

QADirector Installation and Configuration Guide

Release 5.3.1



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Customer Support Hotline:
1-800-538-7822

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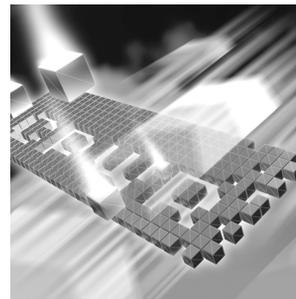
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Introduction



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- ◆ Getting Help

Who Should Read This Guide

This guide is intended for administrators who are installing or configuring QACenter products; it does not contain reference or usage information. You can find that information in the online Help for your product.

Compuware assumes that you are familiar with basic Microsoft Windows navigation. If this is not the case, familiarize yourself with the documentation for Microsoft Windows before reading this guide.

Related Publications

The *Distributed License Management Installation Guide*, which contains instructions for licensing your QACenter product, is available in PDF format. Access this guide from the Compuware FrontLine Customer Support Web site at <http://frontline.compuware.com>. See “World Wide Web Information” on page 6 for specific details.

Because PDF is based on PostScript, a PostScript printer is the most reliable way to print online books. In most cases, you can also print PDF files to PCL printers. If you cannot print the PDF files to your printer, refer to Adobe’s Web site at <http://www.adobe.com> for troubleshooting information.

World Wide Web Information

To access Compuware Corporation's site on the World Wide Web, point your browser at <http://www.compuware.com>. The Compuware site provides a variety of product and support information.

FrontLine Support Web Site: You can access online customer support for Compuware products via the FrontLine support Web site. FrontLine provides fast access to critical information about your QACenter product. You can read or download documentation, frequently asked questions, and product fixes, or e-mail your questions or comments. To access FrontLine, follow these steps:

- 1 Open a Web browser and go to: <http://frontline.compuware.com>
The **Welcome to FrontLine** page appears.
- 2 On the right side of the page, enter your login ID and password and click **Login**.

Note: If you are a first-time visitor, click **Register** to receive your free password to access FrontLine. After you complete the registration form, your login ID and password will be e-mailed to you and your account will be activated.

- 3 From the list in the center of the page, select a product and click **Go**. You will see the product's FrontLine home page, where you can access documentation, technical information, fixes, and other support items.

Getting Help

At Compuware, we strive to make our products and documentation the best in the industry. Feedback from our customers helps us maintain our quality standards. If you need support services, please obtain the following information before calling Compuware's 24-hour product support hotline:

- ◆ The name, release (version), and build number of the QACenter product. This information is displayed when you select the About command from your product's Help menu. The name and release are also on the covers of the product documentation.
- ◆ Installation information, including installed options, whether the product uses local or network databases, whether it is installed in the default directories, whether it is a client or server installation.
- ◆ Environment information, such as the operating system and release on which the product is installed, memory, hardware/network speci-

fications, and the names and releases of other applications that were running.

- ◆ The location of the problem in the QACenter product software, and the actions taken before the problem occurred.
- ◆ The exact product error message, if any.
- ◆ The exact application, licensing, or operating system error messages, if any.
- ◆ Your Compuware client, office, or site number, if available.

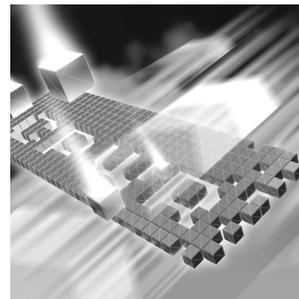


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Chapter 1

Getting Started



- ◆ Overview
- ◆ Before You Install
- ◆ Viewing Online Books
- ◆ System Requirements
- ◆ Integrated Products Requirements

Overview

QACenter is a suite of automated software quality products for enterprise and e-business applications. QACenter offers a comprehensive solution for IT organizations concerned with assuring quality and performance, while keeping pace with faster development cycles. QACenter includes:

QADirector: Coordinates the entire testing process by organizing, tracking, and executing automated and manual tests. QADirector integrates with Compuware's testing, program analysis, defect tracking, and requirements management tools.

The QADirector **Test Management Server** reads job submissions from the database, manages jobs, tracks available test execution machines, and manages the licenses for manual test Web execution. It also reports on the status of jobs in progress.

The QADirector **Test Execution Server** is installed on the local machine. The Test Execution Server allows jobs to run on a computer.

TrackRecord: Records and reports information about products being developed or supported. An object-oriented database contains recorded information on team members, testers, schedules, and defect reports retrievable using TrackRecord's query and reporting features.

Reconcile: Helps create and control project requirements. It stores the project requirements in a relational database. You can view the requirements through Microsoft Word, a reporting view (grid), and the Web. Use Reconcile to help you manage project development from conception through delivery.

TestPartner: Tests Web- and Windows-based applications that use Microsoft technologies. You can record user sessions with the application, add validation functions, and replay the sessions later to ensure that the application works as expected. TestPartner's scripting language is Visual Basic for Applications (VBA); it supports testing of Java, Visual Basic, and Visual C++ applications; browser-based Web applications; and COM components including both ActiveX controls and automation objects.

QAHyperstation+: Works with mainframe QAHyperstation to test host-based applications directly from your Windows desktop. This integrated, workstation-based interface tool uses 32-bit code that provides improved performance and better stability on 32-bit Windows platforms.

QARun: Tests enterprise client/server applications. QARun creates and runs test scripts that support a wide variety of development tools and the diverse components of today's corporate environments. QARun couples advanced verification facilities with error-recovery mechanisms to reliably test local and remote applications.

Changepoint Request Management: Tracks defects managed using a built-in report designer. Allows testers to submit a defect from QADirector into Changepoint's Request Management system. Relevant information from QADirector is stored as a change request, while Changepoint's request management capability provides powerful workflow features allowing you make sure the defect is correctly assigned.

QALoad: Load tests enterprise client/server systems and associated networks. Can stress systems by simulating thousands of users simultaneously performing different operations. Creates and runs test scripts that simulate application transactions on systems without involving end users or their equipment.

