

**Reference Guide**

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# **OpenEnterprise Terminal Services Reference Guide (V2.83)**

**Remote Automation Solutions**

Website: [www.EmersonProcess.com/Remote](http://www.EmersonProcess.com/Remote)



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# 1 Terminal Services Overview

Terminal Services is a component of Microsoft® Windows Server™ 2003. To quote Microsoft's® own product documentation,

"It allows you to deliver Windows-based applications, or the Windows desktop itself, to virtually any computing device - including those that cannot run Windows. "

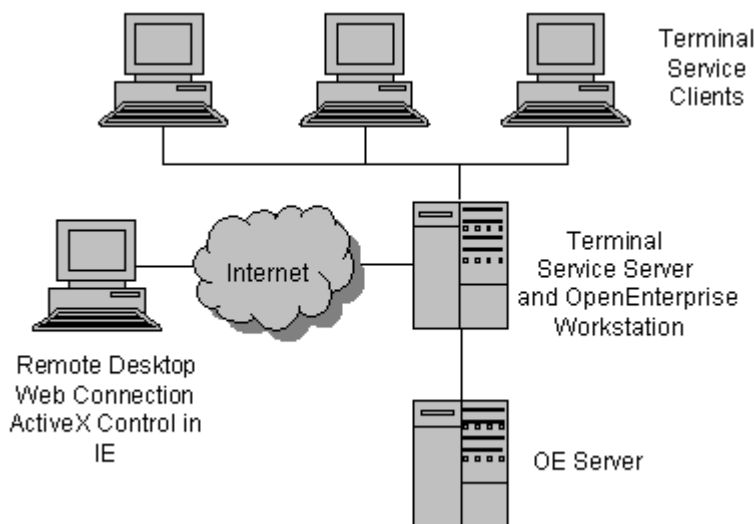
The standard Microsoft documentation should be consulted for a full description of the configuration of Windows Terminal services.

It is assumed that the reader of this document has a basic understanding of Terminal Services architecture and the OpenEnterprise product.

**Please Note:** OpenEnterprise does not support Windows mandatory user profiles.

## 1.1 Terminal Services Set-Up

The diagram below represents a typical Terminal Services set-up.



### 1.1.1 Terminal Services Server

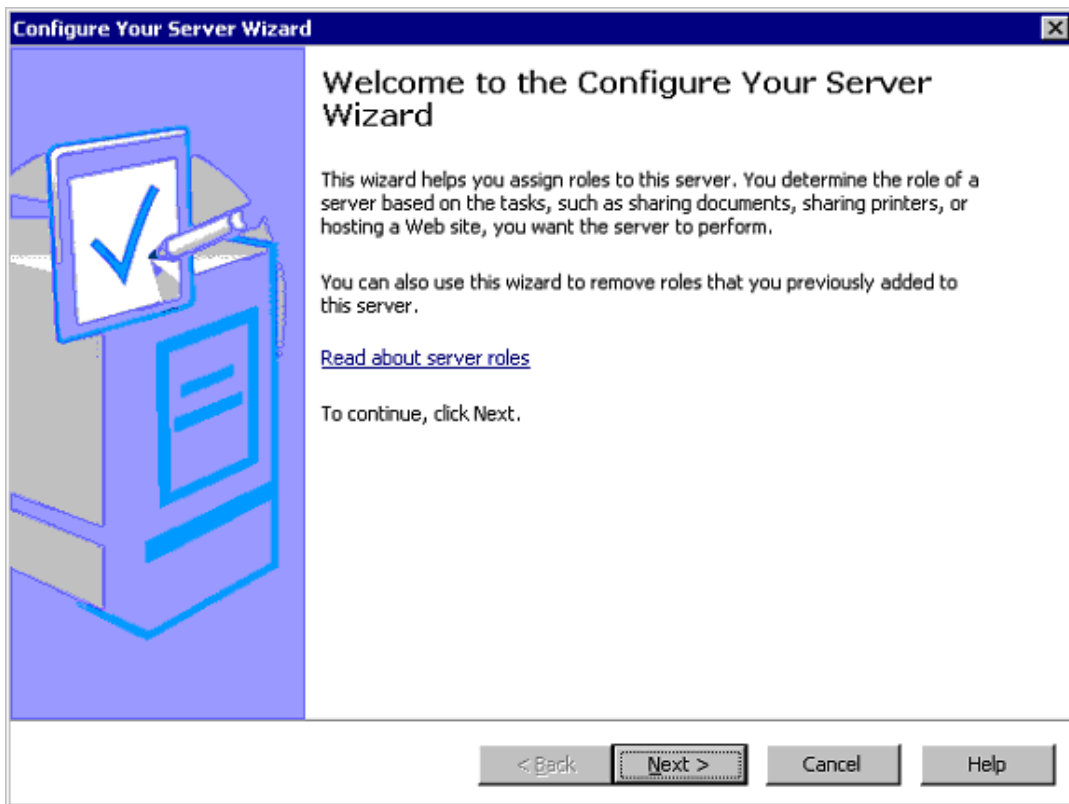
This example uses Windows 2003 Server Enterprise edition. There are five basic aspects of configuration on the Terminal Service Server.

1. Enabling Terminal Server
2. Set up Licensing Server
3. Windows User Configuration
4. Share Terminal Services Client
5. Install OpenEnterprise Workstation

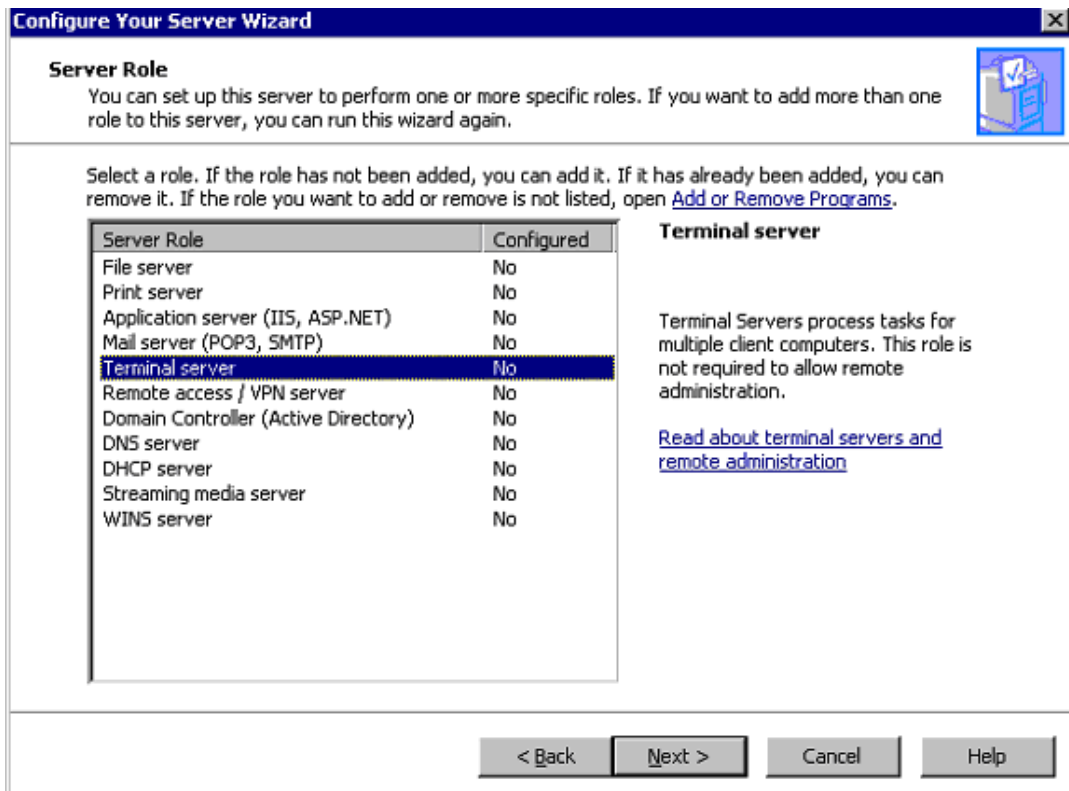
#### 1.1.1.1 Enabling Terminal Server

To enable Windows Terminal services, take the following steps.

1. Select **All Programs>Administrative Tools>Configure your Server Wizard** from the Start menu.



2. Follow the on screen instructions, and on the Server Roles page select Terminal Server from the list of options shown.



