



Amlib

Library Management System

Amlib Client 6.0 Installation Guide

Version 6.0

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Amlib Client 6.0 Installation Guide

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Email:

support-amlib@oclc.org

Amlib Help Desk (TOPDesk):

<https://servicedesk.oclc.org/tas/public/>

OCLC Amlib Support Documentation:

<https://www.oclc.org/support/services/amlib.en.html>

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WELCOME

Welcome to the *Amlib Client 6.0* Installation Guide.

Details on installing other optional components (such as *NetOpacs*, *ZServer*, *SIP2*, *OpenOPAC* and *DIY Self Issues*) are available in separate module specific Installation Guides.

OVERVIEW

The installation of the *Amlib* client involves the following steps:

1. Install the *Amlib Client 6.0* application
2. Install the database server:
 - a. *MS SQL Server 2008 R2*
 - b. *Oracle*
3. Create and configure *Amlib* databases
4. Configure the *Amlib* database connection settings

BEFORE YOU BEGIN THE INSTALLATION

Read the Installation Notes First

Please carefully read the entire [installation guide](#) prior to commencing the actual *Amlib* installation.

This installation process is for NEW installations only. This documentation should not be used for upgrades. Follow the instructions precisely. If you have any difficulties, please call *OCLC (UK) Ltd* immediately.

If you have any questions please log a support call on TOPdesk at <https://servicedesk.oclc.org/tas/public/index.jsp> . If you do not know your TOPdesk login please email support-amlib@oclc.org and we will send it to you.

Serial Numbers Required for Installation of Amlib Modules

The *Amlib Client 6.0* installation requires a serial key. If you did not receive a serial key for the modules that your library has purchased you should contact Amlib Support via TOPdesk before commencing the installation.

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AMLIB SUPPORTED OPERATING SYSTEMS & SYSTEM REQUIREMENTS

Database Server

Operating System	<ul style="list-style-type: none">• <i>Windows Server 2000 – 2008, 2008 R2, 2012</i>• <i>Linux (and Unix)</i>
RDBMS	<ul style="list-style-type: none">• <i>Microsoft SQL Server 2008, 2008 R2, 2012 R2</i>• <i>Oracle 10g, 11gR2</i>
Memory (RAM)	<ul style="list-style-type: none">• Depends on operating system, volume & RDBMS selected• Minimum 2GB RAM for <i>SQL Server but recommended 3+GB</i>• Minimum 2GB RAM for <i>Oracle but recommended 3+GB</i>
Hard Disk	<ul style="list-style-type: none">• Depends on volume. Using multiple Fast SCSI-3 Disk Drives (for example: more SCSI drives provides better performance)
Backup	<ul style="list-style-type: none">• Removable backup device (for example: USB External HDD)

OpenOPAC (Web Opac) Application Web Server

Operating System	<ul style="list-style-type: none">• <i>Windows Server 2008, 2008 R2, 2012</i>• <i>Windows 7</i>
.Net Framework	<ul style="list-style-type: none">• <i>4.0 or later ></i> (Full version not the .NET 4.0 Client Profile, it must be installed prior installation)
IIS	<ul style="list-style-type: none">• <i>6.0 or later with ASP.net support installed</i>
Java runtime	<ul style="list-style-type: none">• <i>6.0 or later</i>
Memory (RAM)	<ul style="list-style-type: none">• <i>Minimum 4GB</i>
Hard Disk	<ul style="list-style-type: none">• <i>Minimum 40GB depending on the size of the catalogue (Only applies to Solr search server)</i>
Browser	<ul style="list-style-type: none">• <i>IE 7/8/9 or higher</i>• <i>Chrome, Firefox, Opera</i>• <i>Safari 5.1.7 or higher</i>
Javascript	<ul style="list-style-type: none">• <i>Must be activated</i>
Cookies	<ul style="list-style-type: none">• <i>Must be activated</i>• <i>Automatic mobile device detection does not work without cookies. When cookies are disabled, the site can't store culture information (eg. the language that is selected, and the date settings) and the login information is stored in a way that is considered to be unsafe</i>

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NetOpacs (Web Opac) Application Web Server

Operating System	<ul style="list-style-type: none">• <i>Windows 2008, 2008 R2, 2012 with IIS pre-installed (IIS Components listed in NetOpacs install guide)</i>
Memory (RAM)	<ul style="list-style-type: none">• Depends on operating system and volume• Minimum 2GB RAM for Windows 2003/2008

Please Note: Although NetOpacs can operate on the same Amlib Database Server, it is recommended that medium to large libraries should implement a dedicated NetOpacs Server for maximum performance & security.

PC Client (for Client Server Modules including Offline)

Operating System	<ul style="list-style-type: none">• <i>Windows XP, 2000, Vista, Windows 7, Windows 8</i>
Memory (RAM)	<ul style="list-style-type: none">• Minimum 256 Mb for <i>Windows XP</i>• Minimum 256 Mb for <i>Windows 2000</i>• Minimum 2GB for <i>Windows 7</i>• Minimum 2GB for <i>Windows Vista</i>• Minimum 2GB for <i>Windows 8</i>
Display	<ul style="list-style-type: none">• SVGA (800x600) minim• um
Web Browser	<ul style="list-style-type: none">• <i>Internet Explorer 7</i> and above (will also work with other JAVA enabled browsers)

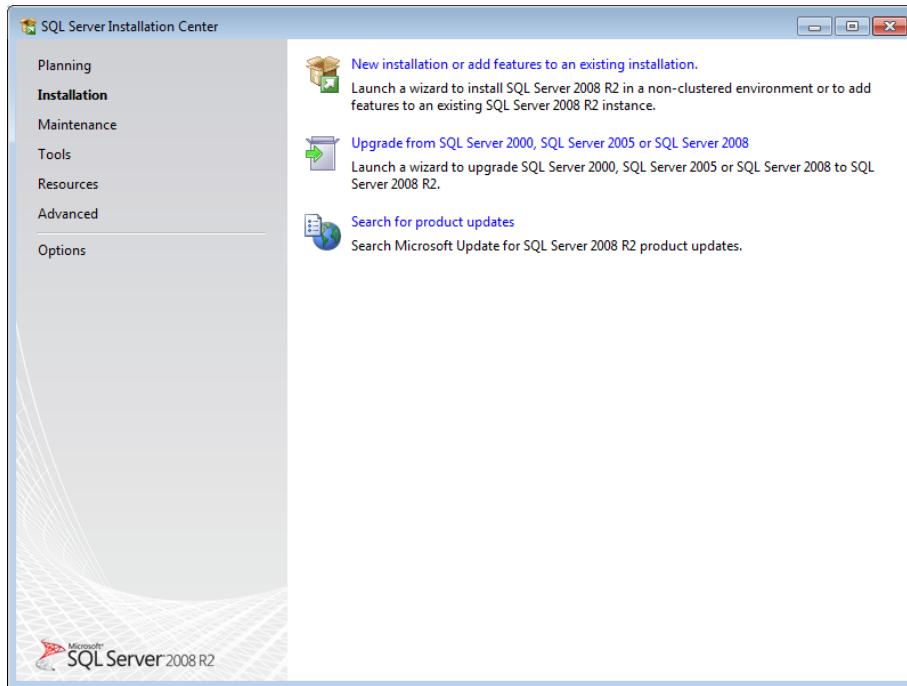
- **Important Note:** the above requirements are provided as a general guideline only

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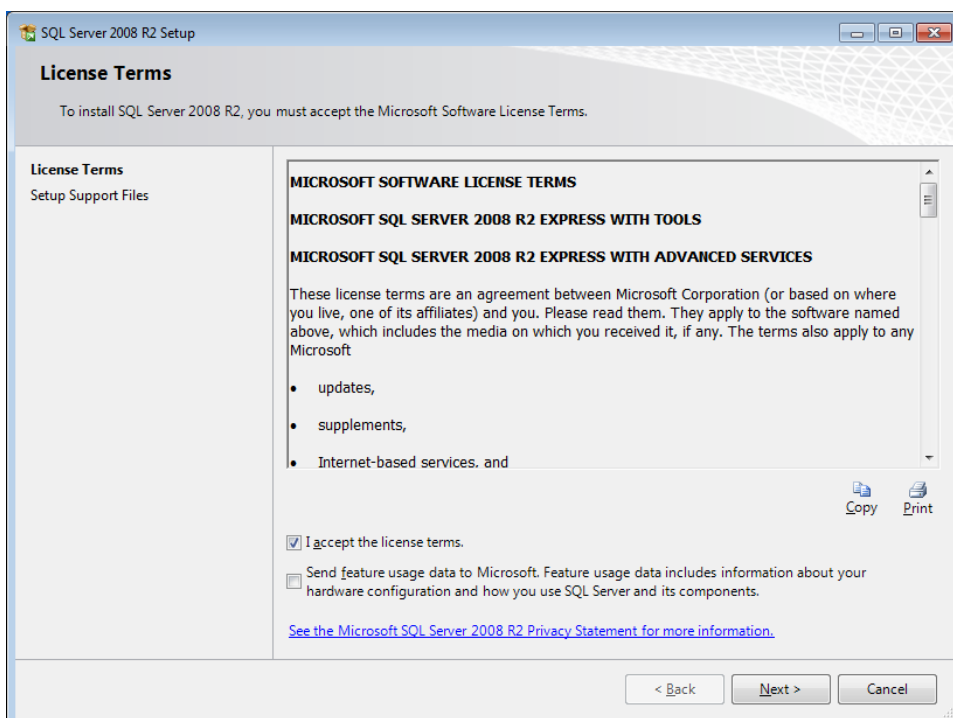
SECTION 1: MICROSOFT SQL SERVER INSTALLATION

Step 1: SQL Server 2008 Setup

1. Download the Express (R2) version of SQL Server 2008: **SQLEXPRTW_x86_ENU.exe** (32-bit server) or **SQLEXPRTW_x64_ENU.exe** (64-bit) from the *Microsoft Download Center*:
 - <http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22973>
2. Double-Select on the application to launch the installer:

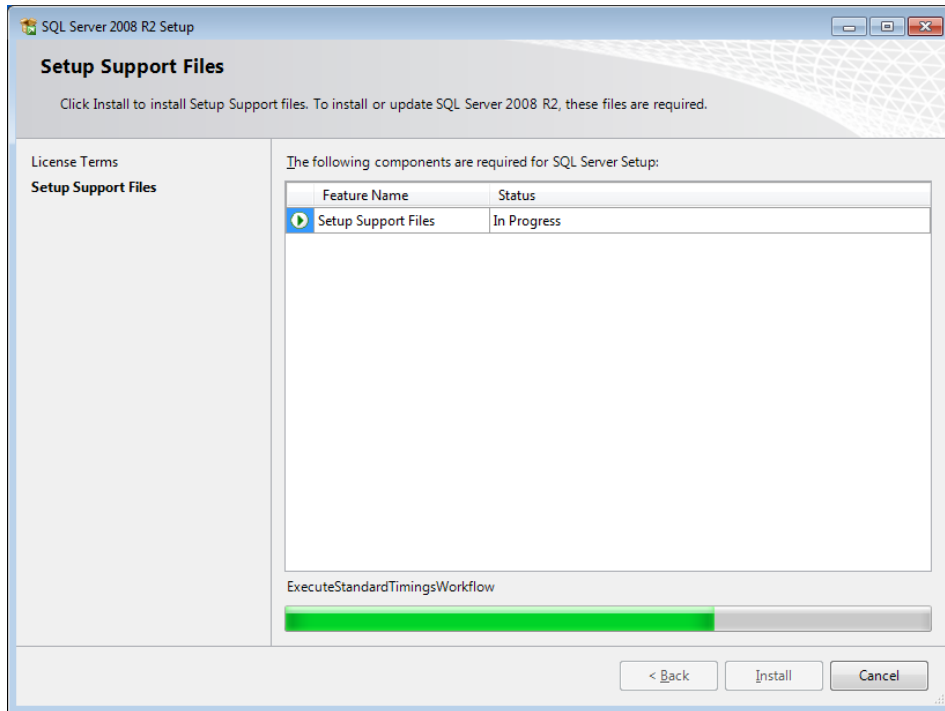


3. Select the **New installation or add new features to an existing installation** link – the **License Terms** screen will display:

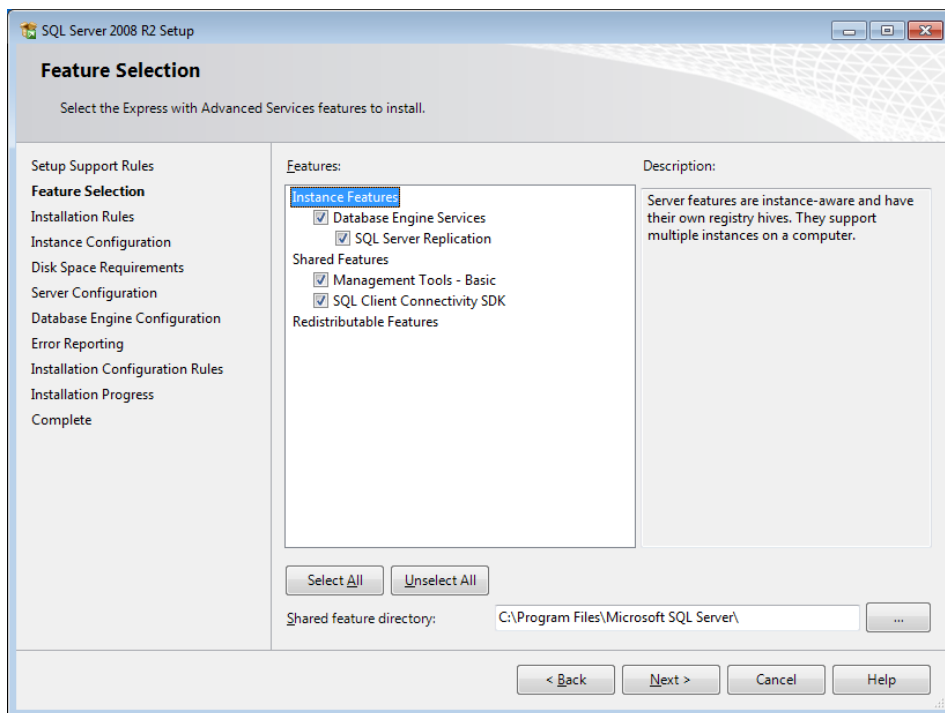


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4. Tick the I accept the license terms box and Select the **Next** button – the Support Files will be installed:

