

LADSPPLUS

and

LADS

for Networks

for 'Thin Client' deployment

Version 6.03-N
Dec 2010

Installation Guide for SQL Server 2005 Express *

* with notes on using full versions of Microsoft ® SQL Server including SQL Server 2008 R2 ® instead of the Express Edition provided on your CD

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Lucid Research Limited

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1. Pre-installation reading

Technical requirements

Because technical requirements may change we recommend you visit the Microsoft website link below for full details of hardware and software specification for hosting Microsoft ® SQL Server ® 2005 Express Edition.

<http://support.microsoft.com/kb/910229>

DOMAIN CONTROLLERS

Please note the information below concerning deployment on **Domain Controllers** which comes from the Microsoft web link above:

Security Note We recommend against running SQL Server Express on a domain controller.

It is possible to install SQL Server Express on a Windows domain controller; however, it cannot run on a Windows Server 2003 domain controller as Local Service or Network Service.

SQL Server service accounts should run as Windows domain user accounts. It is also possible to install SQL Server service accounts to run as Local System, but this option is not recommended.

See this link to view our help document which shows how to deal with running SQL Server services on a Domain Controller..

[http://www.lucid-research.com/documents/manuals/support/Lucid For SQL Networks Troubleshooting Guide.pdf](http://www.lucid-research.com/documents/manuals/support/Lucid%20For%20SQL%20Networks%20Troubleshooting%20Guide.pdf)

COMPONENTS NEEDED:

Before installing SQL Server 2005 Express Edition, please ensure the components in the box below have been installed on the server or workstation which will host it. Both can be freely downloaded from Microsoft – try doing a web search with the name of the component.

<p>.NET Framework 3.5 SP1 Microsoft Core XML Services (MSXML) 6.0</p>

At the time of creation of this Guide, the minimum requirements for running *LADS Plus* on a workstation were:

Pentium III Compatible or higher
Minimum: 500 MHz
256 Mb RAM or higher
Windows 2000, XP Pro and Vista
Sound Card and headphones
Desktop area: 1024 x 768 pixels or greater

Checklist of steps for deploying *LADS (or LADS Plus)* onto your network

Please follow the steps in the order below to avoid problems and possible runtime errors!

1. Read the appropriate section of this guide for each step

ON YOUR SERVER

2. Install and configure the SQL Server 2005 Express database engine
3. Install SQL Server Management Studio Express (**not essential**)
4. Install the SQL Native Client Driver (**if not already present**)
5. Install the *LADS (or Plus)* Application software
6. Launch the *LADS (or Plus)* Administration Module for the first time to start the *Database Installation Tool* which attaches the database.
7. Run the Application Administration Module again to register your serial number.

ON EACH WORKSTATION

8. Install the SQL Native Client Driver (**if not already present**)
9. Install the system files for workstations (MSI).
10. Set up a Share on the Server
11. Create a shortcut pointing at the *LADS (or Plus)* Test Module within the Share on the server and then try out a Test yourself.

NOTE:

This Guide covers our two similar software products, so it will either refer to LADS or LADS Plus throughout this guide. Screen pictures in the Guide will be 'snapshots' taken from either one of these two titles.

Software Overview

LADS (Plus) for Networks is designed for use in a networked environment, and closely follows the client-server model. Typically you would have a server and multiple test stations (workstations). Note that you can access *LADS* from an unlimited number of workstations within your institution but the Lucid software licence agreement determines how many workstations are permitted to run *LADS* simultaneously.

MAIN APPLICATION

The *LADS* application is installed onto a server from a single setup file. The server hosts *SQL Server 2005 Express Edition* (supplied free, courtesy of Microsoft ®) which embeds the software's database which is called *LADS*. You can also use an existing edition of *SQL Server 2005* or *SQL Server 2008*. 64 bit editions of the latter are now supported.

THIN CLIENT

A shortcut is manually set up on each workstation to run the *LADS* Test module or the *LADS* Administration module (if required). A small installer (.MSI) is provided to install various .OCX and.DLL system files on each workstation.

KEY FEATURES of Thin Client Version 6.03-N

- ◆ The client installer is a single small .MSI file for easy deployment.
- ◆ You don't need to manually configure an ODBC link on each workstation – an encrypted text file containing the DSN connection details will be hosted on the server.

Administrator

At least one Administration Station should be chosen on the network. This station hosts the Administration Module which is used to administer *LADS* and to view and print out reports generated by the software. The Administration Station should be sited in a secure location as it gives access to sensitive data.

Test stations

It is not standard practice to allow Users to view their report after they have completed the test suite, however, there is a useful option in version 6.03-N to allow this to happen.

Users can enter their name and date of birth and proceed to do the test, or an administrator can pre-register Users individually or in cohorts. Users can then access their tests using their name and date of birth for identity verification.

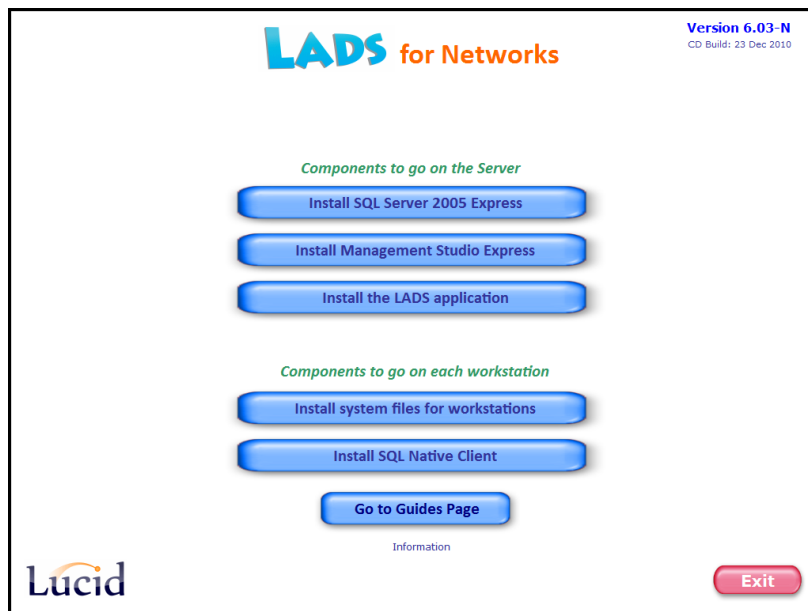
2. Setting up the database server

Your Software is supplied with SQL Server 2005 Express Edition ®, which has been made freely distributable by Microsoft ®. However, customers who already have the full version of Microsoft ® SQL Server ® 2005 or 2008 (including R2) on their server can still choose to have the LADS database attached to an existing Microsoft ® SQL Server instance.

In this event, skip the chapters in this guide which refer to installing the Database Engine and move on to Chapter 5. “Installing LADS on the server”.

Installing SQL Server 2005 Express

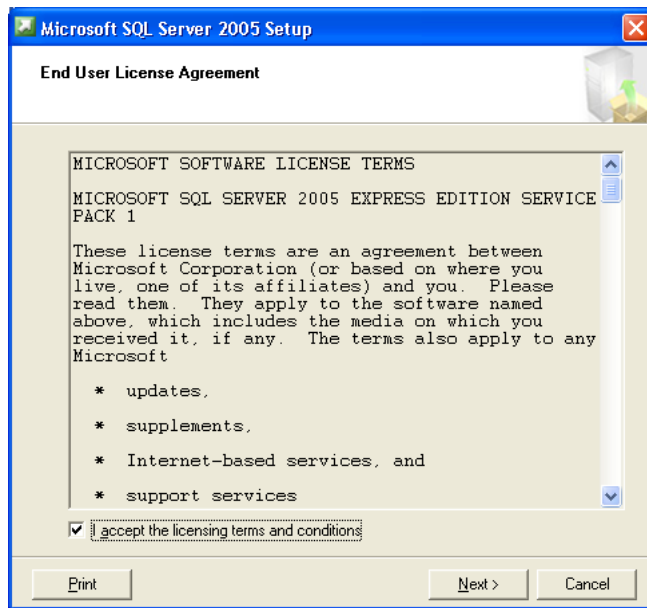
1. Before starting this step of the installation process it is essential that you log on to the local PC with *administrator privileges*.



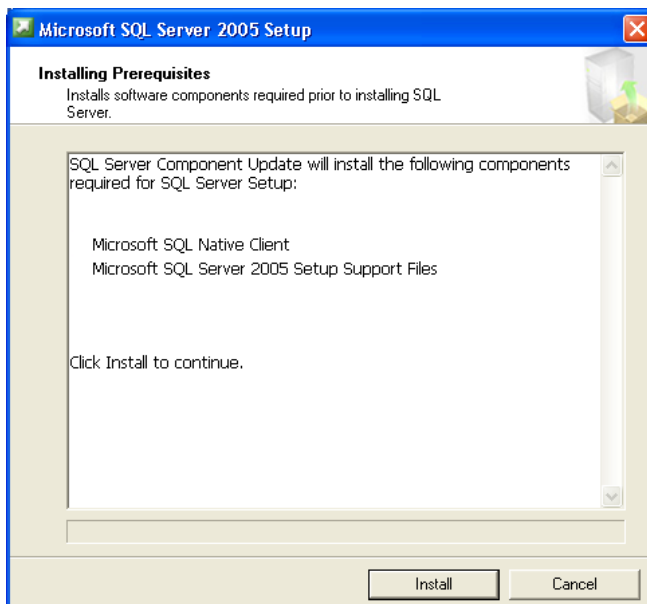
2. Next, insert the *LADS (or LADS Plus)* CD in the computer which will host the database. The Start-up menu (see picture above) should start automatically – if it doesn't then run the command `D : \SETUP` (where D is your computer's CD drive).

3. On the Start-up menu select “*Install SQL Server 2005 Express*”.

You will see the End User License Agreement, which you will need to read and choose to accept before choosing 'Next' to proceed with the installation.



