4.2.4 Deployment and Maintenance

4.2.4.1 Configuring IIS on Windows 2000 Server

Follow the steps in this section if IIS is not set up on the target IIS server.

Microsoft's Internet Information Service (IIS) can be installed on any Windows 2000 workstation and server. To install IIS:

1. Open the Control Panel and select Add Remove Programs
2. Select Add Remove Windows Components on the left.

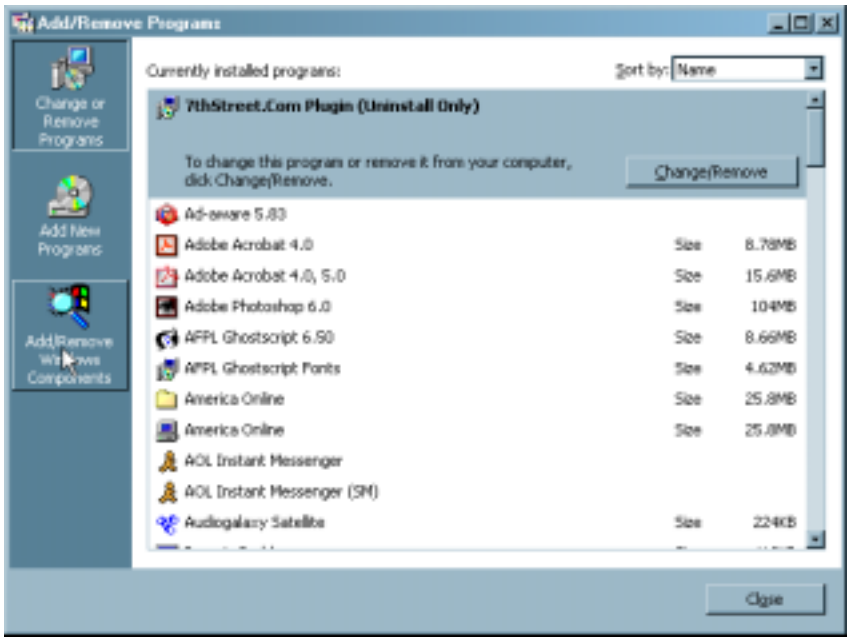

Figure 4-21: Add/Remove Programs

3. Click Internet Information Service and **Next.**

   If IIS is being installed on this machine for the first time you may have to provide the Windows 2000 CD.

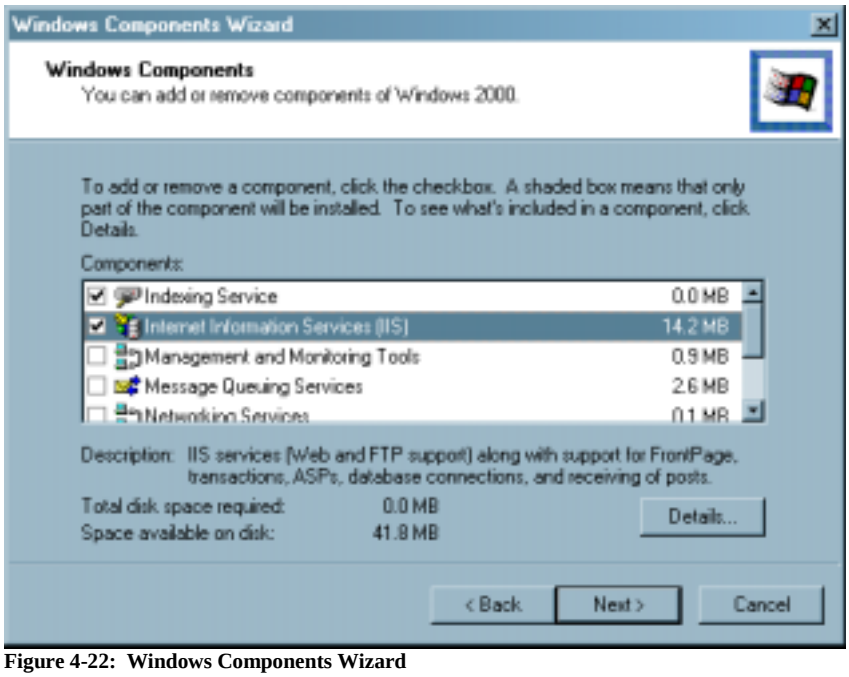

Figure 4-22: Windows Components Wizard

4. By default the IISAdmin service will load automatically at startup. Additionally, it will load the following dependency services: FTP Publishing Service, Simple Mail Transfer Protocol (SMTP) and the World Wide Web Publishing Service.
5. Disable the FTP service from the Services Manager for added security if FTP is not used.

4.2.4.2 Adding Emissions Web System to IIS Server

1. Now the asp files the students have written need to be copied to the IIS Server.
2. Create a directory on the server where the web files will be saved. This directory can be called anything and located anywhere on the server. (e.g. C:\Emissions System").
3. From the student's CD, copy all the files and subdirectories in the "IIS emissions" directory and paste it in the directory you just created in step 2.
4. Open the **Internet Services Manager,** found in Administrative Tools folder in the Control Panel, and expand the computer name in the tree.

