

Installing Rational Testing Products

Rational Robot
Rational TeamTest
Rational TestManager

VERSION 2001A.04.00

PART NUMBER 800-024532-000

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Preface

This manual tells you how to install Rational testing products, including the steps you need to take both before and after installation. With Rational testing products, you can plan, develop, and execute both functional and performance tests for your Windows Millennium, Windows NT 4.0, Windows 2000, Windows 98, and Windows 95 applications, as well as manage all testing activities — planning, design, development, execution, and analysis — using Rational TestManager.

Audience

This guide is intended for Rational software users who are installing Rational testing products, such as system administrators, application developers, quality assurance managers, and quality assurance testers.

Other Resources

- Rational testing products contain complete online Help. From the main toolbar, you can choose an option from the Help menu.
- All manuals for this product are available online in PDF format. These manuals are on the *Rational Solutions for Windows* Online Documentation CD.
- For information about training opportunities, see the Rational University Web site: <http://www.rational.com/university>.

Contacting Rational Technical Publications

To send feedback about documentation for Rational products, please send e-mail to our technical publications department at techpubs@rational.com.

Contacting Rational Technical Support

If you have questions about installing, using, or maintaining this product, contact Rational Technical Support as follows:

Your Location	Telephone	Facsimile	E-mail
North America	(800) 433-5444 (toll free) (408) 863-4000 Cupertino, CA	(781) 676-2460 Lexington, MA	support@rational.com
Europe, Middle East, Africa	+31 (0) 20-4546-200 Netherlands	+31 (0) 20-4545-201 Netherlands	support@europe.rational.com
Asia Pacific	+61-2-9419-0111 Australia	+61-2-9419-0123 Australia	support@apac.rational.com

Note: When you contact Rational Technical Support, please be prepared to supply the following information:

- Your name, telephone number, and company name
- Your computer's make and model
- Your operating system and version number
- Product release number and serial number
- Your case ID number (if you are following up on a previously-reported problem)

This chapter tells you what you need to know before installing Rational testing products and is organized as follows:

- *About Rational TestManager* on page 1
- *About Rational Robot* on page 1
- *About Rational TeamTest* on page 2
- *About Rational ClearQuest Databases* on page 2
- *About Licensing* on page 3
- *Hardware and Software Requirements* on page 4
- *Before You Install Rational Testing Products* on page 6
- *Installing Client Software for Performance Testing* on page 7

About Rational TestManager

Use Rational TestManager to manage all testing activities: planning, design, development, execution, and analysis. TestManager ties testing to the rest of the development effort, joining your testing assets and tools to provide a single point from which to understand the exact state of your project.

Note: If you plan to do performance testing, you need to install the Rational Test Agents. See *Installing Rational Test Agents* on page 35.

About Rational Robot

When you install Rational Robot, you install all of the following components:

- Rational TestManager, which is described in the previous section.
- Rational Robot – Use to develop and execute functional tests for your Windows applications. For information, see the *Using Rational Robot* manual.

- Rational Administrator – Use to manage a Rational project. For information, see the *Using the Rational Administrator* manual.
- Rational SiteCheck – Use to manage Internet and intranet Web sites. For information, see the Rational SiteCheck Help.
- Comparators – Includes the Object Properties, Text, Grid, and Image Comparators. Use to view and analyze the results of test script playback. For information, see the *Using Rational TestManager* manual and the Comparators Help.

About Rational TeamTest

When you install Rational TeamTest, you can install some or all of the components available on your installation CDs. The following list describes Rational TeamTest:

- Rational TestManager and Rational Robot, described previously.
- Rational ClearQuest– Use to track defects of your testing project. Rational Robot installs this version of Rational ClearQuest, which includes specially designed defect forms.

About Rational ClearQuest Databases

Before you create or attach a ClearQuest database to a project using the Rational Administrator, you need to:

- Configure ClearQuest by creating a new schema project or by connecting to an existing schema project. A ClearQuest schema project stores all schemas and all data associated with existing schemas in a special project. The schema project does not store any user data. For more information about configuring a schema project, see the *Installing Rational Suite* manual.
- Decide what type of ClearQuest user database to use. A ClearQuest user database contains all user data and a copy of the schema associated with the database. User data in a ClearQuest database includes change-request records such as defects, as well as reports, records, tables, and all other data entered by users.

The following table summarizes which type of database software to use for a ClearQuest database:

Table 1 Determining a Database Type for ClearQuest

If you have	Then
Seven or fewer concurrent users who will not access the database over a wide-area network	<p>Use a Microsoft Access database. This is the default database and installs automatically when you install Rational software.</p> <p>Note: Rational ClearQuest Web does not support Microsoft Access databases.</p> <p>This database is virtually maintenance-free; for example, you can back it up by simply backing up the Rational project directory. However, with more than seven concurrent users, database access is relatively slow.</p>
Eight or more concurrent users who will access the database over a wide-area network	<p>Use the Sybase SQL Anywhere Database Server software that comes on Disc 2 of the <i>Rational Solutions for Windows CDs</i>.</p> <p>We recommend using a Window NT Server for your database server because a Windows NT Workstation allows only ten network connections.</p>
Eight or more concurrent users and you want to use Microsoft SQL Server for your database	<p>Use Microsoft SQLServer to create an empty database foundation to use with ClearQuest.</p> <p>For information about using Microsoft SQL Server for ClearQuest, see the <i>Installing Rational ClearQuest</i> manual, available on the <i>Rational Solutions for Windows Online Documentation CD</i>.</p>
Eight or more concurrent users and you want to use Oracle software	<p>Use Oracle to create an empty database foundation to use with ClearQuest.</p> <p>For information about using Oracle for ClearQuest, see the <i>Installing Rational ClearQuest</i> manual, available on the <i>Rational Solutions for Windows Online Documentation CD</i>.</p>

About Licensing

If you want to play back more than one virtual tester, you need to purchase the appropriate licenses and install a license server. See *Administering Licenses for Rational Software* for the software licensing description, procedures, and licensing administration information. The online Help for Rational License Key Administrator contains detailed information about common user licensing activities.

Hardware and Software Requirements

Make sure that your computer conforms to the following minimum requirements for each product or component you plan to install.

Table 2 Hardware and Software Requirements

Rational component	Minimum requirements
Rational TeamTest	PC-compatible computer with a Pentium microprocessor (133 MHz or better recommended) 300 MB free disk space (minimum installation) 64 MB RAM is the recommended minimum; more memory generally improves responsiveness. Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows 2000, Windows 98 2nd edition, or Windows 95 SR2
Rational Robot	PC-compatible computer with a Pentium microprocessor (133 MHz or better recommended) 200 MB free disk space (minimum installation) 64 MB RAM is the recommended minimum; more memory generally improves responsiveness. Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows 2000, Windows 98 2nd edition, or Windows 95 SR2
Rational TestManager	PC-compatible computer with a Pentium microprocessor (133 MHz or better recommended) 200 MB free disk space (minimum installation) 64 MB RAM is the recommended minimum; more memory generally improves responsiveness. 1-3 MB RAM per virtual tester 1-3 MB disk space per virtual tester Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows 2000, Windows 98 2nd edition, or Windows 95 SR2 If you are running Visual Basic language test scripts, VB 6 on Windows 2000 or Windows NT is required. If you are running Java test scripts, the JDK (IBM version 1.1.7B or Sun Microsystems versions 1.2.2 or 1.3.0) is required.