QACenter Additional Installation Media Contents: In addition to the QADirector suite of products, the installation media includes Adobe Acrobat Reader, Microsoft Internet Explorer, Java 2 Development Kit, and Microsoft Virtual Machine installation programs. To install one or more of these products from the installation media, click **Install 3rd Party Software**, then click on the product installation you would like to perform.

Before You Install

Review this section before you install QADirector.

Installation Types

The following installation options are available when you install QADirector:

Basic Installation: Install QADirector on one machine from the installation media using the default settings. See “[Basic Installation](#)” on page 17. In a Basic Installation the SQL Server Express 2005 database is installed along with all other components on a single machine.

Enterprise Installation Including Integrated Products: Install QADirector in a distributed environment and customize the install. See “[Before You Begin](#)” on page 21. In an Enterprise Installation, the SQL or Oracle database is usually installed on a separate machine which is set up as a database server.

If you purchased an integrated product refer to that product’s *Installation and Configuration Guide* for information. There are some products with which QADirector integrates that require some configuration.

Release Notes

Review the Release Notes for information about new features, technical notes, and known issues that may enhance or impact your product’s performance. Release Notes contain recent changes that may not be included in your QACenter product documentation.

View Release Notes from the installation media or on FrontLine, Compuware’s product support Web site. The Release Notes on FrontLine are periodically updated as new information becomes available.

Accessing the Release Notes from the Installation Media

- 1 From the installation media browser, click the **QACenter** tab.
- 2 Locate the **QADirector** installation link and click the associated link for the Release Notes. The Release Notes open in your default Web browser.
- 3 Read the Release Notes online, or print the document.
- 4 After reading or printing the Release Notes, close the document to return to the installation media browser.

Accessing the Release Notes on FrontLine

- 1 Open a Web browser and go to <http://frontline.compuware.com> where the **Welcome to FrontLine** page appears.
 - 2 On the right side of the page, enter your login ID and password and click **Login**.
- Note:** If you are a first-time visitor, click **Register** to receive your free password to access FrontLine. After you complete the registration form, your login ID and password will be e-mailed to you and your account will be activated.
- 3 From the list in the center of the page, select a product and click **Go**. You will see the product's FrontLine home page, where you can access documentation, technical information, fixes, and other support items.

Installing the License

A trial license is supplied with your QACenter product. During this 30-day trial period, you are informed of how much evaluation time remains each time you start QADirector.

Install a permanent license at any time during the evaluation period. When the evaluation period expires, you **must** install a license to successfully run this product. Information about permanent license installation can be found in the *Distributed License Management Installation Guide*. Access this guide by clicking **Start>Programs>Compuware>QADirector>Documentation**.

Viewing Online Books

Install Acrobat Reader (provided on the installation media) to view the online books in PDF format.

System Requirements

System requirements exist for each QACenter component. The following requirements are specific to this version of QADirector.

QADirector Database Server

Hardware

- ◆ 1 GHz processor with 512 MB RAM (2 GHz with 1 GB RAM recommended)
- ◆ Minimum 450 MB of free disk space

Operating System

- ◆ Microsoft Windows 2000 Professional SP 4
- ◆ Microsoft Windows 2000 Server SP 4
- ◆ Microsoft Windows 2000 Advanced Server SP 4
- ◆ Microsoft Windows XP Professional SP 1, 1a, or 2
- ◆ Microsoft Windows Server 2003 Standard SP 1
- ◆ Microsoft Windows Server 2003 Enterprise SP 1

Database Management System

- ◆ Microsoft SQL Server 2000 SP 3, 2005
- ◆ Microsoft SQL Server Express 2000, 2005
- ◆ Oracle 9i, 10g

QADirector Client and Test Execution and Test Management Servers

Hardware

- ◆ Mid-level Pentium III PC with 512 MB of RAM (minimum)
- ◆ Minimum 450 MB of free disk space

Operating System

- ◆ Microsoft Windows 2000 Professional SP 4
- ◆ Microsoft Windows 2000 Server SP 4
- ◆ Microsoft Windows 2000 Advanced Server SP 4
- ◆ Microsoft Windows XP Professional SP 1, 1a, or 2
- ◆ Microsoft Windows Server 2003 Standard SP 1
- ◆ Microsoft Windows Server 2003 Enterprise

Software

- ◆ Oracle Client 9i, 10g, if using an Oracle database

Network

- ◆ TCP/IP protocol installed on all computers
- ◆ Four ports within the range of ports 1024 through 5000 must remain open. QADirector randomly selects four ports to use when executing jobs.

Windows Environment

In order to use QADirector in a Windows environment, users must have specific permission and rights.

Registry

Ensure that users have update access to the following registry keys:

- ◆ HKEY_CURRENT_USER\Software\
◆ HKEY_LOCAL_MACHINE\SOFTWARE\
◆ HKEY_LOCAL_MACHINE\SOFTWARE\QADirector

Windows Directories

Users must also have update access to the following directories:

- ◆ QADirector install directory (Example: \Program Files\Compuware)
- ◆ System32

MDAC

- ◆ SQLSRV32.DLL driver provided with the MDAC installation must be installed and configured on workstation.

Browser

Microsoft Internet Explorer 6.0 SP 2 or 7.0

Integrated Products Requirements

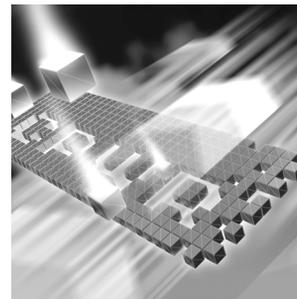
QADirector integrates with many Compuware automated testing, analysis, defect tracking, and requirements management tools. If you intend to use QADirector with any of these tools, please note the minimum version requirements:

- ◆ File-AID/CS (Compare, ConverterPro) Release 03.03.00
- ◆ QAHiperstation Release 07.05.00 or later
- ◆ QAHiperstation+ Release 02.00.00 or later
- ◆ QALoad Release 05.05.01 or 05.06.00

- ◆ QARun Release 04.09.x
- ◆ Reconcile 02.00.01
- ◆ TestPartner 05.06.00 or 06.00.00
- ◆ TrackRecord Release 06.03.00
- ◆ ChangePoint Request Management 12
- ◆ Optimal Trace 4.1 (in support of Requirements Management API)

Chapter 2

Completing a Basic Installation



- ◆ Basic Installation
- ◆ Installing QADirector
- ◆ Configuring QADirector

Basic Installation

The following example provides the basic installation sequence for QADirector using the default database (SQL Server Express 2005) on one machine.

