Defined Contribution System/Windows

Installation Guide

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DC/Win Installation Guide

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Introduction

The guide is intended to provide you with the information necessary to choose an appropriate system configuration for your environment, then walk you though the installation steps for the database, then the workstation software. It is expected that the reader is experienced with installing software applications, has a familiarity with network administrative activities, and possesses a general knowledge of terms commonly used in Information Technology.

Types of Databases Supported

This software currently supports two different database technologies; the file-based Access database and the client/server-based SQL Server database.

SQL Server vs. Access

For new installations, we strongly recommend using SQL Server as your database choice.   The Access database option is being phased out and will be eliminated during 2006. If you are currently using the Access database, migrating to SQL Server is a simple process which is covered in the topic *"Migrating from Access to a SQL database".* Using the Access database is covered under *"Scenario 5".*

There are two different flavors of the SQL Database. The first is Microsoft SQL Server (MS SQL), and the second is the Microsoft SQL Desktop Engine (MSDE) which is limited capacity version of MS SQL that is included free of charge with DATAIR applications.

Choosing between MSDE and MS SQL

The differences between the two versions are detailed in the following table:

Feature	MSDE	MS SQL
Maximum Database Size	2 GB	32 TB
Number of Simultaneous Operations	5	Unlimited
Enterprise Manager Server Utilities	Not included	Included
Cost	Included free of charge	Must be purchased separately

In essence, the limitations placed on the free MSDE version of the database include limiting the maximum size of a database to 2 gigabytes, which is actually a tremendous amount of data, and limiting the number of simultaneous 'operations' to 5. There is a loose correlation of 'simultaneous operations' to maximum users; however it is not a direct relationship. An 'operation' can be thought of as data being read or written to the database.

When more than 5 simultaneous operations take place, the database server will process all the requests to read or write data, but it will slow each of them down proportionally. The more pending simultaneous operations there are, the slower it will process each operation.

When doing data entry, data is only read or written as you move from record to record or when changes are saved. Each of these database accesses take only a split second, thus it is possible to support many more than 5 users doing data entry since the chances of 5 users pressing Save or moving to a new record at the exact same instant is very low. However, when you are running calculations, the system will be continually reading and writing data during the entire time the calculations are running and the chances of simultaneous database accesses is much higher.

More realistic is that you will have a mix of users doing data entry and calculations at the same time. Depending on their usage patterns, you will be able to support well in excess of 5 simultaneous users, but it is difficult to predict the exact number. Keep in mind that if you exceed the number of simultaneous operations, the system will continue to operate, just slow down temporarily.

The bottom line is this… If you wish to be very conservative, you may want to limit the number of users to no more that 5 users. More realistic is that MSDE would support 10 or more simultaneous users using a mix of DATAIR applications. If you outgrow the free MSDE version, upgrading to MS SQL is quite easy.

For additional information on MSDE and MS SQL, please see the Technology Publications section of the DATAIR web site.

Choosing your Installation Type

Now that you have some insight into the differences between the various database options, we will present a number of 'scenarios' that represent the most common situations. These are general in nature, and you should select the one that most closely fits your situation.
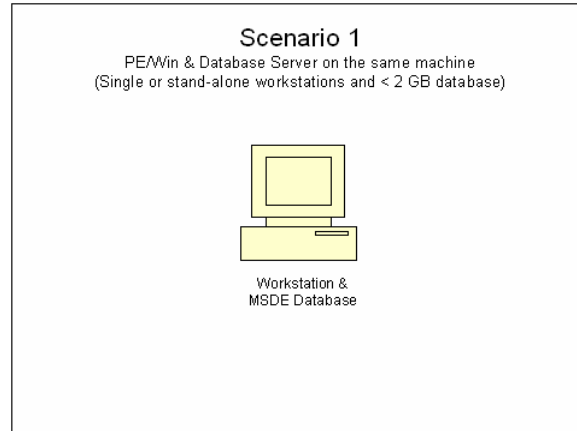
Each scenario includes a description and visual representation of the configuration, a listing of what's needed, and a brief description of the installation steps.

We also have included some example scenarios of configurations which are unsupported and will not work. We recommend that you review these also.

After choosing a scenario that most closely resembles your situation, proceed to the detailed installation instructions for each applicable installation step.

Note: Even though the scenarios mention 5 users as the division between MSDE and MS SQL, use the guidelines provided in "Choosing between MSDE and MS SQL" when considering the actual number of users each configuration will support.

Scenario #1 - Software and MSDE Database on the same machine

Scenario 1
PE/Win & Database Server on the same machine
(Single or stand-alone workstations and < 2 GB database)

Workstation &
MSDE Database

Typical Uses

Notebook computer or stand-alone computer where each user has their own database. The database may not exceed 2 GB in size.
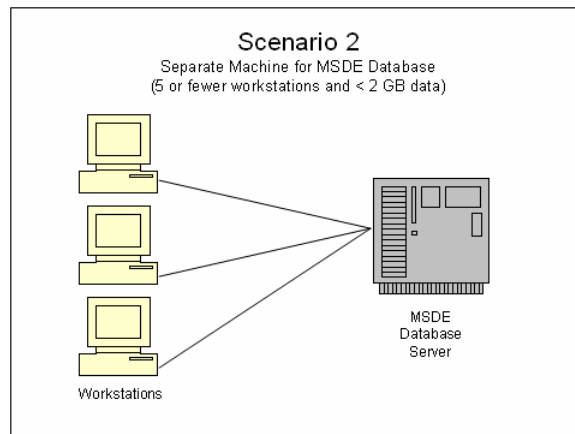
What's Needed

➢   DC/Win software CD.
➢   Workstation that meets the Stand-alone Workstation requirements.

Installation Steps

Step 1: Install MSDE Server on Workstation
Step 2: Install DC/Win Application Software on Workstation

Scenario #2 – Software and SQL Database on different machines (5 or fewer users)

Typical Uses

Five or fewer networked workstations sharing a database with less than 2 GB of data.
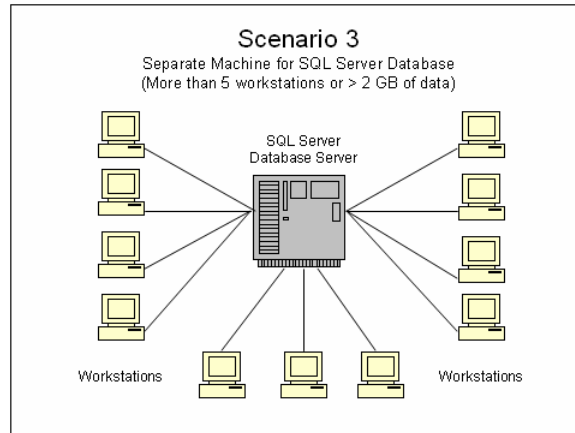
What's Needed

➢ DC/Win software CD.
➢ Workstations that meet the "Workstation-only" requirements
➢ Machine that hosts the database must meet the "Stand-alone Workstation" requirements.
➢ Windows-compatible network

Installation Steps

Step 1: Install MSDE & DATAIR Database on the machine that will be used as the server
Step 2: Install the DC/Win application software on each of the workstations

Scenario #3 – Software and SQL Database on different machines (more than 5 users)

Typical Uses

More than 5 simultaneous users sharing a database, or more than 2 GB of data.

What's Needed

➢ DC/Win software CD
➢ Microsoft SQL Server (Purchased separately)
➢ Microsoft SQL Server Client Access Licenses (CALs) for each workstation (purchased separately)
➢ Workstations that meet the "Workstation-only" requirements
➢ Server that meets the Microsoft SQL Server Database Only requirements
➢ Windows-compatible network

Installation Steps

Step 1: Install Microsoft SQL Server on the Server computer
Step 2: Install the DC/Win application software on each of the workstations

Scenario #4 – 5 or fewer users, < 2 GB data Peer-to-peer network (no dedicated server)

Scenario 4
Peer-to-Peer Network
(5 or fewer workstations, < 2 GB data)

Workstation 1

Workstation 3
&
MSDE Database Server
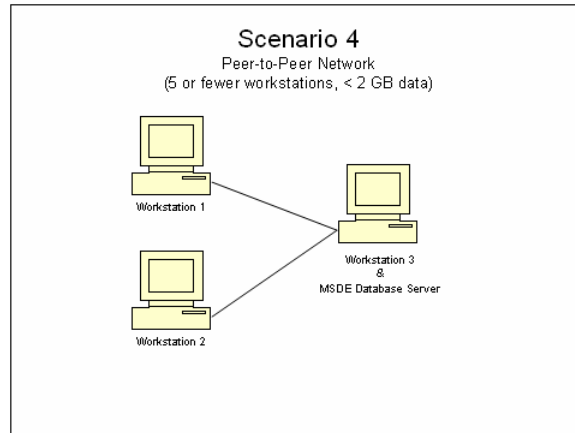
Workstation 2

Description

While we strongly recommend having a machine to specifically be used as a server for the database, there are situations when having a workstation also serve as the database server is acceptable. Appropriate situations include where there are only two or three computers, or where there is a little-used workstation.

