

SIMS
Finance SQL
Technical Guide



CAPITA

• Education Services •

Windows is a registered trademark of the Microsoft® Corporation
All other trademarks acknowledged

© Capita Business Services Ltd 2004. All rights reserved.
No part of this publication may be reproduced, photocopied, stored on a retrieval system, translated or
transmitted without the express written consent of the publisher.

Capita Doc Ref: SQLA/ALL/TEC/190104/AW

Capita Education Services, Stannard Way, Priory Business Park, Cardington, Bedford, MK44 3SG
Tel: 01234 838080 Fax: 01234 838091 www.capitaes.co.uk

Table of Contents

Chapter 1: What is SQL Anywhere?	1
Providing Feedback on Documentation	1
General Information.....	1
Client / Server.....	2
The Database.....	2
Open Database Connectivity & Borland Database Engine	3
The dBase / SQL Finance Integrator.....	3
Windows® & Network Versions	4
32 Bit Installations	4
32 Bit ODBC Data Source Administrator	6
Chapter 2: Standalone Installations & Upgrades	7
General.....	7
Installing a SIMS SQL Anywhere product	7
Installing/Upgrading the software.....	7
Standalone Installation	8
ODBC Setup	8
New Installation of FMS Modules from CD	11
Upgrading to the Latest Version of FMS	15
FMS 6.75 and Single Database Upgrades.....	15
FMS 6.75 and Multi-database Upgrades.....	18
Chapter 3: SQL Anywhere and Networks	21
Network Installations - General	21
Specific Network Installations - Novell 4 and 5	22
Location of the database.....	22
Novell System Files.....	23
Specific Network Installation – NT4, Win2k or XP.....	23
Manual Start.....	23
Automatic Start.....	23

Network Protocols - Overview	25
32 Bit Data Source	25
Chapter 4: Installing/Upgrading FMS on a Network	27
General.....	27
Installing a SIMS SQL Anywhere product - FMS 6.00 series	27
Installing/Upgrading the software	27
New Network Installation of FMS	28
Some Examples	31
Environment	36
Existing Users only - Upgrade of database	37
FMS 6.75 and Multi-upgrade Option	37
Running the Software.....	40
Printing.....	40
Chapter 5: Backing up your work.....	41
Backup Strategy	41
General Backup Information.....	41
SQL Specific.....	42
Chapter 6: Performance Tuning	43
Standalone	43
Network	43
Location of Files	44
Database Server	44
Database Client Application (e.g. Finance)	45
Chapter 7: Commonly Asked Questions	47
What is Client-Server and why do you use it?.....	47
Why don't my reports print as I expect?	47
How do I re-install FMS?	47
Can I run data for two schools on one file server?	48
Will Data from the other SIMS modules be available to FMS?.....	48
Is it possible to get the data "fixed"?.....	48

What is Virtual Memory?	48
How do I know if my PC is 'thrashing'?	49
How can I replicate the LEA financial structure for all schools?	49
Chapter 8: Problem Solving.....	51
Server and Workstation problems	51
FMS 6.00 Series - Trouble Shooting	51
FMS and New Hardware.....	51
Common Error Messages	52
Checking the Database Server is running.....	53
Checking which Protocols have been specified	53
Checking the physical location of the SIMS.db	54
Checking the Settings in ODBCAD32	55
Starting the Database Server:.....	55
Identifying the Protocol Connection	56
Granting the user SYSTEM Access Rights to the SIMS.db on a Windows® NT machine.....	56
Network Protocols	57
Problems with NETBIOS.....	58
Problems with ex-Novell Workstations.....	58
Appendix 1.....	59
Appendix 2: Files Installed by FMS 6.75	61
Glossary.....	65

Chapter 1: What is SQL Anywhere?

This chapter contains:

Providing Feedback on Documentation	1
General Information.....	1
Client / Server.....	2
The Database.....	2
Open Database Connectivity & Borland Database Engine	3
The dBase / SQL Finance Integrator.....	3
Windows® & Network Versions	4
32 Bit Installations	4

Providing Feedback on Documentation

We always welcome comments and feedback on the quality of our documentation including on-line help files and handbooks.

If you have any comments, feedback or suggestions regarding the module help file, this handbook (PDF file) or any other aspect of our documentation, please email:

Publications@capitaes.co.uk

Please ensure that you include the module name, version and aspect of documentation on which you are commenting.

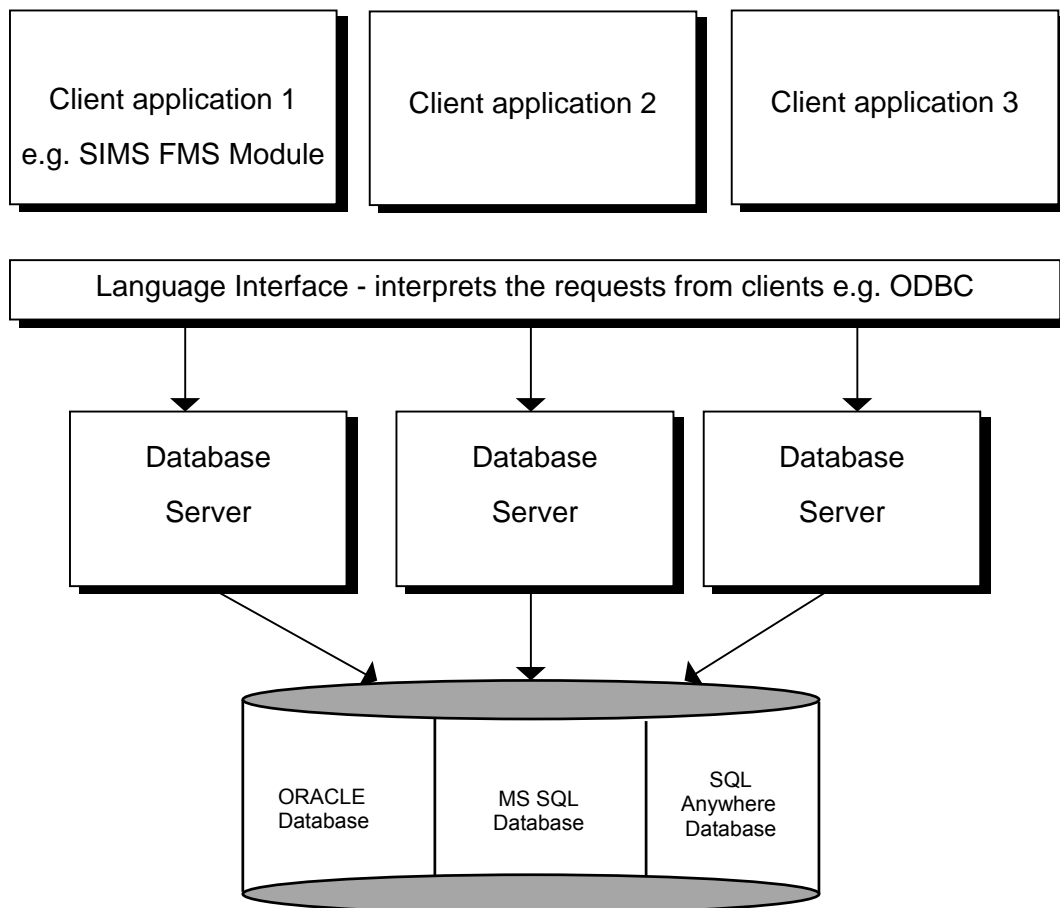
General Information

SQL stands for Structured Query Language. Applications exist on your computer in school or college (known as client applications). They are not in direct contact with the relevant database and require an intermediary (known as a database server). In the context of this Guide, the term DATABASE SERVER refers to a piece of software that controls access to the database. It should not be confused with a NETWORK FILE SERVER which is a piece of hardware.

The application, database server and database may all be installed on a single machine or may be distributed across a number of machines linked by the network.

When a user of a client application wishes to amend some information held on a database, the client application must send a request to the database server to find the relevant information. The database server has access to the information held, can retrieve it, and then passes it to the client application. The information can now be changed, and then returned by the database server.

Client / Server



The client application normally resides on your own local computer. It exists for a single purpose alone - to send requests for data management to the database engine (or server). The client communicates with the engine using a language interface. The language interface may be one of a number such as ESQL, or ODBC, or HLI. The language interface sits between the client application and the engine.

The database server takes the request and transfers it to the database. Each database has its own type of database server hence a SQL Anywhere database must be accessed through a SQL Anywhere database server.

The Database

The database file can be regarded as a receptacle for tables containing the data dictionary and relevant data. The database file also contains procedures that carry out much of the data manipulation required by the application.

Open Database Connectivity & Borland Database Engine

ODBC (Open DataBase Connectivity) is one of the possible language interfaces. It allows a client application to send requests to update or retrieve information from a database. The emphasis here is on the word Open, which indicates that an application does not contain code that ties it into a particular manufacturer's database (Oracle, SQL Anywhere, Microsoft SQL Server); instead it can access potentially any database style with a minimum of impact on the client application. This does however rely on the application requests being coded according to certain rules in the first place; SQL must be used to issue the update/data retrieval requests, for instance. Each database manufacturer supplies an 'ODBC Driver' to sit at the ODBC level and take requests from clients; these are then translated by the driver into something understandable by the style of database and passed on to the database server which handles the database access.

If the issue of how to send the requests is simplified from the client's perspective, the main issues that remain to be resolved are:

- What style of database (and therefore driver) will the client be dealing with? (e.g. SQL Anywhere)
- What is the name of the database that the client wants to connect to? (e.g. SIMS.DB)
- What is the 'nickname' of the server that is to be started to control access to the database? (e.g. SIMS_Server)

The answers to these - and other - questions are grouped together under a named heading, referred to as a DataSource Name (DSN) and stored in a file ODBC.INI, which is accessed by software that controls the ODBC layer.

Essentially, the client application can satisfy all of the requirements for identifying and setting up its target database environment by referencing this DSN when it sends a request to connect to a database.

Delphi applications however are not able to send the request straight to the ODBC layer; instead they are required to go through an intermediary called the BDE (Borland Database Engine). The BDE uses a file that contains a number of headings (called misleadingly 'ODBC Drivers'), each of which identifies firstly the type of driver (Oracle, SQL Anywhere, etc) and then the DSN that contains the pertinent information allowing the database to be identified. A utility is provided by Borland to configure this file.

A Delphi application will connect firstly by accessing the BDE ODBC Driver entry; this in turn points to an ODBC DSN, which then allows a server/engine to be started and a connection to be made through to the database.

The dBase / SQL Finance Integrator

This is a piece of software is designed to cover the gap in operation between the modules required by FMS that operate on dBase and FMS which operates on a SQL Anywhere database.

One of the implications of this is that for a time, two copies of data will be maintained. The newer FMS modules use the SQL Anywhere tables, and the earlier modules use dBase tables. For a fully integrated system to continue working using both systems, it is necessary for information to be transferred between the systems.

Data will be transferred in one direction only - from dBase to SQL. It is anticipated that the updating of the SQL database can be carried out on a daily basis, possibly overnight.

Windows® & Network Versions

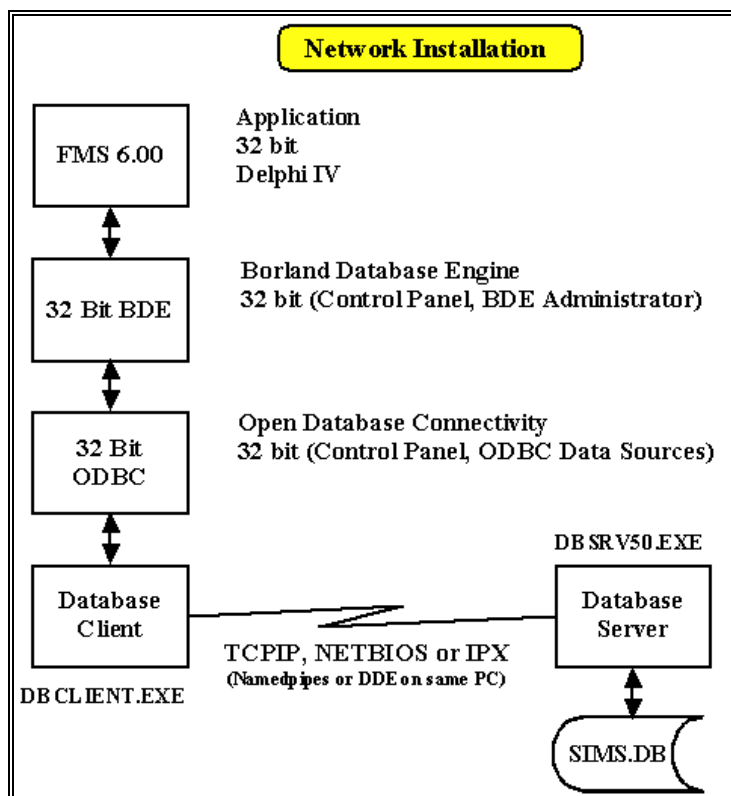
The SQL Anywhere Database Server has been tested on Windows® NT4, Windows® 2000, Windows® XP, Novell versions 4 and 5.

It runs on the **Novell File Server** as a **Netware Loadable Module (NLM)**.

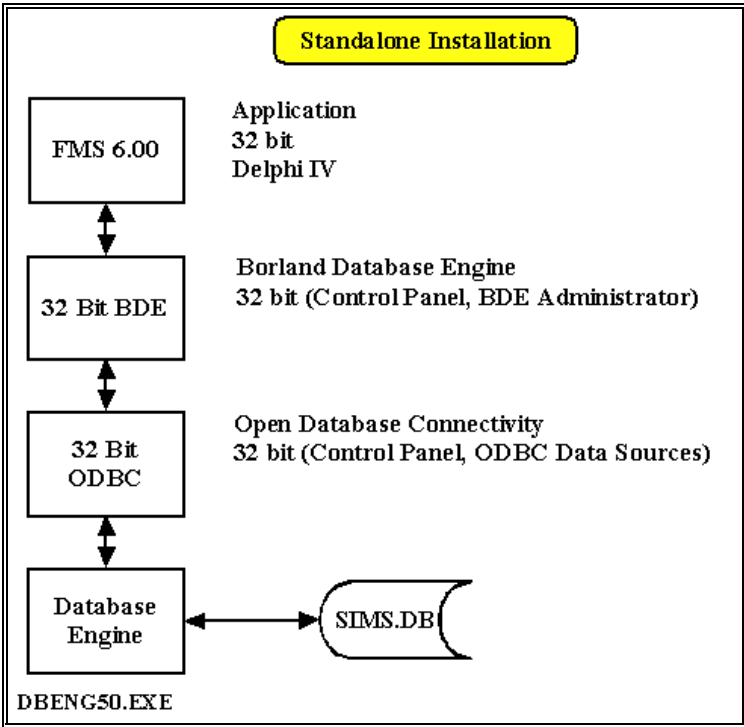
On **Windows**-based systems, it runs as an executable file (**.EXE**).