If you do not wish to install the **SQL Server Express 2005** database, then proceed with an **Enterprise Installation**. An example of full or enterprise installation in a distributed environment appears in [“Completing an Installation”](#) on page 21.

Before You Begin

- 1 Exit all non-essential Windows programs. Some Windows programs may interfere with the installation process.
- 2 Do one of the following:
 - ◇ If you are migrating from an earlier version see [“Upgrading and Migrating Previous Versions of QADirector”](#) on page 31.
 - ◇ If this is a new installation, continue.

Installing QADirector

Follow these steps to install QADirector:

- 1 From the installation media browser, click the **QACenter** tab.
- 2 Click the link to install **QADirector**. The **Welcome** dialog box appears.
- 3 Click **Next**. The **License Agreement** dialog box appears.
- 4 You must click **Yes** to continue with the installation. The **Customer Information** dialog box appears.
- 5 Type your name and company in the **User Name** and **Company Name** fields.
- 6 Click **Next**. The **Choose Destination Location** dialog box appears.
- 7 Choose the location in which to install **QADirector**.
By default, **QADirector** installs in the Windows folder in Program Files\Compuware\QADirector. Click **Browse** to select an existing folder or type the to path name in the **Path** field. Click **OK**.
- 8 Click **Next**. The **Select Components** dialog box appears.
- 9 Check the selection(s) that apply to your environment. The next series of dialog boxes to display depend on your selections.
- 10 Click **Next**. Continue making any selections or revisions to the following dialog boxes until you reach the **Select Program Folder** dialog box.
- 11 Specify a location for the **QADirector** program shortcuts by typing a new folder, selecting an existing folder from the list, or accepting the default folder.
- 12 Click **Next**. The **Start Copying Files** dialog box appears and the programs are installed.
- 13 Click **Finish**. The computer is restarted if necessary.

Configuring QADirector

Setting Up an ODBC Data Source

Create a Windows ODBC DSN. Use the following SQL Server Express 2005 information, which was installed previously:

- ◇ **DSN Name:** QADirector (recommended)
- ◇ **Server Name:** <Machine Name>\QACenter
- ◇ **User Name:** sa
- ◇ **Password:** Enter the password you specified during installation, (if you did not specify a password, leave blank)
- ◇ **DB Name:** QACenter

Note: When SQL Server Express 2005 is initially installed, **sa** is the userid and the password is empty. It is possible that you may see a different userid in the ODBC applet in the control panel for this datasource. If so, please disregard, as **sa** is the correct userid.

For more information see [Appendix B, “Setting Up a Net Service Name”](#).

Configuring QADirector

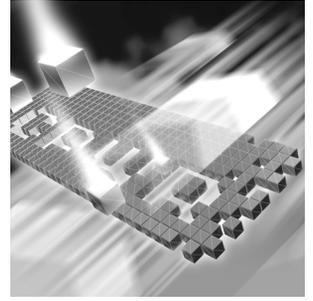
- 1 Shut down the Test Management Server and the Test Execution Server if they are running on the computer.
- 2 Open the database configuration utility by clicking **Start>Programs>Compuware>QADirector>Database Configuration Utility**. The path to the software may vary slightly depending on your operating system.
- 3 Select SQL Server.
- 4 Select the DSN created in [“Setting Up an ODBC Data Source”](#) on page 18 and type the following in the appropriate locations:
 - ◇ **DB Name:** QACenter
 - ◇ **Schema:** Default
 - ◇ **User Name:** sa
 - ◇ **Password:** Enter the password you specified during installation, (if you did not specify a password, leave blank)
- 5 Click **Apply** (if enabled).
- 6 Click **Test** to verify the configuration.
- 7 Click **OK**.

Verifying the Installation

- 1 Click **Start>Programs>Compuware>QADirector>QADirector**. The path to the software may vary slightly depending on your operating system.
- 2 Type `admin` for both the user name and password
- 3 Create a project (Example: `Test1`).

Chapter 3

Completing an Installation



- ◆ Before You Begin
- ◆ Installing the QACenter Database on the Database Server Machine
- ◆ Installing QADirector
- ◆ Configuring QADirector
- ◆ Configuring the Test Management and Execution Servers
- ◆ Configuring the Windows XP SP2 Firewall for QADirector
- ◆ Integrating With Other Compuware Products

Before You Begin

Exit all non-essential Windows programs before running this setup program. Some Windows programs may interfere with the installation process.

Do one of the following:

- ◇ If you are migrating from an earlier version see [“Upgrading and Migrating Previous Versions of QADirector”](#) on page 31.
- ◇ If this is a new installation, continue.

Installing the QACenter Database on the Database Server Machine

Create a QACenter database manually or using the installation media. Manually creating and configuring a database consists of a series of procedures. To manually create and configure the database, refer to [Appendix A, “Manually Creating and Configuring a Database”](#).

To simplify this process, Compuware provides a database installation directly from the installation media. This section provides information about installing a QACenter SQL Server or Oracle database using the Database Install on the installation media.

Note: Compuware recommends using the database installation from the installation media if you have no database administration experience.

Installing a SQL Server Database

Requirements

- ◆ An existing database server instance that runs a supported version of SQL Server. See [“System Requirements”](#) on page 12.
- ◆ The following specifics used to configure the database instance:
 - ◇ The SQL Server must be case insensitive at the time of installation.
 - ◇ If the database instance is defined, you must specify code page 1252 and sort order 52 (also known as ISO 8859-1).
 - ◇ If you are using SQL Server 2000, specify the `SQL_Latin1_General_CP1_CI_AS` collation.
- ◆ An SQL Server user ID and password to allow the administrator to set up the database.

