

QueWorX

Installation and Configuration Guide

NEC NEC Unified Solutions, Inc.

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1

Introduction

Welcome to the *QueWorX Installation and Configuration Guide*. This guide provides the information you need to install and configure the QueWorX software and the necessary hardware.

- Chapter Topics
- [QueWorX Overview](#)
 - [Guide Organization](#)

QueWorX Overview

QueWorX is a software application that provides the tools necessary to add sophisticated Computer Telephony Interface (CTI) functionality to a call center. Functions, such as customer data collection, estimated time in queue, queue depth, and customer callback are possible. Call routing based on a customer information database and the QueWorXAgent popup screens are expanded features and capabilities of QueWorX.

InfoServ is the engine driving the QueWorX application and is a service in Windows 2000. It enables communication between CallCenterWorX products on all NEC PBX platforms and the QueWorX system. QueWorX connects with the CallCenterWorX application to provide system functionality.

Guide Organization

- | | |
|---|---|
| Chapter 1
Introduction | Outlines how to use the manual, including the organization, chapter layout, and conventions used in the <i>QueWorX Installation and Configuration Guide</i> . |
| Chapter 2
Getting Started | Explains the hardware and software requirements of the QueWorX Server. |
| Chapter 3
QueWorX Installation | Lists the installations you need to fully install QueWorX. |
| Chapter 4
Configuring the NEAX 2400
PBX | Explains how to setup the UCD/IVR, Agent Positions, and ACD Pilots (Monitored Numbers) using CAT Mode for the NEAX 2000 PBX. |

- Chapter 5*
Configuring the NEAX 2400 PBX Describes the ASDT, APHN, ASHU, AMNO, and AKYD commands for the NEAX 2400 PBX.
- Chapter 6*
Configuring the WebCallback Explains how to install the Internet Information Server (IIS), configure the Web Initiated Callback, and initiate a Web Callback.
- Chapter 7*
Securing the QueWorX Server Provides recommended security practices to create and enforce a secure network environment for the QueWorX Server.
- Chapter 8*
Backing Up and Recovering the QueWorX Database Describes how to back up and restore the QueWorX database.

2

Getting Started

For QueWorX to operate properly, your operating environment must meet the requirements in this chapter.

Chapter Topic: • [QueWorX Server Requirements](#)

QueWorX Server Requirements

[Table 2-1](#) lists the requirements for the QueWorX server. The minimum hardware configuration QueWorX needs is the basis for the requirements. Some installations can operate satisfactorily with this basic configuration.

In an operational environment, we recommend QueWorX run on a dedicated server.

Table 2-1 QueWorX Server Requirements

<i>Requirements</i>
<p>Operating System</p> <p>Microsoft Windows 2000 Server, SP4 Microsoft Windows 2003 Server Note: Must configure for concurrent licenses</p>
<p>Processor</p> <p>Pentium 3.0 GHz processor or faster</p>
<p>System Memory</p> <p>2GB RAM (or above)</p>

Requirements
Hard Drive Space (available before installation)
50MB
Additional Hardware
4x CD-ROM drive
Dedicated USB port for security key
Internal or external modem
4 PCI-E slots (number of slots depends on number of Dialogic voice boards to be installed)
2 10/100Mbps Ethernet Cards
Integrated SVGA Controller with 4MB VRAM (Display properties must be set to a minimum of 1024 x 768 pixels with a color quality of at least 16 bit)

Table 2-2 QueWorX Agent Application and QueWorX Report Runner Requirements

Requirements
Operating System
Microsoft Windows XP Microsoft Windows 2000, or Microsoft Windows Vista
Processor
Pentium 1.2GHz (or above)
System Memory
1GB RAM or more
Hard Drive Space (available before installation)
25MB
Additional Hardware
Color Monitor with 1024 x 768 True Color resolution
1 10/100Mbps NIC Card
4x CD-ROM drive

3

QueWorX Installation

This chapter lists the installations needed to fully install QueWorX.

- Chapter Topic*
- [WIBU Security Key Driver Installation](#)
 - [.NET Framework Version 2.0 Installation](#)
 - [Dialogic System Release 6.0 Installation](#)
 - [Microsoft SQL Server 2005 Express Installation](#)
 - [SQL Server Management Studio Express Installation](#)
 - [QueWorX Installation](#)
 - [WIBU Security File Installation](#)
 - [QueWorX Service Configuration](#)
 - [Ports Configuration GUI Use](#)
 - [NEC IVR Console Initialization](#)
 - [QueWorX Upgrade](#)



NOTE

Requires Windows 2000/2003 Server to install this product. Install the Windows Service Pack 4 and ensure you install the latest updates available for your computer's operating system, software, and hardware. You obtain these from the Microsoft Windows Update web site.



NOTE

Refer to the CallCenterWorX ACD for Business and Enterprise System Manual non the QueWorX Documentation CD-ROM for the procedures to configure the ACD CallCenterWorX and the ACD MAT, which includes the MAT Menu options.

WIBU Security Key Driver Installation

Do the following to install the WIBU Security Key driver.

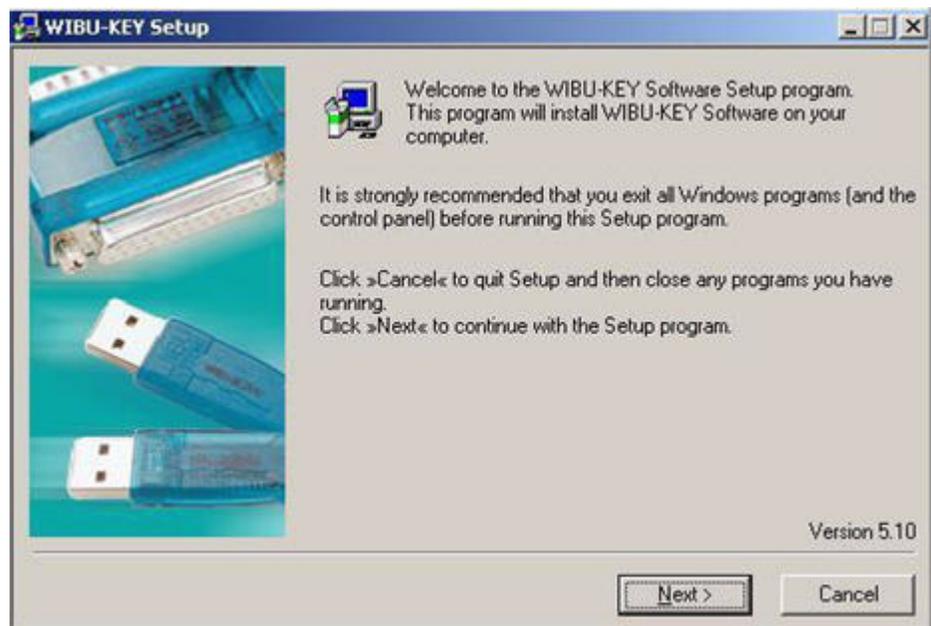


NOTE

To install this product, your system must have the Windows 2000/2003 Server and Service Pack 4 for Windows 2000. Find Service Pack 4 in the Windows 2000 SP4 folder located on CD2.

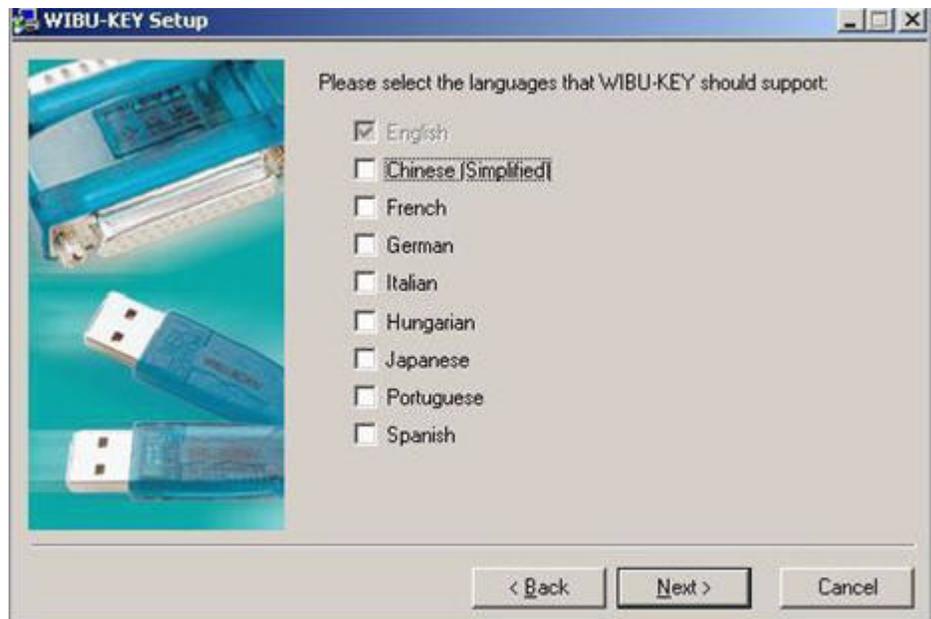
- Step 1** If the WIBU security key is already in the USB port, remove it. Do not re-insert the WIBU security key into the USB port until directed to do so.
- Step 2** Open CD1 in the WIBU-KEY folder and run the **setup32.exe** file. The *WIBU-KEY Setup—Welcome* dialog box appears (Figure 3-1).

Figure 3-1 WIBU-KEY Setup—Welcome dialog box



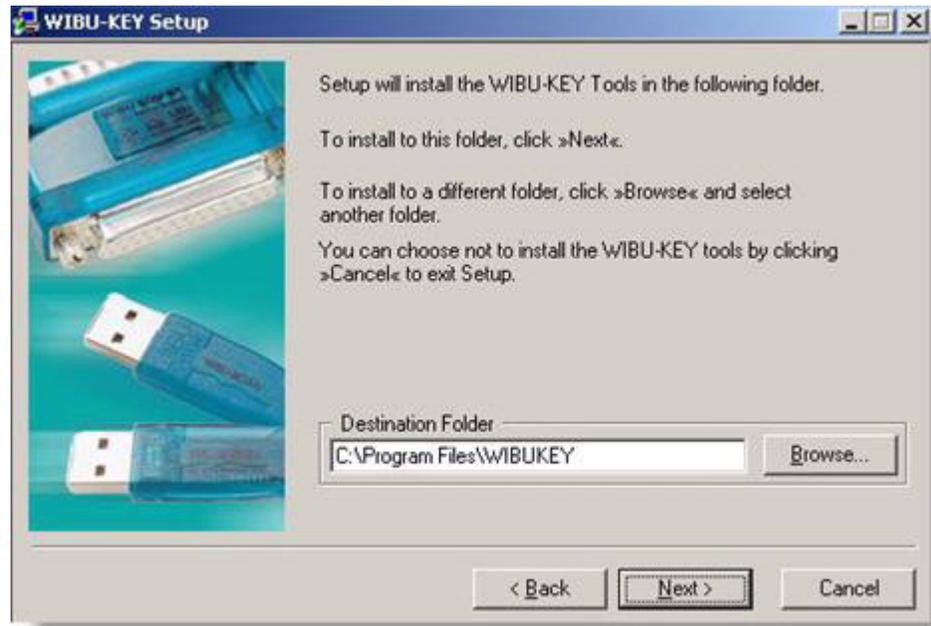
Step 3 Click **Next** to continue.
The *Wibu-Key Setup—destination folder* dialog box appears (Figure 3-2).

Figure 3-2 WIBU-KEY Setup—destination folder dialog box



- Step 4** Select the desired language for Wibu-Key, if not pre-selected, and click **Next**.
The *Destination Folder* dialog box appears (Figure 3-3).

Figure 3-3 WIBU-KEY Setup—create destination folder dialog box



- Step 5** Do one of the following:
- To accept the default program folder, click **Next**.
 - To select a different location and/or existing folder:
 - Click **Browse**.
 - Select the desired location in the new dialog box,
 - Click **OK** to return to the Destination Folder dialog box (Figure 3-3).
 - Click **Next**.
 - To specify a different folder name located in the current directory:
 - Type a folder name in the **Destination Folder** text box.



If the folder does not exist, a confirmation dialog box appears (Figure 3-4).

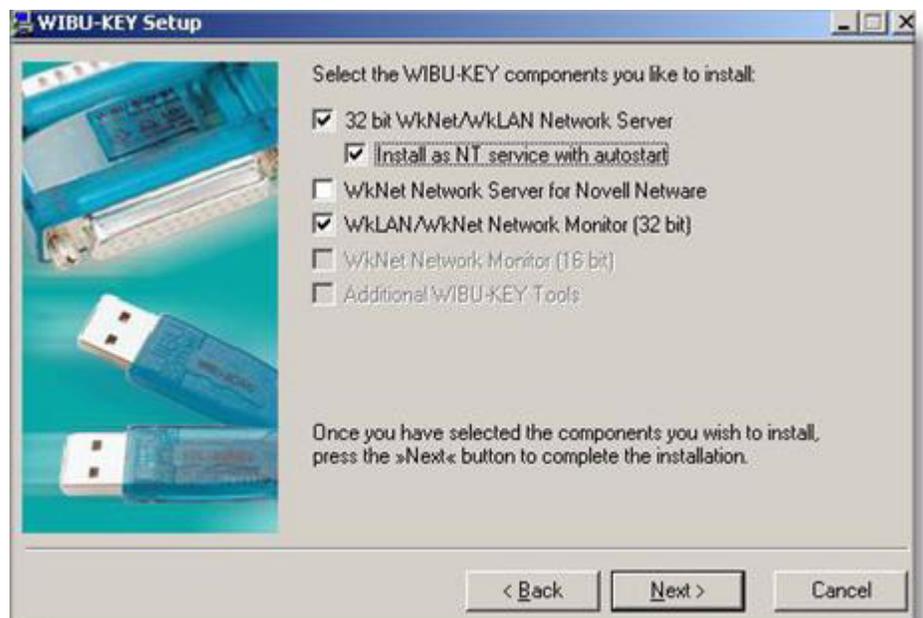
Figure 3-4 WIBU-KEY Setup—select components dialog box



Step 6 Click **Yes** to create the new destination folder.

Step 7 Click **Next**.
The *Select WIBU-KEY components* dialog box appears (Figure 3-5).

Figure 3-5 WIBU-KEY Setup—select components dialog box



Step 8 Select the following components for installation:

- 32 bit Reknit/Walk-in Network Server and the related check box to install it as an NT service with autostart
- WkLAN/WkNet Network Monitor (32 bit)



NOTE

Do not install the **WkNet Network Server for Novell Netware** component.

Step 9 Click **Next**:

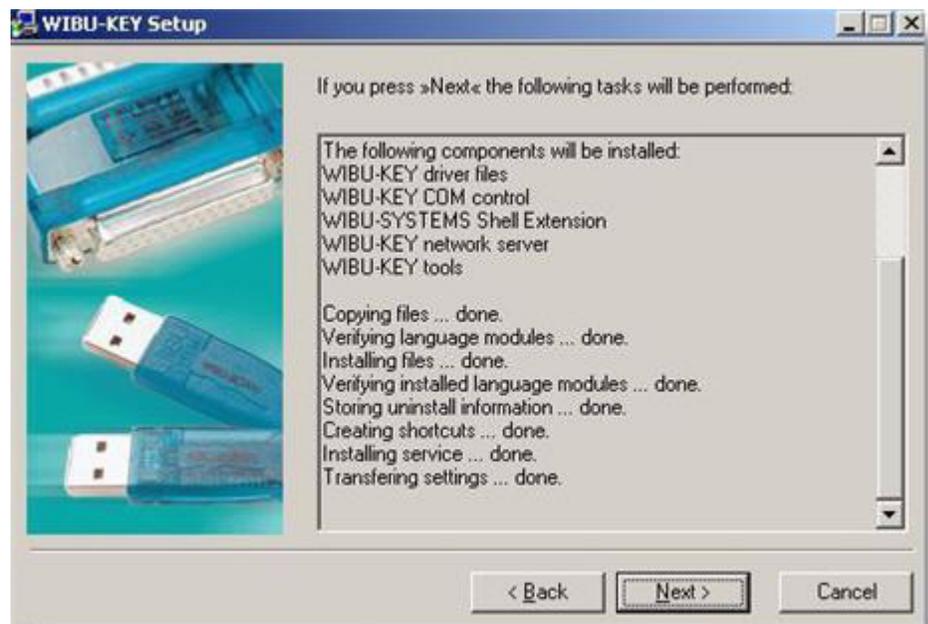
The *Component Review* dialog box appears (Figure 3-6).

Figure 3-6 WIBU-KEY Setup— component review dialog box



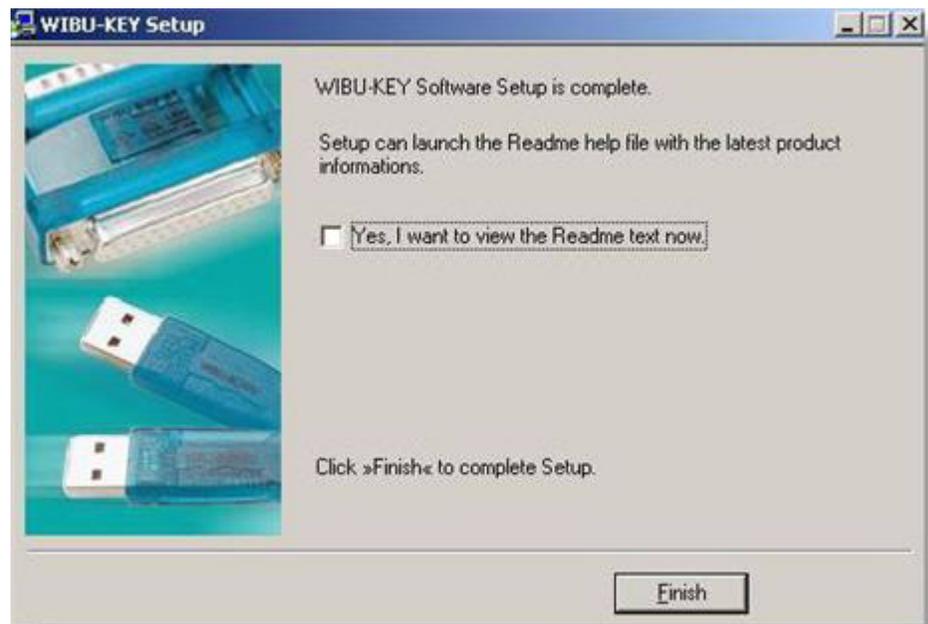
Step 10 Review the pre-installation information and if everything is correct, click **Next** to begin copying the files to the destination folder. The *Copying Files* dialog box appears (Figure 3-7).

Figure 3-7 WIBU-KEY Setup—copying files dialog box



Step 11 When the file copy completes, click **Next**.
The *Completed Setup* dialog box appears (Figure 3-8).

Figure 3-8 WIBU-KEY Setup—completed setup dialog box



Step 12 If you do not want to view the *Readme* text file, clear the **Yes, I want to view the Readme text now** check box and click **Finish** to exit setup.



NOTE

If the WIBU security key setup completes successfully the *WIBU_KEY Setup—driver installed* dialog box appears (Figure 3-9).

Figure 3-9 *WIBU_KEY Setup—driver installed dialog box*



Step 13 Click **OK**.

Step 14 Insert the security key into the USB port.



NOTE

If you are installing the Windows 2003 server, follow [Step 15](#) through [Step 21](#) to install the WIBU Key. Otherwise, continue with [Step 22](#).

Step 15 When the Windows 2003 server detects new hardware, the *Welcome* dialog box appears (Figure 3-10).

Figure 3-10 Found New Hardware Wizard—Welcome



Step 16 Select **Yes, now and Everytime I connect a device**.

Step 17 Click **Next**.

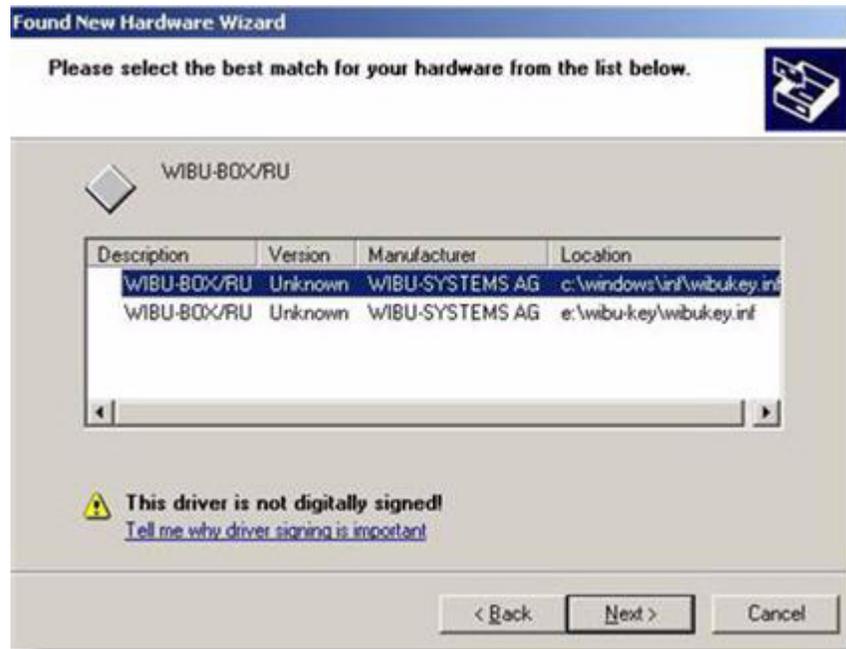
The *Found New Hardware Wizard* dialog box appears (Figure 3-11) when the Windows 2003 server detects new hardware.

Figure 3-11 Found New Hardware—hardware select dialog box



- Step 18** Select **Install the software automatically (Recommended)** and click **Next**.
The *Found New Hardware—hardware select* dialog box appears (Figure 3-12).

Figure 3-12 Found New Hardware—hardware select dialog box



- Step 19** Select the appropriate installation path, (C:) for WIBU-BOXRU and click **Next**.
The *Security Alert - Driver Installation* dialog box appears (Figure 3-13).

Figure 3-13 Security Alert-Driver Installation dialog box



- Step 20** Click **Yes** to install the driver software.
The *Found New Hardware Wizard Completing* dialog box appears (Figure 3-14).

Figure 3-14 Found New Hardware Wizard—Complete dialog box



- Step 21** Click **Finish**.



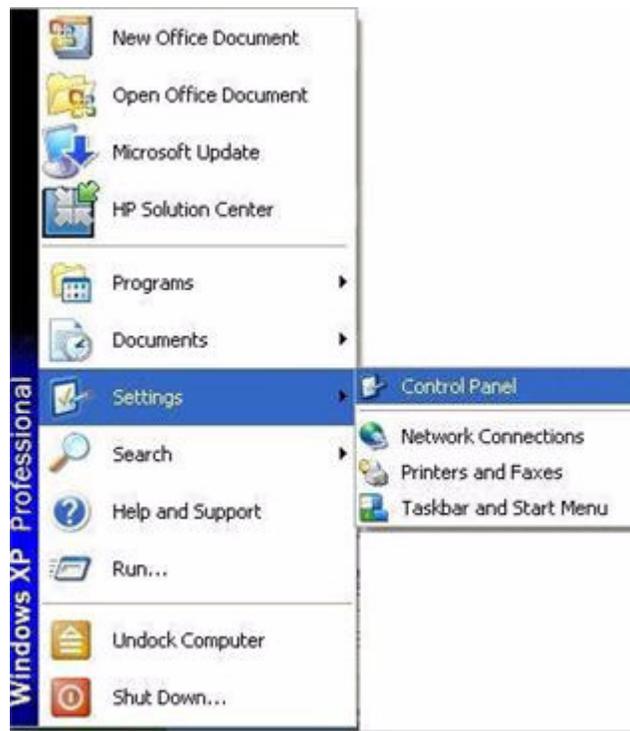
NOTE

Windows 2000 Server automatically detects the key and enables the appropriate driver.

- Step 22** Proceed to the Control Panel (Figure 3-15) to test the key.

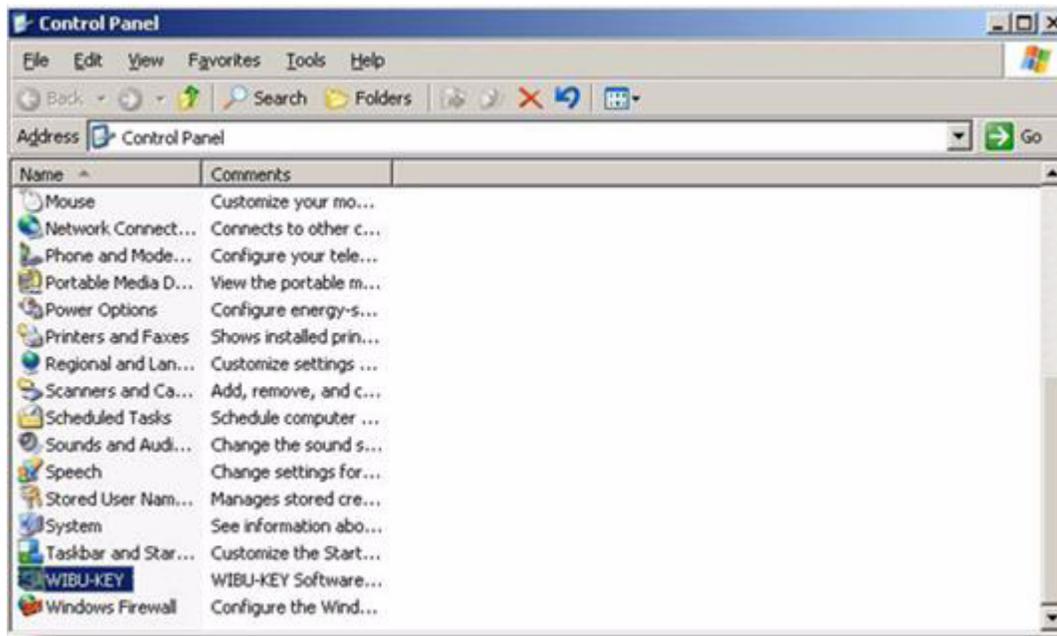
- Click **Start**
- Click **Settings**
- Click **Control Panel**

Figure 3-15 Control Panel Access



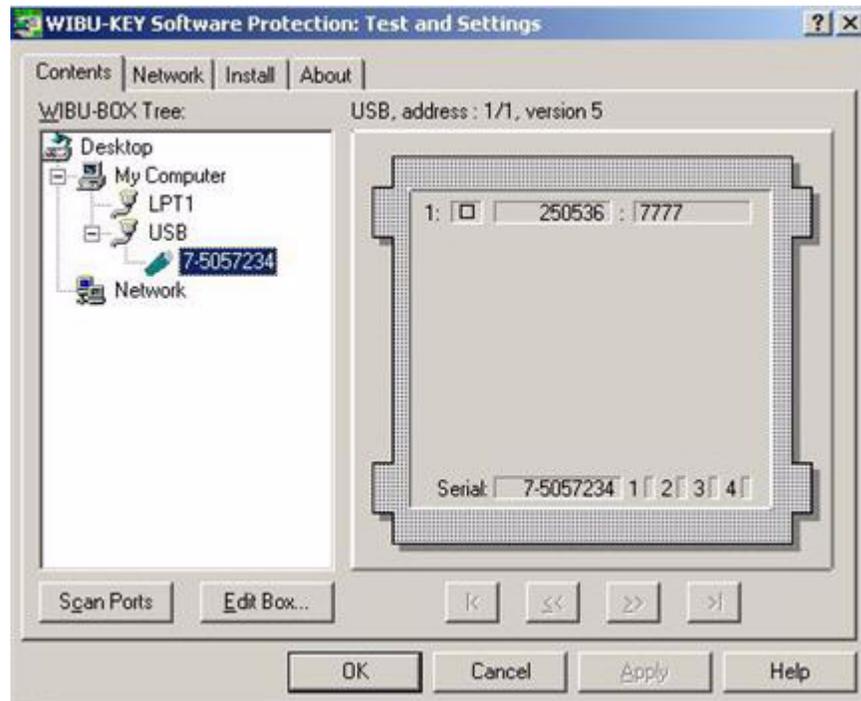
The Control Panel directory appears (Figure 3-16).

Figure 3-16 Control Panel—WIBU-KEY



- Step 23** Double-click **WIBU-KEY** to verify the key information is in the directory. The *WIBU-KEY Software Protection—Test and Settings* dialog box appears (Figure 3-17) where you verify the key exists in the directory.

Figure 3-17 *WIBU-KEY Software Protection—Test and Settings* dialog box



If the key is not found, try removing and reattaching the key to the back of the computer. If that fails, call technical support.

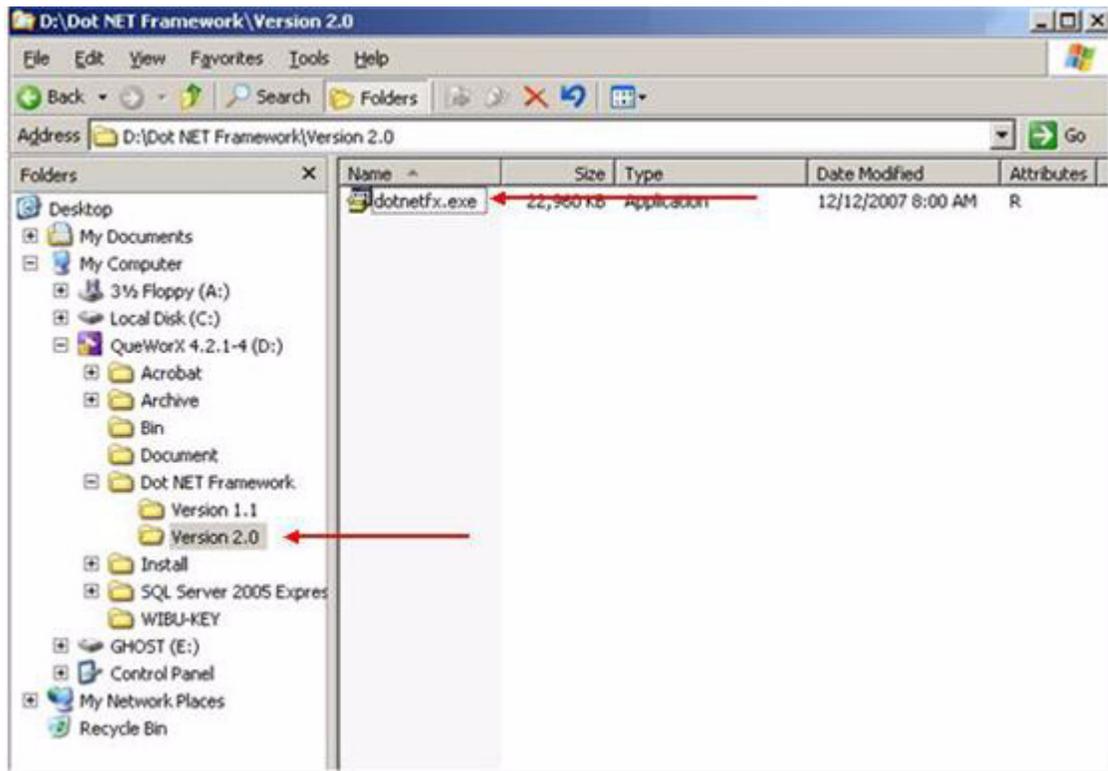
NOTE

.NET Framework Version 2.0 Installation

The Microsoft .NET Framework, version 2.0, is a software component of the Microsoft Windows operating system and you must install it to run QueWorX. Do the following to install the .NET Framework 2.0.

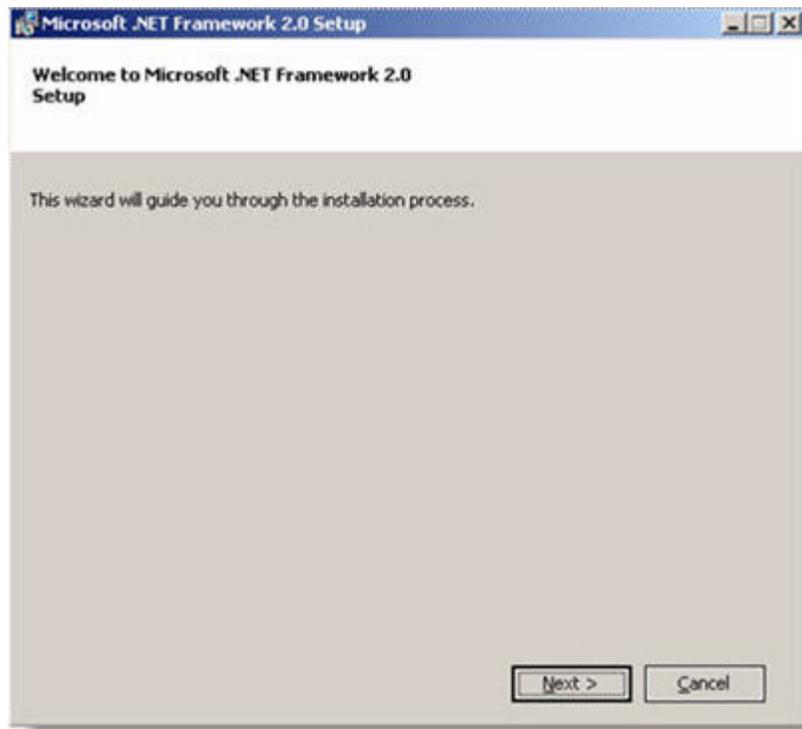
- Step 1** From the QueWorX CD, find the Dot Net Framework directory and double-click the **Version 2.0** folder to open it (Figure 3-18).

Figure 3-18 QueWorX CD—Dot Net Framework folder



- Step 2** Double-click **dotnetfx.exe**. The *Microsoft .NET Framework 2.0 Setup* dialog box appears (Figure 3-19).

Figure 3-19 Microsoft .NET Framework 2.0 Setup dialog box



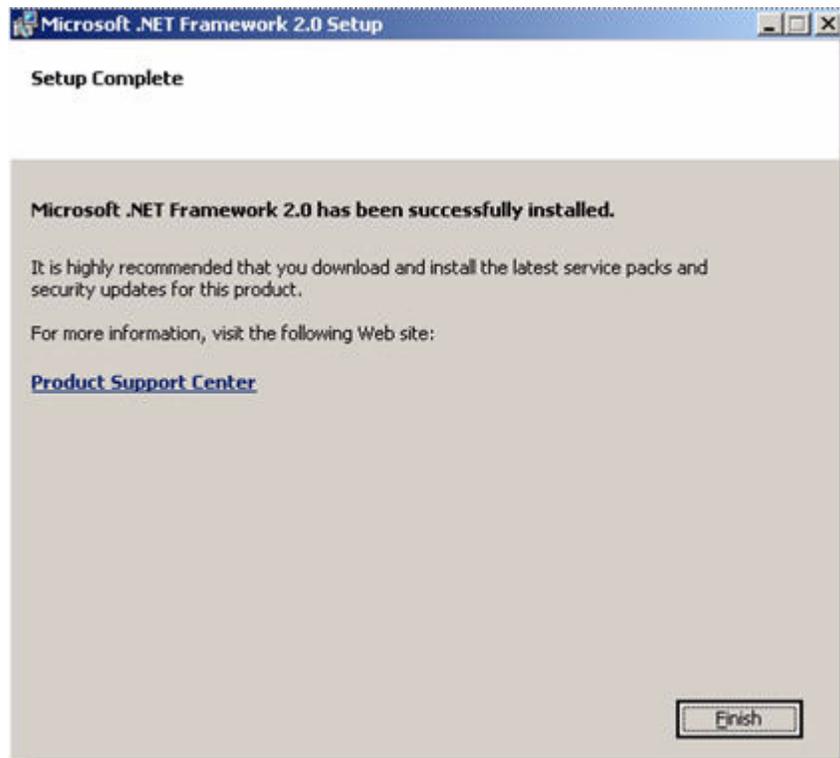
- Step 3** Click **Next** to continue the installation.
The End-User License Agreement dialog box appears (Figure 3-20).

Figure 3-20 End-User License Agreement dialog box



- Step 4** Read the **License Agreement**.
- Step 5** Select **I accept the terms**.
- Step 6** Click **Install**.
The installation begins.
- Step 7** The *Setup Complete* dialog box appears when the installation completes ([Figure 3-21](#)).

Figure 3-21 Setup Complete dialog box



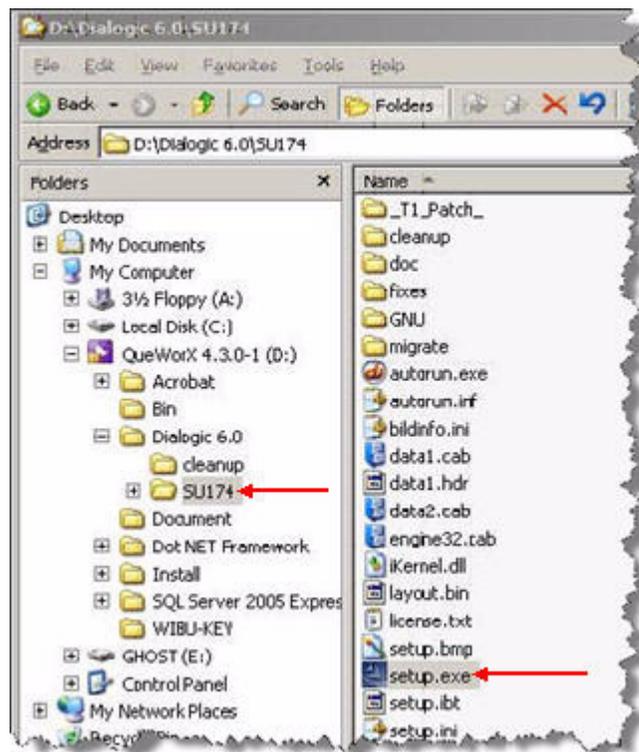
- Step 8** Click **Finish**.
The .Net installation is complete.

Dialogic System Release 6.0 Installation

CD1 contains the setup file you need to install Dialogic System Release 6.0. Do the following to install release 6.0.