Rational component	Minimum requirements
Rational Test Agent software – Windows Systems	<p>PC-compatible computer with a Pentium microprocessor (133 MHz or better recommended).</p> <p>64 MB memory.</p> <p>150 MB free disk space for installation. We recommend more disk space for large virtual tester runs.</p> <p>Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows 2000, Windows 98 2nd edition, or Windows 95 SR2.</p> <p>If you are running VU test scripts, Microsoft Windows NT 4.0 (Service Pack 5 or 6a) or Windows 2000 is required.</p> <p>If you are running Visual Basic language test scripts, VB 6 Service Pack 3 and Windows 2000, or VB 6 Service Pack 3 and Windows NT.</p> <p>If you are running Java test scripts, the JDK (IBM version 1.1.7B or Sun Microsystems versions 1.2.2 or 1.3.0).</p> <p>TCP/IP</p>
Rational Test Agent software – UNIX Systems	<p>32 MB memory, plus .5–2 MB per virtual tester (some workloads may require more memory).</p> <p>150 MB free disk space for installation. We recommend more disk space for large virtual tester runs.</p> <p>One of the following operating systems:</p> <p>AIX 4.3</p> <p>HP-UX 11</p> <p>DYNIX/ptx</p> <p>Solaris 2.5, 2.6, or 2.7</p> <p>Red Hat 6.x release of Linux</p> <p>If you are running Java test scripts, the JDK (IBM version 1.1.7B or Sun Microsystems versions 1.2.2 or 1.3.0).</p>
Rational ClearQuest Web	<p>ClearQuest Web is included with Rational TeamTest.</p> <p>Microsoft Internet Information Server (IIS) with Active Server Pages.</p>
Crystal Reports 8.0 Professional Edition	80 MB free disk space (minimum installation)

Rational component	Minimum requirements
SQL Anywhere Server	<p>Your network server must be an Intel-based PC. Windows 2000, Windows NT 4.0 Server, Windows NT 4.0 Workstation Pentium processor 64 MB memory 100 MB disk space TCP/IP</p> <p>Note: Novell NetWare software is no longer supported for network servers.</p>

Before You Install Rational Testing Products

This section contains information about tasks to do before you install Rational testing products. Before you install Rational testing products, be sure to do the following:

- If you are running a previous version of Rational Suite PerformanceStudio or Rational LoadTest be sure to uninstall these products first.

Previous versions of Rational LoadTest and Rational Suite PerformanceStudio will not work with testing products from this release. You must uninstall them first.

- If SQA Suite 6.x is installed on your computer, you do not have to uninstall it. The current version of Rational testing products and SQA Suite 6.x. can coexist because they are installed in different directories.
- Decide which type of database you need for your ClearQuest database. For more information, see *About Rational ClearQuest Databases* on page 2.
- Make sure that all computers have TCP/IP installed. Install any updates to your network software that you have not installed.
- Verify that the computers are communicating with each other. (If you have any problems, see your network administrator.)

For Rational performance testing products:

- Determine the role each computer will play in testing—whether it will be a Local or an Agent computer. For information, see *Installing Rational Test Agents* on page 35.
- Install the appropriate client software. For information, see *Installing Client Software for Performance Testing* on page 7.
- Determine the kind of network you will be using, either Ethernet or Token Ring. You will need to know this when you install the Rational Test network driver. For information, see *Installing and Removing the Network Driver* on page 31.

Installing Client Software for Performance Testing

To play back a test script that tests Oracle, Sybase, or SQL Server databases on a Local or Agent computer, you must install the appropriate database client software before you install any Rational testing products.

Oracle Client Software

To play back a test script that tests an Oracle database on a Local or Agent computer, you must install Oracle client software.

Sybase Client Software

To generate test scripts that test a Sybase database, you must install the Sybase 11.1 NT client software on the Local computer.

To play back test scripts that test a Sybase database, you must install the appropriate software on each Agent computer:

- For UNIX Agents, install Sybase 11.1 UNIX client software
- For NT Agents, install Sybase 11.1 NT client software

SQL Server Client Software

To generate test scripts that test a SQL Server database, you must install the SQL Server 6.5 or newer NT client software on the Local computer.

To play back SQL Server test scripts on an Agent, you must install the appropriate software on each Agent computer as follows:

- For UNIX Agents, install Sybase 11.1 UNIX client software (limited compatibility)
- For NT Agents, install SQL Server 6.5 or newer NT client software

TUXEDO Protocol Software

To generate test scripts using the TUXEDO protocol, you must install the TUXEDO 6 client software on the Local computer.

SAP Protocol Software

To generate test scripts using the SAP protocol, you must install the SAP Frontend software, typically referred to as SAPGUI, on the Local computer.

DCOM Protocol Software

Before you play back test scripts that use the DCOM protocol on an Agent computer, ensure that the client application recorded on the Local computer also runs on the Agent. This ensures that the necessary COM objects are present and properly registered on the Agent.

This chapter explains how to install the Rational testing products TeamTest, Robot, and TestManager. It includes the following topics:

- *Installation Types* on page 9
- *Installing Rational Robot, Team Test, and TestManager* on page 10
- *Removing Your Software* on page 12
- *Troubleshooting Your Installation* on page 12

Note: Please see the *Installing Rational Suite* manual for directions on how to install TestStudio.

Installation Types

The Rational Software Setup program provides you with several installation types, letting you install the configuration most appropriate for your system. The following table describes the installation types:

Table 3 **Installation Types**

Type	Description
Typical	Installs the most commonly used features for a product. Use this option for standard installations.
Custom/Full	Allows you to add or remove products or product features. Defaults to all features in a typical installation. Use this option to install Web Server Components on a Web Server (ClearQuestWeb and TestManager/Web).
Compact/Laptop	Installs a subset of the standard configuration. May omit optional files, including online documentation or online Help. Use this option on systems with limited disk space.
Minimal	Installs the files needed to run the program from a CD or network location. Use this option to run the program from a centrally managed location.

Installing Rational Robot, Team Test, and TestManager

This section describes how to install Rational Robot, TeamTest, and TestManager.

- 1 Log in using an account with Administrator privileges.
- 2 Insert the Rational Solutions for Windows Disc 1 CD into your CD drive. The installation starts automatically.

If the installation does not start automatically, do the following:

- a Click **Start > Run**.
- b Type *drive:\SETUP.EXE*, and then click **OK**.
- 3 At the Rational Software Setup screen, click **Next**.
- 4 At the Choose Product to Install screen, select one of the following from the list of available products, and then click **Next**:
 - Rational Robot
 - Rational TeamTest
 - Rational TestManager

Note: To install a Rational Test Agent, see *Installing Rational Test Agents* on page 35.

For information about software licenses, click **Help** or see the *Administering Licenses for Rational Software* manual.

- 5 Read the terms of the license agreement, select **Yes, I accept the agreement**, and then click **Next**.

If you do not accept the agreement, the Setup program ends.

- 6 Select the setup configuration you prefer, and then click **Next**.
 - **Typical** – Installs the most commonly used features for this product.
 - **Custom/Full** – Lets you specify which products or features to install.
 - **Compact/Laptop** – Installs the smallest subset of features needed to run this product.
 - **Minimal** – Configures your machine to run the product from a network drive.

If the Upgrade Compatibility screen appears, you have additional, older Rational products installed on your system. Because Rational tools share files and components, this installation can cause the older Rational products to stop working. You will see no visual clue that the older products may be compromised.

- 7 For each additional, older product listed, we recommend that you either:
 - **Upgrade it** – Complete this installation, and then restart the Setup wizard to upgrade the listed products. Upgrading each product updates all necessary files, registry entries, startup menu items, and shared components. See the product-specific upgrade section in *Before You Begin* on page 1 for requirements.
 - **Remove it** – Complete this installation, and then see *Removing Your Software* on page 12 for the removal procedure.
- 8 If the Update Shared Components screen appears, do one of the following:
 - Click **Next** to install the shared components listed. Setup installs the U.S. English versions of the files. It does not overwrite newer versions of the files.
 - Click **Replace files with newer versions in English** to replace your version of the shared components with the U.S. English version. (This option is available only if you installed earlier versions of the shared files in a non-U.S. English language.)
 - Click **Cancel** to exit Setup and install the shared files yourself.

Note: A shared component is software provided by a company other than Rational Software Corporation. It is potentially available to other applications on your system. In general, we recommend that you let the Rational setup procedure install shared components for you.
- 9 At the Rational Confirmation screen, view the selections that you have made and, if they are correct, click **Next**.
- 10 Click **Finish** when done.
- 11 You must shut down and restart your computer to finish the installation. Log in again using the same user account and Administrator privileges that you used to start the installation. This allows the setup program to complete.

If you need to install a software license, the online Help for Rational License Key Administrator contains detailed information about common user licensing activities. Refer to *Administering Licenses for Rational Software* for the software licensing description, procedures, and licensing administration information.

When to Install Shared Files Yourself

You may want to install shared files yourself under the following circumstances:

- You are using a U.S. English system, but installing new files may invalidate your current environment. In this case, you need to determine how to correct your environment so you can run existing tools and the Rational products that you want to install.

- Your site may mandate that you obtain shared files directly from the source — for example, from Microsoft — rather than using files supplied by a third party. Or, your site may prohibit end-users from installing shared components.
- You may want to install equivalent files that are localized to your language. Rational Software supplies only U.S. English versions of shared files.
- There may be a later version of the files available. Rational products should work with the supplied version of shared files or any later versions.