Installing the Database

- 1 Log on as a user with administrator permissions.
- 2 From the installation media, click **Install QACenter Products**.
- 3 Click **Databases**. The **Welcome** dialog box appears.
- 4 Click **Next**. The **License Agreement** dialog box appears.
- 5 Click **Yes**. The **Database Management System** dialog box appears.
- 6 Select **Microsoft SQL Server 2000\2005** and click **Next**. The **SQL Server Login Information** dialog box appears.

- 7 Type the following information in the **Server Login Information** dialog box fields:
 - ◇ **Server** field: Database server name.
 - ◇ **Login** field: Database user name (must have sufficient permissions) Example: sa.
 - ◇ **Password** field: User password.
- 8 Click **Next**. The **Database Selection** dialog box appears.
- 9 Select the QADirector database to install and clear the **Reconcile** selection.
- 10 Click **Next**. The **Database Information** dialog box appears.
- 11 Type the following information in the **Database Information** dialog box fields:
 - ◇ **Database**: Database name.
 - ◇ **Login**: Database User name for new database (optional). New user account is created.
 - ◇ **Password**: Password for new user (optional).
- 12 Click **Next**. The **Review Settings** dialog box appears displaying information specified in the previous setup screens. To change any of the settings, click **Back**.
- 13 Click **Next** to begin creating the database. This may take a few minutes. The **Command Results** dialog box appears.

At the end of the installation, this dialog box displays a log containing all commands executed during the database creation. To save the log, select the text, copy and paste it into a text file, and save it.
- 14 Click **Finish** to complete the database installation.

Installing an Oracle Database

Requirements

- ◆ An existing database server instance that runs supported versions of Oracle. Refer to “[System Requirements](#)” on page 12 for details.
- ◆ The following specifics used to configure the database instance:
 - ◇ When the Oracle database instance is defined, you must specify the Storage Character Set as iso 8859-1 West European.
 - ◇ The NLS_LANGUAGE parameter should be set in the parameter file as:

```
NLS_LANGUAGE = 'AMERICAN'
```

If you are using Windows 2000, set the NLS_LANGUAGE parameter to AMERICAN_AMERICA.WE8ISO8859P1 in the following locations:

HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\NLS_LANG
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\ALL_HOMES\IDO\NLS_LANG
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOME-\NLS_LANG

- ◇ You must know the Oracle user ID and password to allow the QADirector administrator to set up the Oracle.
- ◆ An Oracle Net Service created before installing an Oracle database. For further information see [Appendix B, “Setting Up a Net Service Name”](#).

Installing the Oracle Database

To install the QACenter Oracle database:

- 1 Log on as a user with administrator permissions.
- 2 From the installation media, click **Install QACenter Products**.
- 3 Click **Databases**. The **Welcome** dialog box appears.
- 4 Click **Next**. The **License Agreement** dialog box appears.
- 5 Click **Yes**. The **Database Management System** dialog box appears.
- 6 Select **Oracle 9i\10g** and click **Next**. The **Oracle Login Information** dialog box appears.
- 7 Type the following information in the **Oracle Login Information** dialog box fields:
 - ◇ **Service**: Service name.
 - ◇ **Login**: User/schema name (must have sufficient permissions)
Example: `sys`.
 - ◇ **Password**: User password.
- 8 Click **Next**. The **Database Selection** dialog box appears.
- 9 Select the QADirector database and clear the **Reconcile** selection.
- 10 Click **Next**. The **Review Settings** dialog box appears displaying information specified in the previous setup screens. To change anything, click **Back**.
- 11 Click **Next** to begin creating the database. The **Command Results** dialog box appears.

At the end of the installation, this dialog box displays a log containing all commands that were executed during the database creation.

To save the log, select the text, copy and paste it into a text file, and save it.

- 12 Click **Finish** to complete the database installation.

Installing QADirector

Installing QADirector on a Client Machine

Use this process to install QADirector on a client machine and repeat the process for every client in an Enterprise environment.

- 1 Log on as a user with administrator permissions.
- 2 From the installation media, click **Install QACenter Products**.
- 3 Click **QADirector**. The **Welcome** dialog box appears.
- 4 Click **Next**. The **License Agreement** dialog box appears.
- 5 Click **Yes**. The **Customer Information** dialog box appears.
- 6 Type your name and company in the **User Name** and **Company Name** fields.
- 7 Click **Next**. The **Choose Destination Location** dialog box appears.
- 8 Choose the location in which to install QADirector.
By default, QADirector installs in the Windows folder in Program Files\Compuware\QADirector. Click **Browse** to select an existing folder or type the path name in the **Path** field.
- 9 Click **OK** and click **Next**. The **Select Components** dialog box appears. Components to install appear as follows:

- ◇ **Database Server:** Do not select this component.
Note: To install SQL Server Express 2005, click **Cancel** and see [“Completing a Basic Installation”](#) on page 17.
- ◇ **Test Management Server:** Installs the Test Management Server on the local machine.
- ◇ **Test Execution Server:** Installs the Test Execution Server on the local machine.
Note: Select these to install them on the same machine. To install them on separate machines, deselect these options and see [“Installing the Test Management and Test Execution Servers”](#) on page 26.
- ◇ **Windows Client:** Installs QADirector on the local machine.

- ◇ **IBM S/390 Support:** Includes the QA 3270 Emulator Server, a utility program used to manage communications between your 3270 IBM mainframe emulator and QADirector. The QA 3270 Emulator Server includes the TN3270 Mainframe Emulator, a free emulator you can use for mainframe testing. If you prefer to use your own emulator, refer to the QA 3270 Emulator Server Readme file for a list of supported emulators. After installing QADirector, you can view the Readme file by clicking **Start>Programs>Compuware>QADirector>QA 3270 Emulator Server>Readme**.
- 10 Specify a location. Type a folder name, or select one from the existing folders list. The **Start Copying Files** dialog box appears.
 - 11 Click **Next**. The **Setup Status** dialog box appears.
 - 12 Click **Next**. The components are installed.
 - 13 (Optional) Select the **Display Release Notes** check box when the **Setup Complete** dialog box appears.
 - 14 Click **Finish**. The computer is restarted if necessary.

Installing the Test Management and Test Execution Servers

Installing the Test Management Server

To install a Test Management Server, follow [steps 1–10](#) of [Installing QADirector](#). Select to install the Test Management Server only and continue with the process.