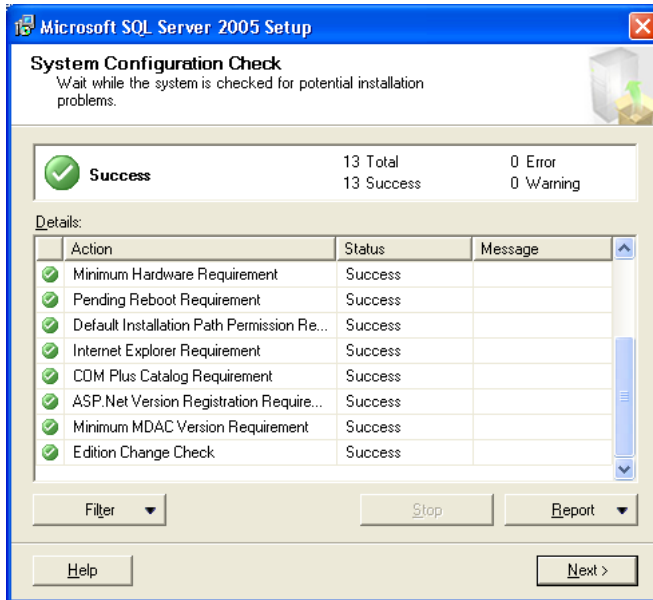
4. The screen shown below will now appear, click 'Install' to continue.



5. Click 'Next' on the Welcome screen as shown below.

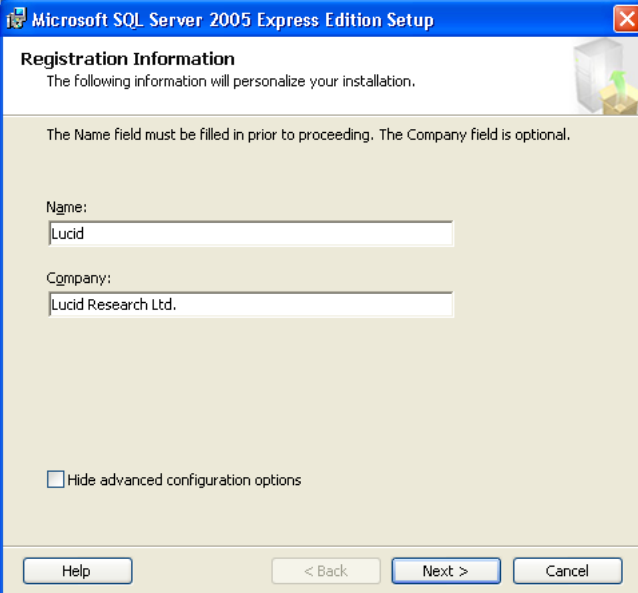


6. At this point the installer will do a System Configuration check to ensure that your target computer has sufficient hardware specifications and correct software components.



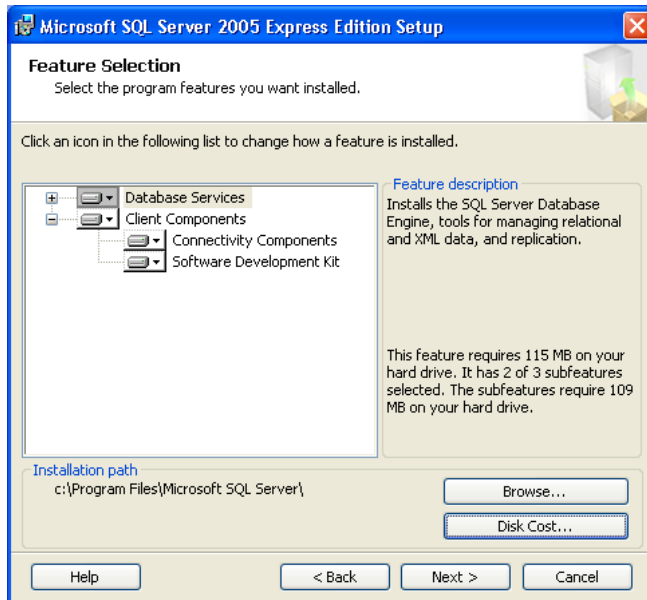
If the configuration check fails, it may be necessary to rectify any failures as appropriate, if practicable.

7. Assuming the computer has passed the System Configuration Check, a registration panel will be shown (below). The important thing to do on this screen is to clear (uncheck) the tick box marked '*Hide advanced configuration options*', otherwise the database engine will be installed with all its default options, which, as we will see later, may not be suitable.

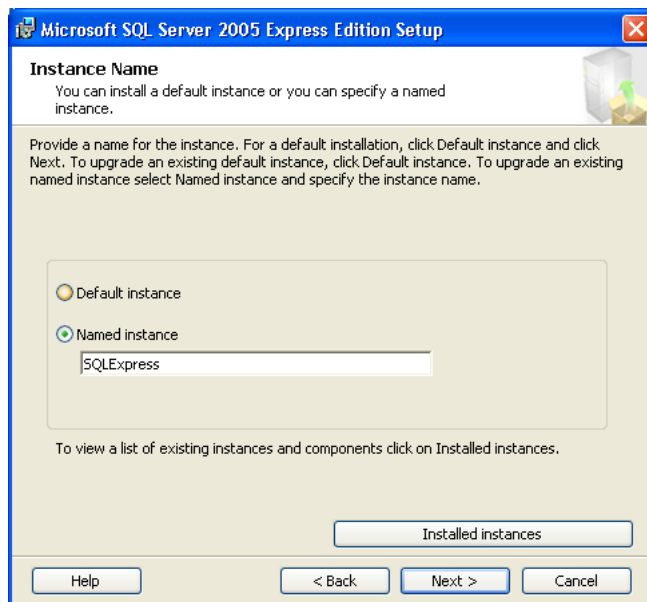


The screenshot shows the 'Microsoft SQL Server 2005 Express Edition Setup' window. The title bar is blue with the Microsoft logo and the text 'Microsoft SQL Server 2005 Express Edition Setup'. The main content area is titled 'Registration Information' and contains the following text: 'The following information will personalize your installation.' Below this, a note states: 'The Name field must be filled in prior to proceeding. The Company field is optional.' There are two text input fields: 'Name:' with the value 'Lucid' and 'Company:' with the value 'Lucid Research Ltd.'. At the bottom, there is a checkbox labeled 'Hide advanced configuration options' which is currently unchecked. The bottom of the window features four buttons: 'Help', '< Back', 'Next >', and 'Cancel'.

8. The next stage is to select the components which will be installed. Please select ALL components from Database Services and Client Components.

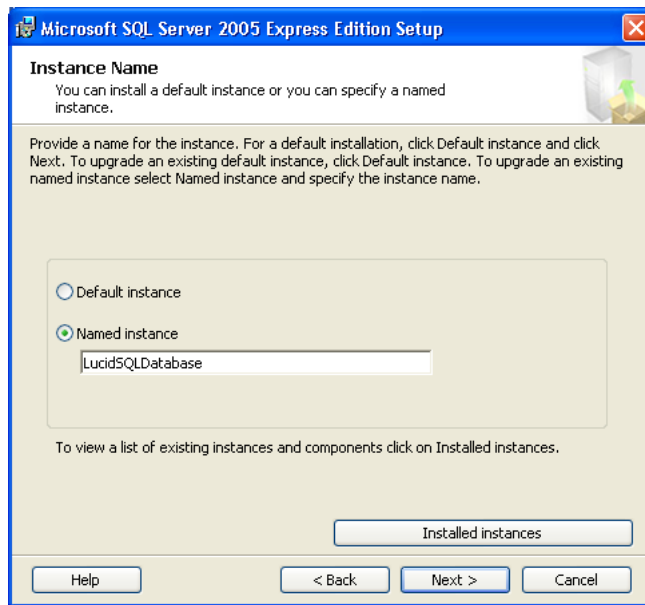


9. At this point you need to decide whether you will use the default instance name for the SQL Server 2005 Express (*SQLExpress*) or make up your own instance name. The screen below has the default instance.



10. A named instance has been entered below in preference to the default name; **this is Lucid's recommendation**. If in future you install some different software which can only use the default instance name, you should naturally be

in a better position if the Lucid software runs with its own instance name. The name chosen in this example is 'LucidSQLDatabase'.



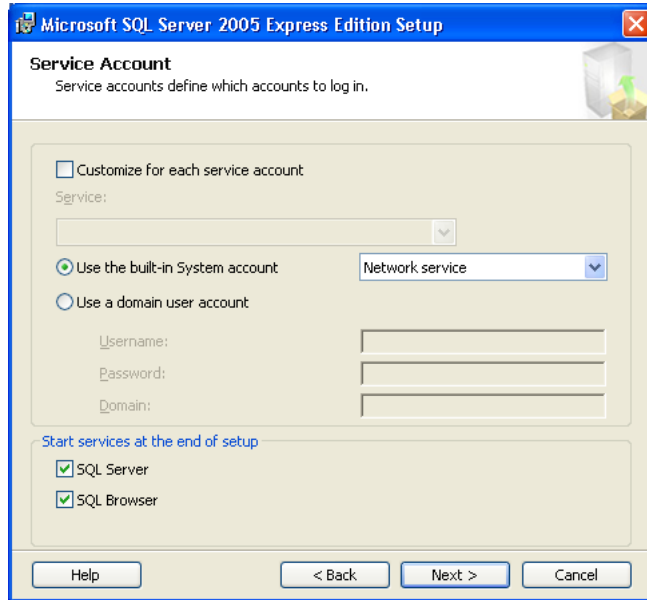
11. In the Service Account panel below, the default settings have been left selected. The SQL Server and SQL Browser services will both be needed when the Lucid database is created a little later.

NOTE: If you are installing upon a **Domain Controller** the built-in System account will not be available and you will only see *Local Service* in the drop-down list box and not *Network Service*.