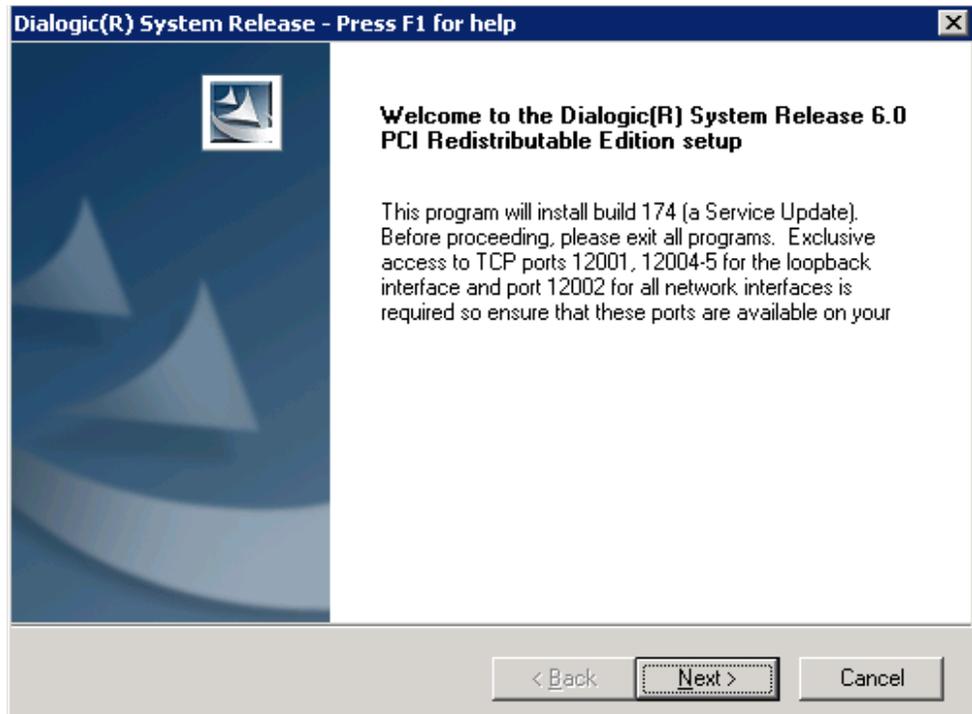
- Step 1** Insert CD1.
- Step 2** Select **QueWorX 4.3.0-1 > Dialogic 6 > SU174** to locate **setup.exe**.
- Step 3** Click **setup.exe** in the Dialogic 6.0/SU174 folder.([Figure 3-22](#)).

Figure 3-22 QueWorX window—Dialogic folder



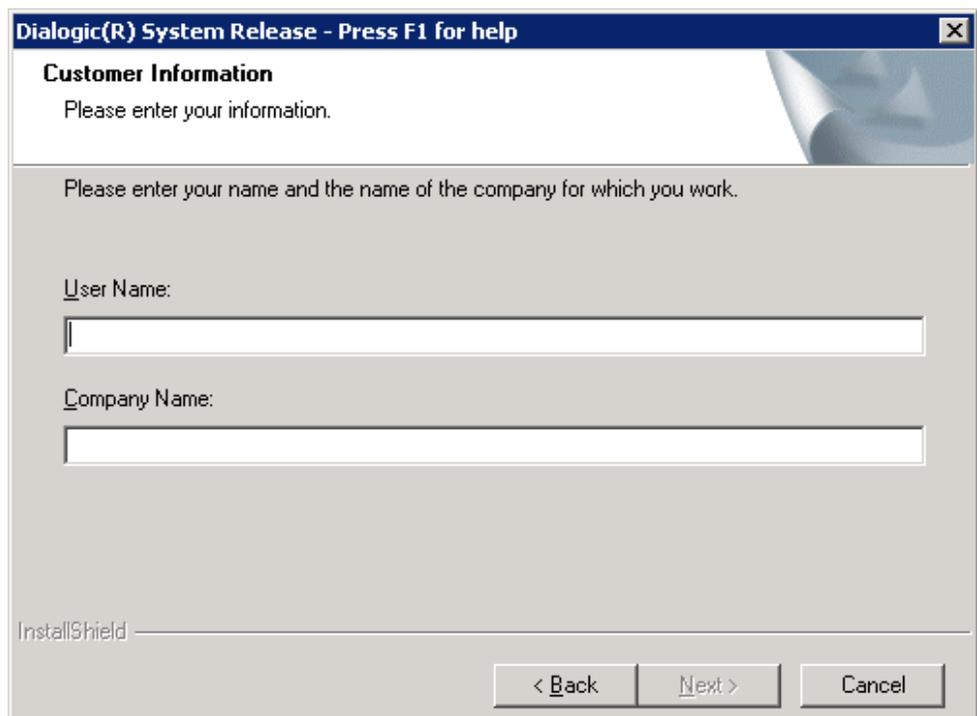
The Dialogic System Release Setup—Welcome dialog box appears ([Figure 3-23](#)).

Figure 3-23 Dialogic System Release Setup—Welcome dialog box



- Step 4** Click **Next** to continue.
The Customer Information dialog box appears (Figure 3-24).

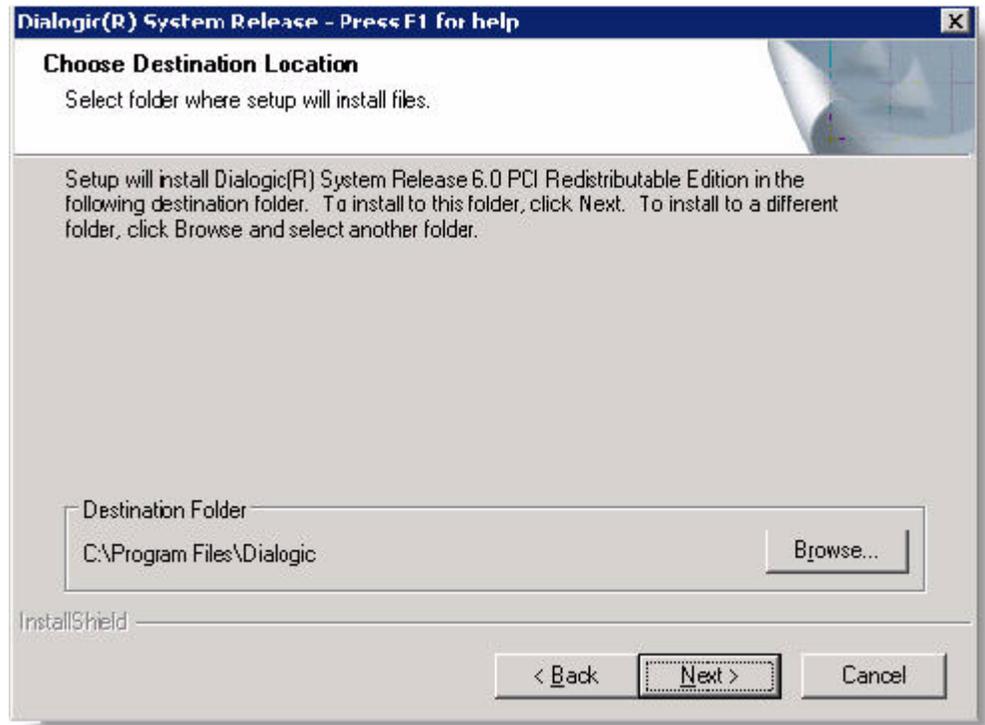
Figure 3-24 Customer Information dialog box



Step 5 Enter the User Name and Company Name.

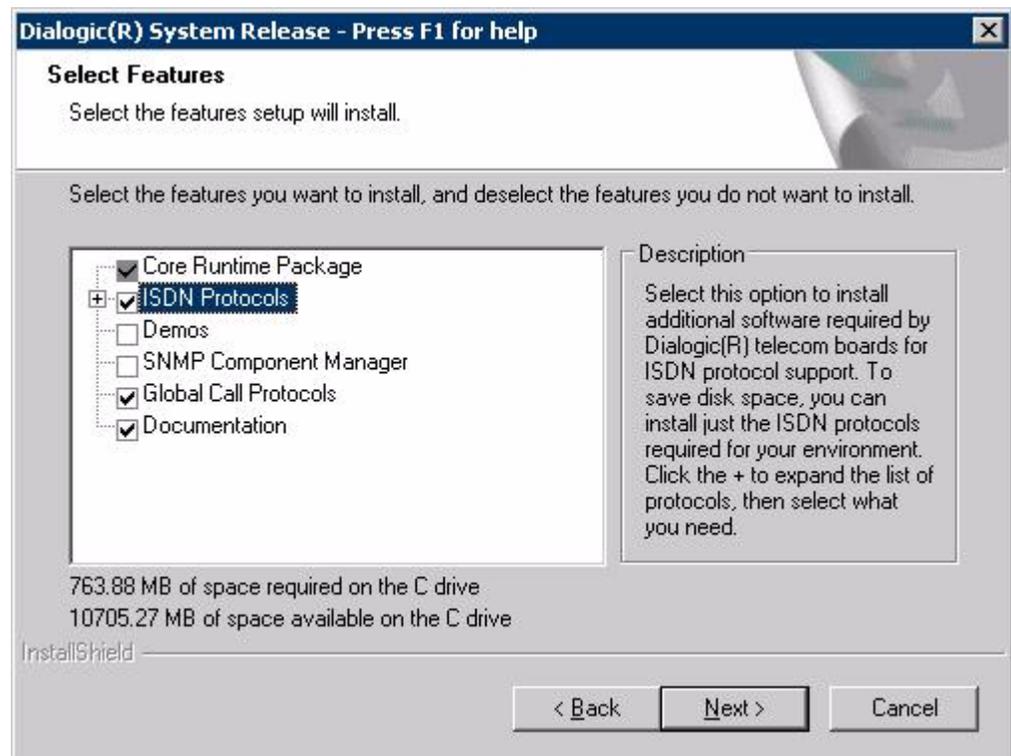
Step 6 Click **Next** to continue.
The Choose Destination Location dialog box appears (Figure 3-25).

Figure 3-25 Choose Destination dialog box



Step 7 Click **Next** to accept the default destination directory.
The Select Features dialog box appears (Figure 3-26).

Figure 3-26 Select Features dialog box



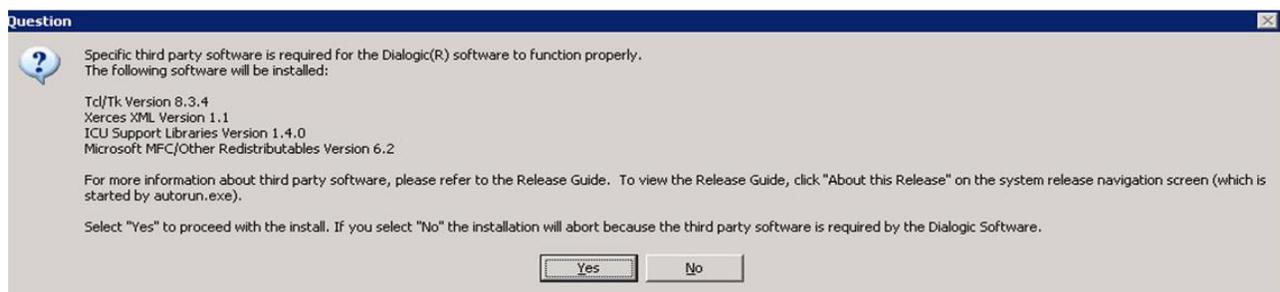
Step 8 Select the features to install:

- ISDN Protocols
- Global Call Protocols
- Documentation

Step 9 Click **Next** to continue.

The Installation of Third Party Yes/No decision dialog box appears.(Figure 3-27).

Figure 3-27 Setup Options dialog box



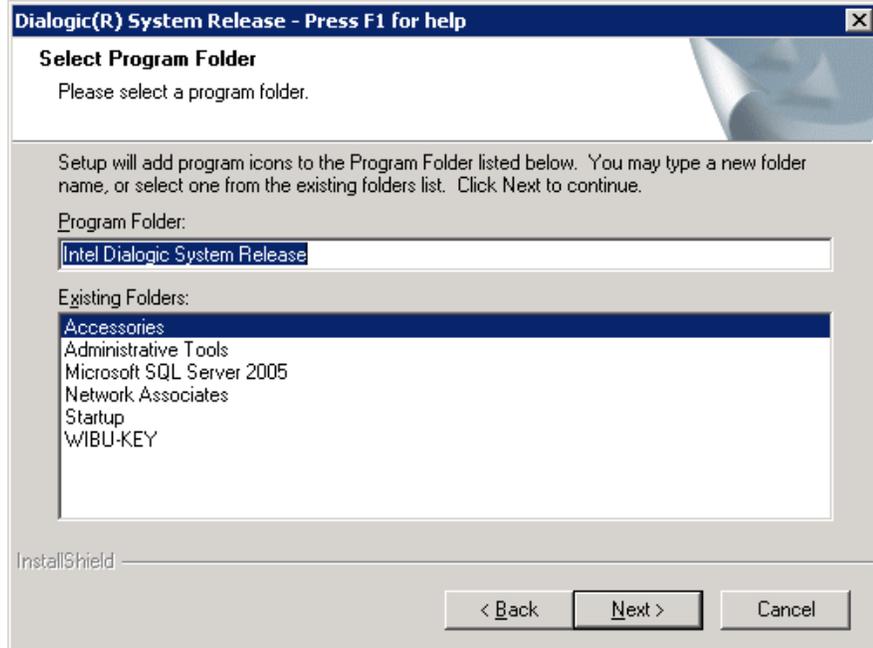
Step 10 Click **Yes** to continue.

A dialog box appears with the notice that the installation did not find Java Runtime Environment (JRE).

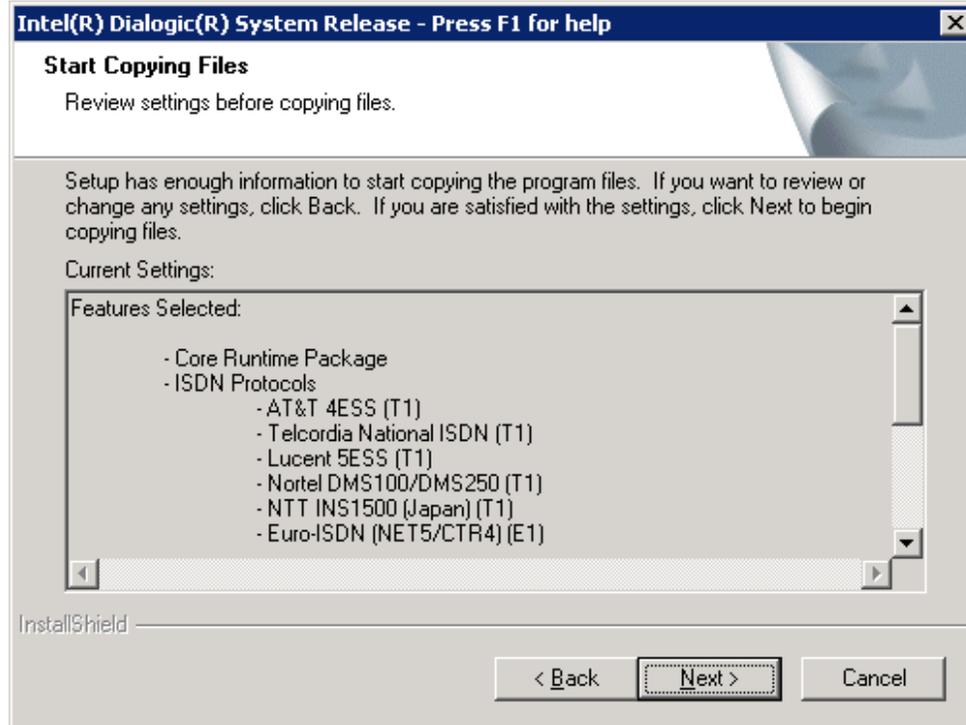
Figure 3-28 Java Runtime environment not found dialog box



The Select Program Folder dialog box appears.

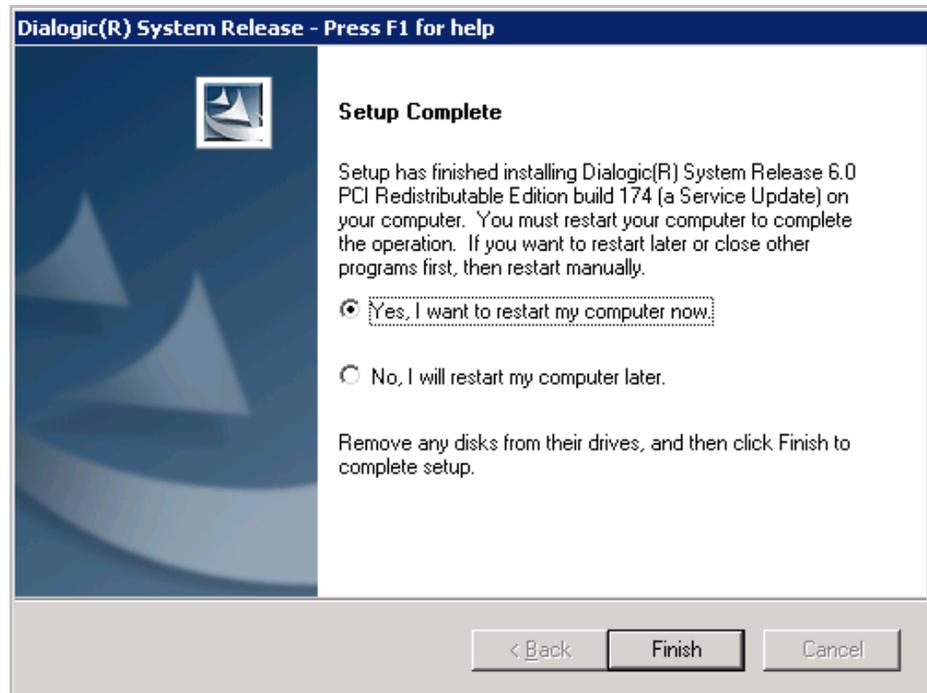


- Step 11** Click **Next** to continue.
Start Copying Files Window appears.

Figure 3-29 Start Copying Files Window

- Step 12** Click **Next** to continue.
Setup Complete appears.

Figure 3-30 Setup Complete



Step 13 Select **Yes, I want to restart my computer now.**

Step 14 Click **Finish.**



When the server reboots you may see the following for each board installed.

Figure 3-31 Welcome to the New Hardware Wizard



Step 15 Select **No, not this time**.

Step 16 Click **Next**.

The Found New Hardware Wizard dialog box appears.

Figure 3-32 Hardware Installation - Installation CD



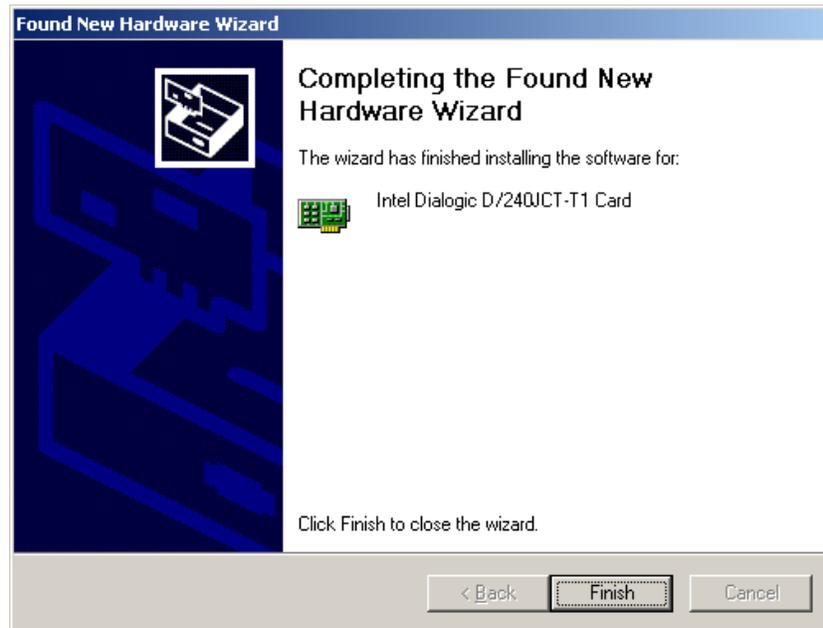
Step 17 Select **Install the software automatically (Recommended)**.

Step 18 Click **Next** to install the software automatically. The Security Alert dialog box appears.



Step 19 Click **Yes** to Install Driver for Dialogic board. Completing the Found New Hardware Wizard dialog box appears.

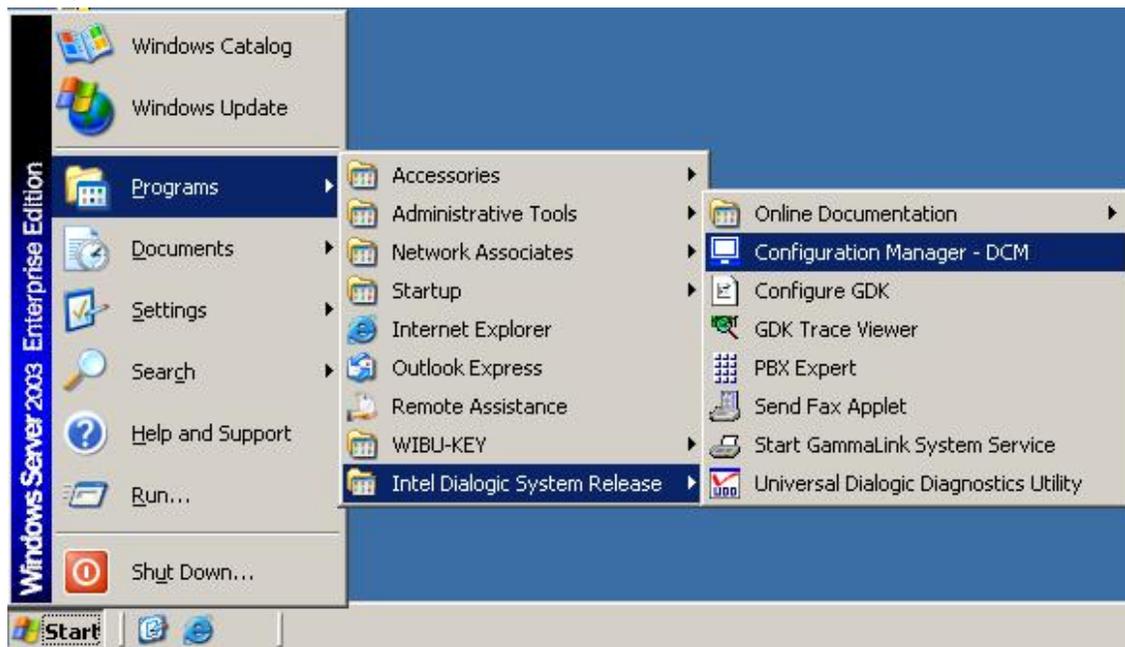
Figure 3-33 Completing the Found New Hardware Wizard dialog box



Step 20 Click **Finish**.

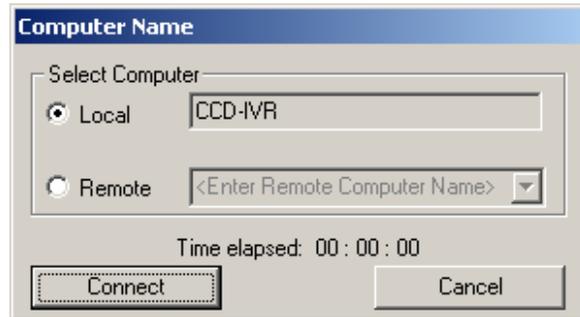
Step 21 Run Dialogic Configuration Manager: Start > Programs > Intel Dialogic System Release > Configuration Manager DCM.

Figure 3-34 Run Dialogic Path



Computer Name dialog box appears.

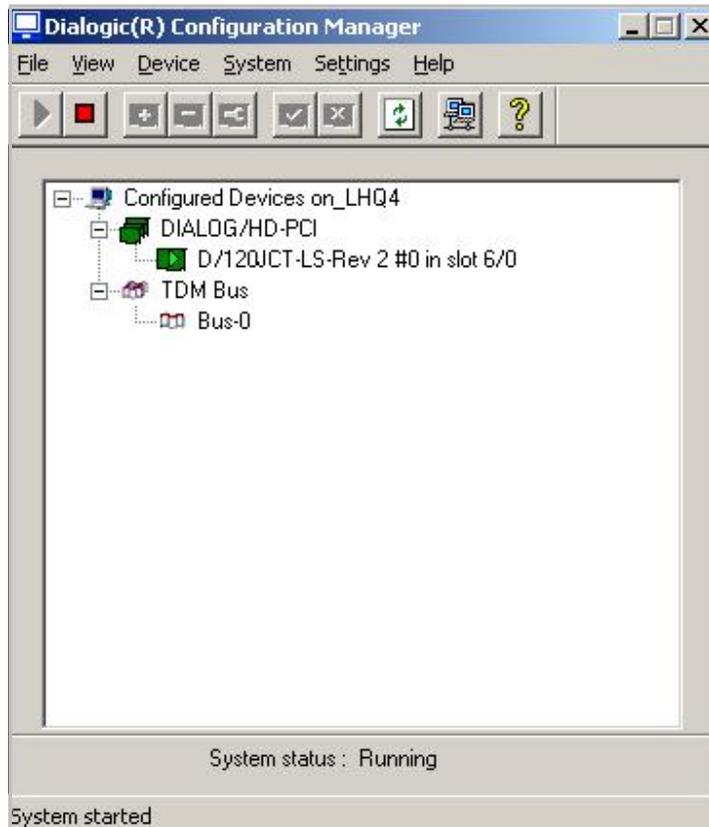
Figure 3-35 Select Computer dialog box



Step 22 Select **Local**.

Step 23 Click **Connect**.

The Dialog(R) Configuration window appears.



Step 24 Click the green arrow to initialize the board.



NOTE

This may take several minutes depending on how many boards are installed.

Microsoft SQL Server 2005 Express Installation

Microsoft SQL Server 2005 Express Edition is an easy to use database platform. It employs a graphical user interface (GUI) for easy installation and provides other free tools, such as the SQL Server Management Studio Express Edition that simplifies basic database operations. Do the following to install the SQL Server 2005 Express Edition.

- Step 1** Insert the QueWorX CD1, and open the **SQL Server 2005 Express SP2** folder.
- Step 2** Double-click the **installSqlExpress.bat** file.
The DOS Command window appears (Figure 3-36).



IMPORTANT

DO NOT RUN SQLEXP.R.EXE DIRECTLY.
The batch file has default flags set to limit the number of steps.

Figure 3-36 DOS Command window

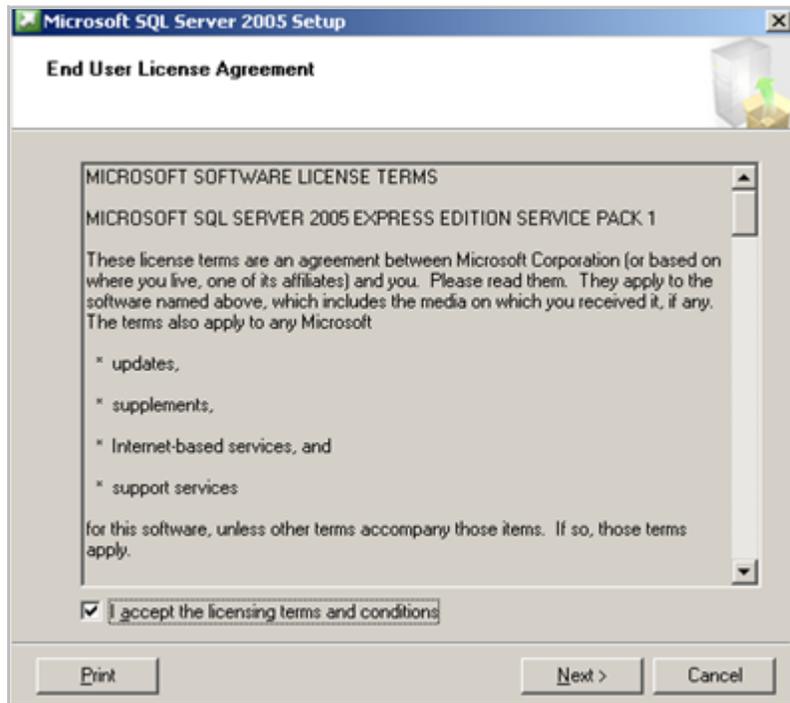
```
C:\WINNT\system32\cmd.exe

Installing SQL Server 2005 Express

A strong password is required for the 'sa' user account.
** Please write down this password and keep it in a safe place! **
Please enter a 'sa' password then press the Enter key: sa
```

- Step 3** Type an **'sa'** (system administrator) password.
- Step 4** Press **ENTER**.
The End User License Agreement dialog box appears (Figure 3-37).

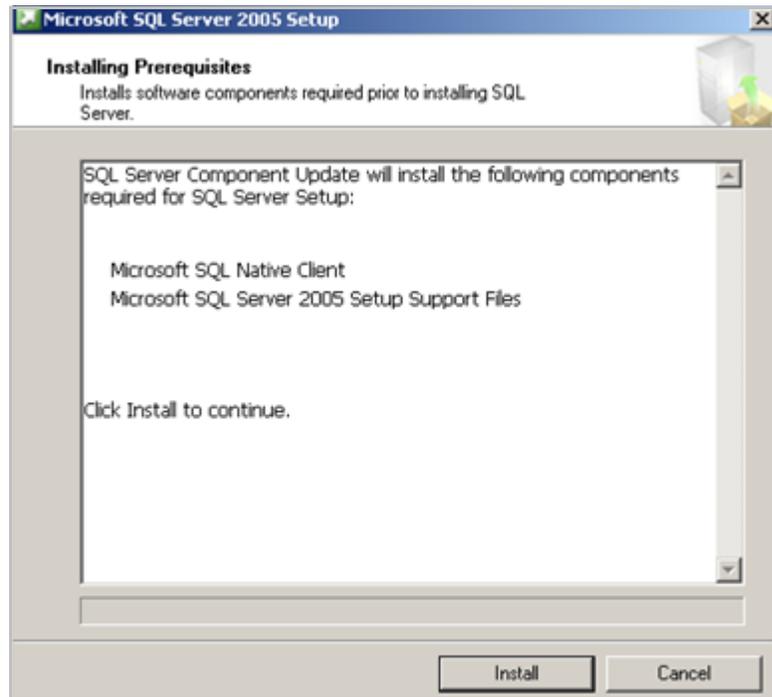
Figure 3-37 End User License Agreement dialog box



Step 5 Select **I accept the licensing terms and conditions**.

Step 6 Click **Next**.
The Installing Prerequisites dialog box appears ([Figure 3-38](#)).

Figure 3-38 Installing Prerequisites dialog box



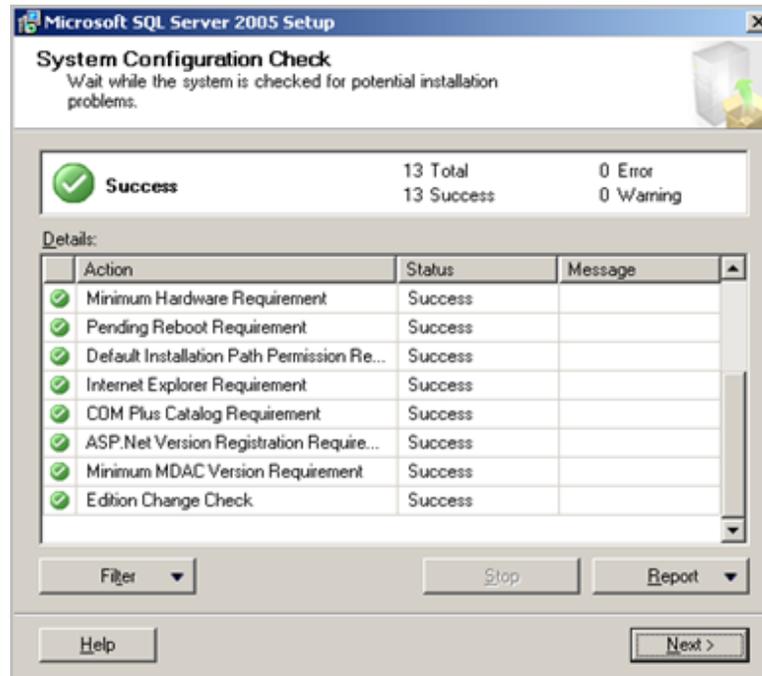
- Step 7** Click **Install**.
The Welcome to the Microsoft SQL Server Installation Wizard dialog box appears (Figure 3-39).

Figure 3-39 Microsoft SQL Server Installation Wizard dialog box



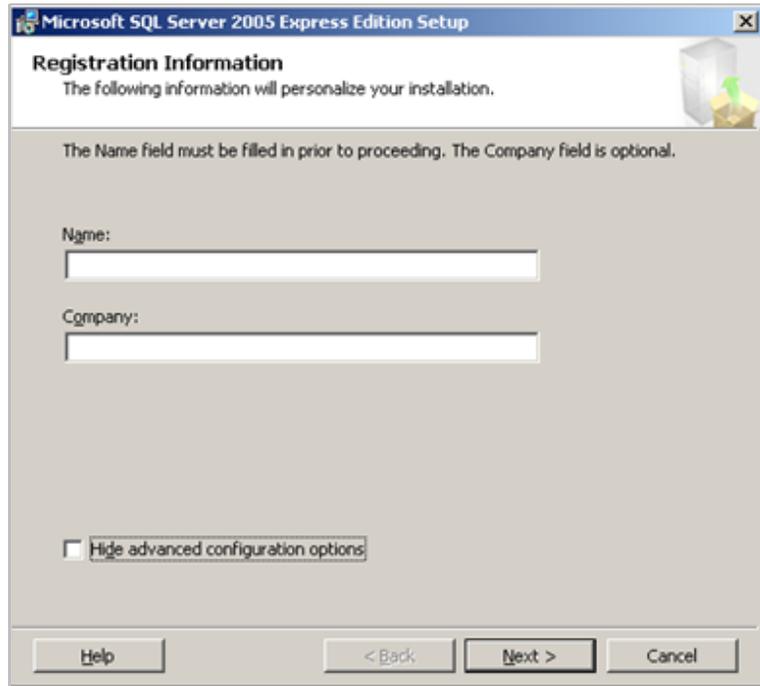
- Step 8** Click **Next**.
The System Configuration Check dialog box appears
(Figure 3-40).

Figure 3-40 System Configuration Check dialog box



- Step 9** Click **Next**.
The Registration Information dialog box appears
(Figure 3-41).

Figure 3-41 Registration Information dialog box



The screenshot shows the "Registration Information" dialog box from the Microsoft SQL Server 2005 Express Edition Setup. The title bar reads "Microsoft SQL Server 2005 Express Edition Setup". The main heading is "Registration Information" with a sub-heading "The following information will personalize your installation." Below this, a note states: "The Name field must be filled in prior to proceeding. The Company field is optional." There are two text input fields: "Name:" and "Company:". At the bottom, there is a checkbox labeled "Hide advanced configuration options" which is currently unchecked. The dialog box has four buttons at the bottom: "Help", "< Back", "Next >", and "Cancel".

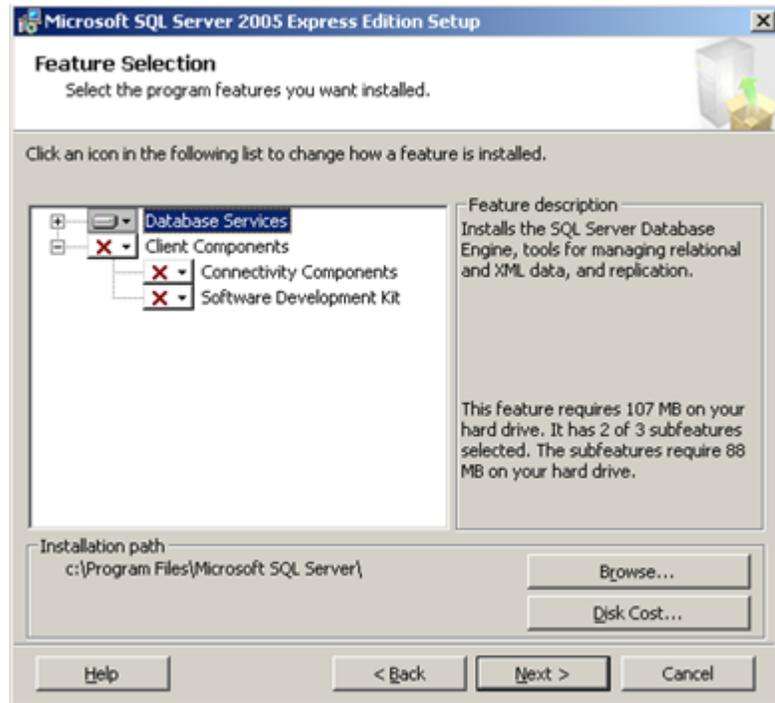
Step 10 Type **Name** and **Company**.

Step 11 Un-select **Hide advanced configuration options**.

Step 12 Click **Next**.

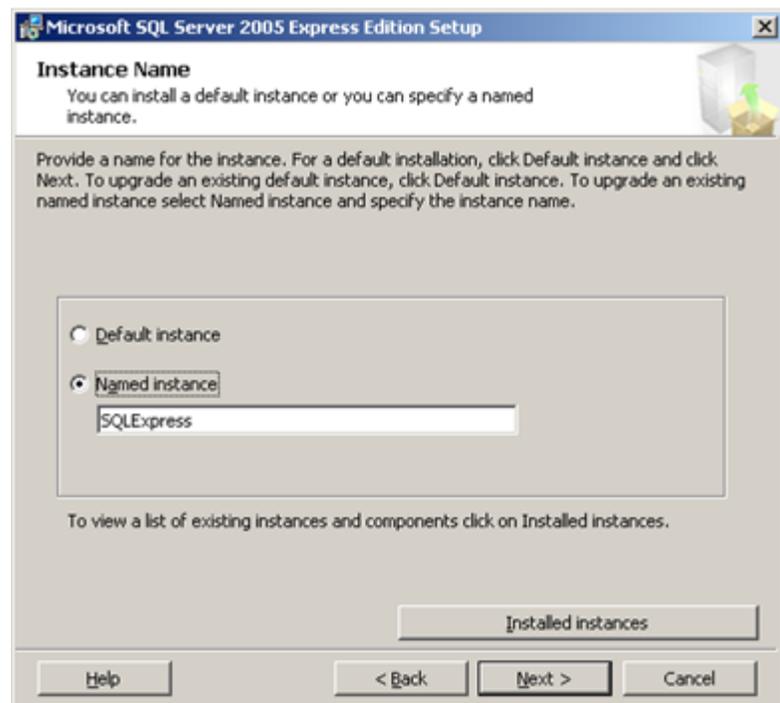
The Feature Selection dialog box appears ([Figure 3-42](#)).

Figure 3-42 Feature Selection dialog box with Defaults



- Step 13** Click **Next**.
The Instance Name dialog box appears (Figure 3-43).