5. Expand the **Default Web Site** tab.

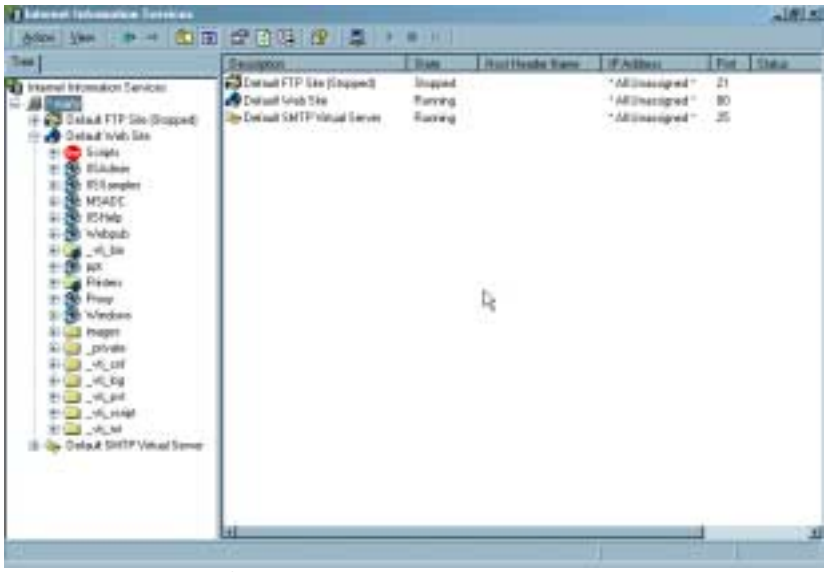

Figure 4-23: Internet Information Service

6. On the **Action** menu select **New → Virtual Directory**.
7. Enter **emissions** and click **Next**.
8. Navigate to the directory created in step 2 and click **Next**.
9. Enable **Read** and **Run Scripts** as the permissions and click **Next.**
10. Lastly, you must change the SQL connection string to reflect the name of the computer the SQL database is on, as well as the administrative name (“sa”) and password. Refer to section 4.2.4.6

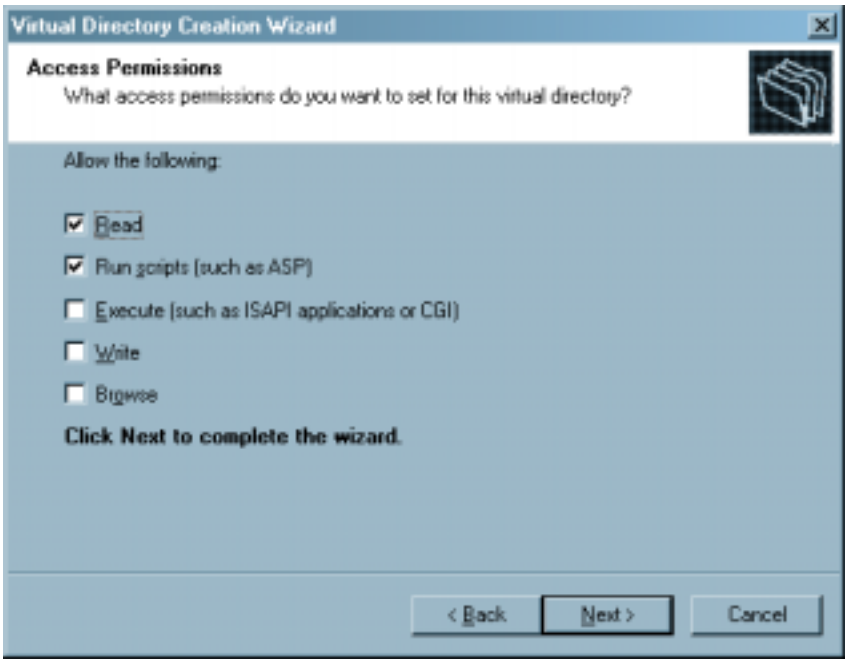

Figure 4-24: Virtual Directory Creation Wizard

11. The default time out for a user's session is 20 minutes. To change this, right click the **emissions** Virtual Directory and select properties.