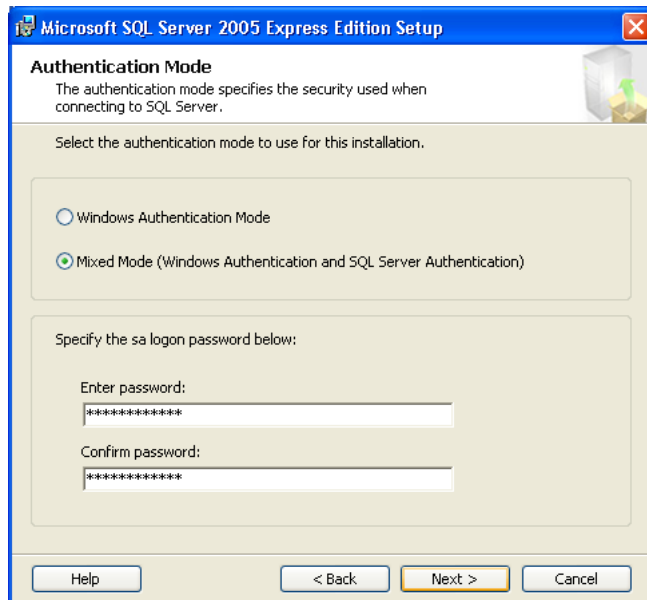
This is where you will need to select '**Use a domain user account**' instead and choose a suitable account. There is a separate document which gives you guidance on this, though you yourself will need to choose the domain user account to use.

See this link to view the document.

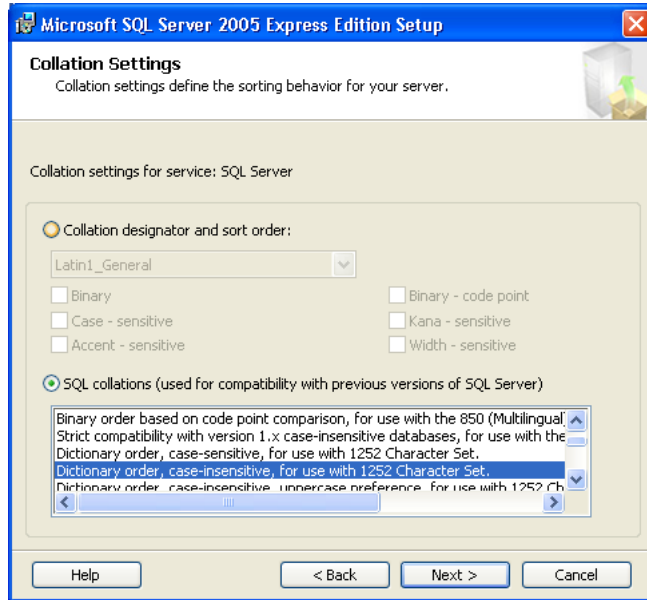
http://www.lucid-research.com/documents/manuals/support/Lucid_For_SQL_Networks_Troubleshooting_Guide.pdf



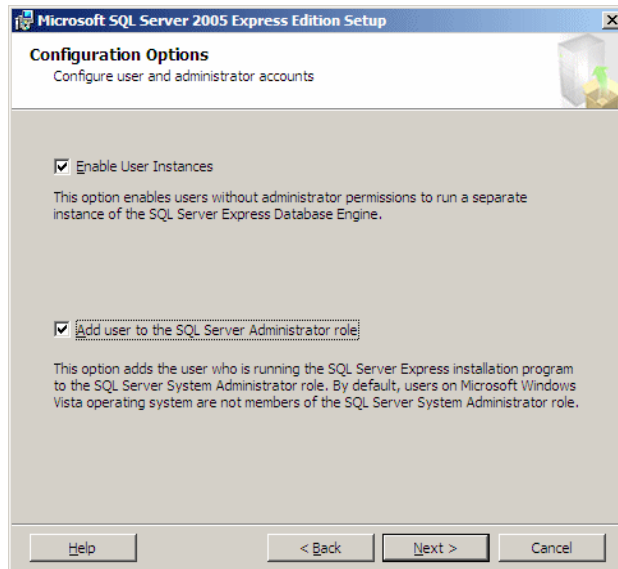
12. The next step is to select the Authentication Mode used to access the database engine. Choose **'Mixed Mode'** and enter your chosen password which you will use with the **'sa'** (system administrator) account.



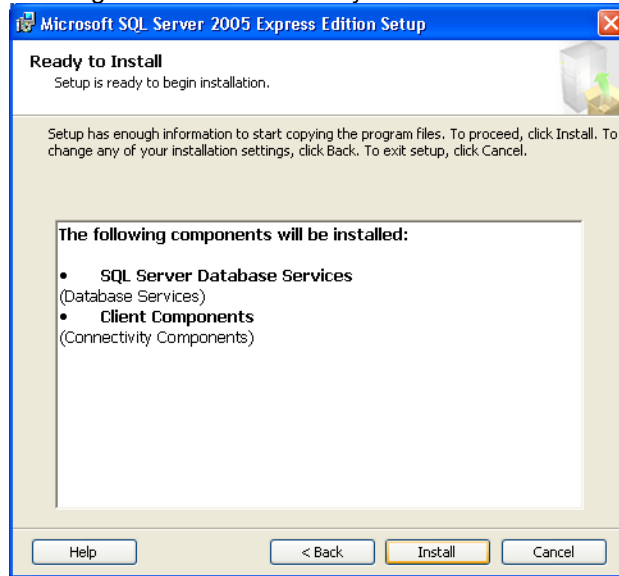
13. The next screen (Collation Settings) can be left with its default settings unless you wish to choose otherwise.



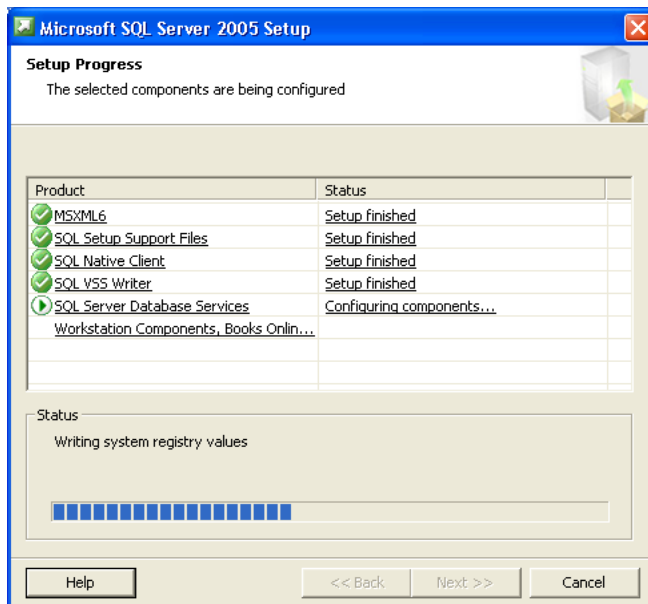
14. The 'User Instances' screen is left with 'Enable User Instances' ticked. This ensures that a separate instance of the database engine will be created for non-administrator users. If you're installing on a server, such as Windows Server 2003 you should also tick the lower option 'Add user to the SQL Server Administrator role'. If installing on a workstation such as XP or Vista you won't see the lower tick box.



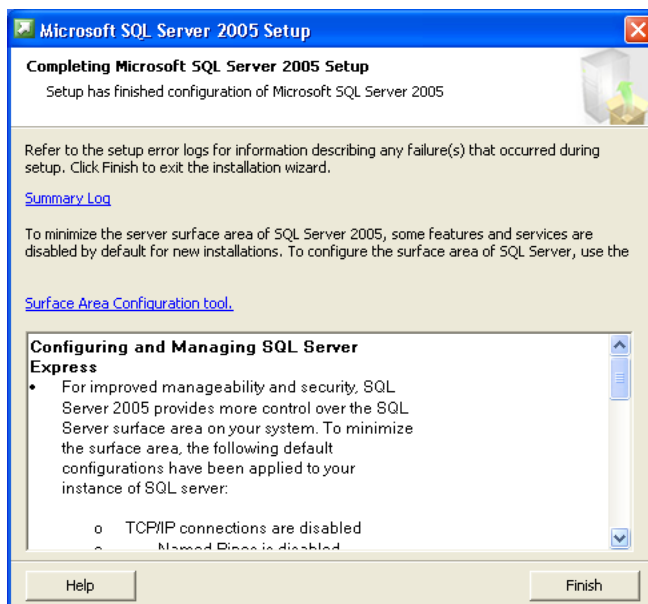
15. By this stage the installer is ready to build the database engine.



16. Installation proceeds...



17. An information screen at the end of the process gives advice on the next stage, which is to use the Configuration tools.