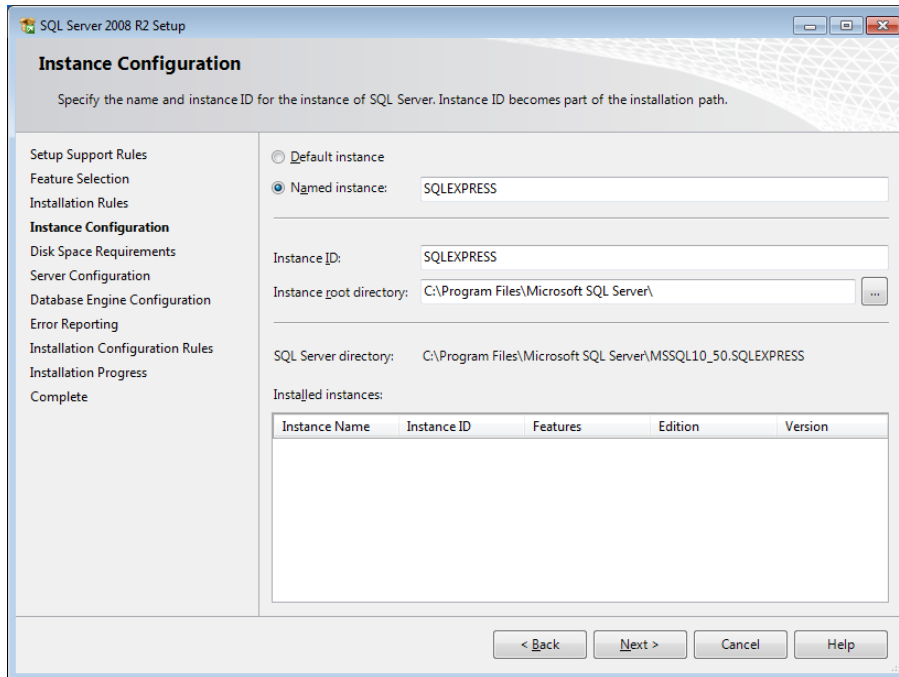


5. Once completed – the **Feature Selection** screen will display:

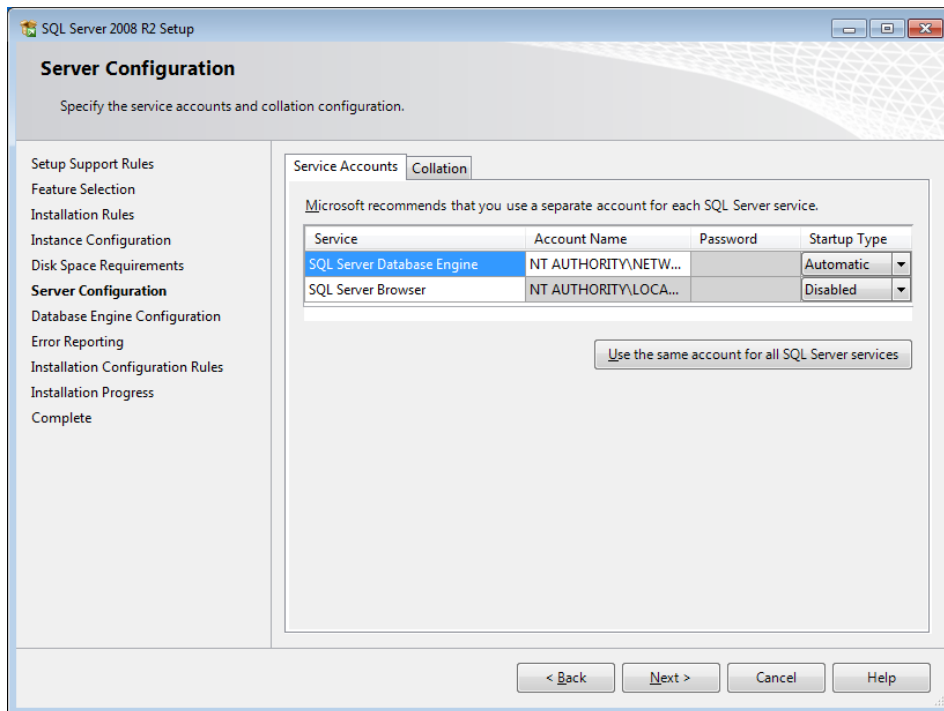


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6. Select the **Select All** button and then the **Next** button – the **Instance Configuration** screen will display:

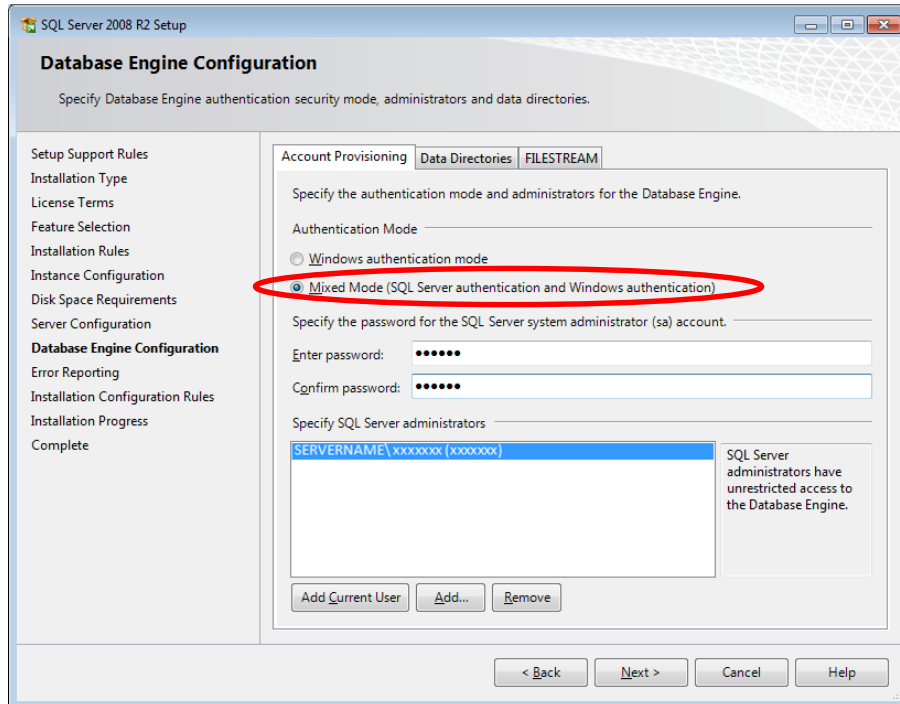


7. Type in a **Named instance** or leave as default: **SQLEXPRESS** and Select the **Next** button
8. The **Server Configuration** screen will display:

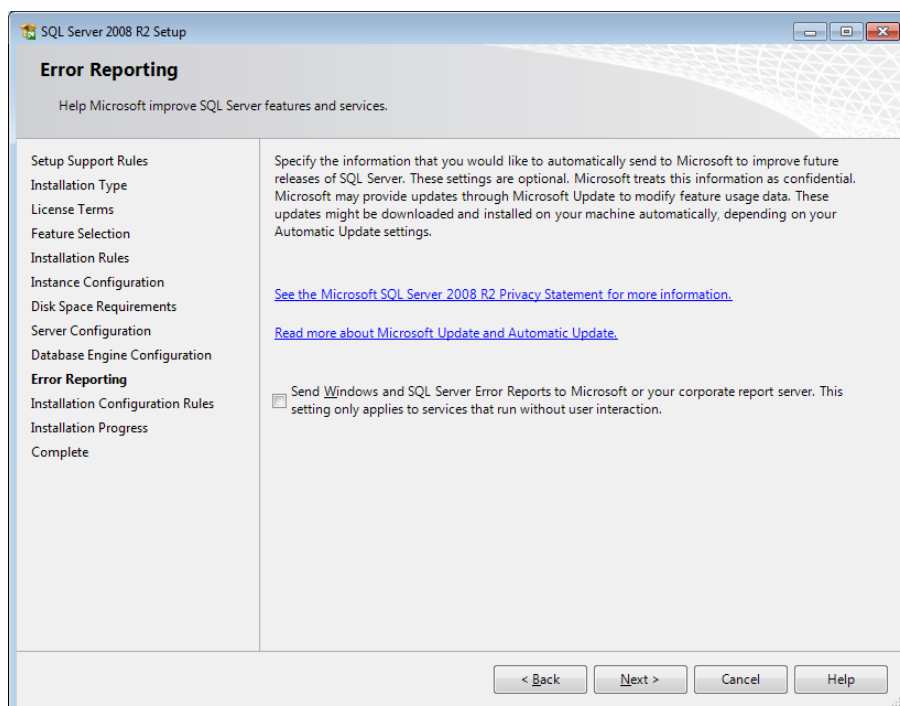


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9. Select the **Next** button – the **Database Engine Configuration** screen will display:

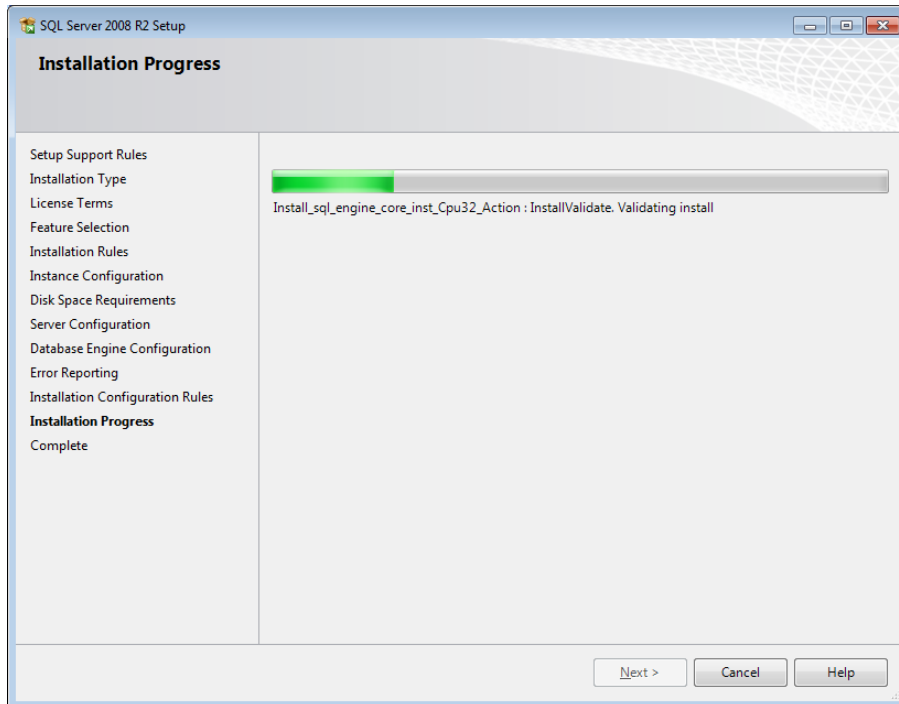


10. **IMPORTANT:** Ensure that the **Mixed Mode (SQL Server authentication and Windows authentication)** radio button is selected
11. **Enter password** and **Confirm password** – for example: **SYSADM/SYSADM**
(Please ensure that you keep a record of this)
12. Select the **Next** button
13. The **Error Reporting** screen will display:

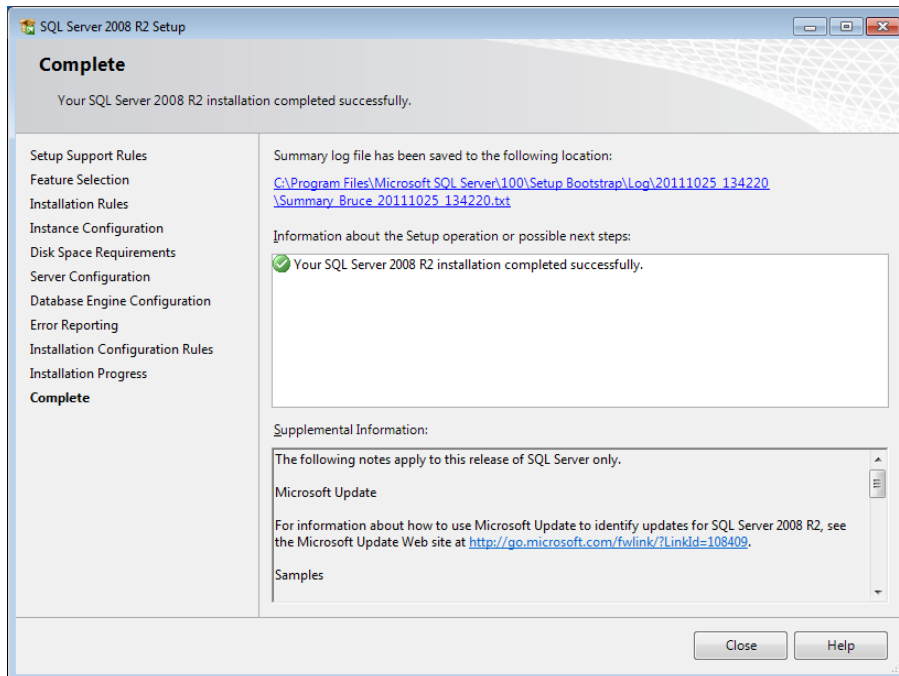


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14. Select the **Next** button – the SQL server will begin installing:



15. Once completed, the following **Complete** screen will display:



16. Select on the **Close** button

The installation of the SQL Server 2008 R2 is now complete.