32 Bit Installations

Network Installation

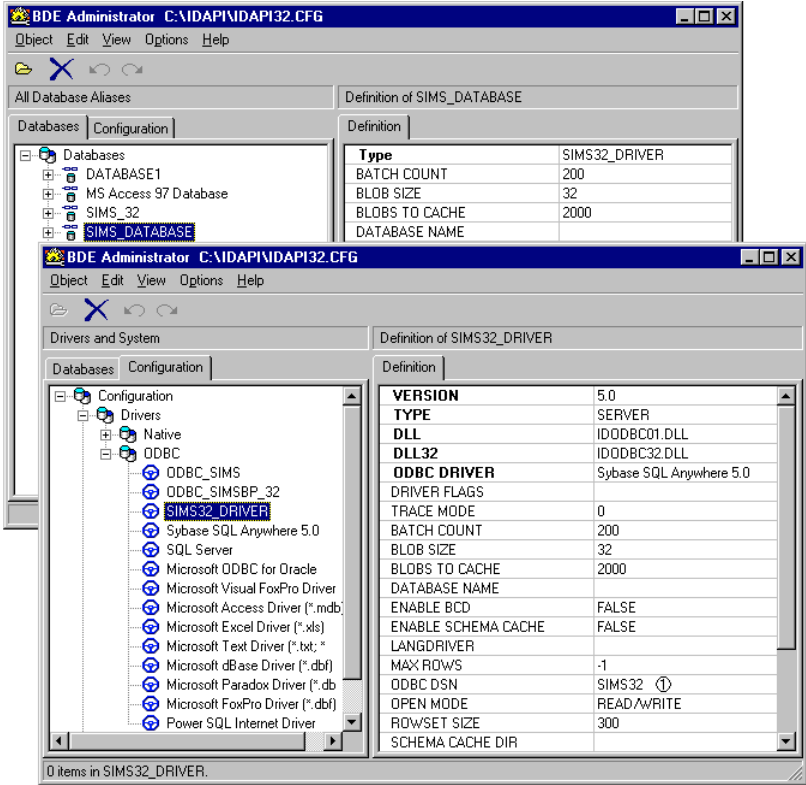


Standalone Installation

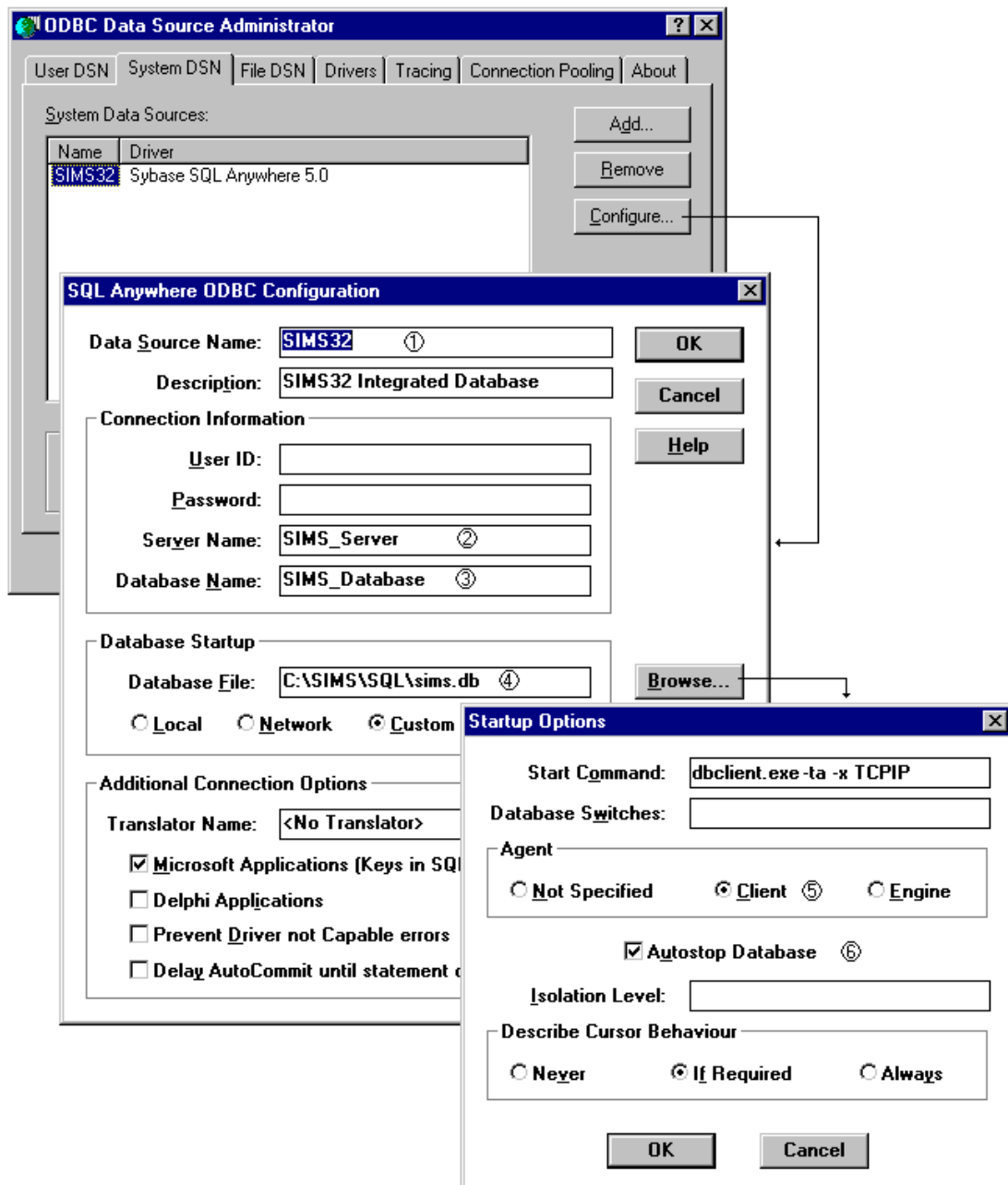


32 Bit BDE Administrator

The FMS suite links to a BDE database, **SIMS_Database**, this in turn connects to an ODBC data source called **SIMS32**. The BDE controls access of Borland products, in this case Delphi, to underlying data sources.



32 Bit ODBC Data Source Administrator



The above settings are added during the installation of the FMS 6 series modules.

These settings indicate that to use **SIMS32** data, **DBCLIENT** should be loaded and should attach to **SIMS_Server**. A database called **SIMS_Database** should be used and, if it is not already loaded, the file **C:\SIMS\SQL\SIMS.DB** should be opened by **SIMS_Server** as **SIMS_Database**. The Database should **Autostop** (be unloaded) when the last client detaches.

Chapter 2: Standalone Installations & Upgrades

This chapter contains:

General.....	7
Installing a SIMS SQL Anywhere product	7
Standalone Installation	8
New Installation of FMS Modules from CD	11
Upgrading to the Latest Version of FMS	15

General

These notes refer to FMS products only. Included with the FMS6 Module are Accounts Receivable (Invoiced Income), Budget Planning and Equipment Register, which all require the FMS Module in order to be accessed.

Installing a SIMS SQL Anywhere product

This applies to FMS modules only. The assumption is that the CD-ROM drive is designated E:\

Before running the installation or upgrade, please close down all other applications (including the Microsoft Office Shortcut bar if it is in use), which may prevent the upgrade working correctly. Screen savers may cause problems in some cases and should be disabled before the upgrade.

Windows® NT/Windows® 2000/Windows® XP Workstations

Please note that the user who is installing or upgrading the software must have administrator level access to the workstation.

Installing/Upgrading the software

If your CD-ROM does not autostart, select the correct option from those shown below for your operating system.

(Once again, these instructions assume that the CD-ROM drive is designated **E:**)

If your operating system is Windows®NT4

- Select the **Start** button.
- Click **Run**.
- In the Run box, type E:\SETUP

Standalone Installation

The first section helps you to set-up the 32 bit version of the ODBC if it is not already installed on your workstation. It is quite likely that you already have this installed, in which case you will never see the following screens displayed and the installation procedures will continue automatically.

The second section displays the screens showing the default folders for the executables and support files installed - SQL Anywhere and the BDE . These should only be changed if there is a good reason to do so.

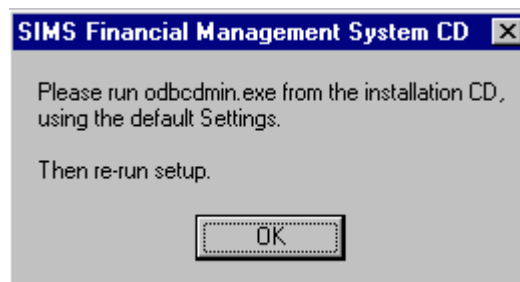
ODBC Setup

If you already have the 32 bit version of ODBC (ODBC 3.0) installed on your system, then please skip this section and proceed to the next, *New Installation of FMS Modules from CD on page 11*.

NOTE: Systems with, for example, Microsoft Office97 installed will have the required ODBC already installed.

Step 1

Once you have selected to install **FMS Modules** from the CD, if the required ODBC is not located automatically, you will receive the following message:

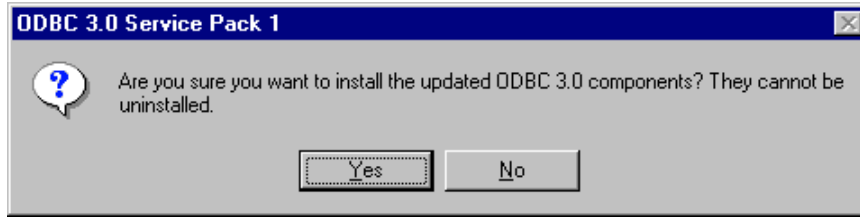


- Click the **OK** button.

Step 2

The next stage will be to access the installation CD, which should be in your CD-ROM drive.

- Select: **Windows Explorer**.
- Click on **Drive E:** \ (where E:\ is assumed to be your CD-ROM drive).
- Double click on **odbcdmin.exe**, which can be found in the **Finance** folder on the CD. You will then be asked to confirm that you wish to proceed with the installation.



- Click the **Yes** button to proceed.

Step 3

The next screen will show you the licensing agreement, which you should read carefully before proceeding with the installation.

- Once you have decided to accept the terms shown, click the **Yes** button to continue.

Step 4

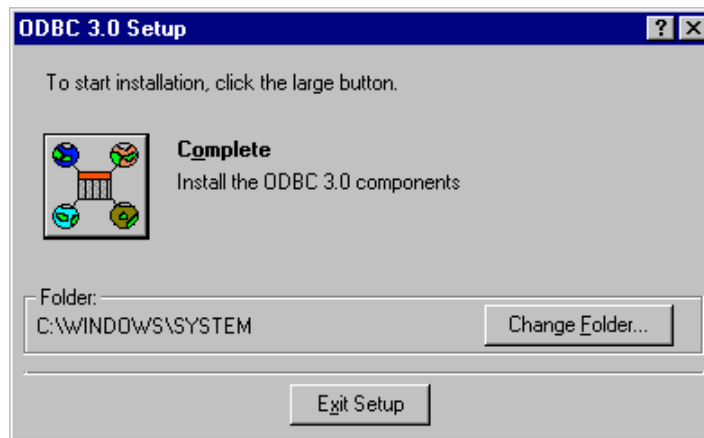
The ODBC 3.0 installation set-up screen will appear.



- Click the **Continue** button.

Step 5

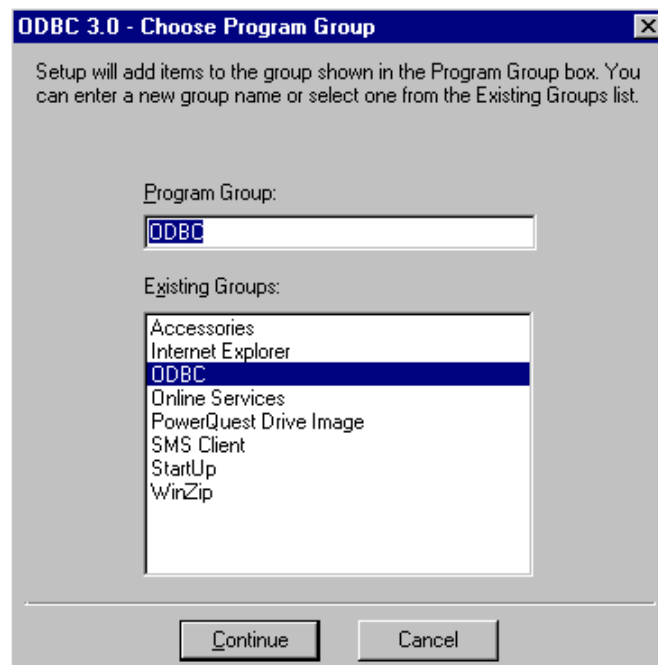
The following screen allows you to proceed with the ODBC set-up.



- Make sure that **Complete** is the highlighted option and click the large button to the left. This will install the complete ODBC to the specified folder shown on the screen.

Step 6

You are now asked to select which **Program Group** should be selected when the ODBC is installed. The default group shown can be accepted, a new group of your choice added, or you may select one from **Existing Groups**.



- Click the **Continue** button and the ODBC will be installed into the specified folder.

- Upon completion the following message is displayed:

ODBC 3.0 Setup was completed successfully.

New Installation of FMS Modules from CD

Step 1

If you have had to install ODBC 3.0, you will need to select the following, in order to run the CD:

START

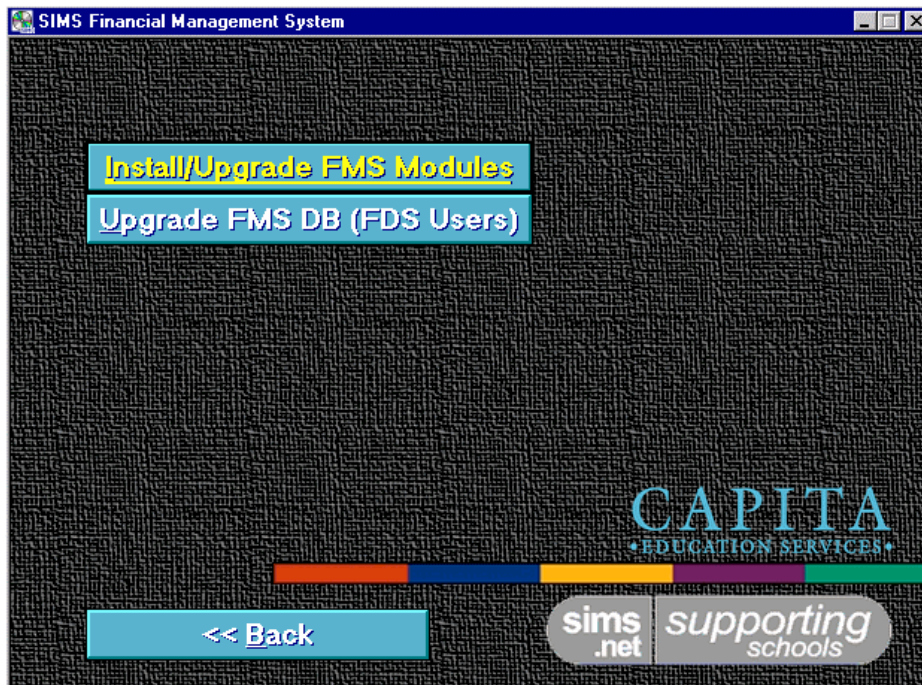
RUN

E:\Setup.exe

(These instructions assume that your CD-ROM drive is designated E:\)

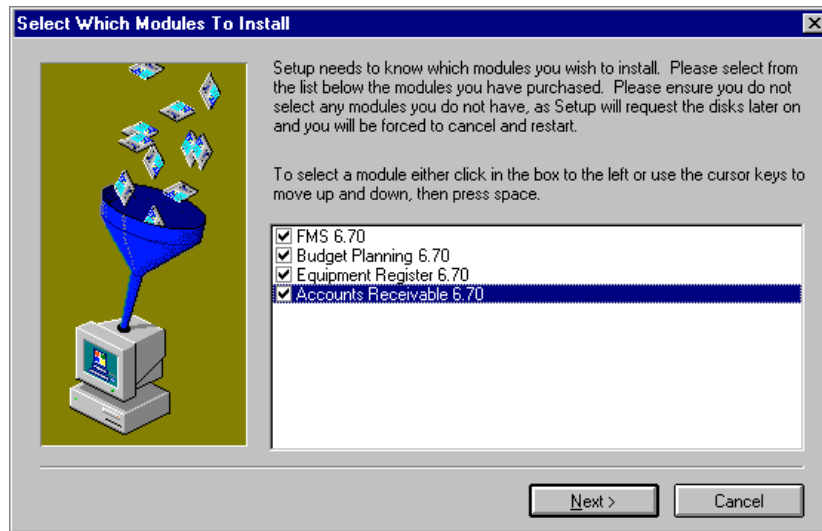
If the correct version of the ODBC has been detected, then the CD will run automatically.

- Navigate to the section containing the Finance Modules. Typically this may be **SIMS 2.nn | Setups... | Finance**.
- Click **FMS 6.75 Modules...** from the next screen.
- To continue with the installation, select **Install/Upgrade FMS Modules**.



Step 2

The **Select Which Modules to Install** screen appears:



- Select the check box next to each module you wish to install, remembering that you must install FMS 6.75 before you can run Accounts Receivable (Invoiced Income), Budget Planning and/or Equipment Register.
- Click the **Next** button to continue.

Step 3

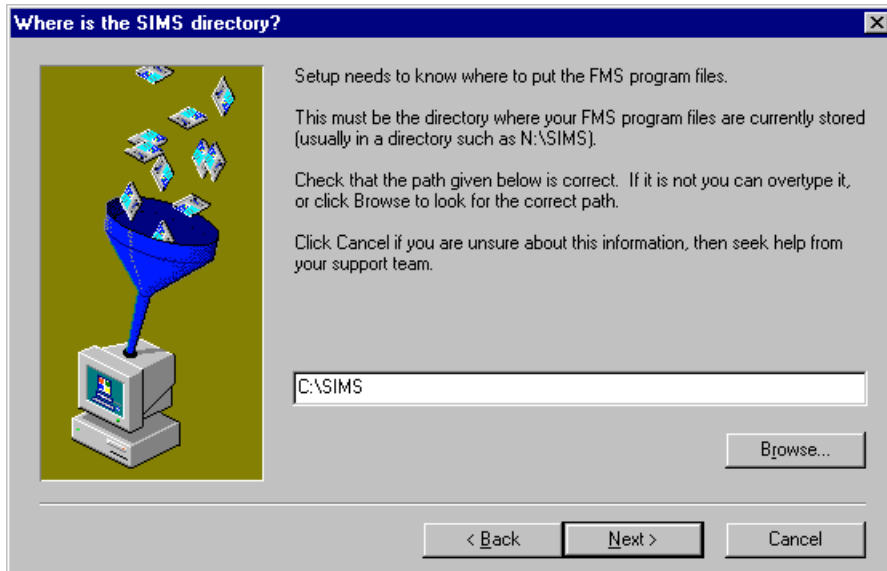
You are now asked to select the type of set-up you require.



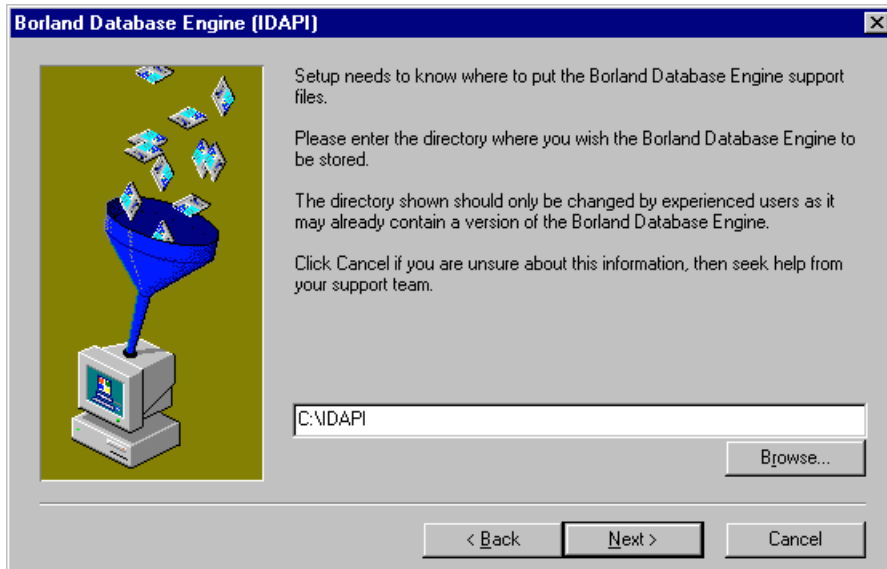
- Click the top button to install selected modules on a standalone workstation.

Step 4

You now need to specify where you wish to install the modules. The first path concerns the SIMS folder, to hold the executable and support files. This will default to **C:\SIMS** unless SIMS exists on a different drive letter.