Removing Your Software

To remove Rational software products, make sure that no one is using the Rational software on your system. You cannot remove files that are in use. To remove Rational software from a Windows NT system, you must have Windows NT administrator privileges on the local machine. The Rational Software Setup program does not remove directories that contain files that you have created using Rational software products.

To remove Rational software from your computer:

- 1 Click **Start > Settings > Control Panel**.
- 2 Click **Add/Remove Programs**.
- 3 Select the Rational product that you want to remove, and then click **Add/Remove**.

Troubleshooting Your Installation

If you encounter any problems running the Rational Setup wizard, try the following suggestions before you call Rational Technical Support for help:

- Stop all applications before you begin the installation.
- Turn off all virus protection software. These programs often run in the background and interfere with the installation and file decompression process.
- Turn off any user interface managers or desktop environments that run on Microsoft Windows.
- Change to a standard VGA video driver while Rational Setup is running, or disable video features such as virtual screens or screen switching.
- Change to a standard mouse driver, or disable special mouse features that perform tasks such as leaving pointer trails or changing pointer sizes.

This chapter is organized as follows:

- *General Information on Upgrading* on page 13
- *Upgrading from Rational Test 2001.03 to 2001A.04* on page 13
- *Upgrading from Rational Test 7.x to 2001A.04* on page 14
- *Upgrading a Rational 7.x Repository to a Project* on page 15
- *Upgrading from Rational Test 6.x to 7.x* on page 18
- *Installing the Rational Test 6.x to 7.x Repository Upgrade Kit* on page 18

General Information on Upgrading

We recommend that you upgrade data from a previous version of Rational testing products to the current version *after* you finish working on a project.

Be sure to back up your data before you upgrade.

Upgrading from Rational Test 2001.03 to 2001A.04

If you are upgrading from Rational Test 2001.03 to 2001A.04, you must do the following tasks in order:

- 1 Install Rational Test 2001A.04. For details, see *Installing Rational Robot, Team Test, and TestManager* on page 10.
- 2 Upgrade your TeamTest/TestStudio-based schema to the latest package versions. The latest packages include:
 - Repository 2.0
 - TeamTest 3.0
 - RequisitePro 1.5
 - Email 5.0
 - PQC 2.0

For detailed procedures about upgrading ClearQuest packages and the database, see the section on “Updating ClearQuest” in the *Installing Rational Suite* manual. This manual is available on the Rational Solutions for Windows Documentation CD and is also available for Web download at www.rational.com.

Note: You must follow all of the instructions in the “Updating ClearQuest” section of the *Installing Rational Suite* manual to successfully perform the upgrade.

Upgrading from Rational Test 7.x to 2001A.04

If you are upgrading from Rational Test 7.x (or Rational Suite 1.x), you must do the following tasks in order:

- 1 Install Rational Test 2001A.04. For details, see *Installing Rational Robot, Team Test, and TestManager* on page 10.
- 2 Upgrade your TeamTest/TestStudio-based schema from the version available in ClearQuest 7.x.

For detailed procedures about upgrading ClearQuest packages and the database, see the section on “Updating ClearQuest” in the *Installing Rational Suite* manual. You must follow all of the instructions in “Updating ClearQuest” to successfully perform the upgrade.

Note: If you are upgrading from Rational Test 7.0, you must first apply the following two packages and upgrade your database before applying any other required packages:

- Repository Upgrade 0.2
- TeamTest Upgrade 0.1

For a list of the other required packages, see *Upgrading from Rational Test 2001.03 to 2001A.04* on page 13.

- 3 Convert your Rational 7.x repository to a project.

See *Upgrading a Rational 7.x Repository to a Project* on page 15 for directions.

Note: If you are upgrading from SQA Suite 6.x, you must first convert to a Rational 7.x repository. See *Creating a 7.x Repository Using Data from a 6.x Repository* on page 19 for details.

Before starting these procedures:

- Back up your current repository in case the conversion is unsuccessful. You will still be able to use your existing repository to access test assets. However, integrations with RequisitePro and ClearQuest will no longer be valid.
- Be aware that you must have administrator permission to convert the repository.

Upgrading a Rational 7.x Repository to a Project

After you have upgraded your ClearQuest schema and database, you need to convert your repositories to Rational projects. Rational Administrator provides a wizard that creates one new Rational project in the directory you specify for each 7.x project in the source repository.

All repository global assets, such as users, groups, and computers, get copied into each new Rational project. In addition, the repository conversion process upgrades your RequisitePro projects.

Use the following procedure to upgrade test repositories from Rational Suite 1.0, 1.5, or 2000, or from any test products marked as 7.x, such as Rational Robot 7.0, 7.1, or 7.5.

- 1** In the Administrator, select **File > Convert Rational Repository into Rational Projects**.
- 2** In the Repository Conversion - Login screen, enter the path of the repository you want to convert, as well as the user ID and the password. Click **Next**.
- 3** In the Destination screen, enter the path where the new Rational project will reside. Click **Next**.

This directory becomes the root for all new projects. One new Rational project is created under this directory for each 7.x project in the source repository. All repository global assets, such as users, groups, and computers, get copied into each new Rational project.

- 4** In the Options screen, select one of the following options and click **Next**:
 - Create a test case for each RequisitePro requirement that defines test criteria and is associated with a test script.
 - Create a test case for each test script associated with a test requirement that describes a feature of the application-under-test. This option is recommended if multiple test scripts are associated with the same requirement.

For more information about test cases, see the *Using Rational TestManager* manual or the Rational TestManager Help.

- 5 In the Summary screen, review your settings and click **Finish**.
- 6 Optionally, review the RepositoryConvert.txt log file that is written to your temp directory.

Rational Test Asset Conversion Information

All test assets that were stored in a 7.x repository project are now stored in a Test Datastore. Each Test Datastore is associated with a Rational project. Any 7.x test assets that were global to the repository are copied into each Test Datastore created for a 7.x repository project. Thus, test assets within a Test Datastore are not shared with any other Test Datastore.

Within a Test Datastore, the test assets are persisted as a collection of files. The properties and relationships of each test asset are stored within an XML file. These files are organized via the Test Datastore directory structure. Each Test Datastore also uses an MS Access database for caching some of the information in the XML files for use by reports and queries.

Note: Users and Groups are stored in a separate datastore called a UserGroupTestDatastore. This datastore is created in a sub-directory of the Rational Administrator project.

Test cases are a new asset type. Test cases define the individual tests that are executed in order to validate test inputs such as RequisitePro requirements. In a 7.x repository project, scripts served this purpose as well as being the actual implementation of the test. In the new Rational Test, scripts are only used as implementations and do not play any role in test coverage. In order to facilitate this new model, the conversion program creates test cases based on the script/requirement relationships that exist in the 7.x repository project.

The following table lists the data that is converted from a v. 7.x repository to a v. 2001A.04 project:

Types of 7.x Rational Test Assets	Converted?
Scripts	Yes (including VPs and Low-Level Scripts)
Schedules	Yes (now called Suites)
Sessions	Yes
Users	Yes

Groups	Yes
Computers	Yes
Datapools	Yes
Data Types	Yes
Performance Reports	Yes
Listing Reports	No
Logs	No
Builds	Yes
Test Documents	No
Coverage Reports	No
Queries	No
Log Filters	No

The following table lists the new test asset types:

New Test Asset Types	Description
Computer List	A collection of Computer assets that can be referenced as the execution target for Suites, Test Cases and Scripts.
Test Plan	A collection of Test Cases which define “what” needs to be tested for a particular feature or set of features.
Test Case	A specific “test” that needs to be planned, designed, and executed in order to validate some aspect of the System Under Test (SUT).
Configured Test Case	A specific “test” that needs to be run under a specific configuration (i.e. Operating System, etc.).
Listing Report (based on Crystal Reports)	A type of report that displays information about the test assets that are stored in the Test Datastore.
Test Case Analysis Report	A type of report that displays information about Test Cases and Test Case Results store in the Test Datastore.
Iteration	A specific period of time during a project, which is typically associated with some exit criteria and milestones.