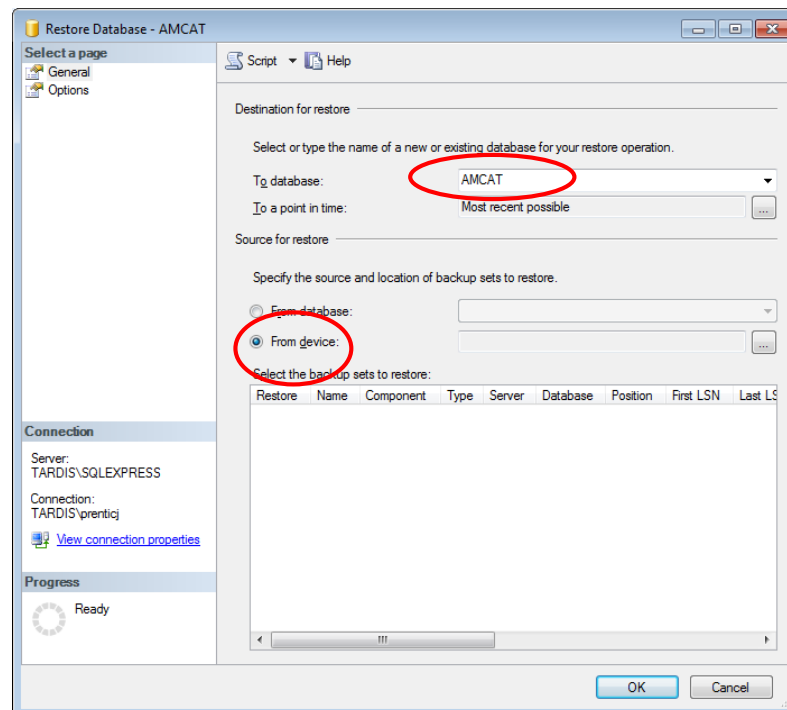
Step 2: Create/Restore the Live Amlib Databases

In nearly all instances, a previously configured set of databases will be installed in the *MSSQL* environment. This will either be a set of databases provided by *OCLC (UK) Amlib* following a site conversion, or a set of databases previously backed up on another server (server migrations only).

Restore Live Databases

For ease of loading, the databases to be loaded should be copied into the **C:\Program Files\Microsoft SQL Server\MSSQL10_50.SQLEXPRESS\MSSQL\Backup** folder on the new server. However this is not essential.

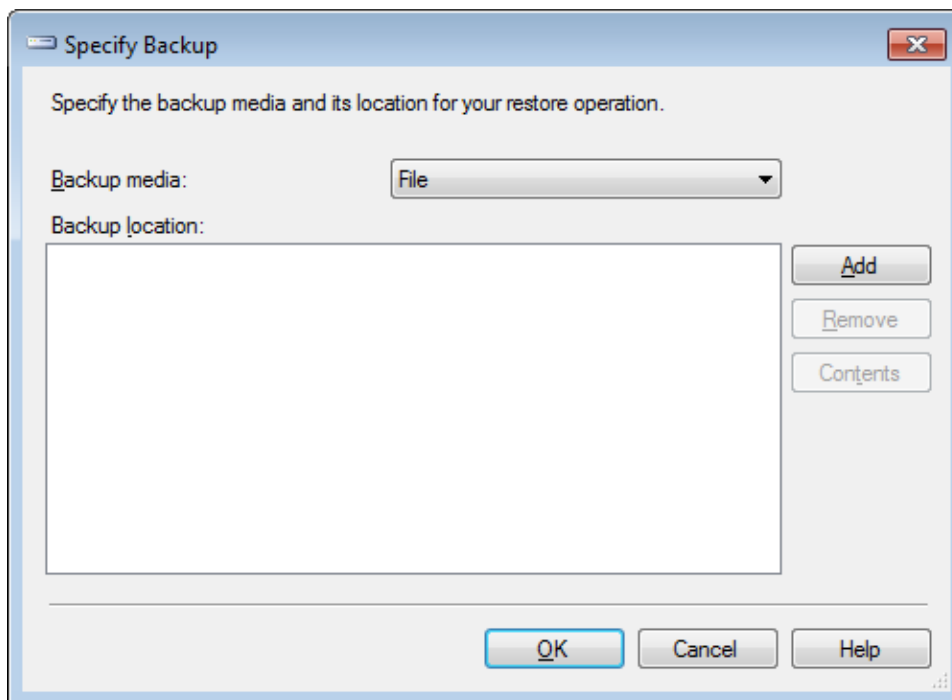
1. Launch the **SQL Server Management Studio**
2. Right-Select on the Databases and select **Restore Database...** – the **Restore Database** screen will display
3. Type in the name of the database you want to add/restore. Start with **AMCAT**



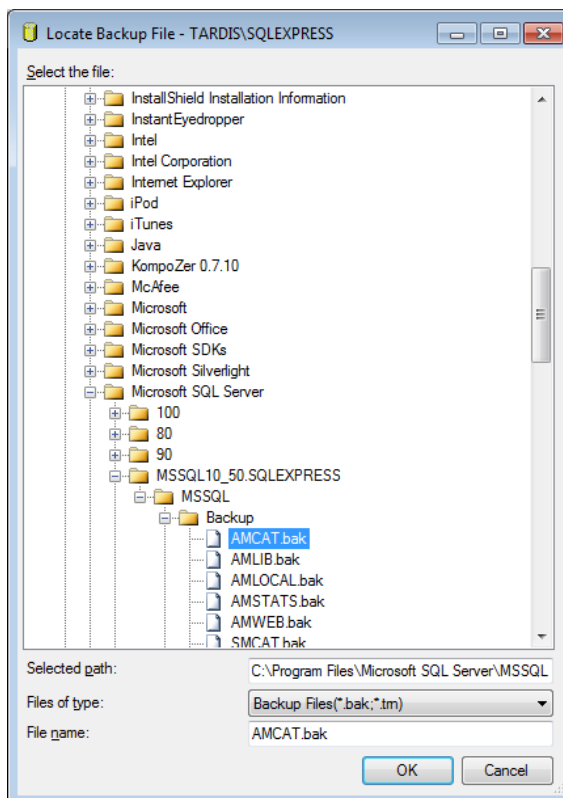
4. Select the **From device:** radio button
5. Select the ... (Select Devices) button – the **Specify Backup** screen will display

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6. Select the **Add** button – the **Locate Backup File** screen will display

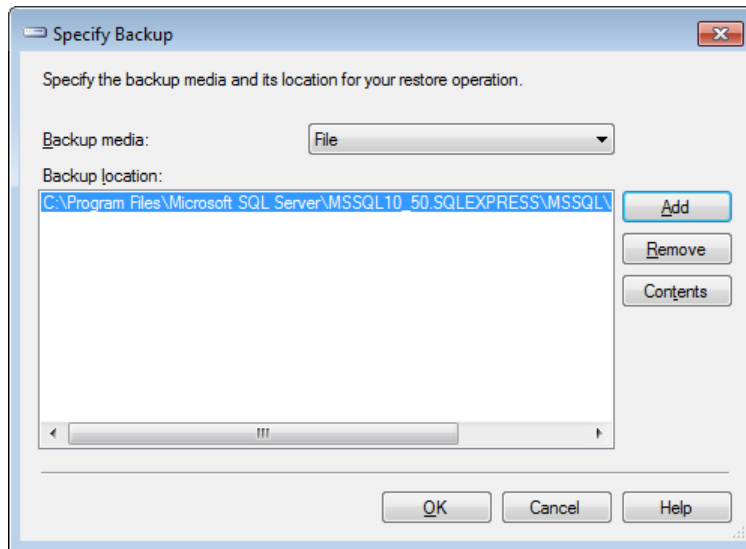


6. Select the corresponding **AMCAT.BAK** file

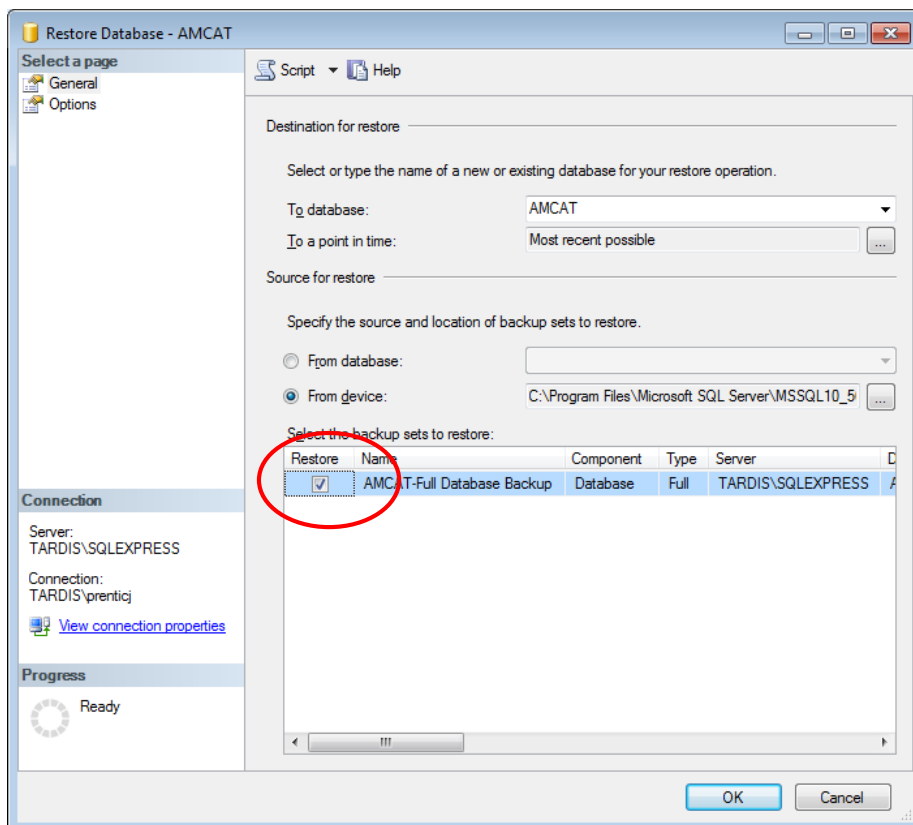


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7. Select the **OK** button to return to the **Specify Backup** screen:



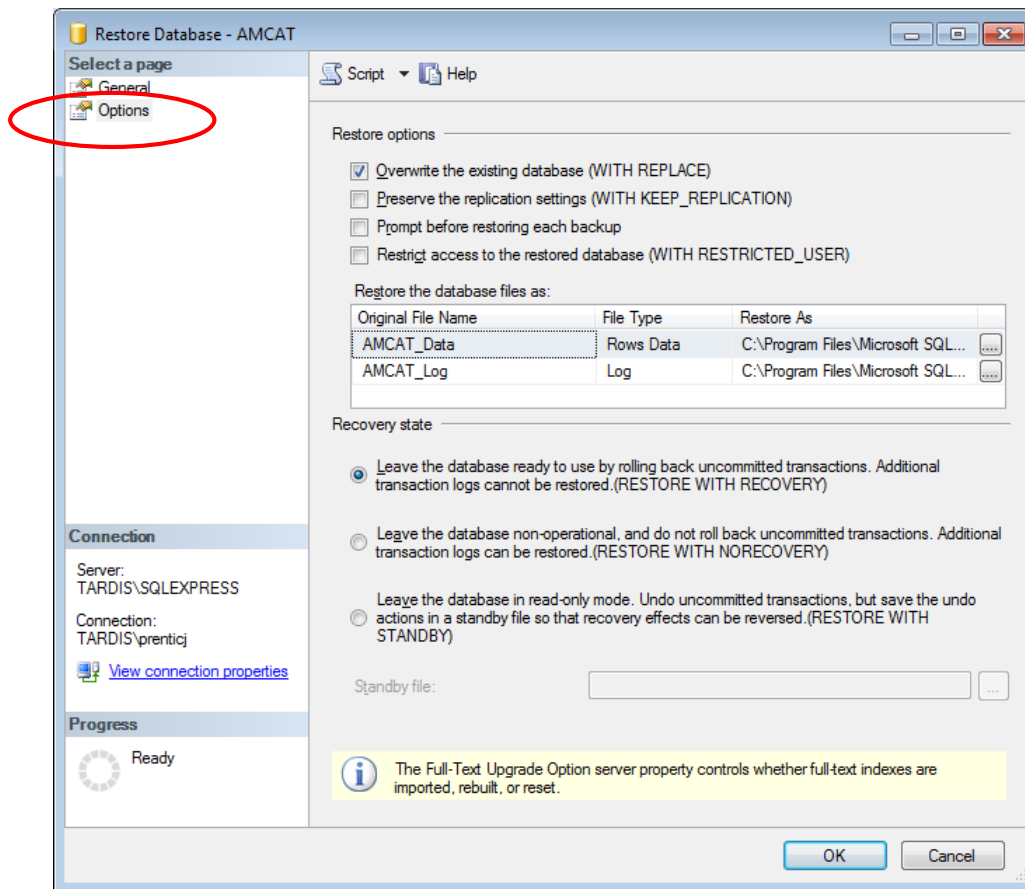
8. Select the **OK** button to return to the **Restore Database** screen:



9. **Tick** the **Restore** box for the selected database

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10. If you are **not overwriting** an **existing database**, go to **Step 14**. In the left side-bar, select the **Options** page:



11. Restore options:

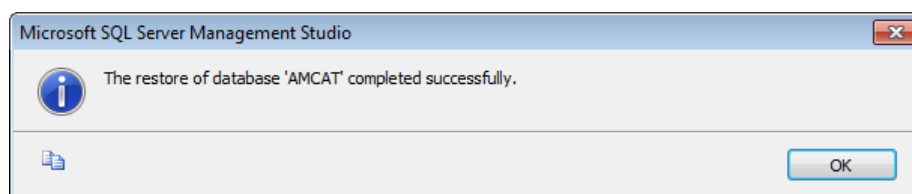
- Select **Overwrite the existing database (WITH REPLACE)**

12. Recovery state:

- Select **Leave the database ready to use by rolling back uncommitted transactions. Additional transaction logs cannot be restored (RESTORE WITH RECOVERY)**

13. Select the **OK** button – the database will be restored

14. The following message will appear when complete: **The restore of the database XXXX completed successfully.**



15. Repeat steps 2-15 for all the **AM** databases

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Step 3: Setup User Security

Once all the databases have been created, you will need to set up the user security logins.

Clear User Schema

It may be necessary to clear the old user schema first.

