

Description: Guide to SQL 2005 database server installation and configuration

OS Requirement: Win 2000 with SP4, 2000 Server with SP4, 2003 Server with SP4, or XP Pro with SP2

General Requirement: At least 1 GB RAM

Introduction

This guide should help you to setup remote communication to any edition of SQL server 2005 and will give you some more tips in order to make it working properly and smoothly with your GENESIS32 applications.

You should note that there are many editions of SQL server 2005. In this article we will distinguish only between SQL Express – the free SQL Server 2005 edition which is the successor to MSDE – and others editions. Comparison of the various editions can be found on Microsoft website here: www.microsoft.com/sql/editions.

SQL Server 2005 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 2005 **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 take 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 it is but you will need to refer to this name when accessing the server. For simplicity you can change this to 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 in SQL Server 2005.

How to manage SQL server 2005

There are three major configuration tools for SQL server 2005. **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 SQL Server 2005 as a part of Analysis Tools. For a SQL Express installation you can download an Express version of Management Studio for free from the official Microsoft website.

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 document 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 2005 group in the Start Menu.
2. Expand SQL Server 2005 Network Configuration and click on the **Protocols** item of your server. In the right 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.

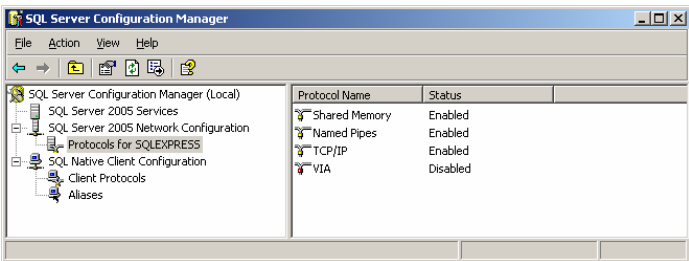


Fig 1: SQL Server Configuration Manager

4. You need to restart the database engine so 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

1. Open **SQL Server Management Studio Express** from Microsoft SQL Server 2005 group in Start Menu.
2. Connect to your server.
3. Right-click on it and select **Properties**
4. Open **Connections** item and verify that **Allow remote connections to this server** is checked.

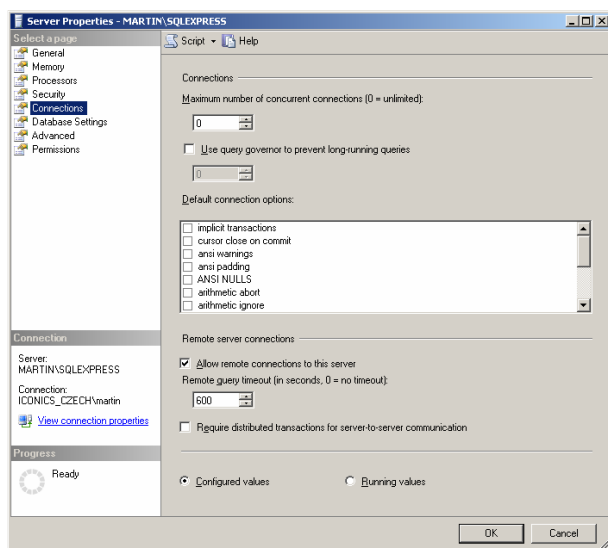


Fig 2: Server Properties - Connections

5. Click **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 2005 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 logon information.

1. Open **SQL Server Management Studio Express** from Microsoft SQL Server 2005 group in Start Menu.
2. Connect to your server.
3. 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.