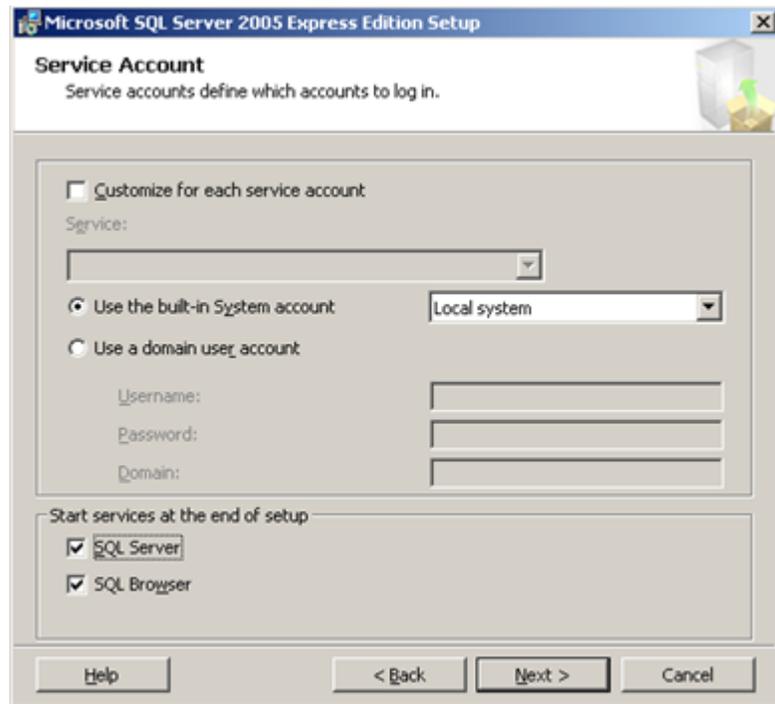
Figure 3-43 Instance Name dialog box



Step 14 Ensure the selection is **Named Instance** and **SQLExpress**.

Step 15 Click **Next**.
The Service Account dialog box appears (Figure 3-44).

Figure 3-44 Service Account dialog box



Step 16 Ensure the options match those in (Figure 3-44).

Step 17 Click **Next**.
The Authentication Mode dialog box appears (Figure 3-45).

Figure 3-45 Authentication Mode dialog box



Step 18 Verify selection of **Mixed Mode**.

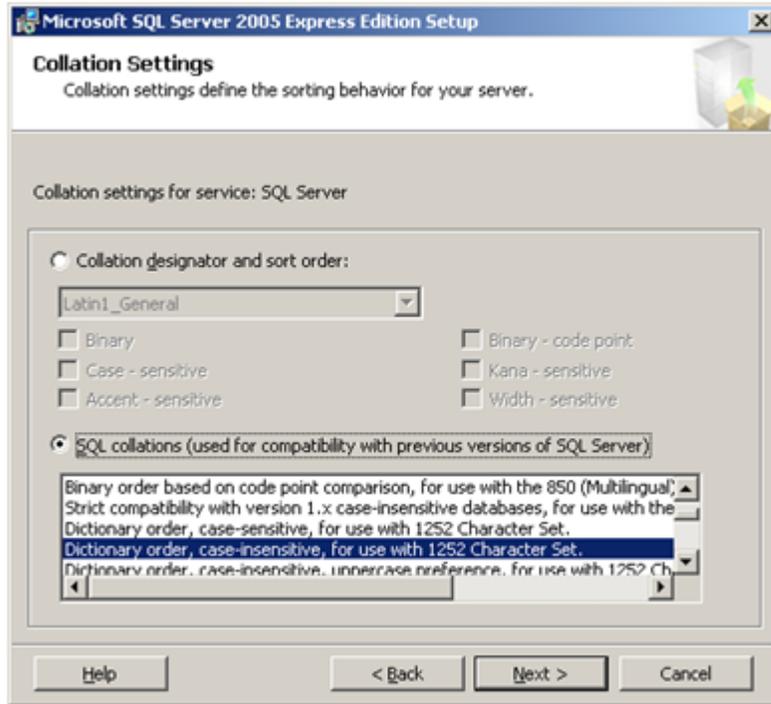
Step 19 Enter a password for the 'sa' user in **Enter password** and **Confirm password**.



Remember this password.

Step 20 Click **Next**.
The Collation Settings dialog box appears (Figure 3-46).

Figure 3-46 Collation Settings dialog box



Step 21 Verify selection of **SQL collations**.

Step 22 Click **Next**.
The Configuration Options dialog box appears (Figure 3-47).



Backwards compatibility with previous databases requires this selection.

Figure 3-47 Configuration Options dialog box

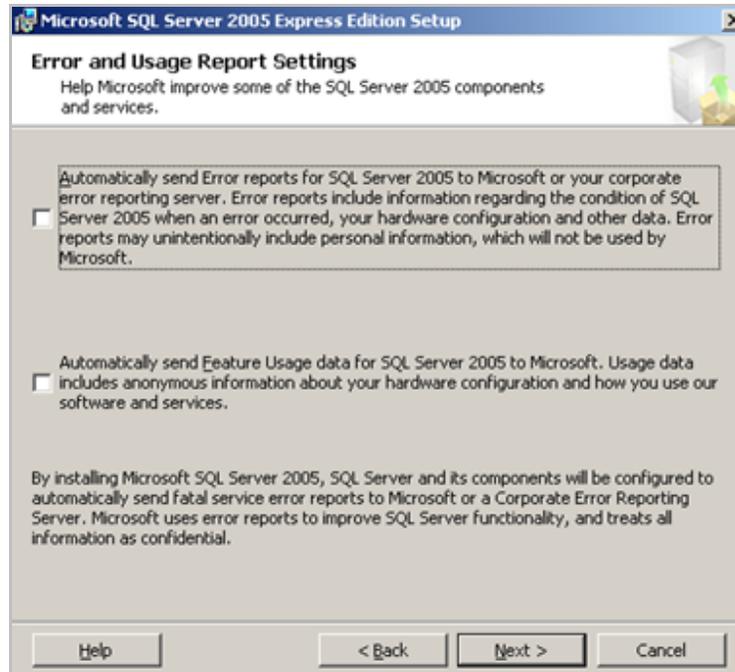


Step 23 Ensure selection of **Enable User Instances**.

Step 24 Click **Next**.

The Error and Usage Report Settings dialog box appears (Figure 3-48).

Figure 3-48 Error & Usage Report Settings dialog box



Step 25 Click **Next**.

The Ready to Install dialog box appears (Figure 3-49).

Figure 3-49 Ready to Install dialog box



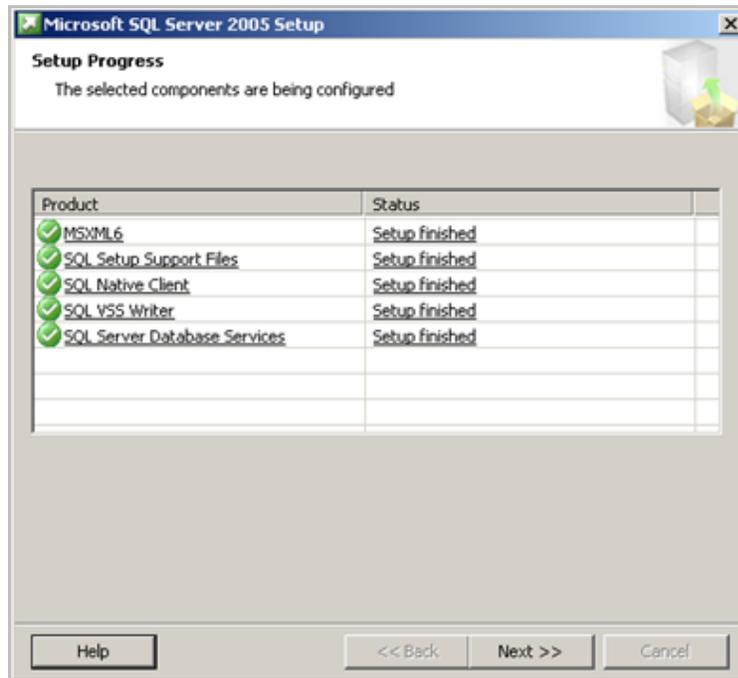
Step 26 Click **Install** and the installation begins.
The Setup Progress dialog box appears (Figure 3-50).



NOTE

Next button is unavailable until the setup is complete.

Figure 3-50 Setup Progress dialog box



Step 27 Click **Next**.
The Completing Microsoft SQL Server 2005 Setup dialog box appears (Figure 3-51).

Figure 3-51 Completing SQL Server 2005 Setup dialog box



Step 28 Click **Finish** to complete the installation and close the DOS window.



REFERENCE

Use *SQL Server Management Studio Express* (included with *SQL Server 2005*) to administer components of the Microsoft SQL Server. Refer to "[SQL Server Management Studio Express Installation](#)" to install the *SQL Server Management Studio Express* application.

Uninstalling SQL Server 2005 Express

Do the following to completely uninstall Microsoft SQL Server 2005 Express Edition.

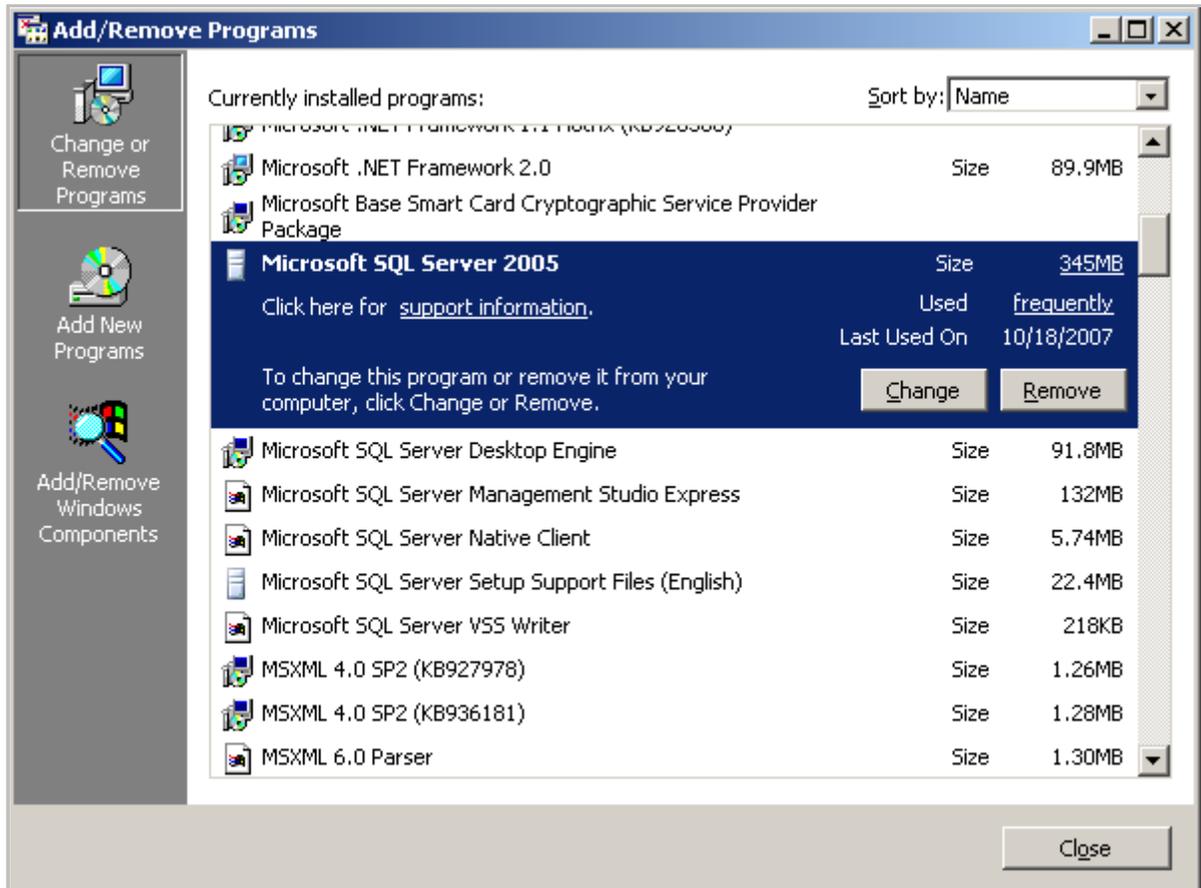
Step 1 Click **Start, Settings, Control Panel** (Figure 3-52).

Figure 3-52 Start, Settings, Control Panel



Step 2 Start the **Add/Remove Programs** from the **Control Panel**. The Add/Remove Programs dialog box appears (Figure 3-53).

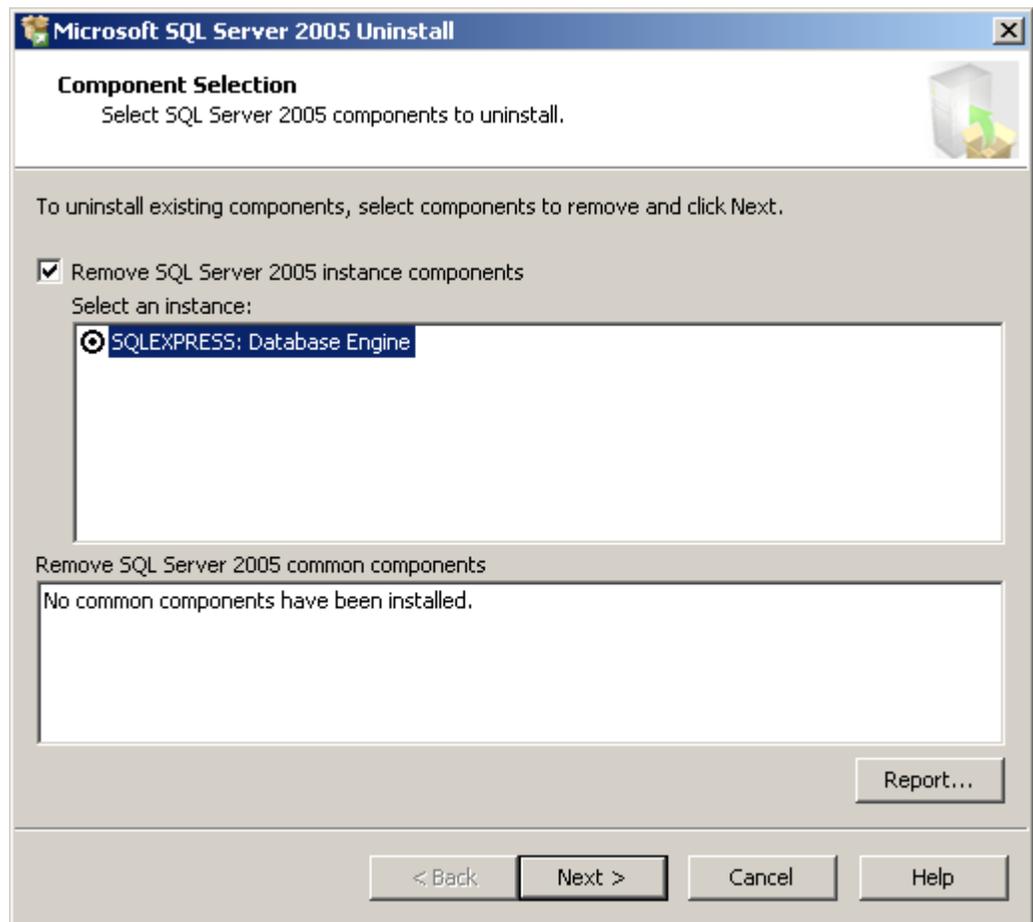
Figure 3-53 Add/Remove Programs dialog box



Step 3 Select **Microsoft SQL Server 2005**.

Step 4 Click **Remove**.
The Component Selection dialog box appears (Figure 3-54).

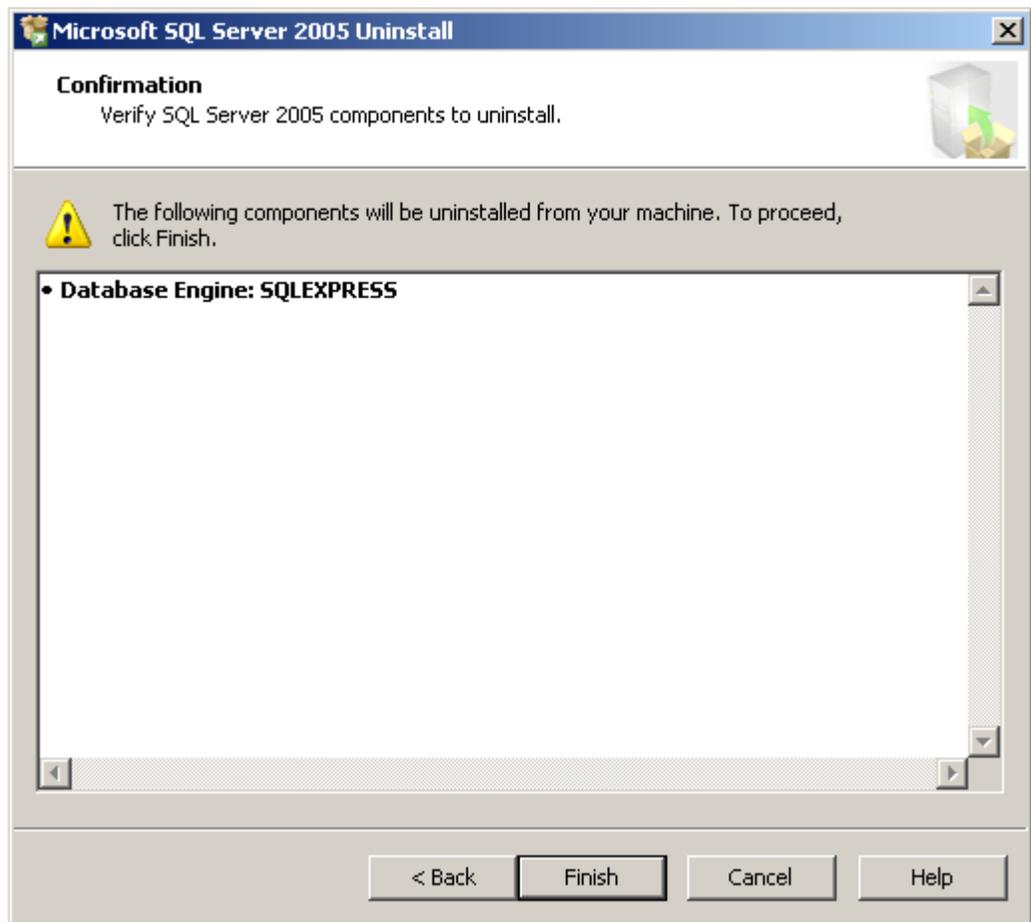
Figure 3-54 Component Selection dialog box



Step 5 Select **SQLEXPRESS**: Database Engine.

Step 6 Click **Next**.
The Confirmation dialog box appears (Figure 3-55).

Figure 3-55 Confirmation dialog box



Step 7 Click **Finish**.

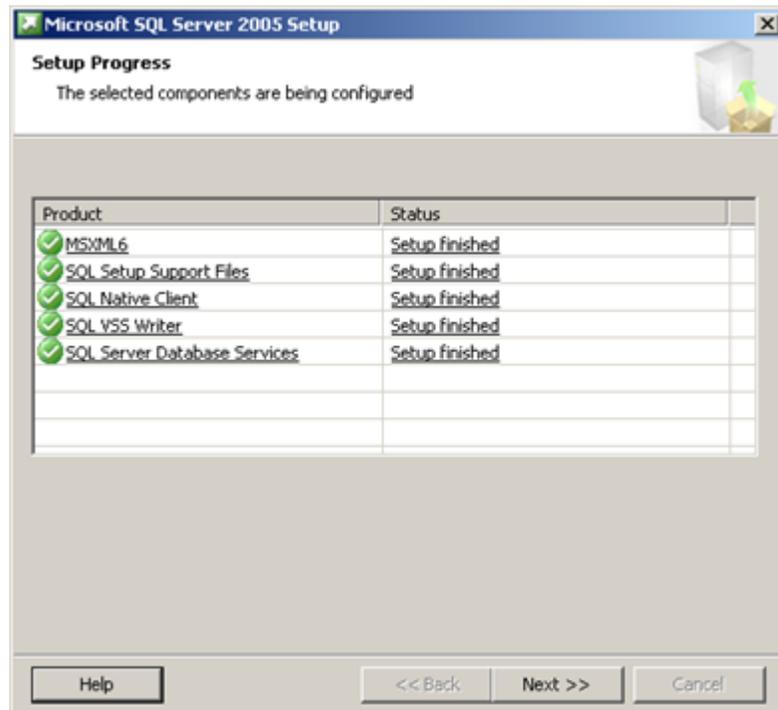


NOTE

The removal of SQL server 2005 Express application begins.

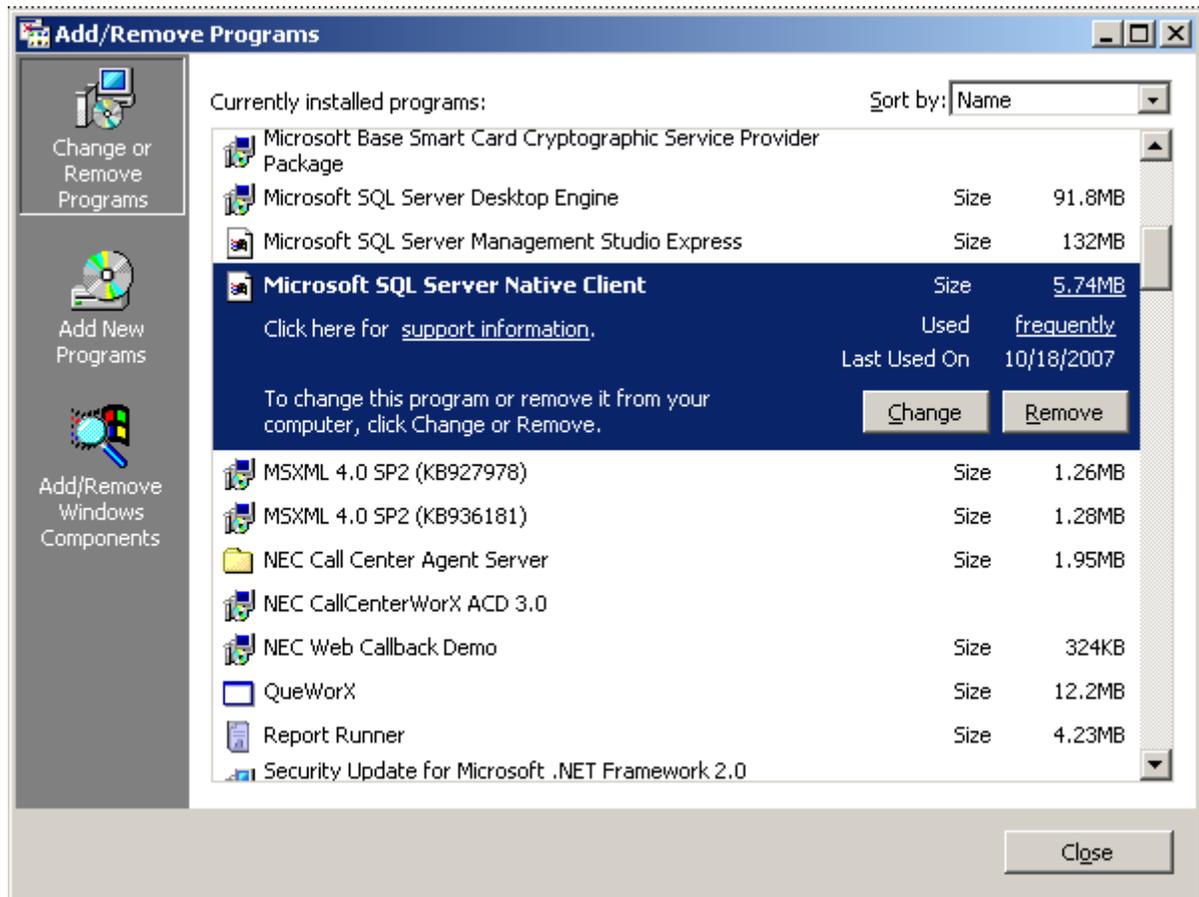
An uninstall/setup dialog box appears (Figure 3-56) with a list of components being removed and the progress of the uninstall.

Figure 3-56 Uninstall/Setup Progress dialog box



- Step 8** When finished, click **Next**.
The Add/Remove Programs dialog box appears again (Figure 3-57).

Figure 3-57 Add/Remove Programs dialog box —remove native client



Step 9 Select **SQL Server Native Client** and click **Remove**. When the client is uninstalled a confirmation dialog box appears (Figure 3-58).

Figure 3-58 Confirmation dialog box



Step 10 Click **Yes**.
SQL Server 2005 Express is uninstalled. If previously installed, the SQL

Server Management Studio Express may also be uninstalled now, if desired.



Refer to [“Uninstalling SQL Server Management Studio”](#) on page 3-51 for detailed instructions.

SQL Server Management Studio Express Installation

SQL Server Management Studio Express is a free administration tool provided by Microsoft that helps users manage SQL Server 2005 Express. Use the following steps to install SQL Server Management Studio Express.

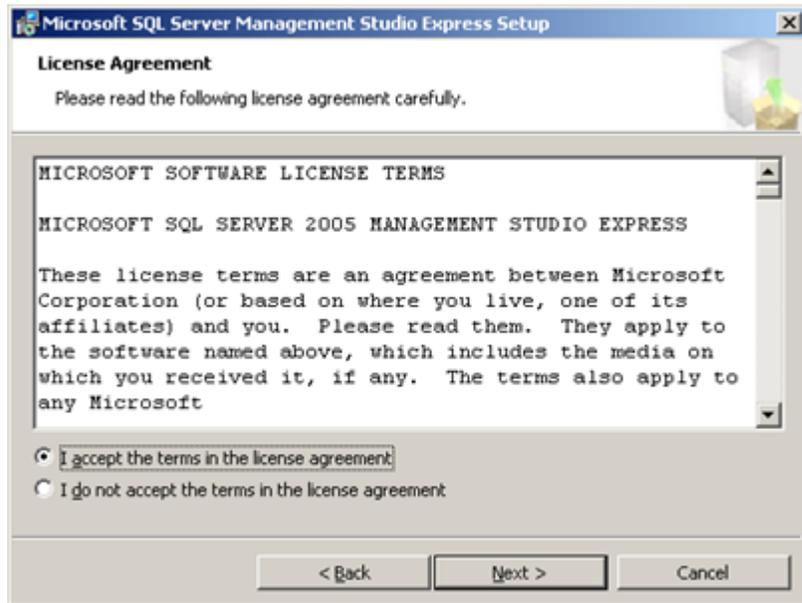
- Step 1** Open Windows Explorer.
- Step 2** Select the **C:** drive.
- Step 3** Double-click **SQL Server 2005 Express SP2** folder.
- Step 4** Double-click the **SQLServer2005_SSMSEE.msi** file.
The Install Wizard dialog box appears ([Figure 3-59](#)).

Figure 3-59 Install Wizard dialog box



- Step 5** Click **Next**.
The License Agreement dialog box appears ([Figure 3-60](#)).

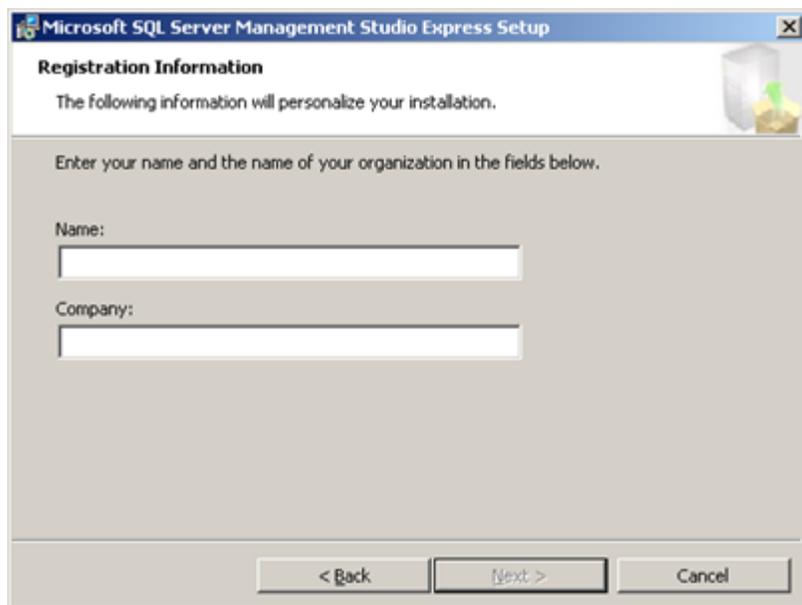
Figure 3-60 License Agreement dialog box



Step 6 Select **I accept the terms in the license agreement**.

Step 7 Click **Next**.
The Registration Information dialog box appears (Figure 3-61).

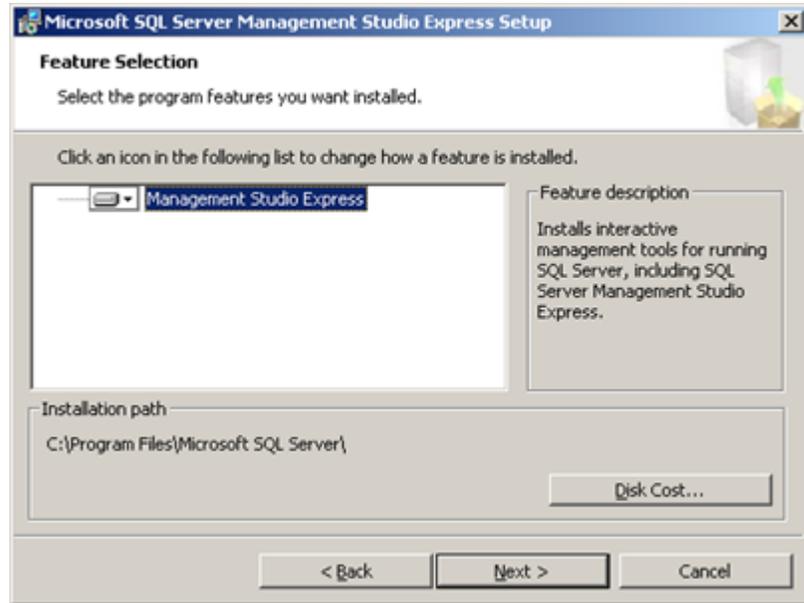
Figure 3-61 Registration Information dialog box



Step 8 Type **Name** and **Company**.

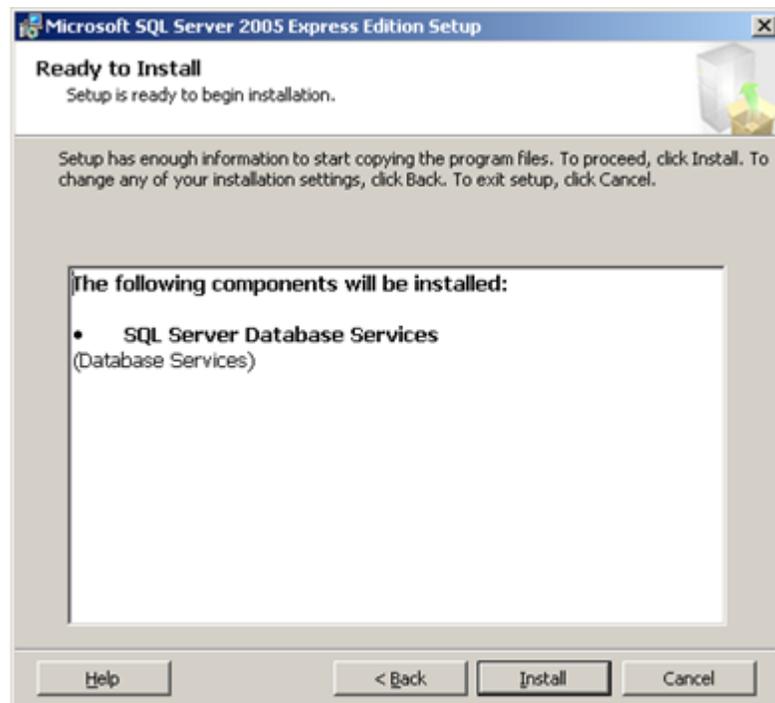
- Step 9** Click **Next**.
The Feature Selection dialog box appears (Figure 3-62).

Figure 3-62 Feature Selection dialog box



- Step 10** Click **Next**.
The Ready to Install the Program dialog box appears (Figure 3-63).

Figure 3-63 Ready to Install dialog box



Step 11 Click **Install**.



NOTE

No further interaction is required until the Installation Complete dialog box appears (Figure 3-64) when the installation is finished.

Figure 3-64 Installation complete dialog box



Step 12 Click **Finish**.

The SQL Server Management Studio Express installation is complete.

SQL Server Management Studio Express

Use the following path to start SQL Server Management Studio Express:

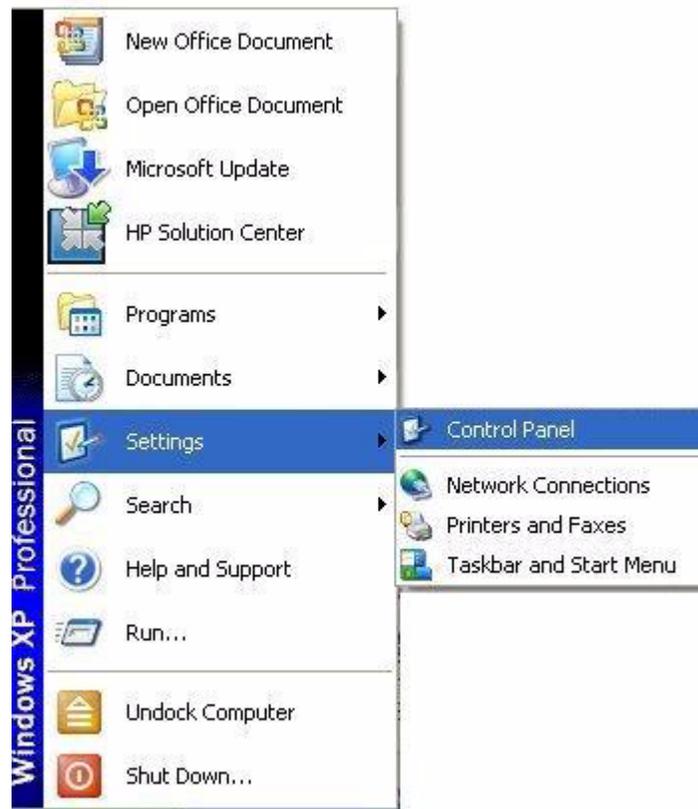
Start > Programs > Microsoft SQL Server 2005 > SQL Server Management Studio Express

Uninstalling SQL Server Management Studio

Do the following to uninstall the SQL Server Management Studio, if desired, after uninstalling the SQL Server 2005 Express.

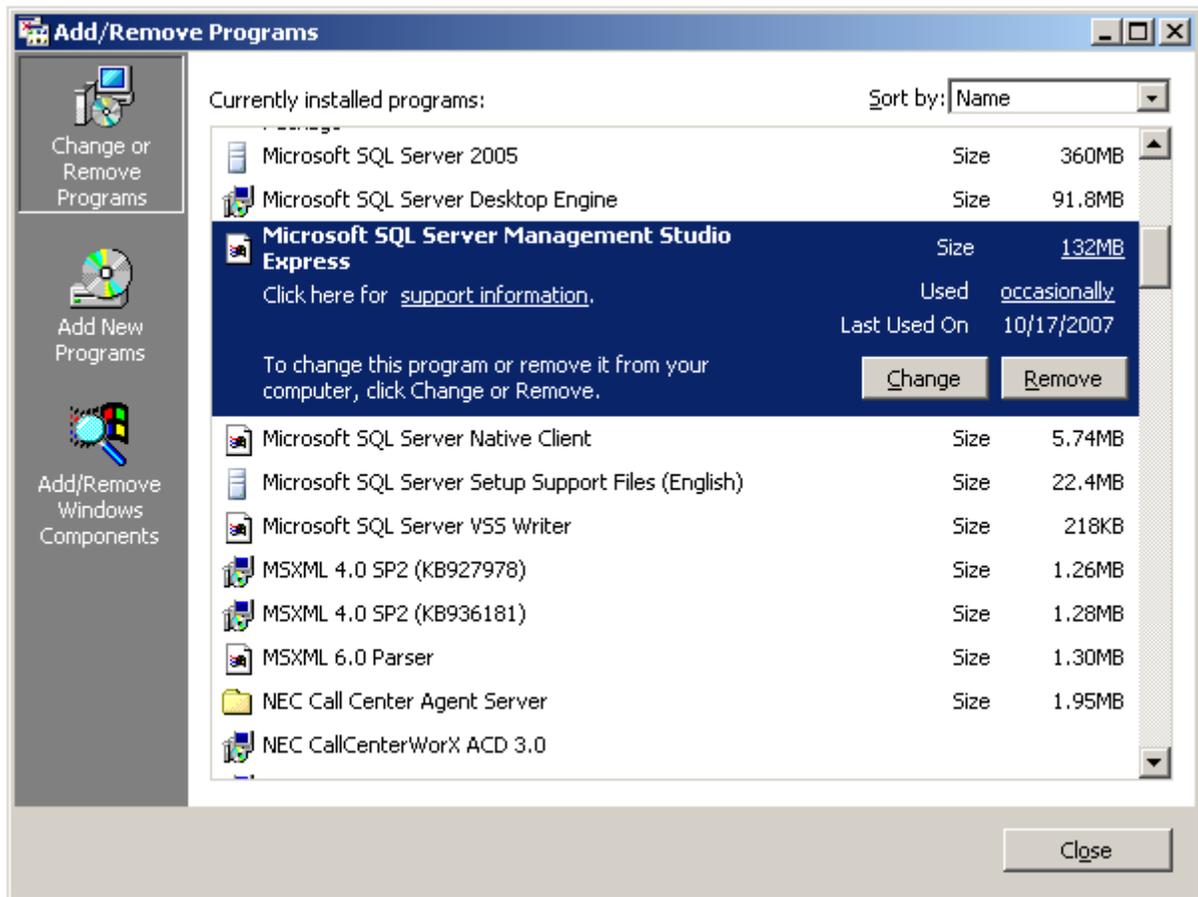
Step 1 Click **Start, Settings, Control Panel** (Figure 3-65).

Figure 3-65 Start, Settings, Control Panel



Step 2 Start **Add/Remove Programs** from **Control Panel**. The Add/Remove Programs dialog box appears (Figure 3-66).

Figure 3-66 Add/Remove Programs dialog box

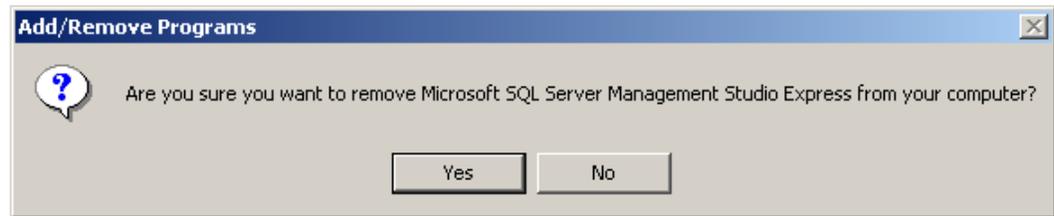


Step 3 Select **Microsoft SQL Server Management Studio Express**.