1. Select the **New Query** button – this will open up a new SQL Query screen
2. Type (or copy) in the following:

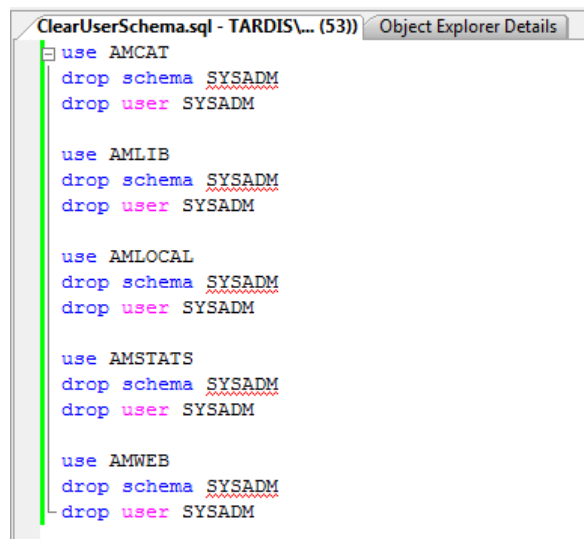
```
use AMCAT
drop schema SYSADM
drop user SYSADM
```

```
use AMLIB
drop schema SYSADM
drop user SYSADM
```

```
use AMLOCAL
drop schema SYSADM
drop user SYSADM
```

```
use AMSTATS
drop schema SYSADM
drop user SYSADM
```

```
use AMWEB
drop schema SYSADM
drop user SYSADM
```

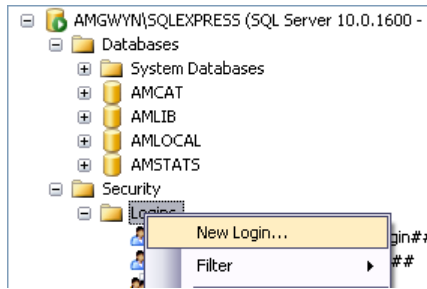


3. Select the **! Execute** button
4. Repeat, replacing **SYSADM** with **NETOPACS**

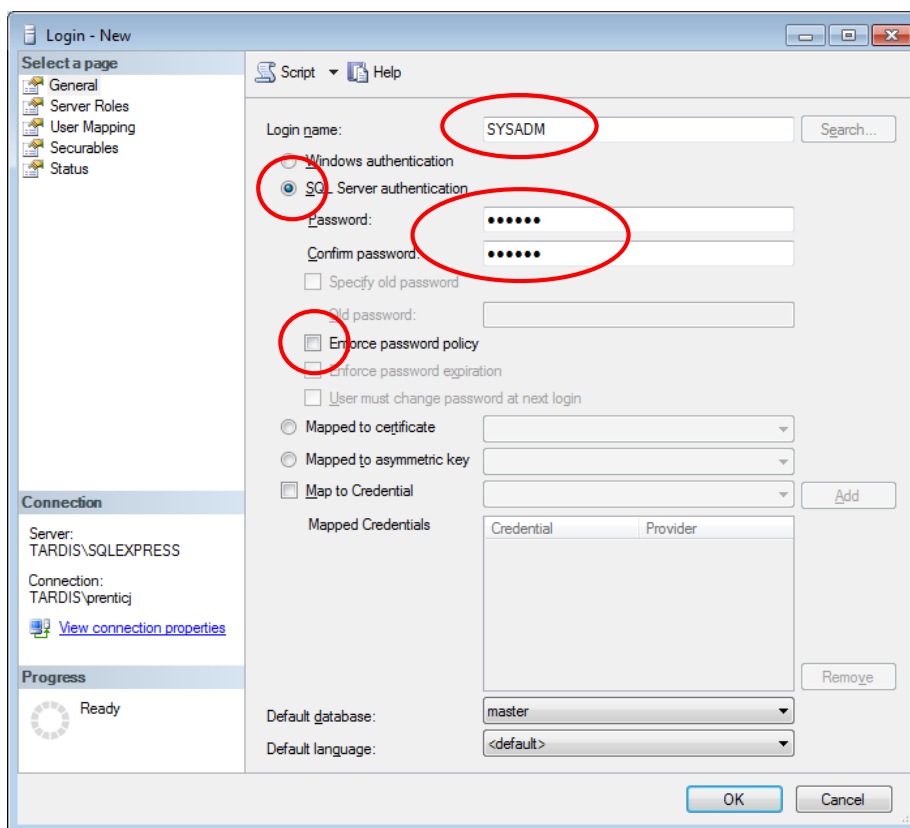
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Map User Schema

1. In the sidebar, expand the **Security** folder, right-Select on **Logins** folder and select **New Login...**

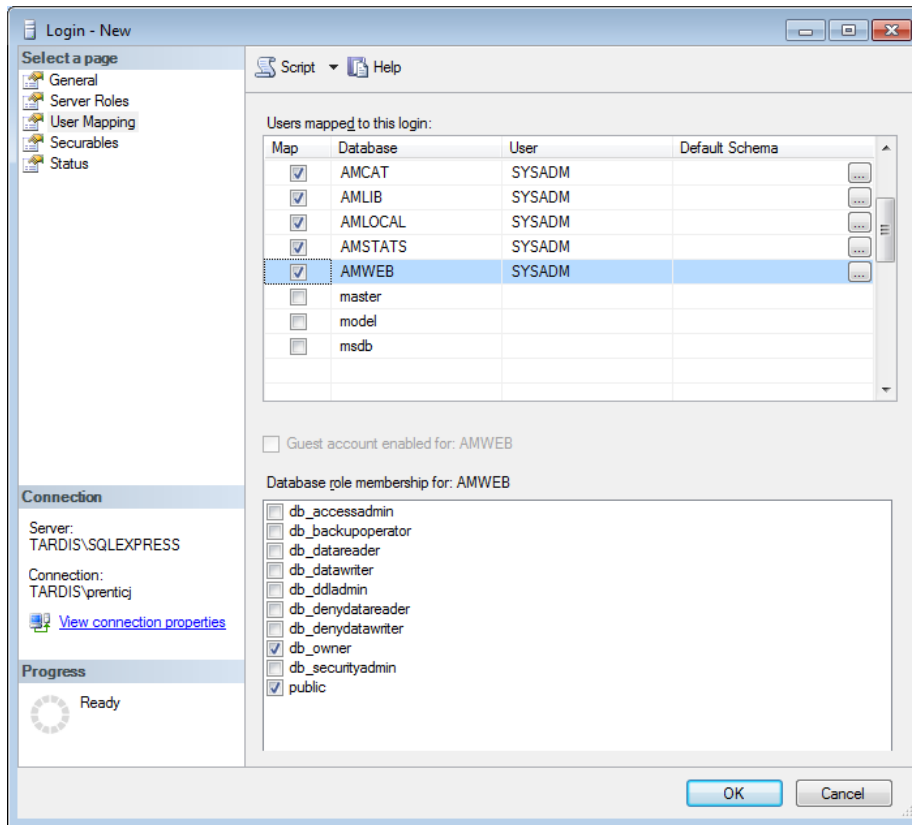


2. The Login - New screen will display:



3. On the General page (select from sidebar):
 - a. Select the **SQL Server authentication** radio button
 - b. Enter the following details:
 - i. Login name: **SYSADM**
 - ii. Password: **SYSADM**
 - iii. Confirm password: **SYSADM**
 - c. Deselect the **Enforce password policy** tick box

4. On the User Mapping page (select from sidebar):



5. In the Map column **tick** the **AMCAT** database option
6. Then tick the **db_owner** option in the lower screen
7. Repeat steps 5 and 6 for the **AMLIB**, **AMLOCAL**, **AMSTATS** and **AMWEB** (where installed) databases
8. Select the **OK** button to exit out of this screen

Repeat steps 1 – 8 to add in the **NETOPACS** (where the *NetOpacs* are installed) login

9. When you are done, your logins will show under **Security > Logins**
10. These logins should also display under each database > **Security > Users**

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SECTION 2B: ORACLE RDBMS

Step 1: Oracle Configuration Required Before Amlib Installation

Since the installation and configuration of the *Oracle* RDBMS is a complex process *OCLC (UK)* requires that the customer have their *Oracle* Data Base Administrator (DBA) to initially setup the required *Amlib* instances (or databases), rollback, tablespaces, backup and ongoing maintenance.

They are:

Create Two (2) Oracle Instances: AMLIB (Live database) and TELIB (Test database)

For libraries using *Microsoft SQL Server* RDBMS *OCLC (UK)* normally recommends create five (5) separate databases for the **Live** database (**AMCAT**, **AMLIB**, **AMLOCAL**, **AMSTATS** and **AMWEB**), but many *Oracle* sites choose to create a single database (instance) only since having five (5) databases creates higher overheads in *Oracle*. This decision will depend on the customer requirements (for example: for a Mobile library for replication of the **AMLIB** tables only).

- Refer to the section “Create Amlib Live and Test Instances for Oracle” for additional information

Create Initial Database, Tablespace and Sufficient Rollback Space

Require for both **AMLIB (Live)** and **TELIB (Test)** environment. For the **TELIB** instance a tablespace of 500 Mb will be sufficient. Sizing of the **AMLIB** instance will depend on the customer volume, and available disk space on the server.

Suitable sizing may be: Customer with 100,000 bibliographic records 8 to 10 Gb AMLIB_DB tablespace, 1 Gb rollback space. Customer with 200,000 bibliographic records 15 to 20 Gb AMLIB_DB tablespace, 2 Gb rollback space.

- Refer to the section “Create Amlib Live and Test Instances for Oracle” for additional information

Install Oracle Client (SQL*Net or Net8) on each PC

The *Oracle Client* (also known as *SQL*Net* or *Net8*) needs to be installed on EACH PC workstation that will be using the *Amlib Library Management System*, as well as the web server running the *Amlib NetOpacs* software. *Oracle SQL*Net* is the *Oracle* client "driver" for *Windows Client Server* applications to seamlessly connect to an *Oracle* database. *Oracle SQL*Net* should be setup with two database "aliases" (if only using 2 *Oracle* instances) – these are **AMLIB** (which should reference the **AMLIB** instance on the *Oracle* database server) and **TELIB** (which should reference the **TELIB** instance on the *Oracle* database server)

If a customer does not have an *Oracle* DBA available to install, configure and maintain their *Oracle* RDBMS *Amlib* we will be able to provide details of a suitable *Oracle* DBA contractor.

Otherwise we recommend that the customer select the *Microsoft SQL Server* RDBMS.

Task required after installation and conversion to *Amlib*:

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Setup Backup Facilities for Oracle and Database server

Libraries should identify whether to use *Oracle* "Hot" backups (online backups for 24-hour database access) or *Oracle* "Cold" backups (where the database is shutdown before being copied to tape). The type of backup used will also impact on the *Oracle* database setup (for example: allowing for archive log space for online backups).

Step 2: Oracle Character Set

For *Oracle 8.1.7*, *OCLC (UK)* recommends that the **AMERICAN_AMERICA.WE8ISO8859P1** character set (8-bit Western European) is used when installing *Oracle* and creating the instances rather than the default US 7-bit ASCII.

If *OCLC (UK)* is providing the data conversion services to the library then the **AMERICAN_AMERICA.WE8ISO8859P1** character set will provide greater accuracy when loading the converted data files.

For *Oracle 9.2* on *Windows 200x*, *OCLC (UK)* recommends that the **WE8MSWIN1252** character set is used. Please advise *OCLC (UK)* of the *Oracle* character set configured on your server prior to the commencement of the data conversion process.

Step 3: Create Initial Database, Tablespace and Sufficient Rollback Space

When configuring the **AMLIB** and **TELIB** instances within *Oracle* we recommend the following settings:

AMLIB Instance

Recommend creating a separate tablespace **AMLIB_DB** to hold the *Amlib* tables.

Sizing of the **AMLIB_DB** tablespace will depend on the customer volume, and available disk space on the server.

Suitable sizing may be:

- *Customer with 100,000 bibliographic records 8 to 10 Gb AMLIB_DB tablespace, 1 Gb rollback space.*
- *Customer with 200,000 bibliographic records 15 to 20 Gb AMLIB_DB tablespace, 2 Gb rollback space*

During the *Amlib* data load the tablespace **AMLIB_DB** is assigned as the default tablespace for the *Amlib* tables. Your *Oracle* DBA should ensure that the tablespace of **AMLIB_DB** and the temporary tablespace (for example: **TEMP**) should be assigned **as a default** to all users created by library system administrators within *Amlib*.

TELIB Instance

Recommend creating a separate tablespace **AMLIB_DB** to hold test *Amlib* tables.

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For the **TELIB** instance a size of 500 Mb will be sufficient for the **AMLIB_DB** tablespace.

During the **TELIB** data load the tablespace **AMLIB_DB** is assigned as the default tablespace for the **Test Amlib** tables.

IMPORTANT: However, in many cases the library wish to have the initial trial conversion loaded into the **Test** database. In this case we would recommend creating an **AMLIB_DB** tablespace of 3 Gb with 200 to 400 Mb Rollback space.

Other Performance Suggestions

To maximise performance *OCLC (UK)* also suggest:

- Locating *Oracle* database and log files across multiple hard disks as possible (not required if the server is configured for RAID 5)
- Setting the **AMLIB_DB** tablespace and Rollback logs set to automatically extend in size
- At some stage in the future export the entire **AMLIB** database and recreate/reload to have *Oracle* recalculate and optimise table extents used

Step 4: Install Oracle Client and Configure SQL*Net (Net8)

The *Oracle Client* needs to be installed on EACH PC workstation that will be using the *Amlib Library Management System*, as well as the web server running the *Amlib NetOpacs* software.

After installing the *Oracle Client*, *SQL*Net* (also known as *Net8* in *Oracle version 8*) needs to be configured with the *Amlib Live* and **Test** databases and the address of the *Oracle* database server.

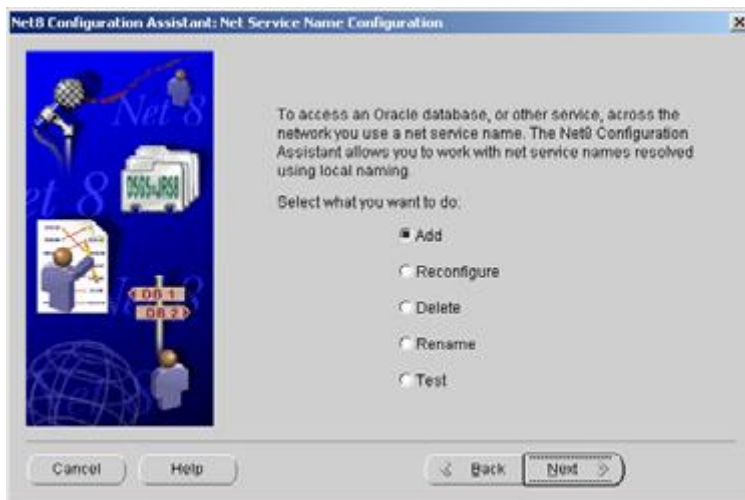
The following is a brief example for configuring the *Oracle Net8 Client* for *Oracle Version 8.1.7*.

