TROUBLESHOOTING GUIDE

(When using SQL Server ® 2008 R2)

Third edition, (3 Dec 2013)

This manual applies to these networked products:

**Lucid CoPS, Lucid Rapid, LASS 8-11, LASS 11-15
LADS, LADS Plus, Lucid Exact, Lucid Ability
Memory Booster, Comprehension Booster**

www.lucid-research.com

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1. Read this first!

This document is an extra guide accompanying the three installation guides which come with Lucid networked software editions.
The first of the three installation guides is the one concerned with installing the database using SQL Server; it is called **Installation Guide for Microsoft ® SQL Server 2008 ® R2 Express Edition.**

Lucid produces several software titles as a network version. Over the years, these versions have evolved and used later versions of Microsoft ® SQL Server.

Lucid currently recommends using SQL Server 2008 R2 ® SP2 Express Edition: Download this free from the Microsoft website at this link:
http://www.microsoft.com/en-gb/download/details.aspx?id=30438

2. Database connectivity problems

Amongst the most common problems with running software over networks is when the software cannot connect to its database. Sometimes the software runs happily on a server but not on a workstation. This chapter is intended to address these kinds of issues. There are five main areas to check, starting with the simplest:

1. Have you forgotten to install the client tools?
2. PING the server.
3. Restarting the SQL Services
4. Checking your network protocols
5. Create a manual DSN to test the connection to the server

2.1. Have you forgotten to install the client tools?

The Number One technical support call to Lucid Research is when the person deploying the Lucid software on the network neglects to install one or both of the two packages needed on every workstation:

(a) The Thin Client msi (client tools).
(b) The SQL Server Native Client msi, which allows a link with the SQL Server (see section 2.4 below).

2.2. Ping the server

From Start > Run type *command* and in the black window enter
ping <ip address>
where ip address is the address of the server which hosts the SQL Server.

Check for any mismatch on the returned results. If you are not able to ping your target machine, there is a good chance that either the network is broken or the target machine is not running. It's possible the target machine is behind a firewall and the firewall blocks the packets sent by ping, though Windows firewall does not block ping (ECHO) packets by default.
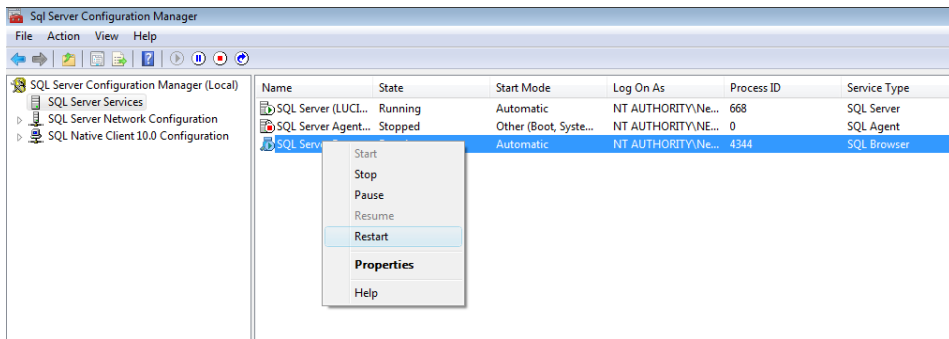
2.3. Restarting the SQL Services

Launch SQL Server Configuration Manager.

SQL Server 2008 R2 Express
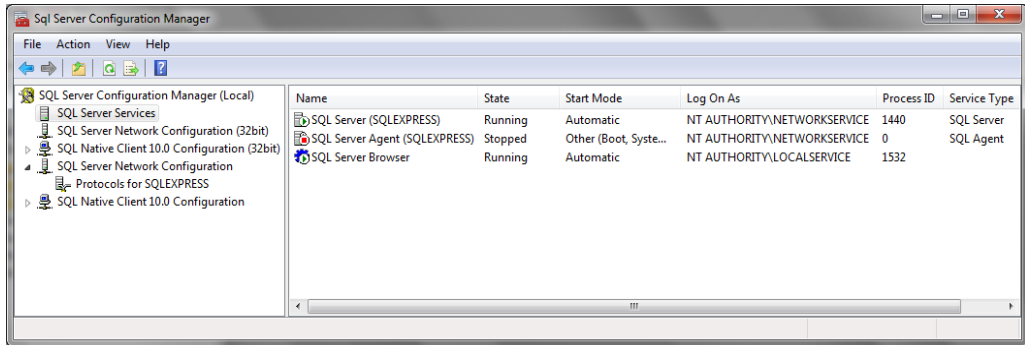
Right mouse click over the service and choose **Restart** from the menu. (see example below).