Step 4 Click **Remove**.

A confirmation dialog box appears when the SQL Server Management Studio Express is uninstalled (Figure 3-67).

Figure 3-67 Confirmation dialog box



Step 5 Click **Yes** to confirm the application removal.



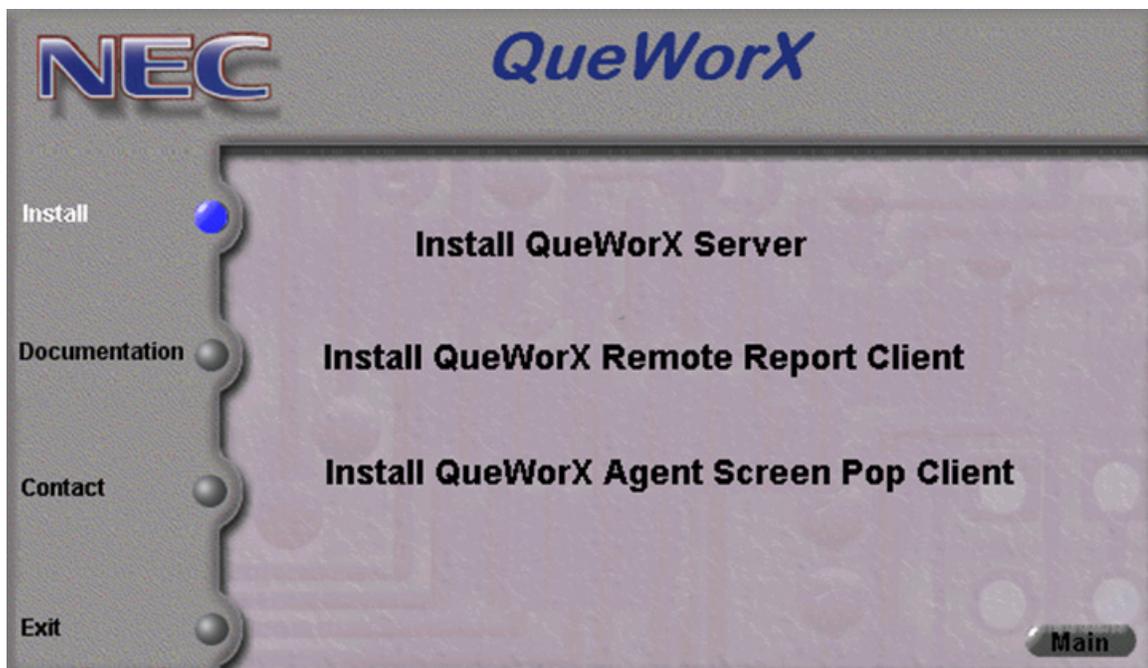
NOTE

Microsoft SQL Server Management Studio Express is now uninstalled.

QueWorX Installation

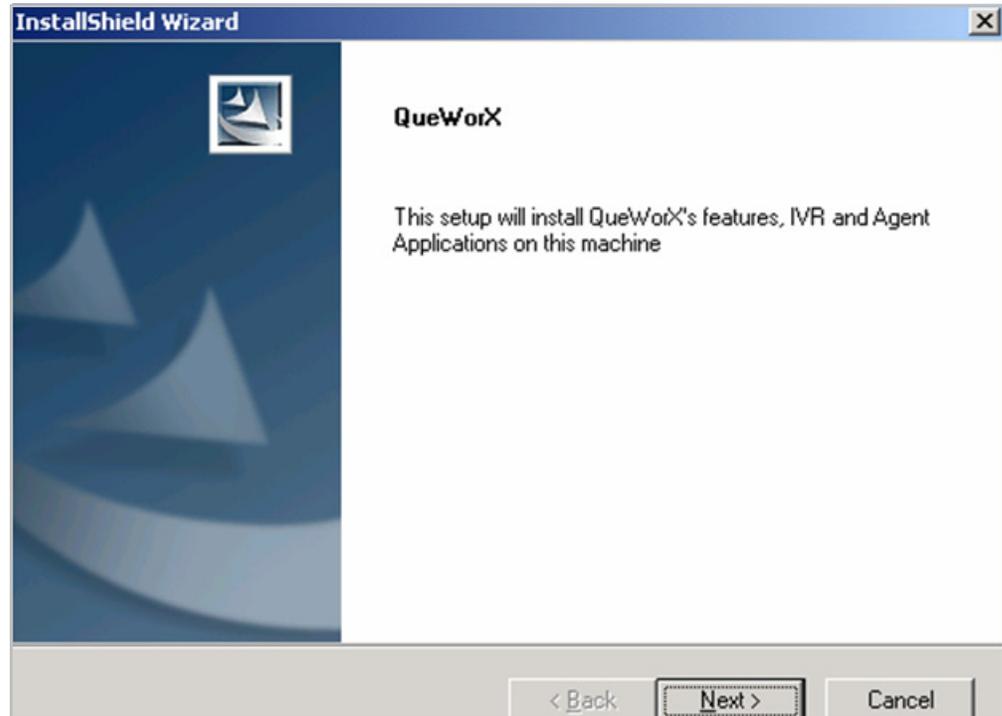
Step 1 Insert the CD1 CD-ROM into an available CD drive.
The QueWorX Server installation screen appears (Figure 3-68).

Figure 3-68 QueWorX Server Installation screen



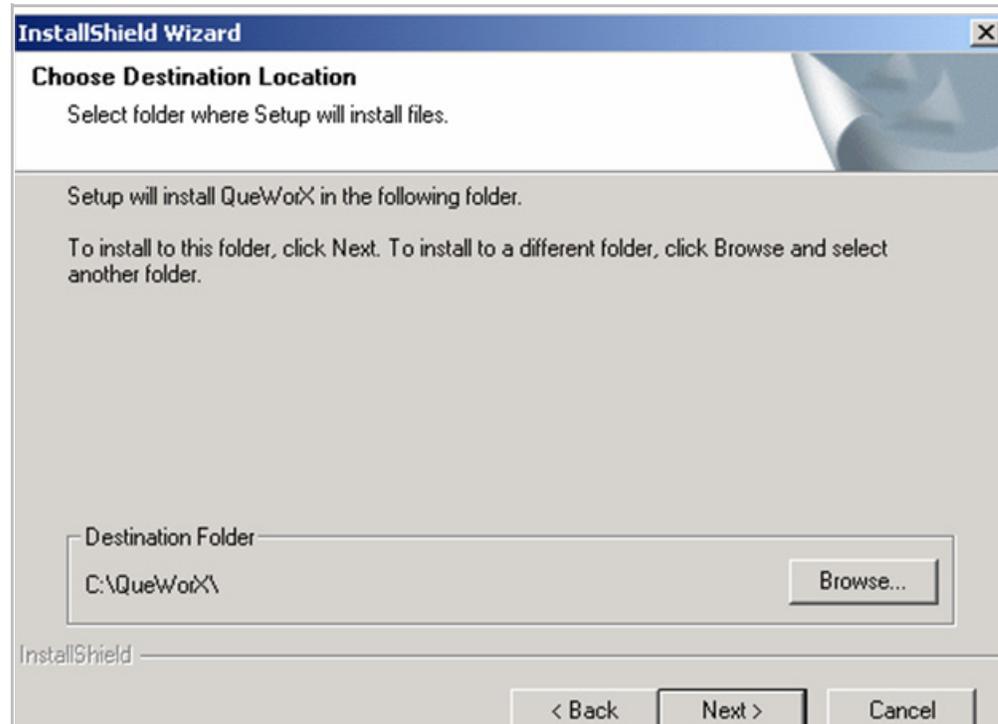
Step 2 Select **Install**, then **Install QueWorX Server**.
The QueWorX Server Welcome dialog box appears (Figure 3-69).

Figure 3-69 QueWorX Server Welcome dialog box



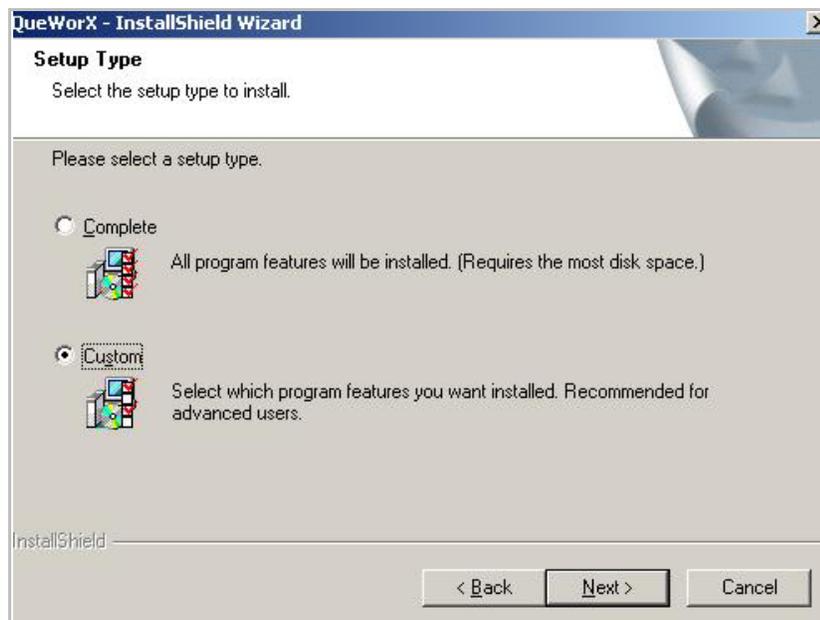
- Step 3** Click **Next**.
The QueWorX Server Choose Destination Location appears (Figure 3-70).

Figure 3-70 QueWorX Server Choose Destination Location dialog box



- Step 4** Click **Next** to accept the default destination location. The QueWorX Server Setup Type dialog box appears (Figure 3-71).

Figure 3-71 QueWorX Server Setup Type dialog box

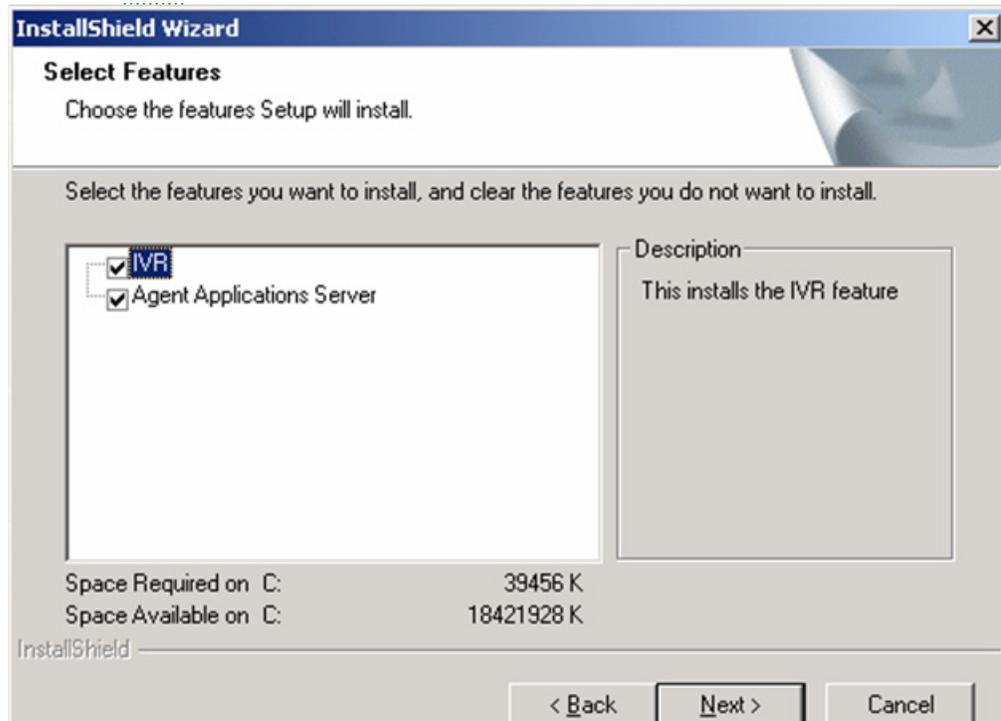


- Step 5** Click **Next**.
The QueWorX Server Select Features appears (Figure 3-72).



The Windows 2003 server window may display differently.

Figure 3-72 QueWorX Server Select Features dialog box

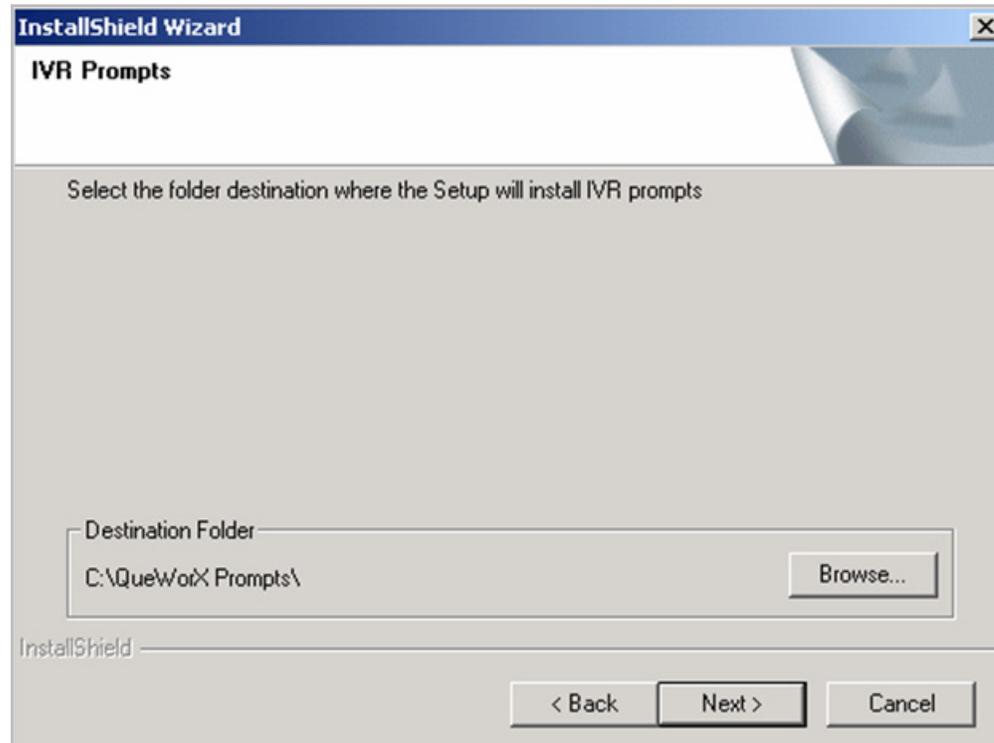


- Step 6** Click **Next**.
The QueWorX Server IVR Prompts appears (Figure 3-73).



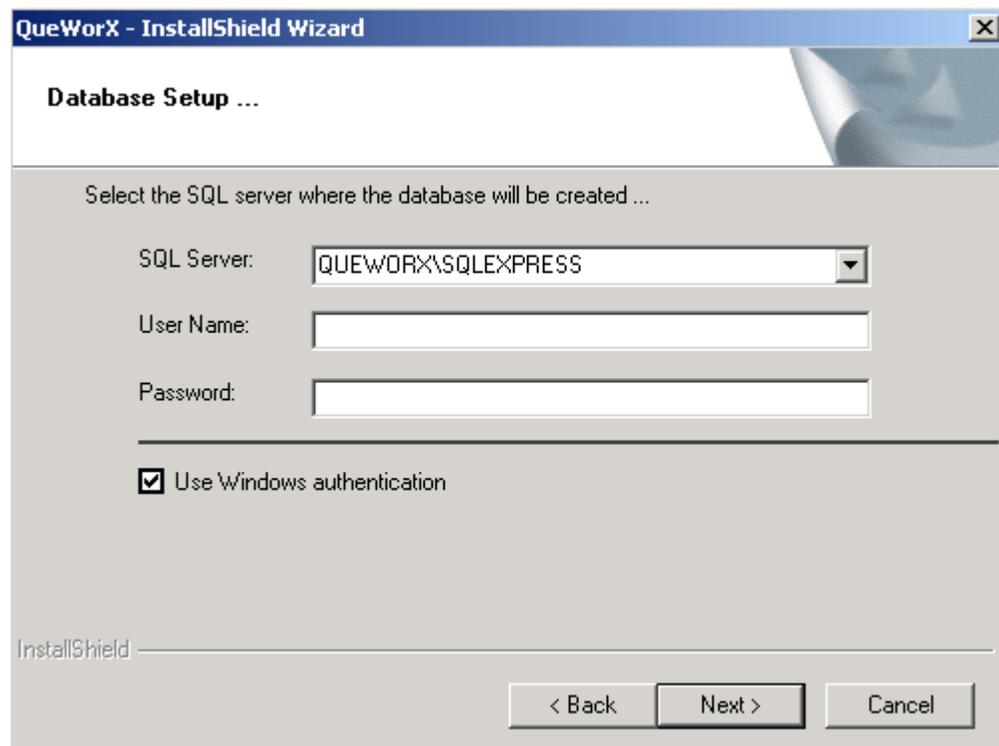
The Windows 2003 server window may display differently.

Figure 3-73 QueWorX Server IVR Prompts dialog box



- Step 7** Click **Next** to accept the default destination folder.
The QueWorX Server Database Setup dialog box appears ([Figure 3-74](#)).

Figure 3-74 QueWorX Server Database Setup dialog box



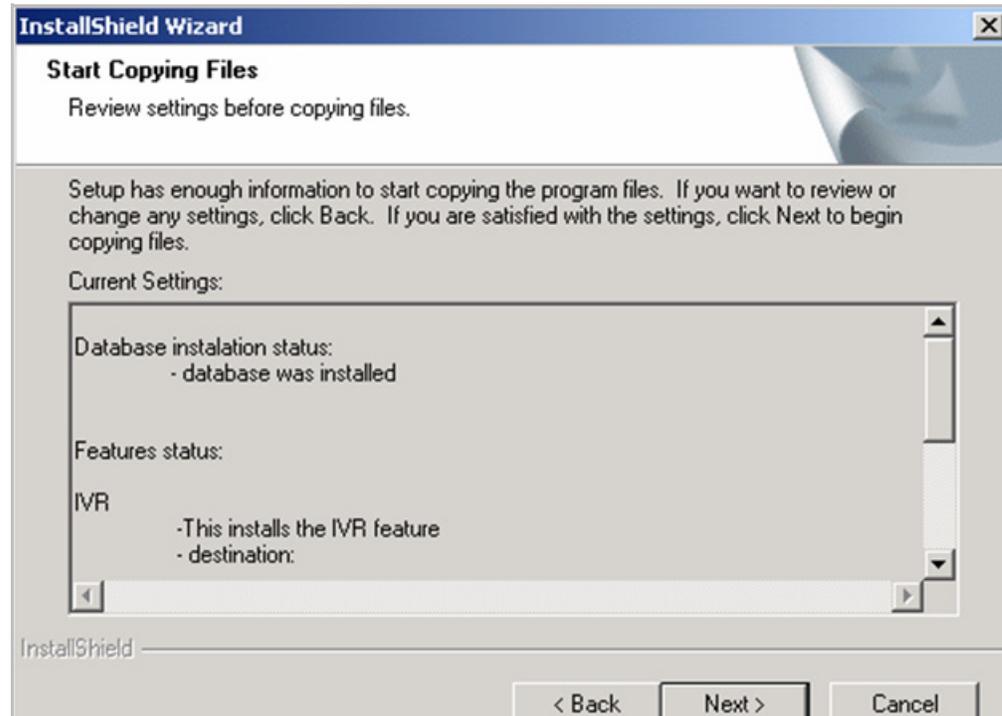
The screenshot shows a Windows-style dialog box titled "QueWorX - InstallShield Wizard" with a sub-header "Database Setup ...". The main text reads "Select the SQL server where the database will be created ...". Below this, there are three input fields: "SQL Server:" with a dropdown menu showing "QUEWORX\SQLEXPRESS", "User Name:" with an empty text box, and "Password:" with an empty text box. A checkbox labeled "Use Windows authentication" is checked. At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

Step 8 Select **Use Windows authentication**.

Step 9 Click **Next**.

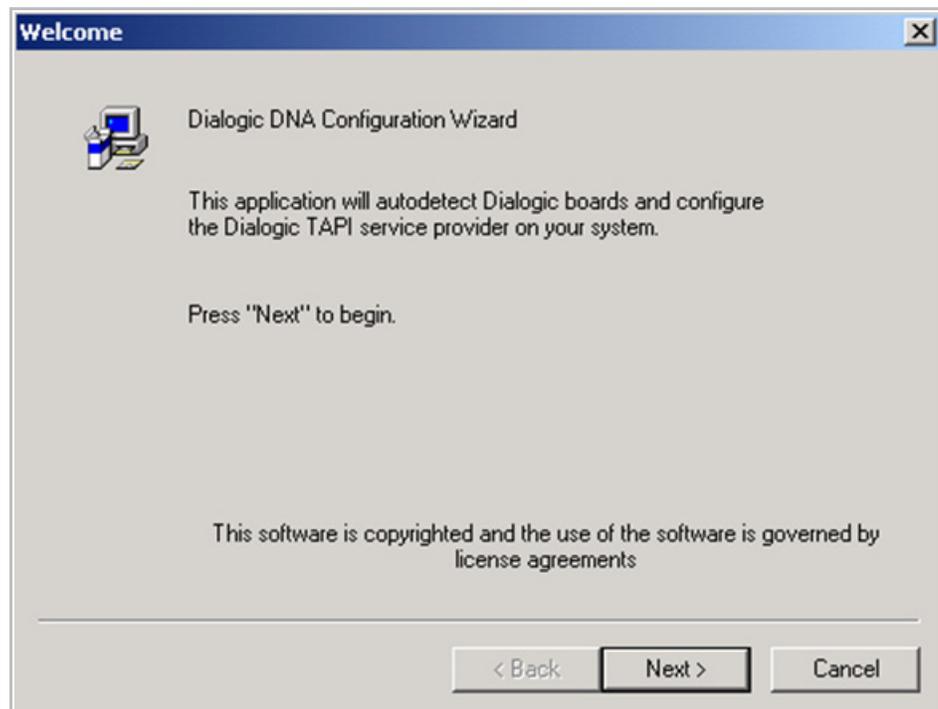
The QueWorX Server Start Copying Files dialog box appears ([Figure 3-75](#)).

Figure 3-75 QueWorX Server Start Copying Files dialog box



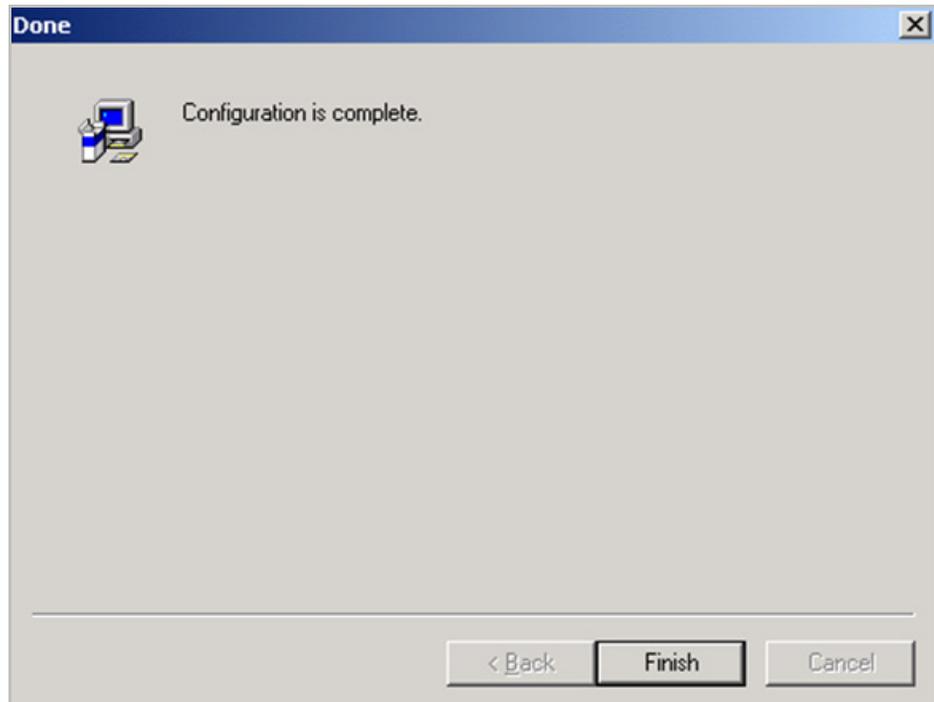
Step 10 Click **Next** to begin copying files. The Dialogic DNA Configuration Wizard Welcome appears (Figure 3-76) when the files are copied.

Figure 3-76 Dialogic DNA Configuration Wizard Welcome dialog box



- Step 11** Click **Next** to begin Dialogic DNA configuration. When configuration finishes, the Dialogic DNA Configuration Wizard Complete dialog box appears (Figure 3-77).

Figure 3-77 Dialogic DNA Configuration Wizard Complete dialog box



- Step 12** Click **Finish**. If a T1 Dialogic board is in use, Choose DTI Protocol dialog box appears (Figure 3-78).

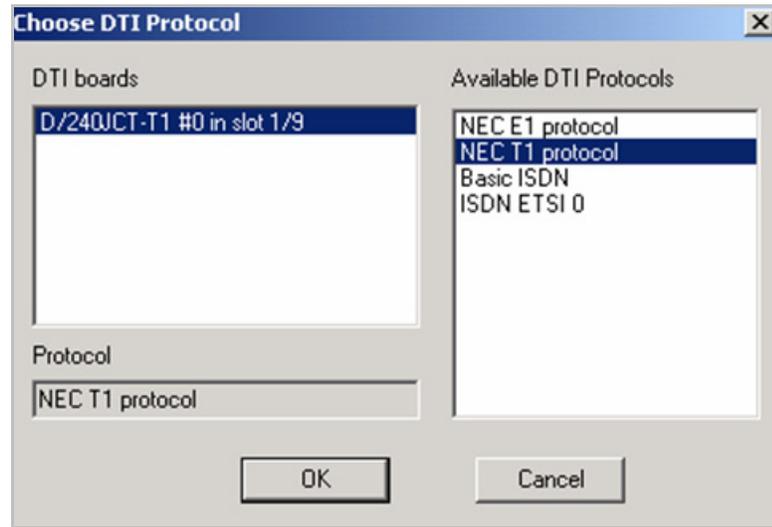


NOTE

If using a T1 Dialogic board continue with [Step 13 on page 3-61](#).

If a T1 Dialogic board is not in use, proceed to [Step 14 on page 3-61](#).

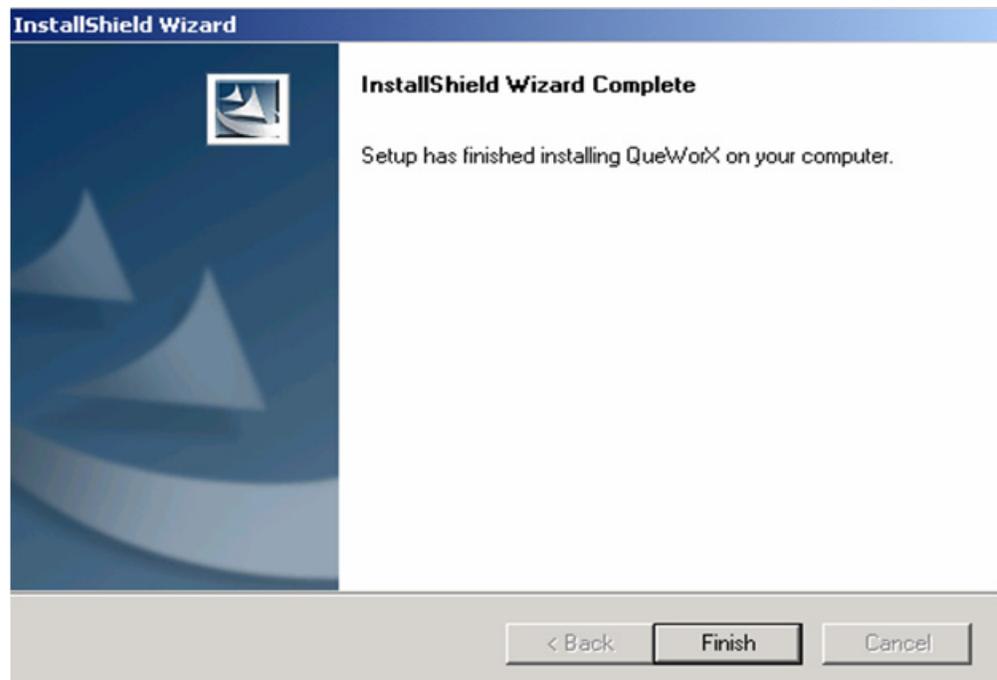
Figure 3-78 Choose DTI Protocol dialog box



Step 13 Select **NEC T1 Protocol** from the **Available DTI Protocols** section.

Step 14 Click **OK**.
The QueWorX Server Complete appears
([Figure 3-79](#)).

Figure 3-79 QueWorX Server Setup Complete dialog box



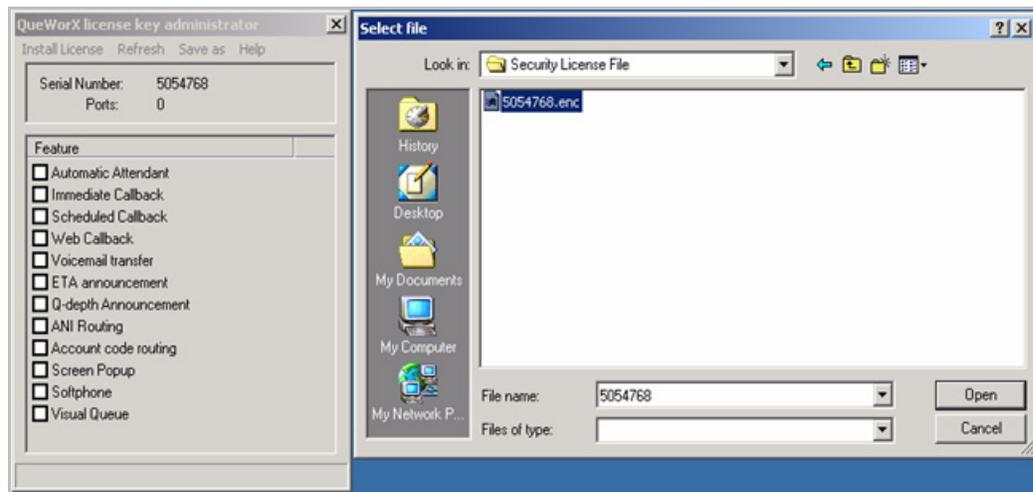
Step 15 Click **Finish**.

WIBU Security File Installation

Do the following to install the WIBU Security file.

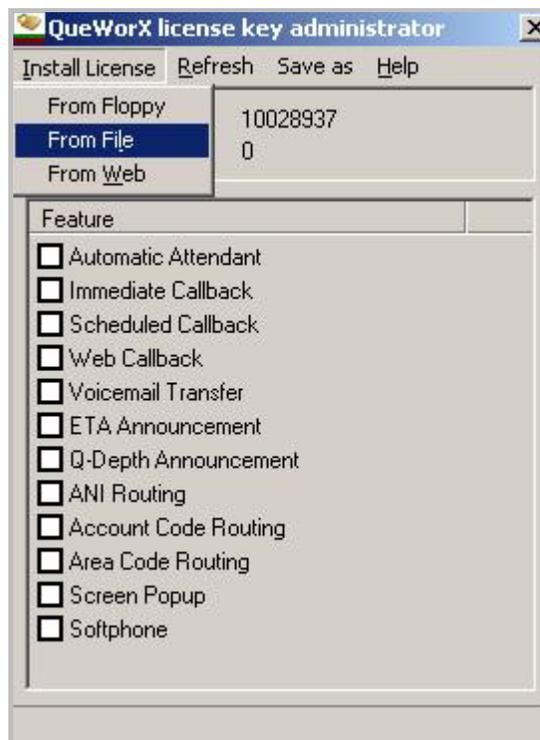
- Step 1** From the **Start**, select **Programs > NEC > QueWorX > SecurityKeyUtility > QueWorX License Key**.
The QueWorX License Key Administrator—Select File dialog box appears (Figure 3-80).

Figure 3-80 QueWorX License Key Administrator—Select File dialog box



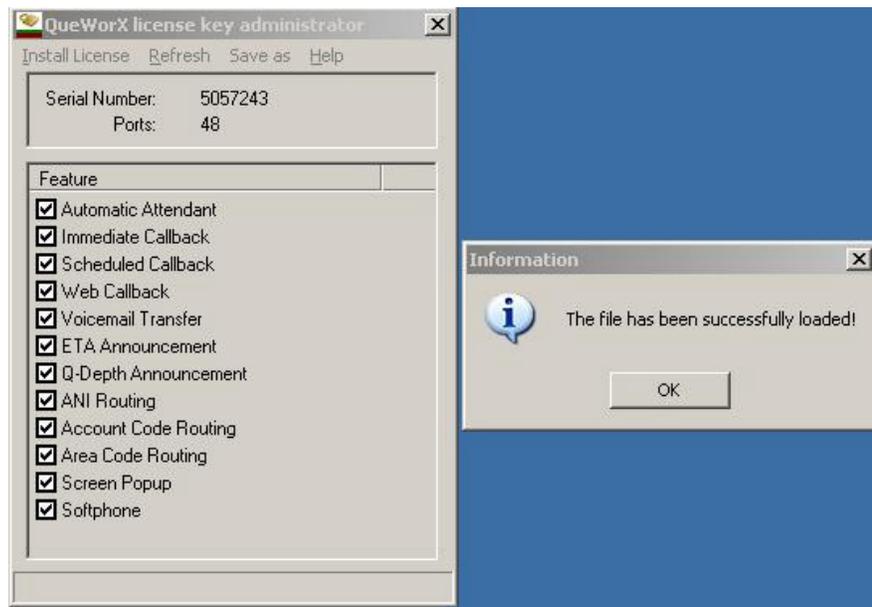
- Step 2** Select **Install License** on the menu bar (Figure 3-81).
- Step 3** The QueWorX Authorized License Keys window appears (Figure 3-82). Select **From File**.

Figure 3-81 Install License - From File



- Step 4** Navigate to the security files location.
- Step 5** Select the security file.
A successful installation dialog box appears and the securityKeyUtility GUI lists the applicable licensed features (checked) (Figure 3-82).

Figure 3-82 QueWorX Authorized License Keys window



QueWorX Service Configuration

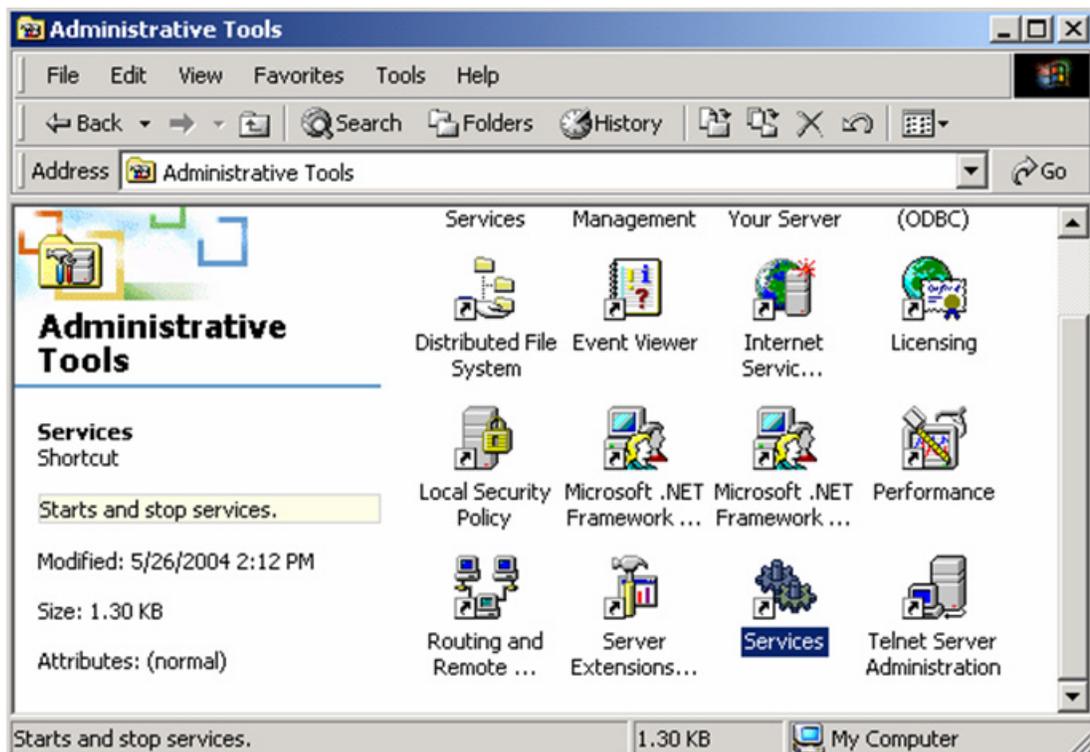
You can configure and manage QueWorX Service through Windows Services management console.