12. Click the **Configuration** button on the **Virtual Directory** tab.

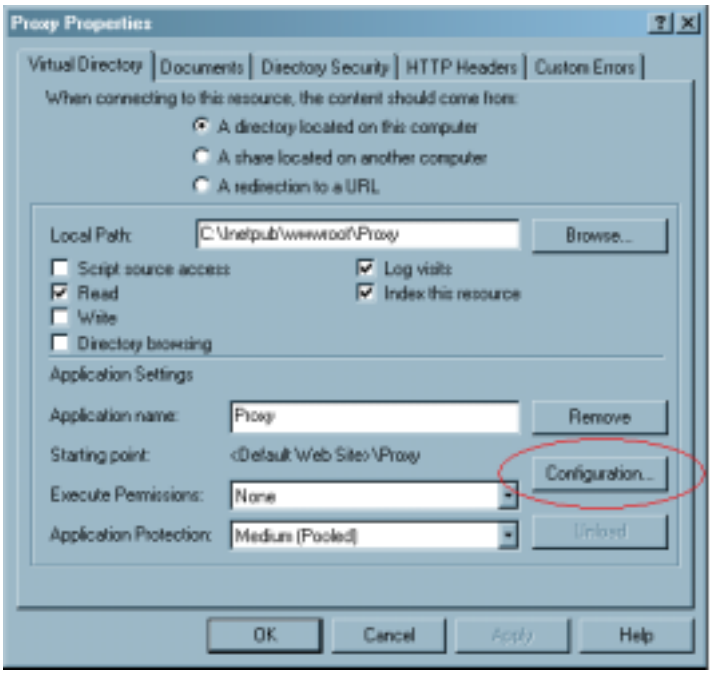

Figure 4-25: Virtual Directory Properties

13. Under the **App Options** tab is the **Session Timeout**.

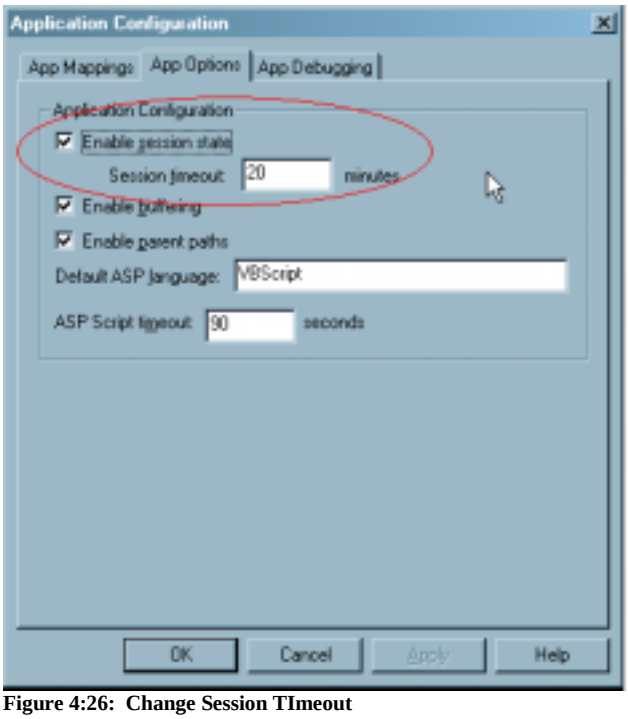

Figure 4:26: Change Session TImeout

14. The **Enable session state** must remain checked, but the timeout period can be changed.

4.2.4.3 Configuring a new instance of SQL Server 2000 on a Windows 2000 Server

Follow the steps in this section if SQL Server 2000 is not installed on the database server.

1. Launch SQL Server 2000 Setup from the computer you wish to have the service run and click **Next**.

Figure 4-27: SQL Server Installation

2. Select **Local Computer** and click **Next**
3. Select **Create a new instance of SQL Server, or install client tools** and click **Next**.
4. Fill in the appropriate company information and click **Next**.
5. Click **Yes** to agree to the license agreement.
6. Select **Client and Server Tools** and click **Next** and click **Next** again at the following screen.

7. Click **Next** to install with **Typical** settings.
8. Microsoft recommends selecting **Use the same account for each service. Auto start SQL Service.** The students chose to use the **local system account** when installing on their test server, however CAE may need to choose to use a domain account. The **local system account** does not have network access right in Windows NT4.0 thus potentially restricting your SQL server from interacting with other servers. A domain

controller must be available to validate the user's name, password and domain if the domain account option is selected.