Test Input	Identifies some aspect of the SUT that needs to be verified by a Test Case. Types of Test Inputs include Requisite Pro requirements and Rose Model elements as well as others that are configured as part of the TestManager extensible Test Input mechanism.
Test Input Type	Types of test inputs, such as RequisitePro requirements and Rose elements.
Test Script Type	Types of scripts, such as GUI, VU, Java, and VB.
Configuration Attribute	A specific aspect of a configuration such as OS, OS Version, memory, etc.
Configuration	A collection of Configuration Attributes which together describe some environment under which some set of Test Cases need to execute and pass.

Upgrading from Rational Test 6.x to 7.x

If you are using Rational Test 6.x (version 6.x of SQA Suite) and want to upgrade to the current version of the Rational testing products, you will need to perform an interim upgrade to version 7.x first, and then upgrade from 7.x to 2001.

You must do the following tasks in order:

- 1 Install the Rational Test 6.x to 7.x Repository Upgrade Kit.
- 2 Create a 7.x repository using the 6.x repository as the source of data. For information, see *Creating a 7.x Repository Using Data from a 6.x Repository* on page 19.
- 3 Upgrade your Rational Test 7.x repository to a Rational project. For information, see *Upgrading a Rational 7.x Repository to a Project* on page 15.

Installing the Rational Test 6.x to 7.x Repository Upgrade Kit

Installing the upgrade utility on the Rational Test 6.x to 7.x Repository Upgrade Kit CD provides the needed programs to upgrade your repositories.

To install the upgrade kit:

- 1 Log in using an account with Administrator privileges.
- 2 Insert the Rational Test 6.x to 2001 Repository Upgrade Kit CD into your CD drive. The installation starts automatically.

If the installation does not start automatically, do the following:

- a Click **Start > Run**.
- b Type *drive*:\SETUP.EXE, and then click **OK**.
- 3 At the Rational Software Setup screen, click **Next**.
- 4 At the Select Installation Option screen, click **Install Unlicensed Tools**, and then click **Next**.
- 5 Read the terms of the license agreement, select **Yes, I accept the agreement**, and then click **Next**. If you do not accept the agreement, the Setup program ends.
- 6 At the Setup Configuration screen, select **Typical**, and then click **Next**.
- 7 At the Software Use screen, select **Administrator**, and then click **Next**.
- 8 At the Rational Confirmation screen, view the selections that you have made and, if they are correct, click **Next**.
- 9 Click **Finish** when done.

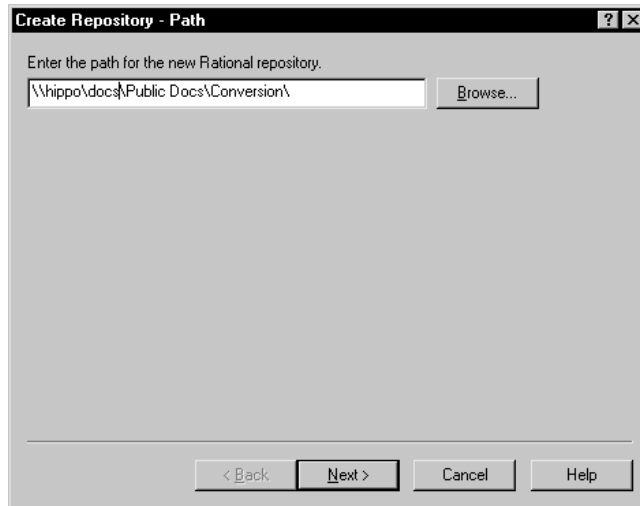
Creating a 7.x Repository Using Data from a 6.x Repository

This section discusses how to create a 7.x repository and populate it with data from a 6.x repository. Because the 7.x repository that you create is only temporary and needs to be converted to version 2001, it is recommended that you create MS Access databases. MS Access databases are the easiest to create.

To create a 7.x repository using data from a 6.x repository:

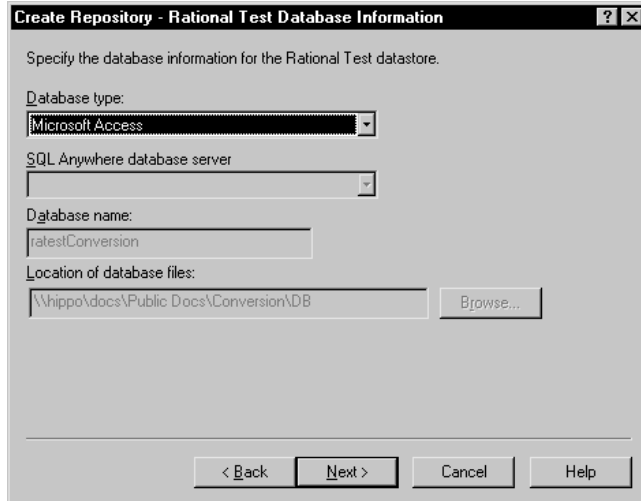
- 1 Create a shared directory in which to store the ClearQuest schema repository and the defect database.
- 2 Start the Rational Administrator.
- 3 Click **File > Create Repository**.

- 4 Enter the UNC path for the new Rational repository, using the shared directory that you created in Step 1, and click **Next**.



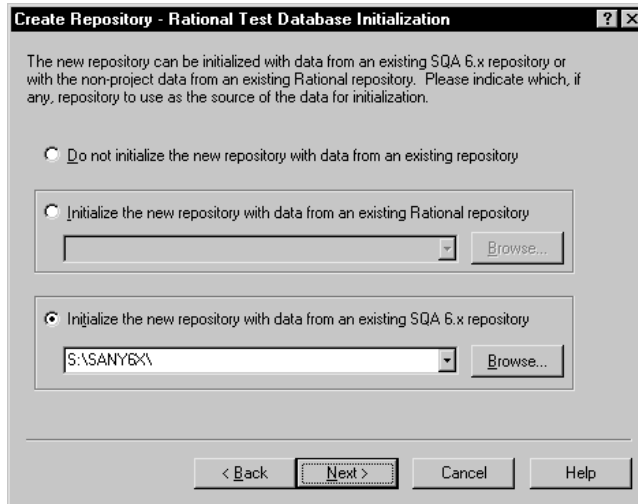
Note: If you plan to perform the 7.x to 2001A upgrade on a different computer, you must use UNC paths (`\\server-name\directory-path`).

- 5 Accept Microsoft Access as the default database type and click **Next**.

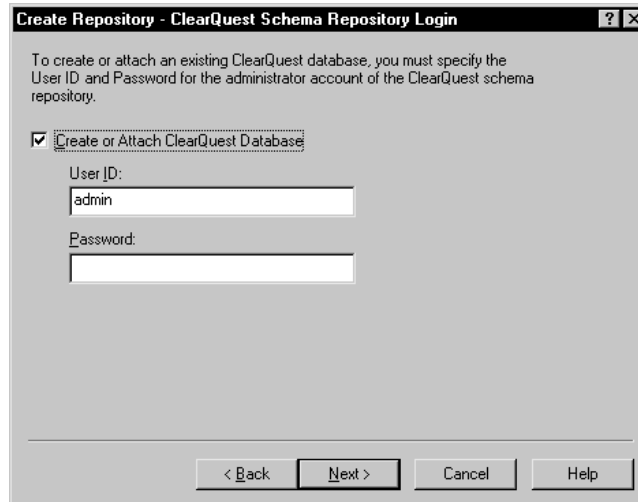


Select Access even if your ultimate goal is to use a different database type. For now, you are only creating a temporary database that will ultimately be converted to v. 2001, and for this purpose, MS Access is the easiest database to create.

- 6 In the Rational Test Database Initialization screen:
 - a Click **Initialize the new repository with data from an existing SQA 6.x repository**.
 - b Browse to or type the path to the 6.x repository and click **Next**.

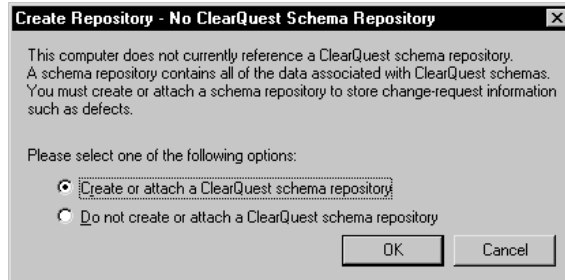


- 7 In the ClearQuest Schema Repository Login screen:
 - a Make sure that **Create or Attach ClearQuest Database** is checked.
 - b Accept the default user ID and password and click **Next**.