QueWorX Service Setup

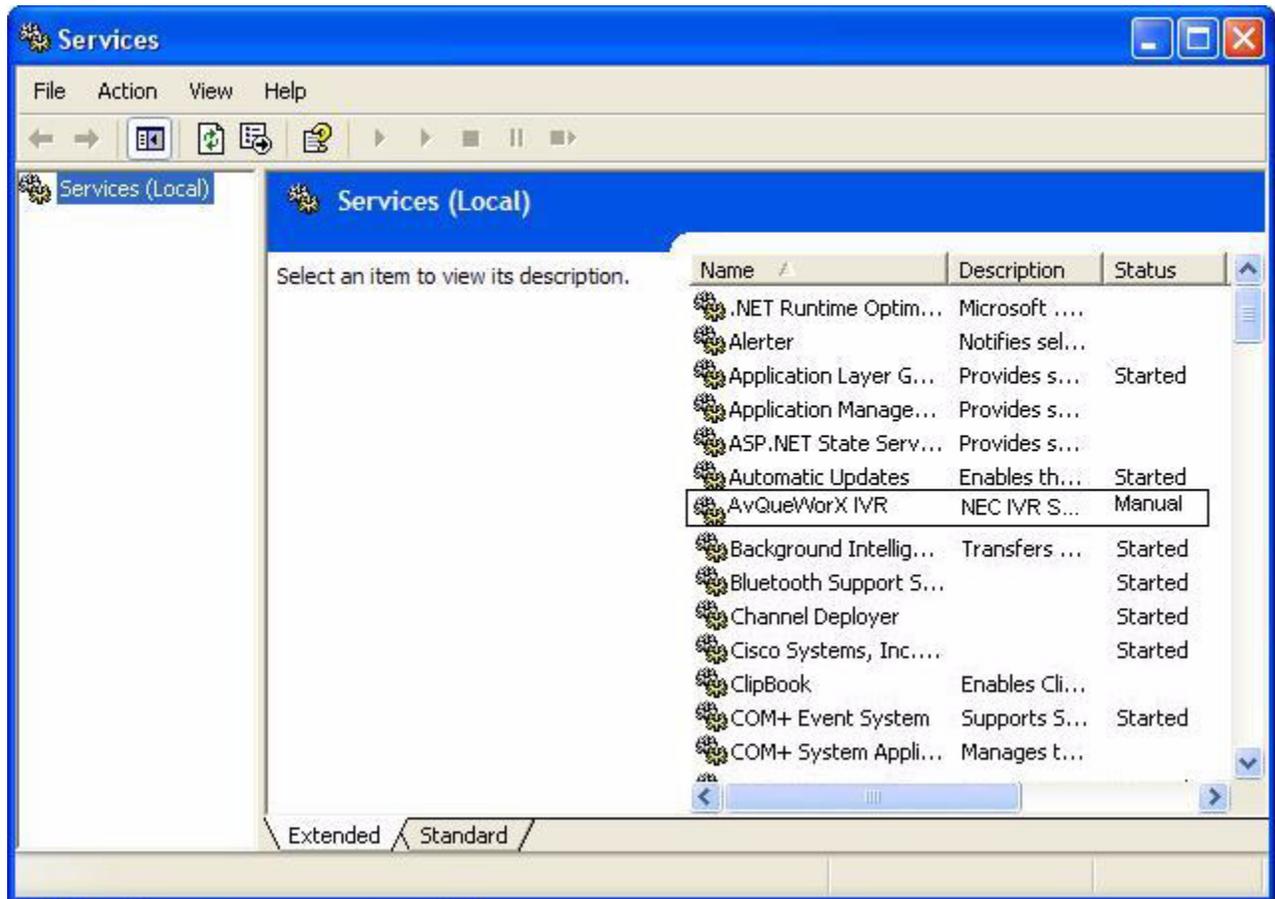
Do the following to set up QueWorX Service.

- Step 1** Click **Start > Settings > Control Panel > Administrator Tools**. The Administrative Tools window appears (Figure 3-83).

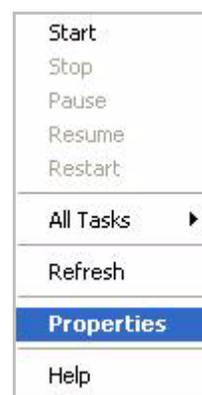
Figure 3-83 Administrative Tools window—Services



- Step 2** Double-click **Services**. The Windows Services Management Console appears.

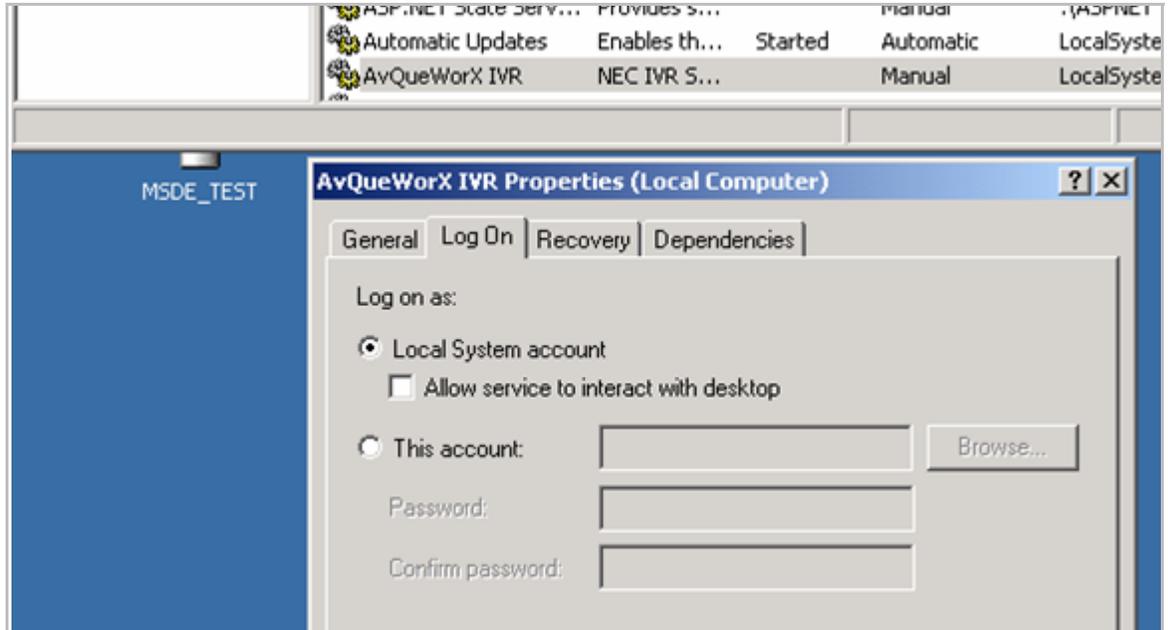
Figure 3-84 Windows Services Management Console


Step 3 Right-click the **AvQueWorX IVR** service. A menu appears (Figure 3-85).

Figure 3-85 Menu


- Step 4** Select **Properties** (Figure 3-85).
The QueWorX IVR Properties dialog box appears (Figure 3-86).

Figure 3-86 QueWorX IVR Properties dialog box (Local Computer)



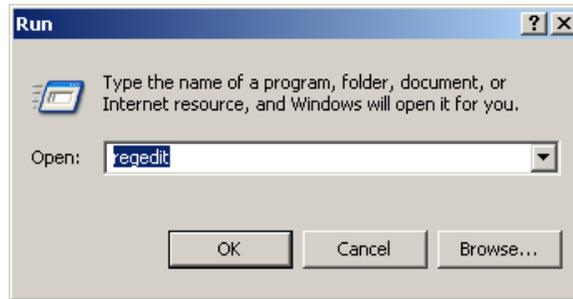
- Step 5** Ensure the service uses the administrator local system user account for logon, or any other local user account with administrator permissions on the QueWorX server, and click **OK**.
- Step 6** Click the **X** in the upper-right corner of the Windows Services Management Console to exit.

QueWorX Service Dependencies Configuration

Do the following to set up the QueWorX Service dependencies.

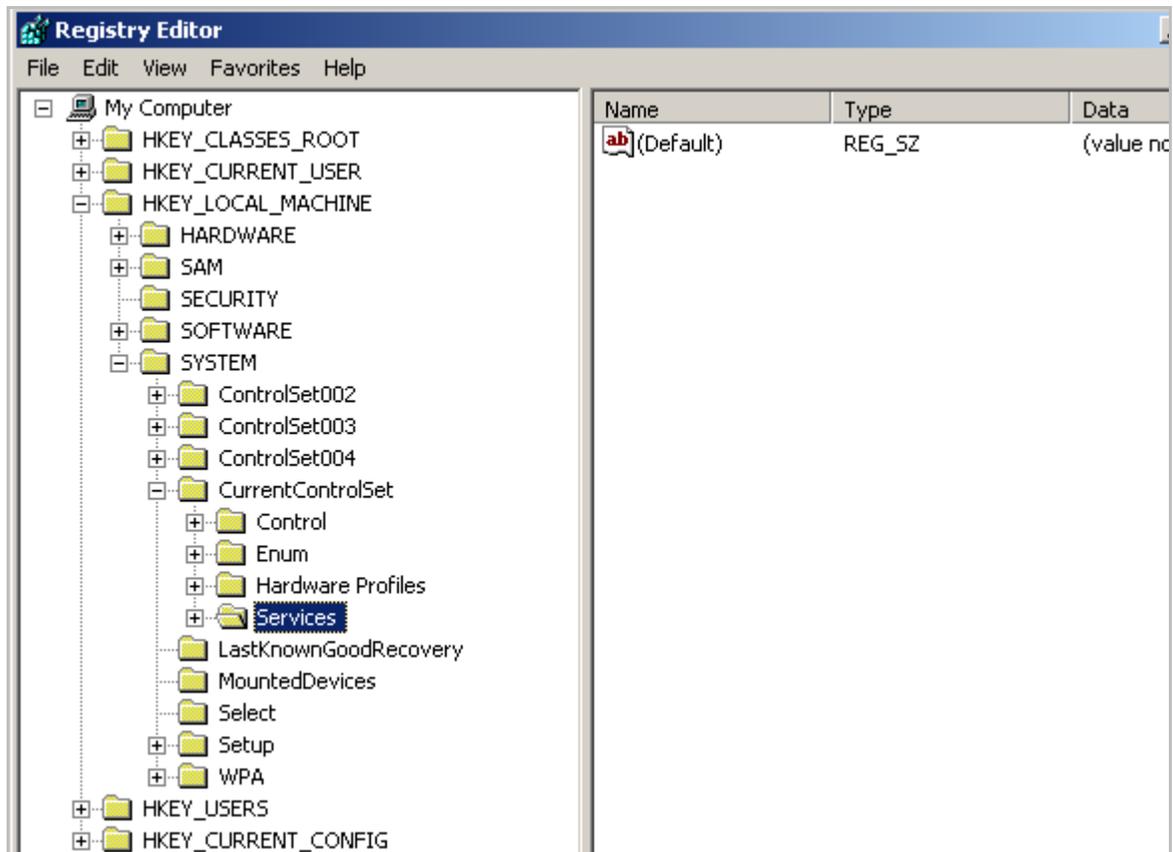
- Step 1** Click **Start** and click **Run**.
The Run dialog box appears (Figure 3-87).

Figure 3-87 Run dialog box



- Step 2** Type **regedit** and click **OK**.
The Registry Editor window appears (Figure 3-88).

Figure 3-88 Registry Editor window



Step 3 Select the following folder:

**My Computer\ HKEY_LOCAL_MACHINE\
SYSTEM\CurrentControlSet\Services\AvQwxSvc.**

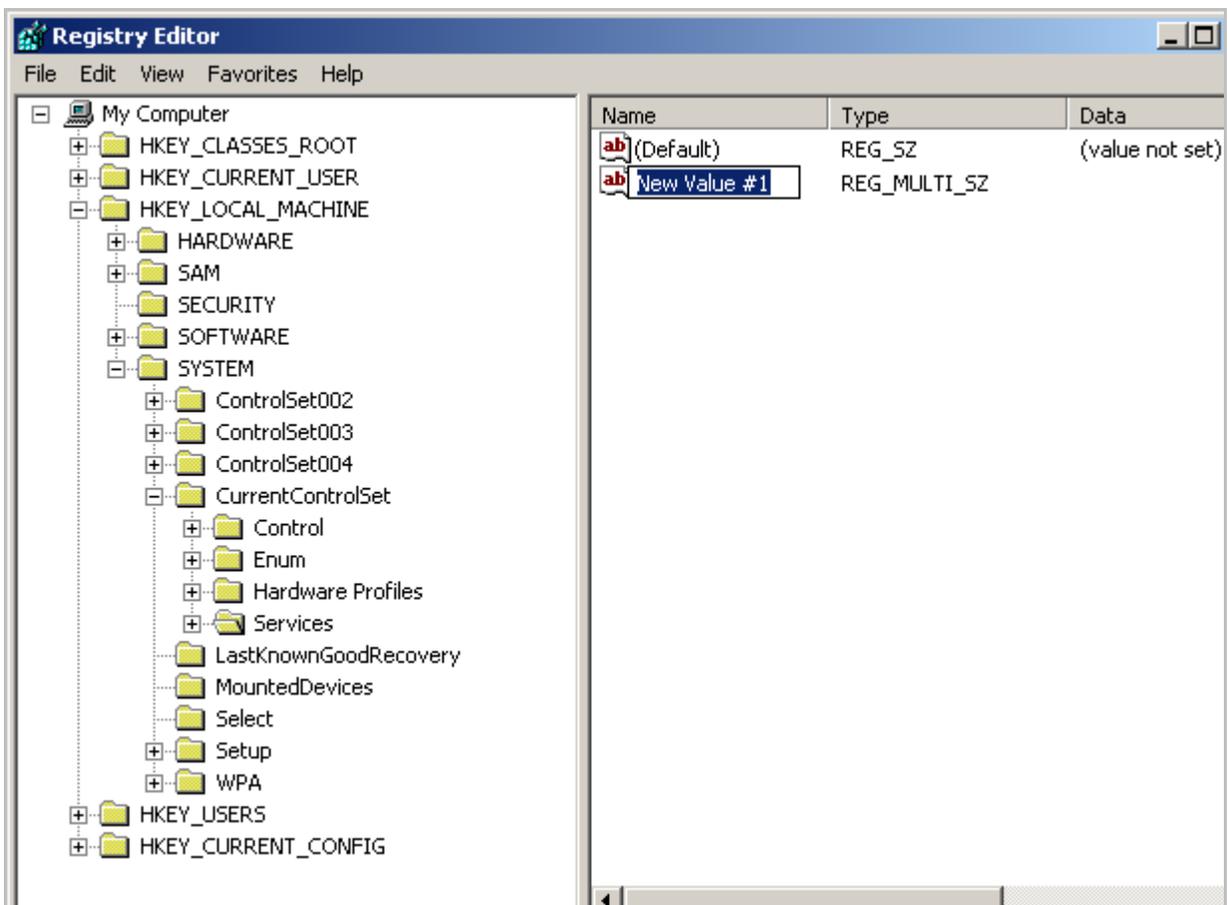


If the right pane of the Services directory in the Registry Editor window (Figure 3-88) already contains “**DependOnService**”, then skip to [Step 6](#).

Step 4 Right-click in the right pane and a shortcut menu appears.

Step 5 Select **New > Multi-String Value**. A New Value field appears in the right pane (Figure 3-89).

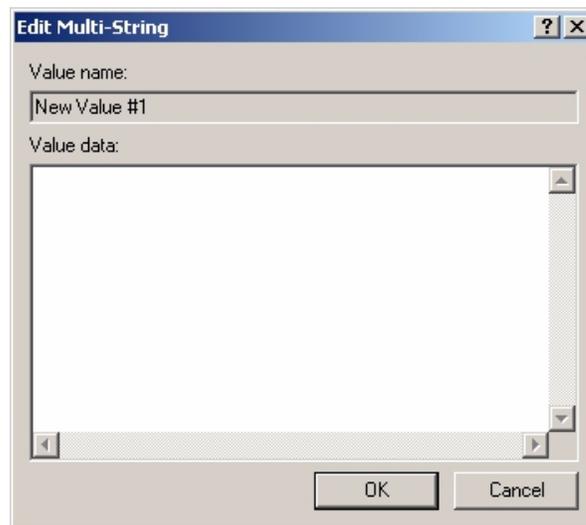
Figure 3-89 Registry Editor—New Value field



Step 6 Select **New Value**, if it is not already selected and type **DependOnService**.

Step 7 Double-click **DependOnService**. The Edit Multi-String dialog box appears (Figure 3-90).

Figure 3-90 Edit Multi-String dialog box



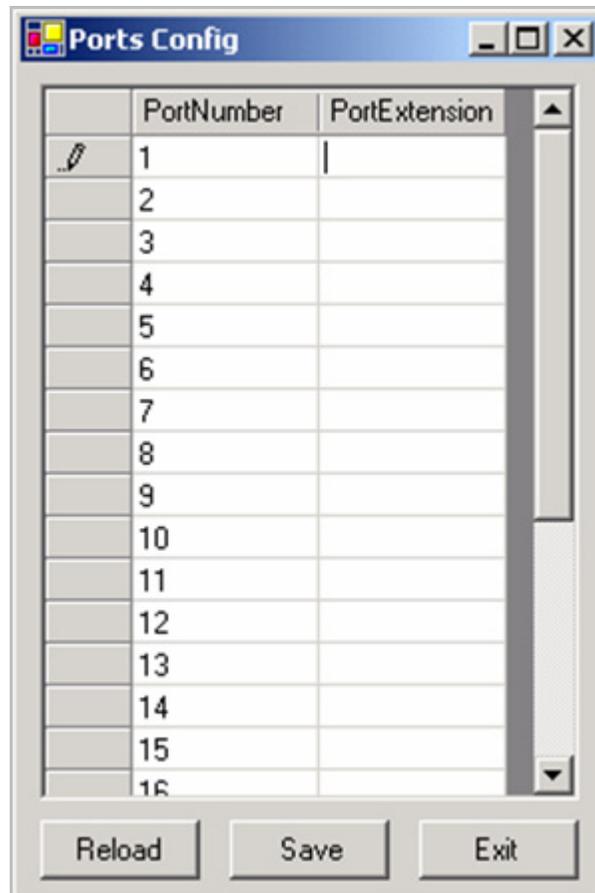
- Step 8** Type the following services in the **Value data** text box:
- Dialogic
 - MSSQL\$SQLEXPRESS
 - Tcpip
- Step 9** Click **OK**, and then click the **X** in the upper-right corner of the Registry Editor window ([Figure 3-88](#)) to exit.

Ports Configuration GUI Use

Do the following to enter IVR Ports with Ports Configuration GUI.

- Step 1** Select **Start > Programs > NEC > QueWorX > MIU Ports Config**.
The Ports Config dialog box appears (Figure 3-91).

Figure 3-91 Ports Config dialog box



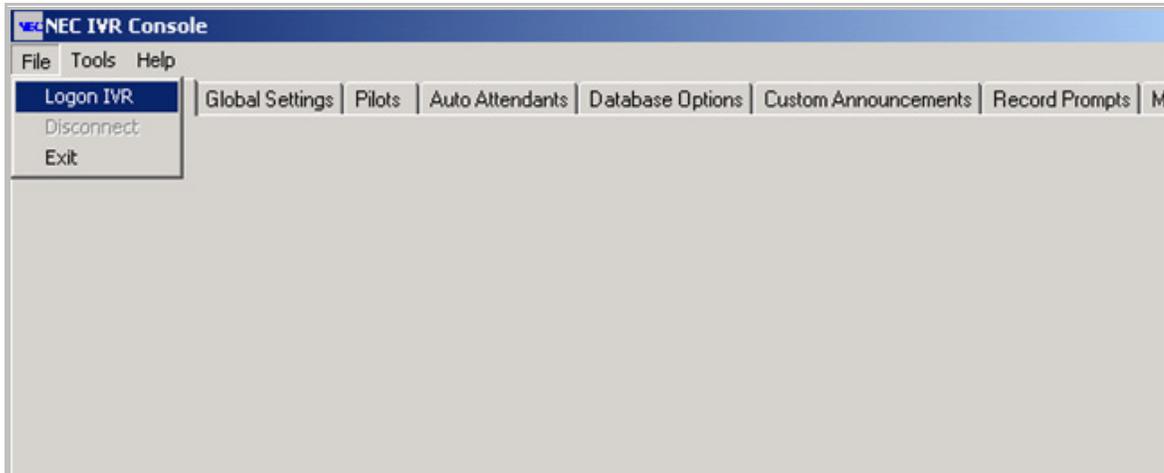
- Step 2** Enter the applicable IVR ports.
- Step 3** Click **Save** to keep the entered information.
—or—
Click **Exit** to close the Ports Config dialog box without saving the entered information.

NEC IVR Console Initialization

Do the following to start the QueWorX IVR.

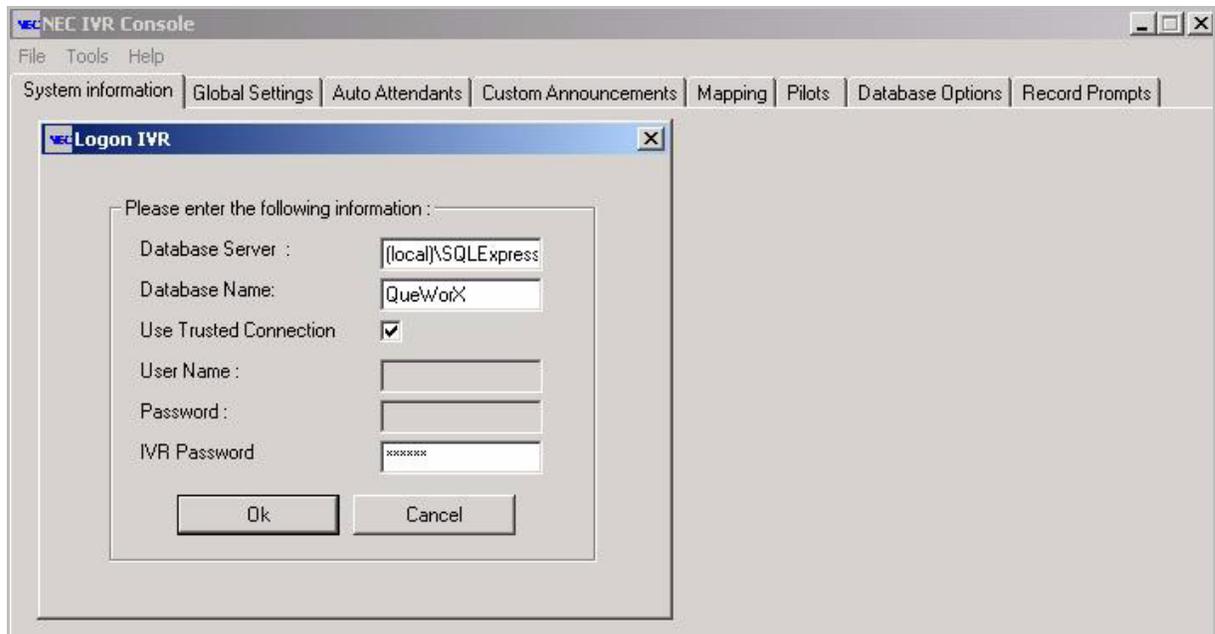
- Step 1** From the Microsoft Windows Desktop, select **Programs > NEC > QueWorX > NEC Admin Console**.
The NEC IVR Console dialog box appears (Figure 3-92).

Figure 3-92 NEC IVR Console dialog box



- Step 2** Select **File > Logon IVR**.
The NEC IVR Console—Logon IVR dialog box appears (Figure 3-93).

Figure 3-93 NEC IVR Console—Logon IVR dialog box



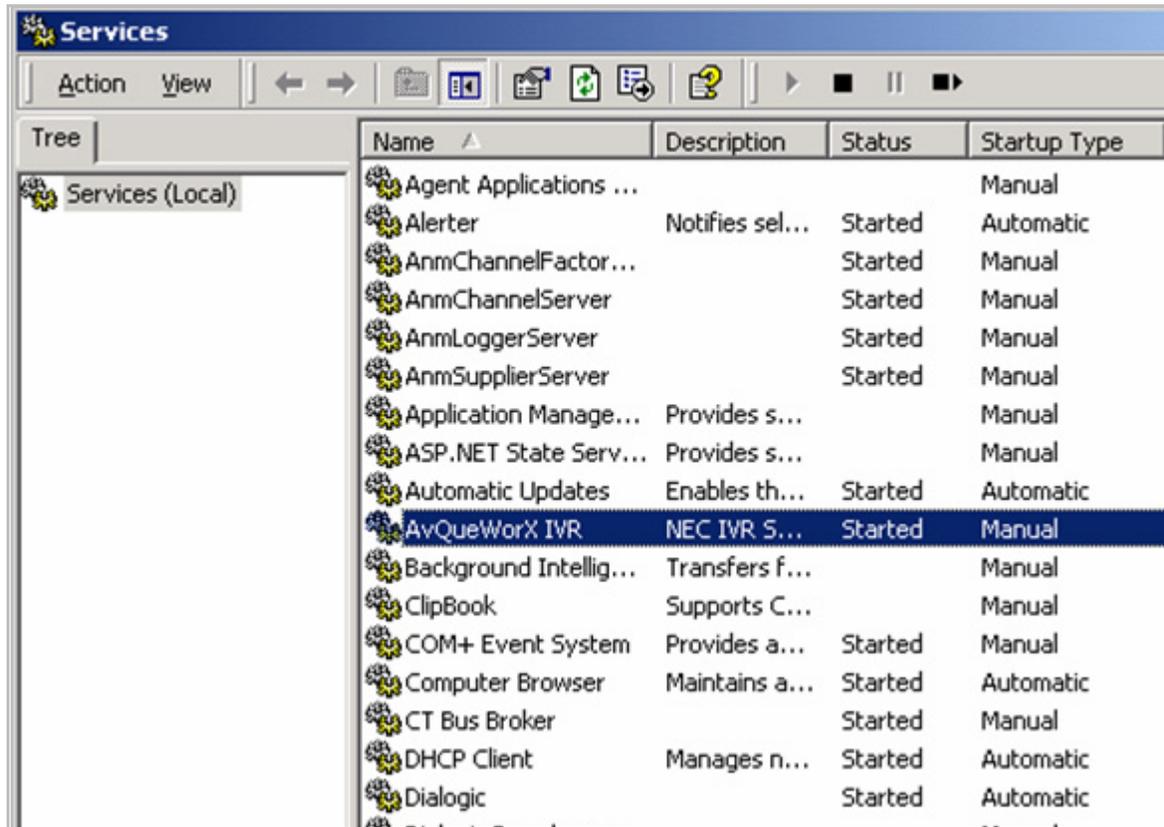
- Step 3** In **IVR Password**, enter **321321** and click **OK**.
The NEC IVR Console—System Information dialog box appears (Figure 3-94).

Figure 3-94 NEC IVR Console—System Information dialog box

The screenshot shows the 'NEC IVR Console' window with the 'System information' tab selected. The 'General Settings' section includes: ACD IP address (127.0.0.1), ACD port number (1039), Return key (dropdown), Transfer extension (text box), Default language (English (United States)), and a link for Available Languages. The 'Agent Applications' section includes: Remote end point (AgentApplicationsServer) and Remote port (60201). The 'Record Utility' section includes: Language (English (United States)) and Password (text box). The 'IVR Server Connection Info' section includes: Server IP address (127.0.0.1) and Port number (6791) with a 'Check Connection' button. The 'Change IVR Password' section includes: Old password, New password, and Confirm new password (text boxes) with a 'Change Password' button. An 'Update' button is located between the Record Utility and IVR Server Connection Info sections.

- Step 4** Enter the applicable ACD IP address and ACD port number.
- Step 5** Click **Update**.
The Windows Services window appears (Figure 3-95).

Figure 3-95 Services window—QueWorX IVR



Step 6 Do the following:

- Select **QueWorX IVR** and right-click.
The shortcut menu appears.
- Select **Start** to start the **QueWorX IVR** service.



After starting the AVQueWorx service, you may have to reinstall the Security File before features are enabled.

QueWorX Upgrade

The following sections describe how to upgrade QueWorX from Version 4.0, 4.01, and 4.2 to 4.3.0. If upgrading to newer release than 4.3.0, these procedures are not necessary.

Upgrades should be done after hours because the server will need to be rebooted several times. If the upgrade must be done during business hours then adjust the ACD Call Control Vectors (CCV) so that no calls are routed to QueWorX until the upgrade is complete.



NOTE

If CallCenterWorX and QueWorX are running on the same machine then you must perform the upgrade after hours because the machine will be rebooted and calls will not be answered.

Before You Start the Upgrade

Ensure the following conditions are met you start the upgrade.

- Stop the QueWorX service.
- Backup the QueWorX database.
- Save a copy of the "QueWorX Prompts" folder located on the C drive at: **C:\QueWorX Prompts**.
- Save a copy of the "MiuDialogic.avd" file located in the IntLib folder at: **c:\QueWorX\MIU\IntLib folder**.
- The original Security License floppy disk file is needed to complete the upgrade.

The following must be removed prior to beginning the upgrade:

- MSDE -Microsoft SQL Desktop Engine (Only if MIS is not installed)
- QueWorx
- Dialogic Global Call Protocol 4.2 (For QueWorx version 4.2 only)
- Dialogic 5.1.1 Feature Release 39
- Dialogic System software

Accessed and use the Add or Remove Programs tool to uninstall the individual components as follows:

Step 1 Click **Start**.

Step 2 Click **Control Panel**.

Step 3 Double-click **Add or Remove Programs**.

MSDE (prerequisite - MIS not loaded) Removal

Do the following to remove MSDE when MIS is not installed.



NOTE

MSDE should only be removed if no MIS application is loaded on the system.

- Step 1** Click **Control Panel**.
- Step 2** Double-click **Change or Remove Programs**.
- Step 3** Select **Microsoft SQL Server Desktop Engine**.
- Step 4** Click **Change/Remove**.
- Step 5** Select **Yes** to remove the software.
- Step 6** Continue to [“QueWorX Removal”](#).

QueWorX Removal

Do the following to uninstall QueWorX.

- Step 1** Select **QueWorx** in **Currently installed programs**.
- Step 2** Click **Change/Remove**.
- Step 3** Remove **WibuKey** following the procedure in [Step 1](#). Continue to [“Dialogic 5.1.1 Feature Release 39 Removal”](#).



NOTE

*If an error screen appears, click the **Ignore** button and continue removing WibuKey from the server.*

Global Call Protocol 4.2 Removal

Do the following to remove Global Call Protocol 4.2.

- Step 1** Select **Intel Dialogic@Global Call Protocol 4.2**.
- Step 2** Click **Change/Remove**.
- Step 3** Click **Ok** to confirm uninstall.
- Step 4** Click **Finish** when complete.
- Step 5** Select **Global Call Protocol**.
- Step 6** Click **Change/Remove**.
- Step 7** Click **Ok** to confirm uninstall.
- Step 8** Click **Finish** when complete.

Dialogic 5.1.1 Feature Release 39 Removal

Do the following to remove Feature Release 39.

- Step 1** Select **5.1.1 feature Release 39** and click **Change/Remove**.
- Step 2** Click **Yes** when the Don't display message again dialog box appears and reboot the computer.
- Step 3** When Windows restarts, click **Control Panel**, then double-click **Change or Remove Programs**. The Change or Remove Programs dialog box appears. Continue to [“Dialogic System Software Removal”](#).

Dialogic System Software Removal

Use the following steps to remove Dialogic System software.

- Step 1** Select **Dialogic Software** and click **Change/Remove**.
- Step 2** Click **OK** if a dialog box appears asking to close any open Dialogic program.
- Step 3** Click **Yes to All** if a pop-up appears asking to remove shared files.
- Step 4** Click **Yes** when asked if you want to remove shared files.
- Step 5** Click **OK** when finished and reboot the computer. Continue to [“Registry Entries Cleanup”](#).

Registry Entries Cleanup

Problems with the Windows registry can cause Windows crashes and error messages. Use the following steps to clean up the registry.



IMPORTANT

NEC recommends that you make a backup of your registry before proceeding.

- Step 1** Insert the QueWorX CD1 and explore to Dialogic 6.0\cleanup folder.
- Step 2** Double-click the **dlgc-rel_clean.bat** file to run it.
- Step 3** Reboot the computer and proceed to [“Dialogic System Release 6.0 Installation”](#).

Reinstallations

QueWorX

Refer to ["QueWorX Installation" on page 3-53](#) for detailed instructions for installing (or reinstalling) QueWorX. The only exception is for the procedure to upgrade the database from SQL 2000 to SQL 2005, which is documented in the following section, ["QueWorX Database-SQL 2000 Database to SQL Server 2005 Upgrade"](#)

Dialogic 6.0

Refer to ["Dialogic System Release 6.0 Installation" on page 3-18.](#) for detailed instructions for installing Dialogic 6.0.

.Net Framework 2.0

Refer to [".NET Framework Version 2.0 Installation" on page 3-14](#) for detailed instructions for Installing the NET Framework Version 2.0 (if needed).

Microsoft SQL Server 2005 Express. (only for 4.0,4.1, and 4.2.0.6)

Refer to ["Microsoft SQL Server 2005 Express Installation" on page 3-29](#) for detailed instructions for installing SQL Server 2005 Express.

SQL Server Management Studio Express. (only for 4.0,4.1, and 4.2.0.6)

Refer to ["SQL Server Management Studio Express Installation" on page 3-47](#) for detailed instructions for Installing SQL Server Management Studio Express.

[Table 3-1](#) contains page references to each installation.

Table 3-1 *Installation links*

Install Names	Page locations
WIBU Security Key Driver Installation	Page 3-1
.NET Framework Version 2.0 Installation	Page 3-14

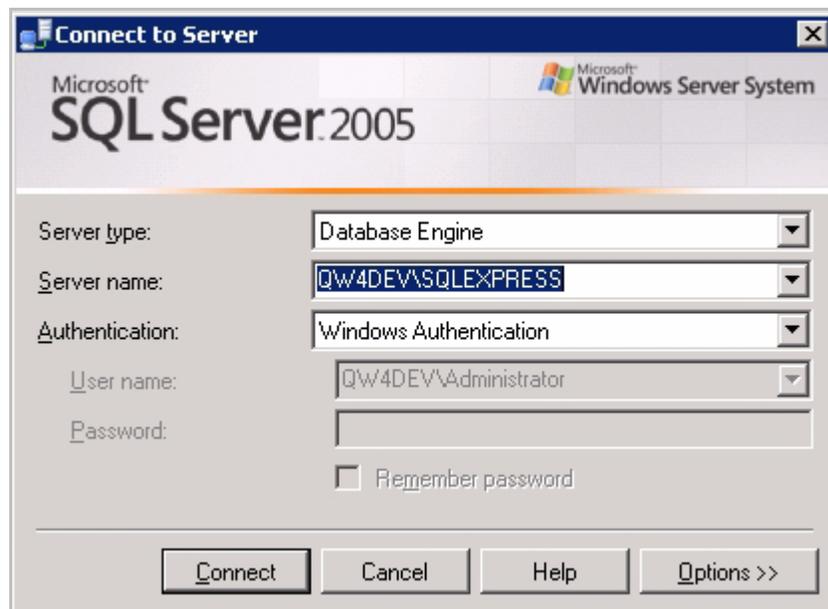
Install Names	Page locations
Dialogic System Release 6.0 Installation	Page 3-18
Microsoft SQL Server 2005 Express Installation	Page 3-29
SQL Server Management Studio Express Installation	Page 3-47
QueWorX Upgrade	Page 3-75
QueWorX Server Installation	Page 3-90

QueWorX Database-SQL 2000 Database to SQL Server 2005 Upgrade

Back up the current QueWorX database in SQL 2000 prior to beginning the following upgrade process to SQL Server 2005.

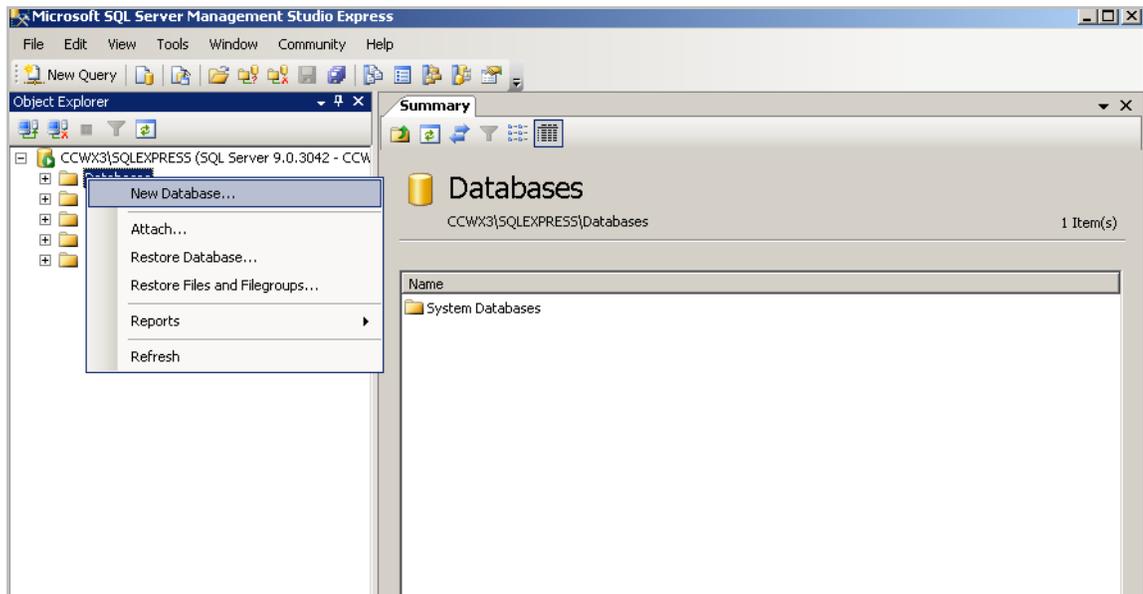
- Step 1** Go to **Start\ Programs\ Microsoft SQL Server 2005\SQL Server Management Studio Express** after completing a backup of the current QueWorX SQL 2000 database. The **Connect to Server** dialog box for Microsoft SQL Server 2005 appears ([Figure 3-96](#)).

Figure 3-96 Connect to Server



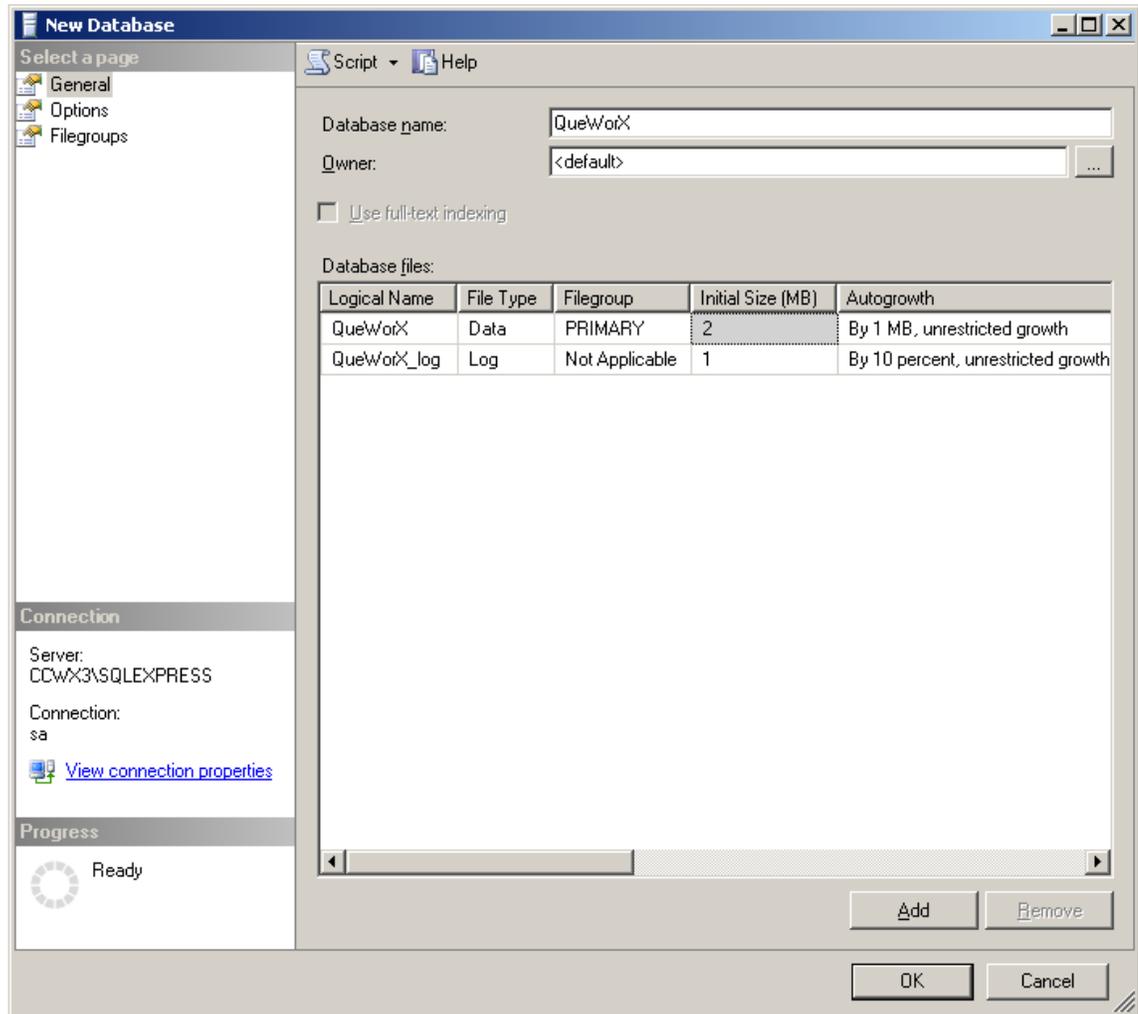
- Step 2** Click **Connect**. The Microsoft SQL Server Management Studio Express window appears ([Figure 3-97](#)).