3. Configure the Terminal Server using the default settings.

#### **1.1.1.2 Set up Licensing Server**

The following is quoted from Microsoft's own documentation for setting up a Licensing Server for use with Terminal Services:-

It is required that at least one Windows Server 2003 license server be present in your Windows Server 2003 Terminal Server environment. For small deployments, it is acceptable to install both the Terminal Server and the Terminal Server Licensing service on the same physical computer. However, for larger deployments we suggest that Terminal Server Licensing be installed on a separate server.

To install Terminal Server Licensing:

1. Click Start, click Control Panel, and then double-click Add or Remove Programs.
2. Click Add/Remove Windows Components.
3. In the dialog box, select Terminal Server Licensing.
4. Follow the instructions in the Windows Components Wizard.

After Terminal Server Licensing is installed, the server becomes a license server and you are asked whether you want to activate the license server. It is highly recommended that you activate the license server. A Terminal Server running on Windows Server 2003 operates for 120 days before the terminal server must discover an activated license server.

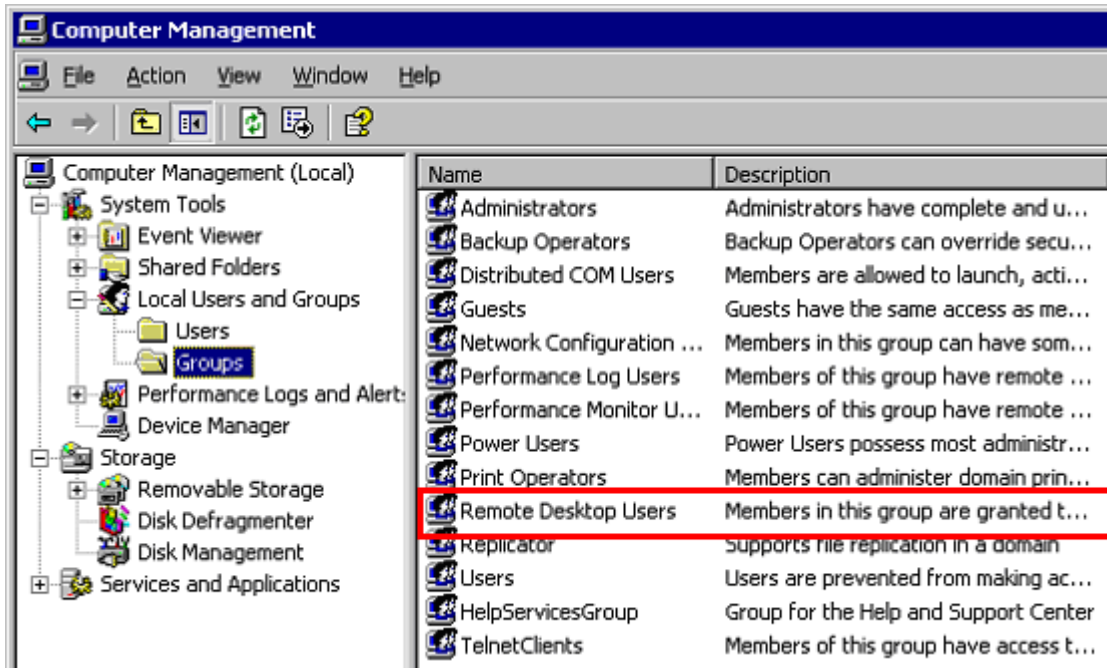
Important: If you do not activate the license server within 120 days, your Terminal Server will no longer operate.

#### **1.1.1.3 Windows User Configuration**

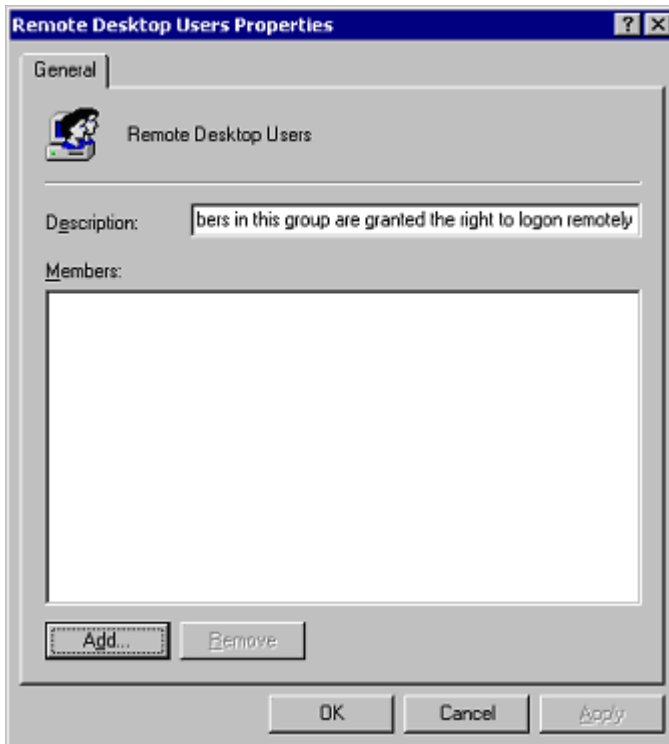
Windows 2003 Server provides a security group called Remote Desktop Users, which has been explicitly defined to simplify the task of configuring users for use with Terminal Services . By adding local or domain Windows users to this group, those users automatically have the privileges required to run a Terminal Services session on the server.

##### **1.1.1.3.1 Adding Remote Desktop Users**

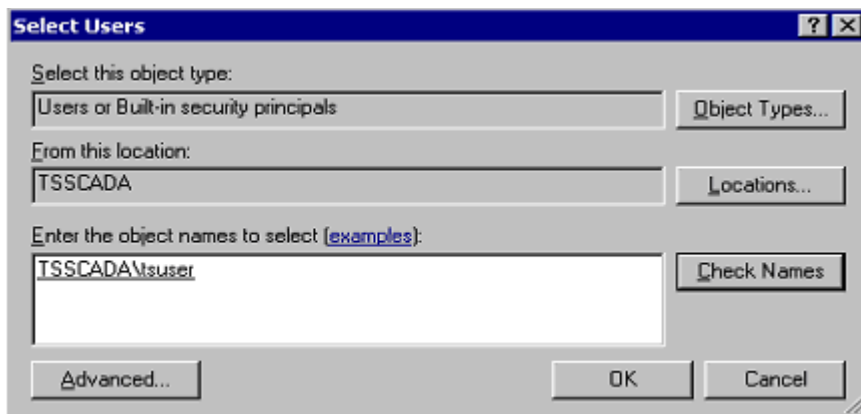
Select the **Computer Management** option from the **Start>All Programs>Administrative Tools** menu. Then select **Local Users and Groups** and the **Groups** folder. From the right hand pane, which lists all the Groups, select **Remote Desktop Users**, highlighted in the image below.



To add a user to the **Remote Desktop Users** group double click on **Remote Desktop Users** highlighted in the image above to bring up the Remote Desktop Users Properties dialogue box, shown here...



Click on the **Add...** button. Enter the name of the user into the object name box, then click the **Check Name** button.

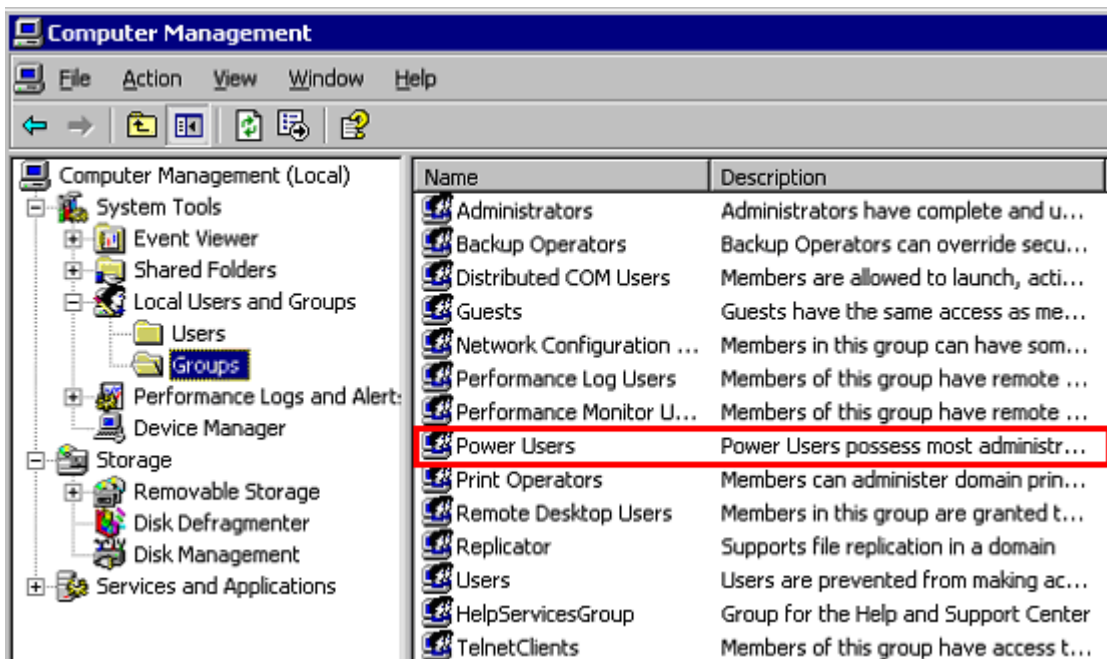


If you have entered a valid name it will come back with the name underlined, as shown in the example above.