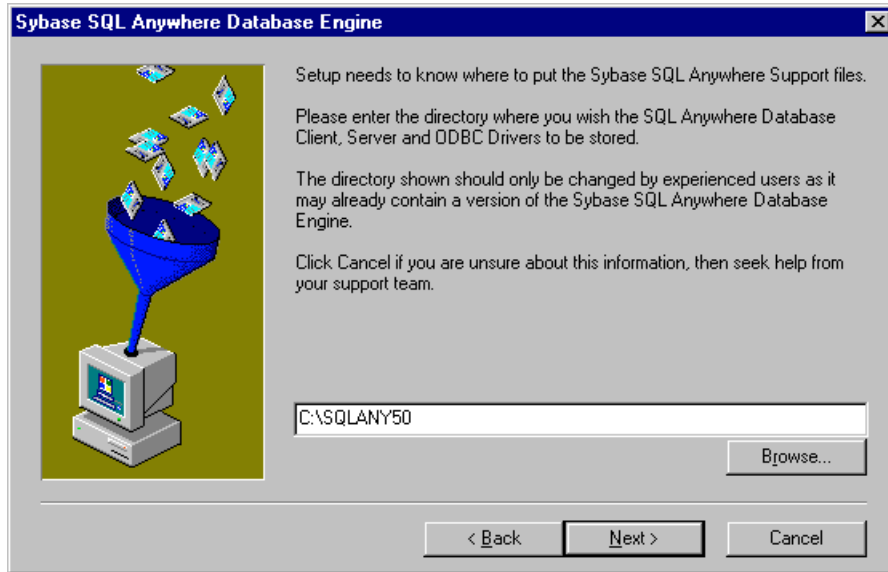


- If the specified folder, **C:\SIMS**, is correct, click the **Next** button. Alternatively, click the **Browse...** button to search for the drive and folder where the modules are to be installed.
- The second path concerns the Borland Database Engine. This is usually held in a folder called **C:\IDAPI** and may already be in place on your machine.



- This screen specifies where the Borland Database Engine files are to be installed. Once again, if the information is correct, click the **Next** button, or click the **Browse...** button to search for an alternative drive and folder.

- The third path concerns the folder in which the SQL Anywhere software is to be installed. This defaults to C:\SQLANY50.

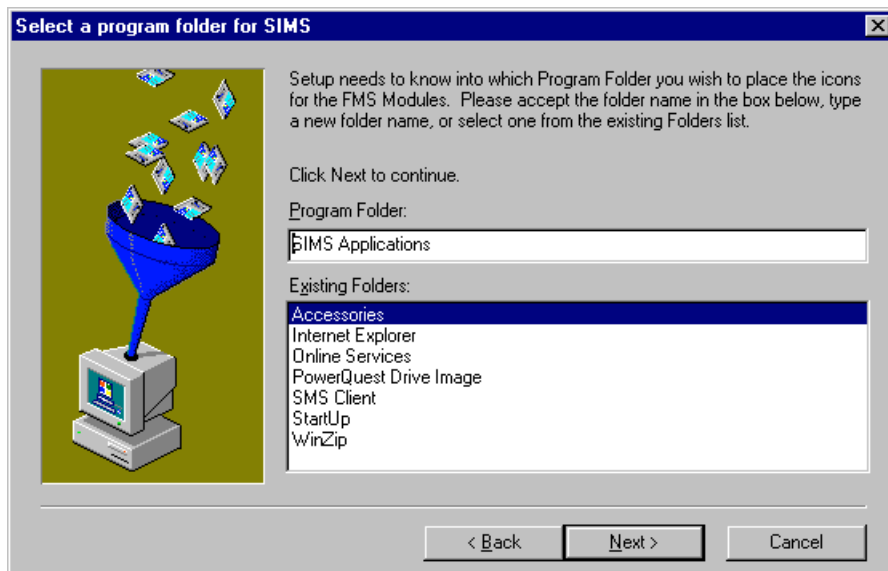


You must now specify where the **SQL Anywhere** files should be installed.

- If the folder shown is correct, click the **Next** button, or click the **Browse...** button to select a different drive and folder.

Step 5

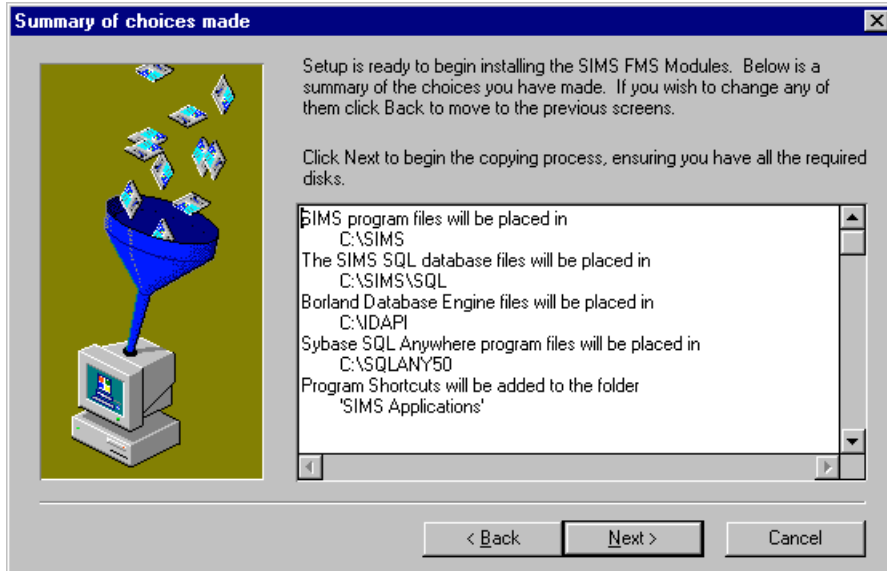
Finally, you are asked to select a Program Folder for the FMS Modules. The program folder selected by default is, **SIMS Applications**, but can be changed if necessary.



- Click the **Next** button to continue.

Step 6

This screen displays the choices made and allows you to review the information prior to installation taking place.



- Click the **Next** button to start the installation procedure.
- Once all the modules have been installed, the 32 bit Borland Database Engine is installed. You will then be warned that you must restart your computer for the changes to take effect, with the option of restarting now or later.
- Click **Finish**. Remove the CD-ROM.

Upgrading to the Latest Version of FMS

FMS 6.75 and Single Database Upgrades

You may upgrade to FMS 6.75 from the following releases of FMS.

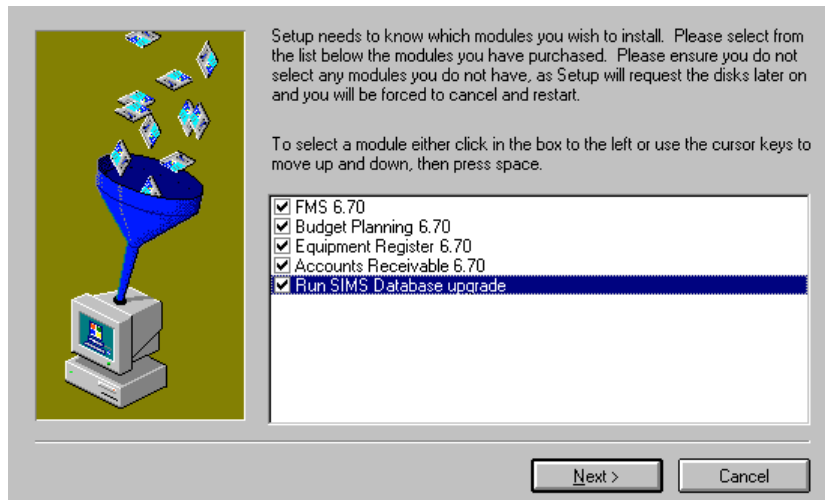
- **FMS 6.70**
- **FMS 6.60**

*NOTE: Whichever version you are upgrading from, the whole process is straightforward and does not require your machine to be re-started in between each upgrade. Simply click the **Next** button as each upgrade is completed.*

Step 1

Follow the installation procedure as described in *New Installation of FMS Modules from CD on page 11* until you reach the **Select which modules to install** screen. As you are upgrading your existing database, the additional option to upgrade your database is included on this screen.

NOTE: The following instructions are for users who use a single installation of FMS with a single database. If you have used the Finance Database Selector Module to set-up multiple companies using multiple databases with a single installation of FMS, please see FMS 6.75 and Multi-database Upgrades on page 18.

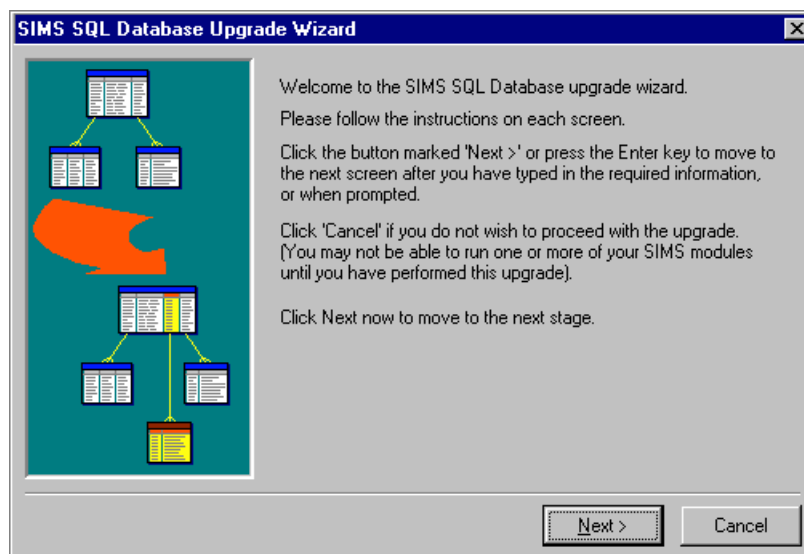


Make sure that you select the **Run SIMS Database Upgrade** check box, as well as the module check boxes that you wish to install.

- Click the **Next** button and continue with the installation as described in *New Installation of FMS Modules from CD on page 11*.

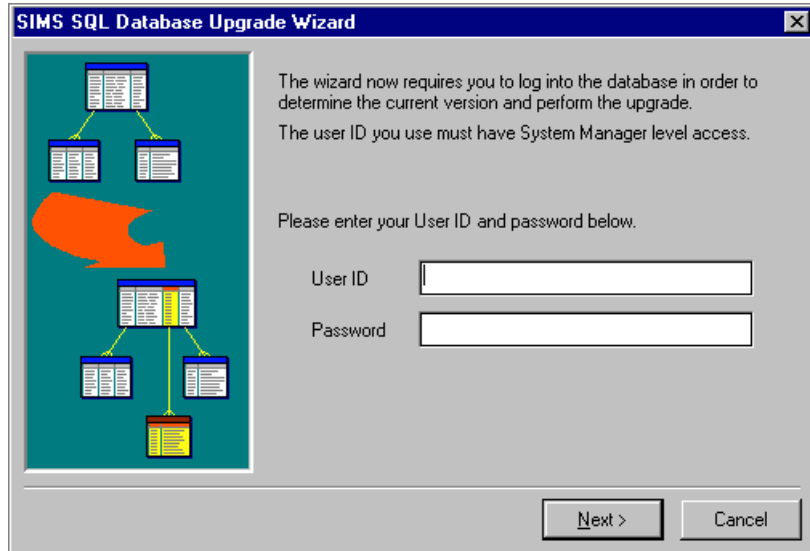
Step 2

Once installation is complete, the upgrade process will start automatically with the aid of the **SIMS SQL Upgrade Wizard**. Please be advised that this process may take some time.



Step 3

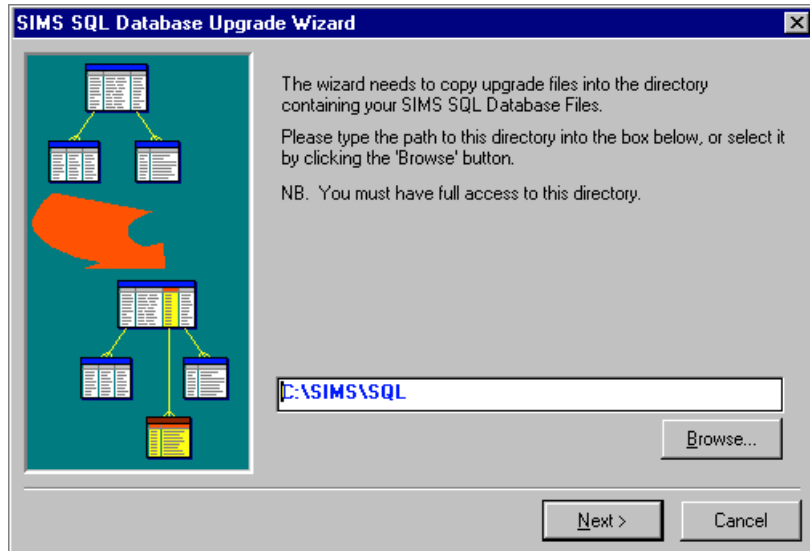
- Click the **Next** button. The next screen will ask you for your **User ID** and **Password**, checking that you have System Manager (Administrator) access rights.

**Step 4**

- Click the **Next** button to continue.

Step 5

- Make sure that the correct folder where your SIMSdb is installed is selected, e.g. C:\SIMS\SQL.

**Step 6**

- Click the **Next** button to proceed with the upgrade.

*NOTE: If during the upgrade procedure, you click the **Cancel** button, then you must either restore FMS from backup or re-select the CD-ROM containing the Finance Modules installation, so that the upgrade can continue from where it was stopped. **You must complete the upgrade to FMS 6.75, as FMS will not function unless the correct version of the database has been installed.***

FMS 6.75 and Multi-database Upgrades

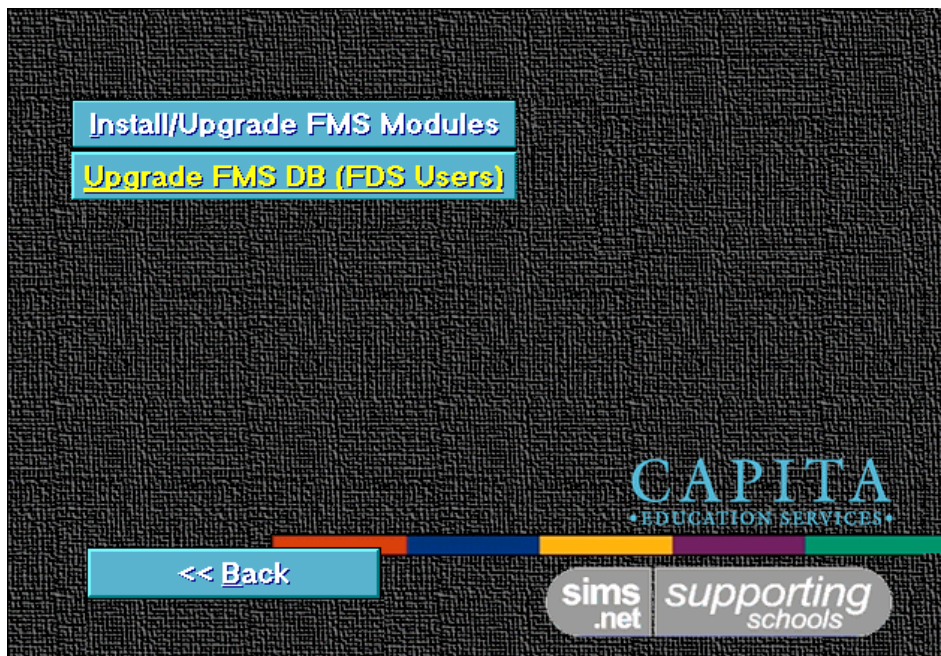
The information given here applies to all users wishing to upgrade multiple databases from a single installation of FMS 6.75.

Step 1

- Before upgrading any of the databases that you have set-up, you will need to upgrade your version of FMS to 6.75 in the normal way, **without** selecting the **Run SIMS Database check box**. Follow the relevant installation instructions as detailed in *New Installation of FMS Modules from CD on page 11*.

Step 2

- Once FMS has been upgraded to version 6.75, launch FDS and select the company to upgrade.
- Make sure the SIMS CD is still in the CD-ROM drive and navigate through until you reach the following screen.



Step 3

- Click the **Upgrade FMS DB (FDS Users)** button. You will be able to see the name of the company in the caption as the database is upgraded.

- Follow the on-screen instructions until the upgrade has completed.

NOTE: You will no longer need to enter the path to the database, as this is now an automatic process.

- Repeat this process for every separate company that you have set-up.



More information:

For further information about the FDS module, please see the Finance Database Selector handbook (FDS.PDF)

Chapter 3: SQL Anywhere and Networks

This chapter contains:

Network Installations - General	21
Specific Network Installations - Novell 4 and 5	22
Novell System Files.....	23
Specific Network Installation – NT4, Win2k or XP	23
Network Protocols - Overview	25

Network Installations - General

The SQL Anywhere Database Server has been tested on Windows® NT 4, Windows® 2000, XP, Novell versions 4 and 5.

The software which is running on the various machines may vary but the command line always takes the same parameters.

NOTE: The following commands and text are case sensitive and must be recorded exactly as they appear in the table.

SIMS_Server , -n, -c, -x, 8192	For example, the command line for NT/Win2K or XP might read: -n SIMS_Server -c 8192 -tl 600 -x NAMEDPIPES, TCPIP and the command line for Novell might read: Load DBSRV50 -n SIMS_Server -c 4M -tl 600 -x IPX
-n SIMS_Server	Specifies the name of the SQL Anywhere server to be SIMS_Server . This is how client machines recognise the server.
-c 8192	sets a cache size of 8 Mb of RAM. This is part of the server's memory and can be increased if more is available or decreased if memory is limited. The cache size can be raised if there is more than 16 Mb of RAM on the PC but the optimal setting will depend on the range of software being run on the PC.
-x TCPIP	sets the network protocol to TCP/IP which is the preferred protocol across the networks.
-x IPX,DDE	sets the network protocol to IPX and the protocol for internal communication to DDE .

Database Server

When the Database Server is loaded, a new parameter has been included, **-tl 600**. This increases the amount of time in seconds that the Database Client will wait for a contact with the Database Server before closing down. The 600 sets the time-out to 10 minutes and becomes the default for all clients. This figure may be increased to up to 1800 seconds.

Database Client

When the Database Client is loaded, a new parameter has been included, **-ta 600**. This increases the amount of time in seconds that the Database Client will wait for a contact with the Application before closing down. The 600 represents 10 minutes and must be set for each client. This figure may be increased to up to 1800 seconds.

Specific Network Installations - Novell 4 and 5

Before working on the file server take the normal precautions as you can affect any or all users of the Network. Before altering the AUTOEXEC.NCF file you should make a copy of the original file.