What's Needed

➢ DC/Windows software CD.
➢ Workstations that meet the "Workstation-only" requirements
➢ Machine that hosts the database must meet the "Stand-alone Workstation" requirements.
➢ Windows-compatible network

Installation Steps

Step 1: Run the MSDE Server Installation on the machine that will act as the database server
Step 2: Install the DC/Win application software on the machine that will act as the database server
Step 3: Install the DC/Win application software on each of the remaining workstations

Scenario #5 – Existing User - Access database
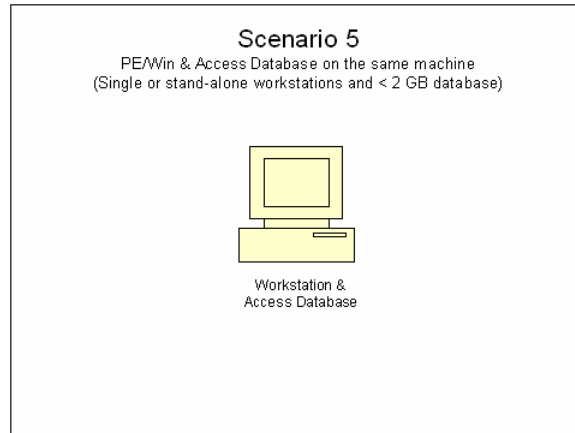
Description

This scenario is intended primarily for clients that participated in the Beta and Preview Release programs that used the Access file-based database. Support for Access file-based databases will be phased out during 2006 and users will be required to migrate to MSDE or MS SQL databases.

What's Needed

➢ DC/Win software CD.
➢ Workstation that meets the Stand-alone Workstation requirements.
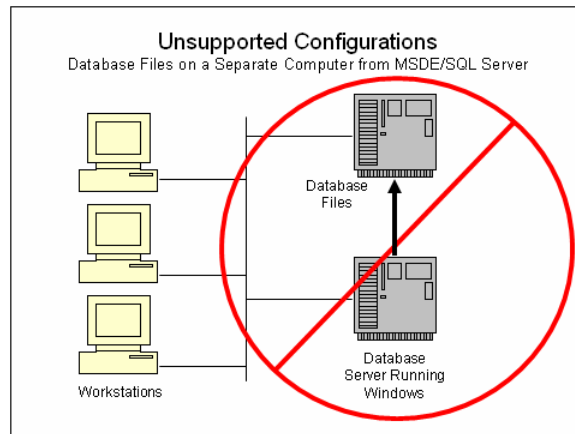
Installation Steps

Step 1: Install the DC/Win application software on the workstation

Unsupported Configurations

The following are examples of installation scenarios that may not be used.

*MSDE/MS SQL Database Server running on one machine and the database files on another*

MSDE/MS SQL Server requires that the database files be located on the same physical computer as where the database server software is running. You may not, for example, install the database server software on one machine and place the database files on another.

MSDE/SQL Database Server running on Novell Server
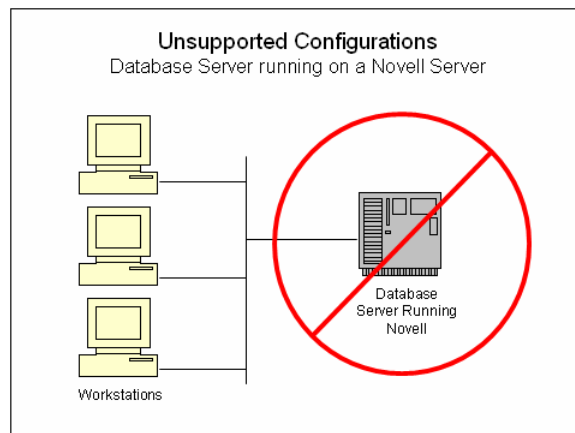
MDSE/SQL Server <u>only</u> runs on Windows-based computers. You can use a Novell network to connect the workstations and database server together, and use the Novell Server as you always have, however the database server software and its database files may only reside on a Windows-based machine.

Workstations connected via VPN, Wide Area Network, or Internet
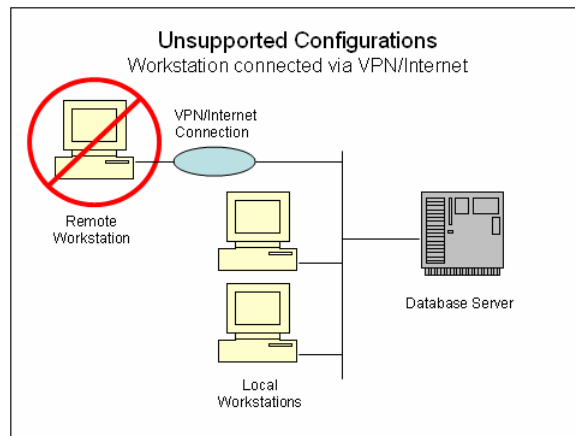
Wide Area Networks, VPNs, and Internet connections do not provide adequate bandwidth to operate software remotely. This type of configurations may result in data loss or corruption.

We recommend using Windows Terminal Server if you require remote access.

Keep in mind that use of the software by a person not physically located at the licensed site may be a violation of the software license agreement and additional software licenses may be necessary. Contact your DATAIR Sales Rep for more information.

Hardware & Software Requirements

Hardware and software requirements vary by the configuration scenario selected.

Workstation-only: **Applies to: Scenario 2, 3, 4 - Workstations**

Feature	Minimum	Recommended
Processor	1.5 GHz Pentium	3 GHz Pentium
RAM Memory	128 MB 98/ME, 256 MB other	512 MB or more
Disk Space (excludes data)	250 MB	250 MB
Video	800x600 SVGA	1024x768 XGA
Windows OS	Windows 98 SE Windows ME Windows 2000 Pro Windows 2000 Server Windows XP Pro Windows XP Home Windows 2003 Server	Windows 2000 Pro Windows 2000 Server Windows XP Pro Windows XP Home Windows 2003 Server
Other	Windows-compatible pointing device Windows-compatible printer Windows-compatible network (optional) CD-ROM or DVD drive 3.5″ Floppy Disk Drive or Internet Access	

Stand-alone Machine (with Database)   **Applies to: Scenario 1 – Workstations**
                                                                            Scenario 4 – Server
                                                                            Scenario 5

Feature	Minimum	Recommended
Processor	2 GHz Pentium	3 GHz Pentium
RAM Memory	256 MB 98/ME, 512 MB other	512 MB or more
Disk Space (excludes data)	350 MB	350 MB
Video	800x600 SVGA	1024x768 XGA
Windows OS	Windows 98 SE ** Windows ME ** Windows 2000 Pro Windows 2000 Server Windows XP Pro Windows XP Home Windows 2003 Server	Windows 2000 Pro Windows 2000 Server Windows XP Pro Windows XP Home Windows 2003 Server
Other	Windows-compatible pointing device Windows-compatible printer Windows-compatible network (optional) CD-ROM or DVD drive 3.5″ Floppy Disk Drive or Internet Access	

** Windows 98 & ME may only be used for Scenario 5

MSDE Server Only   **Applies to: Scenario 2 – Server**

Feature	Minimum	Recommended
Processor	2 GHz Pentium	3 GHz Pentium
RAM Memory	256 MB 98/ME, 512 MB other	1 GB or more
Disk Space (excludes data)	100 MB	100 MB
Video	800x600 SVGA	124x768 XGA
Windows OS	Windows 2000 Pro Windows 2000 Server Windows XP Pro Windows XP Home Windows 2003 Server	Windows 2000 Pro Windows 2000 Server Windows XP Pro Windows 2003 Server
Other	Windows-compatible pointing device Windows-compatible printer Windows-compatible network (optional) CD-ROM or DVD drive 3.5" Floppy Disk Drive or Internet Access	

Microsoft SQL Server Database Only   **Applies to: Scenario 3 – Server**

Feature	Minimum	Recommended ***
Processor	1.5 GHz Pentium	3 GHz Pentium/Xeon
RAM Memory	512 MB	2 GB or more
Disk Space (excludes data)	200 MB	200 MB
Video	800x600 SVGA	102x768 XGA
Windows OS	Windows 2000 Server Windows 2003 Server	Windows 2000 Server Windows 2003 Server
Other	Windows-compatible pointing device Windows-compatible printer Windows-compatible network (optional) CD-ROM or DVD drive 3.5" Floppy Disk Drive or Internet Access	

*** Note: The hardware requirements are based on a server supporting a MS SQL database server for DATAIR Windows applications only. If the server is being used for other purposes, consult an IT professional for assistance in determining appropriate hardware requirements.

Database Disk Space Requirements

The actual space required for data will vary dramatically depending on the number of plans, employees, accounts, and the amount of transaction activity.

For MSDE, we recommend allocating 20 GB of disk space for plan data and database backups. This is based on MSDE's maximum database size of 2 GB, 14 GB of daily database backups, and 4 GB of temporary data storage. .

For SQL Server, we recommend allocating a minimum of 20 GB of disk space for data, backup, and temporary data storage.

Installation Steps

In this section of the guide we will detail each of the installation steps referred to in each of the installation scenarios.

It is assumed that the installation is being performed by a person with at least some technical knowledge regarding installation of software on computers. This installation should be performed by a computer technician or a network administrator, **especially** if this is going to be a database server accessed by multiple client workstations in a network environment.

Installing the MSDE Database Server

Before you Begin….