*Note: You can perform this same task by choosing **Administrative Tools > Services** on your server and looking down the list of services to find **SQL Server** and **SQL Server Browser**.*
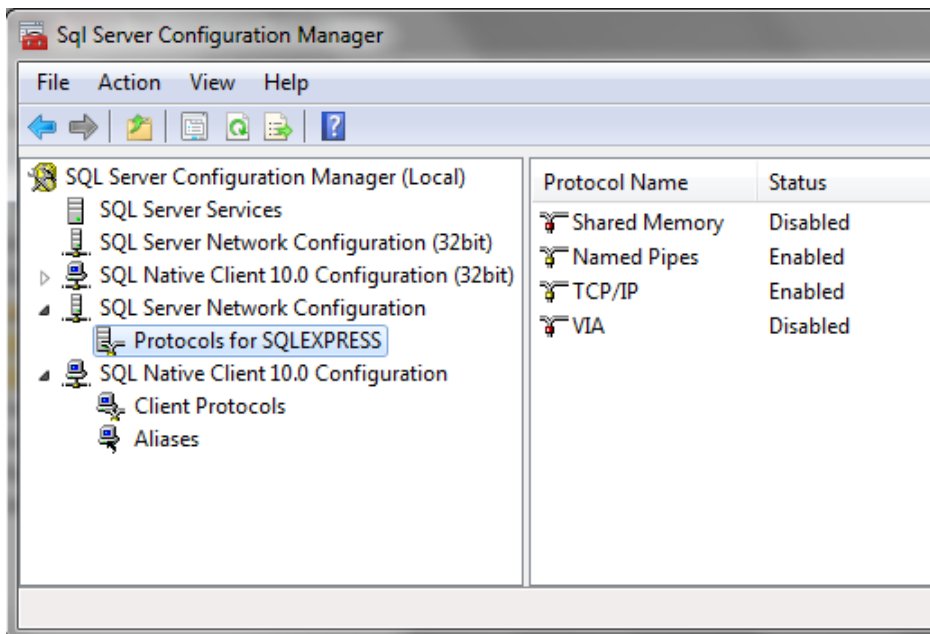
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2.4. Check your network protocols

Again, launch SQL Server Configuration Manager and choose the Protocols as shown in one of the two screens below.
TCP/IP should be **enabled**.
Named Pipes should be **enabled** (unless you have good reason to disable it).
Shared Memory and *VIA* are not normally used so don't enable these if they are disabled.

2.5. Create a manual DSN to test the connection to the server

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 to create a System DSN.
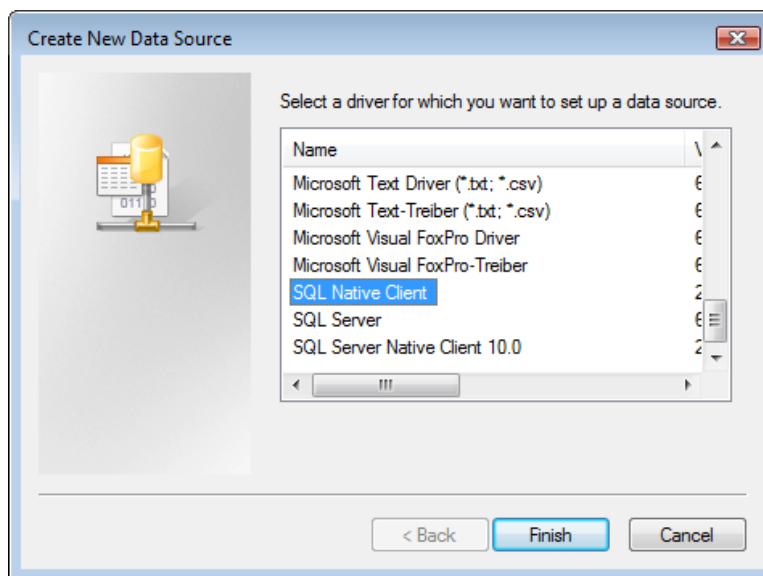
Windows 7
Control Panel > search for ODBC