### 1.1.1.3.2 Add Users to Power Users Group

In addition, all users need to be configured as members of the Power Users group. This is to enable all Terminal Services users to login properly to the OpenEnterprise Workstation.

Select the **Computer Management** option from the **Start>All Programs>Administrative Tools** menu. Then select **Local Users and Groups** and the **Groups** folder. From the right hand pane, which lists all the Groups, select **Power Users**, highlighted in the image below.

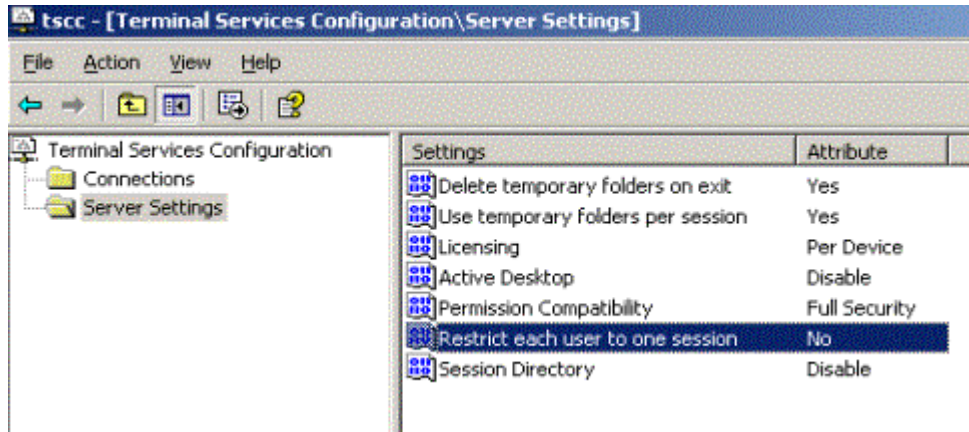


To add a user to the **Power Users** group double click on **Power Users** highlighted in the image above to bring up the **Power Users Properties** dialogue box, then add users as described in the **Adding Remote Desktop Users** section above.

### 1.1.1.3.3 Individual Users or Global User

The default setting enables distinct user logons for each Terminal Services Session. If a global user is to be used for all Terminal Services sessions then the Terminal Server must be configured to allow multiple sessions per user.

This is achieved using the Terminal Services Configuration component, which can be invoked from the **Start>All Programs>Administrative Tools** menu item. Once invoked, the system administrator should select Server Settings in the left hand pane, and then select the Restrict each user to one session in the right hand pane, and change it's value to No, as displayed below.



**1.1.1.4 Share Terminal Services Client**

The Microsoft Terminal Services Client is called Remote Desktop Connection, and is included in the Windows 2003 Server installation.

By sharing the **Windows\System32\Clients\TCSClient** directory on the Terminal Services Server, it is then a simple task to install Remote Desktop Connection onto any client machine.

If the intended Terminal Services Clients have Windows XP Service Pack 1 installed, then Remote Desktop Connection can be run from the Windows Start button by selecting **Start>All Programs>Accessories>Communications>Remote Desktop Connection**.

If the intended Terminal Services Clients have Windows 95, Windows 98 and 98 Second Edition, Windows Me, Windows NT 4.0, or Windows 2000 installed, then you can try installing Remote Desktop Connection from the Terminal Services Server's shared **TCSClient** directory, referred to in paragraph two above. If this is a problem, then you can download the correct version of Remote Desktop Connection from [www.microsoft.com/windowsxp/downloads/tools/rdclientdl.msp](http://www.microsoft.com/windowsxp/downloads/tools/rdclientdl.msp).

**1.1.1.5 OpenEnterprise Workstation**

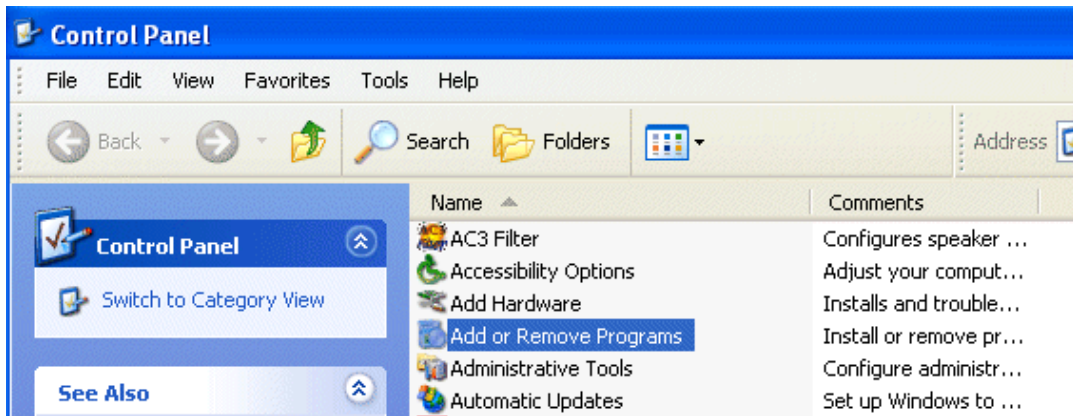
The Microsoft documentation on Terminal Services recommends that programs should be installed using Add or Remove Programs, rather than using the auto-run on the installation CD's. This is to ensure that the programs are available for use by all users when hosted through a Terminal Services session.

**1.1.1.5.1 Using Add or Remove Programs**

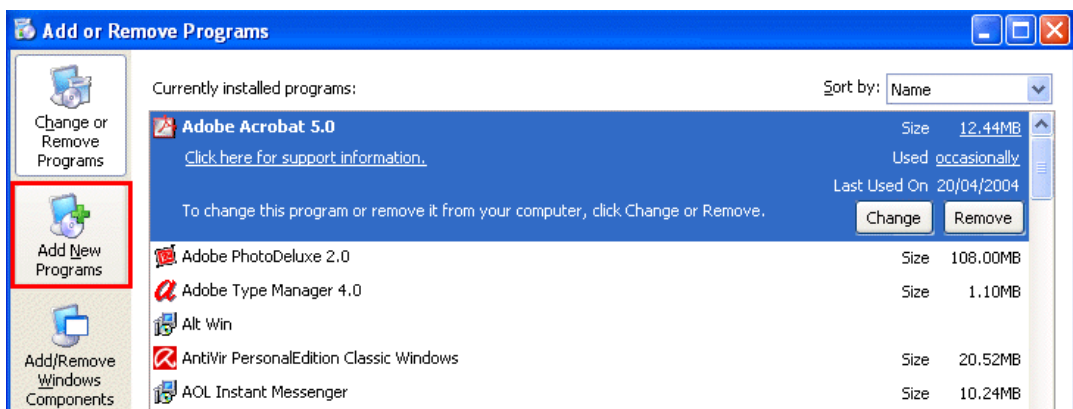
The instructions below show how to install GraphWorX from the OpenEnterprise installation CD using the **Add or Remove Programs** procedure.