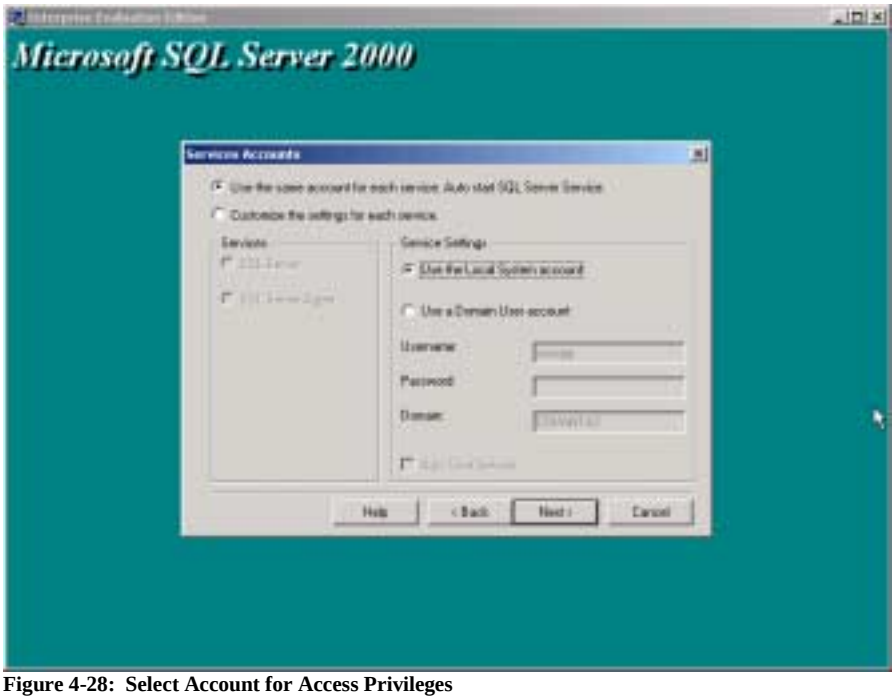

Figure 4-28: Select Account for Access Privileges

9. Choose **Mixed Mode** and enter a name and password for the administrative 'sa' account.

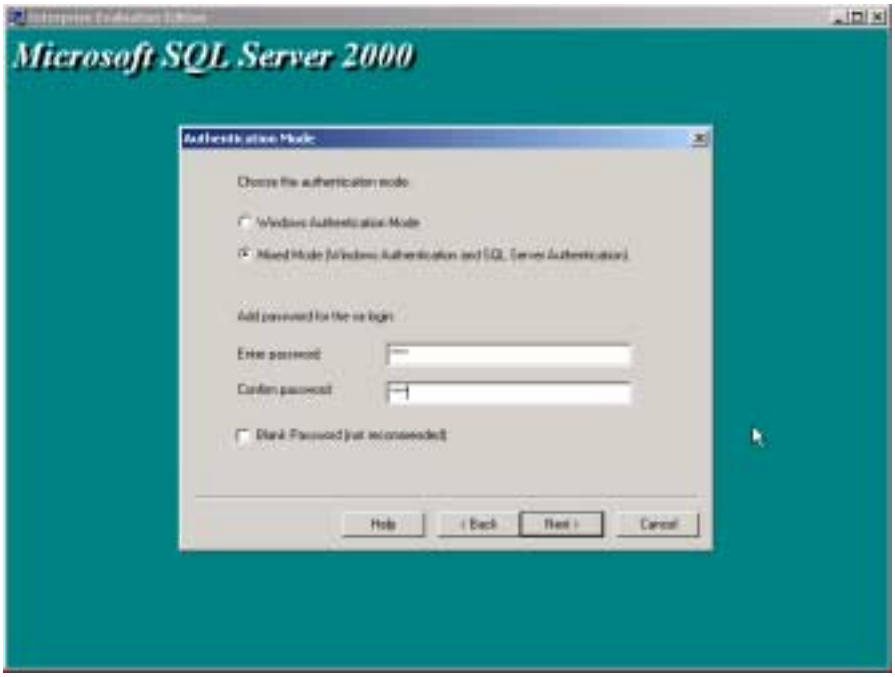

Figure 4-29: Add Password to Administrator Account

10. Finally, click **Next** to begin installation.

4.2.4.4 Importing Emissions Management System data into SQL Server

1. Open the SQL Enterprise Manager

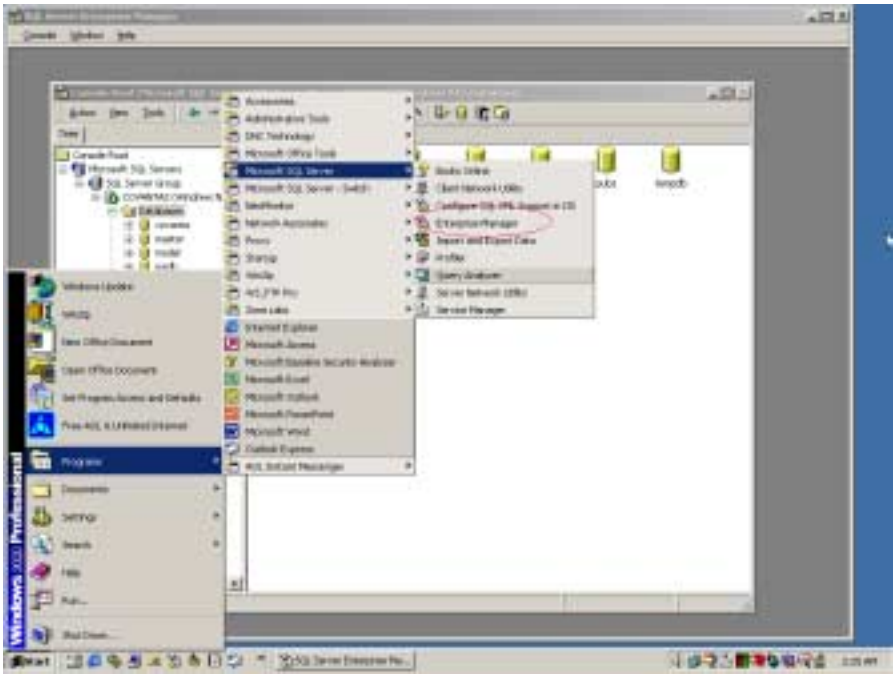

Figure 4-30: Open SQL Enterprise Manager

2. Expand the tree on the left to the name of the SQL server and expand the **Databases** folder.