1. Select the **Net8 Configuration Assistant** icon from the *Oracle* program group – the *Net 8 Configuration Assistant* will launch:

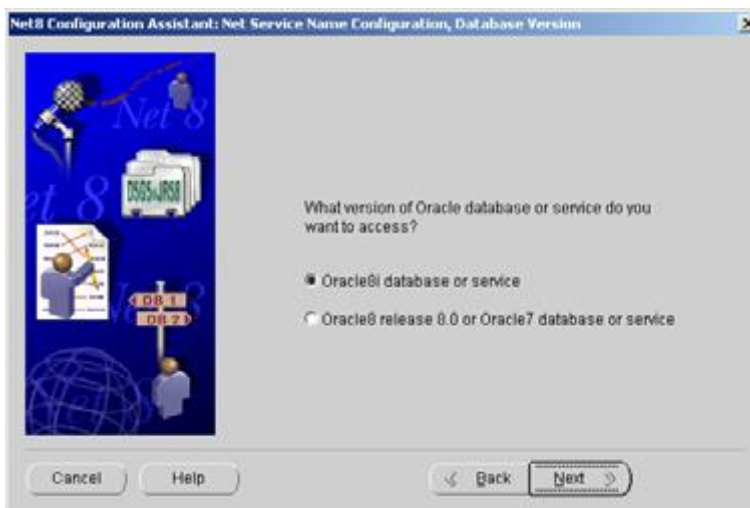


2. Select **Local Net Service Name configuration** and Select the **Next** button

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3. Select **Add** and Select the **Next** button



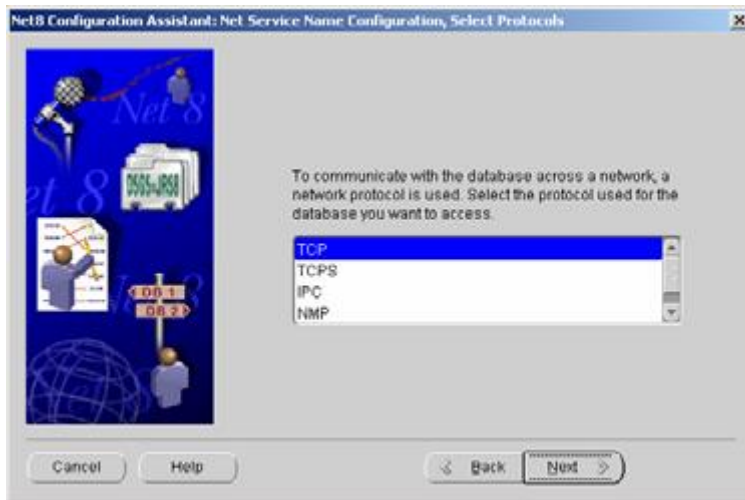
4. Select **Oracle8i database or service** and Select the **Next** button



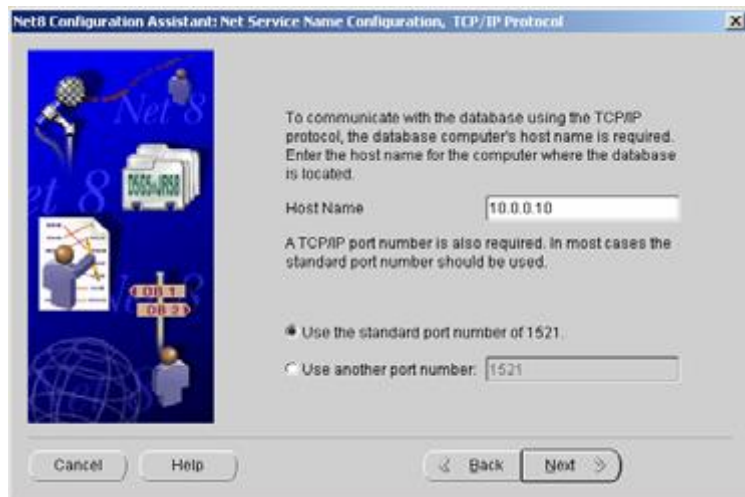
5. Enter a Service Name **AMLIB** and Select the **Next** button

Please Note: When setting up the **Test** database service name enter a service name of **TELIB**

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6. Select **TCP** for communication and Select the **Next** button



7. Enter the TCP/IP Host Name address of the *Oracle* database server and Select the **Next** button
(Leave the standard port number as **1521** unless your Oracle port number is different)



8. To test that the *Oracle Client* is setup correctly select **Yes, perform a test** and Select the **Next** button

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9. If test is successful a confirmation message will be displayed: **Connecting...Test successful**



10. Select the **Next** button to Finish

* Repeat the above configuration process to create a Service Name (or Alias) for the *Amlib Test* database EXCEPT using **TELIB** as the service name

Step 5: Run SQL*Plus To Assign Default Tablespace & Create Amlib Logins

Once the *Amlib* instances and tablespaces have been created in *Oracle*, you have to run an “initialisation” SQL script using the *Oracle Sql*plus* program (or use the *Amlib SQLTalk.exe* utility).

The SQL script provides a number of functions:

- a. Ensures that the *Oracle Client (SQL*Net / Net8)* is correctly configured and that *Amlib* will be able to communicate to the *Oracle* database
- b. Create *Amlib* System Administrator login **SYSADM** – which is also the “owner” of all *Amlib* tables loaded
- c. Create *NetOpacs* login **NETOPACS** – which also is the owner of any temporary *NetOpacs* created from searches
- d. Assign the tablespace **AMLIB_DB** as the default tablespace to **SYSADM** and **NETOPACS**
- e. Create Initial *Amlib* Logins for libraries (libraries can then creating all required staff logins/passwords using the *Amlib Supervisor* module)

The SQL script makes the following assumptions:

- That the *Oracle* **SYSTEM** dba login has a password of **MANAGER**
- That a tablespace called **AMLIB_DB** has been created for the **AMLIB** and **TELIB** instances

You will need to alter the sql script if the above assumptions are not applicable for your *Oracle* configuration

- SQL Script File Name: **OracleCreateAmlibLogins.sql**
- Location: **C:\Amlib\Utility\Version 5.1 Database**

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The contents of the script include:

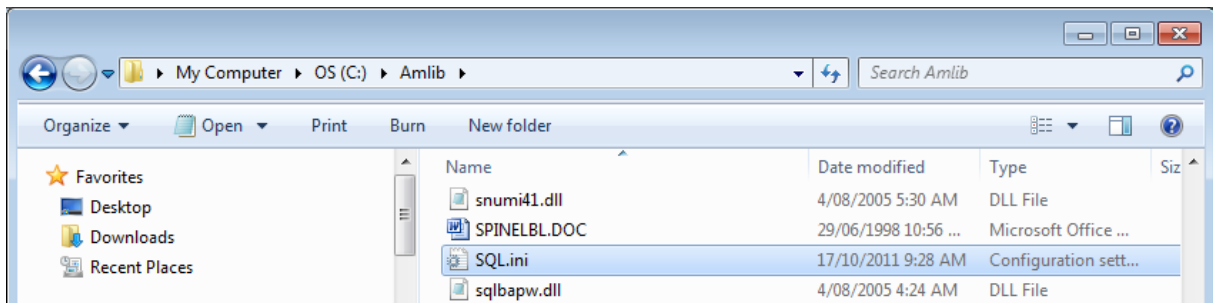
```
CONNECT AMLIB SYSTEM/MANAGER;
GRANT CONNECT TO SYSADM IDENTIFIED BY SYSADM;
GRANT DBA TO SYSADM IDENTIFIED BY SYSADM;
GRANT CONNECT TO NETOPACS IDENTIFIED BY NETOPACS;
GRANT DBA TO NETOPACS;
alter user sysadm identified by sysadm default tablespace amlib_db;
alter user netopacs identified by netopacs default tablespace
amlib_db;
CONNECT TELIB SYSTEM/MANAGER;
GRANT CONNECT TO SYSADM IDENTIFIED BY SYSADM;
GRANT DBA TO SYSADM IDENTIFIED BY SYSADM;
GRANT CONNECT TO NETOPACS IDENTIFIED BY NETOPACS;
GRANT DBA TO NETOPACS;
alter user sysadm identified by sysadm default tablespace amlib_db;
alter user netopacs identified by netopacs default tablespace
amlib_db;
```

Step 6: Load Amlib Database into Oracle

Once you have created the *Amlib* databases in *Oracle* and installed the *Amlib Client* software, you can load the *Amlib* databases into *Oracle* using the *Amlib Upgrade* program.

Step 7: Configure SQL.ini Settings

1. On the *Amlib* application server, navigate to your **Amlib** folder and open up the **SQL.ini** file in *Notepad*:



2. Under the heading [**win32client.dll**] ensure that the correct database connector is being used:
 - Oracle: **comdll=sqlora32**
3. If *Oracle* was selected (**comdll=sqlora32**) was selected in the [**win32client.dll**] section then this section is used to determine the *Oracle* database alias used within the *Oracle SQL*Net* (also known as *Net8 Client*)

Under the heading [**ORAGTWY**] enter in the *Oracle* file path(s) for the **Live** database(s):

- REMOTEDBNAME=AMLIB,@AMLIB
- REMOTEDBNAME=TELIB,@TELIB
- SUBSTITUTE=SYSSQL.,
- SUBSTITUTE=syssql.,
- longbuffer=900000
- MAPERROR=OFF
- fetchrow=100

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The format of this keyword is **remotedbname={[[database name],@[SQL*Net database alias]}**.

```
37 |
38 | [ORAGTWY]
39 | ;
40 | ; This section is for Oracle Router. The REMOTEDBNAME maps the application's
41 | ; database name to the Oracle SQL*Net connect string. The SUBSTITUTE
42 | ; keyword replaces the first parameter with the second parameter. It is mainly
43 | ; used to replace the user id in a Catalog Command Query. This's only needed
44 | ; when you run Quest against Oracle v7, when you run Quest against Oracle6
45 | ;you must remove or comment this line out.
46 | ;
47 | REMOTEDBNAME=AMLIB,@AMLIB
48 | REMOTEDBNAME=TELIB,@TELIB
49 | SUBSTITUTE=SYSSQL.,
50 | SUBSTITUTE=syssql.,
51 | longbuffer=900000
52 | MAPERROR=OFF
53 | fetchrow=100
54 |
```

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SECTION 2: AMLIB CLIENT INSTALLATION

Default Installation Folders

To assist with email support we highly recommend that the default installation folders suggested in the following notes are retained.

For example:

- *Amlib Client* software: **C:\Amlib** (or **D:\Amlib**, **E:\Amlib**)

Step 1: Install the Amlib 6.0 Client

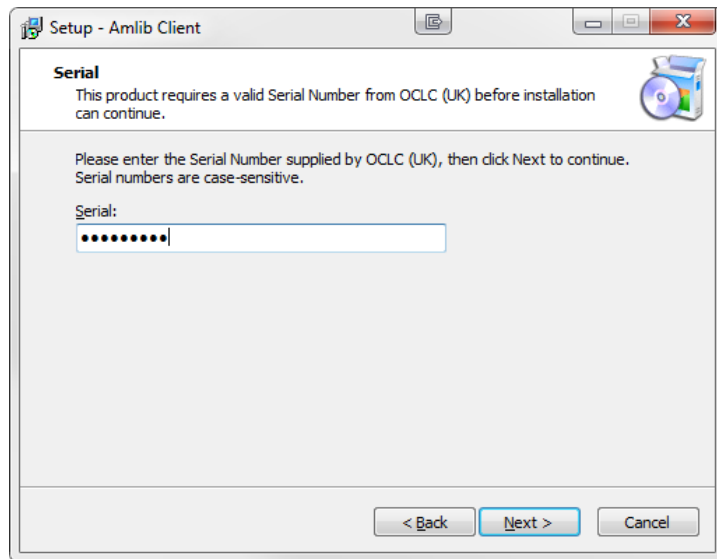
IMPORTANT: Please ensure that you have **full read/write** access to the **\Amlib** folder on your server (for example: **C:\Amlib**) and that you are logged in with Administrative Privileges.