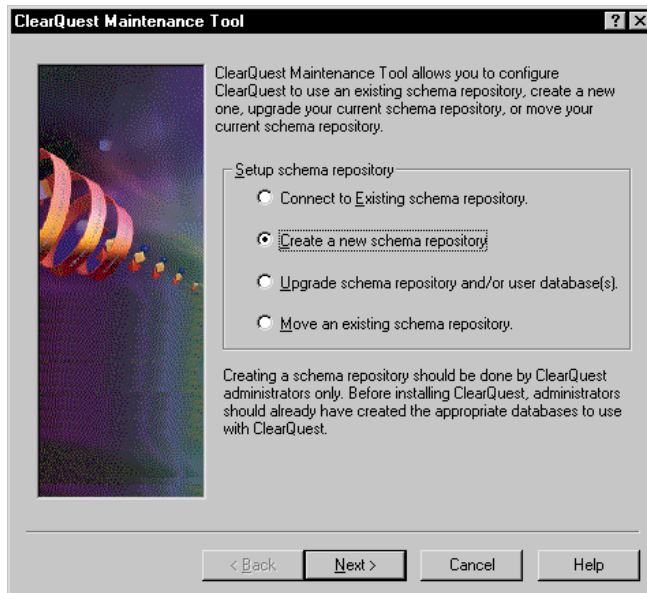
- Default administrator account – The user ID is **admin**, with no password.
- Default user account – The user ID is **user**, with the password **password**.

- 8 In the No ClearQuest Schema or Repository screen, click **Create or attach a ClearQuest Schema Repository** and click **OK**.



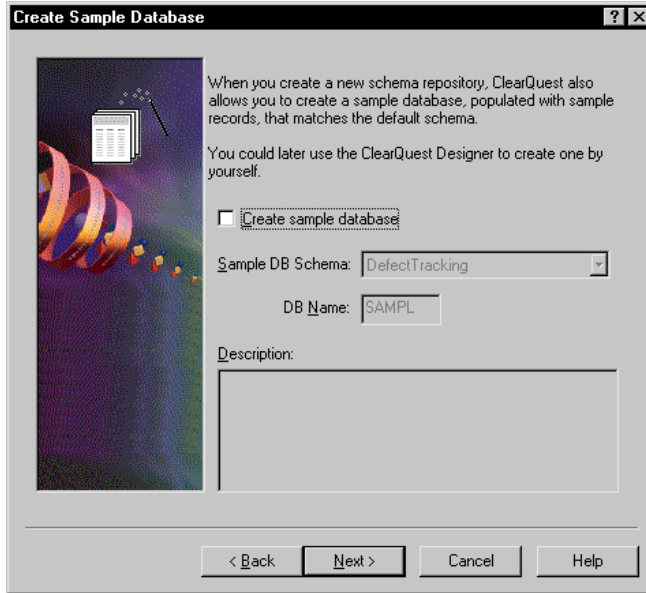
If this dialog does not appear, click **Start > Programs > Rational Administrator > Rational ClearQuest Maintenance Tool**.

- 9 In the ClearQuest Maintenance Tool, click **Create a New schema repository** and click **Next**.

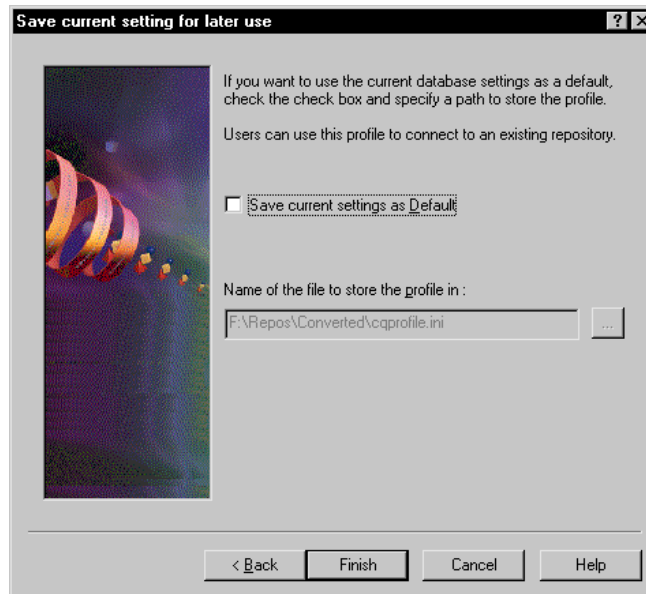


- 10 In the Connect to Existing Schema Repository screen:
 - a Select MS_Access as the **Vendor**.
 - b Browse to the shared folder that you created in Step 1 and type a name for the schema repository's database file, for example **schema.mdb**.
 - c Click **Open**.
 - d Click **Next**.

- 11 In the Create Sample Database screen, clear the **Create sample database** checkbox and click **Next**.



- 12 Clear the **Save Current Setting as Default** checkbox and click **Finish**.



- 13 Click **Done** when the message **Done creating repository** is displayed.
- 14 In the Create Repository Wizard screen, click **Next**.

- 15 In the New or Existing ClearQuest Database screen, enter a database name and description and click **Next**, for example:

Database name: **upgd**

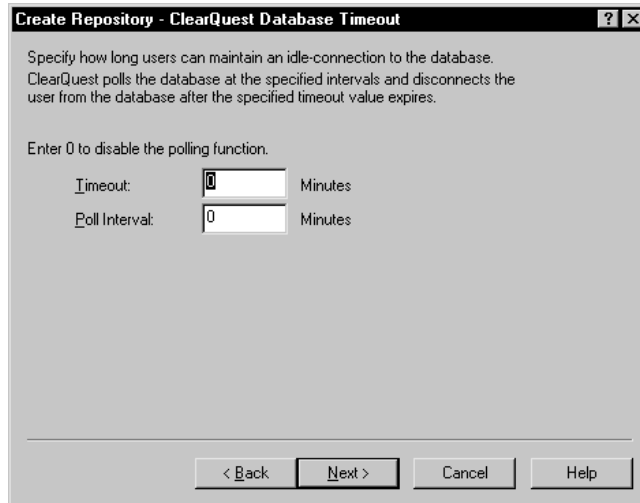
Description: **Converted 6x data**

The screenshot shows a dialog box titled "Create Repository - New or Existing ClearQuest Database". It contains a text area with instructions: "A ClearQuest database is used to store defects as well as other change requests. Please indicate whether you want to create a new ClearQuest database or attach an existing database." There are two radio buttons: "Create a new ClearQuest database" (selected) and "Attach an existing ClearQuest database". Under the selected option, there are two text input fields: "Database name:" with the value "upgd" and "Description:" with the value "Converted from 6x". Below these is an empty table with columns "Database Name", "Description", and "Server". At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

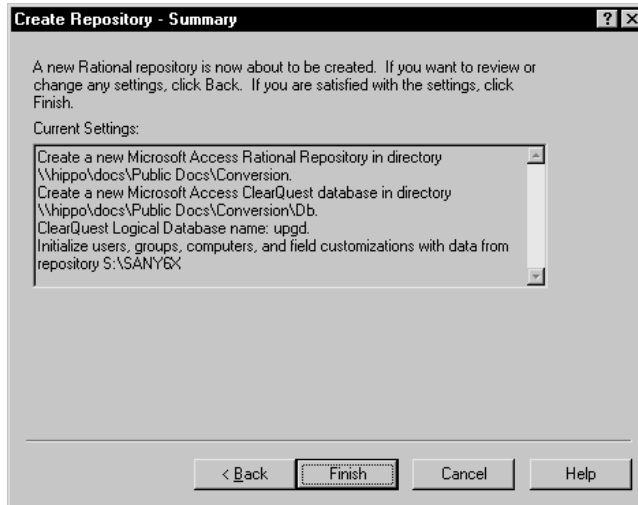
- 16 In the ClearQuest Database Information screen, you create the user (defect) database. Accept the defaults and click **Next**.

The screenshot shows a dialog box titled "Create Repository - ClearQuest Database Information". It contains a text area with instructions: "Please enter the properties of the ClearQuest physical database." There are several input fields: "Database type" (dropdown menu showing "Microsoft Access"), "Physical database name:" (text input with " \\hippo\docs\Public Docs\Conv" and a "Select..." button), "Read/Write user name:", "Read/Write user password:", "Administrator name:", "Administrator password:", "Server name:" (dropdown menu), and "SQL*Net Alias:". At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

17 In the ClearQuest Database timeout screen, accept the defaults and click **Next**.



18 Click **Finish** to create the ClearQuest database and convert the 6.x data.



19 Click **OK**.

See *Upgrading a Rational 7.x Repository to a Project* on page 15 for information on converting your new repository to v. 2001A. After you complete the 7.x to 2001A conversion, see the topic, *Moving or converting user databases*, in the Rational ClearQuest Designer Help, for instructions about changing the database type from MS Access to the database type used at your site.