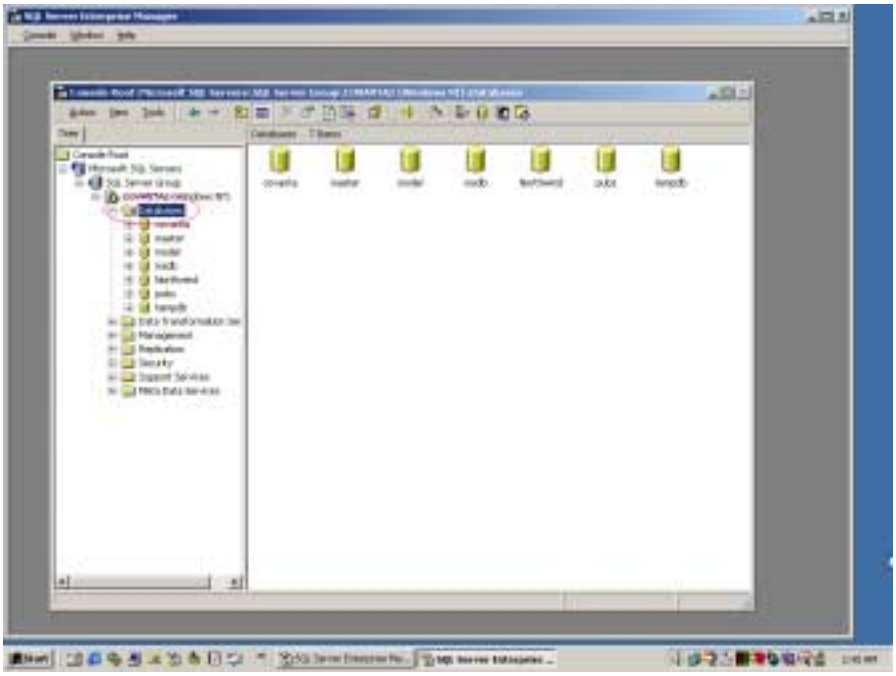

Figure 4-31: Expanding SQL Enterprise Manager

3. On the **Action** menu Select **New Database**

4. Enter a database name (e.g. **EmissionData)** and click **OK.**

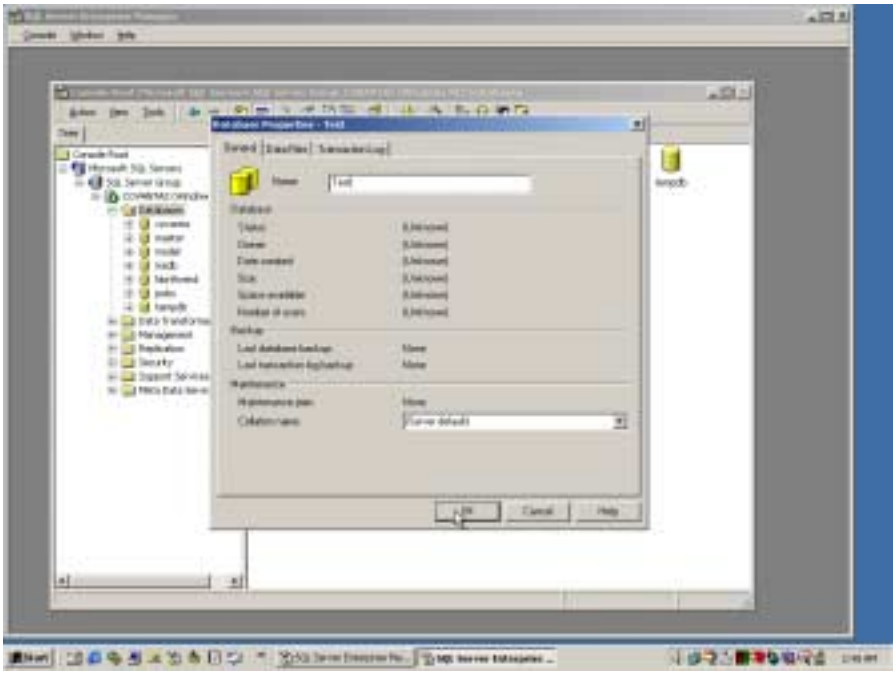

Figure 4-32: Add New Database in SQL Enterprise Manager

5. Right click the new database and expand the **All Tasks** item. Then, click **Import Data.** Click **Next.**

6. The Data Import Wizard appears.
7. Select **Microsoft Excel 97-2000** as the data source and browse to the location of the excel file provided by the students. Click **Next**