1. Select **Start>Settings>Control Panel**
2. Select **Add or Remove Programs**

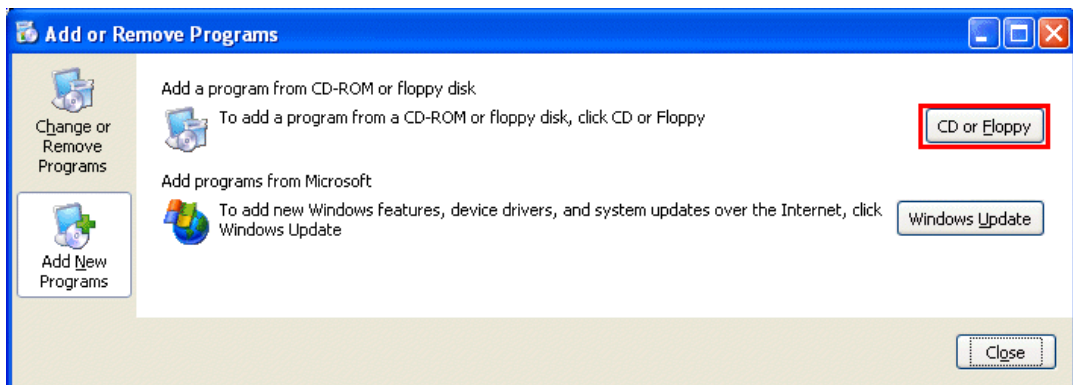




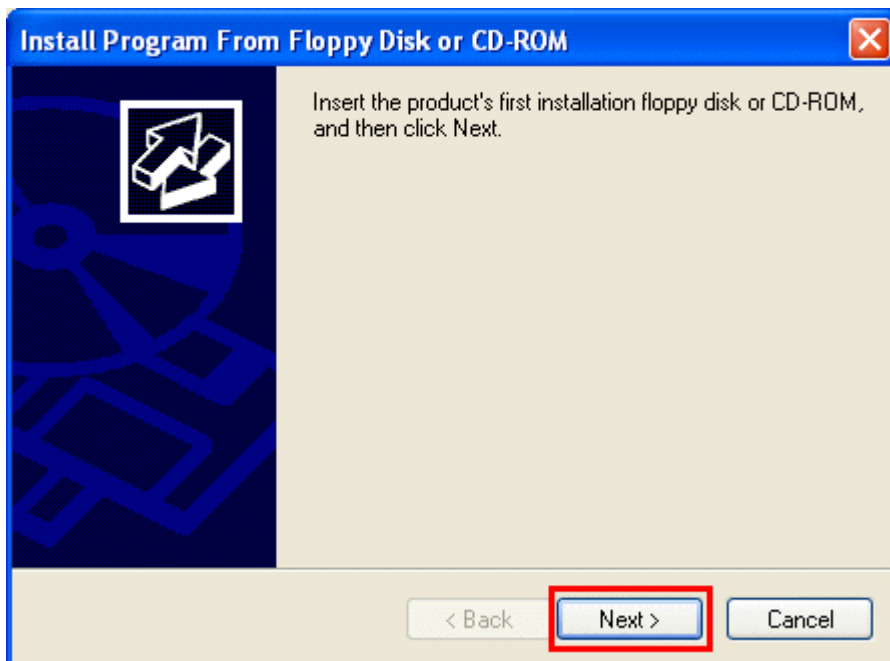
- 3. Select the **Add New Programs** button, shown highlighted in the image below.



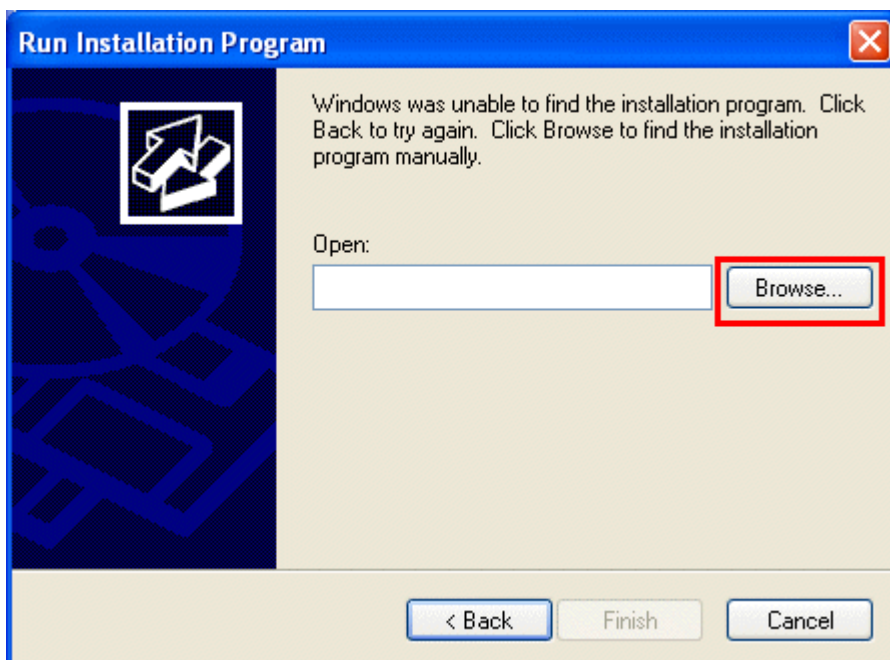
- 4. Select the **CD or Floppy** button, highlighted in the image below.



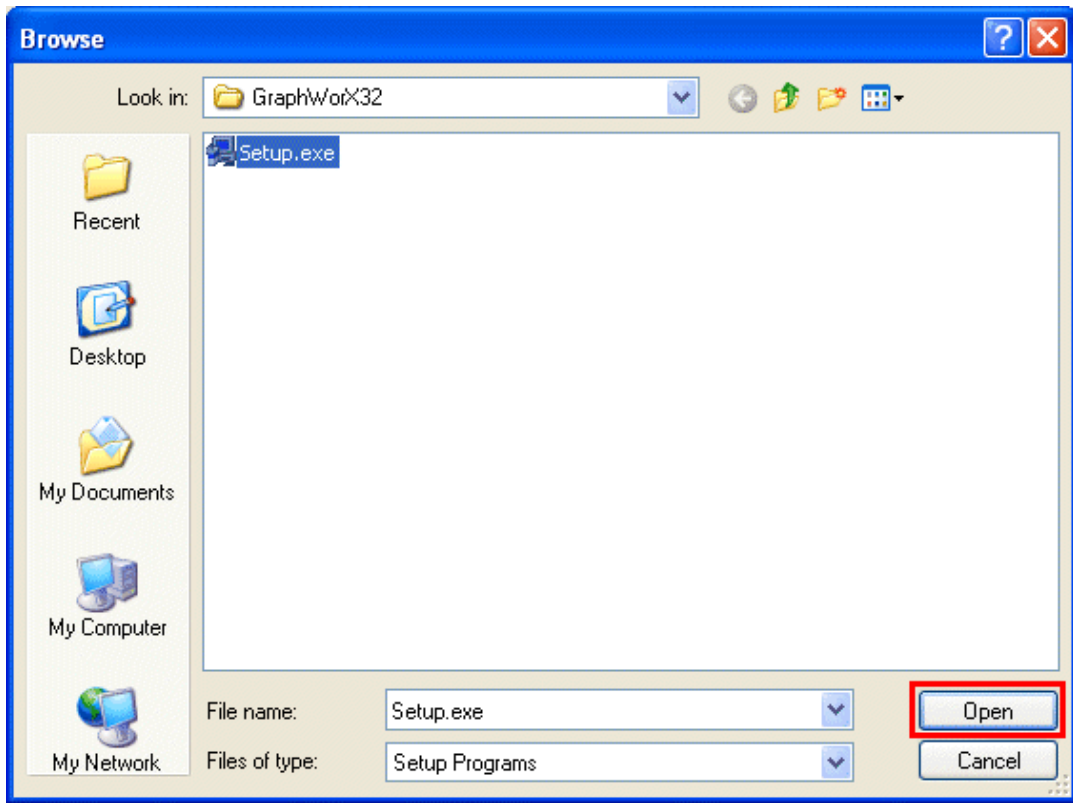
- 5. Place the OpenEnterprise CD into the correct drive and click the **Next** button, highlighted in the image below.