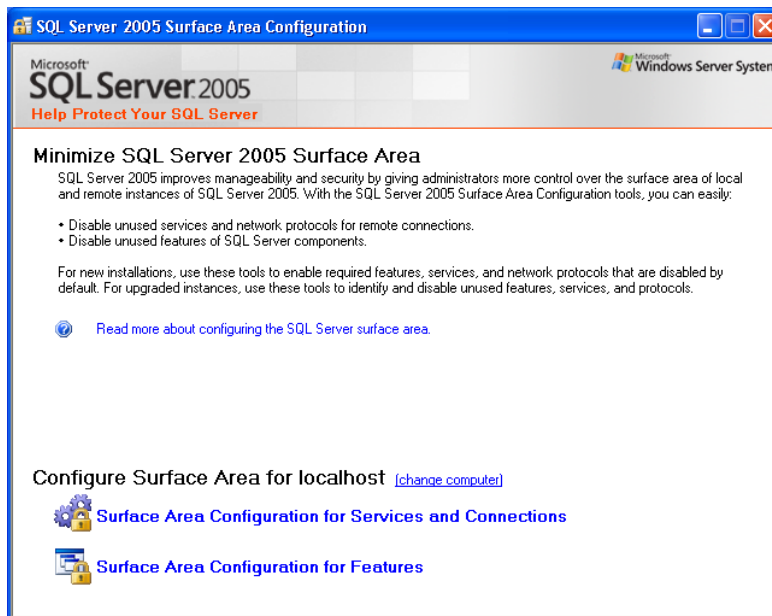
3. Configuring the database engine

1. SQL Server Surface Area Configuration

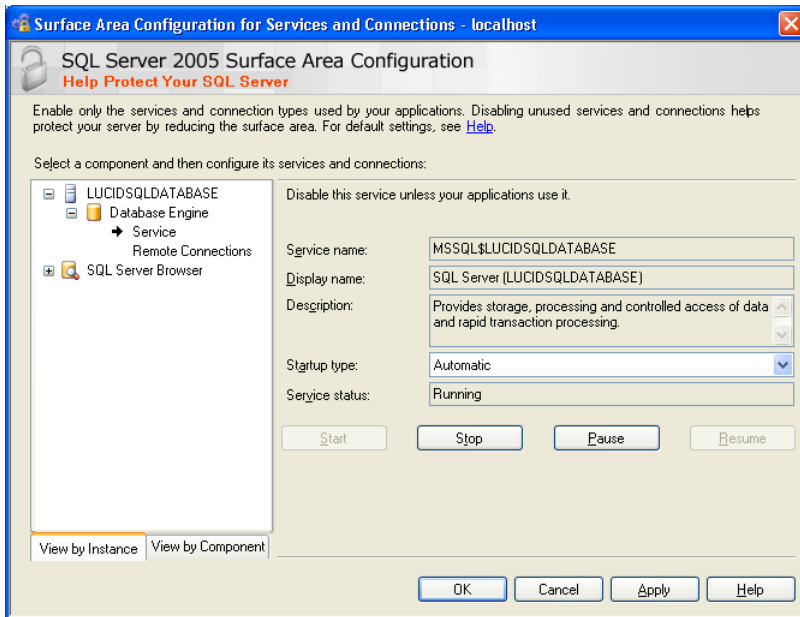
Note: This section applies only to SQL Server 2005.

In Server 2008 you can access *Surface Area Configuration* by launching *SQL Server Management Studio*, in *Object Explorer*, right mouse click on your SQL Server instance, select *Facets* and select from the dropdown *Facets* menu.

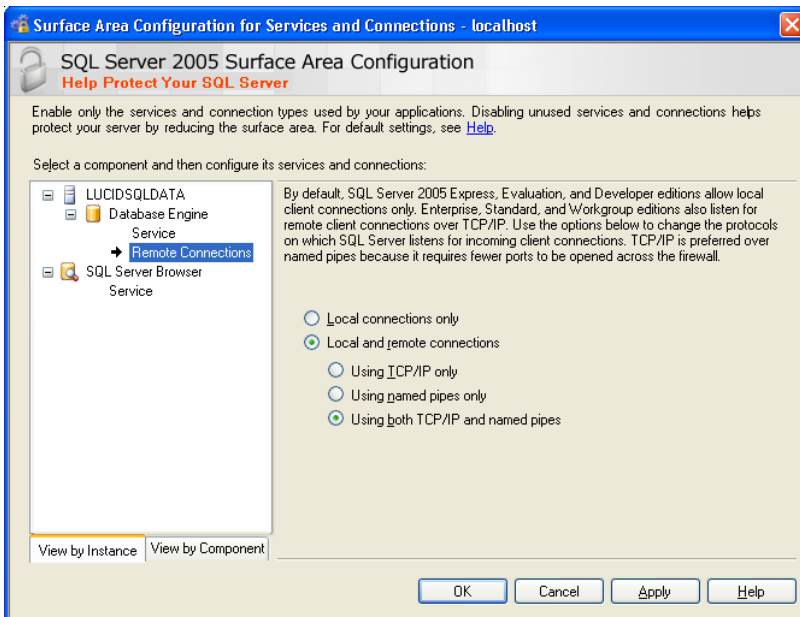
This tool is installed onto the *All Programs* menu and is used to manage security for the database engine.



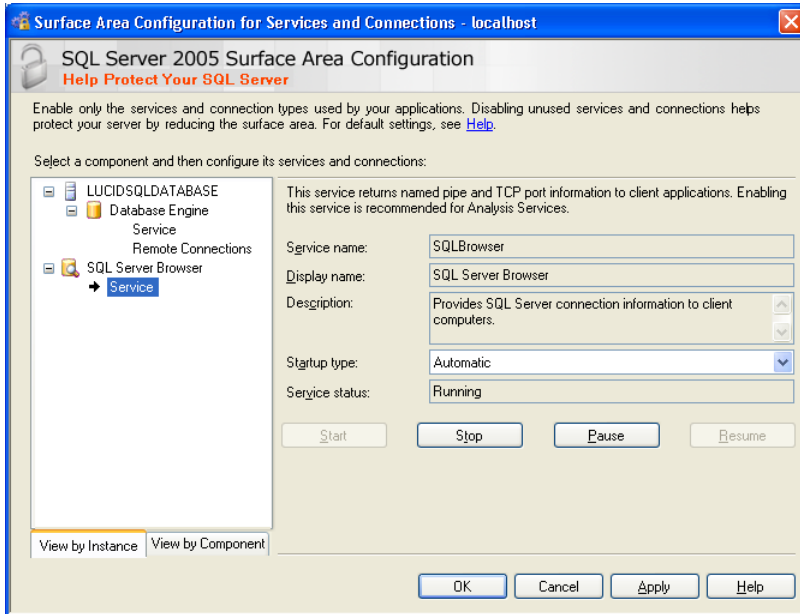
The most relevant of the two main options is the *Surface Area Configuration for Services and Connections*. You can check the status of the Service (see below).



It is important to allow Local and remote connections so that LADS can be run properly on the network. It is also a requirement to install the database, which will be the next step in the installation sequence.



You can also check or configure the setting of the SQL Browser Service (see below).

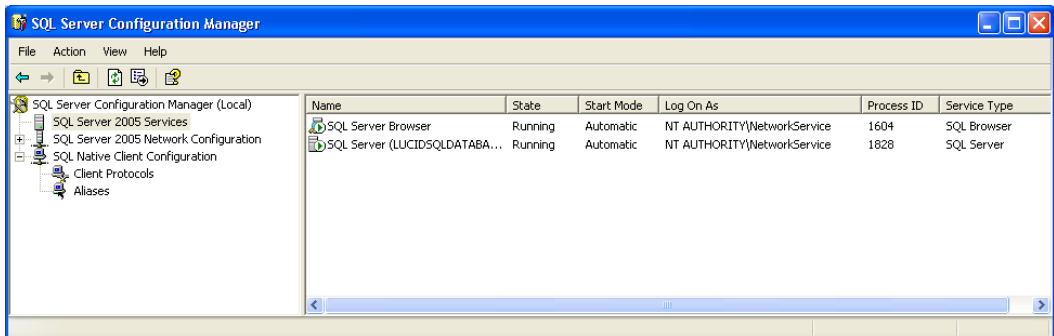


2. SQL Server Configuration Manager

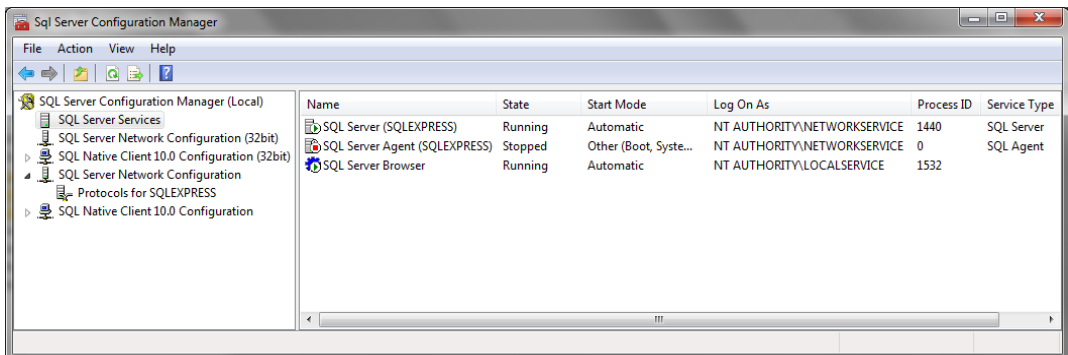
Note: Applies to both SQL Server 2005 and 2008 editions

This tool is installed onto the computer's *All Programs* menu and is used to enable SQL services and protocols. If you first look at the settings for SQL Server 2005 Services, both the *SQL Server Browser* and the *SQL Server* services for the database instance are **not enabled** by default after installation. They can be started or stopped or otherwise configured by right-mouse clicking over them. In the example screen below, both services have been configured to run automatically when the computer is started.

