InLoox

Project management - integrated into Outlook

InLoox 6.x configuration guide for Microsoft SQL Server

An IQ medialab / OptCon Whitepaper

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You can find up-to-date information at **http://www.inloox.com**

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General information

This document describes the steps to successful configure and start-up a Microsoft SQL Server 2005. Furthermore a suitable system configuration is described for using InLoox. A Windows Server 2003 is used as example platform. This configuration guide is also valid for Windows 2008 Server. (Surface Configuration is integrated in SQL Server Configuration Manager)

SQL Server Installation

Obtain a SQL Servers 2005 Edition

1. If you neither do have a Microsoft SQL Server 2005 licence nor an appropriate installation medium, **Microsoft SQL Server 2005 Express Edition** is available free of charge under following address:

   http://www.microsoft.com/downloads/details.aspx?FamilyID=220549b5-0b07-4448-8848-dcc397514b41&displaylang=en

   Important: Please note that off-line replication is not possible with Microsoft SQL Server 2005 Express Edition. If you like to use the InLoox off-line availability, a **Workgroup**, **Standard** or **Enterprise Edition** of Microsoft SQL Server is necessary. You find an overview of the SQL Server versions capability characteristics under:

   http://www.microsoft.com/sql/prodinfo/features/compare-features.mspx

Initial installation of SQL Server 2005 on Windows Server

1. Microsoft offers extensive documentation to initial considerations before the installation under the address http://technet.microsoft.com/en-gb/library/ms143719.aspx. In the following a **standard installation** will proceed. Changes of the standard installation are not considered in this document.
2. Install the Microsoft SQL Server 2005. You find a step by step guide under:

   http://technet.microsoft.com/en-gb/library/ms143219.aspx

Check installation

Check after installation whether the SQL Server 2005 Service is executed:

1. Double click on **Computer Management** in the **Control Panel** >> **Administrative Tools**
3. Click on **Services and Application >> Services**
4. Look for the indicator name of the appropriate service. According to standard the service carries the names **SQL Server (MSSQLSERVER)**

Opening Ports

Please note that opening ports can lead to a **safety risk** in your network. Examine necessary safety precautions in advance before opening ports!

1. Make sure that the database Server ports are not *blocked*. Examine the firewall properties of the server as well as network hardware**.**

   The standard port of Microsoft SQL Server is: **1433**

SQL Server Configuration

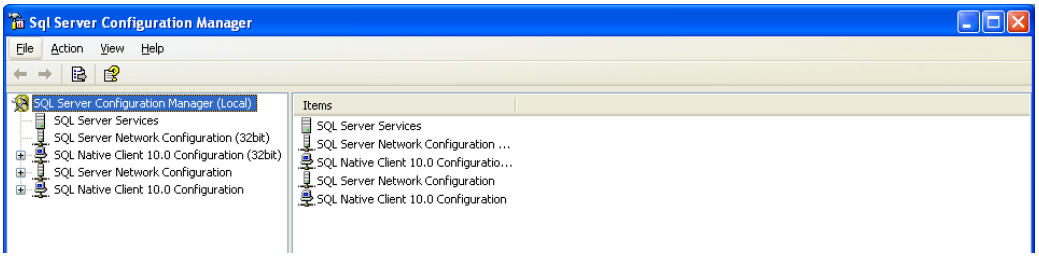
If you try to connect from a remote computer or a client to an instance of Microsoft SQL Server 2005 an error message might be appear:

This problem can occur with any program, which you use for connecting to SQL Server. Follow this guide, in order to solve the problem.

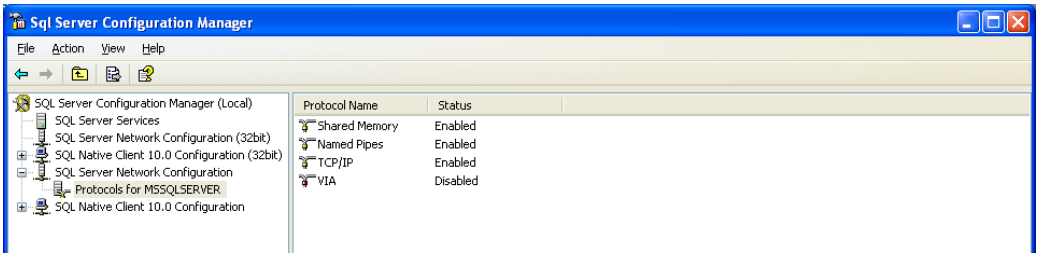
Check the SQL Server Configuration Manager settings

To achieve that the SQL Server instance is reachable on the network, you have to configure and switch on the network protocols if necessary. Proceed as follows:

1. Click on **Start** >> **Programs** >> **Microsoft SQL Server 2005** >> **Configuration Tools**
2. Afterwards click on **SQL Server Configuration Manager**



3. Open the branch **SQL Server Network configuration** in the left tree structure and click on **Protocols for MSSQLSERVER**

