your server as either a **Named** or **Default** instance. By default, it will install as a Named instance with the name “SQLEXPRESS”. You can leave it as is, but you will need to refer to this name when accessing the server. For simplicity, you can change this to the default instance.

You may also be asked during the installation to specify collation of the server. You should leave the default settings unless it is case sensitive. In that case, please uncheck the Case

sensitive checkbox, otherwise you may encounter issues when creating configuration databases.

How to Manage a SQL Server

There are three major configuration tools for the MS SQL server. **SQL Server Configuration Manager** and **SQL Server Surface Area Configuration** automatically installed with your server and both are used for managing the server services. **SQL Server Management Studio** is used for configuration and managing content of your database servers. The Management Studio can be installed either during installation of Non-Express edition of the SQL Server as a part of the Analysis Tools. For a SQL Express installation, you can download an Express version of the Management Studio from the official Microsoft website free of charge.

NOTE: The SQL 2005 Express Server and Server Management Studio can be installed from the ICONICS Product disks.

Network Communication

When you want clients to connect to your server, you need to enable remote connections to your server and enable a protocol that will be used for the communication.

Enabling Communication Protocols

This section describes how to enable remote connections using the SQL Server Configuration Manager application, however, this can also be done in the SQL Server Surface Area Configuration.

1. Open SQL Server Configuration Manager from Microsoft SQL Server group in the Start Menu.
2. Expand SQL Server Network Configuration and click on the **Protocols** item of your server. In the right-hand pane, you will see protocol names.
3. Enable the protocol you want to use. Usually they are TCP/IP and Named Pipes. If you enable them, your SQL server will start listening for incoming connection with those protocols. You must enable at least one of them to allow remote communication.

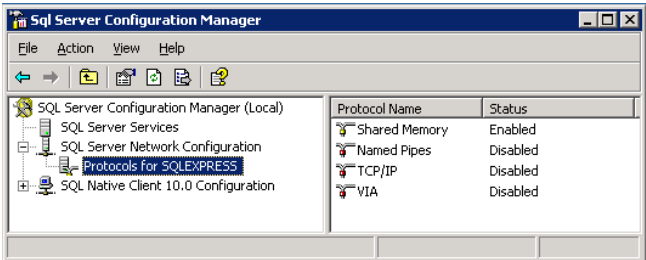


Figure 1 - SQL Server Configuration Manager

- You need to restart the database engine so that the changes will take effect. To do so, select SQL Server 2005 Services and restart the server service.

NOTE: You can follow the same procedure with the Client Protocols. However, the settings configured in SQL Native Client Configuration are used on the computer running the client program. When configured on the computer running SQL Server, they affect only those client programs running on the server.

Allowing Remote Connections to the Server

- Open **SQL Server Management Studio Express** from the Start Menu.
- Connect to your server and right-click on it to select **Properties**
- Open the **Connections** item and verify that **Allow remote connections to this server** is checked.

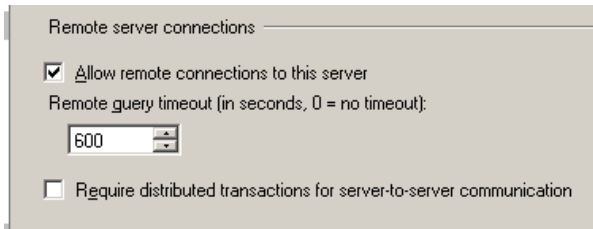


Figure 2 - Server Properties: Connections

- Click on **OK**. If you made any changes here, you will need to restart the database service. You can do that by right clicking on the Server instance and selecting **Restart**.

Setting SQL Server Authentication

As mentioned earlier, we recommend using **SQL Server Authentication**. If you did not select this option during installation, you need to first switch the server to **Mixed authentication mode**. Once Mixed mode is enabled, you need to create a user with SQL server login information.