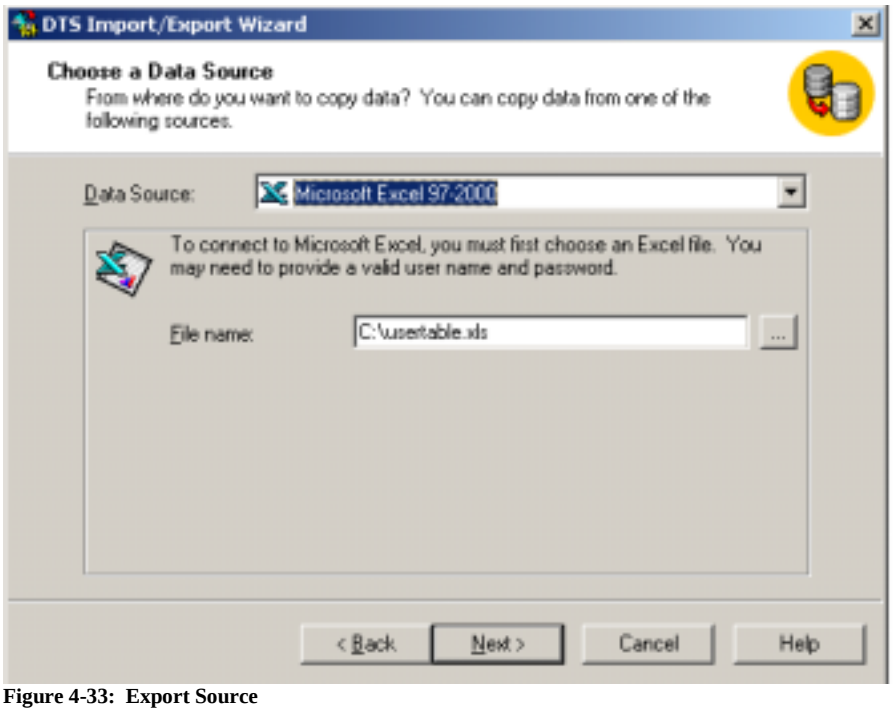

Figure 4-33: Export Source

8. At the next screen, select the name of the SQL server to where the data will be imported. Select **Use SQL Server Authentication** and fill in the name and password of the administrator account. Leave the destination as **Microsoft OLE DB Provider for SQL Server** and choose the name of the database you just created. Click **Next**.

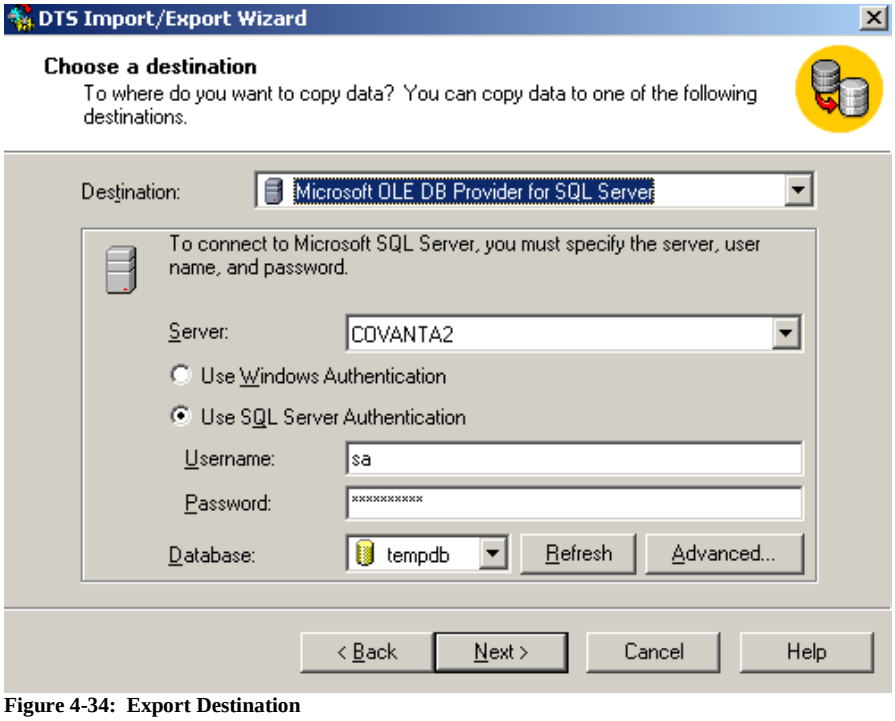

Figure 4-34: Export Destination

9. Click **Next** on the following page. Then click the **Select All** button and then **Next.**
10. Click **Next** again and then **Finish.**
11. You will be presented with a verification message if the data was successfully imported.