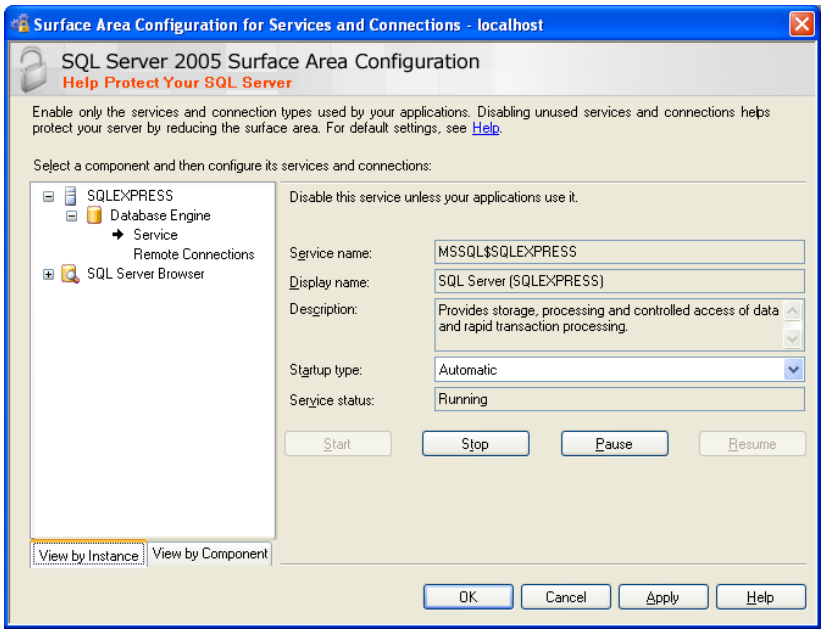


4. Right click on **TCP/IP** to activate this protocol
5. Deactivate **Named Pipes** the same way
6. If a message requests to start the SQL service again, click on the node **SQL Server 2005-Services,** stop the **SQL Server** and **SQL Browser** and restart these thereafter. Make sure that both services are running at the end.

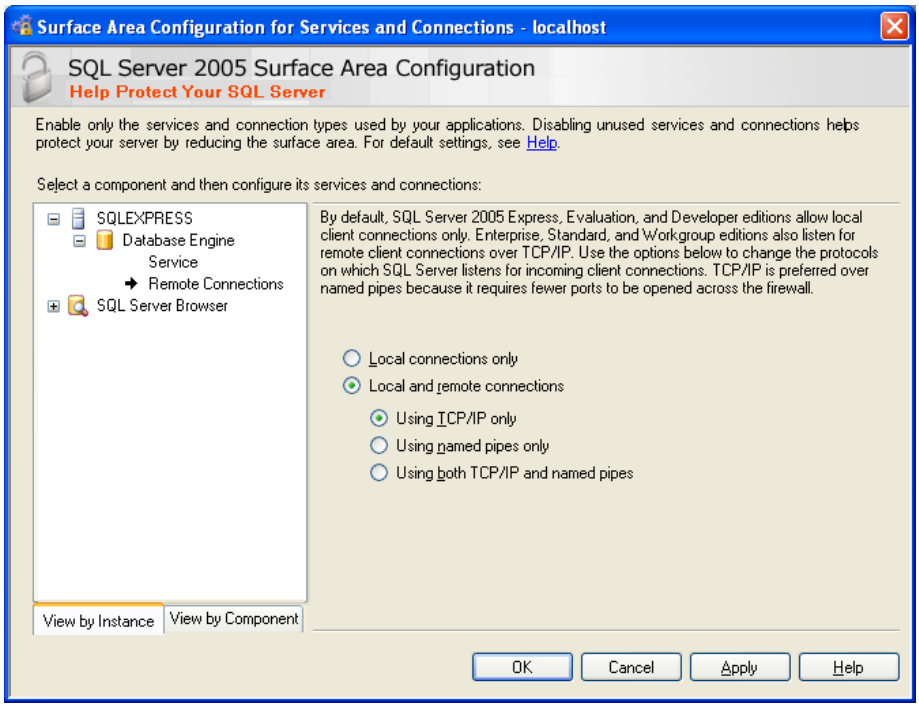
Surface configuration

1. Click on **Start** >> **Programs** >> **Microsoft SQL Server 2005** >> **Configuration Tools**
2. Click on **SQL Server Surface Configuration** afterwards
3. The **SQL Server 2005 Surface Area Configuration** will open

4. Click on **Surface Area Configuration for Services and Connections** in the bottom area
5. The **SQL Server 2005 Surface Area configuration** will open



6. Extend the node **Database engine** and click on **Service**
7. Change the **Startup type** to **Automatic** if necessary. Confirm with **Apply**
8. Click on **Remote Connections** afterwards



9. The standard settings of SQL Server Express Edition is **Local connections only**
10. Change the settings to **Local and remote connections** >> **Using TCP/IP only**
11. Confirm with **OK**

Authorizations configuration

After the Microsoft SQL Server installation on a Windows Server are several SQL security groups in the Active directory. The membership in one of these groups permits the access to Microsoft SQL Server.