1. Select *System DSN* and then *Add*

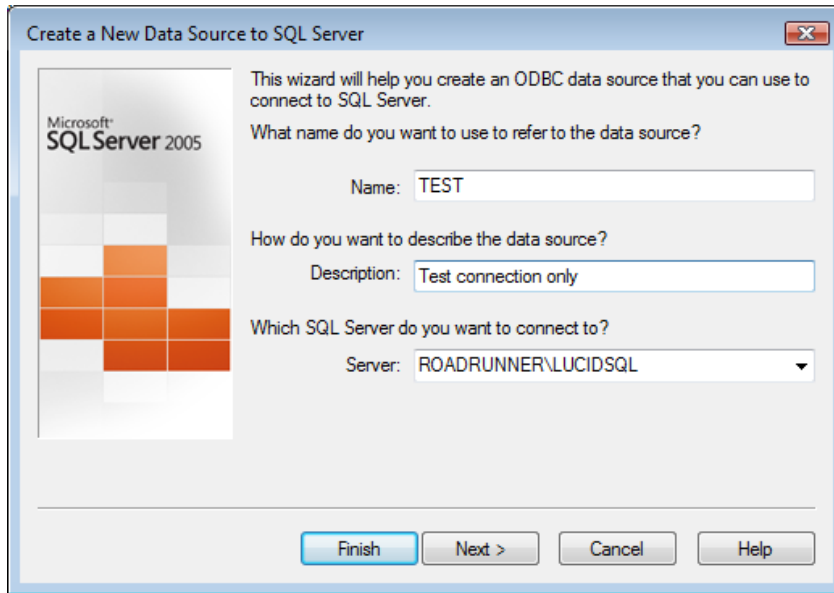2. Choose the most appropriate ADO driver

    For SQL Server 2005 use **SQL Native Client**
    For SQL Server 2008 R2 use **SQL Server Native client 10.0**
   *For SQL Server 2012 use* **SQL Server Native client 11.0**

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

4. Choose the SQL Server authentication option and enter the Login ID and password. By default these are as below:

Product	Login ID (User Account)	Default password
Lucid CoPS v6.04-N	LucidUser	ZX_123_abZ *
Lucid Rapid v6.04-N	LucidUser	ZX_123_abZ *
LASS 8-11 v6.04-N	LucidUser	ZX_123_abZ *
LASS 11-15 v6.04-N	LucidUser	ZX_123_abZ *
Lucid Ability v6.01-N	LucidUser	ZX_123_abZ
LADS v6.03-N	LADSUser	ZX_123_abZ *
LADS Plus v6.04	LADSUser	ZX_123_abZ *
Lucid Exact v1.6-N	ExactUser	ZX_123_abZ *
Memory Booster v1.21-N	MemoryBoosterUser	ZX_123_abZ *
Comprehension Booster v1.32-N	reading_booster_user	ZX_123_abZ *
* These are post Nov 2010 release versions, try using ZX123AB for earlier versions such as v4.02-N		
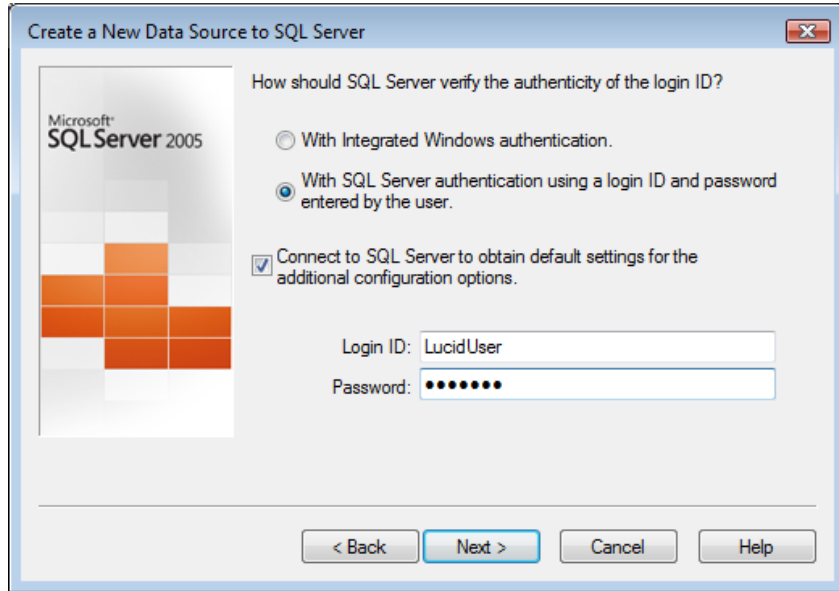
Move by clicking on **Next** and ensure the correct default database is shown (choose from the table below):