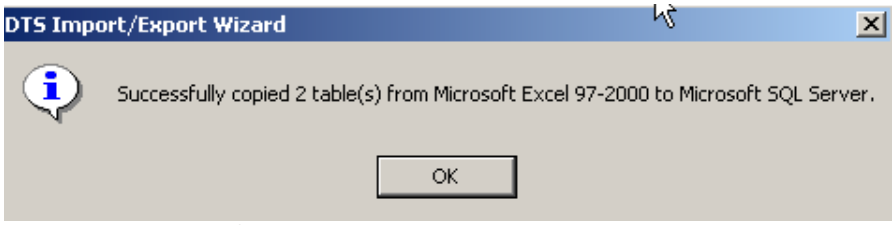

Figure 4-35: Export Confirmation Message

4.2.4.5 Logging in for the first time

1. To connect to the Emissions Management Server, open Internet Explorer type the address in the form: http://<servername>/emission

   Where emission is the name of the virtual directory

2. The Web Emissions system has a pre-configured built in administrator account named “administrator” whose password by default is “administrator”. This account has access to all plants and cannot be removed from the system.
3. After logging in for the first time with this name it is recommended that you change the password immediately for security purposes.

4.2.4.6 Changing the SQL connection string

The SQL connection string is what tells the Web System how and where to connect to the emissions database. This information is located in the **global.asi** file in the **connectDB()** function. This needs to be configured before the system will work.

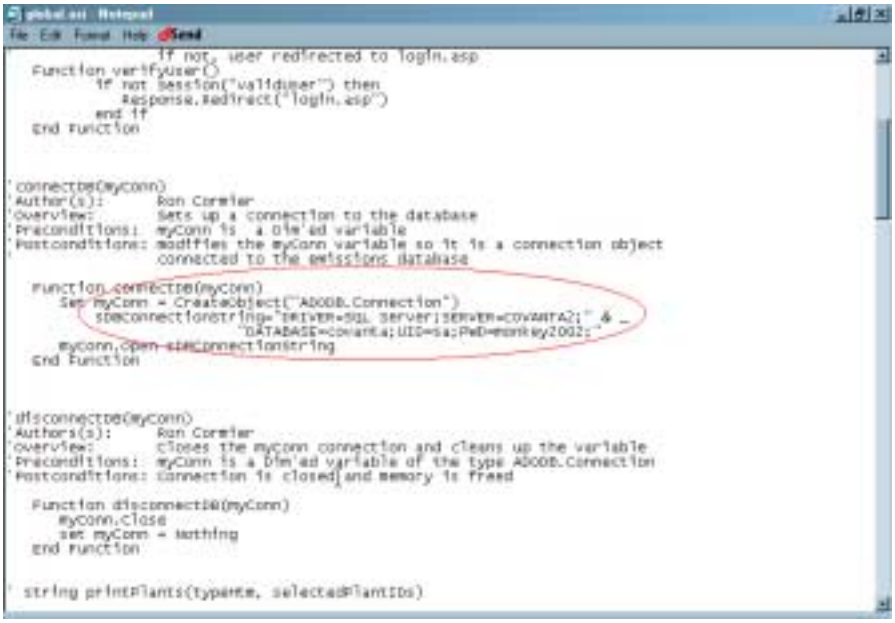

Figure 4-36: Edit Connection String in Global.asi

The “**SERVER”, “DATABASE”, ”UID” and “PWD”** parameters need to be changed to match the settings on CAE’s network.

SERVER is the netbios name of the SQL server containing the emissions data.

DATABASE is the name of the database created in step 4 of section 4.2.4.3.

UID is the name of an administrative account in the SQL Server (e.g. “sa”).

PWD is the password for the user listed above in **UID**.

DRIVER is "SQL Server". Don't change this.

4.2.4.7 Adding links to main menu

Adding a link to the database requires two pieces of information be inserted into the database.

1. The name of the web page must be inserted into the *pages* table of the database. Using the SQL Enterprise Manager, expand the **table** folder. Right click on the **pages** table and select **Return All Rows**. Add the name of the web page in the next available row of the table. In the second column, insert the next sequential number. Lastly, type the text you wish to read for the link.

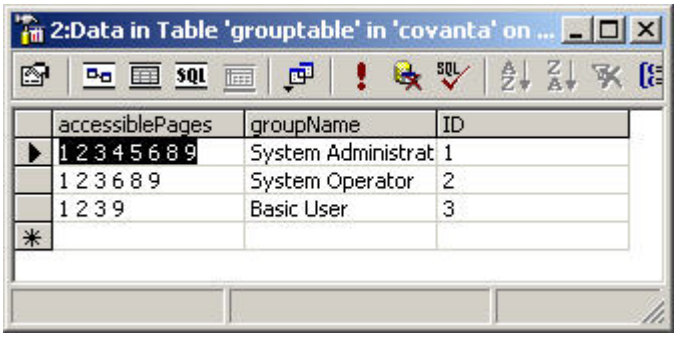

Figure 4-37: *grouptable* table

2. Close the pagetable table. Select **Return All Rows** for the *grouptable* table. Notice each user group has a list of numbers associated with it. Insert the page ID of the link you added in the previous step to the user group you wish to have access to the page.