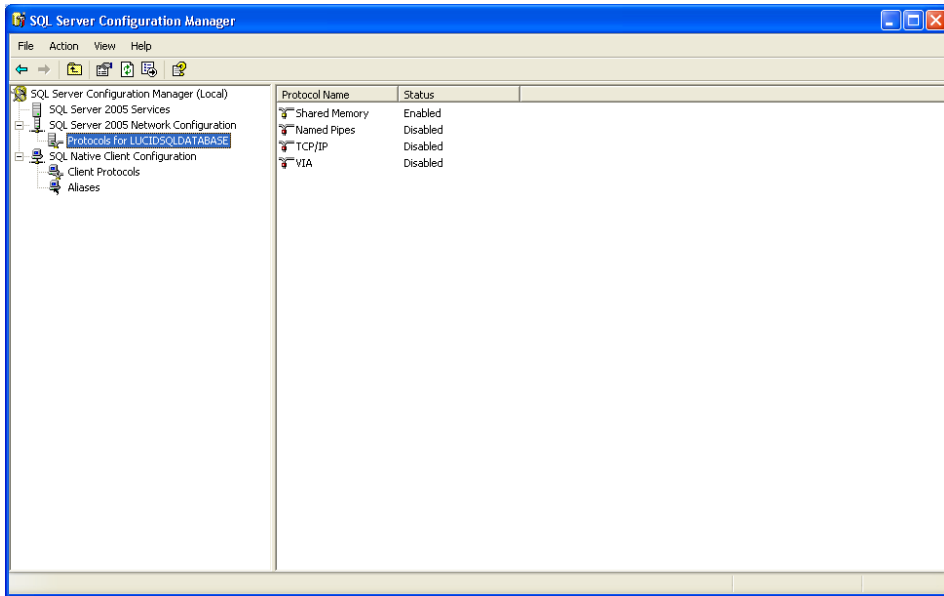
SQL Server 2005



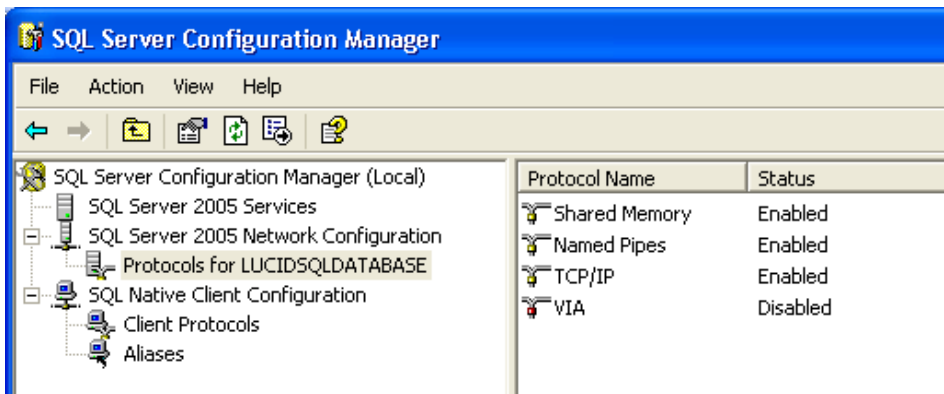
SQL Server 2008 R2



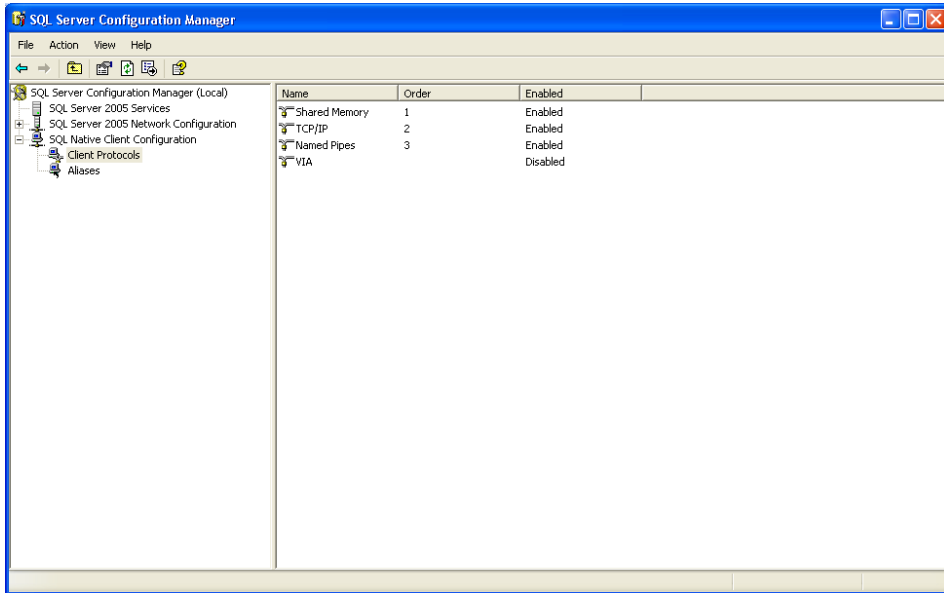
After installation, most networking protocols are also disabled by default. In the picture below, three of the four protocols are disabled.



After configuration, the *Named Pipes* and *TCP/IP* protocols have now been enabled (see example below). You may choose not to enable unused protocols for your own security reasons.



SQL Native Client protocols can also be configured in a similar way (see below).



4. Installing SQL Server Management Studio Express (optional)

This is a powerful and easy to use management program allowing you to view or edit the LADS database or even add your own databases to *SQL Server 2005 Express Edition*.

NOTE: It is no longer necessary to install this program as the database for your Lucid product is now installed without using an SQL script (this action required the program). If, however, in future you need to look at or edit fields in the database or do other maintenance tasks, it would still be useful to have this tool available in anticipation.

To install the program you can run its installer from the button option down on the Front End menu on **LADS for Networks** CD.

In case you wish to bypass the Front End menu, the installer file itself is on the *LADS CD*:

Folder: **Studio Express**

Filename: **SQLServer2005_SSMSEE.msi**

Use of this piece of software is entirely at your own risk. Lucid Research cannot provide support in the event that this software has been used or configured incorrectly in association with the LADS software or its database.

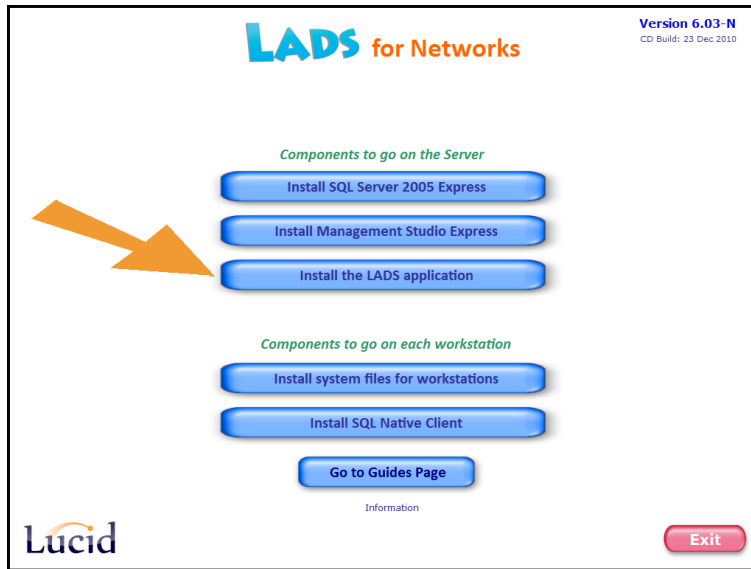
We recommend that you visit the Microsoft website to check for any later versions of the Management Studio or to obtain the accompanying Books Online documentation. See the link at:

<http://msdn.microsoft.com/vstudio/express/sql/download/>

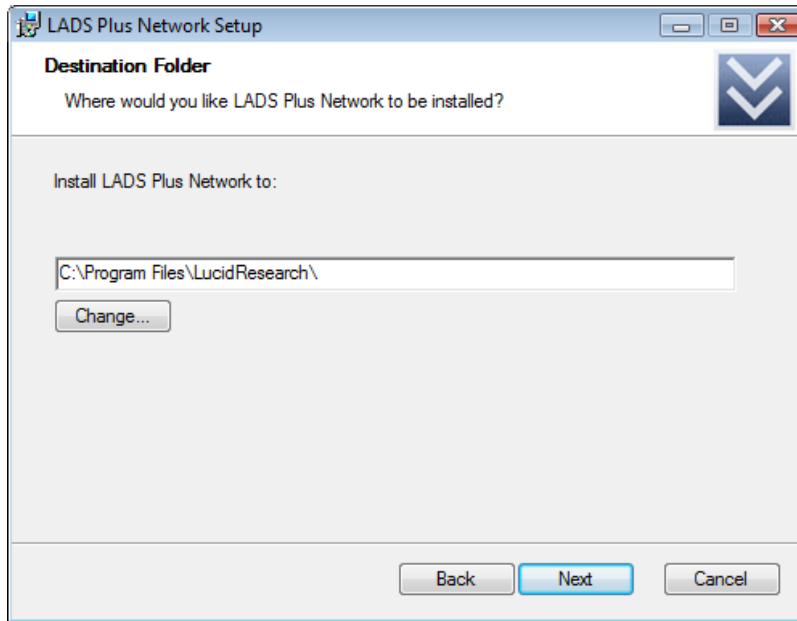
5. Installing LADS (or LADS Plus) on the server

IMPORTANT! Please install the Lucid software on a locally attached disk (such as C:) and avoid using networked drives. The reason for this is that the LADS database files must be accessible to the SQL Server Service (using the 'sa' account).

1. Before you set up a Test or Administration Station you should log in to the server with administrator privileges.
2. From the LADS Start-up menu screen, select *"Install the LADS (or LADS Plus) application"*.



3. Simply follow the installation instructions in the setup program which will be launched. You will be asked where you wish to install the application. A default path on the C: drive is shown but you can change this as in the example shown below:



If this location is not suitable, enter your own destination folder on the server. Note that the software application will be installed to a folder called: *\LADS Plus Network* which will be added on to the end of your chosen destination folder.

4. Once the installation has finished, you will next launch the *LADS Plus Administration* application, which will itself launch a special Database Installer Tool which installs the database used by all four Lucid products covered by this Guide., which will assist you in installing the database and configuring the DSN setting which allows LADS Plus to access the database. This is covered in the next section of the guide.

6. Installing the database (server)

NOTE: Before you can proceed with installing the database please ensure you have already installed the *SQL Server 2005 Express* database engine (and optionally the *SQL Server Management Studio Express* tool) and configured it for use (see Chapter 3).

Begin by launching the *Software Administration* executable file.
This file will be called:

LadsAv603.exe (LADS) or
LadsPlusAv603.exe (LADS Plus)

The file is will be found in the Software's application folder, which you chose during installation (see Chapter 5).

After launching the executable you should be presented with the **Database Installation Tool** (below).

There are two steps which need to be carried out.

Step 1

You need to choose the SQL Server instance and enter the 'system administrator' password which you originally chose when installing the SQL Server instance. This User for this password is always 'sa'.