Add all users, who should receive access to InLoox, into the appropriate group:

1. On the Server open: **Start** >> **Programs** >> **Administration** >> **Active directory user and - computers**
2. Edit the appropriate user (e.g. *„Jon Average "*) or the appropriate user group (e.g. *„Coworker selling "*)
3. The dialog **Options of…** appears. Change to the register **Member of**
4. Click on **Add**. The **group select** dialog appears
5. Enter the text **SQLServer2005MSSQLUser** (for SQL Server 2005) and/or **SQLServer2008MSSQLUser** (for SQL Server 2008) into the input field **object names**. Click on **check names**. The name should be resolved as follows:

   `SQLServer2005MSSQLUser$SERVERNAME$MSSQLSERVER` (for SQL Server 2005)
   `SQLServer2008MSSQLUser$SERVERNAME$MSSQLSERVER` (for SQL Server 2008)

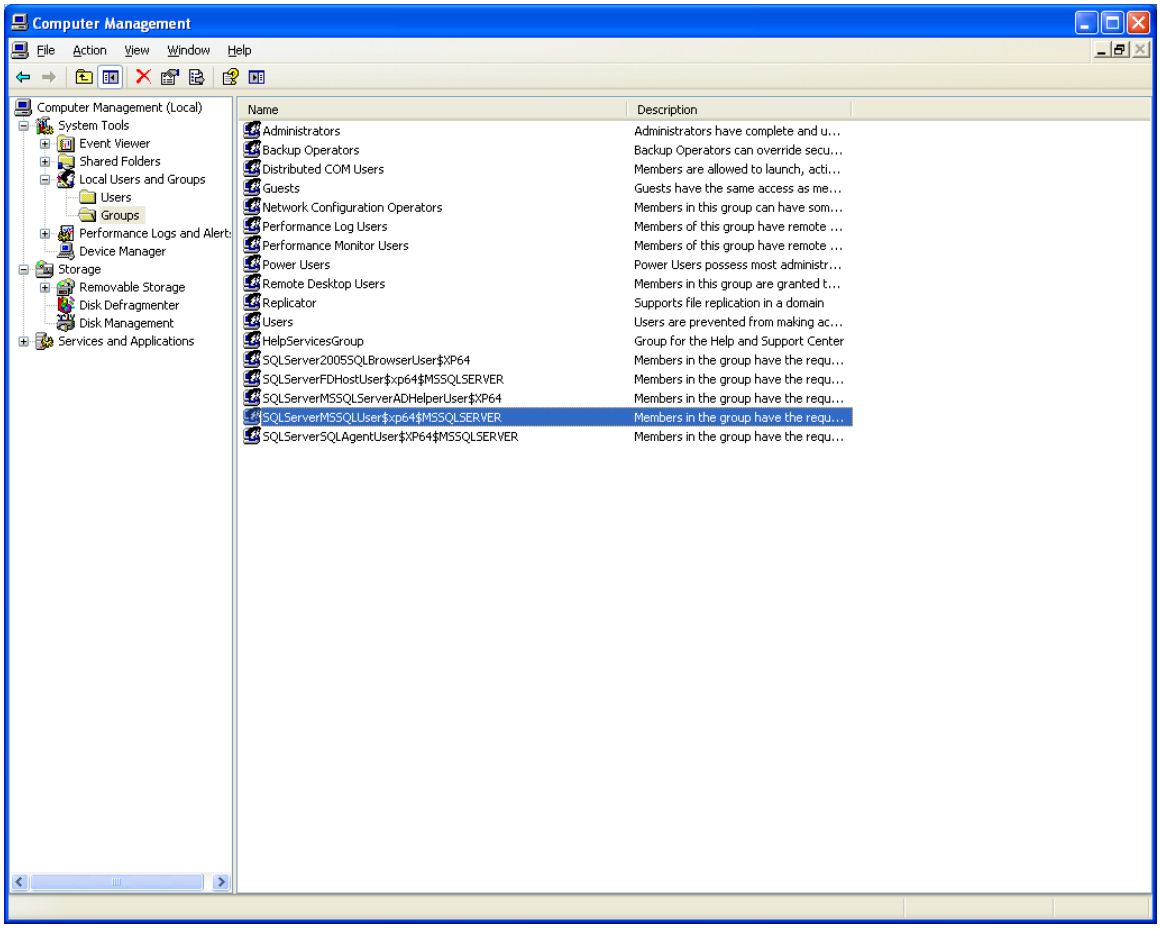
   The **SERVER NAME** stands for the name of the SQL Server or the primary domain controller

6. Confirm the opened dialog fields with **OK**

If you do not find the SQL user groups in the Active Directory of the Server, this can have different causes:

- You are located on a member Server of a domain without independent Active directory. Proceed in this case as follows:

  After MS SQL Server installation on a Windows 2003 member Server without Active Directory stand the same groups are available under **Start** >> **Programs** >> **Administration** >> **Computer Administration** >> **System** >> **Local users and groups** >> **Groups,** which are described on the previous page.