➢ Installing MSDE must be done at the computer where it will reside. In other words, you cannot install this from a remote workstation over the network. You must be physically at the computer where it will reside.

➢ Install MSDE only once. All workstations will connect to this single installation of MSDE.

➢ You will need to login to the machine with full administrative rights and full access to install SQL Server. If your login does not have these permission or you are not sure what they are, your network administrator should be performing the installation.

➢ You may be required to reboot the machine you are installing the MSDE server on during, or at the conclusion of, the installation process. You may want to take this into account when deciding on an appropriate time to install the server software.

➢ The actual database files are installed to a default SQL Server folder. The location cannot be changed.

➢ When you are prompted for a "Shared/Data" directory, this is NOT where the database is installed. This is a common, shared folder on your network that all DATAIR users must have read/write access to. If you are installing this on a stand-alone PC, use the default local directory suggested during the installation.

Step-by-Step…

After you are logged in, insert the DC/Win CD accompanying these instructions. This CD has an AutoPlay feature that should begin the installation automatically. If it does not, open "My Computer" from your desktop, open the CD drive and double click "Setup.exe" to start the installation and the following screen will appear.
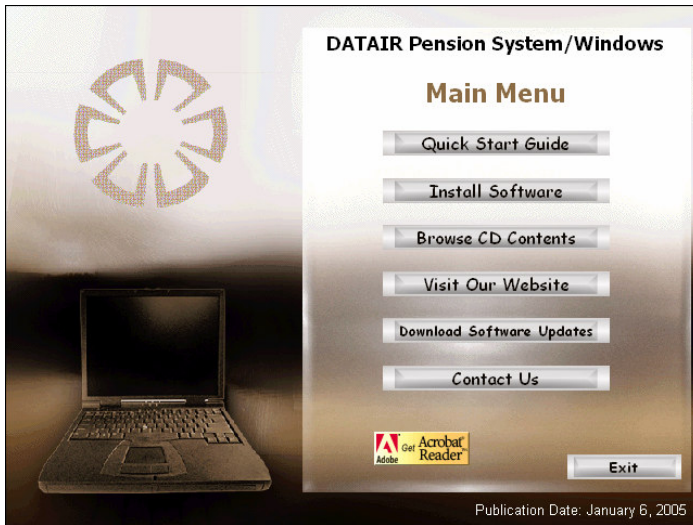
Select "Install Software".

Then, on this screen, select "Database Server Install" to launch the installer.

You will see a welcome dialogue and then a licensing dialogue. Click "Next" to continue on these screens.

The installer will now analyze your system, looking for previously installed components or databases. When it's done you will see the screen below listing your options.
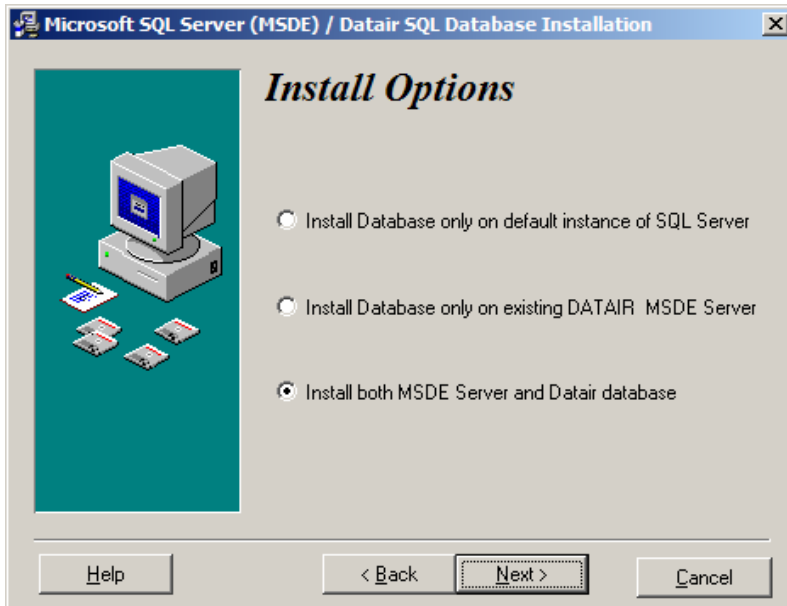
If the installer found a DATAIR instance of MSDE already on your machine, some items may be
disabled. Most likely you will want to install the MSDE server and a DATAIR database on that
server. That option is selected by default.

 Click Next to continue.

You are now being asked to provide a Shared File Directory. This is NOT where the database files
will be located, but rather a shared directory that is accessible to all users who will connect to this
database server. The location specified need not be physically located on the same machine that you
are installing the MSDE Database Server on. If you are installing MSDE for a stand-alone machine,
accept the default directory displayed.

Again, please note that this is not where your SQL Server database will be stored. This is simply a
folder that will be used by DATAIR applications for shared files.

Click Next to continue…
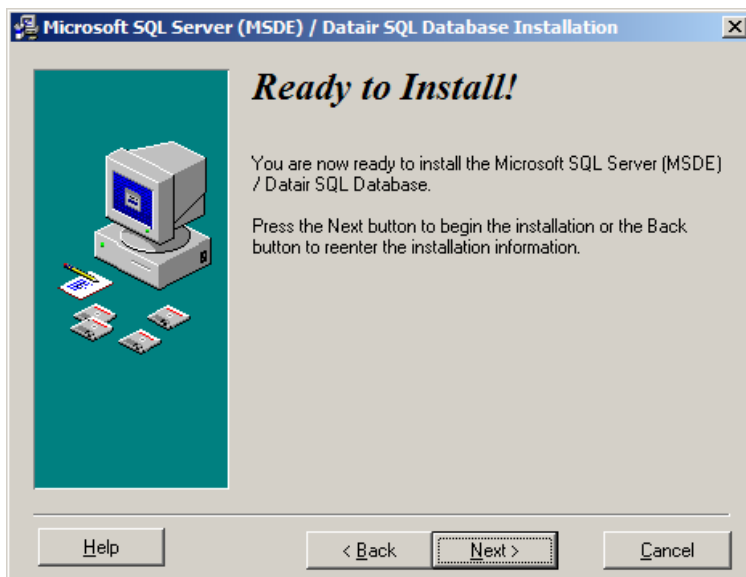
You are now ready to install.

Click Next and Microsoft's MSDE installer will begin. The installation may take several minutes depending on the speeds of your CD-Rom drive and your computer.

After a successful installation you will see this dialogue:
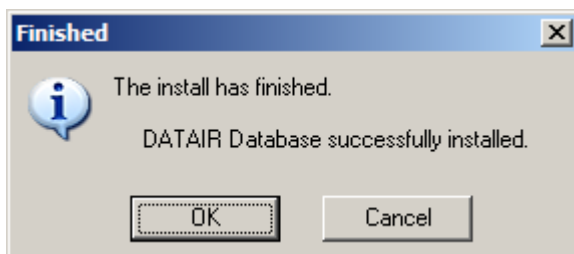
Press OK.

The installer attempts to start MSDE, but you may need to re-boot your computer for MSDE to start properly.

This completes the installation of the MSDE Database Server and the DATAIR Database.

Troubleshooting the MSDE Installation:

You shouldn't run into many errors installing MSDE if your machine meets the minimum requirements and you have logged on with administrative rights for this computer.

However, there are a few situations where error messages may be displayed:

If the computer you are installing the database on already points to a DATAIR SQL Server database, you will get the following warning:
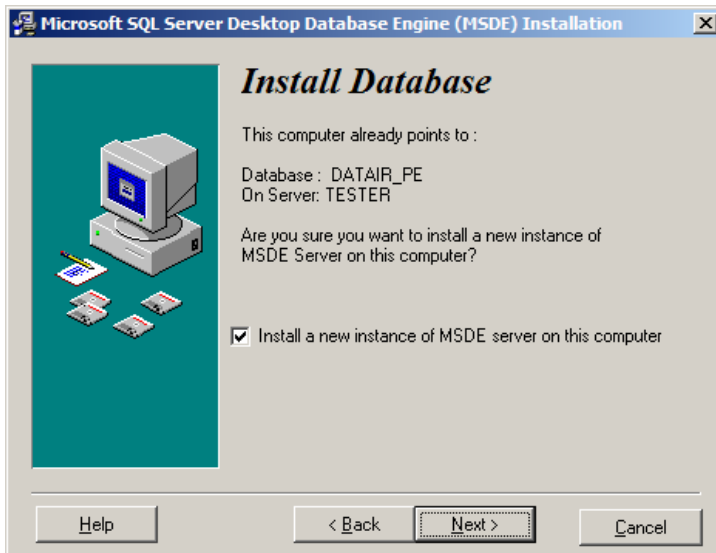
The other most common error you might see during installation might be:
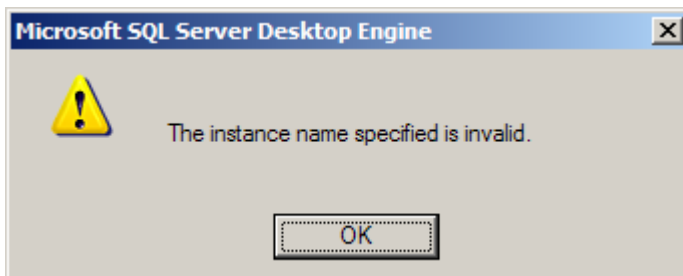
This means you have already run the DATAIR installer of MSDE and that a DATAIR named instance of MSDE is already installed and running on this computer. This installation is not necessary and will be cancelled.