Installing the Test Execution Server

To install a Test Execution Server, follow [steps 1–10](#) of [Installing QADirector](#). Select to install the Test Execution Server only and continue with the process.

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Configuring QADirector

To configure QADirector Client, first shut down the Test Execution Server (TES) and the Test Management Server (TMS).

Database connection information can be changed from within QADirector in the System Administration Center (See [“Connecting from Within QADirector”](#) on page 28.)

Configuring QADirector for Oracle

To configure QADirector for Oracle, ensure that you have an Oracle Net Service and that you create a Windows ODBC data source for the Oracle database. For information see [Appendix B, “Setting Up a Net Service Name”](#).

Creating an ODBC Data Source

- 1 Create an Oracle Net Service name using the Oracle Net Configuration Assistant.
- 2 Create a System DSN.

Completing the Configuration

- 1 Run the **Database Configuration Utility** located in **Start>Programs>Compuware >QADirector>Database Configuration Utility**.
- 2 Select **Oracle**.
- 3 Click the list and select the data source name you created previously.
- 4 Type the schema name and the Oracle database user name and password.
- 5 Click **OK**.

For more information see [Appendix B, “Setting Up a Net Service Name”](#).

Configuring QADirector Client For SQL Server

To connect to the database before logging in to QADirector, create a data source and SQL Server DSN. Follow these steps:

Creating an ODBC Data Source

Create an ODBC DSN. For more information see [Appendix B, “Setting Up a Net Service Name”](#).

Completing the Configuration

- 1 Click **Start>Program Files>Compuware>QADirector>Database Configuration Utility**. The **Select Database Connection** dialog box appears.
- 2 Select **SQL Server**.
- 3 Click the list and select the data source name you created previously.

- 4 Type the database name, schema name, and the SQL Server database user name and password.

Configuring the Test Management and Execution Servers

Multiple Test Management Servers can be created and configured with different priorities. The prioritized Test Management Server list appears in the TM Server List panel in the System Administration Center. These Test Management Servers will start according to priority.

Only one Test Management Server is the active Test Management Server at any particular time even though other Test Management Servers may be running. For example, if a Test Management Server with the priority of 1 fails to start, the Test Management Server with the priority of 2 will start in its place.

Completing the Configuration

Follow the steps for “[Configuring QADirector for Oracle](#)” on page 27 or “[Configuring QADirector Client For SQL Server](#)” on page 27.

Connecting from Within QADirector

To connect to the database from within QADirector, follow these steps:

- 1 Navigate to the **System Administration Center**.
- 2 From the **Datasource** panel click **Actions>Change**. The **Select Database Connection** dialog box appears.
- 3 Follow the steps for “[Configuring QADirector for Oracle](#)” on page 27 or “[Configuring QADirector Client For SQL Server](#)” on page 27.

Configuring the QA3270 Emulator Server

If you installed the optional IBM S/390 Support component, you may need to configure the QA 3270 Emulator Server to work with your mainframe emulator. To access the QA 3270 Emulator Server readme file, click **Start>Programs>Compuware>QADirector>QA 3270 Emulator Server>Readme**.

Using the QADirector Tutorial

To complete the QADirector tutorial, install TestPartner. The tutorial database is located in Program Files\Compuware\QADirector\Tutorial\MIBQADB\QAD4.MDB. For detailed instructions on using the

tutorial, refer to the *QADirector Tutorial*, which can be accessed through online Help.

Configuring the Windows XP SP2 Firewall for QADirector

With the release of Windows XP, Microsoft introduced a set of security technologies to improve the ability of Windows XP-based computers to withstand malicious attacks from viruses and worms. The Windows Firewall prevents unsolicited, inbound TCP/IP connections. Therefore, the Test Management Server, Test Execution Server, and various other test execution components may not communicate with each other while the Windows Firewall is active.

Consider the following when configuring QADirector:

- ◆ Networking should be configured to use the TCP/IP protocol with a static port of 1433.
- ◆ By default, SQL Server allows network connections using port 1433.
- ◆ The SQL Server machine should have the latest MS Data Access Components (MDAC2.71a). These are available with SQL Server Service Pack 3a or later. Without this version of MDAC, it is not possible to connect to the SQL Server 2000 installed on a Windows XP with Service Pack 2 operating system.
- ◆ By default the Web Server (IIS) Port 80 is blocked. Enable the port using the Windows Firewall dialog box.

Use this process in conjunction with Microsoft Windows XP Service Pack 2 to ensure that QADirector 05.01.00 works properly when the Windows Firewall is active:

- 1 Click **Start>Control Panel>Windows Firewall**. The **Windows Firewall** dialog box appears.
- 2 Click the **Exceptions** tab.
- 3 Click **Add Program**. The **Add a Program** dialog box appears.
- 4 Browse to the directory where QADirector is installed.
- 5 Select the following programs from the list of available programs:
"QC_TESRV.EXE , QC_TMSRV.EXE , TDRV.EXE
"TENG.EXE

If necessary, select the programs one at a time. It may be necessary to go back to the **Exceptions** tab each time a program is selected. Make sure the check box is selected for each of the QADirector programs.

Obtaining the Correct Port Number For the Firewall

The correct port number must be used for SQL Server to properly set up the Firewall. After the port number is obtained, you will return to the Exceptions tab to complete the setup.

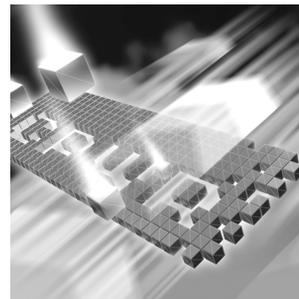
- 1 Click **Start>Programs>Microsoft SQL Server>Server Network Utility**. The **SQL Server Network Utility** dialog box appears:
- 2 Select **TCP/IP** and click **Properties**. The **Properties** dialog box appears. The default port number is displayed in the Default port field.
- 3 Click **Start>Control Panel>Windows Firewall**. The **Windows Firewall** dialog box appears
- 4 Select the **Exceptions** tab.
- 5 Click **Add Port**. The **Add a Port** dialog box appears.
- 6 In the **Port number** field, type the port number from the **SQL Server Network Utility**.
- 7 Select the **TCP** option.
- 8 In the **Name** field, type a meaningful name.
- 9 Click **OK**. The **Windows Firewall** dialog box appears.
- 10 Click **OK**.