- Open **SQL Server Management Studio Express** from the Start Menu.
- Connect to your server.
- If you did not select Mixed authentication mode during installation, right-click on your server and select **Properties**. If you already picked Mixed mode during the installation, skip to step 6.
- Open **Security** page and select **SQL Server and Windows Authentication Mode**.



Figure 3 - Server Properties: Security

- Click on **OK** to close the properties.
- Expand the tree under your connected SQL server and open the **Security** folder.
- Right-click on the **Login** folder and select **New Login**.
- Enter a login name and select the option for **SQL Server authentication**.
- Give the user a password and confirm it.

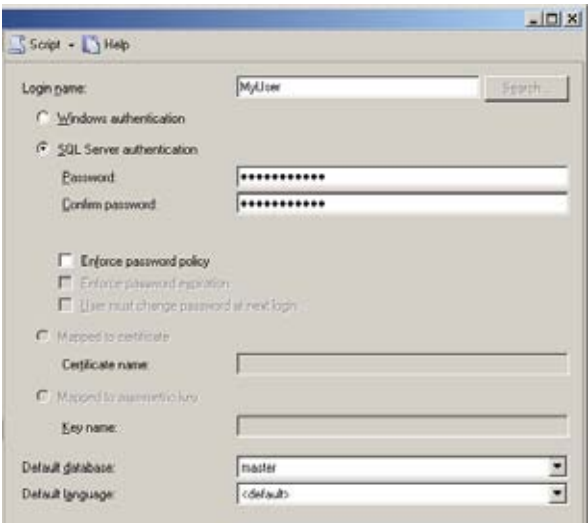


Figure 4 - New Login Dialog

- Make any other necessary changes to the account and assign it an appropriate role.
- Click on **OK** to complete the new login creation.
- Restart the database service.
- Disconnect from the server and try to reconnect with your new login to ensure it works.

Starting SQL Browser service

The SQL Browser service is necessary to allow you to pick this instance of SQL from the dropdown list of other machines.

Like enabling remote connections, starting the SQL Browser service can be done in SQL Server Configuration Manager or SQL Server Surface Area Configuration. This section will describe how it is done using the SQL Server Surface Area Configuration.

1. Open **SQL Server Surface Area Configuration** application from the Microsoft SQL Server group in Start Menu.
2. Click on **Surface Area Configuration for Services and Connections** and select **SQL Server Browser** item in the tree on the left.



Figure 5 - Surface Area Configuration

3. Make sure it is **running** and the **Startup type** is set to **Automatic**.

NOTE: If you are using SQL Server 2008, you may not find the Surface Area Configuration. In this case, you can use either the SQL Server Configuration Manager or the Windows Services Manage to make the service automatic.

Creating a Data Source to a Remote SQL

1. Go to Control Panel → Administrative Tools and open the **ODBC Data Source** dialog.
2. Select the **Machine Data Source** tab and click “**New...**”
3. In the Create New Data Source window, select to create a **System Data Source** and click “**Next.**”
4. Select **SQL Native Client** in the driver menu and click “**Next**”, and then click “**Finish**”.



Figure 6 - SQL Native Client

NOTE: If you do not see the SQL Native Client in the list you can download the **Microsoft SQL Server Native Client** from Microsoft’s web site.

5. In the Create a New Data Source to SQL Server window, enter a name for this ODBC connection and enter a description as desired.
6. In the Server drop down list, select the server you want to connect to. Click “**Next**”.

NOTE: Only servers that are running **SQL server browser** will be listed. How to run SQL server browser is described in the previous section.

7. Select **Verify with SQL Server authentication using a login ID and password entered by the user**.
8. Fill out the name and password of the SQL user you created earlier.
9. Click “**Next**” twice.
10. If it is not already selected, change the language of the SQL Server system messages to English.
11. Hit Finish.
12. A confirmation window will open. Test the data source connection by clicking on the “**Test Data Source**” button. Click “**OK**” when you are done testing.