1. The *Amlib Client 6.0* installer is available on the OCLC Website, [Downloads and Software Updates](#) (contact *Amlib* support if you require a login to this website)
2. Download the [Amlib60Setup.exe](#) and save it on your *Amlib* server
3. Double-Select the **Amlib60Setup.exe** to launch the installation Wizard – the Setup – Amlib Client screen will open displaying the **Welcome** message:

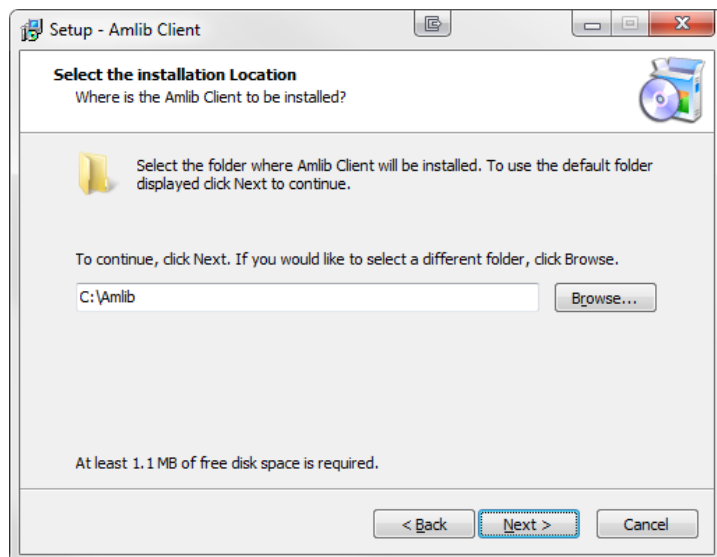


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1. Select the **Next** button – the **Serial** screen will display, prompting you for valid Serial Number:



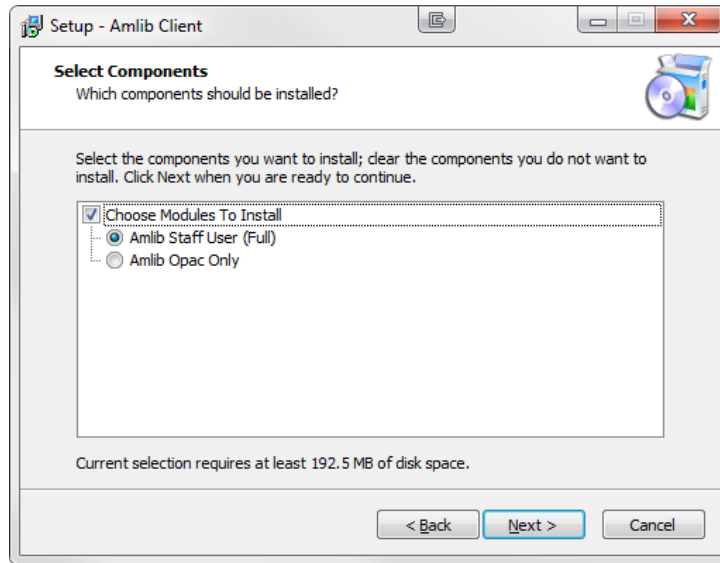
2. Enter the **Serial Key** supplied by *OCLC (UK) Ltd* (case sensitive!)
3. Select the **Next** button – the **Installation Location** screen will be displayed:



4. Enter the drive/folder location where you would like to install the *Amlib Client* – we recommend that the *Amlib Client* be installed in **C:\Amlib** (or **D:\Amlib**, etc)

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5. Select the **Next** button – the **Select Components** window will display:



6. Choose which component should be installed:

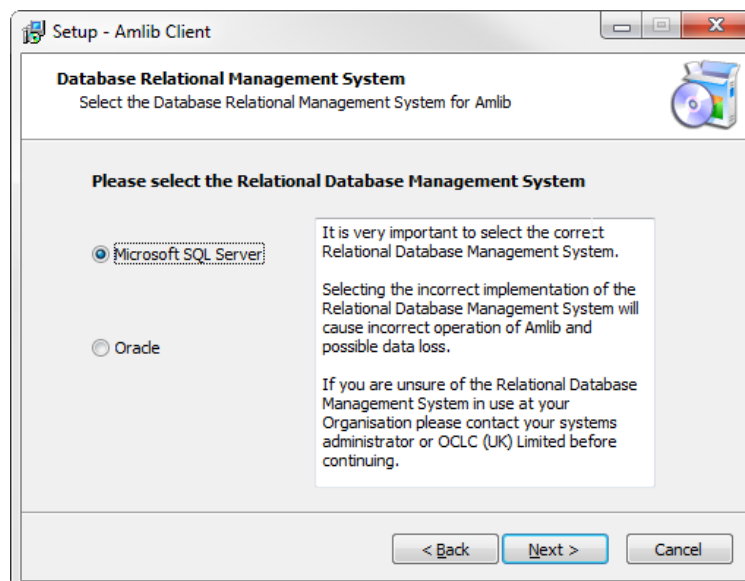
a. Amlib Staff User (Full)

- Installs *Amlib* Staff Client (catalogue, circulation, etc.)
- Default option

b. Amlib Opac Only

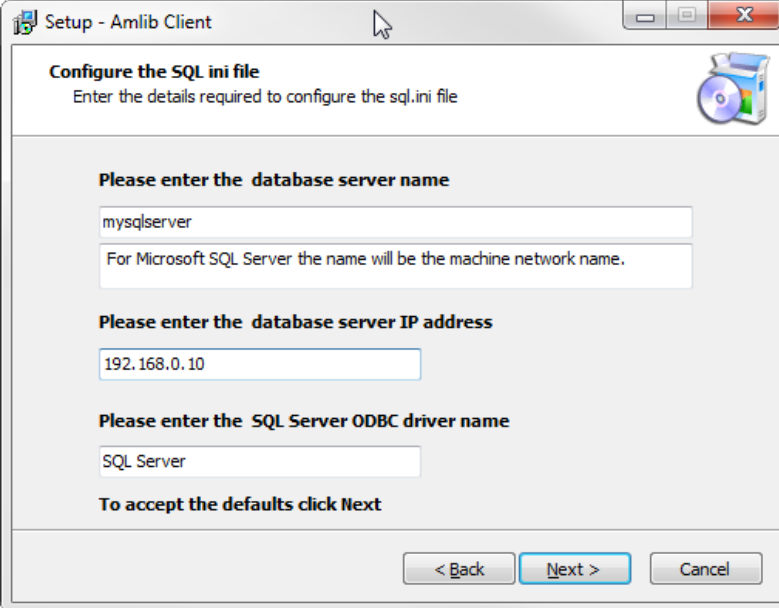
- Only installs the Amlib Client Server OPAC module
(*only select this option if you installing on a Public Access workstation*)

7. The **Select Relational Database Management System** will display. Choose either Microsoft SQL Server or Oracle. In this example we will use Microsoft SQL Server.



8. The **Configure the SQL ini file** screen will display.

(The **SQL.ini** file is a configuration file containing the pathway information which allows the *Amlib Client* (and other components such as the *NetOpacs*) to connect with the *Amlib* databases)



Setup - Amlib Client

Configure the SQL ini file
Enter the details required to configure the sql.ini file

Please enter the database server name
mysqlserver
For Microsoft SQL Server the name will be the machine network name.

Please enter the database server IP address
192.168.0.10

Please enter the SQL Server ODBC driver name
SQL Server

To accept the defaults click Next

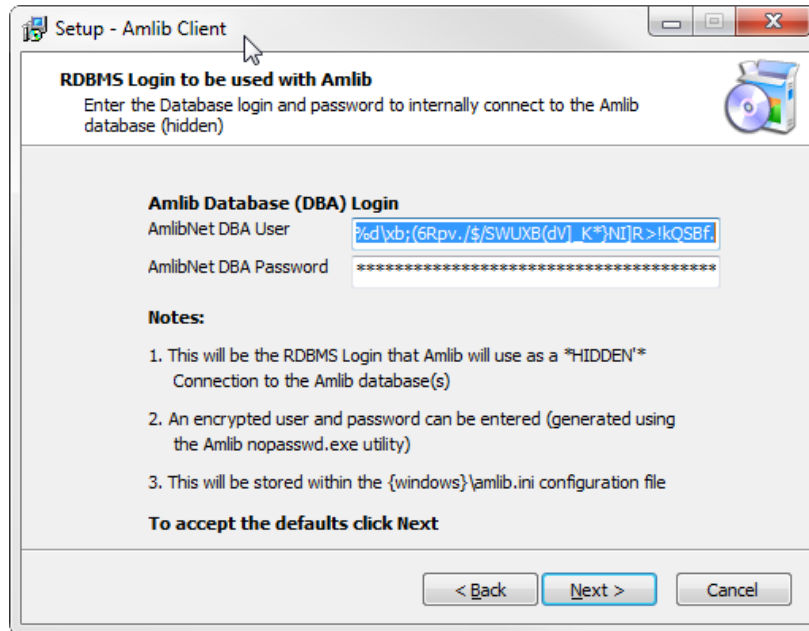
< Back Next > Cancel

For the full version of SQL server only the server name needs to be entered. If the SQL Server is using the express version the server name will need to take the format SERVERNAME\SQLEXPRESS. This same format will be required for a named instance and take the same format SERVERNAME\INSTANCENAME.

9. The **RDBMS Login to be used with Amlib** screen will display. Most customers can accept the defaults.

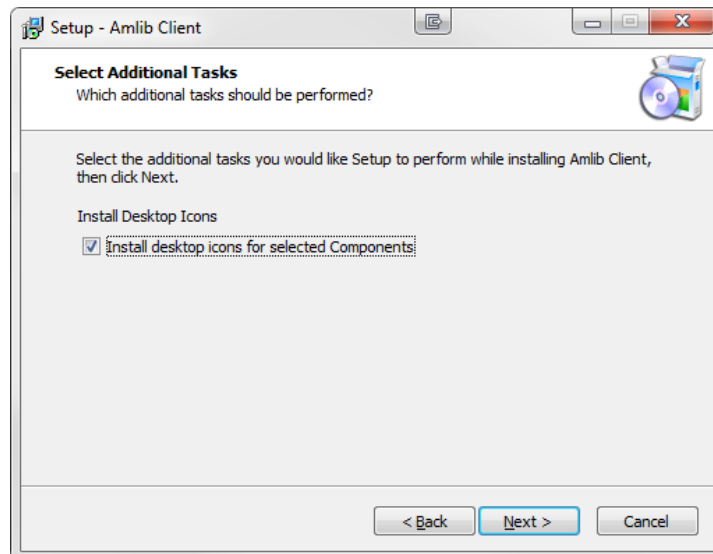
This will be the RDBMS Login that *Amlib* will use as a *HIDDEN* Amlib Database (DBA) Login to connect the *Client* to the database
An encrypted **User** and **Password** can be entered (please contact Amlib support for assistance)
This will be stored within the {windows}\amlib.ini configuration file

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10. The **Select Start Menu Folder** screen will display. To accept the default name (for most customers), Select the **Next** button

11. The **Select Additional Tasks** screen will display prompt if you wish to install a desktop icon for the *Amlib Client*:



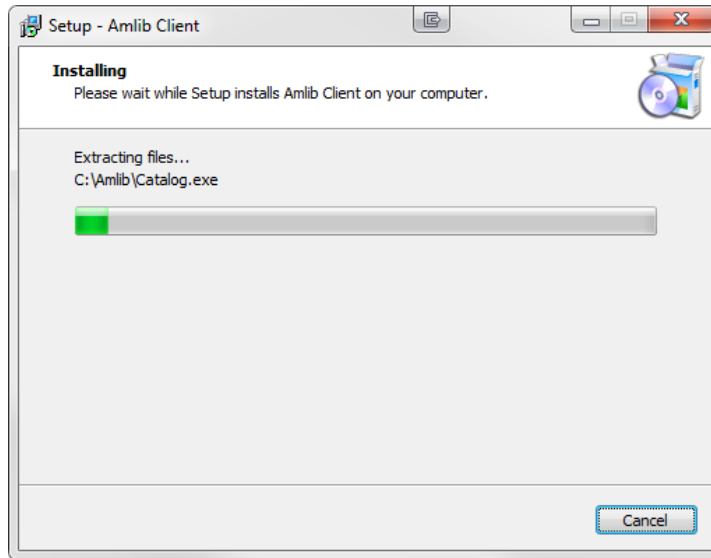
(You can unselect **Install desktop icons for selected Components** if you do not wish to install the *Amlib* icons on the desktop)

12. Select the **Next** button to continue

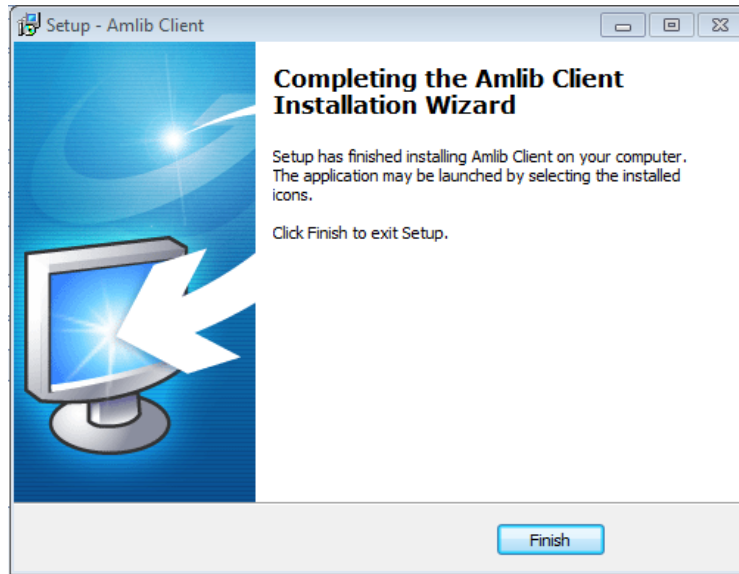
13. The **Ready to Install** screen will display with a summary of the installation tasks to be performed

14. Select the **Install** button – the **Installing** screen will display:

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15. Select Finish and the Setup wizard will close



(You can unselect **Start the Amlib Configuration Manager** if you do not wish to install the *Amlib* icons on the desktop)

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SECTION 3: BACKUPS

This is relevant to users that are running a Microsoft SQL Server.

In all versions of SQL Server there are two recovery models for databases, Simple and Full. The main difference is how many of the transactions are logged for recovery purposes. If customers are happy to be able to go as far back as their latest complete backup then Simple recovery more will suffice and the log sizes will be managed by SQL Server. If point-in-time recovery is required then Full recovery must be used, in this mode in order for the logs to be cleared they must first be backed up.

For the full version of SQL server please use this guide on maintenance plans found here:

<https://www.oclc.org/support/services/amlib/documentation/technical-documents.en.html>

One of the functionalities that is not included with an Express version of SQL Server is the SQL Server Agent which is used in scheduling and managing maintenance plans. This leaves two options for scheduling database backups and maintenance:

1. Use the Amlib Backup management utility.
This requires at least .NET 3.5 to be installed on the machine that will run the backups. Windows Server 2000 does not support the .NET framework, therefore any customer running Server 2000 will need to implement option 2.
2. Use windows task scheduler to run a batch file and SQL script

The Amlib Backup management utility installer and guide is available from the Amlib OCLC.org website. <https://www.oclc.org/support/services/amlib/documentation/technical-documents.en.html>

The batch file, SQL script and documentation can also be downloaded from the following locations.

<https://www.oclc.org/support/services/amlib/documentation/technical-documents.en.html>

If you require your username and password please contact the support helpdesk.

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SECTION 4: TROUBLESHOOTING TIPS

The first step in troubleshooting problems that you may be experiencing with *Amlib* (*Client* or *NetOpacs*) connecting to the database is to first check the following:

- Can you connect to the *Amlib* database using the *Amlib Client* on the server?
- Can you connect to the *Amlib* database using the *Amlib Client* from another workstation?