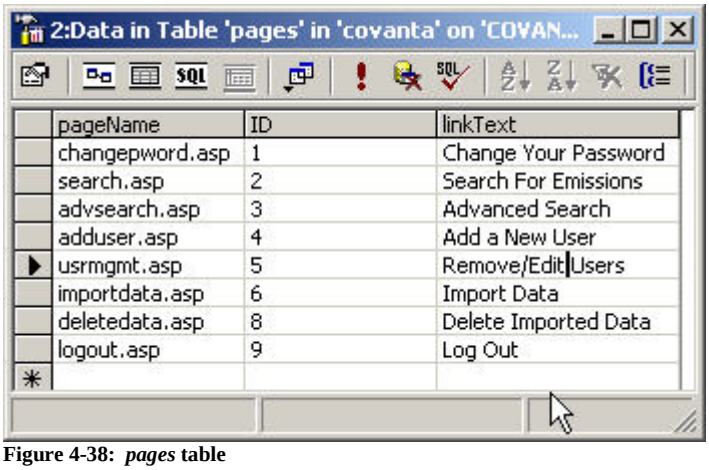

Figure 4-38: ***pages*** **table**

3. The link will be available to the user group who has access to the new page next time someone from that group logs into the system.

4.2.4.8 Migrating Emissions Web System or Emissions Database to a different server

To move the Emissions system to another machine there are two import steps to follow.

1. Copy the asp files from one machine to the other. This can be done by following the steps is 4.2.4.1
2. Export the data from the SQL database and import it on the other machine. The import procedure is described in 4.2.4.2
3. To export the database, open the Enterprise Manager, drill down to the emissions database, right click it, select **All Tasks → Export Data.**
4. Once the export wizard opens click **Next** to begin.
5. The **Data Source** should be **Microsoft OLE DB Provider for SQL Server**. The **Server** box should have the name of the SQL server containing the emissions data. Select **Use SQL Server Authentication** and fill in the name and password of the

administrative account. Lastly, choose the name of the **database** with the emissions data.

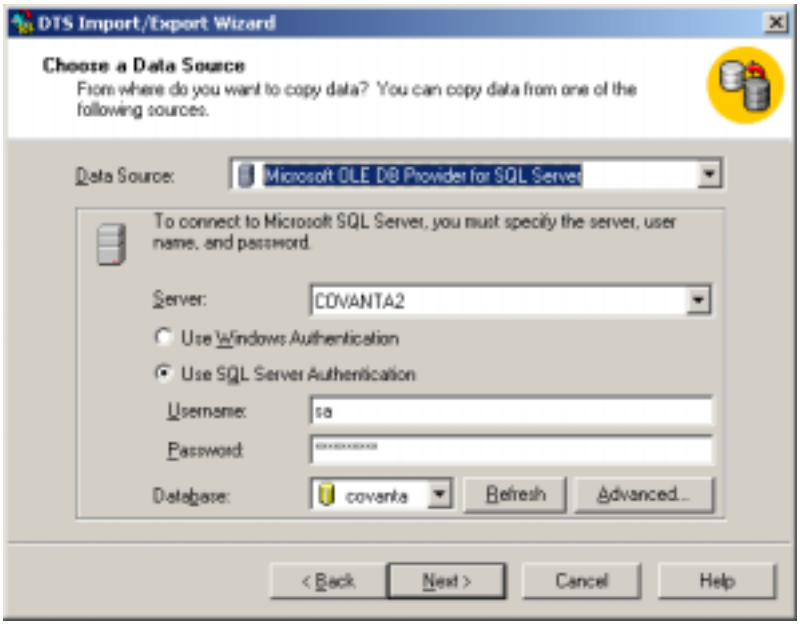

Figure 4-39: Export Source

6. The data source box can change depending on the nature of the export. If the purpose of the export is to move the database from one SQL server on a network to a different server on the same network, then follow the steps immediately below. If, however, the export's purpose is to move the database from a SQL server to another machine on an inaccessible network, then skip to step 6.11.
7. To copy the database to another SQL Server on the same network, chose **Microsoft OLE DB Provider for SQL Server** as the destination, select the **Server** name from the **Server** box, fill in the authentication information, and select the **database** to which the emissions data will be imported. Note, selecting **New** in the **database** box will let you create a new database on that server.
8. Click **Next** on the following page
9. Select the tables to export. (Typically all the tables should be selected).

10. Click **Next** again to run the export immediately.
11. If the nature of the export is to copy the database from a server on CAE's network to a different server on an inaccessible network then choose **Microsoft Excel 97-2000** as the destination. Chose a location for the exported file to be saved.
12. Click **Next** on the following page.
13. Select the tables to be exported (typically all the tables should be selected).
14. Click **Next** to run the export immediately.
15. Note: if the name of the server where the emissions database is located changes, then you must follow the procedure described in section **4.2.4.6** and change the SQL connection string.