Installing Microsoft SQL Server

These instructions cover the installation of a Microsoft SQL Database Server as an addendum to Microsoft's instructions

Before you Begin….

➢ Multiple copies, or 'instances' as they are called, of SQL Server may be installed on a single computer. Even if you have Microsoft SQL Server already running on the machine you will be server computer, we strongly recommend that you install a second instance named "DATAIR". This will simplify support and eliminate any potential conflicts. The instructions for installing the server software on based on that configuration.
➢ Microsoft SQL Server 2000 Service Pack 3 or later is required.
➢ You may be required to reboot the machine you are installing the SQL Server on during, or at the conclusion of, the installation process. You may want to take this into account when deciding on an appropriate time to install the server software.
➢ During the DATAIR portion of the installation, when you are prompted for a "Shared/Data" directory, this is NOT where the database is installed. This is a common, shared folder on your network that all DATAIR users must have read/write access to. If you are installing this on a stand-alone PC, use the default local directory suggested during the installation.

Step-by-Step Instructions

Insert the SQL Server CD
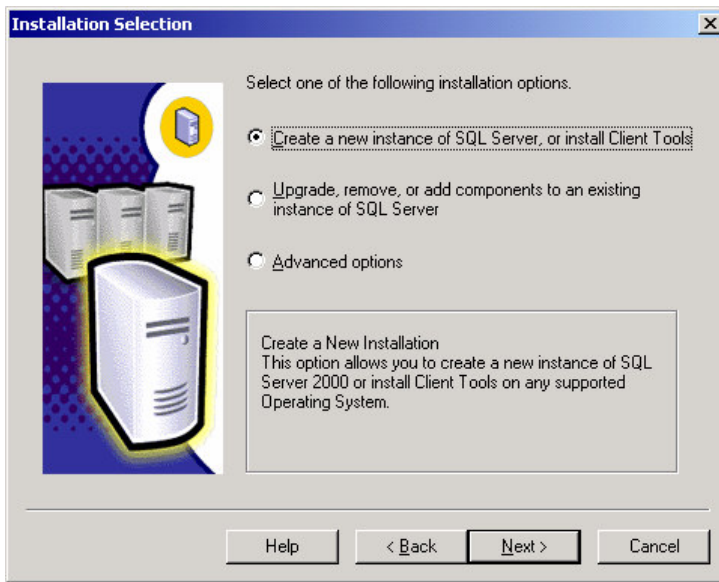

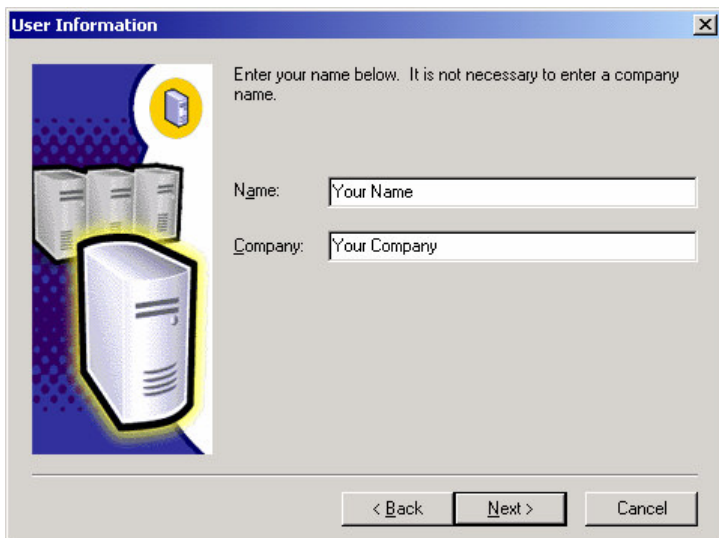Choose "SQL Server 2000 Components"
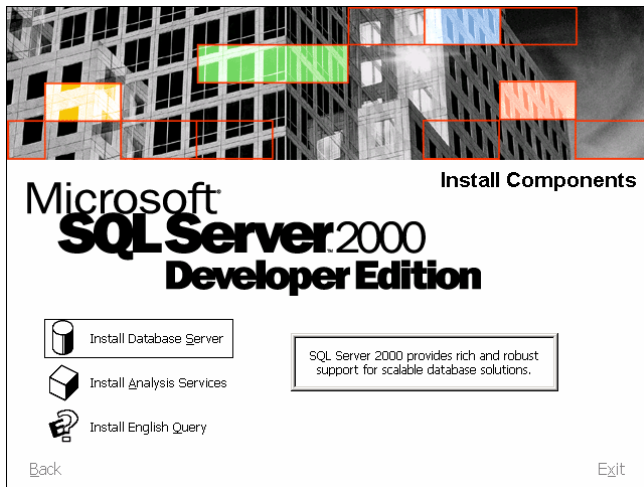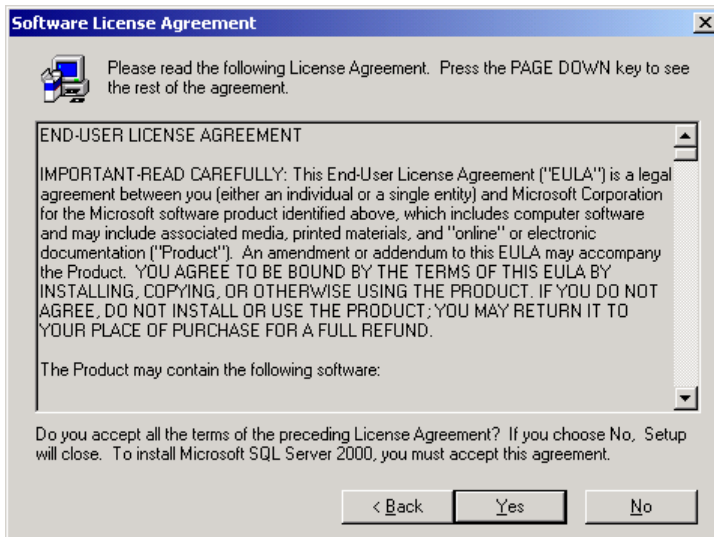
Choose "Install Database Server"
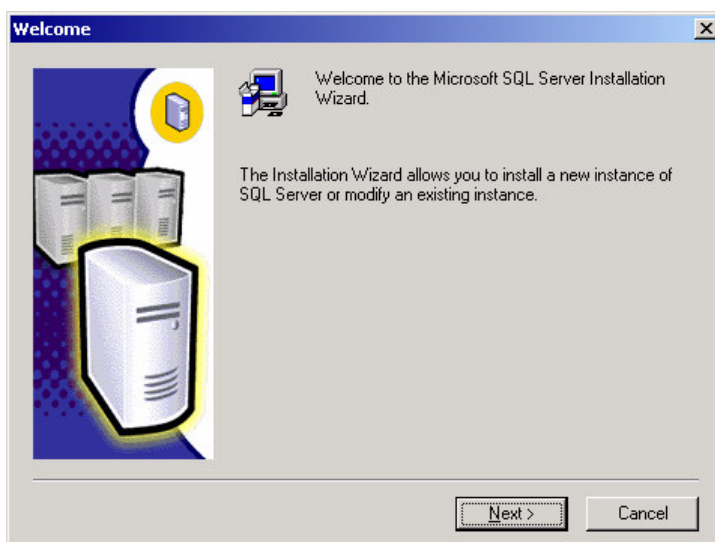
Press Next >
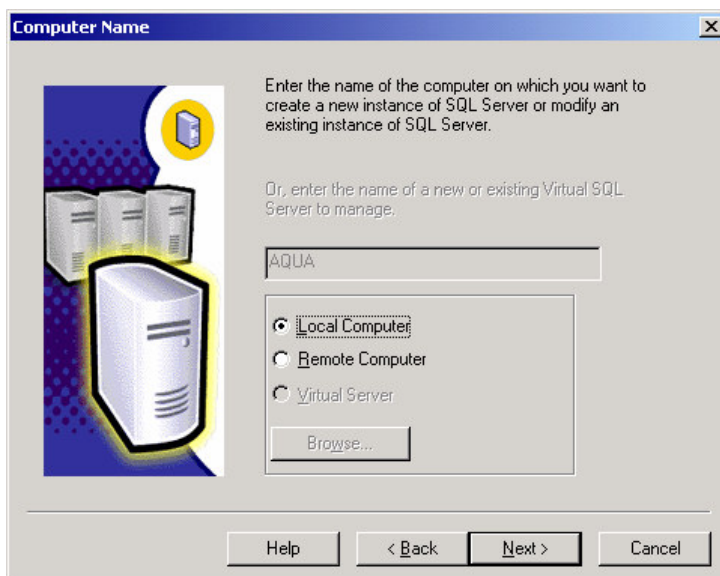
Accept the default "Local Computer" and press Next >
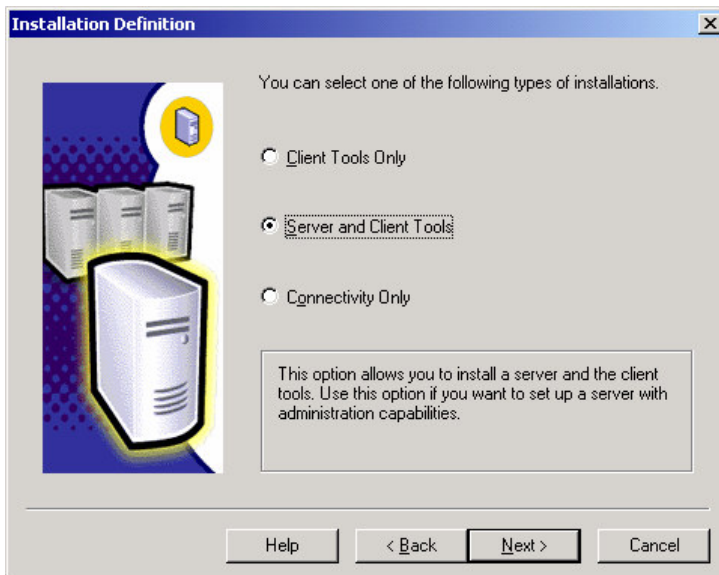