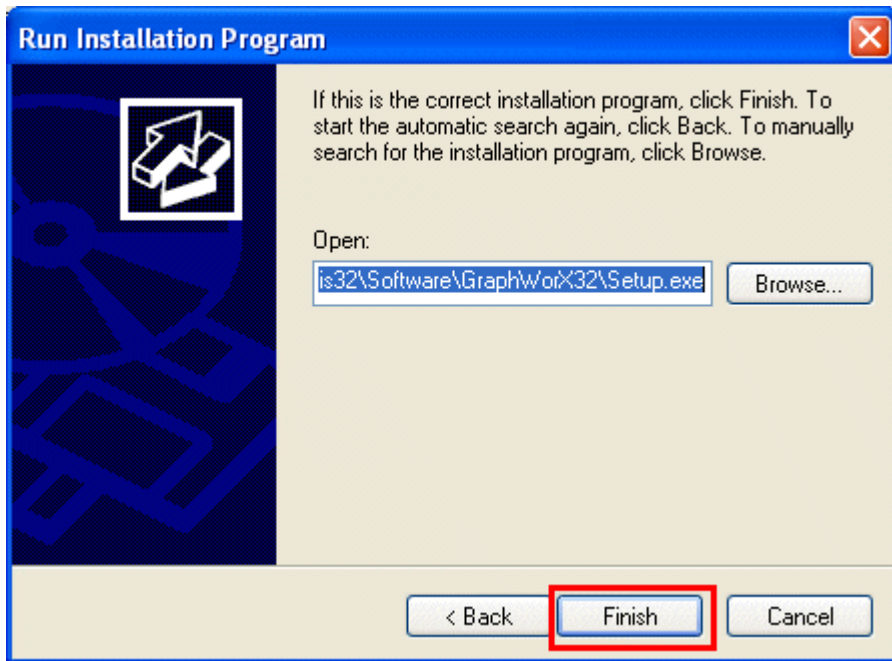
6. Click the Browse button on the next page to locate the CD drive holding the OpenEnterprise installation CD.



7. Locate the Setup file for GraphworX. The example below shows the GraphworX setup file located. Now click the **Open** button highlighted in the example below.



- 8. Finally, click the **Finish** button to begin installing GraphWorX.



Other than using Add or Remove Programs for the installation of OpenEnterprise Graphics, licensing and OpenEnterprise Workstation the installation procedure is as required for a normal workstation.

### 1.1.1.5.2 Workstation Data Servers

The following OpenEnterprise components should be added to the Startup folder for the All Users user, to ensure that they are automatically started whenever any user logs on through a Terminal Services session.

- Bristol OPC Server
- Bristol HDA Server
- Alarm Client Server
- OE Notes Server

Terminal Services Server

### 1.1.2 OpenEnterprise Server

The OpenEnterprise Server should be installed on a separate dedicated host machine or machines (if using a redundant configuration). This is because of an incompatibility between some versions of OpenBSI and Windows Terminal Services.

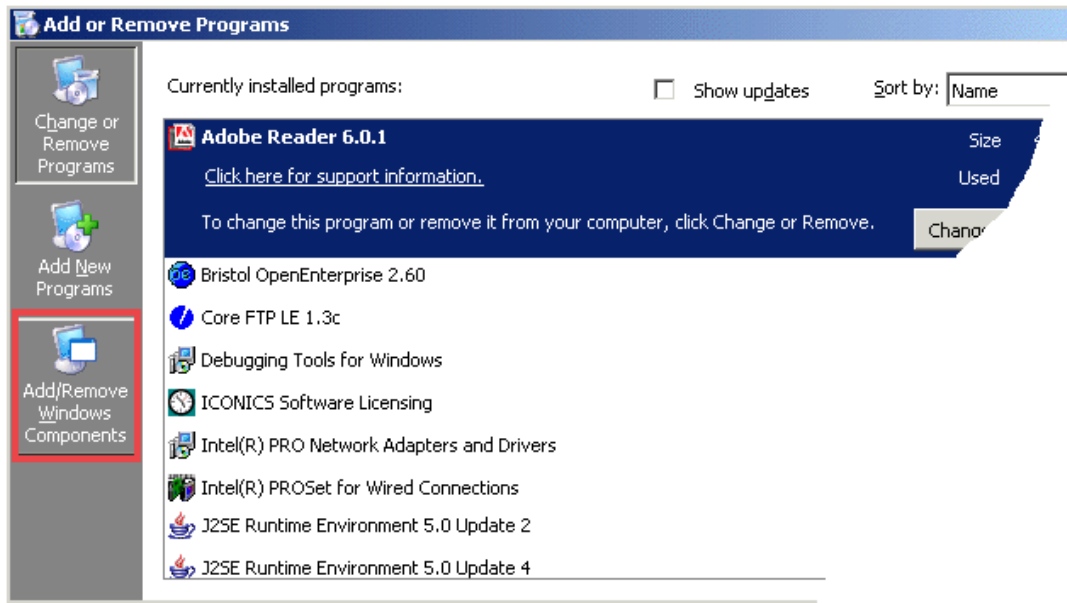
**WARNING: OpenBSI should NOT be installed on the Terminal Services Server. OpenBSI 5.5 (and earlier) versions are not compatible with Windows Terminal Services, and may damage some components of your Windows Installation!!!!**

### 1.1.3 Internet Access

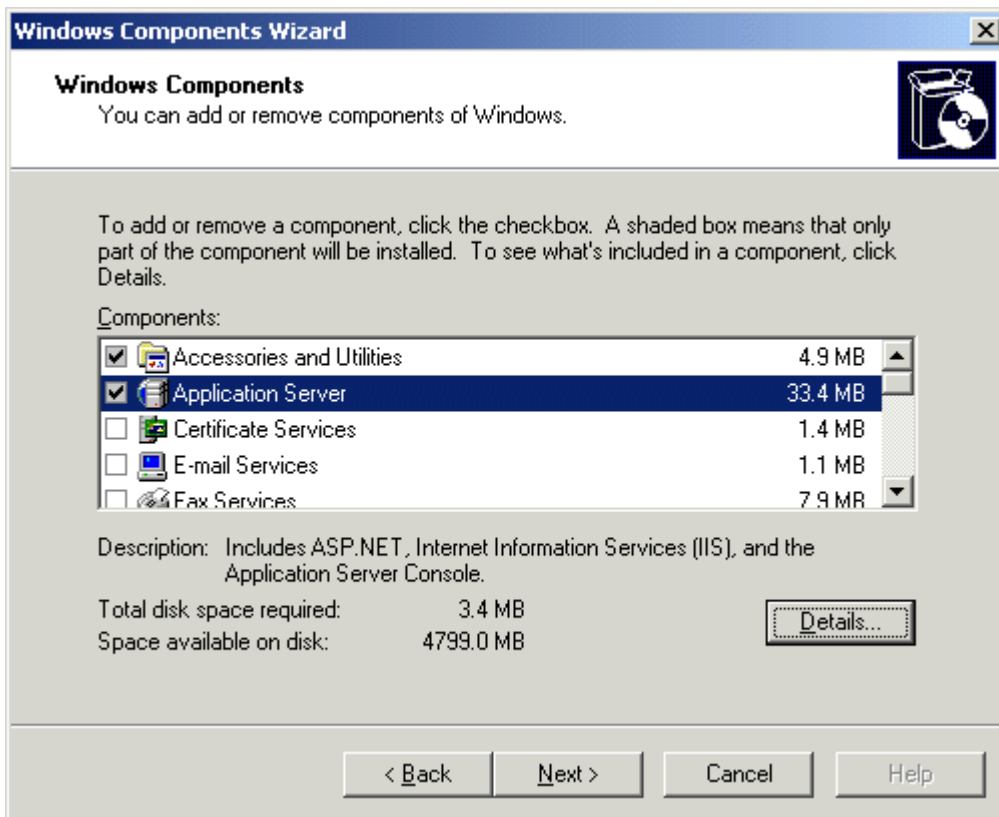
In order to access Terminal Services over the Internet, it is necessary for would be clients to first connect to a Web Server that can provide the client's browser with the Remote Desktop Web Connection page and ActiveX control. A Web Server is created by installing and configuring Microsoft Internet Information services (IIS) on the host machine. The Web Server does not need to be the same machine that hosts the Terminal Server, but it is usually the simplest and most convenient option.