The SQL Anywhere Database Server runs on the Novell File Server as a Netware Loadable Module (NLM). This application can be started manually or as one of the routines which run when the server is started up. This file can only be altered by a user with Supervisor level access to the network. The file resides in the SYSTEM directory on volume SYS.

The following line will be added to the AUTOEXEC.NCF file when the installation takes place. The line can be moved or the cache size modified as necessary.

Load DBSRV50 -n SIMS_Server -c 4M -tl 600 -x IPX

If this line is the last one listed in the AUTOEXEC.NCF file, the SQL Database Server screen will be displayed on the Novell file servers' monitor. If it is entered earlier in the script it will still run but will not be visible on the screen. If the database server is closed down users will be forced out of the SIMS SQL product and will lose any unsaved data.

To load the database server manually, the above line can be typed at the “ : ” prompt at the file server or on a workstation using RCONSOLE.

Location of the database

The location of the database to be used is passed to the Database Server by the client and the Database Server loads the file as required. The location of the database file must be specified as the network file server sees it.

SIMS.DB is the SQL Anywhere database file and SIMS\SQL\ is the default directory for the file. For example if the SIMS network has only one volume this will be called SYS and the location could be

SYS:\SIMS\SQL.

To find out the correct volume name type MAP at the DOS prompt on a work station. This will display the drive letters which are known to the network. The corresponding volume name and directory path will also be displayed.

Novell System Files

To make changes to the AUTOEXEC.NCF and to have access to the SYSTEM directory you must be logged on to the Novell network with SUPERVISOR privileges.

On Novell 4 Networks there are two Novell system files which may need to be upgraded for the software to work. These are CLIB.NLM and DIRECTFS.NLM. To ensure these files can be recovered if necessary, the originals are copied as CLIB.BFS and DIRECTFS.BFS respectively and the new versions as CLIB.SIM and DIRECTFS.SIM respectively.

Specific Network Installation – NT4, Win2k or XP

The Database Server can run on a dedicated or non-dedicated Microsoft machine. The SQL Anywhere software resides by default in C:\SQLANY50\WIN32. The database server can be started manually or automatically.

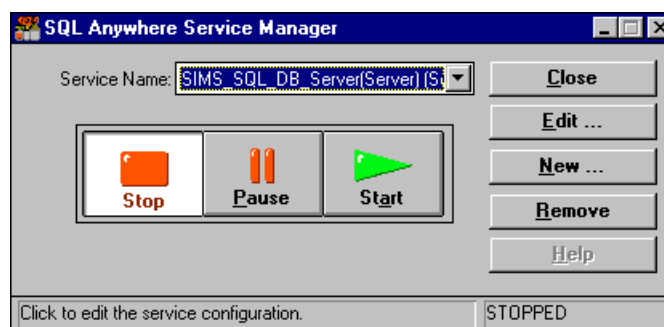
Manual Start

To start manually the following command line is required :

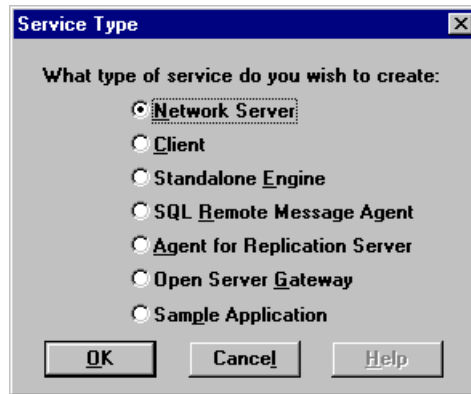
DBSRV50 -n SIMS_Server -c 8192 -tl 600 -x NAMEDPIPES, TCPIP

Automatic Start

Automatic start-up is provided via a utility that comes with the SQL Anywhere software. It allows the command line shown above in Manual Start to be executed when the Windows® NT, Windows® 2000 or Windows® XP server is started. The utility creates a SERVICE which is run by Windows® NT, Windows® 2000 or Windows® XP. By default, the utility is found in C:\SQLANY50\WIN32 and is called DBSVMN50.EXE. Running the program will present the following: (The service name will be blank if none exist.)

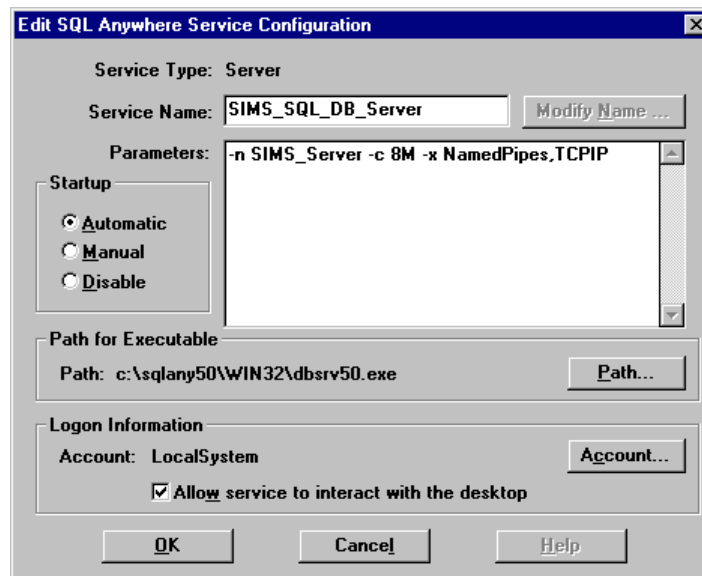


Should you wish to set-up a new **Service**, select New and the following options will be given.



To create a service which starts the SQL Anywhere database server when NT starts select Network Server.

The next screen is presented for editing an existing service or defining a new service. If **Startup** is set to Automatic the service will start when the NT server is switched on, even if no-one is logged into it.



If **Allow service to interact with desktop** is not selected, the running database server will not be visible on the task bar to a user logged in at the file server.

N B. If the server is running in the background, switching off the PC on which the server is running will obviously disconnect any workstations using the SIMS FMS Module.

The parameter x NAMEDPIPES , TCPIP sets the network protocol to TCPIP, and NAMEDPIPES which allows the NT4/Win2k or XP machine to be used as a workstation as well as a server.

As with Novell, the location of the database to be used is passed to the Database Server by the client, and the Database Server loads the file as required. The location of the database file must be specified as the network file server sees it.

SIMS.DB is the SQL Anywhere database file and SIMS\SQL is the default directory for the file. For example if the SIMS directory is located in C:\SHARE the location of the database file could be C:\SHARE\SIMS\SQL

The path C:\SHARE\SIMS\SQL should be entered during the workstation set-up so the workstation can inform the database server where to find the SIMS.DB file.

Network Protocols - Overview

The protocols to be used by SQL Anywhere are specified during the installation and should not need changing.

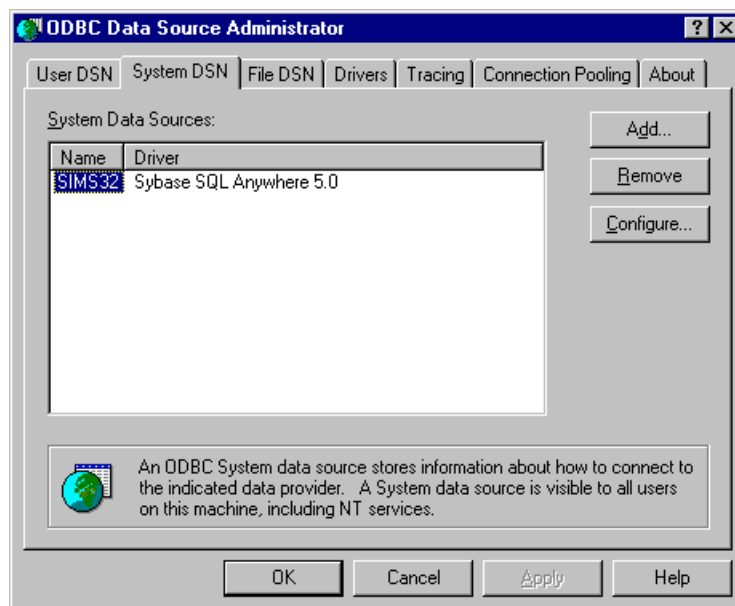
SQL Anywhere can communicate across most networks and can set up links via any protocols it finds active. To speed up loading of the Database server, a limited list of protocols to be used can be specified. On a workstation, at least one matching protocol must be specified. The fewer the number of protocols specified, the quicker the server and client will start.

Protocol :	The most common protocol for network traffic on a Novell network is IPX and this can be specified in the server startup line as -x IPX . For a Microsoft network the most usual protocol is TCPIP and this can be specified in the server start-up line with -x TCPIP .
-------------------	---

32 Bit Data Source

On a workstation using 32 bit configuration, the protocol is set-up within ODBCAD32.EXE, which is found in the Windows directory and can be used to alter the ODBC 32 bit configuration. The protocol can be specified by highlighting the SIMS entry and selecting the **Configure** button.

You should be able to locate the SIMS entry by selecting the **System DSN**



When **Configure** is chosen the following screen is displayed. All the information on this screen should already be in place.

Clicking on **Options** with the **Custom** radio button selected will display the screen below. This allows the specification of the database client software and of the protocol to be used. As with the server, if no protocol is specified, the client will load several protocols in an attempt to find a Database Server with the correct name.

Note that, in the diagram above, in the Start Command box the full path precedes the DBCLIENT.EXE.

Chapter 4: Installing/Upgrading FMS on a Network

This chapter contains:

General.....	27
Installing a SIMS SQL Anywhere product - FMS 6.00 series	27
New Network Installation of FMS	28
Environment	36
Existing Users only - Upgrade of database	37
Running the Software	40

General

These notes refer to FMS and the FMS suite of modules only, as these modules are the only SIMS products to use SQL Anywhere. Included in the current generation of FMS related products are the main FMS Module, Accounts Receivable, Budget Planning and Equipment Register.

Installing a SIMS SQL Anywhere product - FMS 6.00 series

The assumption is that the CD-ROM drive is designated E:\

Before running the installation or upgrade, please close down all other applications (including the Microsoft Office Shortcut bar if it is in use), which may prevent the upgrade working correctly. Screen savers can cause problems in some cases and should be disabled before the upgrade.

NT Workstations	Please note that the user who is installing or upgrading the software must have administrator level access to the workstation.
Networks	The user must have administrator level access to any file server being used.

Installing/Upgrading the software

If your CD-ROM does not autostart, select the correct option from those shown below for your operating system.

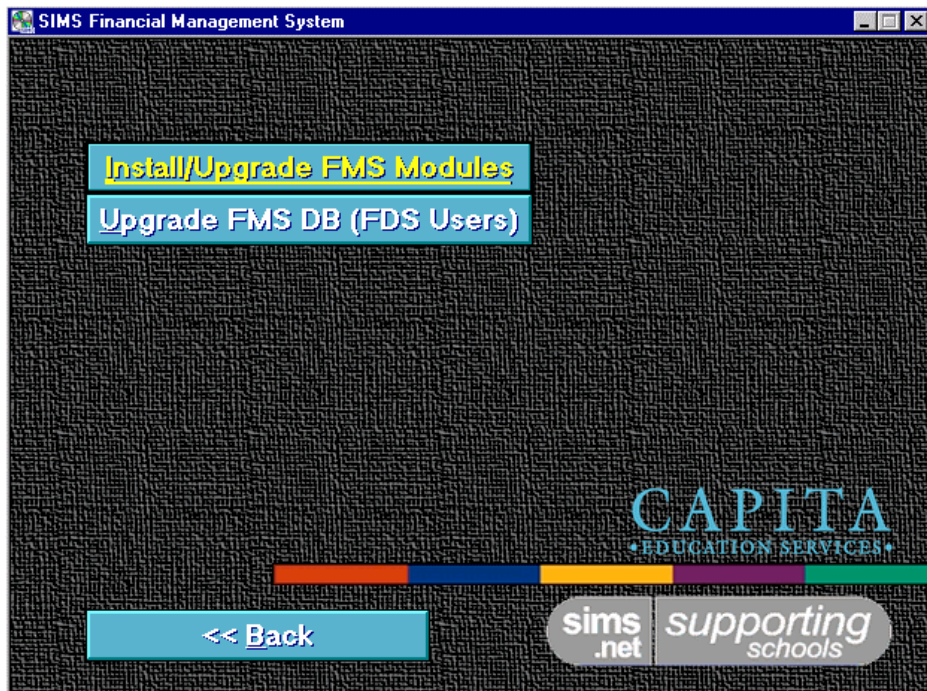
(Once again, these instructions assume that the CD-ROM drive is designated **E:**)

If your operating system is Windows® NT4

- Press the **Start** button.
- Click **Run**.
- In the Run box, type E:\SETUP
- Navigate to the section containing the Finance Modules. Typically this may be **Setups | SIMS 2.nn | Finance | FMS 6.75 Modules...**

New Network Installation of FMS

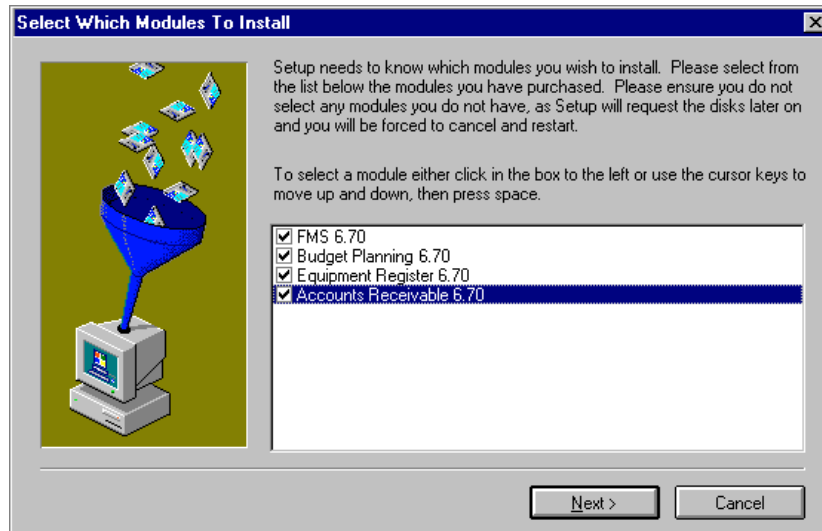
Step 1



- Click **Install/Upgrade FMS Modules**.

Step 2

You will need to decide which of the FMS Modules you wish to be included for the network installation.



- Click the tick box next to each module you wish to install, remembering that you must install FMS before you can run Accounts Receivable, Budget Planning and/or Equipment Register.
- Click the **Next** button to continue.

Step 3

- If you are selecting a standalone installation, please see **Chapter 2 Standalone installation and upgrade**.
- For a network installation, click the large button on the bottom, left hand side of the screen and click the **Next** button to continue.

- Before installation it is suggested that you check the installation procedures detailed in *Appendix 1 on page 59*.

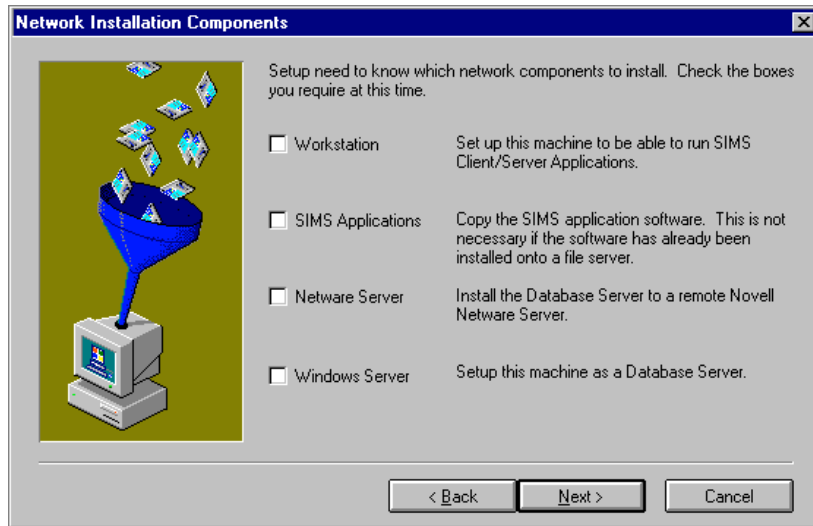


More information:

Standalone Installation on page 8

Step 4

If a network installation is chosen the following options will be available.



<input checked="" type="checkbox"/> Workstation	This sets up any machine which is required to communicate with a SQL Anywhere database server. It will install the BDE and the network client. In addition, it will create (or amend) SIMSETUP.INI and make necessary changes to the ODBC layer. These steps enable connection from the application to the SIMS SQL Anywhere database.
<input checked="" type="checkbox"/> SIMS Applications	This option causes installation of SIMS application software. (the .EXE and any supporting files such as reports [.RPT]). It is recommended that this option is selected for all machines which will run SIMS FMS. The installation routine detects the presence of an existing SIMS system which could be installed on the Network Server with a mapped drive (e.g. S:\SIMS). This will be shown as the default installation for SIMS Windows support files. However the system performance is dependent on the speed of the underlying network and is likely to run faster if the SIMS Application files are installed locally on the hard disk of each workstation. This will mean that, at upgrade, each workstation file set will need to be upgraded to keep them in step with the SIMS.DB. We recommend that you ensure that the suggested SIMS directory be set to a local drive.

<input checked="" type="checkbox"/> Netware Server	<p>If this option is selected, DO NOT select the Windows Server option.</p> <p>This is for Novell Netware network systems. It will install or update Netware-specific SQL Anywhere database server software on the Database Server. It will also create the SIMS.DB in the directory specified by the user (normally \SIMS\SQL).</p> <p>This option must be selected ONCE only for any installation. It can be run from any workstation with appropriate network access.</p>
<input checked="" type="checkbox"/> Windows Server	<p>If this option is selected, DO NOT select the Netware Server option.</p> <p>This is for Microsoft® Windows® NT, Win2k, or XP networks. It will install or update Windows-specific SQL Anywhere database server software on the machine acting as a Database Server. It will also create the SIMS.DB in the directory specified by the user (normally \SIMS\SQL) and can only be run at the machine that is to be the database server.</p>

Some Examples

Example 1: NT file server and three workstations with the applications installed locally (any supported Windows version).