Integrating With Other Compuware Products

QADirector integrates with many Compuware automated testing, analysis, defect tracking, and requirements management tools. If you purchased an integrated product refer to that product's *Installation and Configuration Guide* for information.

Chapter 4

Upgrading and Migrating Previous Versions of QADirector



◆ Upgrading QADirector

Upgrading QADirector

Install the latest version of QADirector directly over the previous version. It is not necessary to uninstall the previous version. If you must uninstall the previous version, refer to the Installation Guide for that version for instructions on how to uninstall.

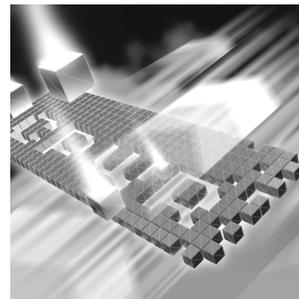
Upgrading the QADirector Database

- 1 At the **QADirector Log In** screen, click the **Configure** button. The **Select a Database** dialog appears.
- 2 From the **Data Source Type** options, select **SQL Server/MSDE** or **Oracle** datasource.
- 3 In the **Data Source Name** field, select the exact name of the Database/ODBC connection to be migrated. The **Database Name**, and **Schema/User Name/Password** fields are filled in by default.
- 4 Click **Test** to verify that the information provided is correct. A test confirmation dialog appears.
- 5 Click **OK**. The **QADirector Log In** screen appears.
- 6 At the **QADirector Log In** screen, type the **User Name** and **Password**.
- 7 Click **OK**.
- 8 If necessary, click **Yes** to upgrade the database schema to the required schema level.

- 9 Click **Begin Upgrade**. The Current Item Progress, Overall Progress, and Upgrade Item indicators will display the ongoing progress of the database migration.
- 10 When the upgrade is complete, click **Close**.

Chapter 5

Maintaining the Installation



- ◆ Accessing Maintenance Mode
- ◆ Modifying an Installation
- ◆ Repairing an Installation
- ◆ Uninstalling QADirector
- ◆ Click Finish to complete the maintenance.
- ◆ Click Finish to complete the maintenance.

Accessing Maintenance Mode

To access maintenance mode for QACenter products, Compuware recommends using the Windows Control Panel.

Required: Compuware recommends that you exit all non-essential Windows programs before running this setup program. Some Windows programs may interfere with the installation process.

Accessing Maintenance Mode from the Windows Control Panel

- 1 Click the Windows **Start** button and select **Settings>Control Panel**. The **Control Panel** dialog box appears.
- 2 Select the **Add/Remove Programs** icon. The **Add/Remove Programs** dialog box appears.
- 3 Select the QACenter product to maintain and click **Change/Remove**. Three maintenance mode options display: modify, repair, and remove. For more information about these options, see the appropriate section in this chapter.

Modifying an Installation

For products with optional components, you may want to add or remove a component. Rather than uninstall and re-install the product, you can modify your installation.

Modifying Products With Optional Components

- 1 Access maintenance mode described at the beginning of this chapter.
- 2 Select the **Modify** option and click **Next**. The **Select Components** dialog box appears allowing you to add or remove components.
- 3 Click **Next**. Setup will add or remove the appropriate components.
- 4 After modifying, you may be prompted to restart your computer. If you are prompted to restart your computer, you may choose to restart it now (recommended) or to restart it later.
- 5 Click **Finish** to complete the maintenance.

Repairing an Installation

There may be times when you will need to repair a damaged QACenter product installation. This could be due to an inadvertent deletion or corruption of the program. To repair your QACenter product, follow these steps:

- 1 Access maintenance mode described at the beginning of this chapter.
- 2 Select the **Repair** option and click **Next**. Setup will repair the specified QACenter product.
- 3 After repairing, you may be prompted to restart your computer. If you are prompted to restart your computer, you may choose to restart it now (recommended) or to restart it later.
- 4 Click **Finish** to complete the maintenance.

Uninstalling QADirector

If you want to remove QADirector, follow these steps:

- 1 Access maintenance mode as described at the beginning of this chapter.
- 2 Select the **Remove** option and click **Next**. The **Confirm File Deletion** dialog box appears.

- 3 Click **OK**. Setup will remove QADirector from your machine.
- 4 After uninstalling, you may be prompted to restart your computer. If you are prompted to restart your computer, you may choose to restart it now (recommended) or to restart it later.
- 5 Click **Finish** to complete the maintenance.

Uninstalling the QACenter SQL Server Express 2005 Instance

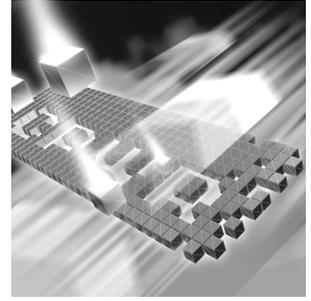
To remove the QACenter SQL Server Express 2005 instance, follow these steps:

Caution: All associated data will be lost when you uninstall the SQL Server Express 2005 instance.

- 1 Access maintenance mode as described at the beginning of this chapter and remove the **Microsoft SQL Server Desktop Engine (QACENTER)**.
- 2 Delete any remaining files from the installation directory.

Appendix A

Manually Creating and Configuring a Database



- ◆ Manually Creating and Configuring an Oracle Database
- ◆ Manually Creating and Configuring a SQL Server Database

Manually Creating and Configuring an Oracle Database

This section provides information about configuring QADirector to use an Oracle database.