  Configure the **group membership** as described above

- If you cannot find the SQL Server user group on the Server, you also have the possibility of creating a new user group manually. Consider the chapter:

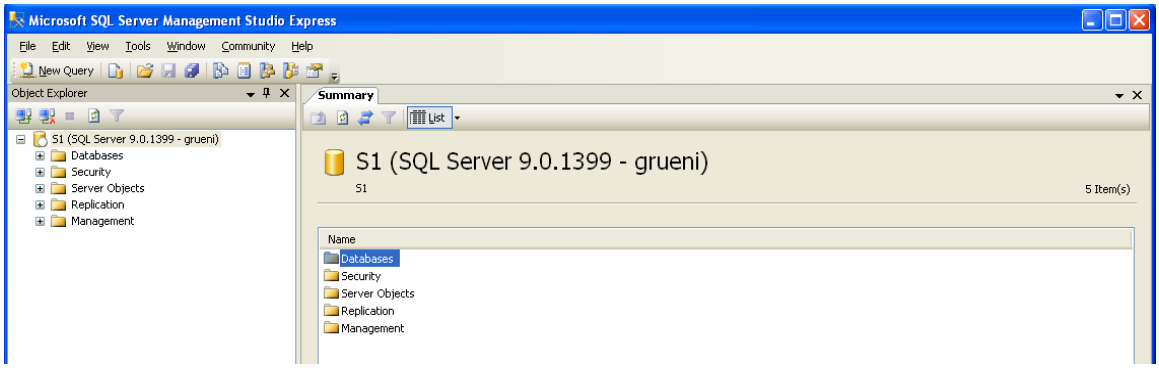
  Extended configuration options / troubleshooting
  Authorization configuration with SQL Server Management Studio

Extended configuration options / troubleshooting

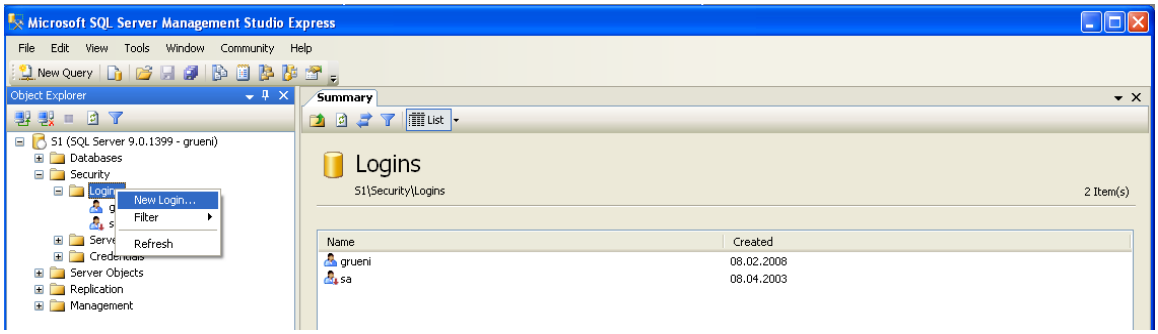
Authorization configuration with SQL Servers Management Studio

1. Create a new user group **InLoox** in the Active directory
2. Add all **InLoox users** to this group
3. Click on **Start** >> **Programs** >> **Microsoft SQL Server 2005** >> **SQL Server Management Studio**
4. The **Connect to Server** dialog appears

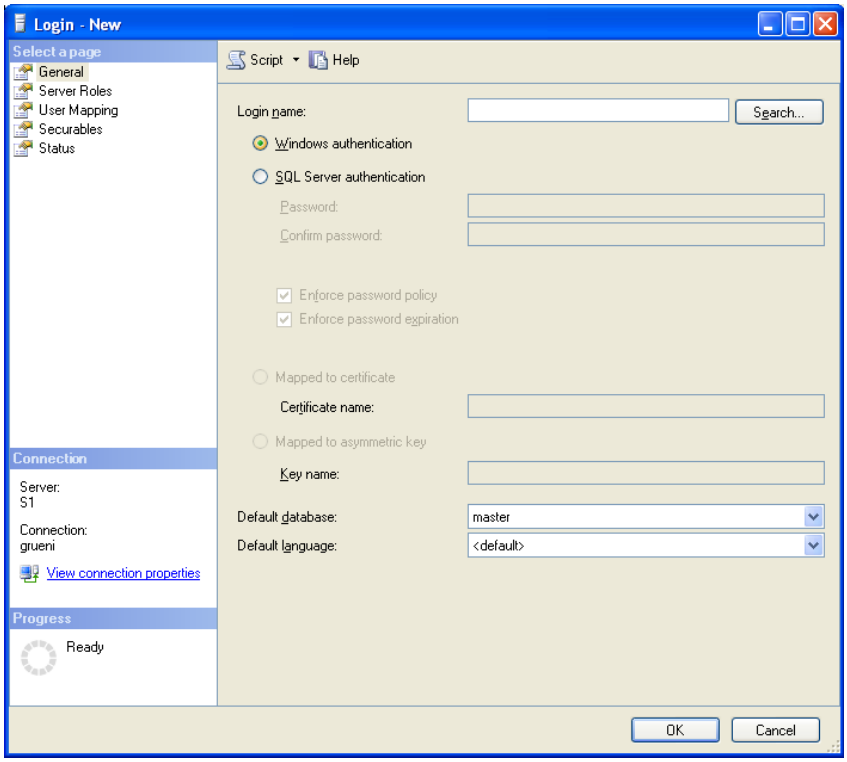
5. Select the appropriate Server under **Server name**
6. Click on **Connect** afterwards
7. Microsoft SQL Server Management Studio indicates that it is **connected**