#### 1.1.3.1 Installing Internet Information Services

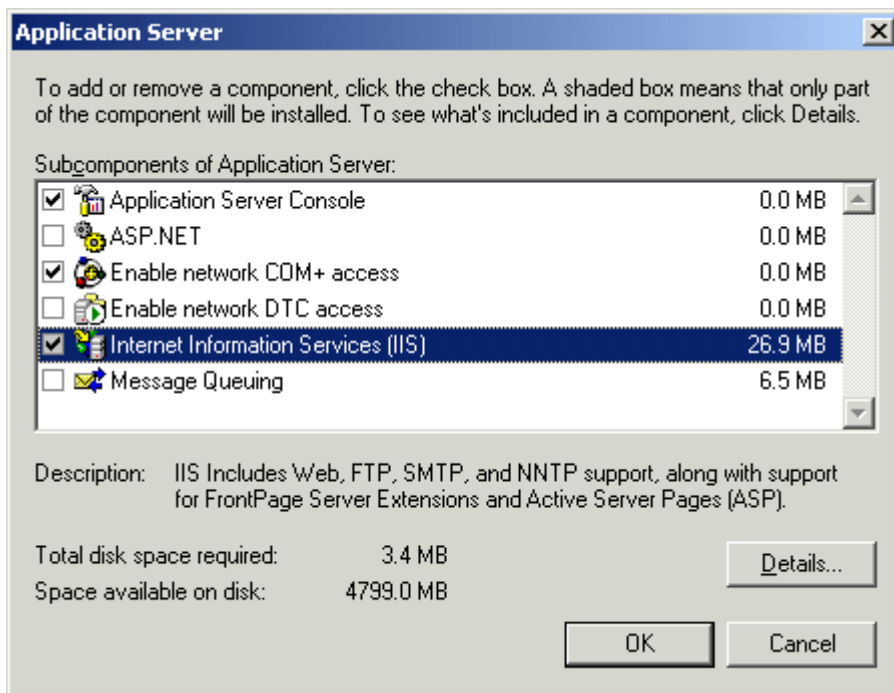
1. From the Windows Start button select **Start>All Programs>Control Panel>Add or Remove Programs**
2. From the **Add or Remove Programs** dialog select the **Add/Remove Windows Components** button, highlighted in the image below.



3. From the Windows Components Wizard window select the Application Sever option and then click the **Details...** button.



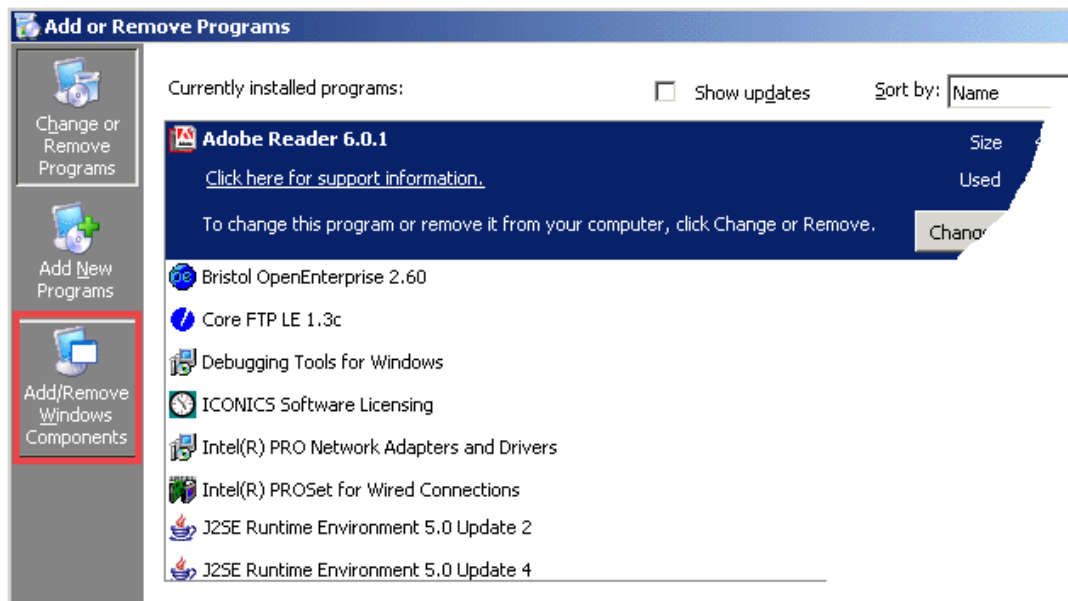
4. From the Application Server window select the **Internet Information Services (IIS)** option, as shown in the example below, and then click the **OK** button. IIS will be installed.



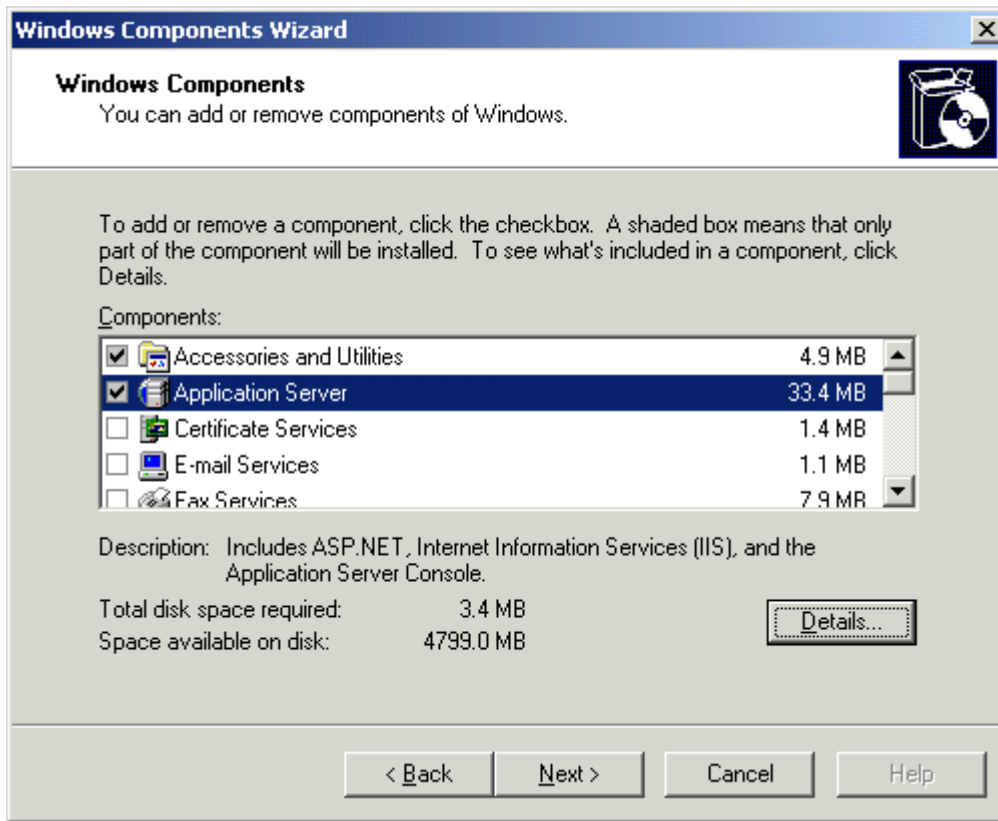
1.1.3.2 Installing the Remote Desktop ActiveX Control

It is also necessary to install the Remote Desktop Web Connection ActiveX control on the Web Server, so that the Web Server act as an access point for the Terminal Server. Follow the instructions below.

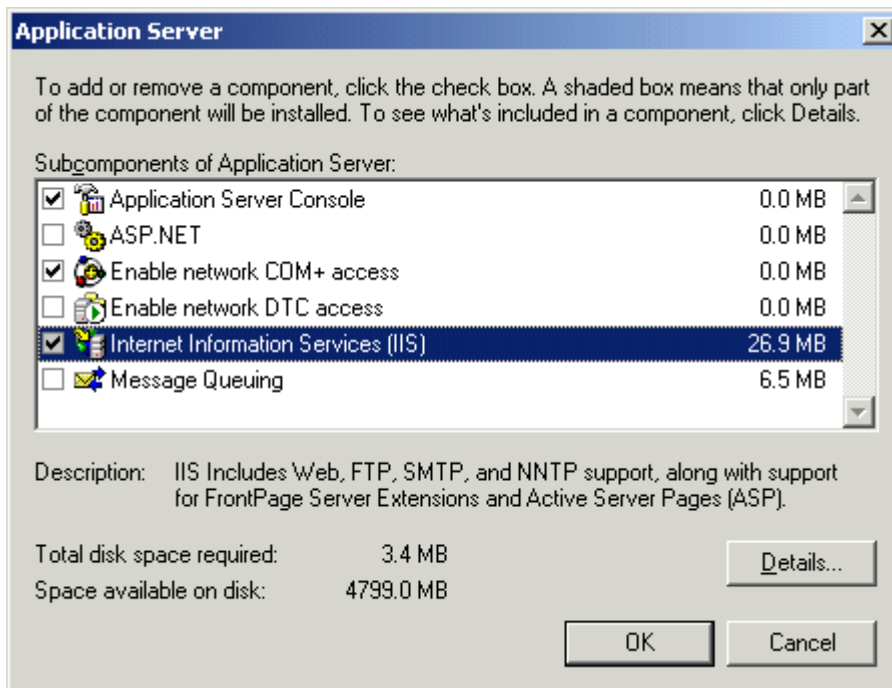
1. From the Windows Start button select **Start>All Programs>Control Panel>Add or Remove Programs**
2. From the **Add or Remove Programs** dialog select the **Add/Remove Windows Components** button, highlighted in the image below.