Conversion Details

When you create a Rational repository with SQA Suite 6.x data, the converter does the following:

- Adds the prefix `_RENAMED_` to a script name or verification point ID that has a period (.) in the name.
- Converts the period (.) in a script name or verification point ID to an underscore (_).

For example, a script named `wn95.tst` converts to `_RENAMED_wn95_tst`. A verification point ID named `alpha.b2` converts to `_RENAMED_alpha_b2`.

The following table lists the data that is converted from a SQA Suite 6.x repository to a Rational repository.

Table 4 Data Converted from a SQA 6.x Repository

Type of SQA Suite 6.x data	Converted?
Custom reports and graphs	No
Defects	Yes
E-mail rules	No
Filters for defects or test procedures	No
Groups (Privileges are not converted.)	Yes
List reports	No
LoadTest schedules (called <i>suites</i> in a Rational project)	No
Projects	Yes
Requirements	Yes
Test cases (called <i>verification points</i> in a Rational project)	Yes
Test logs	No
Test plans	Yes
Test procedures (called <i>test scripts</i> in Rational project)	Yes
Users (Privileges are not converted.)	Yes
Virtual user test procedures (called <i>test scripts</i> in a Rational project)	No

Fields in SQA 6.x and TestStudio Defect Forms

Rational ClearQuest 2.0 includes a specially designed defect form, the TestStudio defect form, similar to the SQA 6.x Manager defect form. The following table lists each field in an SQA 6.x defect form and the comparable field in the TestStudio defect form.

Note: The word *List* in the Description column indicates that if you customize a list in SQA 6.x, it converts to a list in the TestStudio defect form.

Table 5 Comparison of Defect Fields

SQA 6.x defect field	TestStudio defect field	Description
ID	New ID generated	The SQA 6.x ID does not appear on the defect form, but you can use the query feature of ClearQuest to find it.
Description	Headline/Description	Converts the first 125 characters or up to the first carriage return and places this text in the Headline field. The entire SQA 6.x Description field also appears in the Description field of the TestStudio defect form.
Priority	Priority	List
Severity	Severity	List
Occurrences	(Not converted)	
Keywords	Keywords	List
Symptoms	Symptoms	List
Build Found	Notes	In SQA 6.x, a Build Found field is a text field. In Rational Suite, Builds are objects that contain log folders and logs. The text data from the Build Found field is stored in Notes. A Build object is not created for each SQA 6.x Build Found field.
Build Fixed	Notes	In SQA 6.x, a Build Fixed field is a text field. In Rational Suite, Builds are objects that contain log folders and logs. The text data in the Build Fixed field is stored in Notes. A Build object is not created for each SQA 6.x Build Fixed field.
Proc	Script	
Case	Verification Point	
Cycle	(Not converted)	

Table 5 Comparison of Defect Fields

SQA 6.x defect field	TestStudio defect field	Description
Reported By	Reported By Contact	
Reported By Company	Reported By Company	
Hardware	Hardware	List
Operating System	Operating System	List
Other	Other Environment	
Test Station	(Not converted)	In SQA 6.x, a Test Station field is a text field. In Rational Suite, the Computers field replaces the Test Station field and is an object. A Computer object is not created for each SQA 6.x Test Station field.
Log	(Not converted)	
Custom 1	Custom 1	List If you customized the label for this field in SQA 6.x, the label is not converted. Use the ClearQuest Designer to customize this label.
Custom 2	Custom 2	List If you customized the label for this field in SQA 6.x, the label is not converted. Use the ClearQuest Designer to customize this label.
Custom 3	Custom 3	If you customized the label for this field in SQA 6.x, the label is not converted. Use the ClearQuest Designer to customize this label.
Attachment	Attachments	You can attach more than one file after you convert to a Rational Suite repository.
Requirement	Requirement	
Status History	History	
Resolution	Resolution	List
Resolution Description	Resolution Note	

Table 5 Comparison of Defect Fields

SQA 6.x defect field	TestStudio defect field	Description
Modified Software	(Not converted)	

Troubleshooting

The `convert.txt` file in the converted project directory contains the conversion status of each verification point and script. Use this file as a diagnostic tool if you have any problems with your data after conversion.

This chapter is organized as follows:

- *Installing and Removing the Network Driver* on page 31
- *Supported Playback Environments on Agent Computers* on page 34
- *Installing Rational Test Agents* on page 35
- *Installing Rational Robot for Distributed Testing* on page 40
- *Installing the Rational Test Enablers* on page 40
- *Installing the Sample Applets* on page 42
- *Installing Crystal Reports* on page 42
- *Installing Rational ManualTest Web Execution* on page 43

Installing and Removing the Network Driver

To record sessions over a network for performance testing, you must install the Rational Test network driver. If you have a network driver from a previous release, you must remove it and install the current network driver. The following sections explain how to do this on Windows NT and Windows 2000.

Installing the Network Driver on Windows NT

To install the Rational Test network driver on Windows NT:

- 1 Install your Rational testing software.
- 2 Click **Start > Settings > Control Panel**.
- 3 Double-click the Network icon.
- 4 Click the **Protocols** tab.
- 5 Click **Add**.
- 6 Click **Have Disk**. The required files were copied to the Rational directory during Rational Test installation.

7 Specify one of the following file paths to install the driver.

- For Windows NT Ethernet networks, type:

C:\Program Files\Rational\Rational Test\driver

or *installpath*\Rational\Rational Test\driver

where *installpath* is the drive and path is where you installed the Rational testing software.

- For Windows NT Token Ring networks, type:

C:\Program Files\Rational\Rational Test\drivertk

or *installpath*\Rational\Rational Test\drivertk

where *installpath* is the drive and path is where you installed the Rational testing software.

Note: You can install only one type of driver on your computer at a time, either Ethernet or Token Ring. You must remove one type of driver before installing a new type of driver.

8 Click **OK**.

9 In the Select OEM Option dialog box, click **OK** again to verify the driver.

10 Click **Close**.

11 Click **Yes** to shut down Windows and restart your computer after you install the network driver.

Removing the Network Driver from Windows NT

If you need to switch from an Ethernet network to a Token Ring network, or the reverse, you must remove the driver for the unwanted network type before you install the driver for the new network type.

To remove a network driver from Windows NT:

- 1 Click **Start > Settings > Control Panel**, then double-click the Network icon.
- 2 Click the **Services** tab.
- 3 Select the Rational network driver from the **Network Services** list.
 - If your current driver is from Rational Suite PerformanceStudio 1.0 or earlier, select **PerformanceStudio Network Driver**.
 - If your current driver is from Rational Suite PerformanceStudio 1.5 or 2000, select **RSPS Network Driver**.
- 4 Click **Remove**.

- 5 Click **Yes** to confirm that you want to remove the driver.
- 6 When the removal is complete, click **Close**.
- 7 Click **Yes** to reboot the computer.

When the computer restarts, you can install the new network driver.

Installing the Network Driver on Windows 2000

To install the Rational Test network driver on Windows 2000:

- 1 Click **Start > Settings > Network and Dialup Connections**.
- 2 Right-click **Local Area Connection**, and then select **Properties** from the context menu.
- 3 Click **Install**.
- 4 Click **Protocol**, and then click **Add**.
- 5 Click **Have Disk**.
- 6 Enter the path where the driver is located, or browse for the driver. For example, type:

`C:\Program Files\Rational\Rational Test\driverw2k`
or `installpath\Rational\Rational Test\driverw2k`

where *installpath* is the drive and path where you installed the Rational testing software.

- 7 Select either **Ethernet** or **Token Ring** network, and then click **OK**.
- 8 Click **Yes** to shut down Windows and restart your computer after you install the network driver.

Removing the Network Driver from Windows 2000

To remove the network driver from a Windows 2000 computer:

- 1 Click **Start > Settings > Network and Dialup Connections**.
- 2 Right-click **Local Area Connection**, and select **Properties** from the shortcut menu.
- 3 Select **PerformanceStudio Network Driver 2000** from the **Network Services** list.
- 4 Click **Uninstall**.