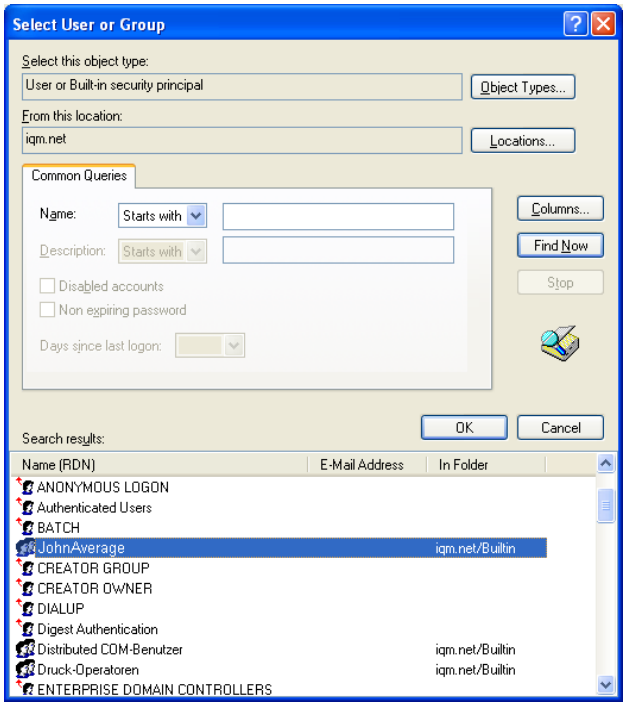
8. Open the **Security** node
9. Click on **Login** with the right mouse button



10. Click on **New Login**
11. The window **Login - New** appears

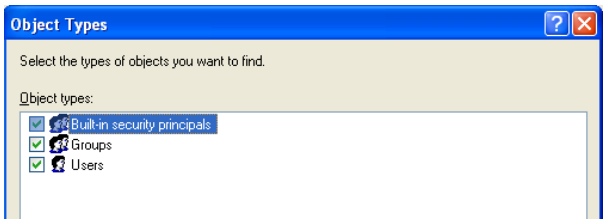


12. Click on **Search**
13. Click on **Find Now** in the new dialog

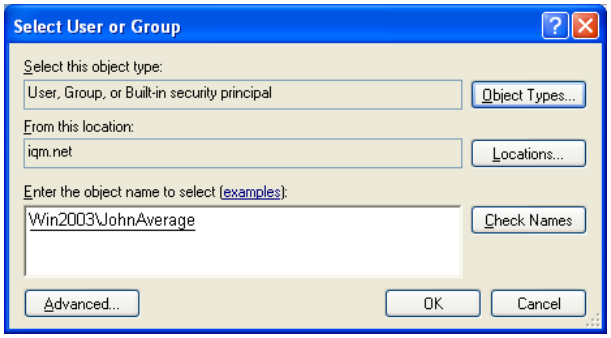


14. Look for the **InLoox group** in the Active directory or in the **computer administration** under groups.

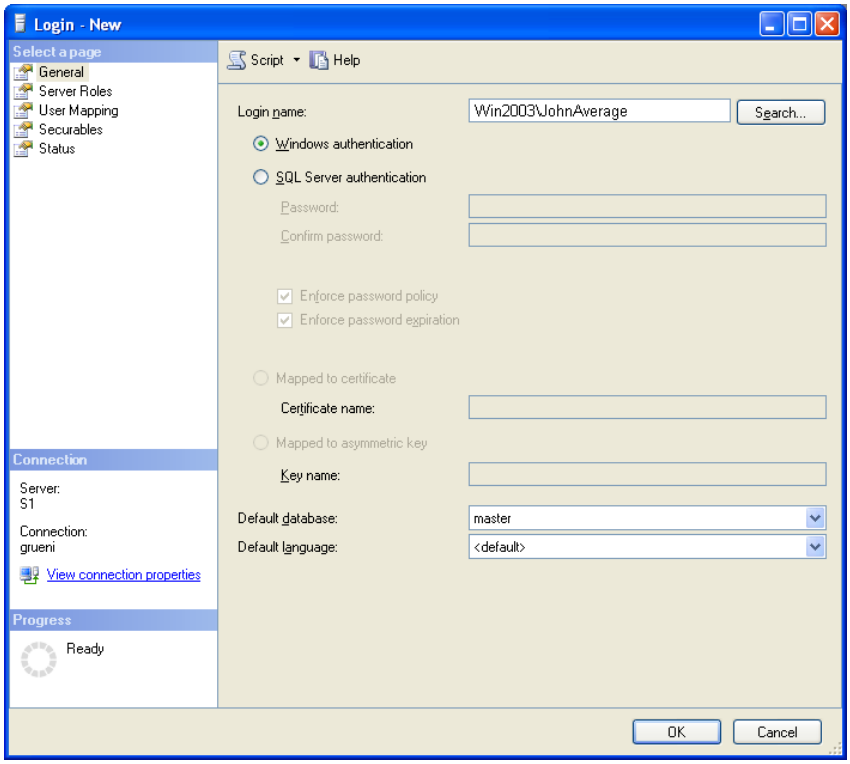
15. Click on **search** and look for the **object names**



16. Make sure that all **object types** are selected. Occasionally groups are not activated and you have to set the appropriate option here, so that you can see the groups