The following steps would be required.

- At the NT File Server, select Workstation, SIMS Applications and WINDOWS Server.
- At the three Workstations, select Workstation and SIMS Applications.

In most cases, this will be the optimum setting for performance.

Example 2: NT file server and three workstations with the applications installed on the File Server.

- At the NT File Server, select Workstation, SIMS Applications and WINDOWS Server.
- At the three workstations, select Workstation and SIMS Applications.
- In most cases, this will be the optimum setting for performance.

Example 3: Novell file server and three workstations (any supported Windows version) with the applications installed locally.

The following steps would be required:

- At one Workstation, select Workstation, SIMS Applications and Netware Server.

- At the other two Workstations, select Workstation and SIMS Applications.

In most cases, this will be the optimum setting for performance.

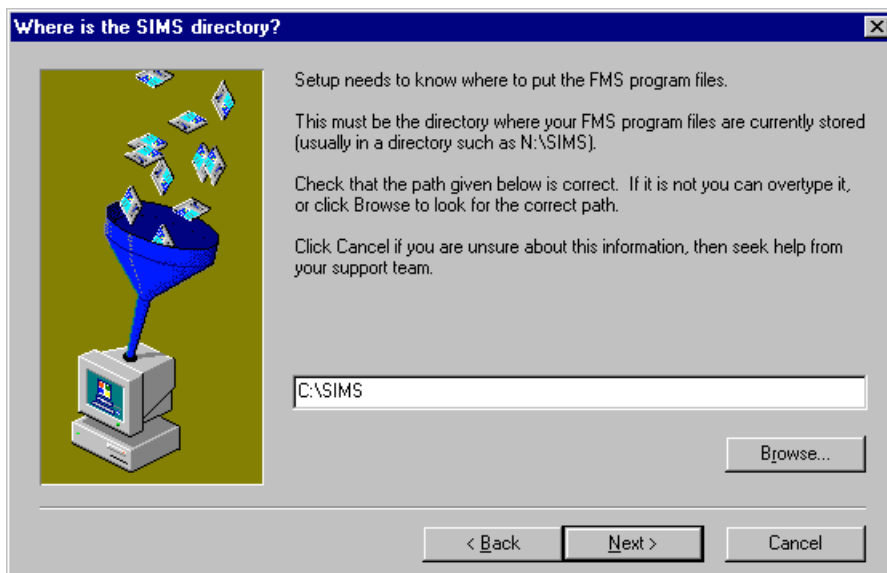
Example 4: Novell file server and three workstations (any supported Windows version) with the applications installed at the file server.

The following steps would be required.

- At one Workstation, select Workstation, SIMS Applications and Netware Server.
- At the other two Workstations, select Workstation only.

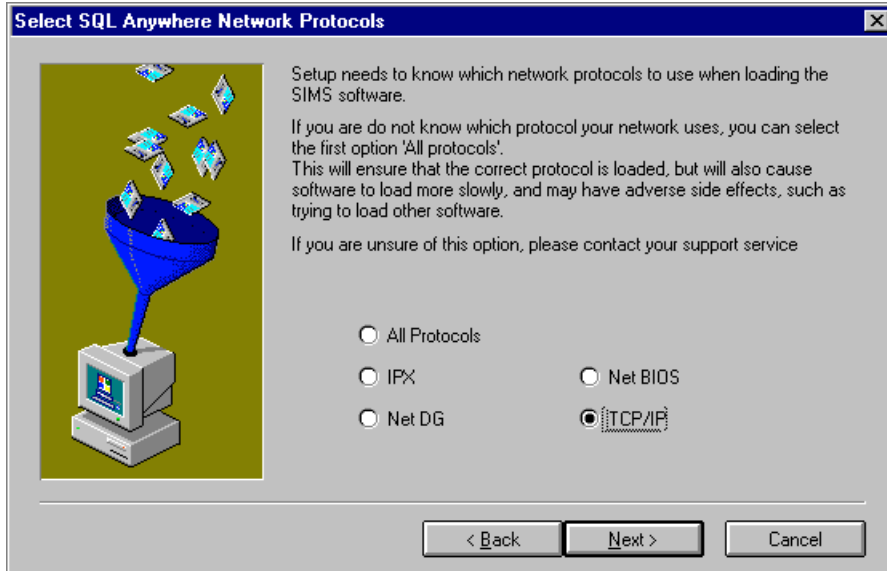
Step 5

The first directory path required is the location of the EXE & support files, which will default to C:\SIMS unless SIMS exists on a different drive letter. For optimal performance, it may be better to change the path to a local drive.



Step 6

The screen below will be presented to enter the network protocol in use.

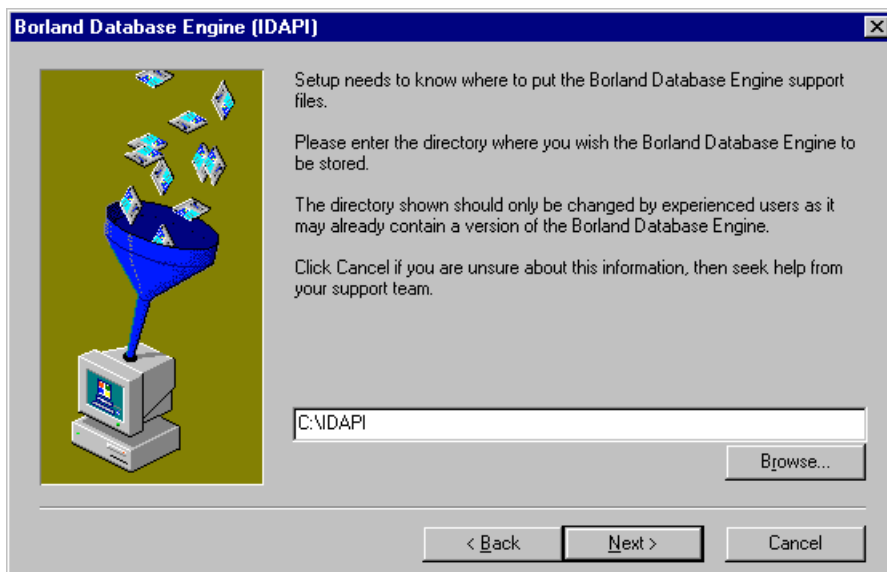


Novell 4 networks:	IPX is the preferred protocol.
NT networks:	Most NT networks will use TCPIP as a protocol.
Other Windows networks:	NT 4 peer to peer usually use NETBIOS as their protocol.
N.B.	We recommend using TCP/IP as your network protocol if you are using any Microsoft network or Novell 5 or above. This must be available on the Network if it is to be selected.

Selecting **All Protocols** will work on any network but loading the software will take longer as it has to test for the available protocols each time it is run.

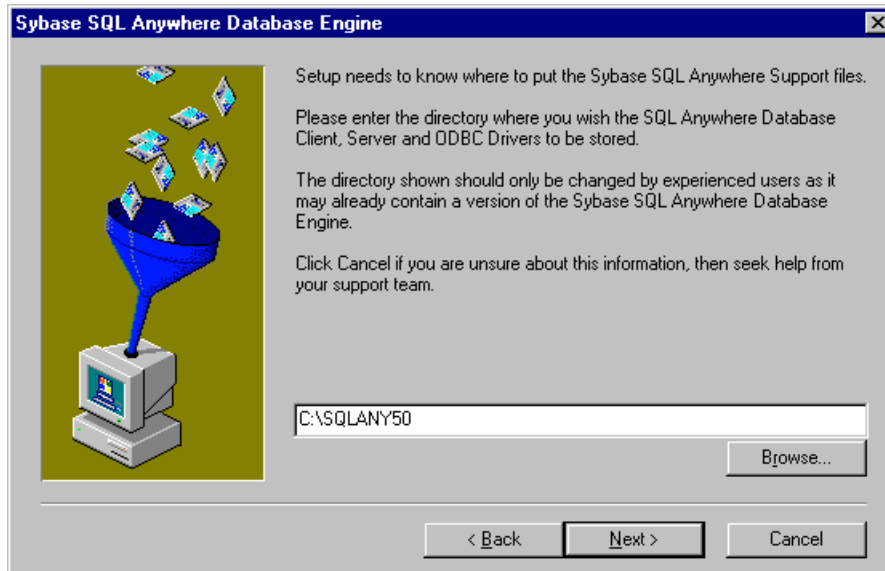
Step 7

If the Borland Database Engine is not already installed, it must now be specified.

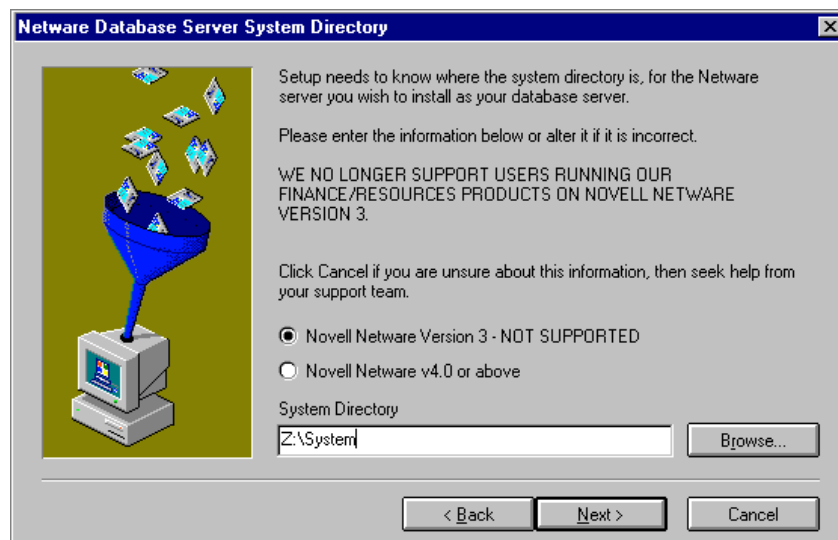


Step 8

The next choice is the directory in which the SQL Anywhere software is to be placed, this defaults to **C:\SQLANY50**.

**Step 9**

If installing on Novell the following screen asks for the version of Novell Netware which is in use. The location of the Novell system directory is also required. The system directory will be identified automatically if possible, on most networks this will be Z:\SYSTEM.

**Step 10**

The screen below may prove to be the most challenging to the inexperienced Network administrator. The SQL Anywhere needs to know the location of the database (.dbf). This will be on the same machine as the server software itself. The location of the SIMS.DB file may look like **S:\SIMS\SQL** to the workstation.

However:

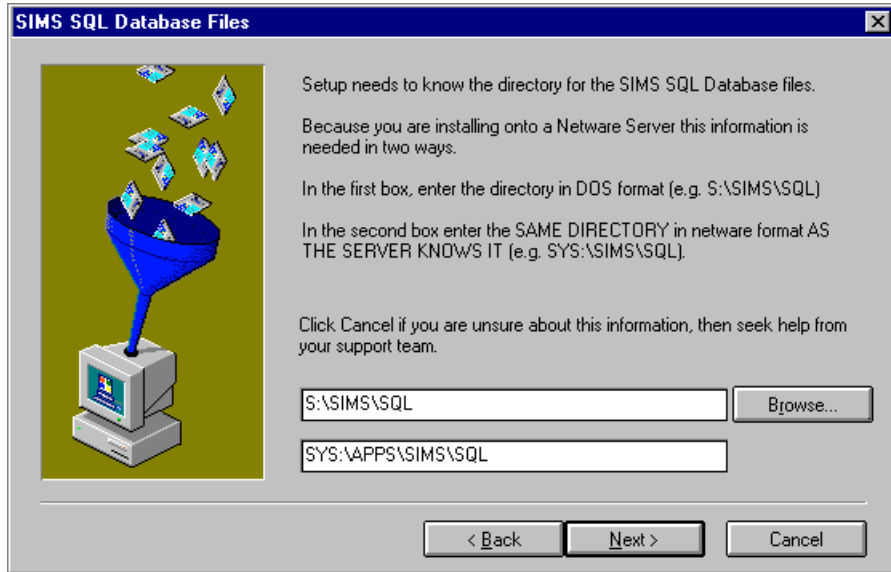
To a Novell file server it may look like: **SYS:\APPS\SIMS\SQL**

To an NT file server it may look like: **C:\<SIMSROOT>\SIMS\SQL**

**More information:**

SQL Anywhere and Networks on page 21

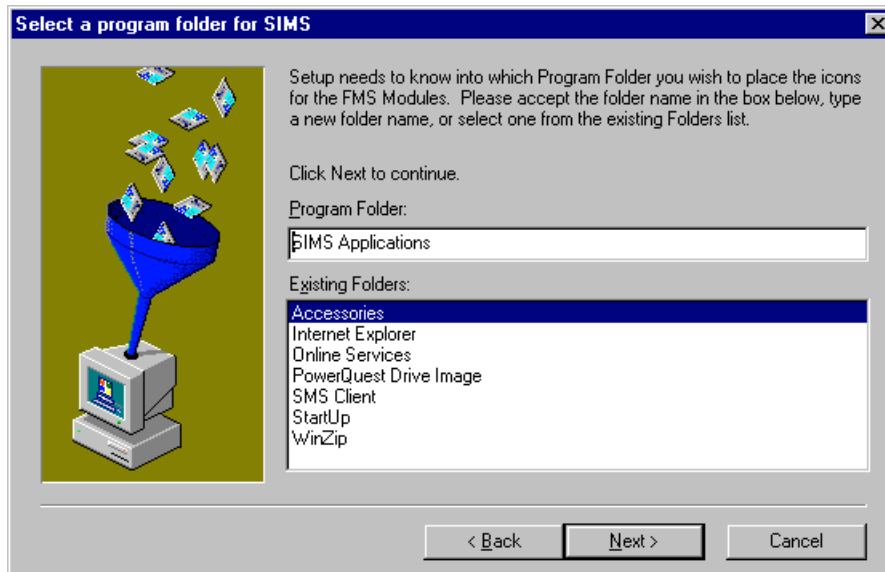
**NOVELL
EXAMPLE
SCREEN**



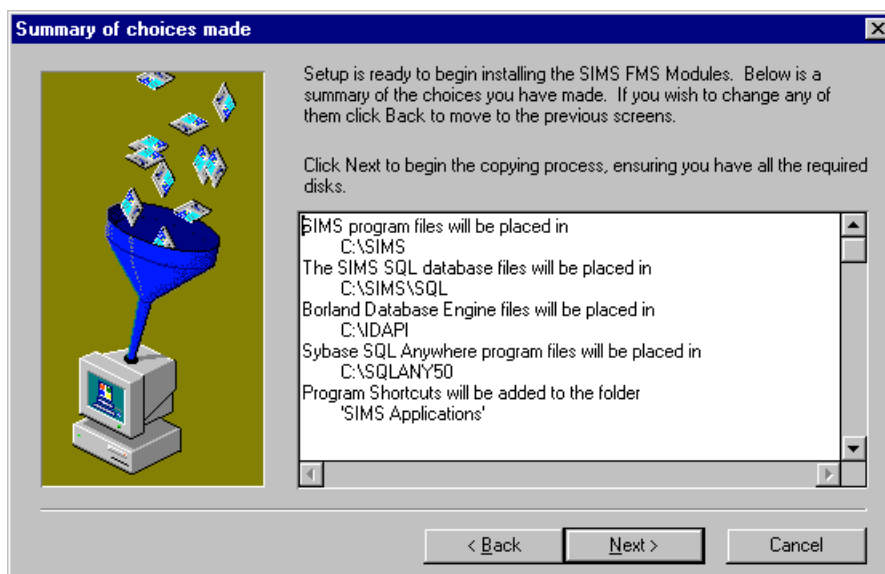
ALWAYS ENSURE THAT YOU READ THE INSTRUCTIONS ON THE ABOVE SCREEN WITH THE UTMOST CARE!

Step 11

The group into which the SIMS FMS Modules are placed, defaults to **SIMS Applications** but can be changed if necessary.



The next screen displays the choices made and allows the user to review the information prior to installation taking place. The last screen has no user input and shows the progress of the installation.



Install/Upgrade FMS Modules must then be run on all the other workstations from the CD-ROM, selecting **Workstation** and **SIMS Applications**. The CD-ROM can be copied onto the network and the set up run from there.

Environment

The following environment should be in place, as a result of the installation.

All machines running SIMS FMS will have the following entries added to the path statement:

C:\SQLANY50\WIN32

In ALL installations, an environment variable will be added:

SQLANY=C:\SQLANY50

(Drive C:\ is used here as an example.)

If the above path and environment variables are not set the software will not run.

Existing Users only - Upgrade of database

<p>Important note for all systems!</p>	<p>WARNING: ENSURE A VALID BACKUP HAS BEEN TAKEN PRIOR TO UPGRADE.</p> <p>For networked configurations, you must close down the database server (SIMS_Server) before you upgrade. For an NT/Win2k or XP database server set up as an NT service, select Start Run DBSVMN50 Stop.</p> <p>For Netware Servers, type Ctrl+Esc 1 to bring up the console, pick 'Multi-user SQL Anywhere' and then File Exit.</p>
---	---

Novell Servers

<p>Important note if the Database Server is <u>not</u> on an NT, Win2000 or XP machine.</p>	<p>When upgrading to FMS 6.75 on a system where the Database Server is running on a Novell file, the database server must be re-started prior to running the Database upgrade.</p> <p>This upgrade takes place immediately after the installation of FMS 6.75 modules.</p>
--	--

FMS 6.75 and Multi-upgrade Option

Please ensure that you have backed up the SIMS.db before proceeding.

You may upgrade to FMS 6.75 from the following releases of FMS.