Product	Database name
Lucid CoPS v6.04-N	LUCID
Lucid Rapid v6.04-N	LUCID
LASS 8-11 v6.04-N	LUCID
LASS 11-15 v6.04-N	LUCID
Lucid Ability v6.01-N	LUCID
LADS v6.03-N	LADS
LADS Plus v6.04-N	LADS
Lucid Exact v1.6-N	EXACT
Memory Booster v1.21-N	memory_booster
Comprehension Booster 1.31-N	reading_booster
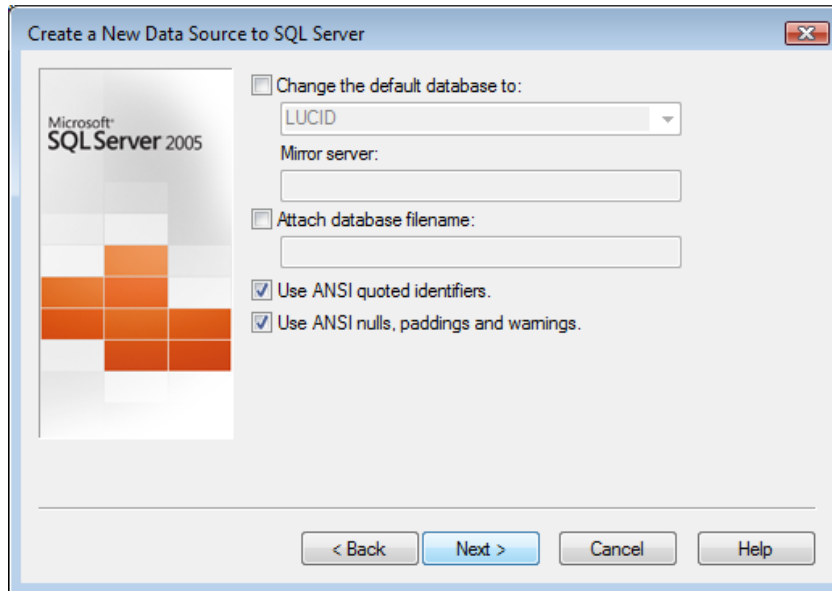
5. At the next screen select Finish.
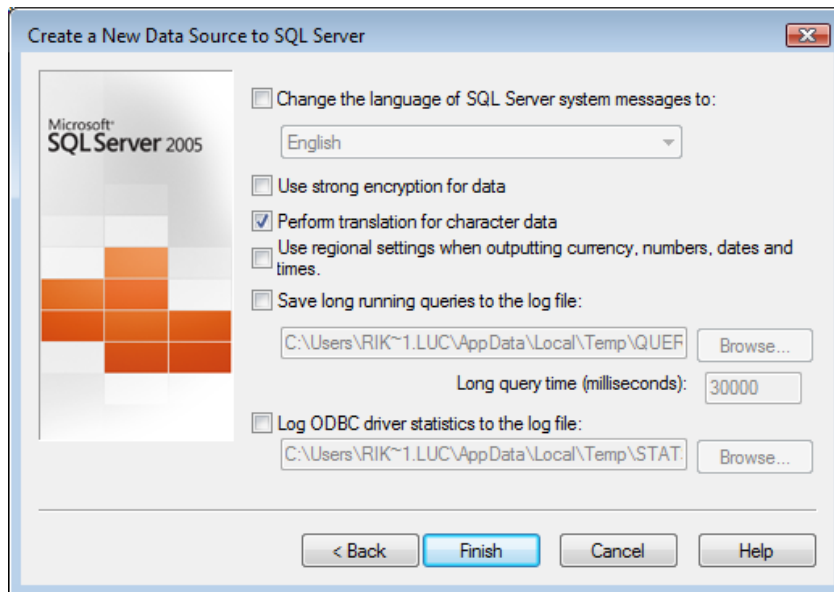
6. You should finally see the Test Data Source screen which should give a 'Test Successful' message upon clicking on the large button if the SQL database is visible to the network and the Login is working.

```
ODBC Microsoft SQL Server Setup                              [x]

              A new ODBC data source will be created with the following
                                   configuration:

Microsoft SQL Server Native Client Version 10.50.1600          ▲

Data Source Name: test
Data Source Description:
Server: ROADRUNNER\LUCIDSQL
Use Integrated Security: No
Database: (Default)
Language: (Default)
Data Encryption: No
Trust Server Certificate: No
Multiple Active Result Sets(MARS): No
Translate Character Data: Yes
Log Long Running Queries: No
Log Driver Statistics: No
Use Regional Settings: No
Use ANSI Quoted Identifiers: Yes
Use ANSI Null, Paddings and Warnings: Yes

                                                               ▼

        [    Test Data Source...    ]        [  OK  ]  [ Cancel ]
```