Accept the default "Create a new instance of SQL Server and Client Tools" an press Next >
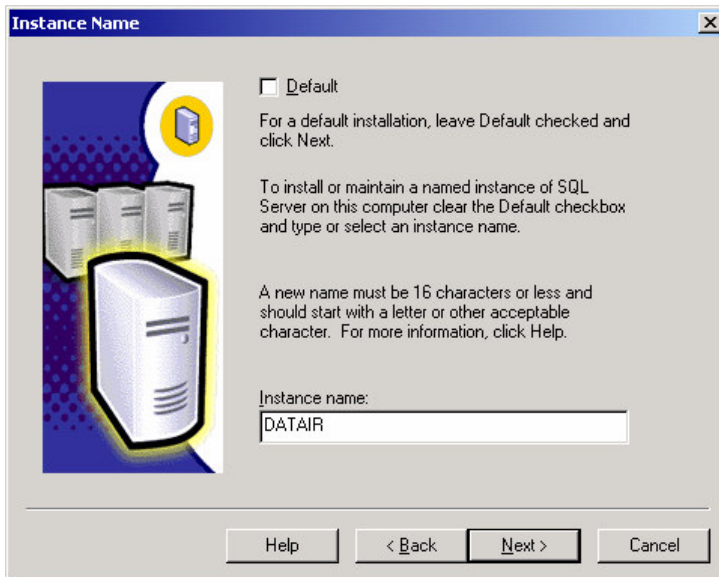

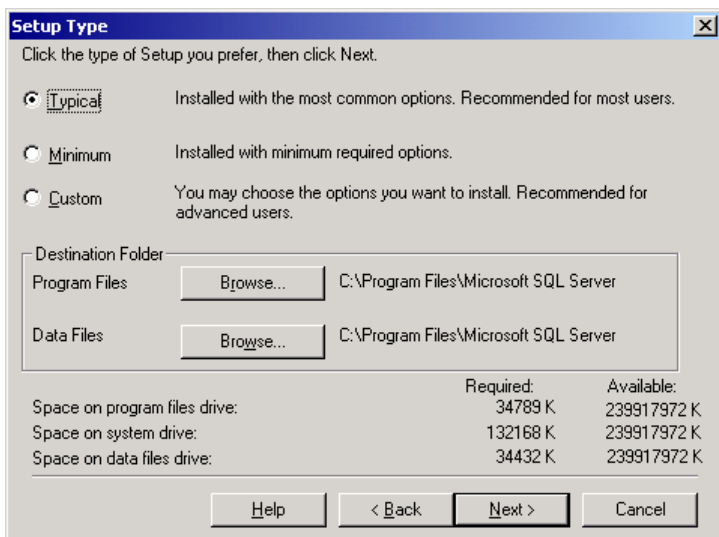
Enter your name and company name and press Next >

Press Yes to accept the license agreement

Accept the default "Server and Client Tools" and press next >

Uncheck the "Default" checkbox and enter "DATAIR" as the instance name, then press Next >

Accept the default options presented. If you wish to place the SQL database files in an alternate location, press "Browse…" in the Data Files section of the screen. Press Next > when you are ready to continue.
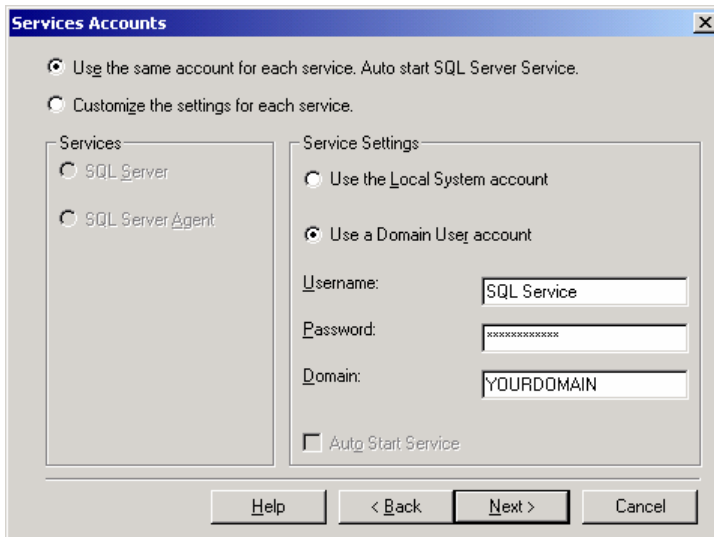
Select the options as shown, and enter the user name, password, and domain of a administrative-level account to be used. This account must exist in your domain. See Microsoft's documentation for additional information. Press Next >
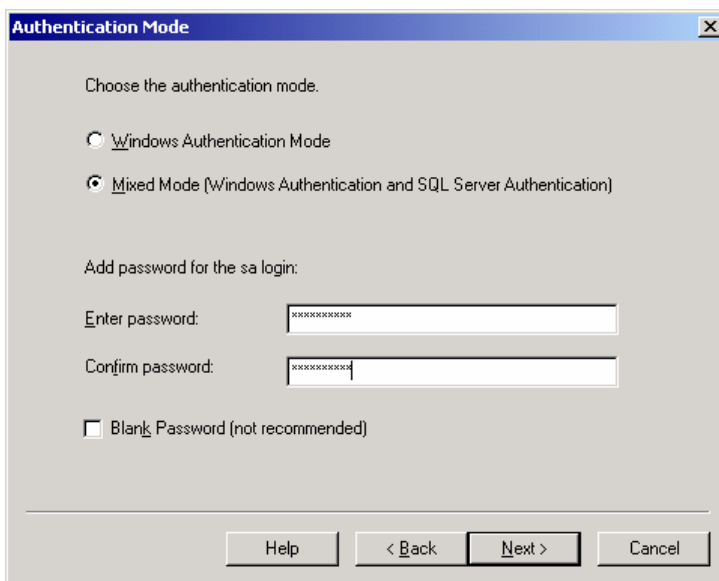
Select "Mixed Mode" and specify a password for the SA account. Be certain to choose a strong password that would not be easily guessed. Press Next >

Press Next > and SQL Server will be installed.

Remember to install the latest SQL Server service pack available from www.microsoft.com/sql after installing the server software.

You may now proceed to the instructions to install a DATAIR Database on the newly-installed server.

**Installing a DATAIR Database on your Microsoft SQL Server**

Follow the directions in this section if you want to install a DATAIR database on your own SQL Server. If you do not already have a DATAIR instance of SQL Server installed on your network, see the topic "Installing a new SQL Database Server" in this guide.

There are two methods on installing the DATAIR Database. Method 1 is installing the database using the Installation CD. Method 2 is installing from a workstation using the DC/Win application software.   We recommend that you use the Method 1.

Before you begin…

Your MS SQL Server must be set for "SQL Server and Windows" authentication, also referred to as "Mixed Security". If you are not sure, load SQL Enterprise Manager and highlight the server you will use for the DATAIR database. Next, select "SQL Server Configuration Properties" from the "Tools" menu. Go to the "Security" tab.

A sample is shown below:
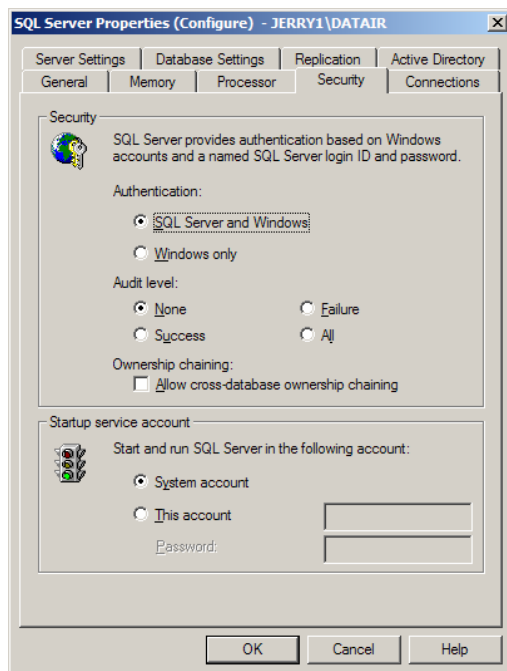
Note: It is imperative that "Authentication" be set to "SQL Server and Windows". You cannot load a DATAIR database on a SQL Server set to "Windows only" authentication.