3. From the **Windows Components Wizard** window select the **Application Sever** option and then click the **Details...** button.

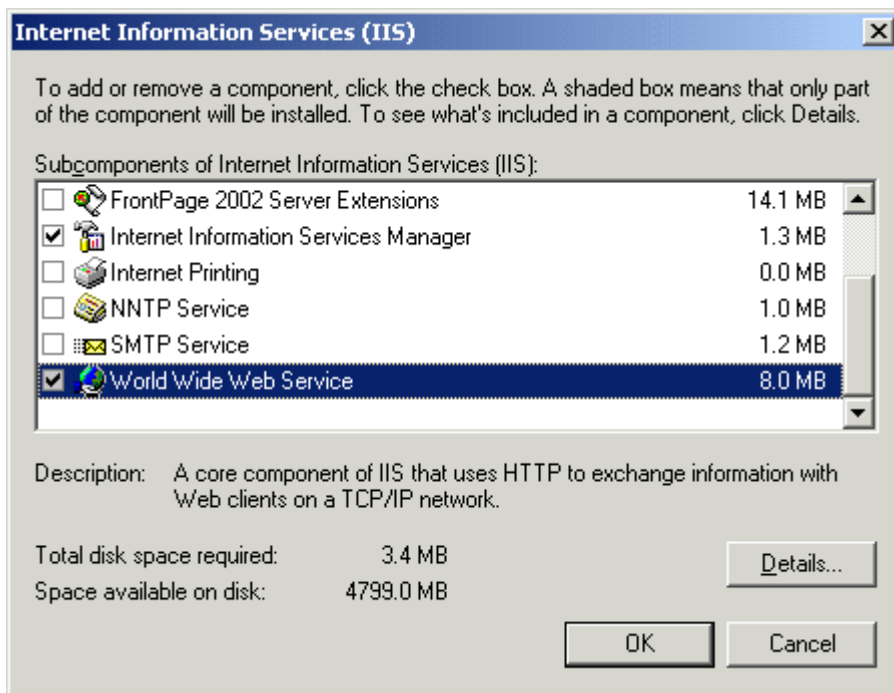


- From the Application Server window select the **Internet Information Services (IIS)** option, as shown in the example below, and then click the **Details...** button.

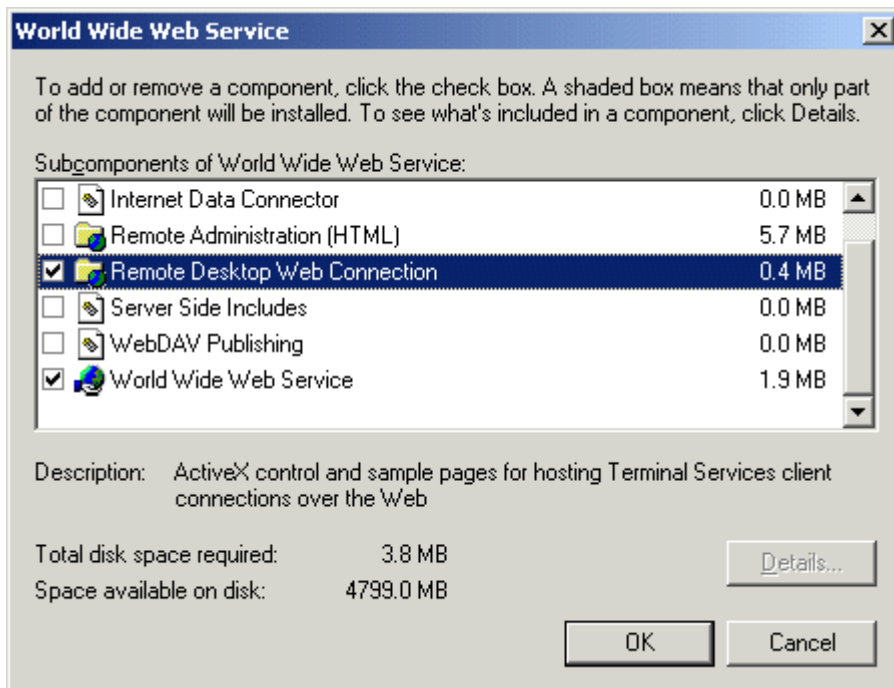


- From the **Internet Information Services (IIS)** window select the **World Wide Web** option, as shown in the example below. Then click the **Details...** button.





6. Finally, from the **World Wide Web Service** window, select the **Remote Desktop Web Connection** option as shown in the example below and then click the **OK** button.



The Remote Desktop Web Connection ActiveX control can also be installed by downloading the software from the Microsoft Web Site.

In addition to the ActiveX control, the installation also includes sample pages for hosting Terminal Services client connections over the Web on Internet Information Server 4.0 and later.



### 1.1.3.3 Firewalls and Proxy Servers

Regardless of how you connect to a Terminal Services Server, if either your client or your server is behind a firewall or proxy server, you won't be able to connect unless you open up the RDC port, 3389, to permit the Remote Desktop Connection capability to pass through.

For further information on setting up a Remote Desktop Connection see the article at

<http://www.microsoft.com/windowsxp/expertzone/columns/russel/02January14.asp>

or the slightly more advanced article found at

<http://www.isaserver.org/tutorials/Publishing-Remote-Desktop-Web-Connection-Sites-ISA-Firewall-Part1.html>

### 1.1.4 Terminal Services Clients

It is recommended that you install the Terminal Services Server and the OpenEnterprise Server first, before attempting to install or use the Terminal Services Clients.

Terminal Services Clients connect to the Terminal Server by running an application called **Remote Desktop Connection**. If the intended Terminal Services Clients have Windows XP Service Pack 1 installed, then Remote Desktop Connection can be run from the Windows Start button by selecting **Start>All Programs>Accessories>Communications>Remote Desktop Connection**.

For instructions on how to install the Remote Desktop Connection onto other client machines see the Share Terminal Services Client page.

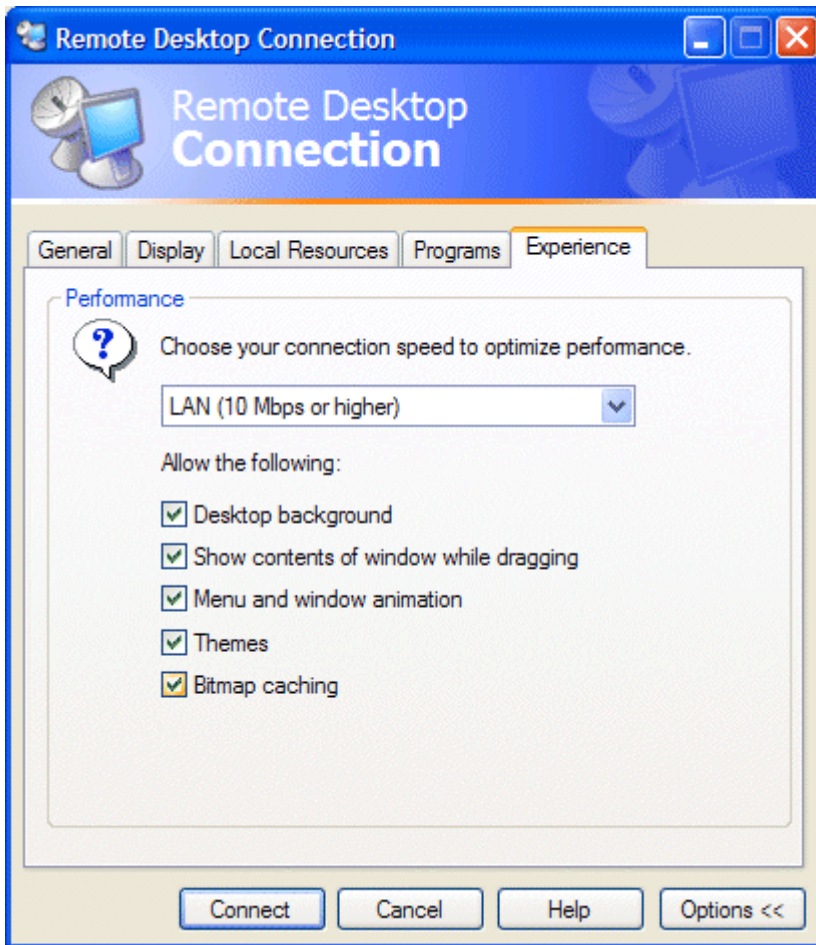
Upon launching Remote Desktop Connection the user will be presented with the following dialog, from which the name of the Terminal Services Server can be selected.