17. The group was found and can be confirmed with **OK**



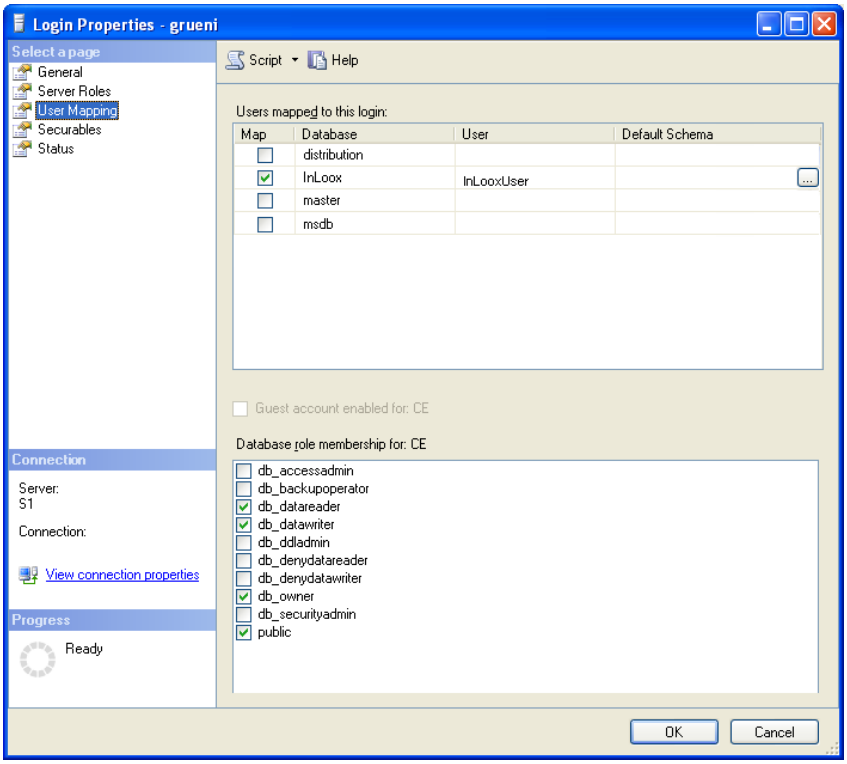
18. The **group name** is inserted

19. Make sure that the option **Windows authentication** is selected. In cases of exception, e.g. if the client is not merged in a domain, however you have to use the **SQL authentication**. Therefore, an appropriate change of the SQL Server configuration is necessary, which can be set as follows:

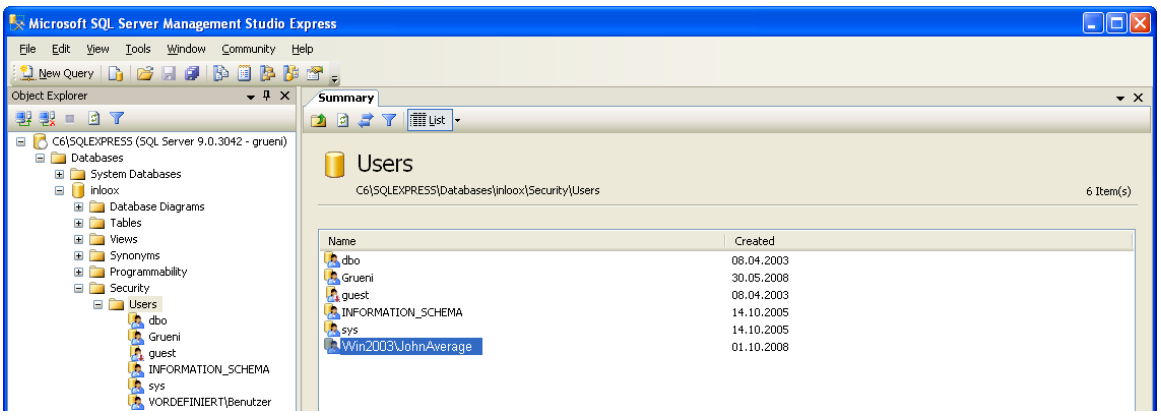
    - Click with the right mouse button in the left area on **SQL Server**, and then click on **Properties**.

- Change the **Server authentification** on register **Security** >> **Server authentication** to **SQL Server and Windows Authentication mode** in the **SQL Server Properties** dialog and then confirm with **OK**
- For details consider the Whitepaper “Configure Microsoft SQL Server for SQL-authentication”