Method 1 – Database installation using the Instillation CD (preferred method)

After you are logged into the server as an administrator, insert the DC/Win CD. The CD has an AutoPlay feature that should begin the installation automatically. If it does not, open "My Computer" from your desktop, open the CD drive and double click "Setup.exe" to start the installation and the following screen will appear.
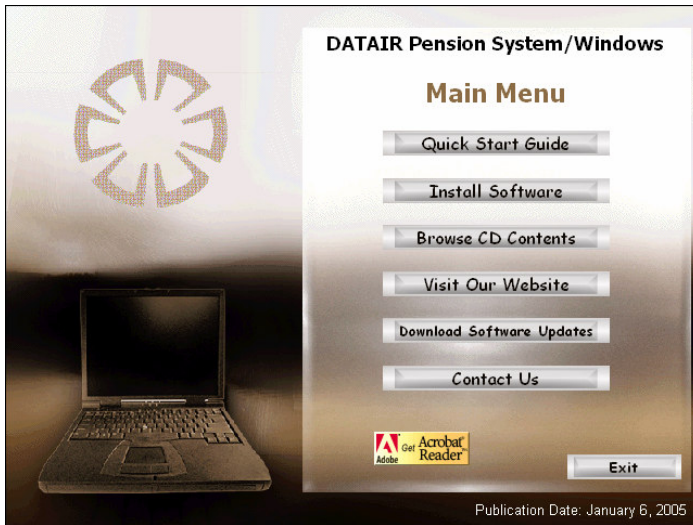
Select "Install Software".

Then, on this screen, select "Database Server Install" to launch the installer.

You will see a welcome dialogue and then a licensing dialogue. Click "Next" to continue on these screens.

The installer will now analyze your system, looking for previously installed components or databases. When it's done you will see the screen below listing your options.
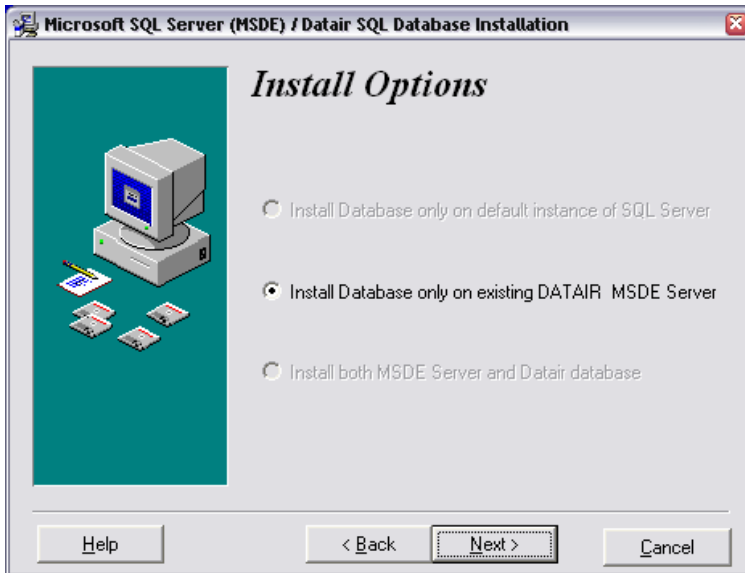
The "Install Database only…" option should be shown, and other options will be disabled.

Click Next to continue.
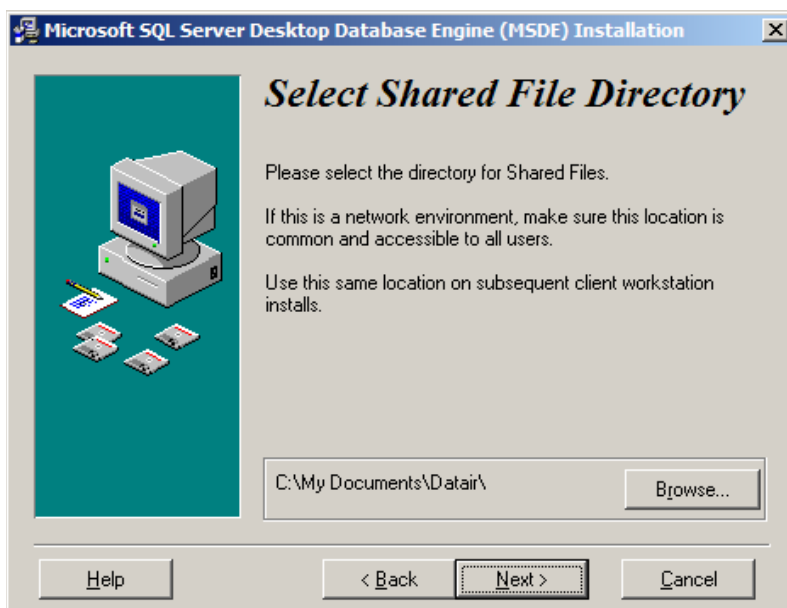
You are now being asked to provide a Shared File Directory. This is NOT where the SQL database files will be located, but rather a shared directory that is accessible to all users who will connect to this database server. The location specified need not be physically located on the same machine that you are installing the Database Server on.

Again, please note that this is not where your SQL Server database will be stored. This is simply a folder that will be used by DATAIR applications for shared files.
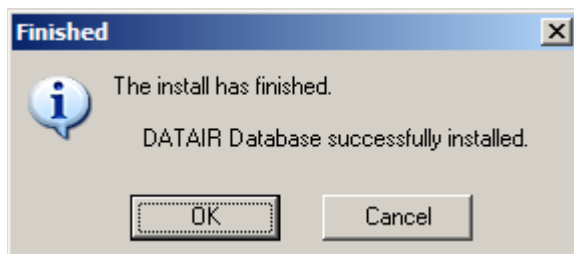
Click Next to continue…
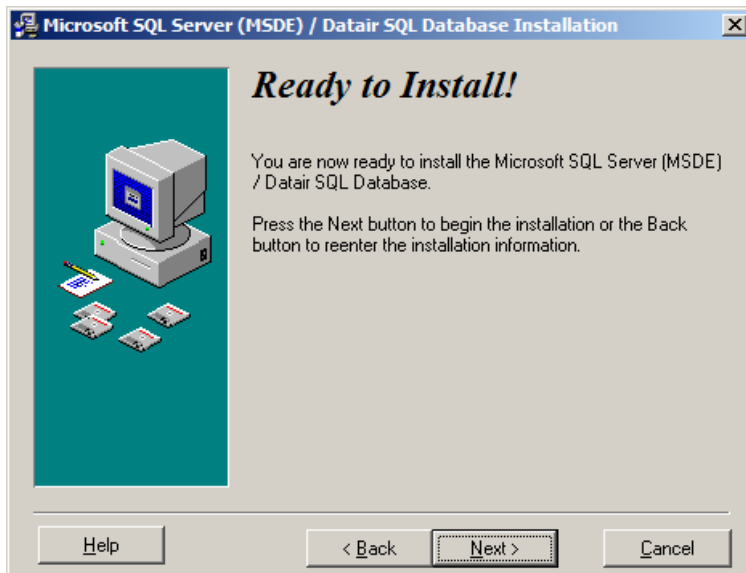
You are now ready to install.

Click Next > and a DATAIR Database will be installed on the SQL Server database.

After a successful installation you will see this dialogue:

Press OK.

This completes the installation of the DATAIR Database.

Method 2 – Installation using the DC/Win application

This install can be performed from any computer where you have run the workstation install of DC/Win.
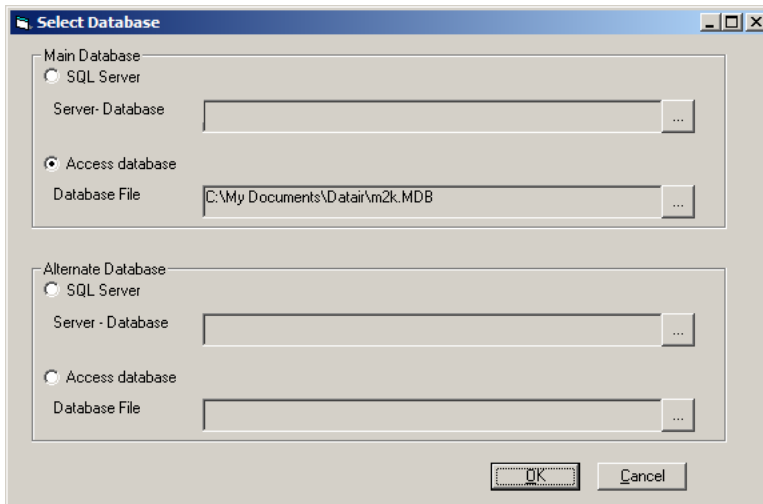
Installing the Database

You will install the database by first launching the DC/Win system. This can be done at any computer. However, you will need to log onto that computer using an administrator-level login, or have the "sa" administrator password for your SQL Server.