4. Open **Security** page and select **SQL Server and Windows Authentication Mode**.

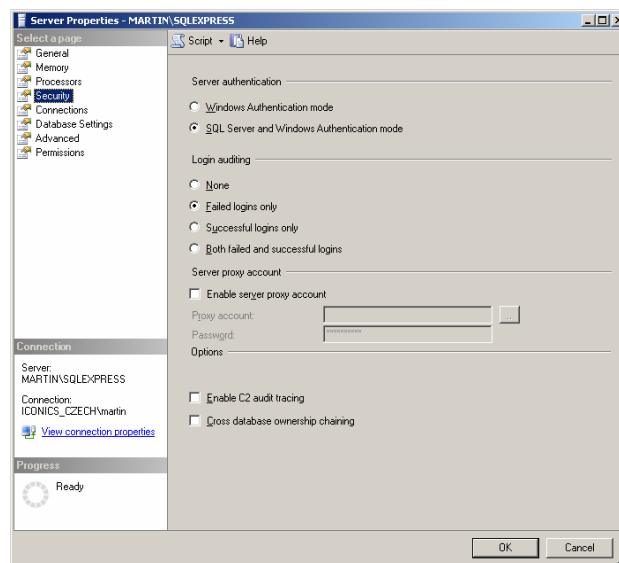


Fig 3: Server Properties - Security

5. Close the properties.
6. Expand the tree under your connected SQL server and open the **Security** folder.
7. Right-click on the **Login** folder and select **New Login**.
8. Enter a name.
9. Check the option for **SQL Server authentication**.
10. Give the user a password and confirm it.

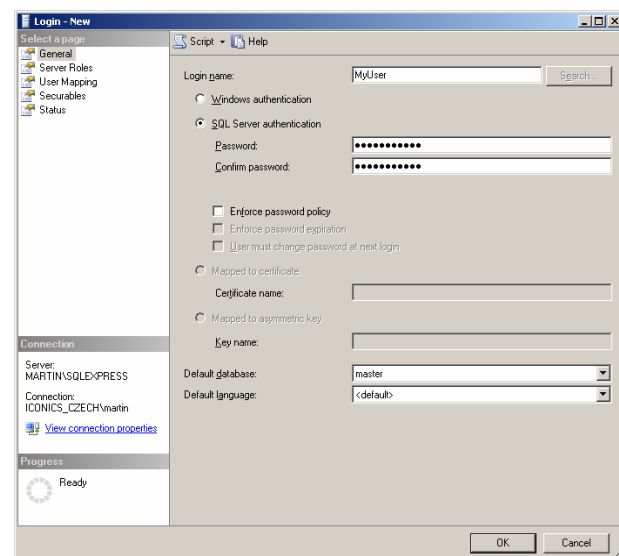


Fig 4: New Login dialog

11. Make any other necessary changes to the account and assign it an appropriate role.

12. Click OK.
13. Restart the database service.
14. 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 document will describe how it is done using the SQL Server Surface Area Configuration.

1. Open **SQL Server Surface Area Configuration** application from Microsoft SQL Server 2005 group in Start Menu.
2. Click on **Surface Area Configuration for Services and Connections**.
3. Select **SQL Server Browser** item in the tree on the left.

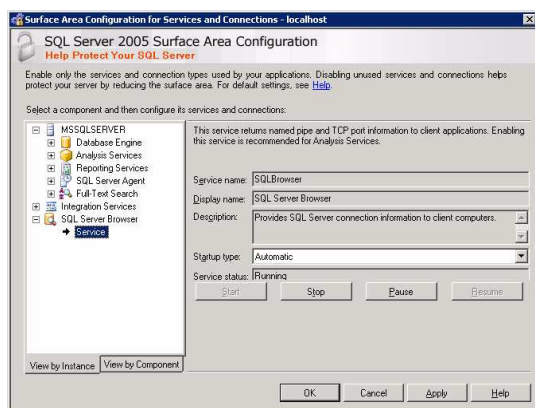


Fig 5: Surface Area Configuration

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

Creating a data source to a remote SQL Server 2005

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”**.

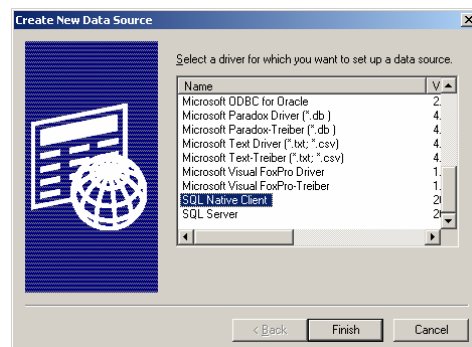


Fig 6: SQL Native Client

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