- **FMS 6.70**
- **FMS 6.60**

*NOTE: Whichever version you are upgrading from, the whole process is straightforward and does not require your machine to be re-started in between each upgrade. Simply click the **Next** button as each upgrade is completed.*

Stage 1 Step 1

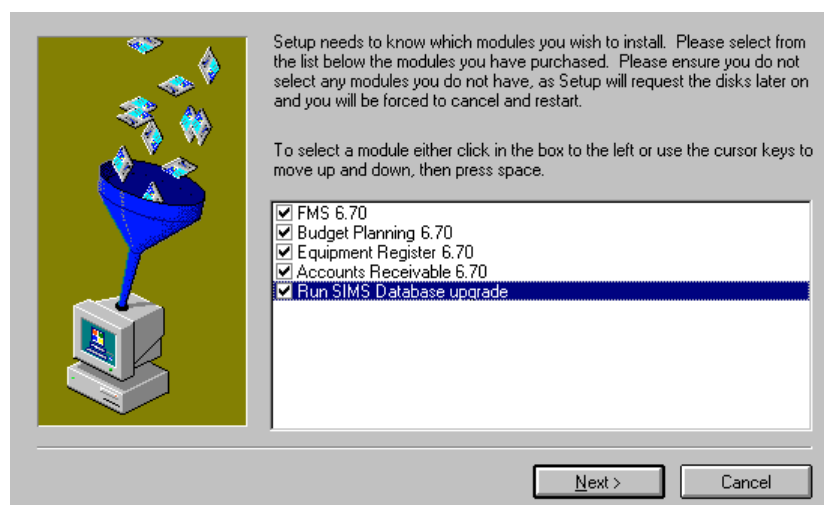
Upgrading is a two-stage process.

- From the installation CD, navigate to the Finance Modules section. Typically this may be **SIMS 2.nn | Setups... | Finance | FMS 6.75 Modules.**
- From the Finance installation screen, click **Install/Upgrade FMS Modules.**

NOTE: The following instructions are for users who use a single installation of FMS with a single database. If you have used the Finance Database Selector Module to set-up multiple companies using multiple databases with a single installation of FMS, then you should follow the instructions given in the FDS handbook (FDS.PDF). Further information may also be obtained from this handbook. Please see FMS 6.75 and Multi-database Upgrades on page 18.

Step 2

- From the following screen, tick the modules you wish to install.
- To upgrade an existing installation, you must also ensure that the **Run SIMS Database Upgrade** tick box has also been selected.



- Click the **Next** button.

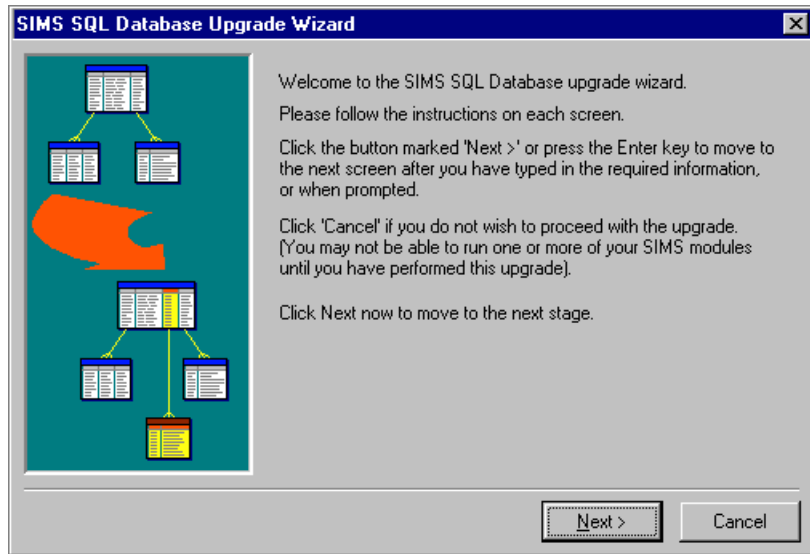
Step 3

The selected FMS Modules will be installed in exactly the same way as the procedures described in *New Network Installation of FMS on page 28*.

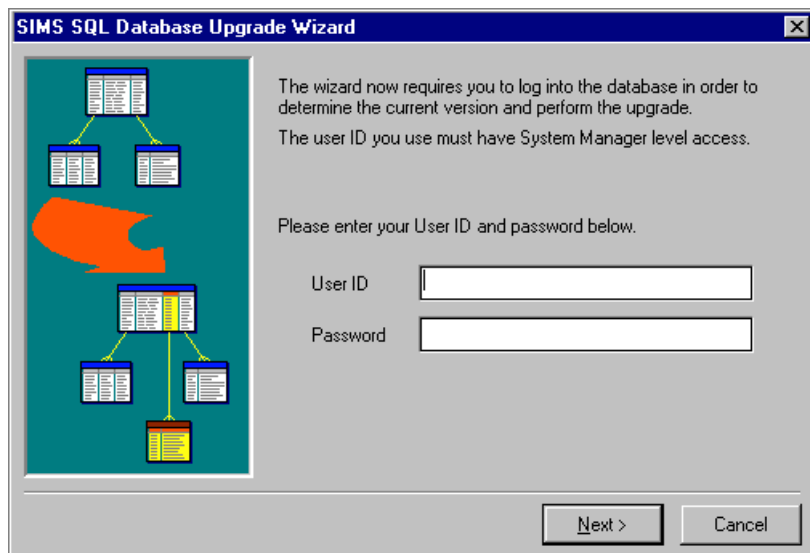
*NOTE: The Database Server/Service **must** be restarted before running the Upgrade Wizard.*

Step 4

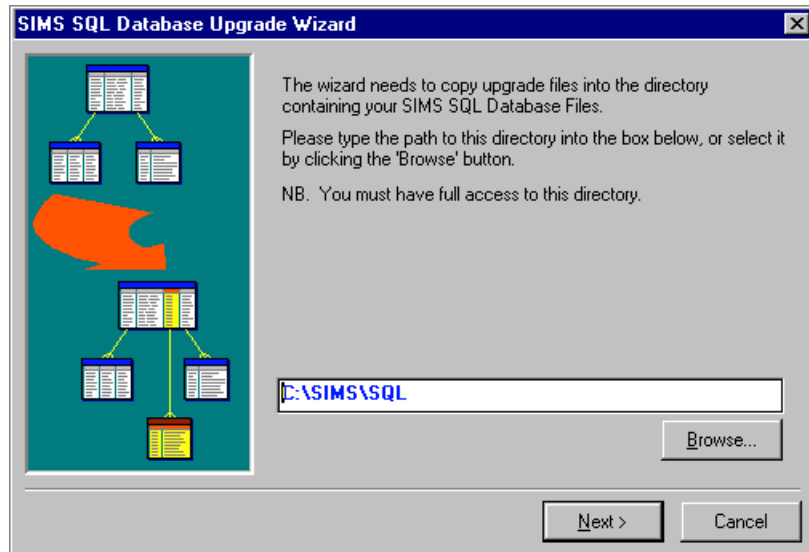
Once installation is complete and providing you selected to upgrade the SIMS database, the Upgrade Wizard should now run automatically.



- Before you are able to continue you must confirm that you have System Manager rights and you will be asked to confirm your **UserID** and **Password**.



- To start the upgrade process click the **Next** button.
- Click the **Next** button and follow the instructions as they are given on screen, making sure to select the correct folder, where your SIMS database is installed, e.g. **C:\SIMS\SQL**



Please be patient as the upgrade process may take some time. As each upgrade is completed, click the **Next** button to begin the next upgrade and continue until the database has been upgraded to FMS 6.75.

*NOTE: If during the upgrade procedure, you click the **Cancel** button, then you must restore FMS from backup and re run the upgrade. **You must make sure that the database is upgraded to FMS 6.75, as FMS will not function unless the correct version of the database is installed.***



More information:

FMS 6.75 and Multi-database Upgrades on page 18

Running the Software

The FMS Modules are taken as the example.

The installation on a standalone PC will produce a Windows Group with several icons: one to run the FMS Module, one to run the FMS help file and one to run Integrator.

On a Network the database server must be started before the module is run from a workstation.

To begin using the **Finance** software :

- Double click on the **FMS Module** icon. A version screen will appear followed by a login screen. The initial login name is SYSMAN with a password of "PASSWORD". (The password is not case sensitive)

Printing

Printing from the module makes use of the printers known to Windows. The printer drivers used are those provided by Microsoft or the printer manufacturers.

If you find that you have a problem with the printer driver, it can be beneficial to download an updated driver from the Microsoft Website.

Chapter 5: Backing up your work

This chapter contains:

Backup Strategy	41
General Backup Information.....	41
SQL Specific.....	42

Backup Strategy

Following a number of problems raised on the SIMS Support Desk we would like to ask that you check that your backup strategy is reliable. The frequency and method of backup should relate to the value you place on your data.

- How much data can you afford to lose?
- What would it cost in terms of time and manpower to re-enter?
- Could the original data be re-entered?

SIMS is an integrated suite of software and most applications share data. A backup should cover all of SIMS and its subdirectories. The SIMS directory itself contains the executable files and these change only after upgrade or installation of new software. This can be backed up less frequently than the data, but should certainly be backed up before and after upgrades or installations. However, the sub directories should be backed up on a daily basis.

Keep both of these backups until the whole system is known to be working correctly after the upgrade.

General Backup Information

- Please ensure that backups are being made successfully: it is **too late** when your system is **dead**. With any backup, ensure the files are **not in use** when the backup is attempted.
- Remember that on a Windows workstation, data may be stored locally as well as on the network. Back up any data you cannot afford to lose. An important document should not be trusted to a single copy on a floppy disk as disks have a limited life.
- As previously advised, please do not use SIMSBACK and SIMSREST for backing up and restoring data.

SQL Specific

It is essential that a reliable backup of the data and transaction logs be taken on a regular basis.

LEA Teams will not be able to reset a date last used flag. **The only option is to restore from backup.**

Files that should be backed up can be found in the SQL directory under SIMS and are:

SIMS.DB

SIMS.LOG

NOTE: The sims.log is just as important as the sims.db file. The sims.log must be backed up at the same time as the sims.db and should never be deleted but renamed and archived.

Chapter 6: Performance Tuning

This chapter contains:

Standalone	43
Network	43
Location of Files	44
Database Server	44
Database Client Application (e.g. Finance)	45

Standalone

The absolute minimum PC must have a P 400 processor or better, with a minimum of 128 Mb of RAM available. This should be increased to 256 Mb of RAM if NT is being used as the operating system.

NOTE: Running FMS, however, and associated modules on a minimum specification PC will result in a relatively slow performance.

Multiple applications should not be used on such a machine.

Network

File Server

If the File server is running Windows® NT 4, Win2000 or XP, the specification will depend on the work it is expected to do, but a P400 or higher with 256 Mb of RAM is a reasonable base line.

A Novell File Server that is only used for “file and print” can perform quite well with a 486 with 16 Mb of RAM. If this is to be used to run a database server it should be at least a P400 with 256 Mb of RAM. If an existing low specification Novell File Server is in use and performing adequately for current use, a Database Server can be added to the Network.

Database Server

A PC can be added to any Network to run the Database Server and to store the Database file. This machine can be located anywhere on the Network, but if physically close to the file server an existing UPS (Un-interruptable Power Supply) may be able to service both the File Server and the Database Server.

The Database Server must have a network card and have a protocol that matches that used by the other machines on the network. It needs to be connected to a network point in the usual way.

The database server should be a fast PC P400 with 256 Mb or better if it is to support multiple users on a shared database.

Location of Files

BDE

The default location is Drive C: in a directory called IDAPI. It is recommended that each machine running FMS6 has a copy of the BDE installed locally.

SQL Anywhere Client files

The default location is Drive C: in a directory called SQLAny50.

Executable Files

The default location is the drive holding the SIMS directory. Best performances will be obtained with the executable files installed on each client machine.

Database Server

Cache Size

When the database server is loaded, a Cache size can be specified. This is a portion of the RAM that is reserved for use by the Database Server. If the PC does not have sufficient memory, increasing the Cache can slow down other applications.

By default, the Cache size is measured in Kilobytes, so that a Cache size specified as 8192 will be interpreted as 8 Mb. Alternatively, the same value can be specified as 8M. A SIMS installation will set the Cache size to 8192. See the extract from the SQL Anywhere help file below.

The syntax is:

```
DBSRV50 -n SIMS_Server -c 8192 -x TCPIP (32 Bit)
```

```
Load DBSRV50 -n SIMS_Server -c 4M -x TCPIP (Novell 32 Bit)
```

Increasing the Cache size will improve the speed of operation of the database server. There is a point at which increasing cache size will no longer increase the speed of operation. In general, raising cache size beyond 10% of the size of the SIMS.db will not give a proportional improvement in performance.

This information is an extract from the SQL Anywhere help file:

-c cache-size sets the size of the cache. The database server uses extra memory for caching database pages if it is set aside in the cache. Any cache size less than 10000 is assumed to be K-bytes (1K = 1024 bytes). Any cache size 10000 or greater is assumed to be in bytes. The cache size may also be specified as nK or nM (1M = 1024K). By default, the database server uses 2 megabytes of memory for caching. The more cache that can be given the engine, the better will be its performance.

Database Client Application (e.g. Finance)

Virtual Memory

Windows applications use a combination of local RAM and local disk space. The disk space used in this way is called Virtual Memory.

See the documentation accompanying the operating system for instructions on optimising this setting.



More information:

Commonly Asked Questions on page 47

Chapter 7: Commonly Asked Questions

This chapter contains:

What is Client-Server and why do you use it?.....	47
Why don't my reports print as I expect?	47
How do I re-install FMS?	47
Can I run data for two schools on one file server?	48
Will Data from the other SIMS modules be available to FMS?.....	48
Is it possible to get the data "fixed"?.....	48
What is Virtual Memory?	48
How do I know if my PC is 'thrashing'?	49
How can I replicate the LEA financial structure for all schools?	49

What is Client-Server and why do you use it?

Client server provides a more secure means of storing and accessing data. SIMS is supplying SQL Anywhere to all schools as part of the annual maintenance; we chose this engine because it is first rate and works on the vast majority of our customers' networks.

Client Server does require faster hardware in order to work satisfactorily.

Why don't my reports print as I expect?

The FMS Modules use the printer drivers provided by Microsoft or by the Printer Manufacturer. If the output is not as expected on a given printer please try a different driver. In the case of a HP690C it has been found that better results are obtained by using a HP550C driver. With printer problems in general try swapping the printer lead, if this is faulty the results can be unpredictable.

Reinstalling the existing printer driver has also found to be beneficial.

How do I re-install FMS?

The installation will replace everything but will not delete a SIMS.DB file. If you wish to re-install then you should first delete the SIMS.DB and SIMS.LOG files. These will be read only and by default will reside in C:\SIMS\SQL\ on a local hard disk.

Can I run data for two schools on one file server?

Please refer to the Finance Database Selector manual entitled FDS.PDF. This is available on the CD ROM.

Will Data from the other SIMS modules be available to FMS?

Data from Personnel, and STAR, will be available for all FMS Modules. It will be necessary to run the Integrator module to transfer the data from dBase tables to SQL Anywhere. The Personnel and STAR data should be tidied using the Data Check Utility before Integrator is run.

Is it possible to get the data “fixed”?

FM6 data can be fixed but only if damage is caused by coding errors or software malfunction. If something has been entered in error, you will have to restore from backup if you feel you are unable to correct it through the software. Please see *Chapter 5 Backing up your work* for more details.

What is Virtual Memory?

Virtual Memory is an imaginary memory area supported by Windows® in conjunction with the hardware, which involves using the hard disk as an extension of memory. Its purpose is to enlarge the address space of an application – i.e. the application can pretend that it has access to more memory than is actually configured on the PC. When the application executes, only part of its code and data is put into memory; when memory fills up and more space is needed, a piece of software called ‘the Virtual Memory Manager’ moves some of the memory-resident code and data temporarily to a special file on the disk called the ‘Paging File’ (or ‘Swap File’). This is referred to as ‘paging’ or ‘swapping’. This file is regarded as an extension of memory, with code and data being swapped between memory and the Paging File as and when necessary. If the system spends most of its time performing this swapping process (rather than processing code), then a situation occurs known as ‘thrashing’ – essentially the system is spending more time managing memory and disk rather than doing the job it is supposed to do (such as running Finance!).

The size of the Paging File is set differently depending on whether you are running NT, Win2000, or Windows® XP.

**Windows®
NT, Win2000
or XP:** The pagefile defaults to a minimum size when NT, 2000 or XP is installed and will never shrink below this size. A maximum threshold level can also be established and the page file is allowed to grow to (but not exceed) this size.

How do I know if my PC is ‘thrashing’?

The system is designed for a certain amount of paging. However, if paging happens frequently, a point can be reached where the system is doing so much paging that there is little time for useful work. Excessive paging, or ‘disk thrashing’, degrades overall performance and can also cause premature disk failure. The symptoms of thrashing are:

- Very high CPU utilisation
- Extremely slow system response
- High (almost constant) hard disk activity.

Generally, the solution to excessive paging is to work with fewer programs simultaneously or to add more RAM to the computer.

How can I replicate the LEA financial structure for all schools?

Exporting the Structure

The SIMS.DB holds the data and indexes for the whole finance system. If the LEA creates a structure and imports a catalogue file into the module, then this will be held in the SIMS.DB file. Installing the FMS Modules and then copying in the SIMS.DB will allow the structure to be replicated on a school’s system.

*NOTE: The existing SIMS.DB and SIMS.LOG (if present) MUST be deleted before copying on the new SIMS.DB. These files may be **READ ONLY** and hence care is needed to ensure that they are deleted.*

Chapter 8: Problem Solving

This chapter contains:

Server and Workstation problems	51
FMS 6.00 Series - Trouble Shooting	51
Network Protocols	57

Server and Workstation problems

If you encounter any problems in installing or upgrading the FMS Modules, the following trouble shooting section, flow charts and information about Network Protocols may help provide solutions.

FMS 6.00 Series - Trouble Shooting

The following suggestions will enable you to identify the most common causes of problems after the installation or upgrade of FMS6. The errors are listed first followed by step by step instructions detailing how to solve them.

*NOTE: If errors are encountered, e.g. Unhandled Exception errors, whilst **using** FMS6, please close down the module and re- enter, trying the route where the error originally occurred. If the error occurs a second time, please reboot your workstation and try the route for a third time. If the problem still exists, please contact your local SIMS Support Team for assistance.*

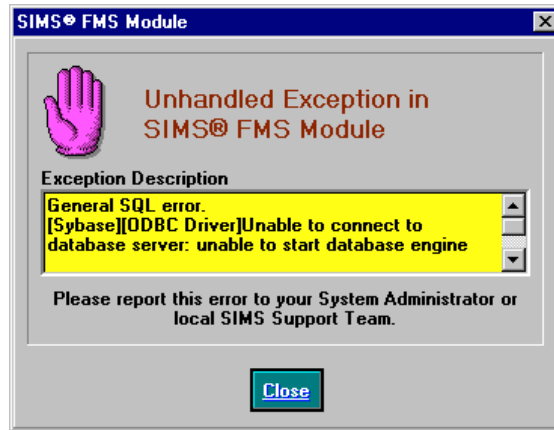
FMS and New Hardware

If after upgrading your hardware you experience a slowing down of the FMS system, it is suggested that you carry out the following procedure.