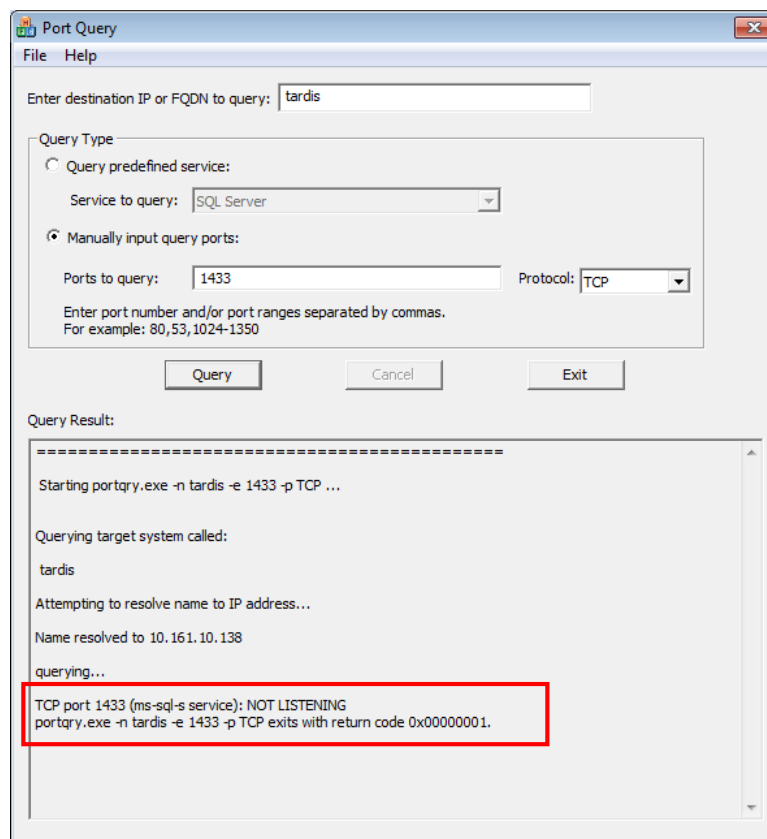
The next step is to try and isolate the problem and ensure that the problem is not due to the hardware, network or firewall.

Step 1: Check Communication to Database Server using Microsoft Port Query

Microsoft Port Query is an easy to use tool that enables you to test whether you can connect from a Workstation (or Web Server) to the database server, and whether the RDBMS is listening for connection requests.

1. Launch the *Microsoft Port Query* program which will be located:
 - *Amlib Client*: c:\amlib\utility\PortQryUI\portqueryui.exe
 - *NetOpacs*: c:\netopacs\utility\PortQryUI\portqueryui.exe
 - *ZServer*: c:\zserver\utility\PortQryUI\portqueryui.exe

(Please Note: Replace c:\amlib or c:\netopacs with the actual path where the applications have been installed)



2. Enter the Destination IP address of database server used when installing *Amlib* (for example:

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tardis, 127.0.0.1, localhost, etc.)

3. **Select** the Manually input query ports option
4. Ports to query:
 - If using *Microsoft SQL Server* enter: **1433**
 - If using *Oracle* enter **1521** (older versions of *Oracle* may be using **1525**)
 - If using *Gupta SQLBase* enter: **2155**
5. Protocol: **TCP**
6. Then Select the **Query** button to start the search

Query Results

1. If the Query result is **LISTENING** (for example: **TCP port 1433 (ms-sql-s service): LISTENING**) then this indicates:
 - The Workstation (or Web Server) can communicate to the database server **OK**
 - You will need to proceed to the next level of *Amlib* troubleshooting to identify the problem you are experiencing
2. If the Query result is **NOT LISTENING** (for example: **TCP port 1433 (ms-sql-s service): NOT LISTENING**) then this indicates:
 - The Workstation (or Web Server) is unable to communicate to the RDBMS on the database server

You should refer this problem to your organisation's database or network administrator to follow up.

Possible reasons why it is unable to communicate to the RDBMS on the database server:

- The database server is not running
- The database server is disconnected from the network
- The workstation (or web server) is disconnected from the network
- There is a problem with the network (for example: switch is faulty, DHCP is not running, etc.) or network configuration
- The RDBMS is not running on the database server (check in Windows Services whether the RDBMS (*Microsoft SQL Server*, *Gupta SQLBase* or *Oracle*) is running)
- The enterprise firewall is preventing connectivity via this Port
- The workstation firewall (for example: *Windows XP Service 2* firewall) is preventing connectivity via this Port
- There a problem with hardware (for example: network card in either database server, workstation or web server)

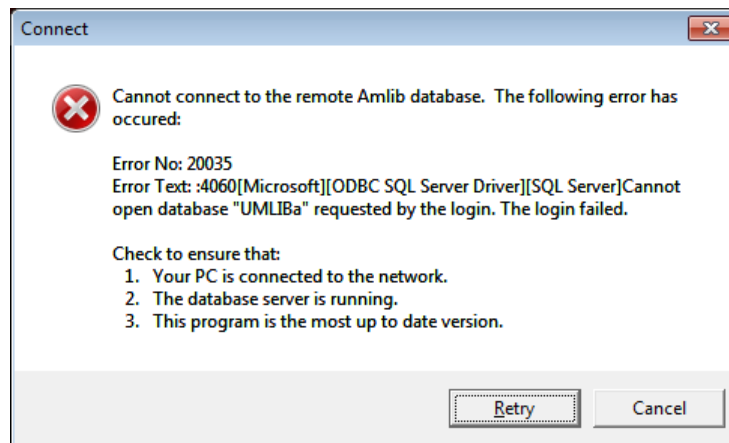
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3. If the Query result is **FILTERED** (for example: **TCP port 1433 (ms-sql-s service): FILTERED**) then this indicates:
 - the enterprise firewall is preventing connectivity via this Port
 - the workstation/server firewall (for example: *Windows XP Service 2* firewall) is preventing connectivity via this Port

You should refer this problem to your organisation's database or network administrator to follow up.

Step 2: Next Level of Amlib Troubleshooting

Message **Unable to connect to database**



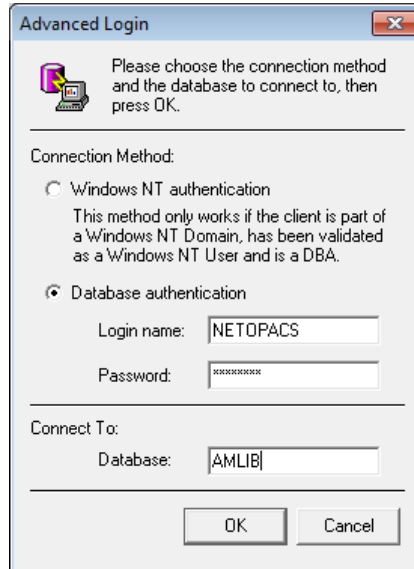
A message **“Cannot connect to database”** is displayed if the PC is unable to connect via the WAN or if *SQLBase* is not running (or if *SQL.ini* is not correctly configured).

The following steps can be used to track down the problem:

1. Review the RDBMS error message displayed on the “cannot connect” screen – for example in the above example refers to **Error No. 20016...SQL Server does not exist....** is a SQL Server error and should be following up with your database administrator (the error number is **not** an *Amlib* error number)
2. Can the PC connect to the database server?
 - Refer to the previous section: [Check Communication to Database Server using Microsoft Port Query](#)
3. If step 2) above is OK, then ensure that you DO NOT have any ODBC Data Sources with the same name as the database (for example: make sure there is NOT an ODBC data source called **AMCAT, AMLIB, AMLOCAL** or **AMSTATS**)
 - In *Windows*: Go to **Control Panel > Administrative Tools > Data Sources (ODBC)**, and check within the User DSN, System DSN or File DSN tabs

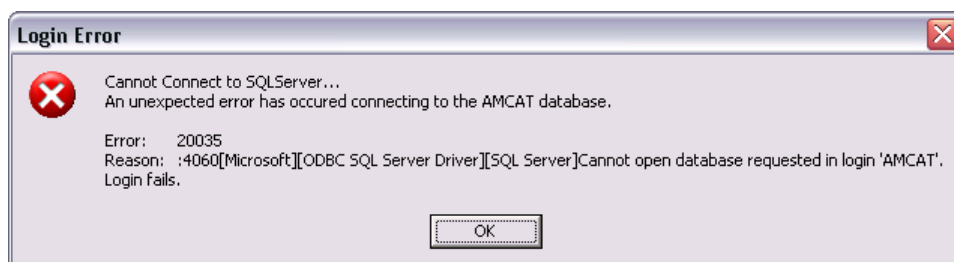
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4. If step 3) above is **OK**, then identify whether the **SQL.ini** is correctly configured or whether there is a connection error:
 - To test start the **\amlib\upgrade.exe** SQL interface program:
 - a) From the menu, select **File > Advanced Login** – the Advanced Login prompt will display:



- b) Enter the login of **NETOPACS**, the password (usually **NETOPACS**) and database **AMLIB** and Select the **OK** button
- c) If Upgrade is able to connect OK to the selected database and will return to the main Upgrade screen and display the username and database
- d) For *SQL Server* and *SQLBase RDBMS* - repeat the above Advanced Login step for each other database (**AMCAT**, **AMLOCAL** and **AMSTATS**) to see whether the problem is due to being unable to connect to only 1 of the databases

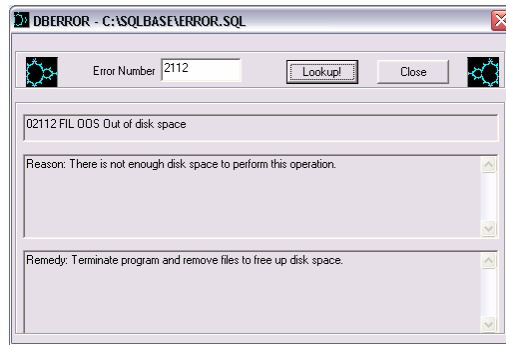
If Upgrade is unable to connect to the selected database then take a detailed copy of the displayed error message (for example: press [**PrtScn**] on your keyboard and paste into a *Word* document) and contact *Amlib Support* for further assistance.



It is also suggested that you take a note of the Error number and research with the RDBMS vendor the explanation and resolution for the Error number:

- For *Microsoft SQL Server*– go to <http://support.microsoft.com>
- For *Oracle* – go to <http://www.oracle.com/support/index.html>
- For *Gupta SQLBase* – On the database server you can use the utility **dberror.exe** located in the **c:\SQLBase** folder to provide more information:

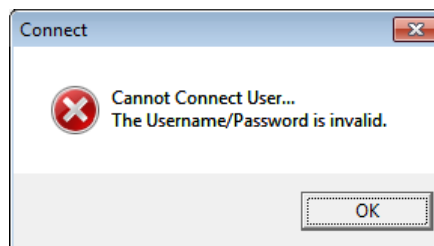
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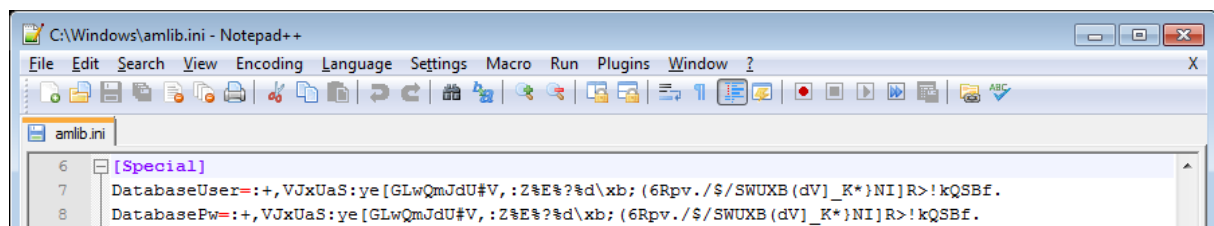
Some of the reasons that the **Upgrade.exe** is unable to connect to the selected database:

- The database does not exist within the RDBMS (for example: if an administrator had deleted the **AMLIB** database)
 - The administrator had moved the *Amlib* databases to another server
 - The database server has insufficient disk space
 - The *Amlib* **SQL.ini** configuration file (located in the **c:\amlib** for the *Amlib Client*, or **c:\netopacs** for the *NetOpacs* module) is not correctly configured – see: [Configure SQL.ini Settings](#) for more information
 - For libraries using *Oracle* RDBMS – the *Oracle Net8 (SQL*Net)* Client is not correctly configured (using the *Oracle TNSPING* utility on the Workstation to test)
 - For libraries using *Microsoft SQL Server* – an old version of the Windows MDAC (ODBC) drivers are installed
5. If step 4) above is OK, then perhaps the *Amlib* database connection settings held in **\{windows\amlib.ini** are incorrect (these are different to the *DIY DefaultUser* and **Login** settings)

Cannot Connect User



When the *Amlib* client is installed on a *Windows 7* machine, an **amlib.ini** file is placed in the **C:\Windows** (in older machines this may be the **C:\Winnt** folder). This file contains the *SQL Server* login details that allow the *Amlib* client to connect to the *SQL* databases.

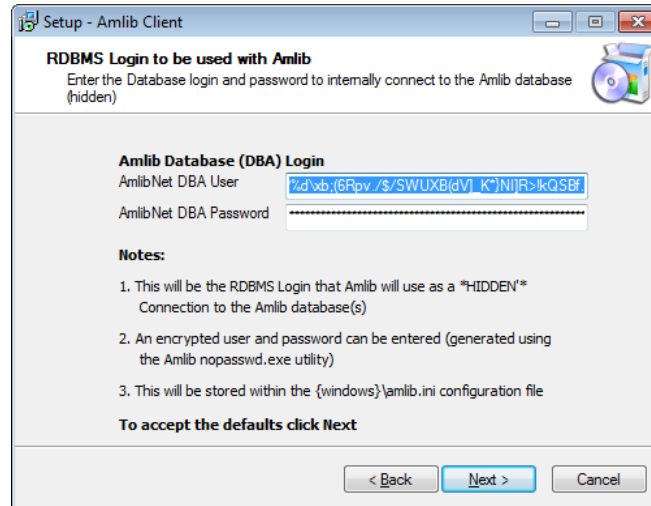


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Typically the **[Special]** section of the **amlib.ini** file would contain the following information:

- DatabaseUser=:+,VJxUaS:ye[GLwQmJdU#V,:Z%E%?%d\xb;(6Rpv./\$/SWUXB(dV)_K*)NI]R>!kQSBf.
- DatabasePw=:+,VJxUaS:ye[GLwQmJdU#V,:Z%E%?%d\xb;(6Rpv./\$/SWUXB(dV)_K*)NI]R>!kQSBf.