Oracle Server Requirements

- ◆ An existing database server that runs the supported versions of Oracle. Refer to “[System Requirements](#)” on page 12 for details.
- ◆ Oracle ODBC drivers for a supported version of Oracle. Refer to “[System Requirements](#)” on page 12 for details.
- ◆ A database instance set up on the Oracle database server to store QADirector data. Use the following specifics to configure the database instance:

- ◇ When the Oracle database instance is defined, you must specify the Storage Character Set as iso 8859-1 West European.
- ◇ The NLS_LANGUAGE parameter should be set in the parameter file as:

```
NLS_LANGUAGE = 'AMERICAN'
```

If you are using Windows 2000, set the NLS_LANGUAGE parameter to AMERICAN_AMERICA.WE8ISO8859P1 in the following locations:

```
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\NLS_LANG  
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\ALL_HOMES\IDO\NLS_LANG
```

HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOME-\NLS_LANG

- ◆ Access to a valid owner name (also known as a *schema*) on the Oracle database server for QADirector. This owner name is the user ID that will be associated with each of the product databases.

Creating Database Tables

Before any client machines can connect to the Oracle database, you must create the database and the database tables for QADirector. The SQL*Plus utility allows you to create the database tables. To create QADirector tables, perform the following for each database:

- 1 Do one of the following:
 - ◇ On the Oracle server or client machine, open SQL*Plus Worksheet by clicking **Start>Programs>OracleHome>Database Administration>SQL*Plus Worksheet**, where *OracleHome* indicates the home directory where your Oracle database was originally installed.
 - ◇ In Windows XP, click the **Start** menu and choose **All Programs>OracleHome>Database Administration>SQL*Plus Worksheet**, where *OracleHome* indicates the home directory where your Oracle database was originally installed
- 2 Select **Connect Directly to a Database**.
- 3 Type a user name in the **Username** field. This will be the name of the schema where the QADirector tables reside.
- 4 Type a password in the **Password** field.
- 5 Type the name of the service running the database in the **Service** field.
- 6 On the database server from within SQL*Plus Worksheet, click **Menu Worksheet** and then click **Run Local Script**. The **Run Local Script File** dialog box appears.
- 7 Click the **Look In** list and navigate to `\cpwr\database\sqlscripts\oracle` on the installation media.
- 8 Execute the following scripts in order:
 - ◇ 1_0rc1.sql
 - ◇ 2_0rc1.sql
 - ◇ 3_0rc1.sql
 - ◇ 4_Common.sql

- ◇ 5_0rc1.sql

Manually Creating and Configuring a SQL Server Database

This section provides information about configuring QADirector to use a SQL Server database.

SQL Server Requirements

- ◆ An existing database server that runs a supported version of SQL Server. Refer to “[System Requirements](#)” on page 12 for details.
- ◆ A database instance on the SQL Server database server to store QADirector data. Use the following specifics to configure the database instance:
 - ◇ If you are using SQL Server 2000, specify the `SQL_Latin1_General_CP1_CI_AS` collation.
- ◆ An SQL Server user ID and password to allow the QADirector administrator to set up the database server.

Creating Database Tables using SQL Server 2000

Once you have created the database, you can create the QADirector database tables. QADirector includes files that execute scripts and automatically create the tables for you.

- 1 To start the SQL Server Query Analyzer, select **SQL Server Query Analyzer** from the **Tools** menu in the SQL Server Enterprise Manager.
- 2 Select the database from the dropdown list.
- 3 Click **File>Open**. The **Open Query File** dialog box appears.
- 4 Click the **Look In** list and browse to `<drive>:\cpwr\database\sql-scripts\mssql` on the installation media.
- 5 Select one script at a time, click **Open**, and click the **Run** (green arrow) icon on the toolbar to run each script in the following order:
 - ◇ 1_MsSql.sql
 - ◇ 2_MsSql.sql
 - ◇ 3_MsSql.sql
 - ◇ 4_Common.sql
 - ◇ 5_MsSql.sql

Creating Database Tables using SQL Server 2005 and SQL Server Express

Once you have created the database, you can create the QADirector database tables. QADirector includes files that execute scripts and automatically create the tables for you.

- 1 Start the SQL Server Management Studio from the **Start** menu.
- 2 Select the database from the dropdown list.
- 3 Click on the **New Query** icon or click on **File>New>Query** with current connection.
- 4 Click **File>Open>File**. The **Open File** dialog box appears.
- 5 Click the **Look In** list and browse to <drive>:\cpwr\database\sql-scripts\mssql on the installation media.
- 6 Select one script at a time, click **Open**, and click the **Run** (green arrow) icon on the toolbar to run each script in the following order:
 - ◇ 1_MsSql.sql
 - ◇ 2_MsSql.sql
 - ◇ 3_MsSql.sql
 - ◇ 4_Common.sql
 - ◇ 5_MsSql.sql

If you use the SQL Server Express Utility to create the tables, you must update each script file before executing them. You must add `USE <Database Name>` to the start of each file. Change `<Database Name>` to the correct database name.

Adding User Rights to the Database (optional)

Once the database and tables have been built, add users and give them access rights using SQL Server Enterprise Manager. Using SQL Server authentication login, create a new login ID and password specifically for SQL Server access. Use this option to create one convenient user name and password to access the QADirector database and have each QADirector user use the same user name and password to connect to the database. If preferred, create multiple SQL Server user names and passwords.

Note: The user name and password used to connect to the SQL Server database is not the same user name and password that is used to connect to QADirector.

To create a SQL Server authentication, follow these steps:

- 1 In the left pane of the SQL Server Enterprise Manager, expand the SQL Server Group, and expand the server machine name.
- 2 Expand the **Security** group.
- 3 Select the **Add New User** icon from the menu. The **SQL Server Login Properties** dialog box appears.
- 4 Select the **General** tab.
- 5 Type a user name in the **Name** field (for example, QATeam).
- 6 Select **SQL Server Authentication**.
- 7 Type the password in the **Password** field.
- 8 From the **Database** drop down menu, select the QADirector database.
- 9 Select the **Database Access** tab and permit the user to access the created database.
- 10 Set up roles and permissions for the Login account:
 - ◇ Option A: Ensure the Login account has the db_owner role.
 - ◇ Option B: Ensure all privileges on all QACenter database objects are granted to the newly created Login account. The following is a sample script for granting all privileges on all objects to a user.