1. Copy your FMS data to a laptop and take timings. This takes out the school equipment and network.
2. Connect a workstation to the database server using a crossed UTP cable. This will give you a two machine network, which excludes the network but includes the new hardware.
3. Install the database server on to a different, fast PC. This changes the hardware but now includes the main network.

Common Error Messages

Unhandled Exception in SIMS FMS Module General SQL Error [Sybase][ODBC Driver] Unable to connect to database server: Unable to start database engine Alias: DbInitial Connection.



Errors of this nature contain the essential information within the yellow highlighted box. It may be necessary to scroll down to the bottom of the yellow box to obtain the full error message.

1. Ensure that the database server is running
2. Check which protocols have been specified for use across the network
3. Test the protocol connection from the client
4. If the above settings are correct and the system partition is NTFS, grant the user SYSTEM access rights to the SIMS_Server.

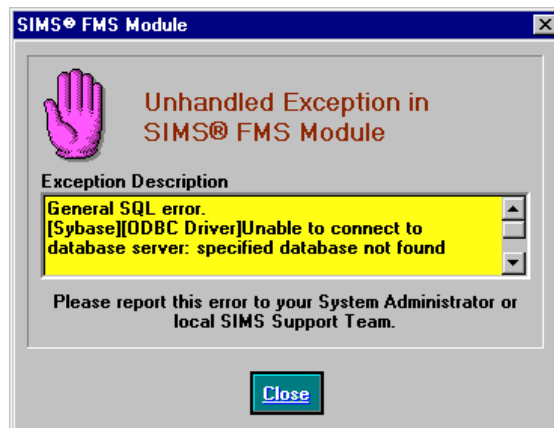


More information:

Checking the Database Server is running on page 53

Checking which Protocols have been specified on page 53

Identifying the Protocol Connection on page 56



Unhandled Exception in SIMS FMS Module General SQL Error [Sybase] [ODBC Driver] Unable to connect to database server: specified database not found Aias:DbInitial Connection

1. Check the physical location of the database
2. Check the settings in the ODBCAD32 are correct
3. If the settings are correct and the database resides on an NTFS partition, grant the user SYSTEM access rights to the database (sims.db)



More information:

Checking the physical location of the SIMS.db on page 54

Checking the Settings in ODBCAD32 on page 55

Granting the user SYSTEM Access Rights to the SIMS.db on a Windows® NT machine. on page 56

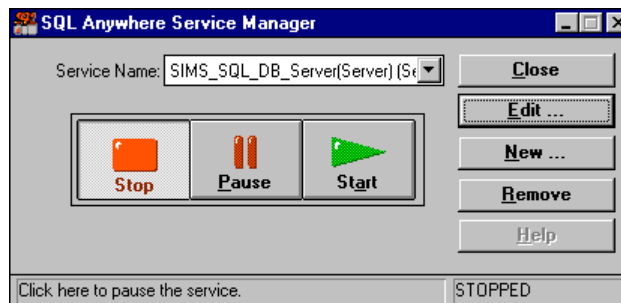
Checking the Database Server is running

On the Server:

Start | Run | DBSVMN50 | OK

Three radio buttons will be displayed. **Stop**, **Pause**, and **Start**.

The **Status** of the service will be displayed in the bottom right hand corner of the screen.



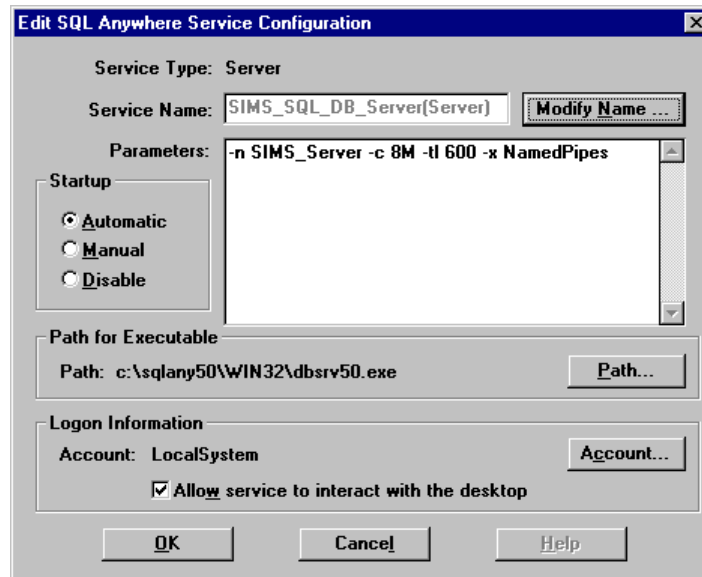
Checking which Protocols have been specified

On the Server:

Start | Run | DBSVMN50 | OK | Edit

A page will be displayed, showing the parameters of the service.

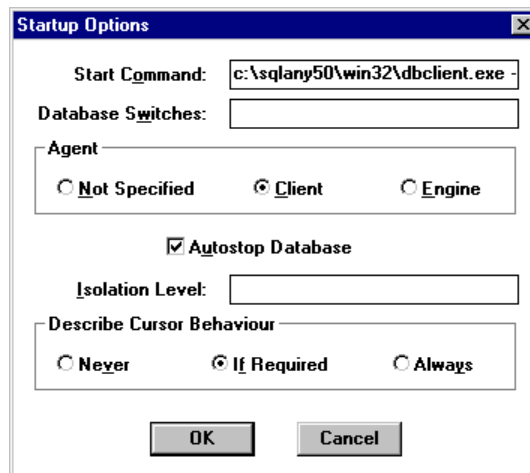
Make a note of these parameters before leaving this screen.



On the Workstation;

Start | Run | ODBCAD32 | SYSTEM DSN | SIMS32 | Configure | Options

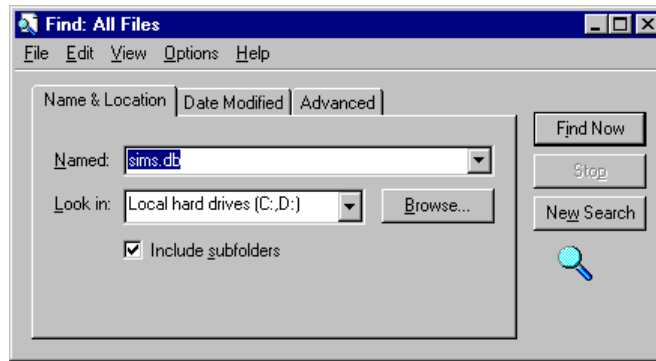
The protocols used in the **Start Command** should match those specified on the server.



Checking the physical location of the SIMS.db

On the Server:

Start | Find | Files or Folders | Find Now



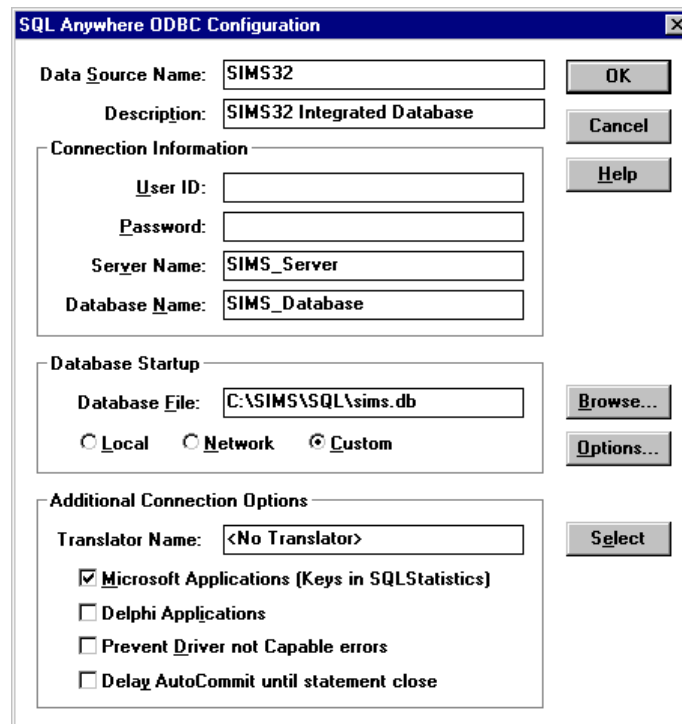
The physical location of the sims.db will be displayed. This path must be specified exactly as displayed in the ODBCAD32 settings on all machines running FMS6.

Checking the Settings in ODBCAD32

On the Workstation:

Start | Run | ODBCAD32 | SYSTEM DSN | SIMS32 | Configure

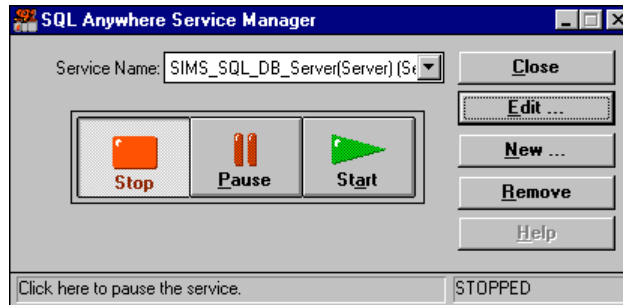
The path to the Database File in Database Startup, must be the *actual physical* path to the SIMS.DB on the server machine, as the server knows it.



Starting the Database Server:

On the server:

Start | Run | DBSVN50 | Start



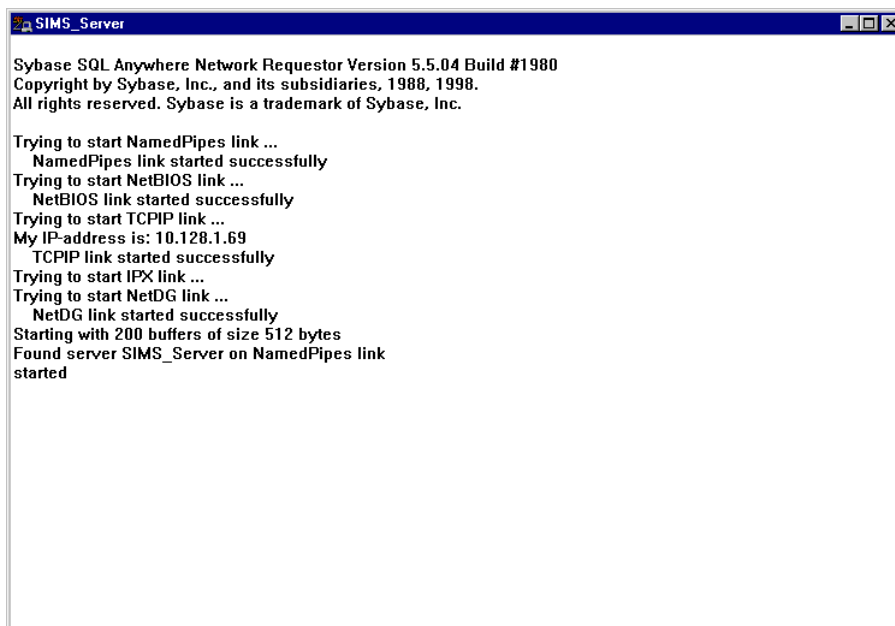
Identifying the Protocol Connection

This can only be carried out when the service is not running. If you have just started the service, please now stop it and restart it after this action has been completed.

Start | Run | dbsrv50 -n SIMS_Server

This will identify which protocol the client is using to connect to the SIMS_Server by displaying:

Found server SIMS_Server on (Protocol Name)

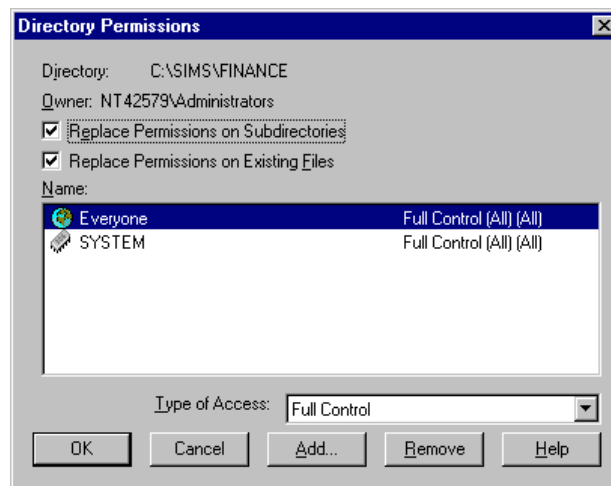


Granting the user SYSTEM Access Rights to the SIMS.db on a Windows® NT machine.

If the SIMS.db resides on an NTFS drive, try the following:

1. Double click **My Computer** and select the drive where the SIMS.db is located
2. Double click this drive and select the folder that contains the sims.db
3. Right click this folder and select **Properties**.
4. Select the **Security** tab and click **Permissions** and then **Add**

5. Select the name SYSTEM from the list displayed
6. Select **Add**
7. Change the **Type of Access** flag to Full Control.
8. Select **OK**.
9. Ensure that both the **Replace Permissions on Subdirectories** and **Replace Permissions on Existing Files** have been selected.
10. Select **OK**, the system will now update the permissions.



If you are using XP, please contact the SIMS Support Desk for the latest information.

Network Protocols

Where possible use **TCP/IP**. This has proven to be the most resilient protocol. The protocol must be available on the machine hosting the Database Server and on all machines that run the FMS Modules, if it is to be used.

If the network is complicated there are extra settings available which can specify which -Card a Database Server communicates through:

On the Database Server -

..... -x **TCPIP{MyIP=nn.nn.nn.nn}** where nn.nn.nn.nn is the TCP/IP address assigned to the card in the machine hosting the Database Server to which the clients machines are connected, e.g. 10.127.10.2

On the Database Client -

..... -x **TCPIP{HOST=nn.nn.nn.nn}** where nn.nn.nn.nn is the TCP/IP address assigned to the card in the machine hosting the Database Server to which the clients machines are connected, e.g. 10.127.10.2

The TCP/IP address specified for the Client and Server should be the same.

Problems with NETBIOS

NETBIOS may not be a suitable protocol if the PC is set-up with a dial up adapter. The entry for **NETBUI → Dial Up Adapter** should be removed from the network properties if NETBIOS is to be used by SQL Anywhere.

Problems with ex-Novell Workstations

On a PC which has been used as a Novell workstation but now acts as a workstation on an NT network, NETBIOS may not be available to SQL Anywhere. Remove all of the information from the Network Properties and re-boot the PC. If the Novell Client is set-up, then immediately remove it. Ensure that NETBUI is available and that a client for Microsoft Network is set-up. In some extreme cases it has been necessary to remove the network card, re-boot the workstation, re-insert the card and restart the machine, thus ensuring the network card is set-up without residual Novell elements.

Appendix 1

FMS 6 – NT, Windows® 2000 or XP Peer to Peer Installation

Screen Title	Server	Workstation
	Choose Option	Choose Option
SIMS FMS Modules	Install FMS Modules	Install FMS Modules
Welcome	Next	Next
What Type of setting	Network	Network
Network Installation Components	<input checked="" type="checkbox"/> 1 - Workstation <input checked="" type="checkbox"/> 2 - SIMS Applications <input type="checkbox"/> 3 - NetWare Server <input checked="" type="checkbox"/> 4 - Windows Server	<input checked="" type="checkbox"/> 1 - Workstation <input checked="" type="checkbox"/> 2 - SIMS Applications <input type="checkbox"/> 3 - NetWare Server <input type="checkbox"/> 4 - Windows Server
Where is the SIMS Directory?	C:\SIMS	C:\SIMS
Select SQL Anywhere Protocols	IPX, NetBIOS, NetDG, TCPIP , ALL	IPX, NetBIOS, NetDG, TCPIP , ALL
Borland Database Engine(IDAPI)	C:\IDAPI	C:\IDAPI
Sybase SQL Anywhere Database Engine	C:\SQLANY50	C:\SQLANY50
SIMS SQL Database Files	C:\<SIMSROOT>\SIMS\SQL	C:\<SIMSROOT>\SIMS\SQL
(As the SERVER sees it)		
Select a program folder for SIMS	SIMS Applications	SIMS Applications
Summary of choices	C:\SIMS	C:\SIMS
(check that these are correct)	C:\IDAPI	C:\IDAPI
	C:\SQLANY50	C:\SQLANY50
	SIMS Applications	SIMS Applications

FMS 6 - Novell Installation

Screen Title	1st Workstation and Server	All other Workstations
	Choose Option	Choose Option
SIMS FMS Modules	Install FMS Modules	Install FMS Modules
Welcome	Next	Next
What Type of setting	Network	Network
Network Installation Components	<input checked="" type="checkbox"/> 1 - Workstation	<input checked="" type="checkbox"/> 1 - Workstation
	<input checked="" type="checkbox"/> 2 - SIMS Applications	<input checked="" type="checkbox"/> 2 - SIMS Applications
	<input type="checkbox"/> 3 - NetWare Server	<input type="checkbox"/> 3 - NetWare Server
	<input type="checkbox"/> 4 - Windows Server	<input type="checkbox"/> 4 - Windows Server
Where is the SIMS Directory?	C:\SIMS	C:\SIMS
Select SQL Anywhere Protocols	IPX, NetBIOS, NetDG, TCPIP, ALL	IPX, NetBIOS, NetDG, TCPIP, ALL
Borland Database Engine(IDAPI)	C:\IDAPI	C:\IDAPI
Sybase SQL Anywhere Database Engine	C:\SQLANY50	C:\SQLANY50
Netware Database Server System Directory	<input checked="" type="radio"/> Netware v4.0 or above	
	Z:\SYSTEM	
System Directory		
SIMS SQL Database Files	C:\SIMS\SQL	C:\SIMS\SQL
(Full path on Server)	SYS:\SIMSROOT\SIMS\SQL	SYS:\SIMSROOT\SIMS\SQL
Select a program folder for SIMS	SIMS Applications	SIMS Applications
Summary of choices	C:\SIMS	C:\SIMS
(check that these are correct)	C:\IDAPI	C:\IDAPI
	C:\SQLANY50	C:\SQLANY50
	SIMS Applications	SIMS Applications