Selecting the **Connect** button will then, subject to security settings, allow the user to log on to the Terminal Services Server.

The **Options>>** button, allows access to additional configuration options which can be used to tune the terminal services session, based on the communication rate available, display settings, and resource sharing for devices such as printers and disk drives.

It is important to tune the Terminal Services session to achieve optimum performance according to the physical connection you are using. The following settings are automatically set for a 10 Mbps or higher LAN:



Several other default connection speed settings are available; including modems at 28.8Kbps and 56Kbps and Broadband at 128 Kbps to 1.5Kbps. It is also possible to define custom settings.

### 1.1.5 Web Clients

It is not necessary to install any additional software in order to access the Terminal Services Server over the web.

#### 1.1.5.1 Terminal Services Access Over Web

The following describes how to establish an OpenEnterprise Terminal Services session via a Web browser.

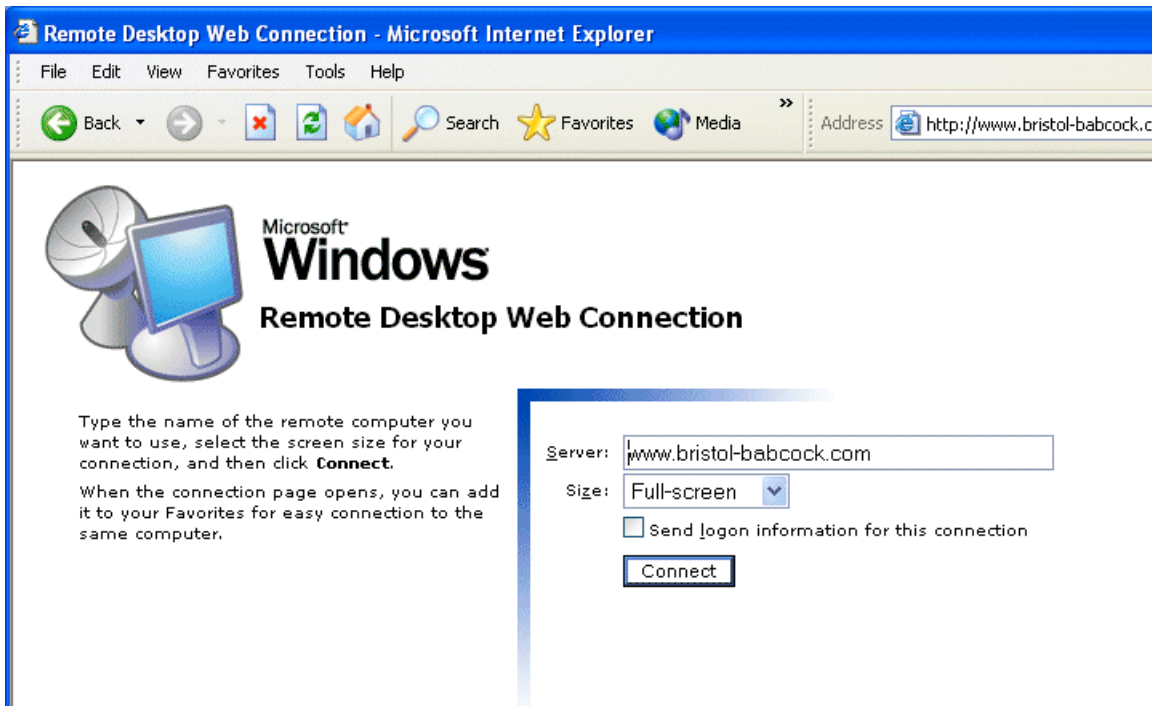
1. Type the Terminal Services Web address, including the Web directory where it will find the Remote Desktop Access page into the browser's address bar.



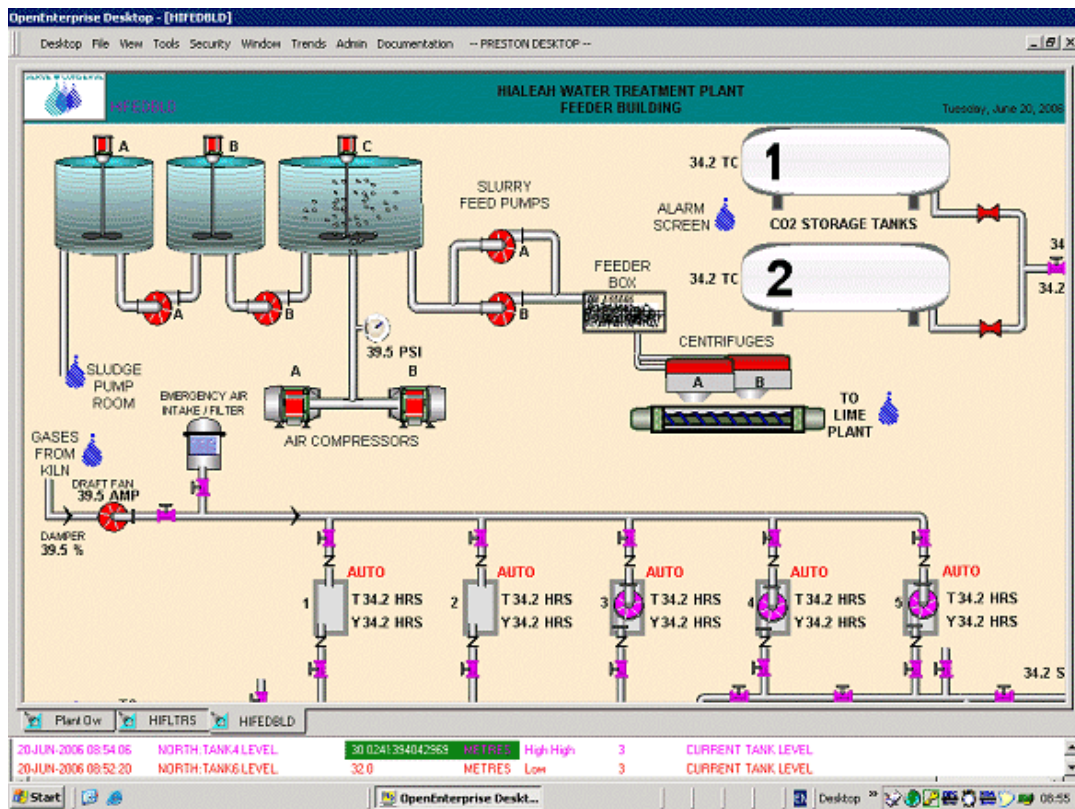
2. If connecting for the first time accept the **Remote Desktop ActiveX Control** download.



3. Click the Connect button on the initial Web page once the ActiveX control has been downloaded.



3. Log in to the Remote Desktop Server.
4. Log in to OpenEnterprise and view OpenEnterprise Desktop remotely.



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Engineered and supported by:

Remote Automation Solutions,

Blackpole Road, Worcester, WR3 8YB, UK

Registered office: Meridian East, Leicester, LE19 1UX

Registered in England and Wales, Registration No. 00671801

VAT Reg No. GB 705 353 652

**Emerson Process Management**  
**Remote Automation Solutions**  
1100 Buckingham St  
Watertown, CT 06795  
T 1 (860) 945 2200  
F 1 (860) 945 2278  
[www.EmersonProcess.com/Remote](http://www.EmersonProcess.com/Remote)  
[binfo@EmersonProcess.com](mailto:binfo@EmersonProcess.com)

**Emerson Process Management**  
**Remote Automation Solutions**  
Blackpole Road  
Worcester, WR3 8YB  
T 44 (0) 1905 856848  
F 44 (0) 1905 856930  
[www.EmersonProcess.com/Remote](http://www.EmersonProcess.com/Remote)  
[oedsupport@EmersonProcess.com](mailto:oedsupport@EmersonProcess.com)