Figure 3-98 Database shortcut menu



- Step 4** Select **New Database** from the shortcut menu.
The New Database dialog box appears ([Figure 3-99](#)).

Figure 3-99 New Database dialog box



Step 5 Type **QueWorX** in **Database name**.

Step 6 Click **OK**.

The Object Explorer pane appears on the left with the QueWorX database listed under the Databases folder.

Step 7 Select **QueWorX** and right-click.

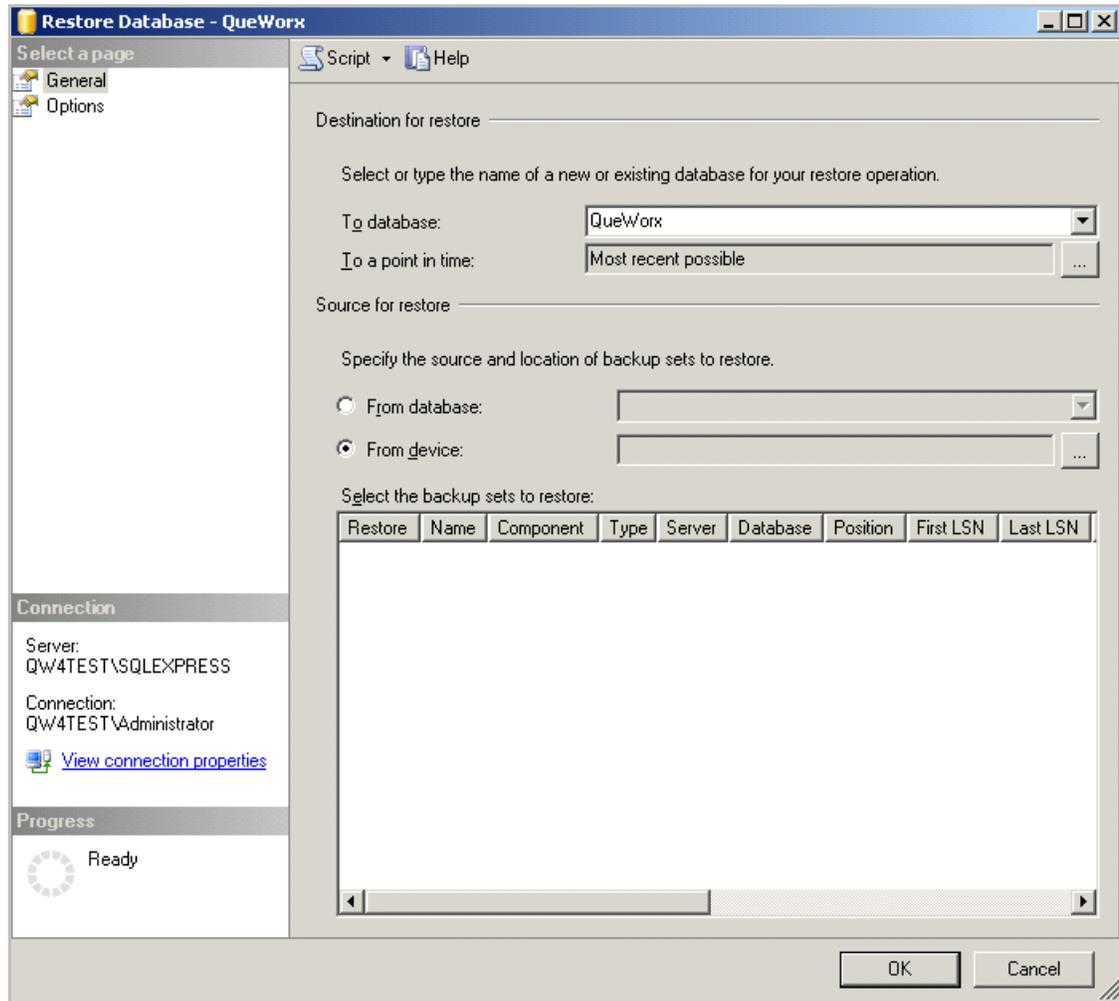
A shortcut menu appears (Figure 3-100).

Figure 3-100 Object Explorer pane—Databases folder



- Step 8** Select **Tasks > Restore > Database** from the shortcut menu (Figure 3-100).
The Restore Database dialog box appears (Figure 3-101).

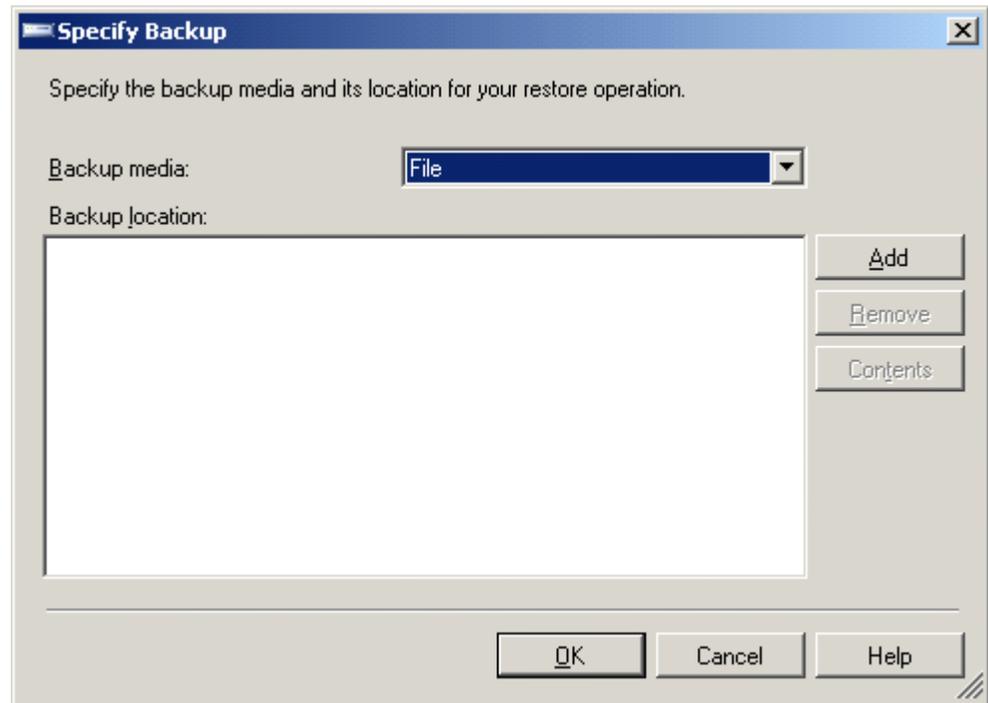
Figure 3-101 Restore Database - QueWorX dialog box



Step 9 Select **From Device** .

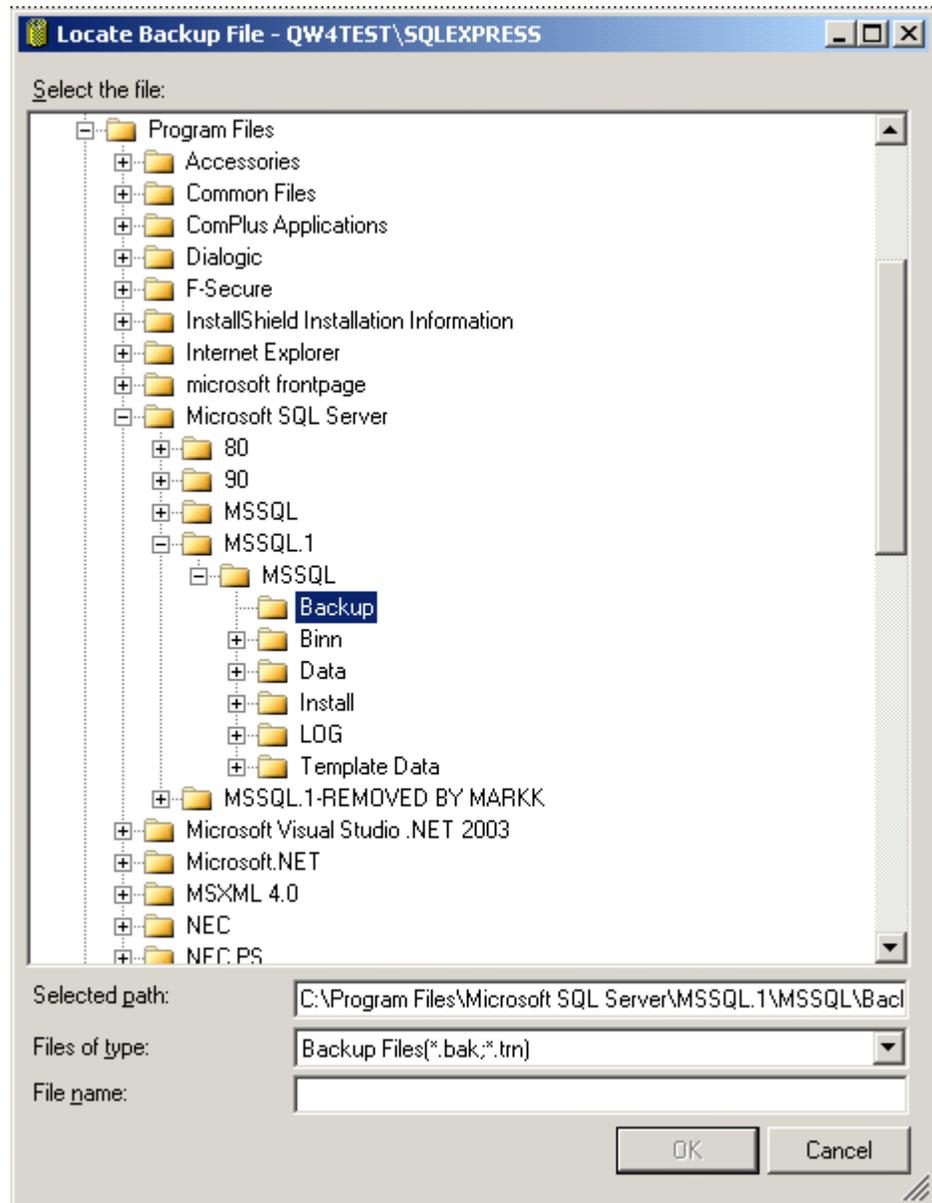
Step 10 Click the ellipse button to the right of this option.
The Specify Backup dialog box appears (Figure 3-102).

Figure 3-102 Specify Backup dialog box



- Step 11** Click **Add**.
The Locate Backup File - QW4TEST\SQLEXPRESS dialog box appears (Figure 3-103).

Figure 3-103 Locate Backup File - QW4TEST\SQL EXPRESS dialog box



Step 12 Select the folder where the backup file was created in [Step 1](#).

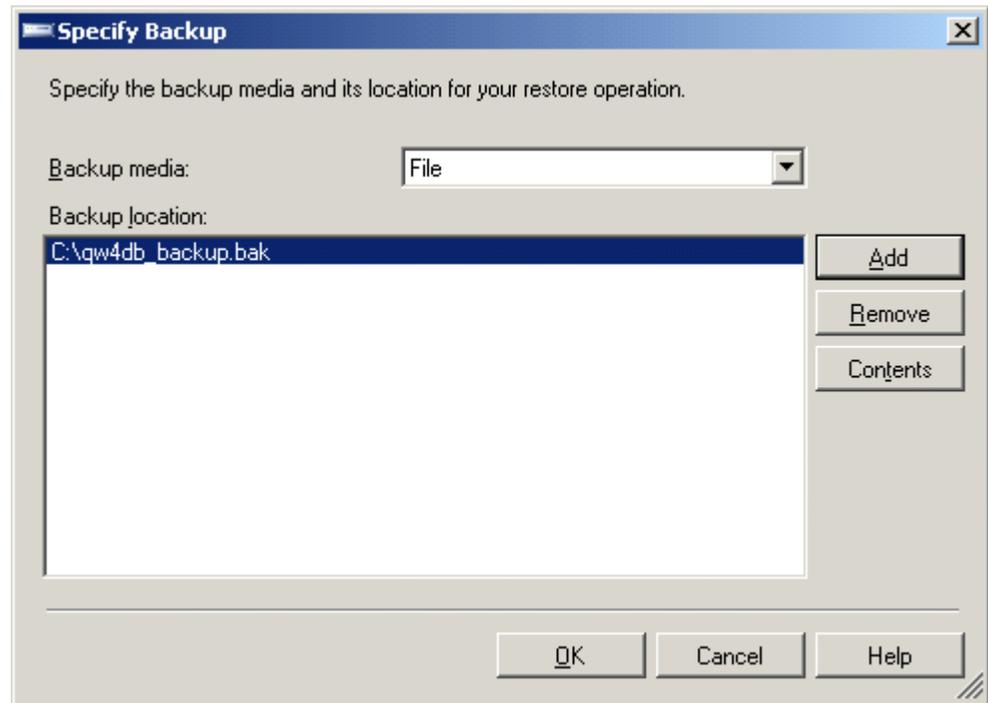
Step 13 Click **OK**.

The Specify Backup dialog box re-appears with the entry in the Backup location list ([Figure 3-104](#)).



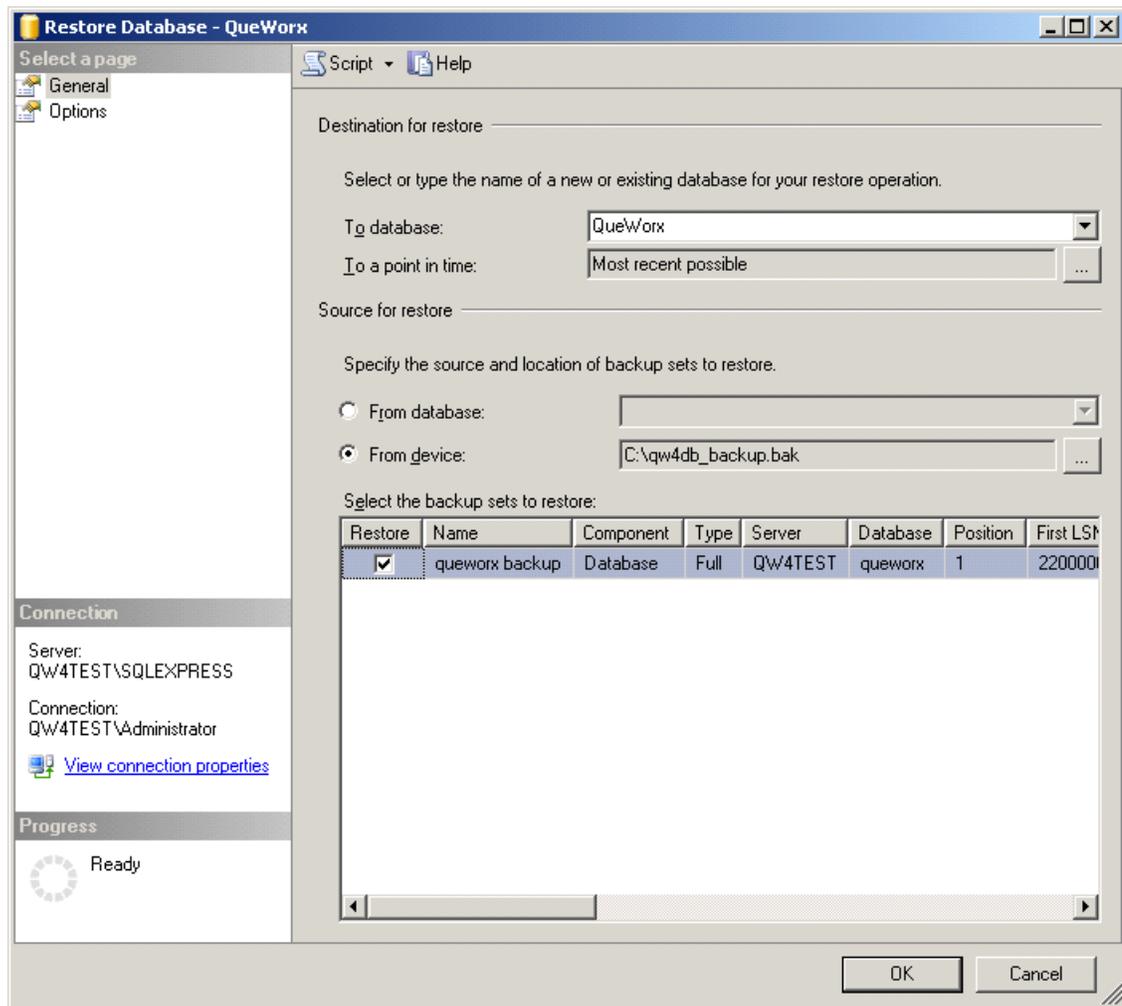
*If the backup file name does not have “.bak” for the extension, select **All Files(*)** for the “Files of type” option.*

Figure 3-104 Specify Backup dialog box



- Step 14** Click **OK**.
The Restore Database - QueWorX dialog box appears
([Figure 3-105](#)).

Figure 3-105 Restore Database dialog box - QueWorX

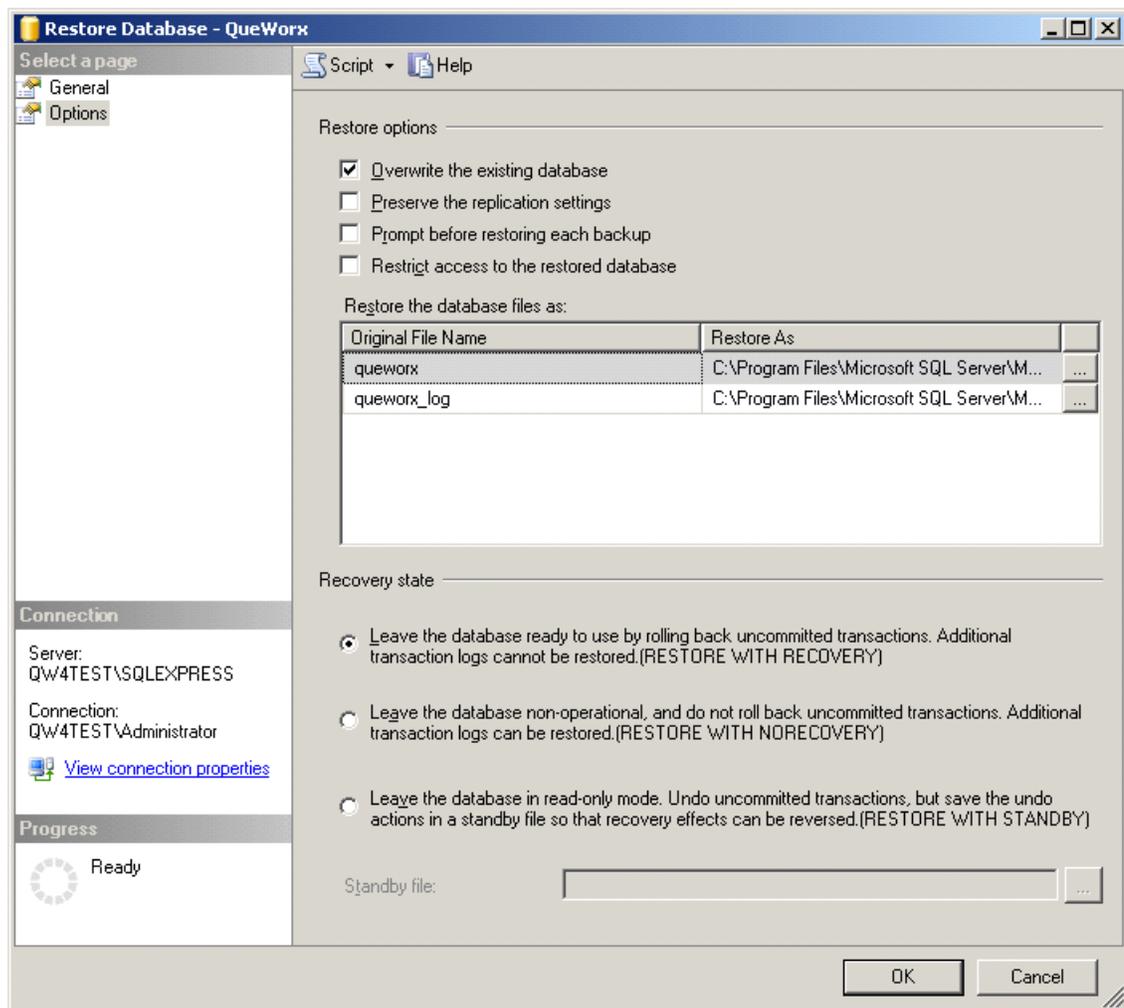


Step 15 Do the following in the Restore Database dialog box (Figure 3-105):

- Select the **Restore** check box by the QueWorx backup under the Select the backup sets to restore list box.
- Select **Options** in the Select a page pane.

The Restore Database dialog box—Options appears (Figure 3-106).

Figure 3-106 Restore Database dialog box—Options



Step 16 Select **Overwrite the existing database** under Restore options.

Step 17 Do the following for each entry in the **Restore the database file as** list box:

—Click the ellipses button at the right end of the row.

—Change the path to your SQL Server 2005 instance for both queworx and queworx_log.

Example1: Original Path: C:\Program Files\Microsoft SQL Server\MSSQL\Data\queworx.mdf

Modified Path: C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data\queworx.mdf

Example2: Original Path: C:\Program Files\Microsoft SQL Server\MSSQL\Data\queworx_log.ldf

Modified Path: C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data\queworx_log.ldf

- Step 18** Click **OK** and the database restoration begins. When complete a dialog box appears (Figure 3-107) stating the database was successfully restored.

Figure 3-107 Database restore complete dialog box



- Step 19** Click **OK**.



NOTE

The restoration process is complete.

- Step 20** Start the Dialogic system service before installing QueWorX.

QueWorX Server Installation

- Step 1** Insert CD1 and go to **Start > Run > type D:\Launch.exe**.
- Step 2** Click **Install QueWorX Server**.
The Install Shield Wizard dialog box appears.
- Step 3** Click **Next** in the following dialog boxes:
- opening Install Shield Wizard
 - Choose Destination Location**
 - Setup Type**
 - Select features**
 - IVR prompts**
- Step 4** Verify the Windows authentication.
- Step 5** Click **Next**.
- Step 6** Select **Upgrade Database**.
- Step 7** Click **Next**.
- Step 8** Click **Next** in the Copying files dialog box.
- Step 9** Click **Next** in the Welcome dialog box.
- Step 10** Click **Finish** in Installation dialog box to complete the installation.

Step 11 Use online instructions under the following sections to install the remaining components:

- WIBU Security File Installation on page 3-62
- QueWorX Service Configuration on page 3-65
- Ports Configuration GUI Use on page 3-71
- NEC IVR Console Initialization on page 3-72.



NOTE

The Upgrade is complete.

After starting the AVQueWorx service, you may have to reinstall the Security File before features are enabled.

Adding or Modifying Digital Dialogic Board Configurations

Skip this section if a single Analog board (4 port only) is in use. Continue with the following steps for any other configuration.

Step 1 Click **Start/Programs/Intel Dialogic System Software**.

Step 2 Select **Configuration Manager-DCM**.

- The configuration manager should list all the installed Dialogic boards.
- A red dot on the boards indicates that the boards are stopped.

Step 3 Click the large green dot in the menu to activate the boards. It will require a minute or two for them to come up.

A green dot appears on the boards when they are active.

Step 4 Do the following:

- Close the window
- Right-click **My Computer**
- Select **Explore**

Step 5 Select the **QueWorX\MIU\Utilities** directory.

Step 6 Double-click **MiuDialogicInstall.exe**.

Step 7 When the Miu Dialogic Install window opens, click **OK** to continue.

Step 8 In the pop-up window, click the **Browse** button.

Step 9 Select the **MiuDialogic.avd** file and click **Save**.

Step 10 If a Save As pop-up window appears, select **Yes** to replace the existing file.

Step 11 If analog boards are being installed, the procedure is finished.

Step 12 If digital boards are installed, the Choose DTI Protocol screen appears.

Step 13 Highlight the DTI board, located on the left-hand side, and any additional boards that are installed.

Step 14 On the right, select **NEC T1 Protocol**, then click **OK**.

Step 15 From the Microsoft Windows Desktop, select **Start > Programs > NEC > QueWorX > MIU Ports Config**.

Step 16 Verify that the number of ports displayed is the same as the licensed number (24 or 48).

Step 17 Close the window.



NOTE

MSDE installation error:

*QueworX 4.2.0.6 or earlier versions may not install MSDE when the MIS application is already loaded on the server. If this occurs, from the command prompt navigate to the MSDE folder located at **C:\SQL2KSP4\MSDE>setup /upgradesp sqlrun disablenetworkprotocols=0 securitymode=sql upgradeuser=sa upgradepwd=sa***

4

Configuring the NEAX 2000 PBX

This chapter explains how to setup the UCD/IVR, Agent Positions, and ACD Pilots (Monitored Numbers) using CAT Mode for the NEAX 2000 PBX.

Chapter Topics

- [Overview](#)
- [UCD/IVR Setup Using CAT Mode](#)
- [Agent Positions Setup Using CAT Mode](#)
- [ACD Pilots \(Monitored Numbers\) Setup Using CAT Mode](#)

Overview

Please note the following when you configure the NEAX 2000 PBX:

- Lens numbers, extensions, and some data used in this guide are arbitrary and may be replaced with real numbers. If unsure about these entries, please contact the PBX administrator.
- You must first install the correct card(s) in the NEAX 2000 IVS PBX. We recommend the PN-4LCD-A card. This card provides positive disconnect supervision.
- For the UCD group settings, you should have $n+2$ extensions in a contiguous range, where n is the number of the ports the IVR will use, plus two virtual extensions for the IVR pilot number and the callback number.
- Before you start programming the PBX, you should know the pilots and the extensions that will be used for the IVR board and configuration.

UCD/IVR Setup Using CAT Mode

Use the following to configure UCD/IVR using CAT Mode for the NEAX 2000 PBX.

Program Two Virtual Extensions for the IVR Pilot and the Callback Pilot

ST+11+EXE+000+EXE+2000 DE (program ext. 2000 as a virtual)

ST+11+EXE+001+EXE+2001 DE (program ext. 2001 as a virtual)

Program IVR Ports Extensions to Ports on the PN-4LCD-A

ST+10+EXE+005+EXE+2002 DE (program ext. 2002 to a port)

ST+10+EXE+006+EXE+2003 DE (program ext. 2003 to a port)

ST+10+EXE+007+EXE+2004 DE (program ext. 2004 to a port)

ST+10+EXE+008+EXE+2005 DE (program ext. 2005 to a port)

Program a Hunt Group for the IVR

ST+170+EXE+2000+EXE+2002 DE (programming the UCD Hunt Group)

ST+170+EXE+2002+EXE+2003 DE (")

ST+170+EXE+2003+EXE+2004 DE (")

ST+170+EXE+2004+EXE+2005 DE (")

ST+170+EXE+2005+EXE+2000 DE (")

Set Ext. 2000 and 2001 as Pilot Numbers for the UCD Group

ST+71+EXE+2000+EXE+1 DE (make ext. 2000 a pilot number)

ST+71+EXE+2001+EXE+1 DE (make ext. 2001 a pilot number)

Assign All the Extension to a UCD Group Number

ST+172+EXE+2000+EXE+07 DE

ST+172+EXE+2001+EXE+07 DE

ST+172+EXE+2002+EXE+07 DE

ST+172+EXE+2003+EXE+07 DE

ST+172+EXE+2004+EXE+07 DE

ST+172+EXE+2005+EXE+07 DE

Busy Out the UCD Pilots

ST+E50+EXE+2000+ EXE+0 DE (Busy out Pilot)

ST+E50+EXE+2001+ EXE+0 DE (Busy out Pilot)

On a 2000 pbx, if all the IVR ports are continuously busy, IVR callbacks may drop when IVR ports become available. To prevent this, the IVR, Callback Pilot, and Analog ports can be put in a hunt group in CMD 180. Then busy out can be performed on the IVR and Callback Pilot CMD E50.

To Busy Out IVR and Callback Pilot CMD E50 When All IVR Ports are Busy

Step 1 Remove IVR pilot Callback Pilot, and Analog ports from CMD 172.

Step 2 Remove IVR and Callback Pilot from CMD 171.

Step 3 Remove IVR Pilot and Analog ports from CMD 170.

Step 4 Add IVR Pilot, CallBack Pilot, Analog ports to Hunt Group in CMD 180. Add the IVR and Callback Pilot or Make sure they are still busied out in CMD E50.

Example: *CMD 180 >Assign 2000(Pilot) >2001(CallBack Pilot>*

2001> 2002>

2002> 2003>

2003> 2004>

2005> 2000>

CMD E50> 2000>0

2001>0

This method should only be used when ports have heavy call volume. Under normal call volume conditions, a hunt group will not maximize the full use of all the IVR ports.

Agent Positions Setup Using CAT Mode

Use the following to configure Agent Positions using CAT Mode for the NEAX 2000 PBX.

Define the Virtual Lines Used by Agents

ST+11+EXE+256+EXE+455+DE

ST+11+EXE+257+EXE+456+DE

Set the ACD Lines as Primary Lines for Agents

ST+93+EXE+305+EXE+455+DE

ST+93+EXE+304+EXE+456+DE

Set the Dterm Function Keys

ST+9000+EXE+305+, +01+EXE+F1042+DE (Log ON/OFF the agent)

ST+9000+EXE+305+, +02+EXE+F1036+DE (Work)

ST+9000+EXE+305+, +03+EXE+F1033+DE (Break)

ST+9000+EXE+305+, +06+EXE+F1046+DE (Queue monitor lamp)

ST+9000+EXE+305+, +07+EXE+455+DE (Get line 455)

ST+9000+EXE+305+, +08+EXE+305+DE (Get line 305)

ACD Pilots (Monitored Numbers) Setup Using CAT Mode

Use the following to configure ACD Pilots using CAT Mode for the NEAX 2000 PBX.

Define the Virtual Extensions for the ACD Pilots

ST+11+EXE+258+EXE+444+DE

ST+11+EXE+259+EXE+445+DE

Set the Defined Extensions as Monitored Numbers

ST+171+EXE+444+EXE+3+DE

ST+171+EXE+445+EXE+3+DE

Assign the ACD Pilots to a Group Number

ST+172+EXE+444+EXE+10+DE (assign pilot 444 to the group number 10)

ST+172+EXE+445+EXE+10+DE (assign pilot 445 to the group number 10)



5

Configuring the NEAX 2400 PBX

This chapter describes the ASDT, APHN, ASHU, AMNO, and AKYD commands for the NEAX 2400 PBX.

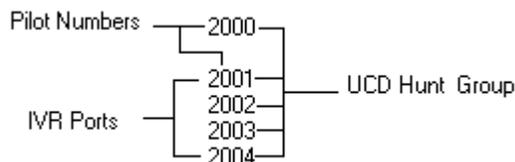
- Chapter Topics
- [Installation Prerequisites](#)
 - [ASDT Command](#)
 - [APHN Command](#)
 - [ASHU Command](#)
 - [AMNO Command](#)
 - [AKYD Command](#)

Installation Prerequisites

Apply the commands in the list below on a functional NEAX 2400 PBX. Extensions 2002-2004 are analog lines on the 16-LCBE programmed by the **ASDT** command.

The UCD Hunt group configuration should be set using the model seen in [Figure 5-1](#).

Figure 5-1 UCD Hunt group configuration





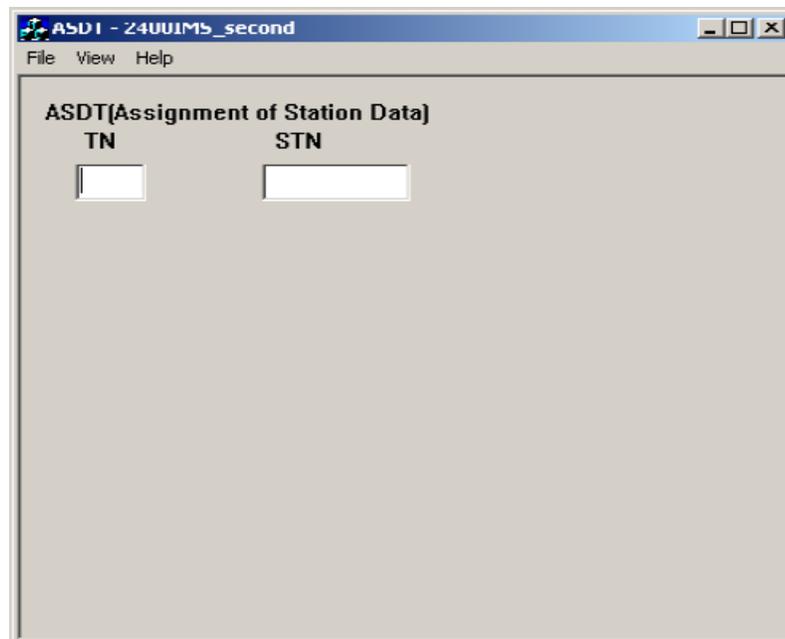
NOTE

- Lens numbers, extensions, and some data used in this guide are arbitrary and may be replaced with real numbers. If you are not sure about these entries, please contact your PBX administrator.
- The first step is to have the correct card(s) installed in the NEAX 2400 IMS PBX.
- The recommended card is the 16-LCBE. This card provides positive disconnect supervision.
- For the UCD group settings, you should have **n+1** extensions in a contiguous range, where **n** is the number of the ports the IVR will use, plus one virtual extension for the IVR pilot number.
- Before you start programming the PBX, you should know the pilots and the extensions that will be used for the IVR board and configuration.

ASDT Command

The **ASDT** command is used to program the analog extensions and virtual lines. It is configured in the ASDT - 2400MS_second dialog box (Figure 5-2).

Figure 5-2 ASDT - 2400IMS_second dialog box—TN and STN



- Step 1** Enter tenant number **1** in **TN**.
- Step 2** Enter the first extension **2001** from the IVR ports in **STN**.

Figure 5-3 ASDT - 2400IMS_second - LEN, TEC, RSC, SFC

The screenshot shows a window titled "ASDT - 2400IMS_second" with a menu bar containing "File", "View", and "Help". The main area is titled "ASDT[Assignment of Station Data]" and contains several input fields:

TN	STN	TEC	RSC	SFC
1	2001	3	1	1

Below the table, there is a "LENS" field containing "001001" and a "DEL?" field which is empty.

Step 3 Enter LEN **001001** for this extension in **LENS**.

Step 4 Set **TEC 3**, **RSC** to **1**, and **SFC** to **1**.

Step 5 Repeat [Step 1](#) thru [Step 4](#) for the following extensions:

—**STN: 2002 – LEN: 001002**

—**STN: 2003 – LEN: 001003**

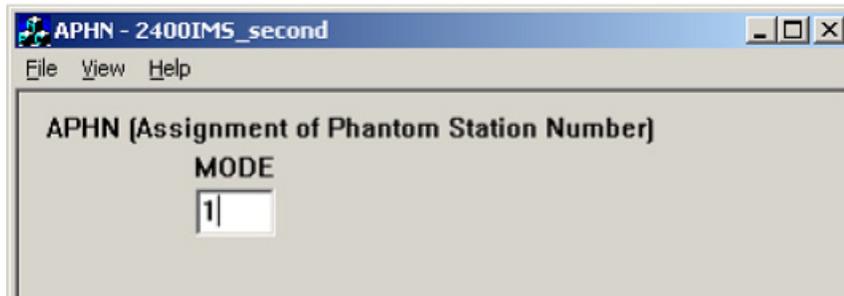
—**STN: 2004 – LEN: 001004**

Step 6 Define a virtual line **STN: 1802** using a virtual **LEN**.

APHN Command

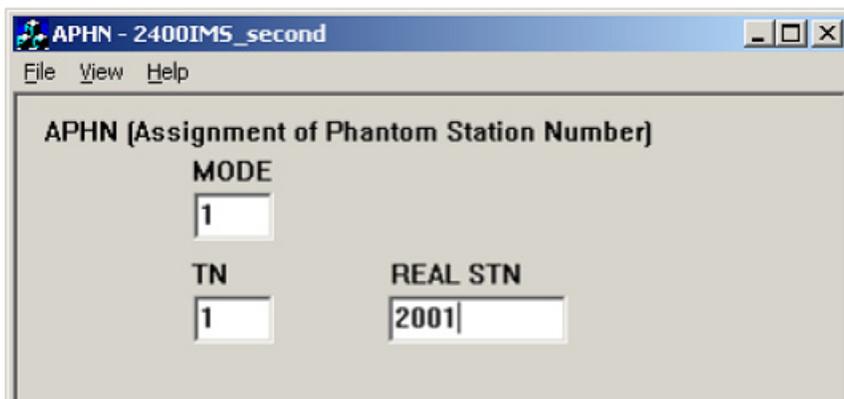
Use the **APHN** command to program the phantom station number data.

Figure 5-4 APHN - 2400IMS_second - Mode



Step 1 Enter 1 in **Mode**.

Figure 5-5 APHN - 2400IMS_second - TN and REAL STN



Step 2 Enter tenant number 1 in **TN**.

Step 3 Enter Real Station Number 2000 in **REAL STN**.