- 5 Click **Yes** to confirm that you want to remove the driver.
- 6 When the removal is complete, click **Close**.
- 7 Click **Yes** to reboot the computer.

Supported Playback Environments on Agent Computers

The following table lists the protocols that are supported when you play back a performance test script on an Agent computer. For example, if your Agent computer runs Solaris, you cannot play back a test script that accesses ODBC. All playback platforms support sockets.

Note: SQL Server 7.x playback is available on ODBC platforms only.

Also note that use of Agent software on AIX 4.3 requires AIX patch “part number ix89833” from IBM. Contact IBM to order the patch.

Table 6 Playback Environments for Performance Testing

	HTTP & HTTP/SSL	Oracle	Sybase	Tuxedo & Jolt	SQL Server	ODBC	SAP VU	DCOM	CORBA (Visibroker 3.x only)
<i>Win NT</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Win ME</i>	No	No	No	No	No	No	No	No	No
<i>Win 2000</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Win 98, 2nd ed.</i>	No	No	No	No	No	No	No	No	No
<i>Win 95, SR2</i>	No	No	No	No	No	No	No	No	No
<i>Solaris 2.5, 2.6, 2.7</i>	Yes	Yes	Yes	Yes	Yes, except extended stored procedures	No	No	No	Yes
<i>HP-UX 11</i>	Yes	Yes	Yes	Yes	Yes, except extended stored procedures	No	No	No	No

Table 6 Playback Environments for Performance Testing (continued)

	HTTP & HTTP/SSL	Oracle	Sybase	Tuxedo & Jolt	SQL Server	ODBC	SAP VU	DCOM	CORBA (Visibroker 3.x only)
<i>AIX 4.3</i>	Yes	Yes	Yes	Yes	Yes, except extended stored procedures	No	No	No	No
<i>DYNIX/ptx</i>	No	Yes	No	Yes	No	No	No	No	No
<i>Red Hat Linux</i>	Limited	Yes	No	Yes	No	No	No	No	No

The following list shows the operating systems that are supported when you play back a GUI test script on an Agent computer.

- Windows NT
- Windows ME
- Windows 2000
- Windows 98, 2nd ed.
- Windows 95, SR2

Installing Rational Test Agents

After you install and license your Rational testing software on a Local computer, you have the option of installing Rational Test Agents on other computers. You use an Agent computer to:

- Play back tests using multiple virtual testers. This allows you to add workload to a server.
- Play back functional tests. You can distribute your functional tests among different computers to save time.
- Monitor and report on resources used during performance tests.

Note: The same version of Rational testing software must be installed on the Local and Agent computers; otherwise, they will not work together.

Installing a Windows Agent

To install Agent software on a Windows computer:

- 1 Log in using an account with Administrator privileges.
- 2 Insert the Rational testing software CD into your CD drive. The installation starts automatically.

If the installation does not start automatically, do the following:

- a Click **Start > Run**.
 - b Type *drive*:\SETUP.EXE, \SETUP.EXE and click **OK**, where *drive* is the CD drive you are using.
- 3 In the Rational Software Setup screen, click **Next**.
 - 4 Click **Install Unlicensed Tools**, and then click **Next**.
 - 5 Select Rational Test Agent from the list of available products, and then click **Next**.
 - 6 Read the terms of the license agreement, select one of the following, and then click **Next**.
 - **Yes, I accept the agreement.** If you accept the agreement, the Setup program continues.
 - **No, I don't accept the agreement.** If you do not accept the agreement, the Setup program ends.
 - 7 Select the setup configuration you prefer, and then click **Next**.

Note: You cannot select the Minimal configuration for Rational testing products.

 - **Typical** – Installs the most commonly used features for this product.
 - **Custom/Full** – Lets you specify which products or features to install.
 - **Compact/Laptop** – Installs the minimal software needed to run this product.
 - 8 Follow the on-screen instructions to complete the installation.

The Rational Setup Wizard displays a series of dialog boxes that guide you through the installation process and prompt you for information.
 - 9 In the last dialog box, click **Finish**.

You must restart your computer to finish the installation.
 - 10 Log in again using the same user account and Administrator privileges that you used to start the installation. This allows the setup program to complete.

Starting a Windows Agent

A Windows Agent runs as an application. To start the Agent, click the executable or put it in a start group.

On Windows NT, you can run the Agent as an NT service if the Agent will be used only for virtual testers.

To run an Agent as an NT service:

- 1 Right-click the **Start** menu. Click **Open All Users**.
- 2 Double-click **Programs**.
- 3 Double-click **Startup**.
- 4 If the Agent is running, you must exit it.
- 5 Right-click the Rational Test Agent icon and select **Delete**.
- 6 If you are running the Local computer as an Agent:
 - a Click **Start > Run**.
 - b Type `rtpsvc -install`, and then click **OK**.
- 7 Start the Agent as an NT service:
 - a Click **Start > Settings > Control Panel**.
 - b Double-click **Services**.
 - c Select Rational Test Agent Service from the list of services, and then click **Start**.
- 8 To start the Agent automatically when you restart your computer:
 - a Click **Startup**.
 - b Click **Automatic** in the Startup Type box, and then click **OK**.

Installing a UNIX Agent

To install Agent software on a UNIX computer:

- 1 Log in as root.
- 2 Create the installation directory:

```
# mkdir -p /usr/rational/test
```
- 3 Insert the Rational Solutions for Windows Disc 1 CD into your CD drive.

- 4 If the CD does not automount, then issue the appropriate UNIX **mount** command. Change your directory to the CD directory. The **mount** and the change directory commands for each Agent are as follows:

For an Agent on a Solaris operating system:

```
# mount /dev/dsk/c0t6d0s0 /cdrom
# cd /cdrom/solaris_agent
```

For an Agent on an HP-UX 11.x operating system:

```
# pfs_mount /dev/rdisk/c0t2d0 -t rrip /cdrom
# cd /cdrom/hp11_agent
```

For an Agent on an AIX 4.3 operating system:

```
# mount -v cdrfs -r /dev/cd0 /cdrom
# cd /cdrom/aix4.3_agent
```

For an Agent on a Red Hat 6.x release of Linux:

```
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/linux_agent
```

For an Agent on a DYNIX/ptx operating system:

```
# mount -r -f cdfs /dev/dsk/cd1 /cdrom
# cd /cdrom/dynix_agent
```

- 5 Copy the installation files to your hard drive.

```
# find . -print|cpio -pdvm /usr/rational/test
```

- 6 Change your directory to the directory that contains the installation script.

```
# cd /usr/rational/test/bin
```

- 7 Run the installation script.

```
# sh agent_install
```

- 8 Start the UNIX Agent.

- a Start the Bourne shell, if you are not running it already.

```
# sh
```

- b Change your directory to the installation directory.

```
# cd /usr/rational/test/bin
```

- c Set the RATL_RTHOME and PATH environment variables:

```
# RATL_RTHOME=/usr/rational/test
# export RATL_RTHOME
# PATH=$PATH:/usr/rational/test
# export PATH
```

- d Start the Agent daemon.

```
# ./RTsagt
```

Restarting a UNIX Agent

To restart the UNIX Agent manually:

- 1 Start the Bourne shell, if you are not running it already.

```
# sh
```

- 2 Change your directory to the installation directory.

```
# cd /usr/rational/test/bin
```

- 3 Set the RATL_RTHOME and PATH environment variables:

```
# RATL_RTHOME=/usr/rational/test
# export RATL_RTHOME
# PATH=$PATH:/usr/rational/test
# export PATH
```

- 4 Start the Agent daemon.

```
# ./RTsagt
```

Removing a UNIX Agent

To remove the UNIX Agent:

- 1 Find the rtprvd process and kill it using `ps -ef | grep rtprvd`.

- 2 `kill -9 pid`

- 3 `rm -rf /usr/rational/test`

Installing Rational Robot for Distributed Testing

To record GUI test scripts on multiple computers, you need to install Robot on each computer. A separate node-locked license is required for Robot-only installations. For information about installing node-locked licenses, see the *Administering Rational Software Licenses* manual or the Rational License Key Administrator Help.

To install Rational Robot, follow the Rational Setup. For information, see *Installing Rational Robot, Team Test, and TestManager* on page 10.

Installing the Rational Test Enablers

The Rational Test Enablers consist of the following:

- **Rational ActiveX Test Control** – Install to test the properties of the ActiveX controls in your application-under-test using Rational Robot.