The Server\Instance combo box should be populated with all SQL Server instances which are being broadcast around your network. There may be only one or there may be several. Because of network traffic and other services vying for processor time you may not see all Servers and their Instances immediately and there may be a need to look for them again. This is why there is a 'Refresh' option to the right of the combo box. You may need to use this.


After selecting the Server\Instance and entering the password for the 'sa' account, select 'OK' to move to Step 2. See **Chapter 10: Troubleshooting** if you see any errors reported at this point.

Database Installer Tool - [LADS and LADS Plus]


Step 1: Please enter your SQL Server 'sa' (system administrator) password.
Then click on 'OK'

SQL Server System Admin

Server\Instance SERVERX64\LUCIDSQL  Refresh

'sa' password  OK

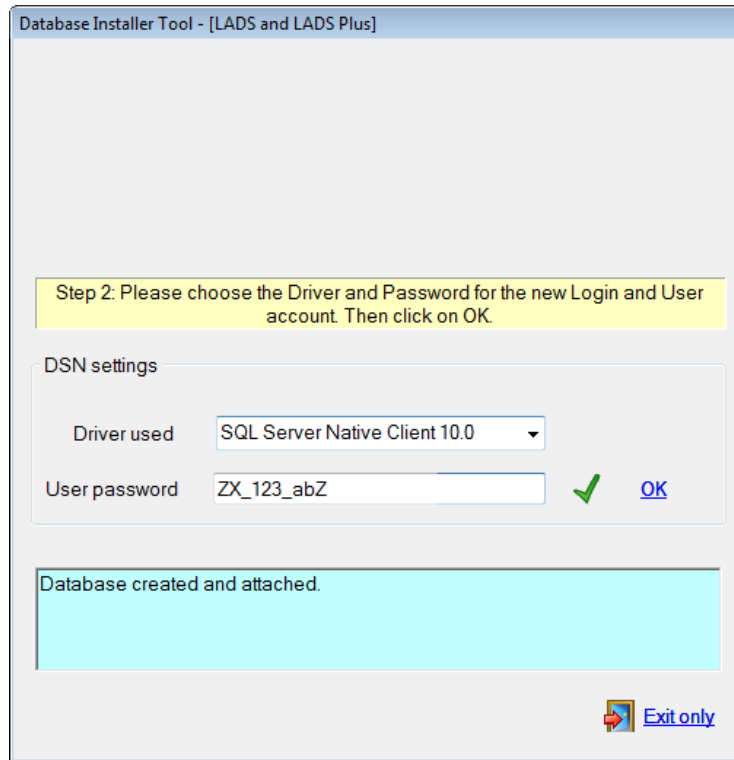
Click 'OK' when you have chosen your Server\Instance and entered the correct password for SQL Server System Administrator account [sa].

 Exit only

Step 2

You now should choose the ADO Driver used by your SQL database. Normally this will be called 'SQL Native Client'. After the release of SQL Server 2008 and the 64 bit version of this release, a new driver called SQL Server Native Client 10.0 was made available. If you are using SQL Server 2008 you should choose this driver.

The User password is shown in a text box and a default value is placed there. You can change this value if you wish. After this you can select 'OK' and the installer tool will attempt to create and add a Login account to the database and configure a User Account already in the database so that it is tied to this Login.



Finally the installer tool reads some data out of one of the tables in the database to verify that it is definitely ready to use.

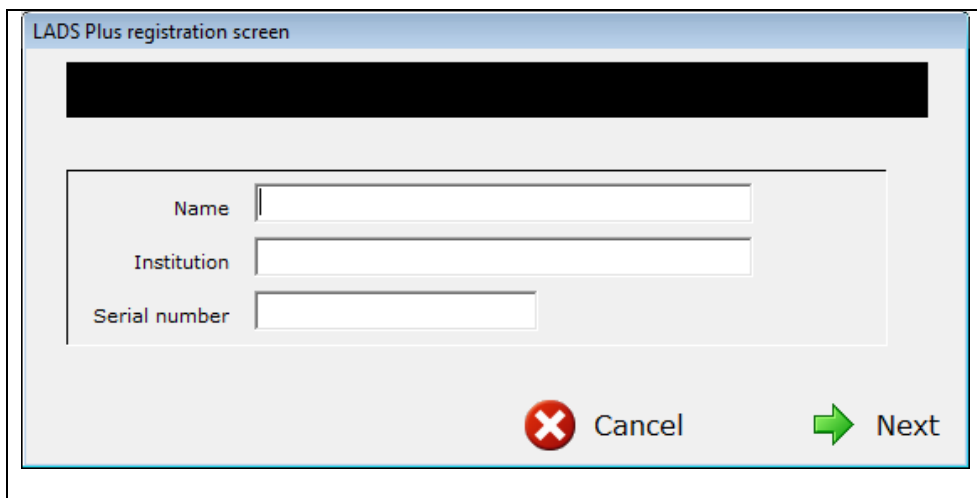
The installer tool then displays a 'success' message box and closes itself.

You need to log in to **SQL Server Management Studio Express** with the SQL administrator ID and password you chose when you first installed SQL Server.

7. Registering LADS or LADS Plus

When you have completed the steps in the previous chapter to get the database working, you may now register the software through the Administration Module. Launch it from a shortcut if you've already created one or by launching the executable file **LADSAv603.exe** or **LADSPPlusAv603.exe** on the server.

You will not be able to use *LADS Plus* tests until you have entered the details requested in the welcome panel shown below. Note that your serial number required will be found inside the DVD box in which your CD arrived.



The screenshot shows a registration window titled "LADS Plus registration screen". At the top, there is a black rectangular bar. Below it, there are three input fields stacked vertically, labeled "Name", "Institution", and "Serial number". At the bottom right of the window, there are two buttons: "Cancel" with a red 'X' icon and "Next" with a green arrow icon.

It is a good idea at this point to view the "*LADS (or LADS Plus) for Networks Software Guide*", which can be found on the installation CD itself as a PDF document or on the Administration module's main menu as an HTML (web-browser) page.

The other user's manual, the **Administrator's Manual** is aimed at trained educational professionals such as Disability Officers. This can also be found on the CD and on the software menu.

PASSWORD:

The default administrator's password is shown prominently on the front of your *LADS Plus for Networks* CD.

8. Installing SQL Native Client

The **SQL Native Client** is an OLE DB and ODBC API that provides data access providers with new functionality and datatypes provided by SQL Server 2005.

In simple English, it is the driver that allows your *Lucid Software* to communicate with the SQL database it uses.

Do I need to install it on my workstations?

First check if it's already installed:

Go to *Control Panel > Administrative Tools > Data Sources (ODBC)*

Click on the "Drivers" tab

See if you can see '**SQL Native Client**'.

If you can't find it, you can install it either from the CD front-end menu or by browsing to the installer file on the Lucid software CD:

Folder name: **SQL Native Client driver**

Filename: **sqlncli.msi**

You can also download it from the Microsoft website on the web page below:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=d09c1d60-a13c-4479-9b91-9e8b9d835cdc&displaylang=en>

SQL Server 2008 R2, latest driver

If you are using SQL Server 2008 R2 you need to use the newer ADO Provider:

SQL Server Native Client 10.0

Please see this link for further clarification:

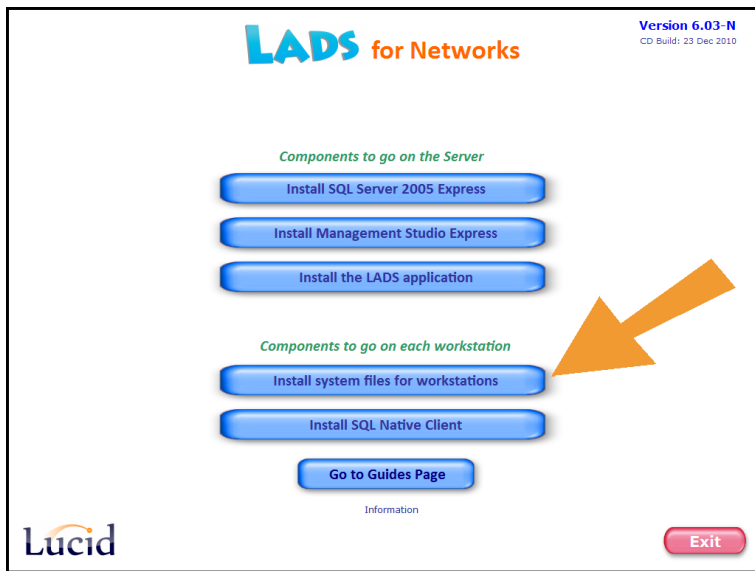
<http://msdn.microsoft.com/en-us/library/ms131321.aspx>

9. Installing system files on workstations

System files installer

There is a small **.msi** file which installs necessary system files on each workstation. These files include a small collection of ActiveX Controls, Visual Basic Runtimes and DLLs which allow *LADS* to run on the workstation, plus a few standard Windows files which are normally found in *C:\Windows\System32*.

Choose the option “*Install system files for workstation*” on the CD Menu (see picture below).



The use of a single **.msi** makes the installation easier to package and deploy across multiple workstations as appropriate for your network.

The file is called:

`"lads system client.msi"`

or

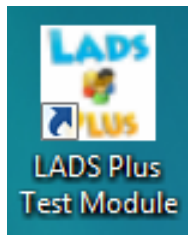
`"lads plus system client.msi"`

NOTE: Please check that the SQL Native Client is already present on the workstation as this driver is used by the application to connect to the SQL database (see Chapter 8).

Setting up a shortcut to the *LADS* or *LADS Plus* Test on workstations

Please make sure that you first set up a *File Share* (**Share**) for your end Users to the application folder hosting the *LADS* or *LADS Plus* software on your server.