Launch the DATAIR DC/Win application and select "Open Database" from the "File" menu.
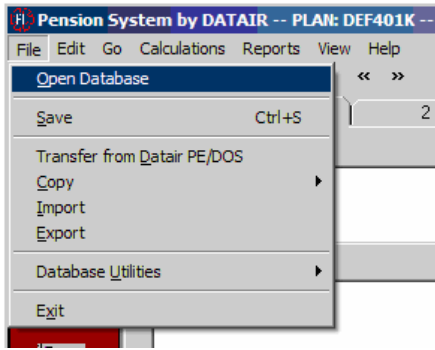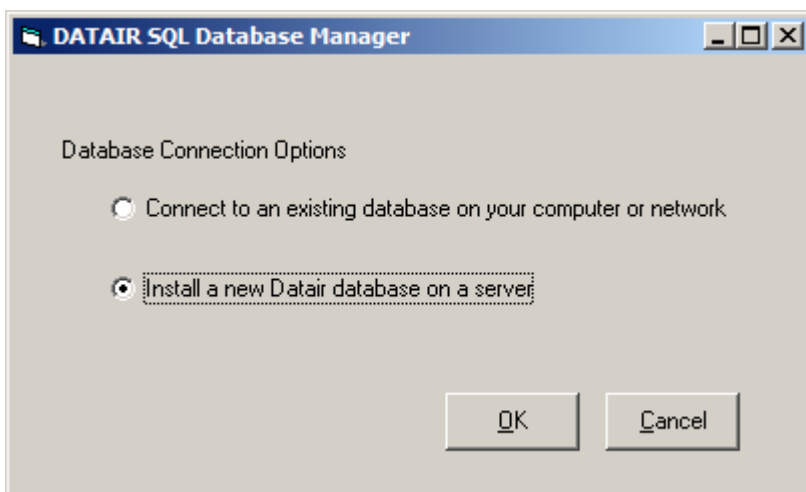
You will see the screen below:

Click the ellipses "…" button next to the blank "SQL Server area in the "Main Database" section above.

This action will cause DC/Win to shut down and launch the DATIR SQL Database Manager seen below:

Select "Install a new DATAIR database on a server".

Select "OK" to begin searching for SQL Servers on your machine and on your network. You will see a list of servers flashing by on your screen. Depending on the size and speed of your network, this process may take from several seconds to a few minutes.

When that is completed, you see the "Install DATAIR SQL Server Database" screen.
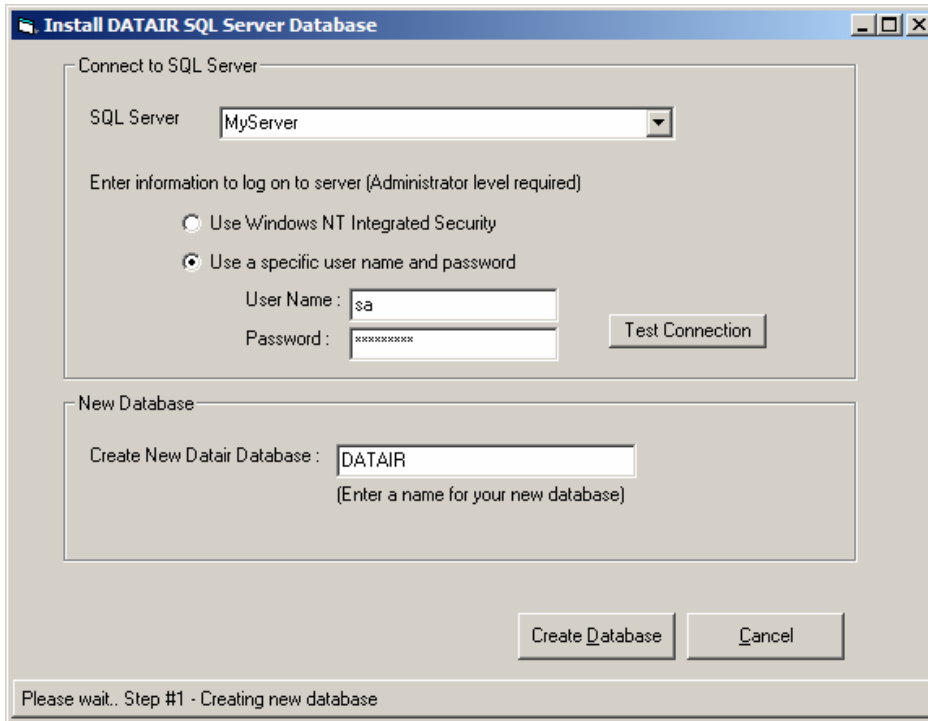

Select a Server from the list of Servers. You will have to supply a SQL username/password that allows owner access to this Server, or select "Use Windows NT integrated security" if your network login has administrative rights to this server. Click Test Connection and the utility will check if you have sufficient rights to install a database.

By default, the database name will be DATAIR. You may change this, but for support purposes, it is **strongly** recommended you keep the default.

Click "Create Database" and the process will begin.

The status bar at the bottom will inform you of the progress. The entire process may take a few minutes, or more. When it is finished you will see a message:
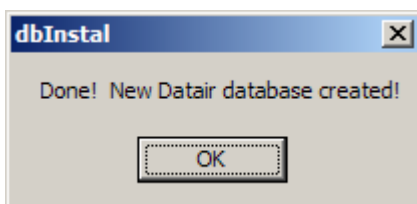
Click OK to finish and end the DB Installer. Restart DC/Win and you will be connected to the SQL Server database.

Connecting Other workstations to SQL Server

To connect other workstations to this SQL Server database, use the same steps in DC/Win (File menu/Open Database/SQL Ellipses), but choose "Connect to an existing database" in the DATAIR SQL Database Manager.
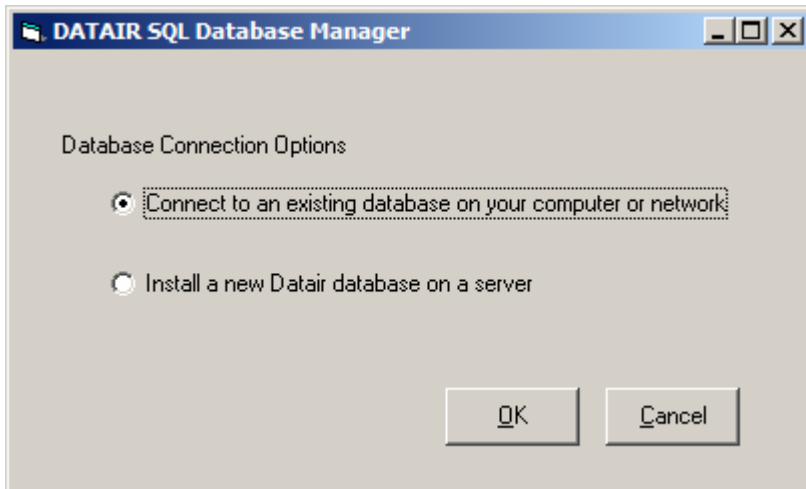
You will see the screen below after the program searches your network for SQL Servers
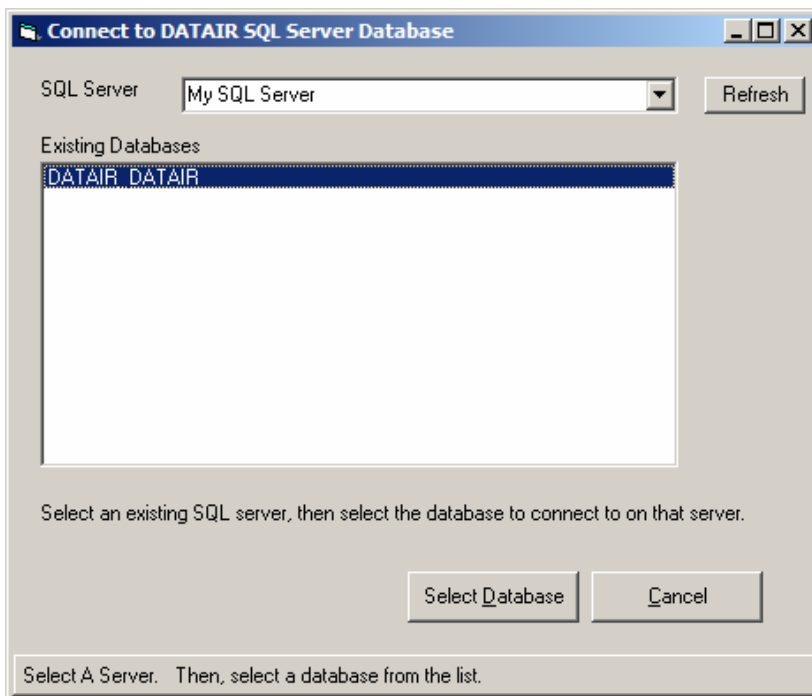
After selecting a Server, a list of DATAIR databases appears in the "Existing Databases" list. Highlight one of those by clicking on it.

When your selections have been made, click the "Select Database" button" to finish.

dbInstal

Done! The next time you start the Datair application you will be connected to the SQL Server Database.

OK
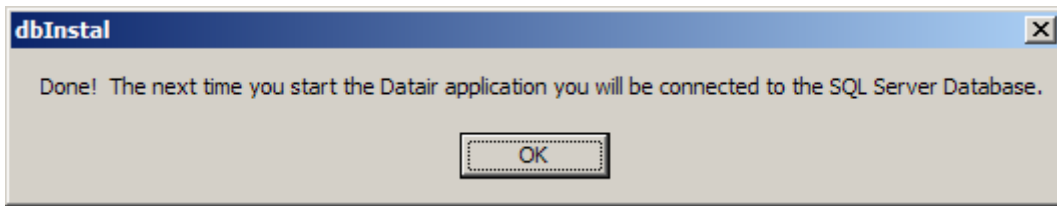
The message above indicates you have successfully installed a DATAIR Database on your Microsoft SQL Server. You're done!