2.6. Recreate the connection string to the database

If you suspect you may have chosen the wrong type of Native Client or you have since moved the database to a different instance of SQL Server you may wish to recreate the connection string used by the software to locate the database; do this by simply deleting the file called server_config_2.dat in the folder \data off the Lucid application folder.
Finally, run the tool 'database installer tool deluxe.exe' from the application folder itself. This tool recreates the encrypted connection string file you deleted.

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3. SQL Server Configuration Manager

This tool is installed onto the computer's *All Programs* menu and is used to enabled SQL services and protocols. If you first look at the settings for SQL Server Services, both the *SQL Server Browser* and the *SQL Server* services for the database instance are usually **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.
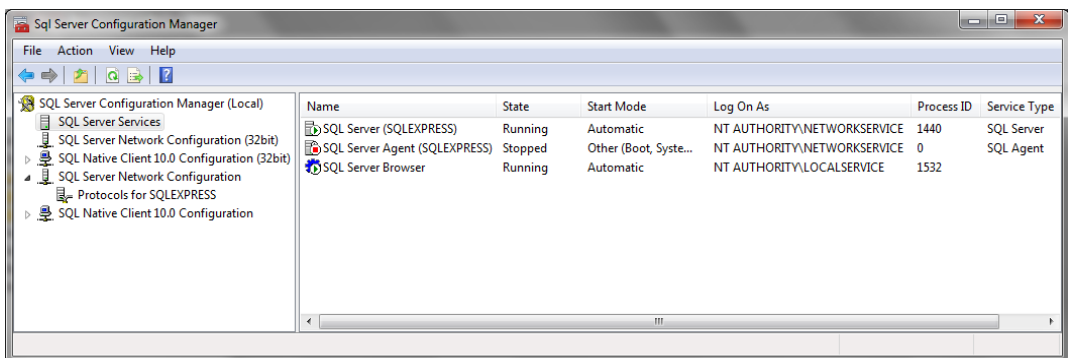
After installation, some or all networking protocols may have been disabled by
default. In the picture below, three of the four protocols are disabled.
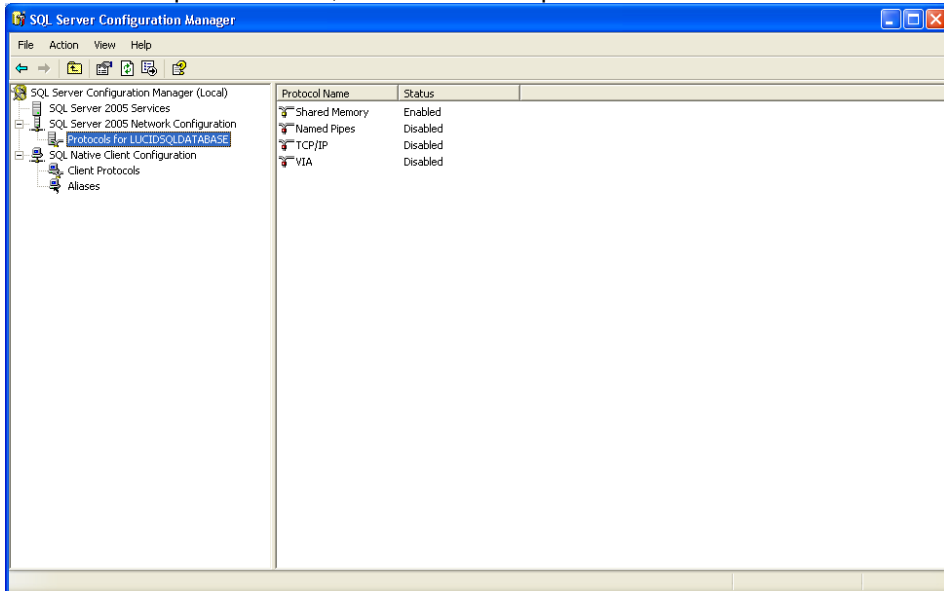
After configuration, the *Named Pipes* and *TCP/IP* protocols have now been
enabled (see example below). You may choose not to enable unused protocols
for your own security reasons.