20. Click on **User Mapping** afterwards

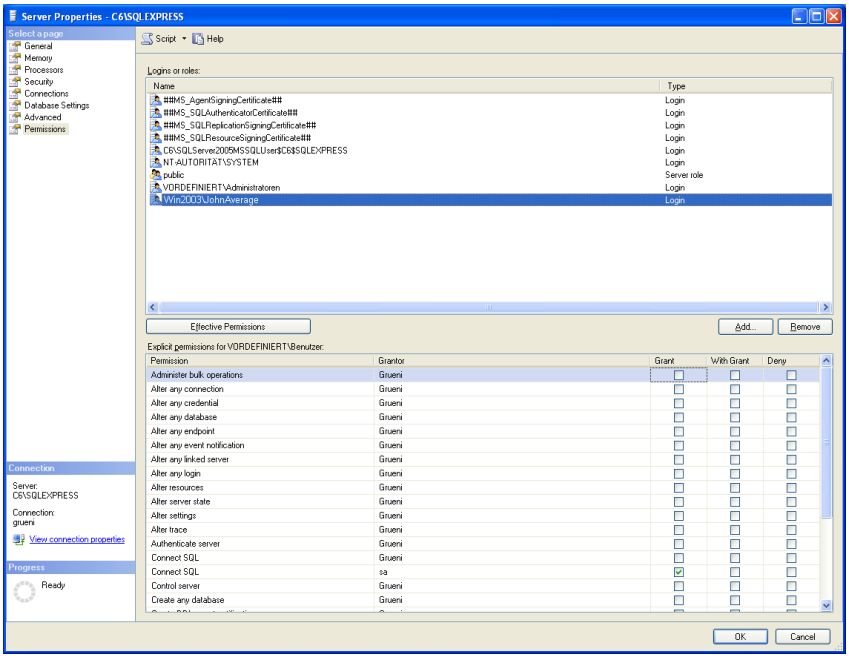


21. **Users**, who are assigned to this logon, see all SQL databases on this Server. Activate the InLoox database here. If this database does not exist yet, publish the InLoox database with help of the **InLoox Setup**
22. Subsequently, you have to assign the permission **db_datareader, db_datawriter** and **db_owner** to the database role for the **InLoox** database. (**db_owner** is necessary o use user define fields)
23. With this approach, the appropriate group is registered in the **Databases** >> **InLoox** >> **Security** >> **User** node at the same time



24. At the end you still have to click on the **Server name >> Properties** with the right mouse button

25. Thereafter click on the **Permissions** node



26. Here the appropriate **group** must be also registered
27. Perhaps it is necessary to restart the **SQL Server Service**

Configuration for Clients outside a domain

Please note that opening ports can lead to a **safety risk** in your network. Examine the necessary safety precautions before opening ports!

Opening Ports

If the **SQL Server** is located on a Windows XP-computer with SP2 or Windows Vista, which does not belong to an Active Directory domain, open the appropriate ports for the SQL Server and SQL Browser Service.

Proceed to the open ports as follows:

1. Select **Windows Firewall** in the **Control Panel**
2. Activate **File and Printer Sharing** in the exception list, because the control over Named Pipes will work that way (port 445). This port is present in the exception list according to the standard.
3. Click on register **exceptions on port**, and share the **TCP port 1433**. This port will assign for the first SQL Server instance according to the standard.
4. Open the port for the **File and Printer Sharing** too, in order to access over Named Pipes to the SQL Server(**port 445**, already in the exception list available)

SQL Server Browser Service activation

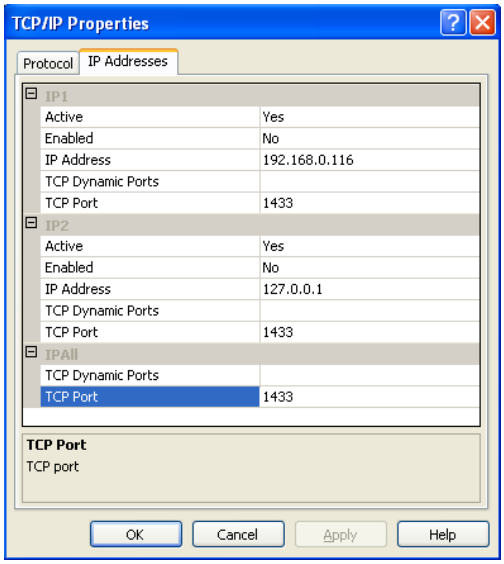
If you execute the SQL Server 2005 with an instance name and you do not use a special TCP/IP port number in your connecting character sequence, you have to activate the SQL Server Browser Service, in order to allow remote connections. SQL Server 2005 Express is installed e.g. with the standard instance name <**computer name> \ SQLEXPRESS**.

You have to activate the SQL Server Browser Service only once, independent of the number of SQL Server 2005 instances, which you would like to execute. Proceed as follows, in order to activate the SQL Server Browser Service:

1. Click on **Start** >> **Programs** >> **Microsoft SQL Server 2005** >> **Configuration Tools**
2. Click on **SQL Server Surface Configuration** afterwards
3. Click on **Surface Area Configuration for Services and Connections** at the SQL Server 2005-surface configuration page
4. Click on **SQL Server Browser** at the **Surface Area Configuration for Services and Connections** page and select **Automatic** as starting type. Afterwards confirm with **Apply**
5. Click on **Start** and afterwards on **OK**

Note: If you execute the SQL Server Browser Service on a computer, the computer shows the instance names and the connection information of all SQL Servers instances, which are executed on the computer. The risk can be reduced, by not activating the SQL Server Browser Service and connect directly over an assigned TCP port to the SQL Server instance. The direct connection to an instance of SQL Server over a TCP port cannot be handled in the context of this article.

After you have allowed remote connections to the SQL Server, you have to configure the SQL Server 2005 Express for using TCP port 1433, which is the standard Microsoft SQL Server port. You have to start the **SQL Server Configuration Manager**, navigate to the **SQL Server 2005 network configuration** node and select the protocols for SQLEXPRESS and the TCP/IP protocol. Click on register IP-Addresses in TCP/IP protocol and write **port 1433** in the TCP port field under the section IP All.



Create exceptions in the Windows Firewall

These steps are valid for the version of the Windows Firewall, which is contained in Windows XP Service Pack 2 (SP2) and in Windows Server 2003. If you use another firewall system, consult the appropriate firewall documentation.