Installing PE/Win Workstation Application Software

Insert the CD accompanying these instructions. This CD has an AutoPlay feature that should begin the installation automatically. If it does not, open "My Computer" from your desktop, open the CD drive and double click "Setup.exe" to start the installation.
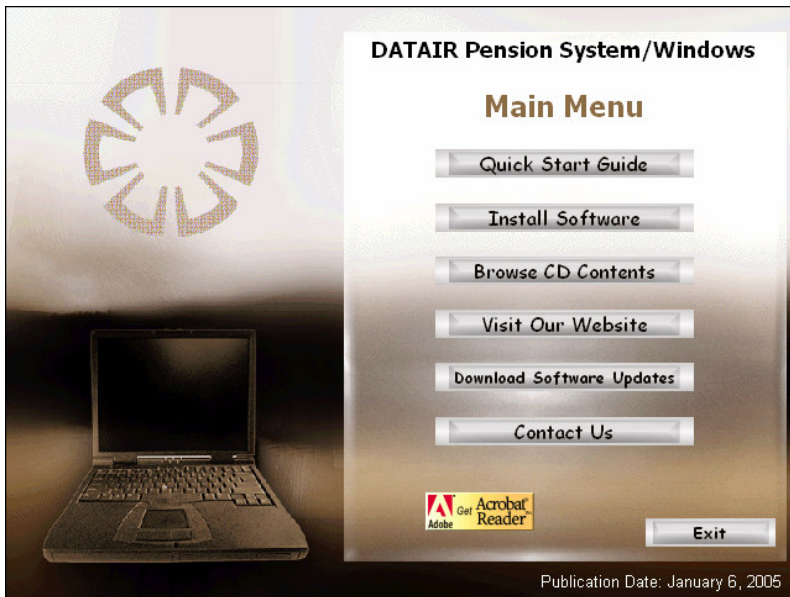
Select "Install Software".

Then, on this screen, select "Workstation Install" to launch the installer.

You will see a welcome dialogue and then a licensing dialogue. Click "Next" to continue on these screens.

Next, you are asked for a Program Directory. We strongly recommend accepting the default installation directory. Press Next to continue…

Next, you are asked for a Shared Files Directory. If you have installed a previous version of this software, the directory will already be filled in correctly.

This shared directory is the same directory where the datair.mdb database file resides that is used in other DATAIR applications. It is also the same common, networked directory that was specified during the MSDE/MS SQL database installation.

The installation may skip presenting this screen if it finds information already pointing to database/common files stored on your computer.
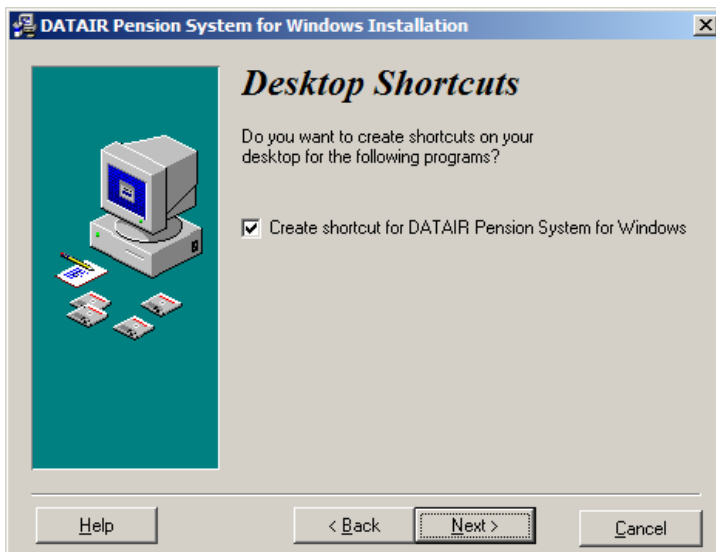
Last, check the box if you would like Desktop Shortcuts created.

Click "Next" on the "Ready to Install" message and your install will begin.

The installation should finish and you will see a "What's New" list of new features.

Migrating from Access to MSDE/MS SQL

If you have already been using DC/Win with an Access database and wish to migrate to SQL, this topic will assist you in making this transition.

> NOTE: If you are using other DATAIR systems such as the Document System, Pension Reporter, Client Manager, or Cafeteria Administration, this process will not affect those systems as DC/Win currently uses a separate Access database from those systems. Data from those systems will be merged with your DC/Win SQL database at a later date.

The overall process consists of the following steps:
➤ Export the data from your DC/Win Access database using the Plan Copy Out feature of the system
➤ Switch the system to connect to the SQL database
➤ Import the data exported in the first step using the Plan Copy In feature of the system

We recommend that you copy out your plans prior to installing SQL server. Copy Out prior to the installation will save a few extra steps as you will not need to switch back and forth between the access and SQL databases to retrieve the plan data. However, Plan Copy Out can be completed after the installation by switching to one database, then to the other.

Plan Copy Out

From the menu bar, select File | Copy | Copy Out. A new window will open for Copy Out. The current plan that is open will be listed under the Company & Plan. To change plans, click on find and select the plan.
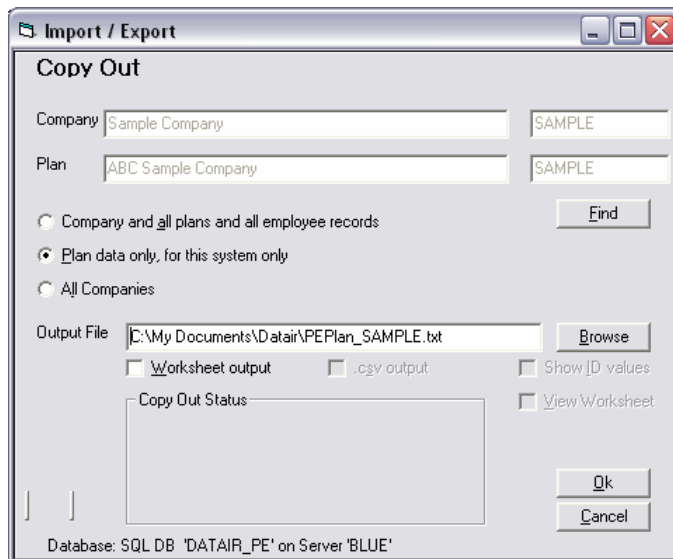
There are three information choices for copying out plans. Choosing the "Company, and all plans and all employee records" will copy the entire company information from all systems. The "Plan data only" choice will copy the plan information along with the sponsor and employees. If you have more than one computer with the possibility of the same company or plan in more than database, you will most likely want to choose the "Plan data only" choice, which is the default.

The "All Companies" choice should be used with caution. This will export all plans in your database, and you may not wish to import all of them into the new database. Or if you have multiple copies of the plan on different computers, the last copied in plan will overwrite previous Copy In operations. If you only have one computer with the Access database and wish to copy all of your plans, then this could be the option that you would choose.

Once you have made your copy out choice, enter the Output File. This is where your file will be created. The file will have the default name based on the plan and the copy out choice. It can be changed. You will need to make sure that is has an extension of .txt in order to copy it back into the database.

Once you install the SQL database, the system will automatically open in SQL. The only plans will be the default plans. You must select one of the defaults to open the plan level. You can then start the copy in process.

Plan Copy In

From the menu bar, select File | Copy | Copy In. A new window will open for Copy In.

> **Important!** *Verify that the correct database type and server/database is shown at the bottom of the screen before proceeding.*

The "From File" will need to be completed with the name of the file that you wish to copy in. Currently the *.txt will be listed. Replace the * with the name of the file. You may use browse to select your file.
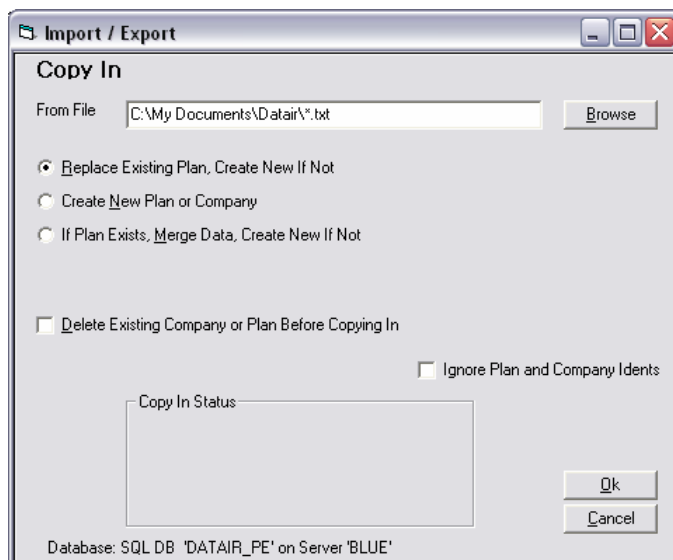
Leave all other options on this screen at their default settings and click Ok and the plan(s) will be copied into the new database.