Appendix 2: Files Installed by FMS 6.75

BDE (Borland Database Engine) May already be on system

IDAPI directory	IDAPI01.DLL	IDQRY01.DLL	SQL_MSS.CNF
BDECFG.EXE	IDAPI32.CFG	IDR10009.DLL	SQL_ORA.CNF
BDECFG.HLP	IDASCI01.DLL	ILD01.DLL	SQL_ORA8.CNF
BDECFG.GID	IDBAT01.DLL	SQL_DB2.CNF	SQL_SSC.CNF
IDAPI.000	IDDBAS01.DLL	SQL_INF.CNF	SQL_SYB.CNF
IDAPI.BAK	IDODBC01.DLL	SQL_INF9.CNF	
IDAPI.CFG	IDPDX01.DLL	SQL_INT.CNF	
IDAPILANGDRV	BLLT1FI0.LD	DB437TH0.LD	DB867CZ0.LD
directory	BLLT1FR0.LD	DB437UK0.LD	DB936CN0.LD
ANCHINA.LD	BLLT1IS0.LD	DB850CF0.LD	DB949KO0.LD
ANCYRR.LD	BLLT1IT0.LD	DB850DE0.LD	DB950TW0.LD
ANCZECH.LD	BLLT1NL0.LD	DB850ES0.LD	DBWINES0.LD
ANGREEK1.LD	BLLT1NO0.LD	DB850FR0.LD	DBWINUS0.LD
ANHUNDC.LD	BLLT1PT0.LD	DB850IT1.LD	DBWINWE0.LD
ANKOREA.LD	BLLT1SV0.LD	DB850NL0.LD	GRCP437.LD
ANPOLISH.LD	BLLT1UK0.LD	DB850PT0.LD	HUN852DC.LD
ANSII850.LD	BLLT1US0.LD	DB850SV1.LD	ICELAND.LD
ANSIINTL.LD	CHINA.LD	DB850UK0.LD	INTL.LD
ANSINOR4.LD	CSKAMEN.LD	DB850US0.LD	INTL850.LD
ANSISLOV.LD	CYRR.LD	DB852CZ0.LD	KOREA.LD
ANSISPAN.LD	CZECH.LD	DB852HDC.LD	NORDAN.LD
ANSISWFN.LD	DB437DE0.LD	DB852PO0.LD	NORDAN40.LD
ANTAIWAN.LD	DB437ES1.LD	DB852SL0.LD	POLISH.LD
ANTHAI.LD	DB437FI0.LD	DB857TR0.LD	SLOVENE.LD
ANTURK.LD	DB437FR0.LD	DB860PT0.LD	SPANISH.LD
BLLT1CA0.LD	DB437GR0.LD	DB863CF1.LD	SWEDFIN.LD
BLLT1DA0.LD	DB437IT0.LD	DB865DA0.LD	TAIWAN.LD
BLLT1DE0.LD	DB437NL0.LD	DB865NO0.LD	THAI.LD
BLLT1ES0.LD	DB437SV0.LD	DB866RU0.LD	TURK.LD

SIMS Database File

SIMS/SQL directory	SIMS.DB
---------------------------	---------

FINANCE Executable and Support Files

SIMS directory	CCBUD0AS.RPT	ERW.EXE	NIITPC.RPT
ACCCONV.650	CCBUDL0S.RPT	ERW.HLP	OORDLST.RPT
ACCCONV.EXE	CCBUDLAD.RPT	ERW.PDF	ORDAMEND.RPT
ACCCONVD.650	CCBUDLAS.RPT	EXPLST.RPT	PARTS.RPT
ACCCONVD.EXE	CCCOM.RPT	FDALLOCD.RPT	PORDLST.RPT
AGEDCRD.RPT	CCCOMORD.RPT	FDALLOCS.RPT	PAUTHCC.RPT
ACCPAY.PDF	CCCOMSUM.RPT	FDS.EXE	PAUTHS.RPT
AGEDSUM.RPT	CCDTRANS.RPT	FDS.HLP	PAYSLIP.RPT
ANNUALCD.RPT	CCENTRE.RPT	FDS.PDF	POREM.RPT
ANNUALCF.RPT	CCEXP.RPT	FINANCE.EXE	RCPTS.RPT
ANNUALGD.RPT	CCGROUP.RPT	FINANCE.HLP	REIMLST.RPT
ANNUALGS.RPT	CCSUMCC.RPT	FINANCEC.PDF	RPAUTHDT.RPT
ANNUALLD.RPT	CCSUMCG.RPT	FINQREP.INI	RPAUTHNO.RPT
ANNUALLS.RPT	CCTRANS.RPT	FINREP.INI	SDBFIX.EXE
ARECDEF.RPT	CEACCB.RPT	FINYEAR.PDF	SDBFREAD.TXT
ARECDET.RPT	CEACCC.RPT	FMSDEC.EXE	SIMS.BMP
ARECFLS.RPT	CEACCM.RPT	FMSENC.EXE	SIMSETUP.INI
ARECSUM.RPT	CEACPB.RPT	FMSINDEX.PDF	STRIALC.RPT
AREC_DLT.RPT	CEACPC.RPT	FMSKEY.EXE	STRIALL.RPT
AREC_DTL.RPT	CEACPM.RPT	FMSMAIL.EXE	SUPINFO.RPT
AREC_LDT.RPT	CEALDB.RPT	FMSREADM.EXE	SUPINF.S.RPT
AREC_LTD.RPT	CEALDC.RPT	FMSUTILS.DLL	SUPPSTAT.RPT
AREC_TDL.RPT	CEALDM.RPT	FMSWRTEM.EXE	SYSPARAM.RPT
AREC_TLD.RPT	CEALSB.RPT	FNDBNK.RPT	TECHSUPP.HLP
ARW.EXE	CEALSC.RPT	FOLIOLST.RPT	TEMPLATE.DB
ARW.HLP	CEALSM.RPT	FUNDRVW.RPT	TRANSLST.RPT
ARW.PDF	CELEDGER.RPT	GLEDGER.PDF	TRANSSUM.RPT
AUDIT.RPT	CFR.HLP	GLREVIEW.RPT	TRIAL1A.RPT
BACSREM2.RPT	CFR.PDF	GL_CC.RPT	TRIAL1B.RPT
BACSREM.RPT	CHART.RPT	GL_LEDG.RPT	TRIAL1C.RPT
BACSRUN.RPT	CHQBSTAT.RPT	GL_NDETS.RPT	TRIAL2A.RPT
BALRES.RPT	CHQNORPT.RPT	GL_TRANS.RPT	TRIAL2B.RPT
BKSTLST.RPT	CHQRUN.RPT	GRPSTRUC.RPT	TRIAL2C.RPT
BMANDPL.PDF	CHQSTAT.RPT	GSFIN.PDF	UNPFLST.RPT
BNKCLAIM.RPT	CONFIG32.EXE	IRR.RPT	UNREC_F.RPT
BNKHIST.RPT	CONVCHK.EXE	INTEGRAT.EXE	UNREC_S.RPT
BNKREC1.RPT	COSTTRAN.RPT	INTEGRAT.PDF	VATCRDBT.RPT
BNKREC2.RPT	CPANDNI.PDF	INVTAGS.RPT	VATEXCPT.RPT
BPLCROSS.RPT	CREDLST.RPT	INVTAGS2.RPT	VATFULL.RPT
BUDAUDIT.RPT	CREDSUM.RPT	INVTAGS3.RPT	VATLSUM.RPT
BUDGETCL.RPT	CTRLSLP.RPT	INVTAGS4.RPT	VATSSUM.RPT
BUDGETPL.RPT	DBVALID.EXE	JRNAUDIT.RPT	VATSUB.RPT
BUDLED.RPT	DBVALID.HLP	JTEMP.RPT	WIZUNZ32.DLL
BUDPLAN.EXE	DELDET.RPT	LCDTRANS.RPT	YECHECK.RPT
BUDPLAN.HLP	DELSUM.RPT	LCTRANS.RPT	YE_TT.RPT
BUDPLAN.PDF	DELNIDET.RPT	LEDCEXP.RPT	ZEROPAY.RPT
CASHPL.RPT	DELNISUM.RPT	LEDLIST.RPT	
CCBUD0AD.RPT	EPROC.PDF	NIITP.RPT	

SQL Anywhere

SQL Client	DBCLIENW.EXE	DBL50W.DLL	WSQLCALL.DLL
SQLAny50/WIN	DBLOGW.EXE	TECHINFO.EXE	WSQLDDE.EXE
directory	DBSTOPW.EXE	WL50EN.DLL	WTR50W.DLL
	DBWE50.DLL	WOD50W.DLL	
Netware 4	DBCLIENT.NLM	DBSERVER.NLM	WL50EN.RES
SYSTEM directory (SQL Server)	DBEXTF50.NLM	DBSRV50.NLM	WSQLNLM.LIC
SQL Server	DB32W.EXE	DBMAPIW.DLL	DBTL50W.DLL
SQLAny50/WIN	DBFILEW.DLL	DBSRV50W.EXE	WSQLWS.LIC
directory	DBFTPW.DLL	DBSTARTW.EXE	
SQL Server	DBCLIENT.EXE	DBSMTP.DLL	WOD50T.DLL
Windows NT	DBENG50.EXE	DBSRV50.EXE	WSQLCALT.DLL
	DBEXTF50.DLL	DBSTART.EXE	WSQLNTS.LIC
SQLAny50/WIN32	DBFILE.DLL	DBSVMN50.EXE	WTR50T.DLL
directory	DBFTP.DLL	DBTL50T.DLL	
	DBL50T.DLL	DBUPGRAD.EXE	
	DBMAPI.DLL	DBVIM.DLL	
	DBREMOTE.EXE	TECHINFO.EXE	
	DBSERVER.EXE	WL50ENT.DLL	

Windows Support Files (Including Run-Time Crystal Reports)

Windows/Crystal directory	U2DDISK.DLL U2FXLS.DLL	U2FWORDDW.DLL	
Windows/System directory	BIVBX11.DLL BOLE16D.DLL COMMDLG.1 COMPOBJ.DLL CPN16UT.DLL CRPE.DLL CTL3D.DLL CTL3DV2.DLL D2HLNK16.DLL D2HTOOLS.DLL MFCOLEUI.DLL MSOUTLIN.VBX	NWCALLS.DLL NWIPXSPX.DLL ODBC.DLL ODBC16GT.DLL ODBC16UT.DLL ODBC32.DLL ODBCADM.EXE ODBCCP32.DLL ODBCINST.DLL ODBCINST.HLP OLE2.DLL OLE2.REG	OLE2CONV.DLL OLE2DISP.DLL OLE2NLS.DLL OLE2PROX.DLL SIMSATT.FON SIMSCLRA.FON SIMSFNAV.FON SIMSMONO.FON STDOLE.TLB STORAGE.DLL TYPELIB.DLL WIZUNZ16.DLL
Windows/System32 directory	BDEADMIN.CPL CRPAIG32.DLL CRPE32.DLL DS16GT.DLL DS32GT.DLL FMSFEES.DLL IMPLODE.DLL	MSVCRT.DLL ODBC32GT.DLL ODBCAD32.EXE ODBCCP32.CPL ODBCCR32.DLL ODBCINT.DLL ODBCTRAC.DLL	OLE2.DLL OLE2DISP.DLL OLE2NLS.DLL P2SODBC.DLL REGSVR32.EXE TCRES.DLL WIZUNZ32.DLL

Glossary

32 bit

32 bit programs use 32 bits to address memory.

BDE

Borland Database Engine. This acts as an interface between Delphi applications and the ODBC, taking data access commands from the application, either forwarding them to the ODBC layer, or rejecting them according to their validity.

BDECFG.EXE

Borland Database Configuration Utility. This is a program file that allows you to configure the BDE engine to allow ODBC datasources to be accessed.

Dedicated Server

A dedicated server is one that is designated to perform a single specific function. The server might, for example, be dedicated to acting as an NT Server, or as a DB Server, and cannot be used as a workstation.

DLLs

Dynamic Link Library. This is a piece of compiled code containing one or more functions which can be accessed dynamically at run time by one or more running programs.

DSN

DataSource Name. A named entry in ODBC.INI or the Registry that supplies information relating to a particular database, driver and server.

ESQL

Embedded SQL . This is an alternative to using ODBC.INI to access a database. It requires the application to be written in C or C++.

HLI

Host Language Interface. This is an alternative to using ODBC to access a database. It uses function calls that are built into the application.

IDAPI

Independent Database Application Programming Interface. Essentially, this is another name for the BDE.

IDAPI.CFG

This holds configuration information for the BDE and allows DSNs to be accessed.

Multi-User

A multi-user application is one that supports concurrent access by more than one user on a network.

ODBC

Open Database Connectivity. A standard interface for accessing databases.

Peer-to-Peer

A networking configuration where more than one machine can communicate with each other, but no one machine acts as the network server.

Single User Access

When access to an application is restricted to one person at a time. The data could still be stored on a server.

SQL

Structured Query Language, usually pronounced "See-kwell". It is a standard language for defining, querying, modifying and controlling the data in a relational database.

TCPIP

One type of protocol that can be used on a Network. This is the recommended protocol for SQL Applications across the Network.

Transaction logging

Anything that affects the data or structure of the database is recorded in a special file called the Transaction Log. The presence of this file enables the database to be recovered should the need arise.

Workstation

A computer. Often used to distinguish computers that are not servers. It may be networked or standalone.

Index

3

32 bit configuration 25

A

administrator level access

NT Workstations 7, 27

to any file server 27

allow service to interact with desktop.... 24

AUTOEXEC.NCF..... 22

automatic start 23

autostart

CD-ROM 7, 27

B

backup strategy 41

BDE Administrator 5

Borland Database Engine 13, 33

C

cache size 44

catalogue file 49

CD-ROM 36

CLIB.NLM 23

client application 2, 3

command line 23

network installation..... 21

copy

AUTOEXEC.NCF..... 22

D

data

transfer from dBase to SQL..... 4

data dictionary..... 2

database access 3

database client..... 26

database client application..... 45

database file 2

database file location..... 22

database server..... 1, 43

cache size 44

default location..... 23

database upgrade..... 38

database upgrade wizard 38

DataSource Name 3

dBase / SQL Integrator 3

dBase tables to SQL Anywhere 48

DBCLIEN.EXE 26

DBSRV50 44

DBSVMN50.EXE..... 23

DDE 21

default

directory for database file 22

directory NT Server or NT4 23

file location BDE 44

file location executable files 44

file location SQL Anywhere 44

installation for SIMS support files... 30

Delphi applications..... 3

DIRECTFS.NLM 23

disconnect

workstations 24

download updated printer driver 40

E

environment 36

variable 36

executable files..... 41, 44

existing users only

upgrade database 37

ex-Novell workstation problems 58

export LEA financial structure 49

F

file

paging..... 48

swap 48

file server 31, 35, 43

Novell 4, 22

FMS modules

installing..... 11

FMS Upgrade 15

I

IDAPI..... 13, 44

initial login name..... 40

install

FMS modules..... 36

modules 29

-
- installation
 - standalone8
 - installing FMS27
 - installing FMS modules..... 11
 - installing/upgrading
 - the software7, 27
 - Windows 95 or NT47, 28
 - Integrator module48
 - IPX..... 33

 - L**
 - language interface.....2
 - location
 - database22, 34

 - M**
 - manual start23
 - MAP23
 - matching protocol25
 - Microsoft networks
 - default protocol24
 - Microsoft Office shortcut bar7, 27
 - Microsoft SQL Server3
 - minimum specification
 - standalone43
 - module install29
 - module selection**12

 - N**
 - NAMEDPIPES.....24
 - NETBIOS21, 24, 33
 - netware loadable module4, 22
 - network40
 - card.....44
 - connection point44
 - installations21
 - optimal setting.....21
 - protocol.....24, 32
 - overview25
 - network file server1
 - network protocols.....51
 - new service23
 - nickname
 - of the server.....3
 - NLM22
 - Novell.....31, 33, 34, 35, 43, 44
 - file server4, 22
 - system files23
 - NT.....31, 33, 35, 36, 43, 48

 - O**
 - ODBC
 - 32 bit.....8
 - installation9
 - set-up.....8
 - ODBC Administrator.....6
 - ODBC driver3
 - ODBC.INI3
 - ODBCAD32.....25
 - open database connectivity3
 - operating system.....45
 - optimal performance32
 - optimise
 - virtual memory.....45
 - ORACLE.....2

 - P**
 - paging file48
 - path.....36
 - peer to peer33
 - performance tuning
 - file server43
 - standalone PC43
 - Personnel.....48
 - printer drivers47
 - printing40
 - problem solving flow charts.....51
 - problems with NETBIOS.....58
 - protocol25, 26, 44
 - IPX33
 - NETBIOS33

 - R**
 - RCONSOLE.....22
 - read only files47
 - re-install47
 - restore from backup48
 - review
 - choices.....36
 - running the software.....40

 - S**
 - select
 - modules12
-

-
- service name 23
- SIMS Applications 35, 36
- SIMS database upgrade 16
- SIMS directory 41, 44
- SIMS folder/directory 13
- SIMS module
- Personnel 48
 - STAR 48
- SIMS.DB 39, 42, 47, 49
- SIMS.LOG 47, 49
- SQL Anywhere 44
- SQLANY50 14, 34, 44
- standalone installation 8
- STAR 48
- start command 26
- strategy for backup 41
- structured query language 1
- swap file 48
- system directory 34
- system DSN 25
- system files
- Novell 23
- T**
- task bar 24
- TCP/IP 33
- TCPIP 23
- thrashing 48, 49
- transaction logs 42
- trouble shooting 51
- client machine 53
 - database server 53
- type of set-up 12
- U**
- uninterruptable power supply 43
- upgrade
- database 37
- upgrade wizard 16
- Upgrading FMS 15
- V**
- variable
- environment 36
- verify backups 41
- virtual memory 45, 48
- W**
- workstation 25