Figure 5-6 APHN - 2400IMS_second - PH and PHSTN

APHN (Assignment of Phantom Station Number)

MODE
1

TN REAL STN
1 2001

CNT	PH	PHSTN
1	1	2000
2		
3		
4		

Step 4 Enter Phantom extension number **1** in a hunting group in **PH**.

Step 5 Enter Phantom Station Number **2000** in **PHSTN**.

ASHU Command

Use the **ASHU** command to assign the analog extensions to an UCD group.

Figure 5-7 ASHU - 2400IMS_second - TN and STN

STN

- Step 1** Enter tenant number **1** in **TN**.
- Step 2** Enter UCD Pilot number **2001** in **STN**.
- Step 3** Press **Get** to validate the entry.

Figure 5-8 ASHU - 2400IMS_second - EDIT SYN

The screenshot shows a window titled "ASHU - 2400IMS_second" with the following fields and buttons:

- TN: 1
- STN: 2001
- EDIT STN: 2003
- CNT: 1

Buttons on the right side include: Get, Set, Del, View Log File, and Exit. A "List Del" button is located between the EDIT STN and CNT fields.

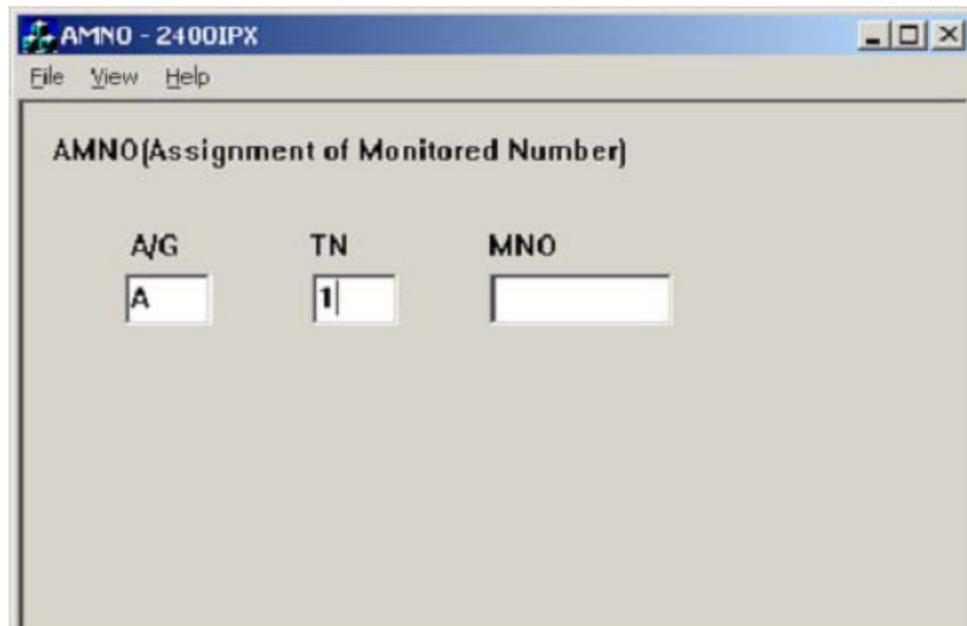
STN
2002

- Step 4** To add extensions to the UCD Group, enter an extension in **EDIT STN**, and press **Enter**.
- The extension appears in the **STN** extension list.
 - Enter all UCD Group extensions using [Step 4](#).
- Step 5** After you enter all the extensions, click **Set**. The UCD Group is now set.

AMNO Command

Use the **AMNO** command to define a monitored number to use for ACD pilots.

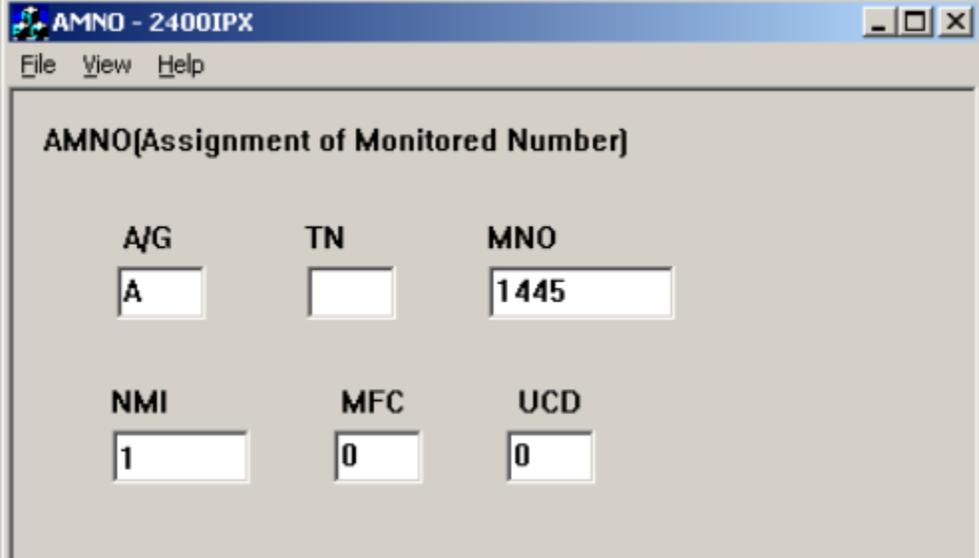
Figure 5-9 AMNO - 2400IPX - A/G, TN, and MNO



The screenshot shows a window titled "AMNO - 2400IPX" with a menu bar containing "File", "View", and "Help". The main area is titled "AMNO(Assignment of Monitored Number)". Below the title, there are three input fields arranged horizontally. The first field is labeled "A/G" and contains the letter "A". The second field is labeled "TN" and contains the number "1". The third field is labeled "MNO" and is currently empty.

- Step 1** Enter **A** in **A/G**.
- Step 2** Enter tenant number **1** in **TN**.
- Step 3** Enter monitored number **1445** in **MNO**.

Figure 5-10 AMNO - 2400IPX - NMI, MFC, and UCD



The screenshot shows a window titled "AMNO - 2400IPX" with a menu bar containing "File", "View", and "Help". The main area is titled "AMNO(Assignment of Monitored Number)". It contains six input fields arranged in two rows. The first row has fields for "A/G" (containing "A"), "TN" (empty), and "MNO" (containing "1445"). The second row has fields for "NMI" (containing "1"), "MFC" (containing "0"), and "UCD" (containing "0").

Field	Value
A/G	A
TN	
MNO	1445
NMI	1
MFC	0
UCD	0

Step 4 Set **NMI** to **1**.

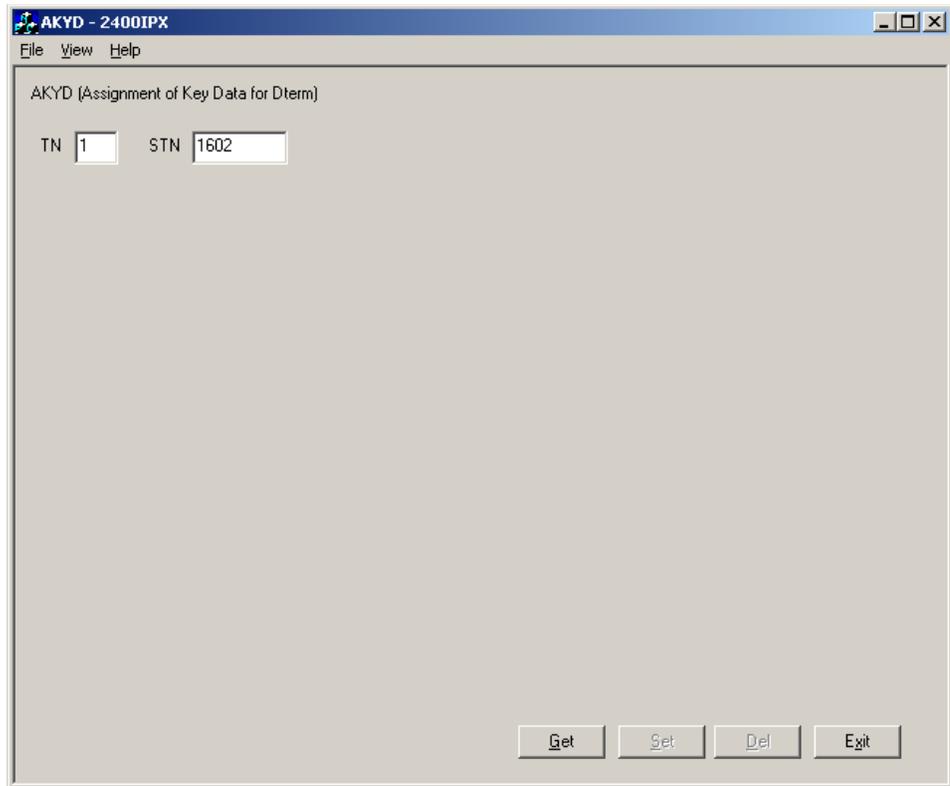
Step 5 Set **MFC** to **0**.

Step 6 Set **UCD** to **0**.

AKYD Command

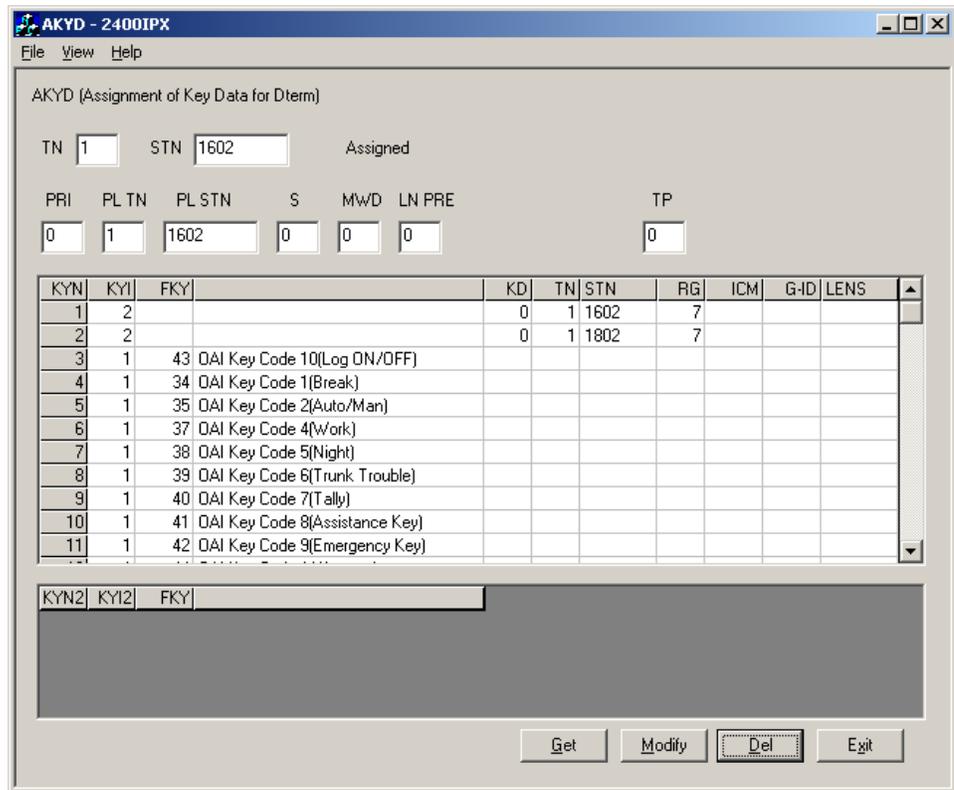
Use the **AKYD** command to configure a Dterm phone for an agent position.

Figure 5-11 AKYD - 2400IPX - TN and STN



- Step 1** Enter tenant number **1** in **TN**.
- Step 2** Enter agent position number **1602** in **STN**.
- Step 3** Click **Get**.
The AKYD - 2400IPX - PL STN, PBX Line and ACD Line displays ([Figure 5-12](#)).

Figure 5-12 AKYD - 2400IPX - PL STN, PBX Line and ACD Line



- Step 4** Set primary line to **1602** in **PL STN**.
- Step 5** Assign the Dterm phone keys for the PBX line and the ACD line as follows:
 - KYN: 1, TN: 1, STN: 1602** - Get line 1602
 - KYN: 2, TN: 1, STN: 1802** - Get line 1802
 - KYN: 3, FKY: 43** - Log ON/OFF the agent
 - KYN: 4, FKY: 34** - Break
 - KYN: 6, FKY: 37** - Work
 - KYN: 14, FKY: 47** - Queue Call Monitoring Lamp



6

Configuring the WebCallback

This chapter explains how to install the Internet Information Server (IIS), configure the Web Initiated Callback, and initiate a Web Callback.

Chapter Topics

- [Internet Information Server \(IIS\) Installation](#)
- [Configuring the Web Initiated Callback](#)
- [Initiating a Web Callback](#)

Internet Information Server (IIS) Installation

Use the following steps to install the Internet Information Server (IIS). Some steps may vary depending on whether Windows Server 2000 operating system or Windows Server 2003 operating system is in use. When separate instructions apply to Windows Server 2000 and Windows Server 2003, they are differentiated in the text.

To Install the Internet Information Server

- Step 1** From the Microsoft Windows Desktop, select **Start > Settings > Control Panel > Add/Remove Programs**.
- Step 2** In the Add/Remove Programs dialog box, select **Add/Remove Windows Components**.
- Step 3** Do one of the following:
- *Windows Server 2000:* In the Windows Components Wizard dialog box, select **Internet Information Services (IIS)** and click **Details**.
 - *Windows Server 2003:* Check **Application Server** and double-click **Application Server Name**.
- Step 4** Do one of the following:
- *Windows Server 2000:* In the Application Server window, select **Asp.net** and **Internet Information Services(IIS)** and click **Details for Internet Information Services**.
 - *Windows Server 2003:* Under the Application Server window, select **Asp.net** and **Internet Information Services(IIS)** and click **Details for Internet Information Services**.
- From the Internet Information Services window, select **Common Files, Internet Information Services Manager** and **World Wide Web Services**.

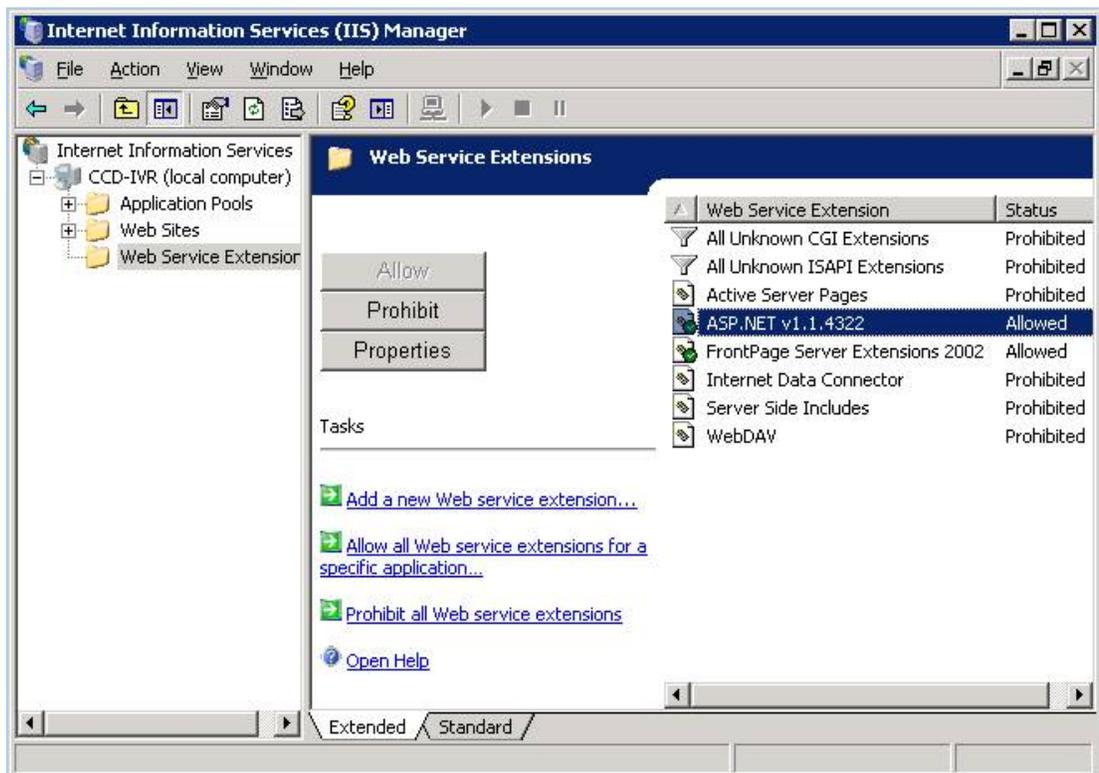
- Step 5** Do one of the following:
- *Windows Server 2000*: Click **OK** to continue.
 - *Windows Server 2003*: Click **OK** twice to continue.
- Step 6** Click **Next** to start installing these components.
- Step 7** When dialog box directs, insert the Windows 2000 or 2003 Server CD into the CD-ROM drive.
- Step 8** Press **OK** to continue.
- Step 9** When the installation finishes, remove the CD from the drive and if prompted, restart the computer.

After the IIS installation is through, use the following steps to ensure the ASP.NET service is enabled.

To Enable ASP.NET

- Step 1** Open the Internet Information Services (IIS) Manager.
- Step 2** Select the **Web Service Extension** directory in the left pane. The Web Service Extensions display in the right pane (Figure 6-1).

Figure 6-1 IIS Manager—ASP.net Web Service Extension



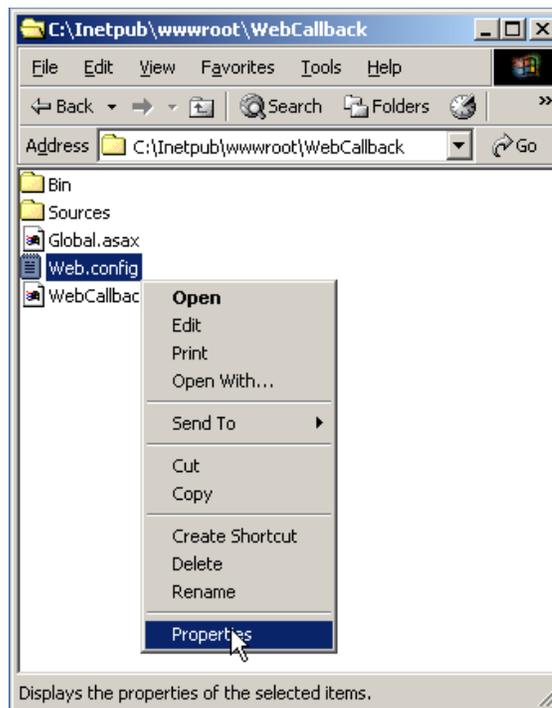
- Step 3** Ensure **ASP.NET** Web Service Extension has **Allowed** in the Status column. If the service is allowed, close the IIS Manager Services dialog box.

- Step 4** Do the following, if **Allow** is *not* displayed in the Status column of ASP.Net:
- Select the **ASP.NET** service and right-click. A shortcut menu appears (Figure 6-1).
 - Click **Allow** to enable the ASP.NET service and then close the IIS Manager Services dialog box.
- The ASP.NET service should now be enabled.

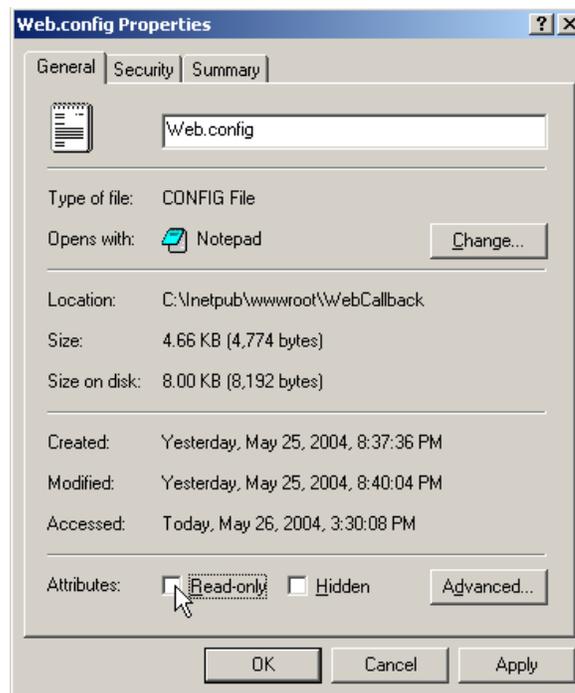
Configuring the Web Initiated Callback

- Step 1** Copy the WebCallback directory from the Install folder located on the QueWorX 4 CD-1 to **C:\inetpub\wwwroot**.
- Step 2** Proceed to **C:\inetpub\wwwroot\WebCallback** and right-click on **Web.config**. The Web.config shortcut menu appears (Figure 6-2).

Figure 6-2 Web.config Properties shortcut menu

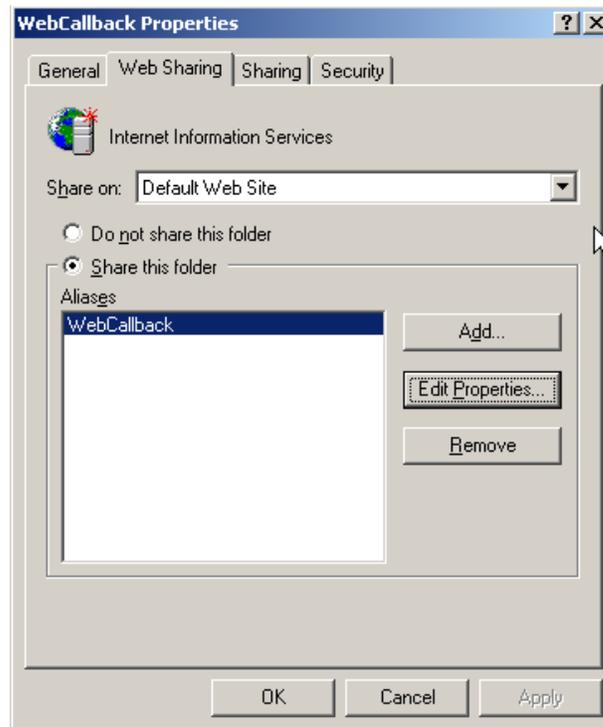


- Step 3** Select **Properties**. The Web.config Properties dialog box—General tab appears (Figure 6-3).

Figure 6-3 Web.config Properties dialog box—General tab

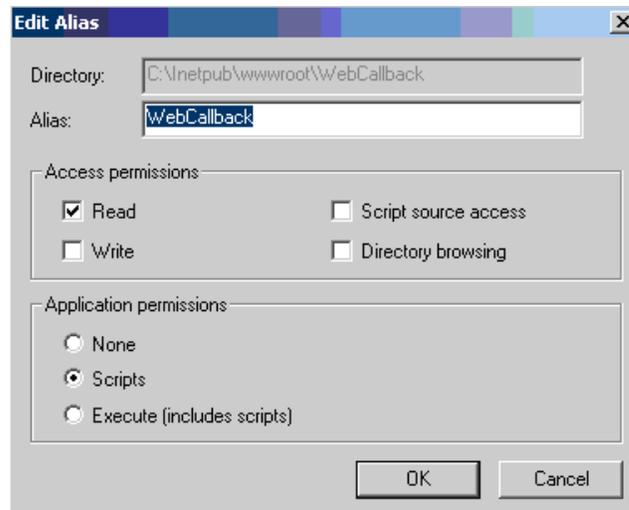
- Step 4** Clear **Read-only**, then click **OK** to continue.
- Step 5** Proceed to **C:\inetpub\wwwroot** and right-click on WebCallback folder.
- Step 6** Click **Properties**.
The WebCallback Properties dialog box—Web Sharing tab appears (Figure 6-4).

Figure 6-4 WebCallback Properties dialog box—Web Sharing tab



- Step 7** Select **Share this folder**.
The Edit Alias dialog box appears (Figure 6-5).

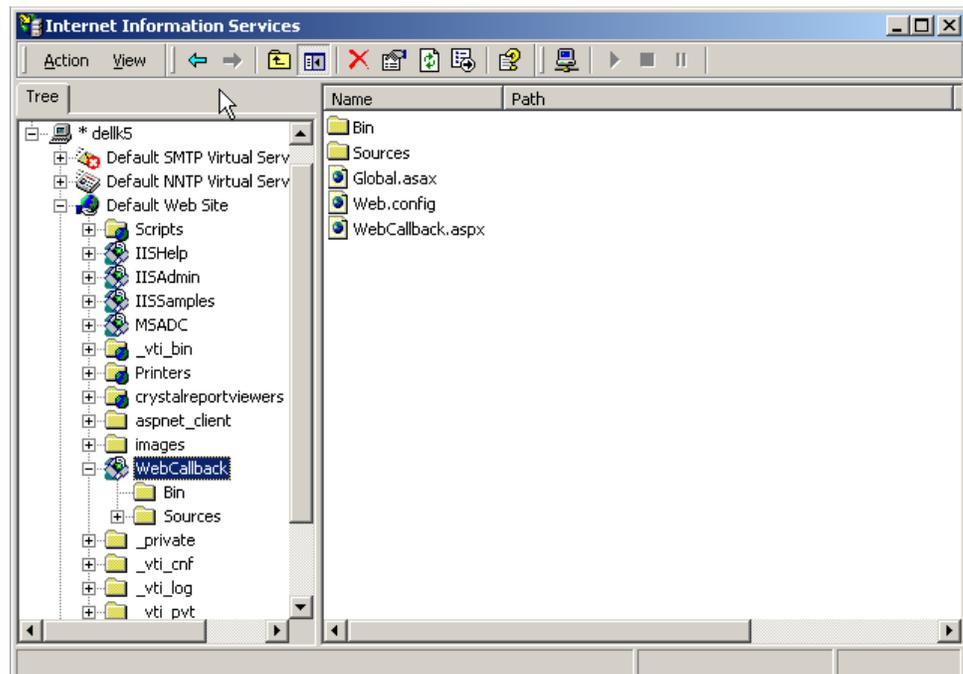
Figure 6-5 Edit Alias dialog box



- Step 8** Select **Read** located in **Access permissions**.
Step 9 Select **Scripts** located in **Application permissions**.

- Step 10** Click **OK** to close the Edit Alias dialog box.
- Step 11** Click **OK** to close the WebCallback Properties dialog box.
- Step 12** Return to the Microsoft Windows Desktop and select **Start > Run**.
- Step 13** Type **inetmgr** in Run dialog box **Open** .
- Step 14** Click **OK**.
The Internet Information Services Manager window appears (Figure 6-6).

Figure 6-6 Internet Information Services Manager window



- Step 15** Select and expand the **Default Web Site** directory.
The **WebCallback** folder will be listed as a virtual directory.
- Step 16** Go to **C:\inetpub\wwwroot\Webcallback** and open the Web.config file.
- Step 17** Enter the **Pilot** and **Split** values under **AppSettings**.



NOTE

The **Pilot** and **Split** values entered under the **AppsSettings** module enables webcallback for that specific pilot and split.

Initiating a Web Callback

- Step 1** Open Microsoft Windows Internet Explorer.
- Step 2** Enter **http://<WebServerName>/WebCallback/WebCallback.aspx**
- You must replace <WebServerName> with the computer name where the IIS server and the WebCallback component are installed.
 - The WebCallback Web page appears (Figure 6-7) in the web browser.

Figure 6-7 WebCallback Web Page

The screenshot displays the WebCallback Web Page with the following fields and values:

Queue Depth:	1
Long waiting call:	00:28(mm:ss)
Expected delay to newly queued calls:	02:58(mm:ss)
Server time:	03:54PM
Business hours:	<i>09:00AM - 05:00PM</i>
CallBack Number	<input type="text"/>
Callback Immediate	<input type="checkbox"/>
Date Time (HH:MM)	04 <input type="text"/> 56 <input type="text"/> PM <input type="text"/>
Email :	<input type="text"/>
Account code:	<input type="text"/>
Information:	<input type="text"/>
URL	<input type="text"/>
	<input type="button" value="Add"/>
	<input type="button" value="Refresh"/>

Table 6-1 WebCallback Web Page Settings Descriptions

Fields	Description
Queue Depth	Displays the current number of calls in queue.
Long waiting call	Displays the longest period of time a call has been waiting before it was answered.
Expected delay to newly queued calls	Displays the Estimated Time to Answer (ETA) for the next call.
Server time	Displays server time to the customer.
Business hours	Displays the hours that a customer can leave a schedule callback.
Callback Number	A customer should provide a valid callback number. Otherwise, the callback is not successful.
Callback Immediate	If a customer wishes to leave an immediate callback, then this option must be checked. If this option is unchecked, then the callback will be scheduled.
Date Time	This option is used for a scheduled callback. The customer must enter a time when the callback would be scheduled. If the scheduled time is outside of the business hours, then the system should announce that no callbacks would be accepted.
Email (optional)	This is the customer's e-mail address which will be used to send information to a customer if he cannot be contacted by phone.
Account Code (optional)	The customer can provide an account code which will provide additional call information to an agent through the Customer Popup information window.
Information (optional)	This field can be used to provide additional call information.
URL (optional)	The customer can provide his website address so that an agent would receive additional call information.

7

Securing the QueWorX Server

This chapter provides recommended security practices to create and enforce a secure network environment for the QueWorX Server.

Chapter Topics

- [Overview](#)
- [Service Conditions](#)
- [Firewall Overview](#)
- [Configure Firewalls](#)
- [Isolation of Windows Services](#)
- [Secure the Operating System](#)
- [Virus Detection](#)
- [Intrusion Detection](#)
- [Secure the Database](#)
- [Database System Administrator \(sa\) Passwords](#)
- [Backup and Recovery Plans](#)

Overview

The lack of strong security policies, out-of-date anti-virus protection, or obsolete software can place your data at risk. NEC is aware of this risk and strives to ship its products with the latest Operating Systems, Service Packs, and Critical Updates.

NEC promotes a secure solution, which involves a layered approach. This includes the use of a firewall, a secure database, and other readily available security practices, in conjunction with your current security framework.

Customers should follow best practices as they relate to their business objectives and specific business environment.

The recommendations in this chapter are offered for your convenience and should be tested prior to deployment or integration with your IT systems. Before applying recommendations from this guide, NEC recommends that you understand the high-level concepts and methods required to apply these recommendations.

Service Conditions

Do not implement recommendations in this guide before testing them in a test environment. The customer is responsible for securing their NEC (or third-party) applications. The latest Service Packs, Patches, and Critical Updates should be applied to the Operating System to maintain system-wide security.

The following operating systems are supported:

- Microsoft Windows 2000 Advanced Server
- Microsoft Windows Server 2003

Please note the following about the information in this chapter:

- No step-by-step instructions are provided for any Windows application. Please refer to the Microsoft Users Guide or online help to locate Windows Operating System procedures.
- No information contained in this chapter replaces a well-structured security policy and it does not address site-specific configuration issues. Consult your System or Network Administrator before adopting NEC's security recommendations.

A secure network environment is a critical security component. To protect a web server on the network from unauthorized modification, destruction, or disclosure, develop network security policies to safeguard data and equipment.

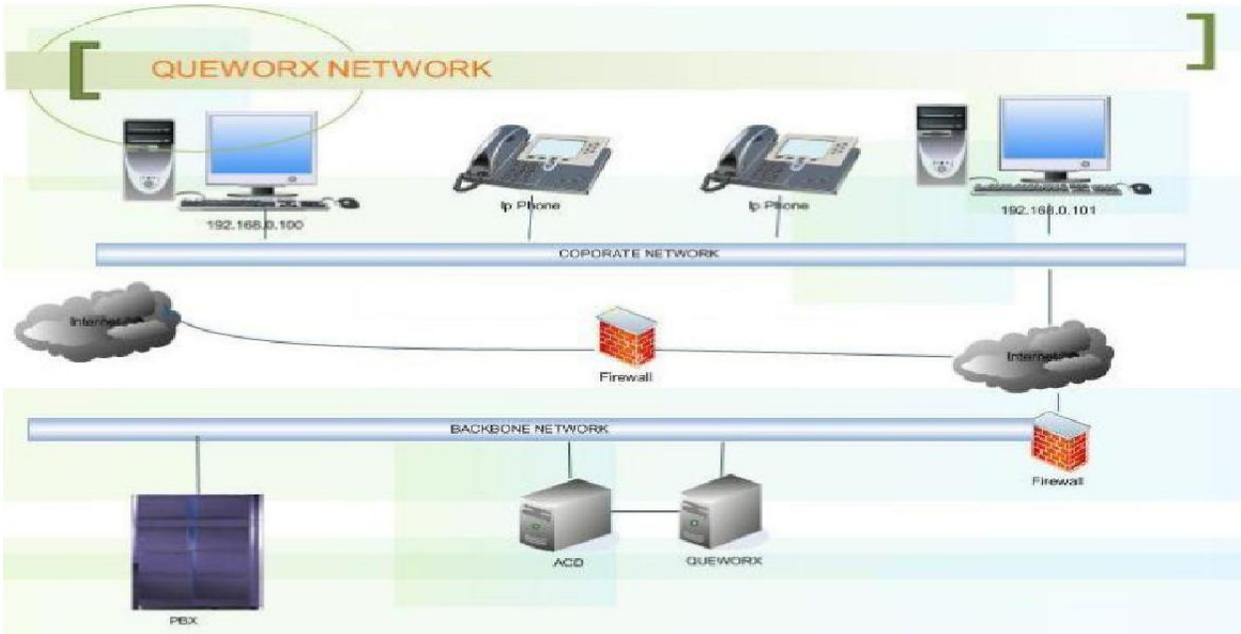


For more information on Securing the Network, go to <http://www.microsoft.com>.
Keywords: Network, Security, Network Security, Firewall, Disable, Disable NetBIOS
Flaw, SQL, Database

Firewall Overview

A firewall is a combination of hardware and software that monitors and controls incoming and outgoing network traffic. To achieve the best results, place a firewall between the Internet and the QueWorX Server as seen in [Figure 7-1](#).

Figure 7-1 Firewall Protection



Potential intruders scan computers from the Internet or within the Local Area Network (LAN), probing for an open port where they can break through and access a server.



Enable the Microsoft Windows firewall when a third-party firewall (hardware/software) is not in place.

To increase security, configure the firewall to allow specific types of traffic into and out of the internal network.

Configure Firewalls

The following ports should be allowed for the ACD to communicate with QueWorX (IVR):

- 135/tcp Incoming (Dcom)
- 2223/tcp Virtual Wallboard server Outgoing
- 1900/tcp Virtual Wallboard admin Incoming
- 1433/tcp QueWorx Report Runner Incoming
- 1945/tcp Virtual Wallboard client Incoming
- 60030/tcp PBX Outgoing
- 60201/tcp Queworx Screenpop Client Application



NOTE

For more information on securing your computer, go to link [http://support.microsoft.com/kb/309798\(2000](http://support.microsoft.com/kb/309798(2000) and [http://support.microsoft.com/kb/816792\(2003\)](http://support.microsoft.com/kb/816792(2003)).

Isolation of Windows Services

To enforce security, it is recommended that you exclude the server from the following Windows Services:

- Do not use the server as a Domain Controller or Global Administrator.
- Do not install the SQL Server on a Domain Controller.
- Disable all unnecessary Windows Services.
- Do not enable the following Windows Services:
 - WINS
 - DHCP
 - FTP
 - SMTP



IMPORTANT

The installation will fail when installed as a Domain Controller.

Secure the Operating System

Use the following recommendations to secure the supported Windows Operating Systems.



REFERENCE

For more information on Securing the Operating System, go to <http://www.microsoft.com>.

Server Administration

To ensure your operating system is secure, NEC recommends the following basic server administration policies.

General

- Download and apply all Critical Updates and configure the Windows Automatic Updates service to receive Critical Update and Security Patch notices.
- Enforce strong passwords.
- Disable/restrict remote access to administrators.
- Clear **Password never expires** for the accounts from computer management or customer maintained. Set passwords on indicated account to expire.
- Restrict Anonymous access:
 - Go to **Administrative Tools > Local Security Policy > Security Settings > Local policies > Security Options**.
 - Configure additional restrictions for anonymous connections by setting to: **No access without explicit anonymous permissions**.



Refer to Microsoft documentation for more information about modifying security settings.

User Accounts & Policies

Use the following recommendations to help prevent a hacker from gaining administrative access to the QueWorX Server and possibly the network.

- Disable the Windows guest user account.
- Disable and delete user accounts as they become inactive.
- Remove descriptions, which refer to account privileges.
- Create all Windows accounts with the lowest possible privileges.
- Rename or remove privileges from the default administrator account.
- Label administrative accounts with a user name other than administrator.
- Enforce policies to limit administrative access to two accounts.

Virus Detection

Maintaining a secure environment means scanning for viruses regularly. Most anti-virus software allows you to automatically download anti-virus software updates and schedule scans at preset intervals.

NEC recommends you scan your systems nightly to reduce the chance of virus infection. Always ensure anti-virus software is up-to-date. Schedule downloads nightly for patches and updates.



REFERENCE

For more information on virus detection, go to <http://www.microsoft.com>.
Keywords: Anti-virus Defense.

Intrusion Detection

Intrusion detection software actively analyzes packets looking for vulnerabilities on your network.

To increase network security, closely monitor your network and use intrusion detection software.



REFERENCE

For more information on intrusion detection, go to <http://www.microsoft.com>.
Keywords: Intrusion Detection Logging.

Secure the Database

The database is a vital component of QueWorX. Sensitive data related to customers is stored in a database. A hacker can use this data to launch a malicious attack.

Any database server that is not kept up-to-date with the latest security patches and critical updates can become infected with a worm. (A computer worm is a self-replicating program. A worm is self-contained and does not need to be part of another program to propagate itself.) A worm attacks vulnerabilities in database applications, which can cripple your network and render your hardware useless. To avoid this type of attack, check nightly for software updates and enforce strong passwords for all system administrator accounts.

Database System Administrator (sa) Passwords

System Administrator (*sa*) passwords are the first line of defense against hackers and malicious software. Hackers can access free programs designed to guess an *sa* password. The program generates test passwords using a combination of common words and numbers to gain access to the server.

Complex passwords are much more secure. **Never**, under any circumstance, use a blank *sa* password.

A strong password is defined as a password containing six or more characters, including at least one number or one special character. Enforcing strong passwords and using strong passwords on servers with Windows Authentication is highly recommended.



For more information on SQL Server 2005 Express, go to <http://msdn2.microsoft.com/en-us/library/ms345149.aspx>.

Backup and Recovery Plans

Backup and Recovery plans are important. A well-developed plan aids recovering from a virus or an attack.

The QueWorX server automatically backs up its database each night at 2:00 A.M. in the SQL Server's default backup location, **C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Backup**, to a file named QueWorX.bak. This backup file is a complete backup. It is recommended that you develop an automatic process to make a copy of this backup file to a separate location in case of fire, flood, or disaster.

The following recommendations apply:

- Develop a solid plan to recover from a virus or attack.
- Back up the QueWorX database before an upgrade, service pack, or patch.
- Test your backup and recovery plan.