If you use a Firewall on a computer with SQL Server 2005, external connections to SQL Server 2005 are blocked, unless SQL Server 2005 and SQL Server Browser Service can communicate through the Firewall. You must provide an exception for each instance of SQL Server 2005, which accept remote connections. In addition, you also need an exception for the SQL Server Browser Service. SQL Server 2005 uses an instance ID as a component of the path, if you install the program files. Determine the correct instance ID, in order to provide exceptions for the individual instances of SQL Server.

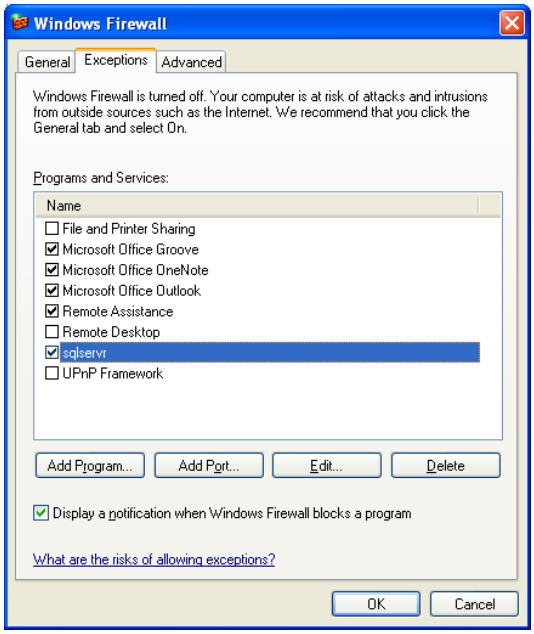
Proceed as follows, in order to determine an instance ID.

1. Click on **Start** >> **Programs** >> **Microsoft SQL Server 2005** >> **Configuration Tools**
2. Click on **SQL Server Configuration Manager** afterwards
3. Click on **SQL Server Browser Service** at the **SQL Server Configuration Manager** in the right window area
4. Right click on the **instance name** in the main window and choose **Property**
5. Click on register **Extended** at the **Property** page of the SQL Server browser
6. Search for the instance **ID** in the **Property List**, and click on **OK**

Create an exception for SQL Server 2005 in the Windows Firewall

Proceed as follows, in order to provide an exception for SQL Server 2005 in the Windows Firewall:

1. Click on **Start >> Settings >> Control Panel >> Windows Firewall**

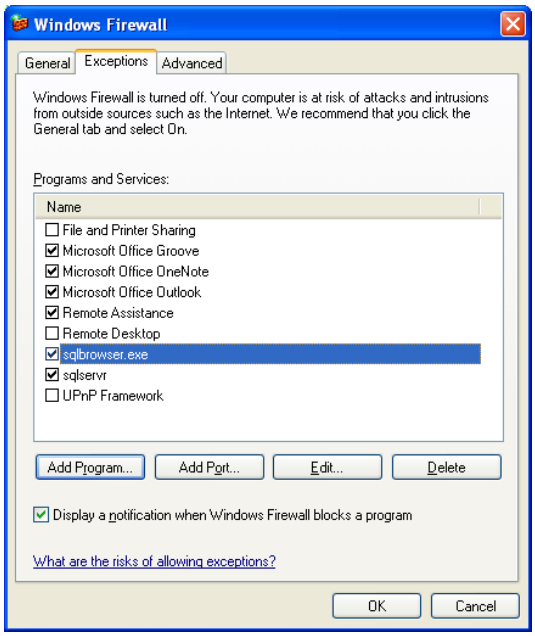


2. Click on the register **Exceptions** in the **Windows Firewall**
3. Click on the **Add Program** button and afterwards on **Browse**
4. Click on the executable program "**C:\Program Files\Microsoft SQL Server \ MSSQL.1 \ MSSQL \ Binn \ sqlservr.exe**"
5. Click on **Open** and afterwards on **OK**
6. Subsequently, the file is specified on register **Exceptions**

Create an exception for the SQL Server Browser Service in the Windows Firewall

Proceed as follows, in order to provide an exception for the SQL Server Browser service in the Windows Firewall:

1. Click on **Start** >> **Settings** >> **Control Panel** >> **Windows Firewall**



2. Click in the **Windows Firewall** on the register **Exceptions**
3. Click on the **Add Program** button and afterwards on **Browse**
4. Click on the executable program **"C:\Program Files\Microsoft SQL Server \ 90 \ Shared \ sqlbrowser.exe"**
5. Click on **Open** and afterwards on **OK**
6. Subsequently, the file is specified on register **Exceptions**

Check list for error solution

For problems please examine:

- Is the **SQL Server** and **SQL Browser Service** execute on the Server?
- Are **Remote Connections** and **TCP/IP** activated in the surface configuration?
- Is the authentication (Windows/SQL with Windows) correctly set in **SQL Server Management Studio** under **Security** in the **Server Properties** of the SQL of Server?
- Is the group in **SQL Server Management Studio** under **Security** >> **Logins** set correctly, in which the InLoox users are entered? Does the registration have the membership **db_datareader, db_datawriter** and **db-owner** in the database roles?
- Is the **port 1433** open in the Firewall?
- Did a restart of the clients take place?
- Did a restart from **SQL Server** take place?