These settings are encrypted version of the **SYSADM/SYSADM** login (the default RDBMS login used for connecting the *Amlib* client to the SQL databases) – which are configured during installation:



Occasionally (due to various permissions issues), the installer is unable to write to the **amlib.ini** file and the **DatabaseUser** and **DatabasePw** settings are left blank:

- DatabaseUser=
- DatabasePw=

If this occurs, the user has several choices:

1. If you wish to use the default **SYSADM/SYSADM** login, you can copy in paste in the following settings (replacing the blank ones in the file):
 - DatabaseUser=:+,VJxUaS:ye[GLwQmJdU#V,:Z%E%?%d\xb;(6Rpv./\$/SWUXB(dV)_K*)NI]R>!kQSBf.
 - DatabasePw=:+,VJxUaS:ye[GLwQmJdU#V,:Z%E%?%d\xb;(6Rpv./\$/SWUXB(dV)_K*)NI]R>!kQSBf.
2. You can type in the RDBMS login you are using (this login must also have been setup in SQL server against the individual Amlib databases)
3. You can use the **nopassword.exe** application (**C:\Amlib\nopassword.exe**) to generate an encrypted login and copy this into the *Windows* **amlib.ini** file
 - See: [Appendix B: Generate Encrypted RDBMS Password](#) for further information

Please Note: The user may need to adjust the folder and/or file permissions to allow the login details to be written into the **amlib.ini** file.

Addendum: Under certain exceptional circumstances, a copy of the **amlib.ini** file may also be found in the Users Virtual Store folder:

- C:\Users\User Name\AppData\Local\VirtualStore\Windows\amlib.ini

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This also may need to be adjusted.

Frequently Asked Questions

Question: How much space do I need to have on my server?

- This will vary from library to library, depending on the number of bibliographic records to be held in the database. Generally libraries should ensure they have at least 5 Gb free space on their database server

Question: Do I need to have a completed backup of my system before proceeding? (Server Migrations Only)

- Yes. *OCLC (UK) Ltd* recommends that the library verify that it has an up-to-date backup of its database (for example: from the previous night) before installing any updates. You should also make sure that your tape backup includes a backup of your *Amlib* client folder (for example: **C:\Amlib**).

Question: Do all users need to be logged out of *Amlib*? (Server Migrations Only)

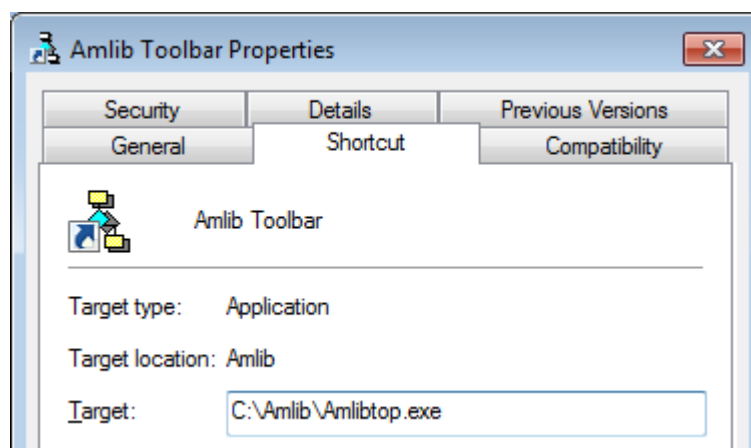
- Yes. All users should be completely logged out from all *Amlib* client modules
- Libraries using the *NetOpacs* module should ensure that this program is also shutdown

Question: Can OCLC (UK) Ltd install *Amlib* for me?

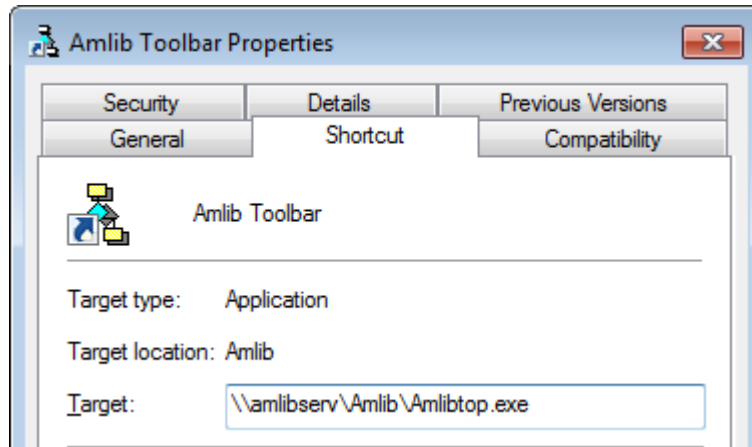
- Yes. *OCLC (UK) Ltd* can arrange for the onsite installation for a small fee

Question: How do I know whether *Amlib* is loaded from my local PC? (Server Migrations Only)

1. Right-Select on the *Amlib* icon on your desktop and select **Properties** – the Amlib Toolbar Properties window will display
2. The Target field will show you where your *Amlib* is installed:
 - a. If it has something like **C:\Amlib** (or **D:\Amlib**, **E:\Amlib** depending on the hard drives in your computer) then it is installed locally



- b. If it starts with two back slashes (\\) and then a name or IP address, it is installed on a server:



3. If you are having trouble identifying where *Amlib* is installed please contact your IT Department or **Amlib Support** for assistance

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AMLIB RDBMS DATABASE STRUCTURE

Database Structure for Microsoft SQL Server (MSSQL)

Within any one *Amlib* installation there is the facility to configure up to five (5) separate database areas, which include:

1. Circulation Database (**LIB** suffix): Item, borrower and circulation data
2. Catalogue Database (**CAT** suffix): Catalogue and authority data
3. Parameter Database (**LOCAL** suffix): System parameters (for example: loan settings)
4. Statistics Database (**STATS** suffix): Statistics
5. Web Database (**WEB** suffix): Web results

Amlib then uses a two-character prefix to designate whether the database is a **Live**, **Test** or other (user-defined) database – for example:

- **AM** (**Live** database prefix)
- **TE** (**Test** database prefix)

Therefore the databases required for the **Live** and **Test** environments using *MSSQL* would be:

Live Environment Databases

- **AMCAT**
- **AMLIB**
- **AMLOCAL**
- **AMSTATS**
- **AMWEB**

Test Environment Databases

- **TECAT**
- **TELIB**
- **TELOCAL**
- **TESTATS**
- **TEWEB**

Please Note: Many existing *Amlib* customers (installed prior to *version 5.x*) have a database structure that consists of four (4) database areas (**AMCAT**, **AMLIB**, **AMLOCAL** and **AMSTATS**), with the data for the **AMWEB** database contained within the **AMCAT** database.

Database Setup for Oracle

Most libraries where *Amlib* is running on *Oracle* choose to create only one (1) database area with the five (5) databases that normally comprise the **Live** or **Test** environment consolidated into a single “instance”. This is done to reduce the administration and performance overheads by reducing the number of “instances” from 10 (5 for **Live** and 5 for **Test**) to just 2.

So the standard **Live** and **Test** database “instances” created for *Oracle* are:

Live Environment Instance

- **AMLIB**

Test Environment Instance

- **TELIB**

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APPENDICES

Appendix A: Silent Mode Command Line Parameters

The *Amlib Client 6.0* installer features the option to install with silent mode command parameters - ideal if you wish to automatically distribute to *Amlib* staff workstations as part of a login script.

For example:

- **Amlib6.0Setup.exe /VERYSILENT /SUPPRESSMSGBOXES /NOCANCEL /DIR="C:\Amlib"**

(Installs the *Amlib Client 6.0* silently to the **C:\Amlib** location on the workstation)

Details of available parameters are:

/SILENT, /VERYSILENT

Instructs Setup to be silent or very silent. When Setup is silent the wizard and the background window are not displayed but the installation progress window is. When a setup is very silent this installation progress window is not displayed. Everything else is normal, so for example: error messages during installation are displayed unless disabled using **/SUPPRESSMSGBOXES**

If a restart is necessary and the **/NORESTART** command isn't used (see below) and Setup is silent, it will display a Reboot now? message box. If it's very silent it will reboot without asking.

/SUPPRESSMSGBOXES

Instructs Setup to suppress message boxes. Only has an effect when combined with **/SILENT** and **/VERYSILENT**.

The default response in situations where there's a choice is:

- **Yes** in a Keep newer file? situation
- **No** in a File exists, confirm overwrite. situation
- **Abort** in Abort/Retry situations
- **Cancel** in Retry/Cancel situations
- **Yes** (=continue) in a DiskSpaceWarning/DirExists/DirDoesntExist/NoUninstallWarning/ExitSetupMessage/Confirm Uninstall situation
- **Yes** (=restart) in a FinishedRestartMessage/UninstalledAndNeedsRestart situation

5 message boxes are not suppressible:

- The About Setup message box
- The Exit Setup? message box
- The FileNotInDir2 message box displayed when Setup requires a new disk to be inserted and the disk was not found
- Any (error) message box displayed before Setup (or Uninstall) could read the command line parameters
- Any message box displayed by [Code] support function MsgBox.

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/NOCANCEL

Prevents the user from cancelling during the installation process, by disabling the **Cancel** button and ignoring Selects on the **Close** button. Useful along with **/SILENT** or **/VERYSILENT**.

/NORESTART

Instructs Setup not to reboot even if it's necessary.

/RESTARTEXITCODE=exit code

Specifies the custom exit code that Setup is to return when a restart is needed. Useful along with **/NORESTART**. Also see Setup Exit Codes.

/DIR="X:\dirname"

Overrides the default directory name displayed on the Select Destination Location wizard page. A fully qualified pathname must be specified.

/PASSWORD=password

Specifies the Password (Serial Key) to use.

When an invalid password is specified, this command line parameter is also ignored.

/GROUP="folder name"

Overrides the default folder name displayed on the Select Start Menu Folder wizard page.

/NOICONS

Instructs Setup to initially check the **Don't create any icons** check box on the Select Start Menu Folder wizard page.

/COMPONENTS="comma separated list of component names"

Overrides the default components settings. Using this command line parameter causes Setup to automatically select a custom type.

(You will need to contact *Amlib Support* for a complete list of components that are available to choose from, depending on which installer is being used)

/TASKS="comma separated list of task names"

Specifies a list of tasks that should be initially selected or deselected. To deselect a task, prefix its name with a "!" character.

Only the specified tasks (and their children) will be selected; the rest will be deselected. Use the **/MERGETASKS** parameter instead if you want to keep the default set of tasks and only select/deselect some of them.

Examples:

Deselect all tasks, then select the "**desktopicon**" and "**fileassoc**" tasks:

/TASKS="desktopicon,fileassoc"

Deselect all tasks, then select a parent task item, but exclude one of its children:

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`/TASKS="parent,!parent\child"`

`/MERGETASKS="comma separated list of task names"`

Like the **`/TASKS`** parameter, except the specified tasks will be merged with the set of tasks that would have otherwise been selected by default.

If **`UsePreviousTasks`** is set to **yes**, the specified tasks will be selected/deselected after any previous tasks are restored.

Examples:

Keep the default set of selected tasks, but additionally select the "**desktopicon**" and "**fileassoc**" tasks:

`/MERGETASKS="desktopicon,fileassoc"`

Keep the default set of selected tasks, but deselect the "desktopicon" task:

`/MERGETASKS="!desktopicon"`

`/LOG`

Causes Setup to create a log file in the user's TEMP directory detailing file installation and [Run] actions taken during the installation process. This can be a helpful debugging aid. For example, if you suspect a file isn't being replaced when you believe it should be (or vice versa), the log file will tell you if the file was really skipped, and why.

The log file is created with a unique name based on the current date. (It will not overwrite or append to existing files.)

The information contained in the log file is technical in nature and therefore not intended to be understandable by end users. Nor is it designed to be machine-parseable; the format of the file is subject to change without notice.

`/LOG="filename"`

Same as **`/LOG`**, except it allows you to specify a fixed path/filename to use for the log file. If a file with the specified name already exists it will be overwritten. If the file cannot be created, Setup will abort with an error message.

`/LOADINF="filename"`

Instructs Setup to load the settings from the specified file after having checked the command line. This file can be prepared using the **`/SAVEINF=`** command as explained below. Don't forget to use quotes if the filename contains spaces.

`/SAVEINF="filename"`

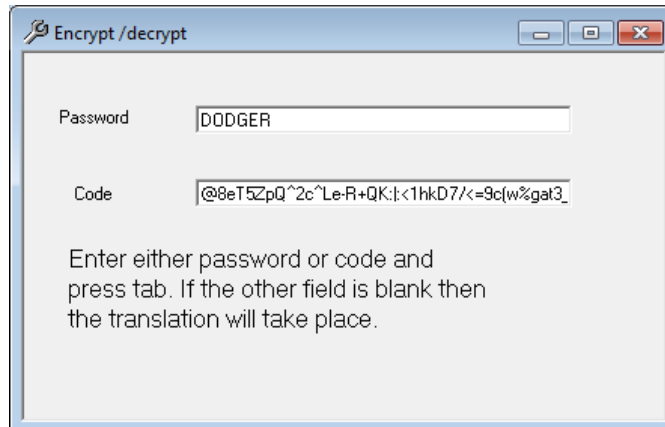
Instructs Setup to save installation settings to the specified file. Don't forget to use quotes if the filename contains spaces.

Appendix B: Generate Encrypted RDBMS Password

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The **nopasswd.exe** utility is located in the **C:\Amlib** folder after installation.

1. Double-Select on the **nopasswd.exe** application to open the Encrypt/decrypt screen will display:



2. Type in the Password (for which you would like to generate an encrypted string) – for example: **DODGER**
3. Press the **<Tab>** key
4. The encrypted password will display in the Code box – for example:
@8eT5ZpQ^2c^Le-R+QK:|:<1hkD7/<=9c(w%gat3_9f\m+u>&;Zo[Y`>H.E6qWqZ*o."q9
5. Copy encrypted password for use