Note: Compuware does not assume any responsibility for the use of this script.

```
USE <Database Name>
```

```
Go
```

```
DECLARE @ExecSQL varchar(255)
```

```
Declare @User varchar(64)
```

```
Set @User = <Login Account>
```

```
DECLARE curGrants CURSOR FOR
```

```
SELECT 'GRANT ALL ON' + NAME + 'TP' + rtrim(@User)
```

```
From SYSOBJECTS
```

```
WHERE TYPE = 'U' or TYPE = "P"
```

```
OPEN curGrants
```

```
FETCH NEXT FROM curGrants INTO @ExecSQL
```

```
WHILE @@FETCH_STATUS = 0
```

```
BEGIN
```

```
Exec(@ExecSQL)
```

```
FETCH NEXT FROM curGrants INTO @ExecSQL
```

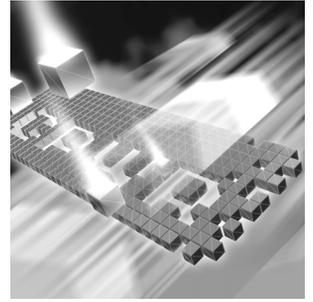
```
END
```

```
CLOSE curGrants
```

```
DEALLOCATE curGrants
```


Appendix B

Setting Up a Net Service Name



- ◆ Setting up an ODBC Data Source for Oracle
- ◆ Setting up an ODBC Data Source for SQL Server

Setting up an ODBC Data Source for Oracle

Setting Up a Net Service

- 1 Open the Oracle Net Configuration Assistant and click **Next**.
- 2 Click **Local Net Service Name Configuration** and click **Next**.
- 3 Click **Add** and click **Next**.
- 4 Click **Oracle 8i or later** and click **Next**.
- 5 Type the Service Name to which you are trying to connect. This may be the database name.
- 6 Click **Next**.
- 7 Click **TCP**.
- 8 Type the Host Name. This may be the machine name on which the Oracle server is installed.
- 9 Click **Next**.
- 10 Click **Perform A Test** and click **Next**.
- 11 Change the user name and password to the user ID you want to use and test the connection.
- 12 Click **Next**.
- 13 Type the Service Name and click **Finish**.

Creating a System DSN

- 1 Do one of the following:
In Windows 2000:
 - a Click the **Start** menu and select **Settings>Control Panel>Data Sources (ODBC)**. The **ODBC Data Source Administrator** opens.
 - b Click the **Drivers** tab and select **Oracle ODBC Driver**.**In Windows XP:**
 - a Select **Control Panel>Administrative Tools>Data Sources (ODBC)**. The **ODBC Data Source Administrator** opens.
 - b Click the **Drivers** tab and select **Oracle ODBC Driver**.
- 2 Click the **System DSN** tab.
- 3 Click **Add**.
- 4 Select **Oracle** from the **Driver** list.
- 5 Click **Finish**. The **Create a New Data Source** dialog box appears.
- 6 Type a Data Source Name (DSN) in the **Data Source Name** field.
- 7 Type a description in the **Description** field.
- 8 Type the database service name in the **Service Name** field. If the database is not local to the computer, type the full name, such as `aqw.qac1ab`.
- 9 Type the user name in the **UserID** field.
- 10 Keep the default settings in the remaining fields and click **OK**.

Setting up an ODBC Data Source for SQL Server

At this point you have a database, tables, and users, but no connection to the database. You must set up an ODBC data source on the QADirector client machine:

- 1 Do one of the following:
In Windows 2000:
 - a Click the **Start** menu, and select **Settings>Control Panel**.
 - b Double click the **Data Sources (ODBC)** icon. The **ODBC Data Source Administrator** opens.**In Windows XP:**

- a Click the **Start** menu and select **Control Panel>Administrative Tools>Data Sources (ODBC)**.
 - b Skip to step 3.
- 2 Click the **System DSN** tab.
- 3 Click **Add**.
- 4 Select **SQL Server** from the **Driver** list.
- 5 Click **Finish**. The **Create a New Data Source to SQL Server** dialog box appears.
- 6 Type an ODBC connection name in the **Name** field.
- 7 Type a description for the ODBC connection in the **Description** field.
- 8 Type the server name in the **Server** field.
- 9 Click **Next**.
- 10 Select the **With SQL Server Authentication using a login ID and password entered by a user** option.
- 11 Type a user name in the **Login** field.
- 12 Type a password in the **Password** field.
- 13 Click **Client Configure**.
- 14 Verify that TCP/IP is selected under the network libraries.
- 15 Click **OK**.
- 16 Click **Next**.
- 17 Select the **Change the Default Database to** check box.
- 18 Select the QADirector database from the database menu.
- 19 Click **Next**.
- 20 Click **Finish**. The **ODBC Microsoft SQL Server Setup** dialog box appears.
- 21 Click **Test Datasource**.
- 22 Click **OK** to exit the **ODBC Microsoft SQL Server Setup** dialog box.
- 23 Click **OK** to exit the ODBC Data Source Administrator.

Determining the Port Number

To find the port number from the Registry:

- 1 Navigate to HKEY_LOCAL_MACHINE\Software\Microsoft\Microsoft SQL Server\\MSSQLServer\SuperSocketNetLib\Tcp. You should see a folder with the same name as the instance that was created for SQL Server Express 2005. For example:
HKEY_LOCAL_MACHINE\Software\Microsoft\Microsoft SQL Server\QACenter\MSSQLServer\SuperSocketNetLib\Tcp

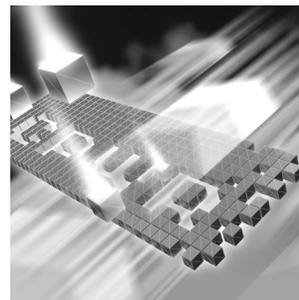
- 2 Remember the number for the Tcpport entry.

To find the port number using SQL Enterprise Manager:

- 1 Open SQL Enterprise Manager.
- 2 Connect to the instance for the SQL Server Express 2005 installation. Example: qacenter.
- 3 Right click on the instance and select **Properties**.
- 4 Click **Network Configuration**.
- 5 Select TCP/IP from the **Enabled Protocols** list and click **Properties**.

The port number is located in the **Default Port** field.

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