You need to manually set up a shortcut on local workstations to point to the correct executable residing on the server, this file is: **LADSTv603.exe** (**LADS**) or **LADSPlusTv603.exe** (**LADS Plus**)

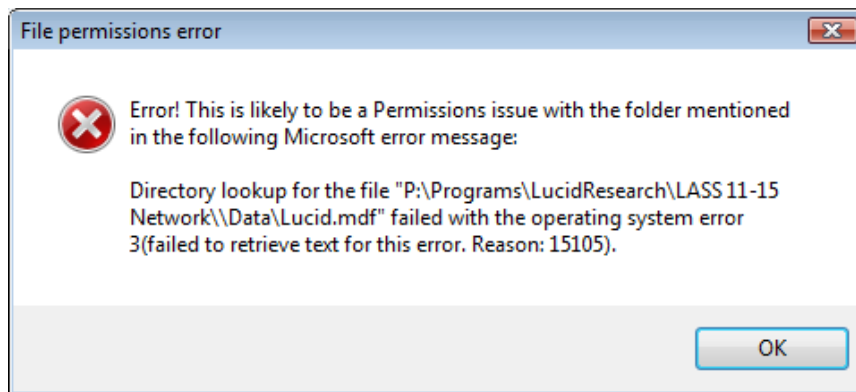
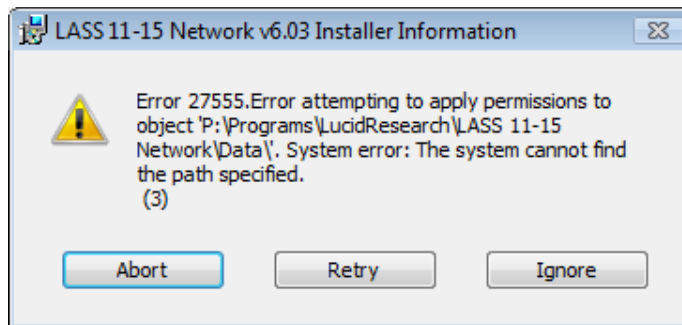


This file is in the same location as the Administration module. You are not advised to make a shortcut to the Administration module except on a secure User account such as an *Administrator*.

10 .Troubleshooting

Database installation

Referring back to Chapter 6. (Installing the database) if you see these error messages immediately after completing Step 1 (see below) you may need to reconsider where you have installed the LADS application software – it should not be on a network drive. Always install onto a locally attached disk.



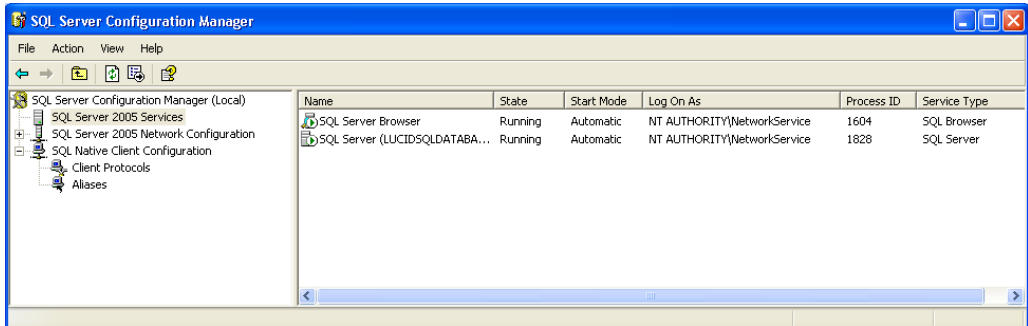
Database connectivity problems

There are several kinds of issues you may encounter if your Lucid application is not able to connect to the Lucid database.

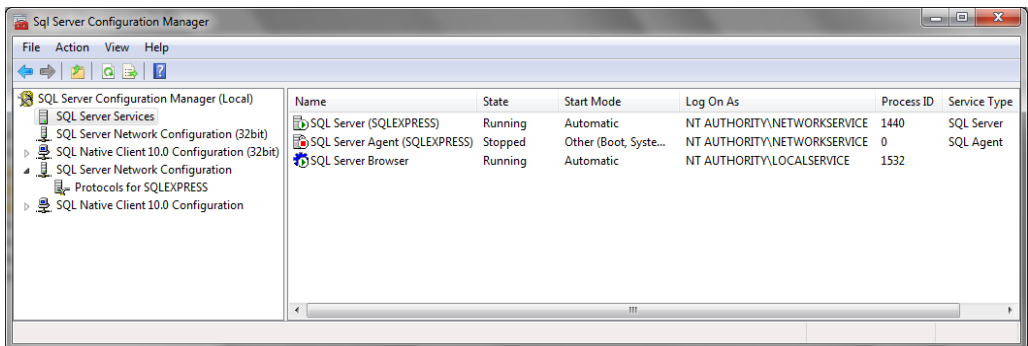
Here are some things to check:

Try restarting *SQL Browser Service* using **SQL Server Configuration Manager**.

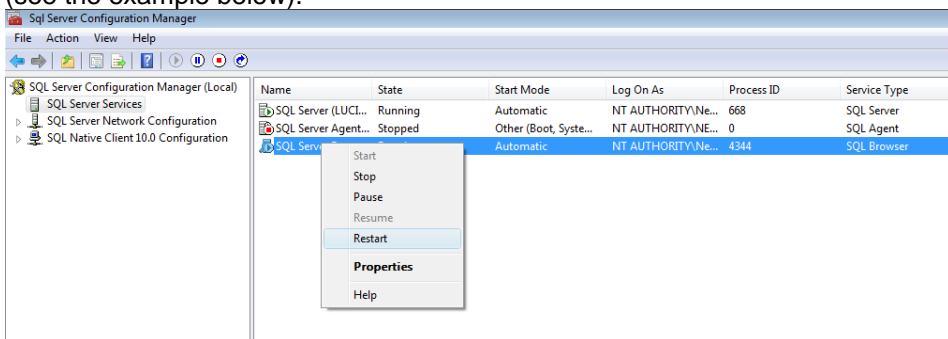
SQL Server 2005 Express



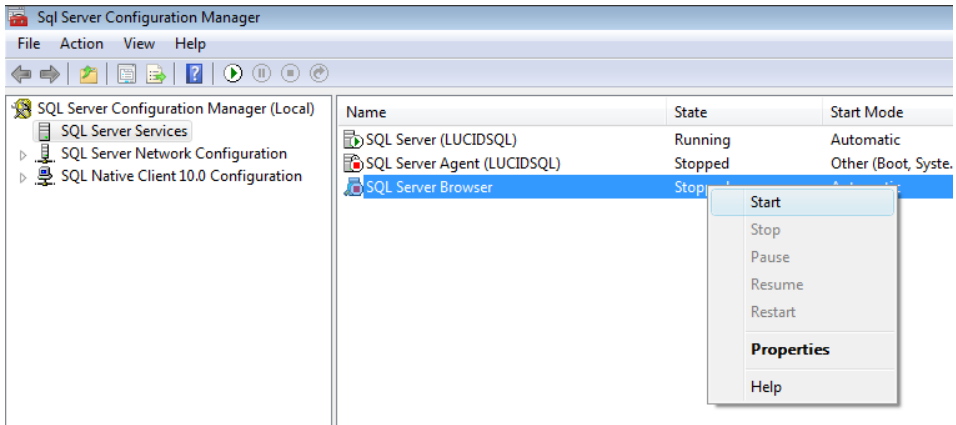
SQL Server 2008 R2



Right mouse click over the service and choose **Restart** from the menu. (see the example below).



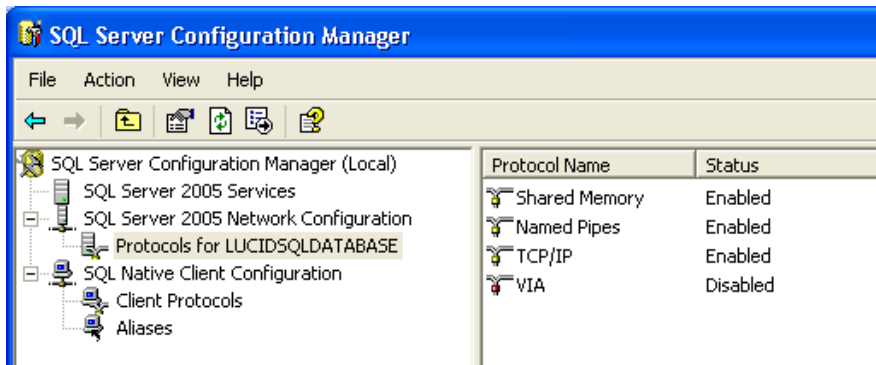
Below: Enlargement of above screen to show detail



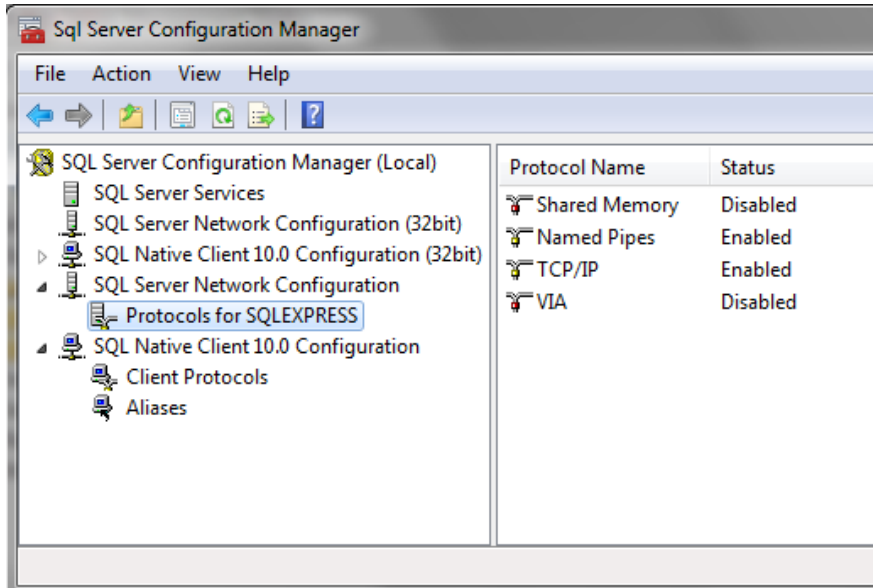
Add additional protocols

TIP: Try enabling the network protocols such as **Named Pipes** if only TCP/IP is currently enabled.