8

Backing Up and Recovering the QueWorX Database

This chapter describes how to back up and restore the QueWorX database.

- Chapter Topics*
- [Creating Manual QueWorX Backups](#)
 - [Restoring the QueWorX Database](#)

Creating Manual QueWorX Backups

The SQL Server Management Studio Express can be used to manually back up the QueWorX database. Identical procedures apply to the licensed version of SQL Server 2005.

The QueWorX server automatically backs up its database each night at 2:00 A.M. to a file named QueWorX.bak in the SQL Server's default backup location at **C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Backup**. This backup file is a complete backup of the database.

It is recommended that you manually backup the database before an upgrade, service pack, or patch update. Use the following steps to backup the QueWorX database using SQL Server Management Studio Express.

To Backup the QueWorX Database

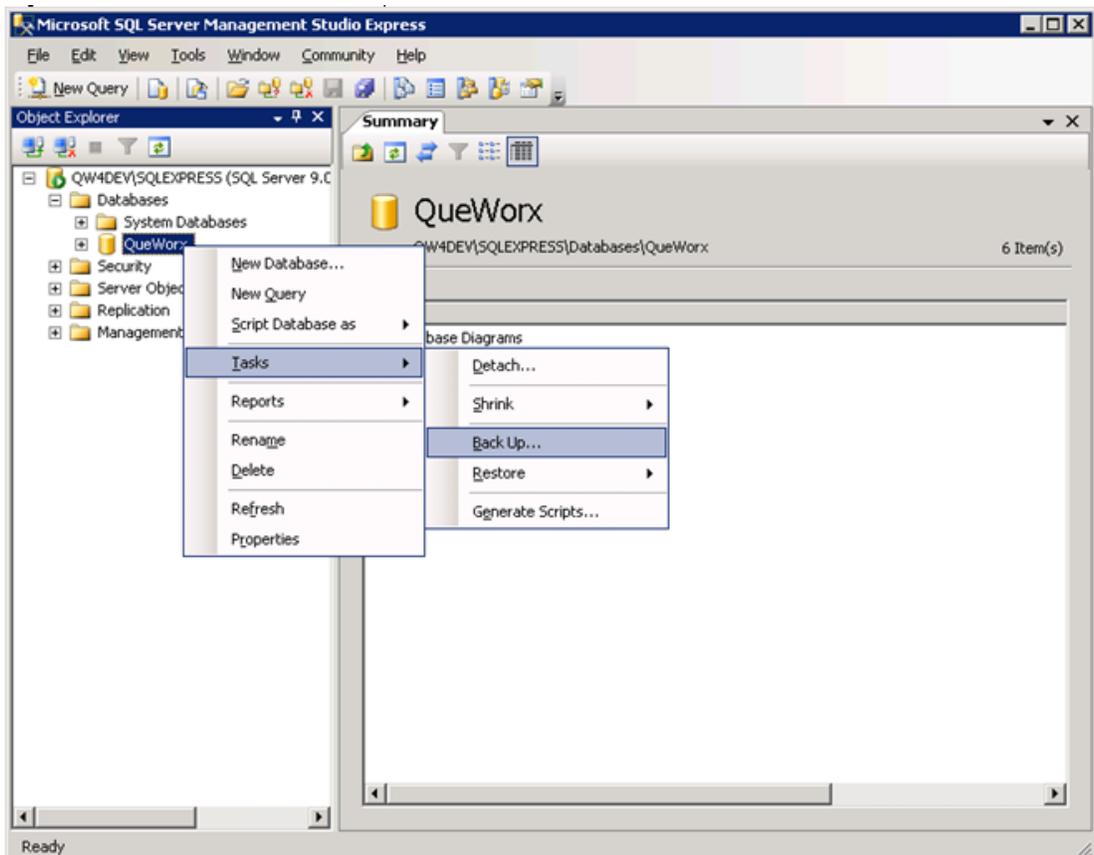
- Step 1** Stop the QueWorX server.
- Step 2** Go to **Start > Programs > Microsoft SQL Server 2005 > SQL Server Management Studio Express**. The Connect to SQL Server 2005 dialog box displays (Figure 8-1).

Figure 8-1 Connect to SQL Server 2005 dialog box



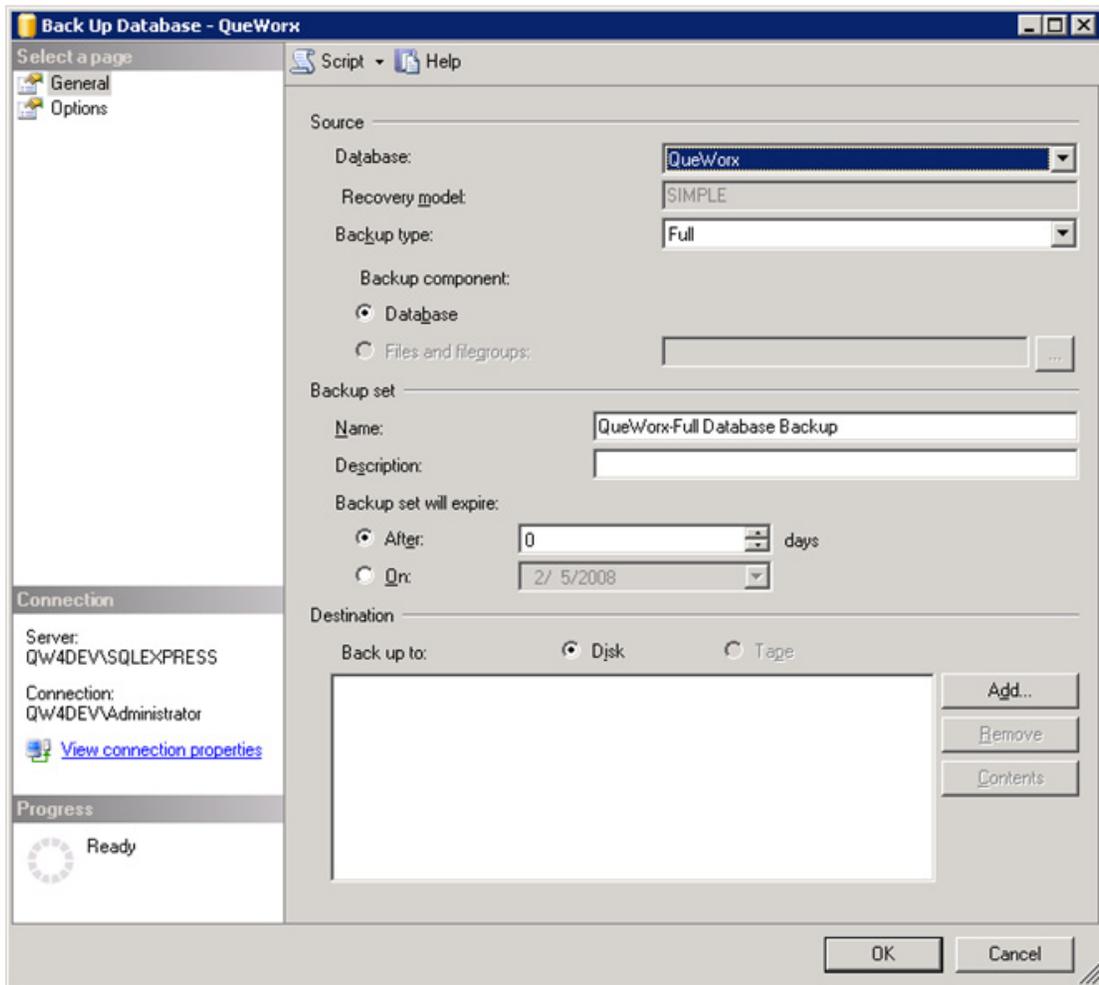
Step 3 Complete the required fields and click **Connect** to connect to the SQL Server 2005. The Object Explorer pane in the SQL Server Management Studio Express window displays (Figure 8-2).

Figure 8-2 SQL Server Management Studio Express window—backup tasks



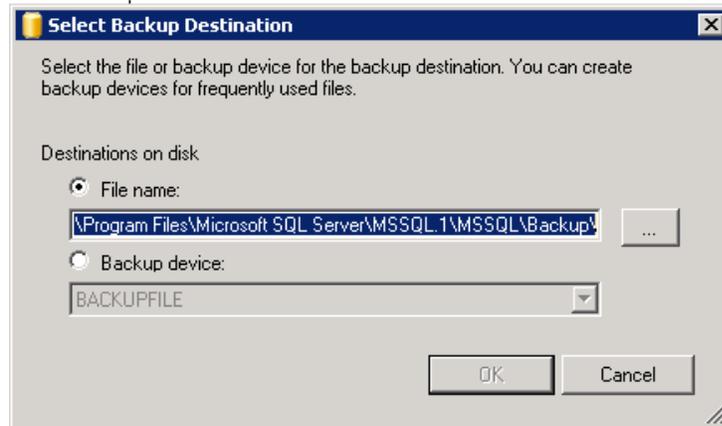
- Step 4** Select **QueWorX** under the **Databases** directory in the left pane, and then right-click and select **Tasks > Back Up**. The Back Up Database-QueWorX window displays (Figure 8-3).

Figure 8-3 Back Up Database-QueWorX window



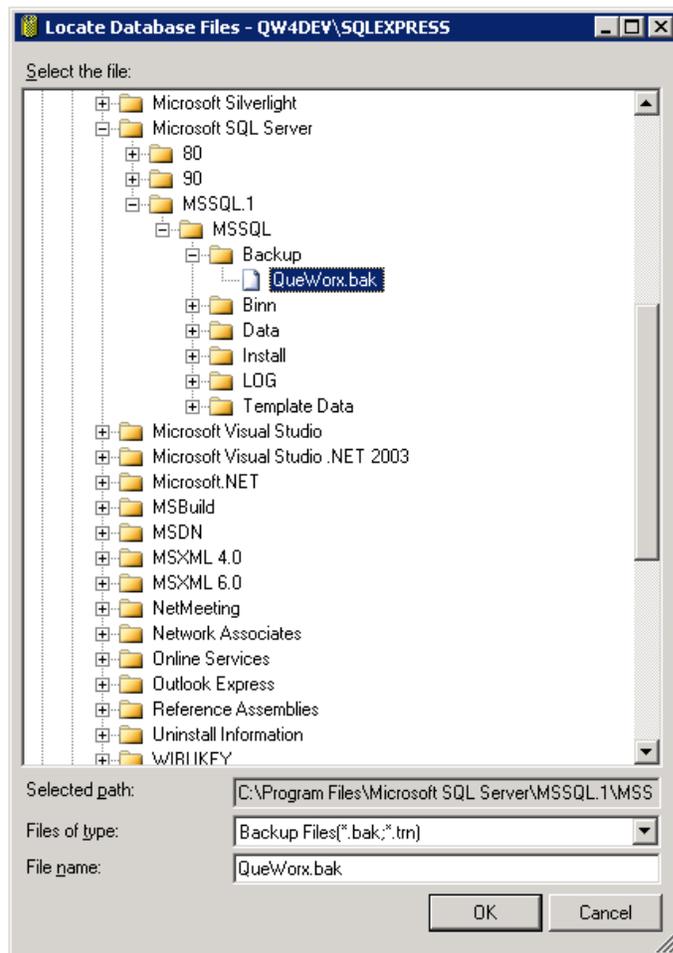
- Step 5** Click the **Add** button on the right side of the dialog box under the Destination section. The Select Backup Destination dialog box displays (Figure 8-4).

Figure 8-4 Select Backup Destination dialog box



Step 6 Click the ellipse button at the end of the **File name** field. The Locate Database Files dialog box displays (Figure 8-5).

Figure 8-5 Locate Database Files dialog box



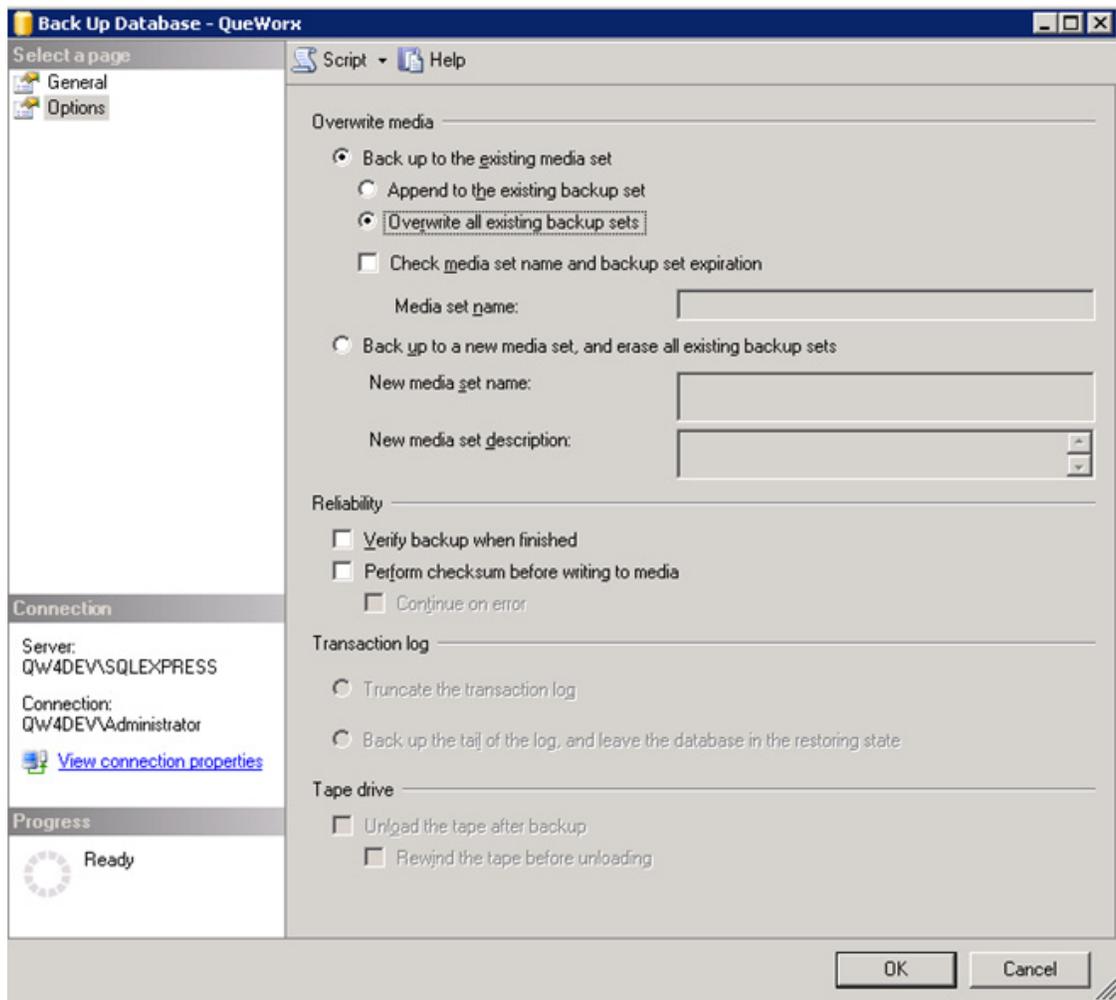
Step 7 Select the **QueWorX.bak** file under the backup folder located at **Microsoft SQL Server > MSSQL.1 > MSSQL > Backup**.



If this file does not exist, select the **Backup** folder and enter **QueWorX.bak** in the **filename** field.

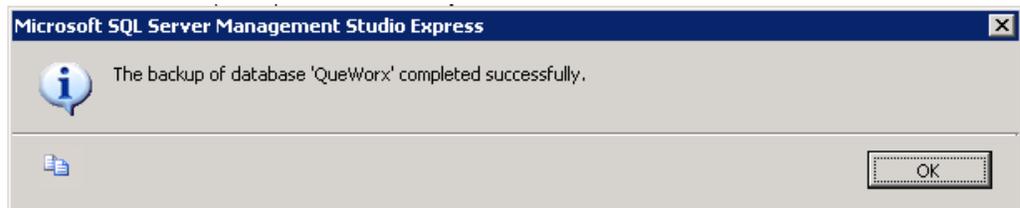
Step 8 Click **OK**, and then click **OK** again when the **Select Backup Destination** dialog box displays again (Figure 8-4). The **SQL Server Management Studio Express** window—**Options** displays (Figure 8-6).

Figure 8-6 SQL Server Management Studio Express window—Options



Step 9 Select **Options** in the left pane, and then select **Overwrite the existing database** under **Overwrite media > Back up to the existing media set**, and then click **OK**. The backup of the QueWorX database begins.

Step 10 Click **OK** in the **Confirmation** dialog box when it displays when the backup completes successfully.

Figure 8-7 Confirmation dialog box

The QueWorX database backup is complete.

Restoring the QueWorX Database

Databases can be restored using the Microsoft SQL Server Management Studio Express. Use the following steps to restore the QueWorX database.

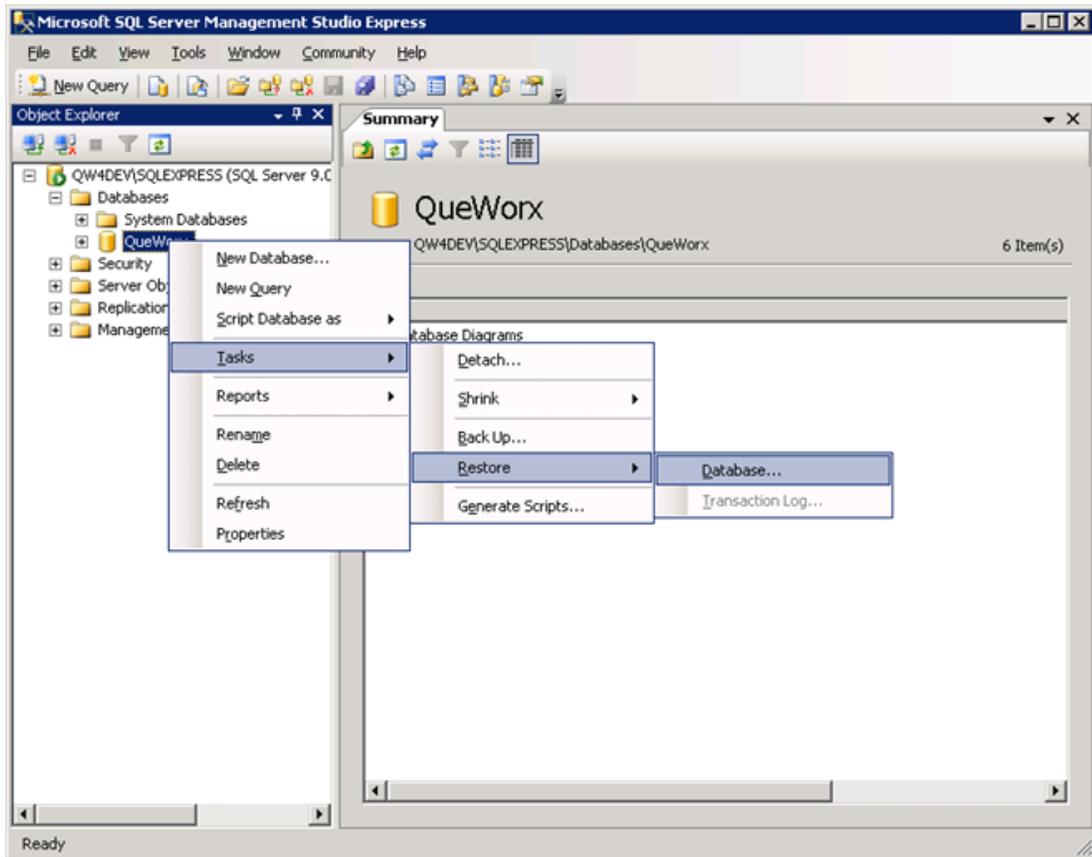
To Restore the QueWorX Database

- Step 1** Stop the QueWorX server.
- Step 2** Go to **Start > Programs > Microsoft SQL Server 2005 > SQL Server Management Studio Express**. The Connect to SQL Server 2005 dialog box displays (Figure 8-8).

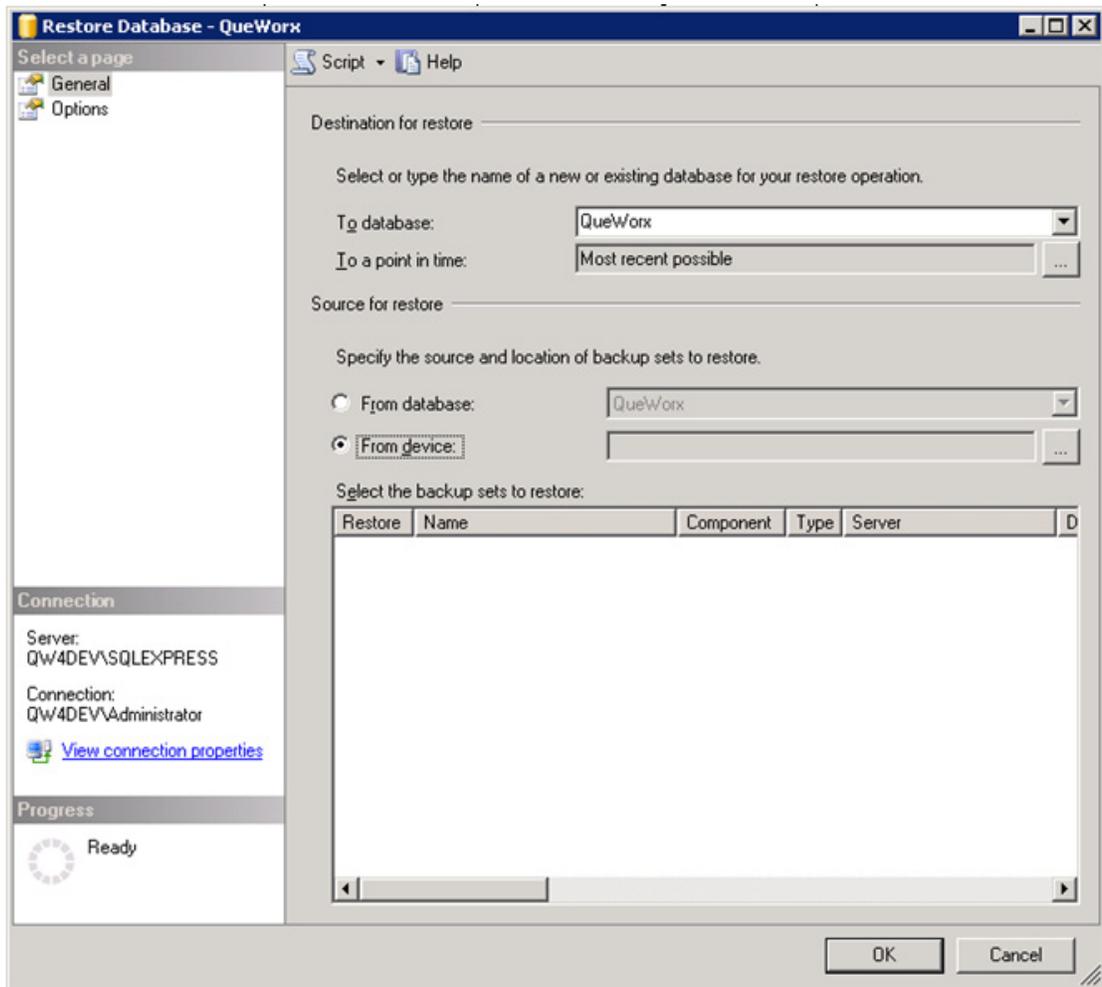
Figure 8-8 Connect to SQL Server 2005 dialog box

- Step 3** Complete the required fields and click **Connect** to connect to the SQL Server 2005. The Object Explorer pane in the SQL Server Management Studio Express window—restore option displays (Figure 8-9).

Figure 8-9 SQL Server Management Studio Express window—restore option

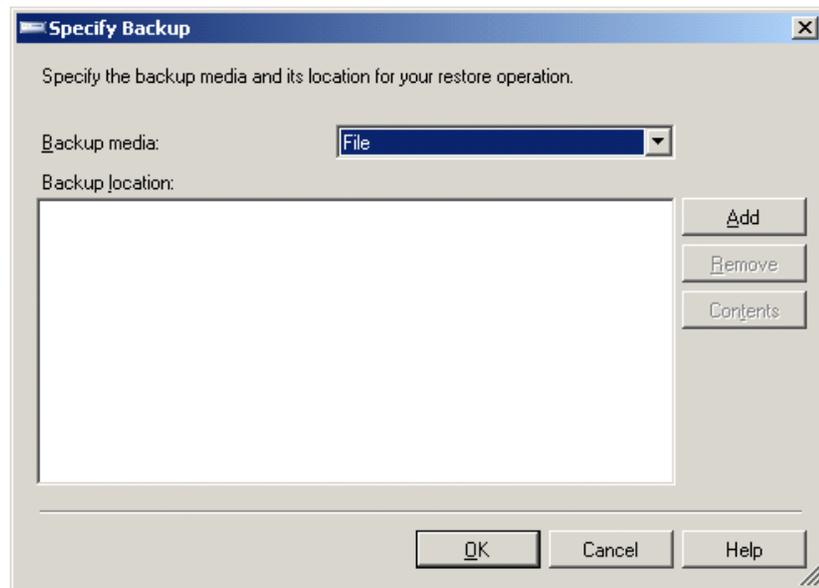


Step 4 Select **QueWorX** under the **Databases** directory in the left pane, and then right-click and select **Tasks > Restore > Database**. The Restore Database-QueWorX window displays (Figure 8-10).

Figure 8-10 *Restore Database-QueWorX window*

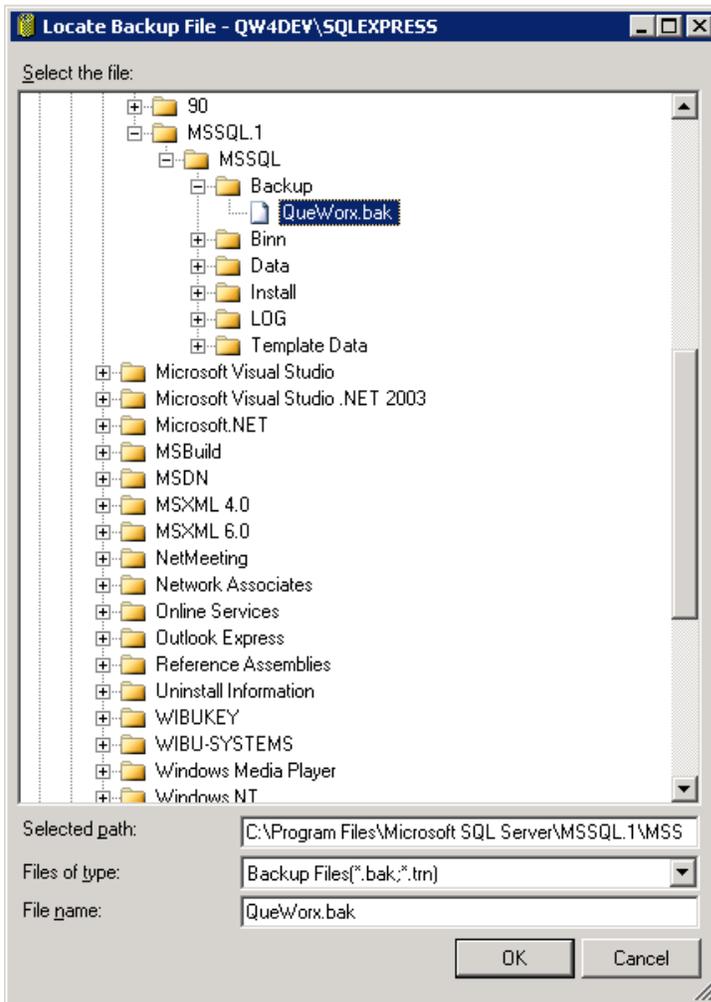
- Step 5** Select **From Device** under the **Specify the source and location of backup sets to restore** section and click the ellipse button at the right end of the **From Device** field. The Specify backup dialog box displays (Figure 8-11).

Figure 8-11 Specify backup dialog box



- Step 6** Click the **Add** button. The Locate Backup File dialog box displays (Figure 8-12).

Figure 8-12 Locate Backup File dialog box



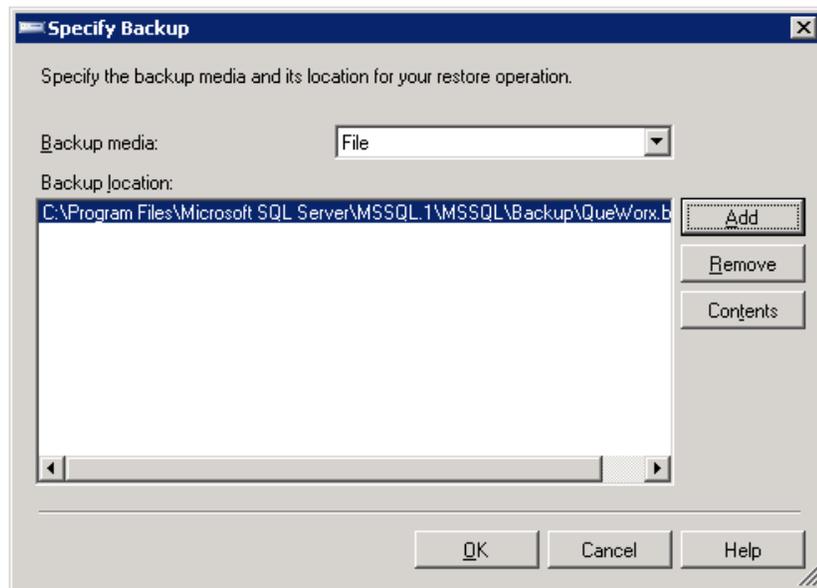
- Step 7** Select the **QueWorX.bak** file in the backup folder located at **Microsoft SQL Server > MSSQL.1 > MSSQL > Backup**. If the backup file was saved at another location or under a different file name, then navigate to that location and then select the **QueWorX.bak** file. If the backup file was saved under a different file name, then select the modified name at this time.



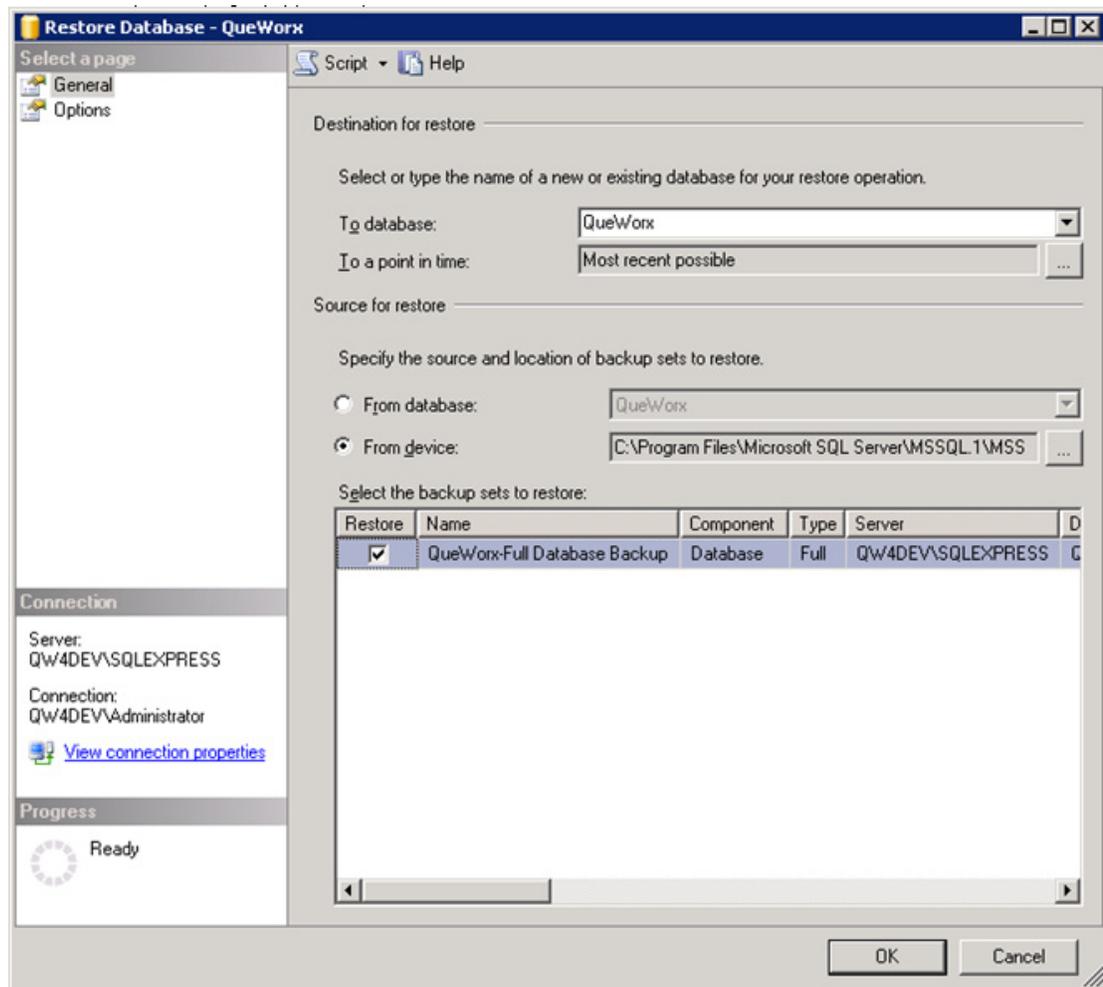
*If the name of your backup file does not have “.bak” for the extension then you need to select **All Files(*)** for the “Files of type” options.*

- Step 8** Click **OK**. The Specify Backup dialog box displays (Figure 8-13) with one entry in the Backup location list.

Figure 8-13 Specify Backup dialog box —backup file displayed

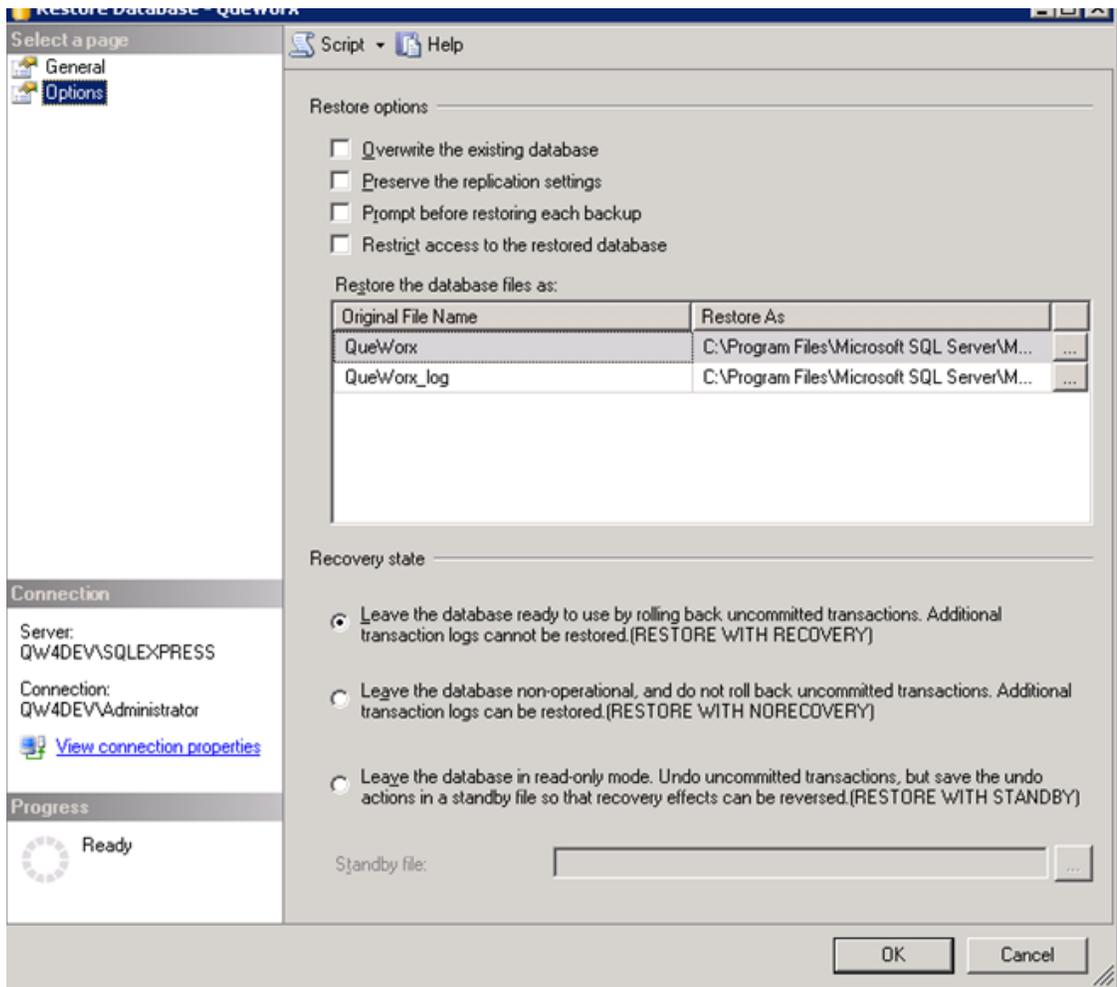


- Step 9** Click **OK**. The Restore Database-QueWorX window displays again (Figure 8-14).

Figure 8-14 *Restore Database-QueWorX window*

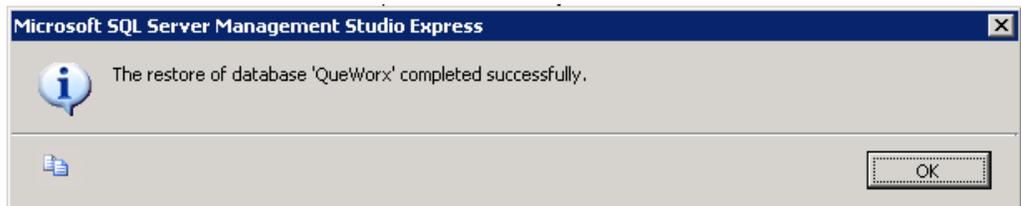
- Step 10** Select the **Restore** check box of the backup file under **Select the backup sets to restore**.
- Step 11** Select **Options** in the left **Select a page** pane. The Restore Database - QueWorX window displays (Figure 8-15) with additional options.

Figure 8-15 Restore Database -QueWorX window—Restore options



Step 12 Select the **Overwrite the existing database** check box under **Restore options**, and then click **OK**. A confirmation dialog box displays (Figure 8-16) when the database has been restored.

Figure 8-16 Restore Confirmation dialog box



Step 13 Click **OK** when the restored database has completed successfully.

For additional information or support on this NEC Unified Solutions product, contact your NEC Unified Solutions representative.

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QueWorX Installation and Configuration Guide

NDA-30309, Revision 7