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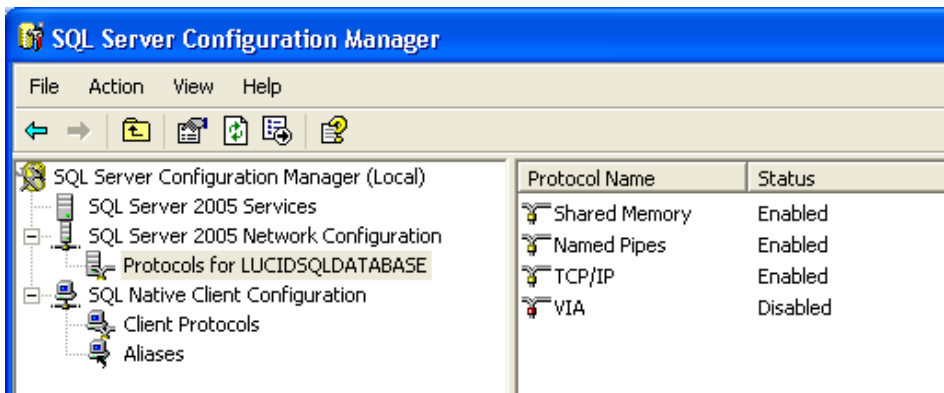
SQL Native Client protocols can also be configured in a similar way (see below).
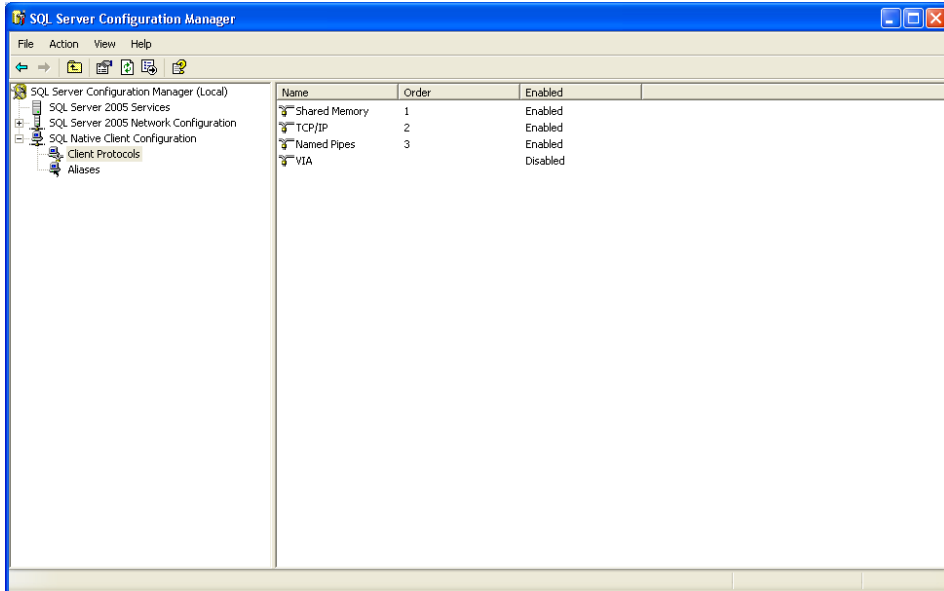
4. More troubleshooting

4.1. Firewalls

Please check for firewalls on the client machines and server.
Check for particular ports being blocked by the firewall or a router.

These ports will normally be:

TCP Port 1433   (for SQL Server service)
UDP Port 1434 (for SQL Server Browser service)

You may need to add exceptions for these ports if they have been blocked

See also the useful Microsoft ® link below:

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

4.2. Log files

Log files (which may help in diagnosing SQL issues) in the generic folder path:

%ProgramFile%Microsoft SQL Server/MSSQLxx.xxx/MSSQL/Log

For example:
C:\Program Files\Microsoft SQL Server\MSSQL10.SQLEXPRESS\MSSQL\Log

4.3. Authentication and logon

Mixed Mode authentication is required in order to deploy and maintain Lucid
network products. For example, the database installer tool used by Lucid
network products when first launched needs the 'sa' account and its password
in ordr to complete its job.
There is a way to change Windows authentication into Mixed Mode
authentication. See this link below:

http://msdn.microsoft.com/en-us/library/ms188670.aspx

4.4. Other sources of help

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 and are 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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