SQL Server 2005



SQL Server 2008 R2



[Normally you wouldn't ever need *Shared Memory* or *VIA*.]

Try manually adding a System DSN

If you cannot manually link to the database from a suitable remote workstation then that suggests a problem with a firewall or services not running. Here's how to attempt to create a System DSN.

Vista and XP

Using Control Panel > Administrative Tools > Data Sources (ODBC)

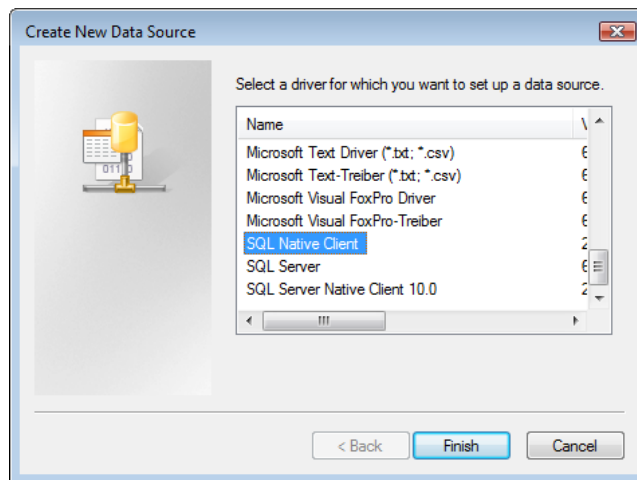
Windows 7

Control Panel > search for ODBC

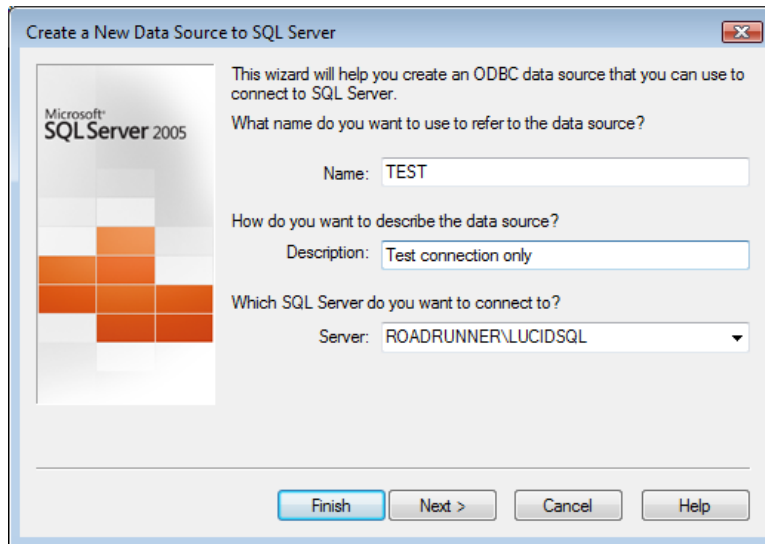
1. Select *System DSN* and then **Add**
2. Choose the most suitable ADO driver

For SQL Server 2005 this will be **SQL Native Client**

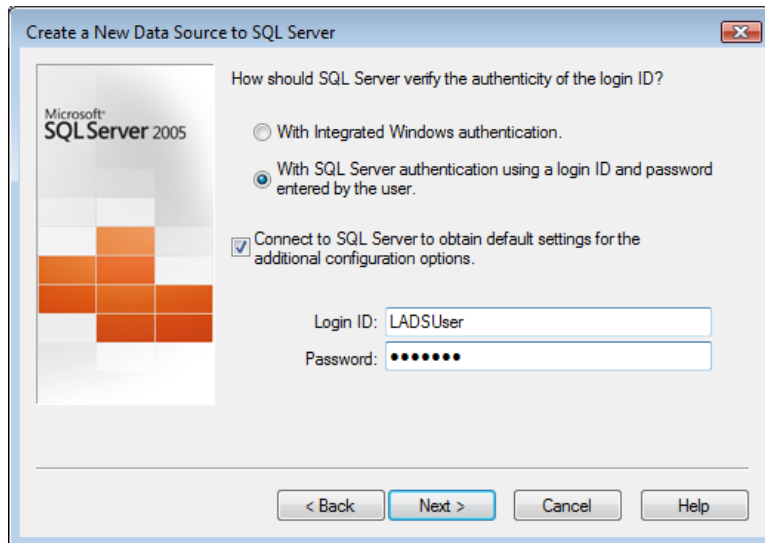
For SQL Server 2008 this may be **SQL Server Native client 10.0**



3. Give the DSN a name, optional description and choose the Server\Instance.

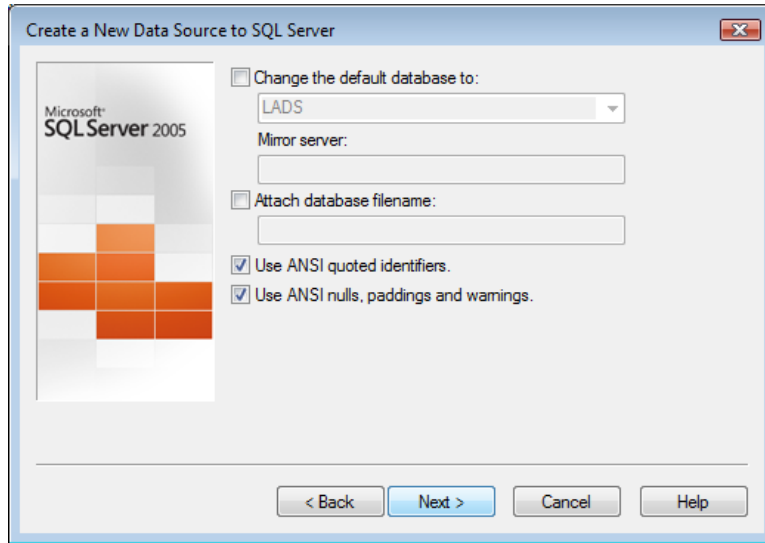


4. Choose the SQL Server authentication and enter the account name and password, by default these are **LucidUser** and **ZX_123_abZ** respectively). **See note ***

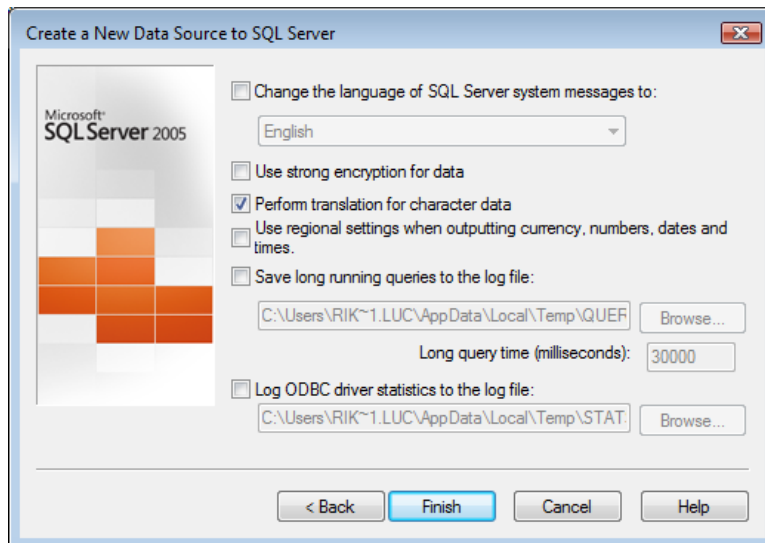


* Versions of LADS and LADS Plus Network software before v6.031-N used the weaker password **ZX123AB** but this password has been now changed to the stronger one mentioned in (4) above.

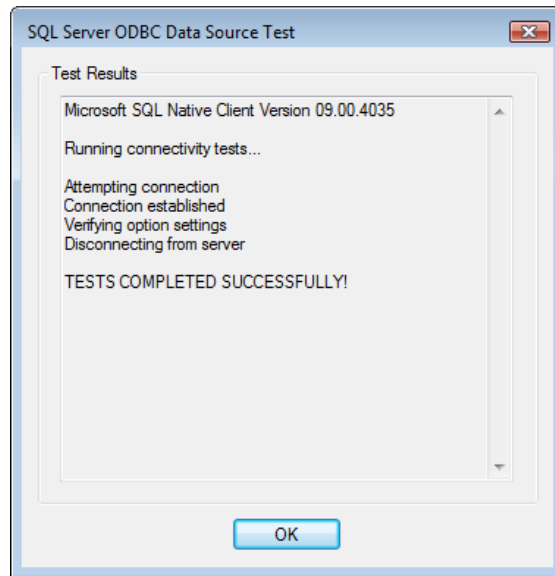
5. Move on and ensure default database is 'LUCID'



6. At the next screen select Finish.



7. You should finally see the Test Data Source screen which should give a 'Test Successful' message upon clicking on the large button if the SQL database is visible to the network and the Login is working.



Firewalls

Please check for firewalls on the client machines and server.

Check for ports being blocked by the firewall or a router (e.g. TCP Port 1433).

See the link below:

<http://technet.microsoft.com/en-us/library/cc646023.aspx>

Finally

Please look on our website first as some issues may be reported on the Technical Support pages there. See the website link below:

<http://www.lucid-research.com/networksupport.htm>

Please also check the software updates page on the Lucid Research website at

<http://www.lucid-research.com/updatesdla.htm>

Bug fixes are put there to be freely downloadable.

If this doesn't help please email us at technical@lucid-research.com

We try and answer email queries within 24 hours, often sooner.

If you contact us by telephone then please have noted down in advance as many details about the problem encountered as possible, along with the software serial number.

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