Note: If you are using a development environment other than PowerBuilder, Oracle Forms, Visual Basic, Delphi, Java, or HTML, and you want to test the properties of your ActiveX controls, you must manually add the Rational ActiveX Test Control to each OLE container in your application. For instructions, see the documentation that comes with your development environment.

The ActiveX Test Control provides communication between any OLE container and Robot. It is a non-intrusive control and has no impact on the behavior or performance of your application. At runtime, the Rational ActiveX Test Control is not visible.

- **Rational Test Java Enabler** – Required to test Java applets running in a browser, or to test stand-alone Java applications. This Enabler scans your hard drive for Web browsers and Sun JDK installations that Robot supports, and enables only those environments currently installed on your system. Run the enabler each time you install a new Java environment (such as a new release of a browser or JDK).
- **Rational Test Oracle Forms Enabler** – Install to test Oracle Forms 6.0, 5.0, and 4.5 applications. Installs both the Rational Test Oracle Forms Enabler and the Rational Test Object Testing Library for Oracle Forms.

Note: Be sure to install Oracle Forms 6.0, 5.0, or 4.5 and the Oracle Open Client Adapter for ODBC before you install the Rational Test Oracle Forms Enabler.
- **Rational Test Delphi Enabler** – Install to test your Delphi applications. Before you can test your Delphi applications, you must install the Rational Object Testing Library for Delphi and the Rational Test Delphi Enabler.

- **Rational Test Visual Basic Enabler** – Install to test Visual Basic 4.0 applications. Ensures that all forms in your project, including MDI forms, contain the Rational ActiveX Test Control. This Enabler is an add-in (extension) to Visual Basic 4.0. For more information about Visual Basic add-ins, see your Visual Basic documentation.

Note: You do not need the Visual Basic Enabler to test Visual Basic 5.0 and later applications.

For more information about the Rational Test Enablers, see the *Using Rational Robot* manual.

To install the Rational Test Enablers:

- 1 Turn on the computer to start Windows.
- 2 Insert the Rational Solutions for Windows Disc 1 CD into your CD drive. The installation starts automatically.

If the installation does not start automatically, do the following:

- a Click **Start > Run**.
- b Type `drive:\SETUP.EXE`, and then click **OK**.
- 3 At the Rational Software Setup screen, click **Next**.
- 4 Click Install Unlicensed Tools, and then click **Next**.
- 5 Select Rational Test Enablers, then click **Finish**.

The Rational Test Enablers installation starts.

- 6 Select one or more of the following, and then click **Next**.
 - Rational ActiveX Test Control
 - Rational Test Oracle Forms Enabler
 - Rational Test Java Enabler
 - Rational Test Visual Basic Enabler
 - Rational Test Delphi Enabler
- 7 Follow the on-screen instructions to complete the installation.

Installing the Sample Applets

The Rational sample applets are included:

- **Small Sample applets** – Use with the *Try it!* cards for quick and easy instructions about recording tests on controls created in specific development environments. You can install sample applets for Java, HTML, Oracle Forms, PowerBuilder, and Visual basic development environments.

To install the sample applets:

- 1 Install Rational Robot, TeamTest, TestStudio, or EnterpriseStudio. For information about installing Robot and TeamTest, see *Installing Rational Robot, Team Test, and TestManager* on page 10.

Note: You cannot install the Rational sample applets if your only installed Rational testing product is Rational TestManager.

- 2 Click **Start > Programs > Rational product name > Rational Test > Set Up Rational Test Samples**.
- 3 Select the sample applets that you want to install:
 - HTML Sample
 - Java Sample
 - Visual Basic Sample
 - PowerBuilder Sample
 - Oracle Sample
- 4 Click **Next**.
- 5 Click **Finish** to complete the installation.

Installing Crystal Reports

Crystal Reports lets you customize defect reports that come with Rational TeamTest. Crystal Reports also lets you create new report formats. This software comes on a separate CD in your Rational testing software kit.

To install Crystal Reports 8.0 Professional Edition use the Crystal Reports installation directions that come with the CD.

Installing Rational ManualTest Web Execution

A *manual test script* is a set of testing instructions that are run by a human tester. A manual test script can consist of steps and verification points that you type into a manual test script using Rational ManualTest. After you create a manual test script and associate it with a test case, creating a test case implementation, you can run the test case from a Web browser. For information about creating a manual test script and about test case implementations, see the *Using Rational TestManager* manual.

With the ManualTest Web Execution component of Rational TestManager, you can:

- Run a test case with a manual test script implementation from a Web browser. The advantage to using the ManualTest Execution feature of TestManager is that you only need Web browser software to run a test case with a manual test script implementation.
- Indicate results and add comments as you perform each task in a manual test script. These results appear in a test log.
- Include your test case results in a TestManager report.

When you run a test case, you view and record the results of performing the manual steps and verification points in the manual test script.

Note: You can only run a test case from a Web browser if it has a manual test script implementation; you can not run a test case with an automated test script implementation from a Web browser. If a test case has both a manual test script and an automated test script implementation, only the manual test script runs from a Web browser.

To run a test case associated with a manual test script, you or an administrator install and configure a Web server with ManualTest Web Execution software and configure a Web browser on each client to access a Rational project. To run a test case with a manual test script implementation, using a Web browser, you type the *machinename*, the network name of the Web server, and the *alias*, the name of an alias for the directory where you or your administrator installed the ManualTest Web Execution software on the Web server.

For example:

```
http://Webserver1/ManTestdir
```

For information about setting up a Web browser and installing a Web server, see *Installing a Web Server* on page 45 and *Setting Up a Web Browser* on page 51.

Software Requirements

Make sure that your server conforms to the following minimum requirements for a Web server:

For the Web server:

- Windows ME, Windows 2000 Professional, Windows 2000 Server, Windows 2000 Advanced Server, Windows 98, Windows 95, Windows NT 4.0 Workstation, or Windows NT 4.0 Server.
- Microsoft Internet Explorer 5.0 or later on the Web server.

For	Install
All versions of Windows 2000 and Windows ME	Microsoft Internet Information Services 5.0 (IIS 5.0) from the Windows 2000 CD
Windows 98, Windows 95, or the Windows NT 4.0 Workstation	Microsoft Personal Web Server (PWS) from the Windows NT 4.0 Option Pack (available from Microsoft, www.microsoft.com)
Windows NT 4.0 Server	Microsoft Internet Information Server (IIS) from the Windows NT 4.0 Option Pack (available from Microsoft, www.microsoft.com)

Note: We recommend that you use Windows 2000 Server, Windows 2000 Advanced Server, or Windows NT 4.0 Server, as the Web server platform. You can not use a shared or networked project with the Windows 2000 Professional or Windows NT 4.0 Workstation.

To access the Web server as a client, use one of the following Web browsers:

- Netscape Navigator 4.0 or later
- Microsoft Internet Explorer 4.0 or later

About Shared Projects

We recommend that when you create a project, you make it a shared project so others can access your manual test scripts from a Web browser. To share a project, create the project in a shared directory and use the Uniform Naming Convention (UNC) for the directory name. (For more information about creating a shared directory, see the *Using the Rational Administrator* manual or the Rational Administrator Help.)

Installing a Web Server

To install a Web server to run a test case with a manual test script implementation from a Web browser:

1 Install the ManualTest Web Execution component.

- a Turn on the computer to start Windows.
- b Log in using an account with Administrator privileges.
- c Quit all applications before installing any Rational products.
- d Insert the Rational Solutions CD 1 into your CD drive.

The installation starts automatically.

If the CD does not start automatically, click **Start > Run**. Type *drive:\SETUP.EXE*, and then click **OK**.

e On the **Rational Software Setup** page, click **Next**.

f Click one of the following Rational testing products from the list of available products, and then click **Next**:

- Rational Robot
- Any Rational Suite product
- Rational TeamTest
- Rational TestManager

g Read the terms of the license agreement carefully, select one of the following, and then click **Next**.

- **Yes, I accept the agreement.** If you accept the agreement, the Setup program continues.
- **No, I don't accept the agreement.** If you do not accept the agreement, the Setup program ends.

h Do one of the following on the **Select Configuration** page:

i If you do not want to create manual test scripts on the Web server and only want to set up a Web server:

Click **Custom**, and then click **Next**.

Clear all check boxes on the **Choose Features** page.

Click the -- on the **Web Server Components** check box.

Select the **Rational ManualTest Web Execution** check box.

- ii If you want to create manual test scripts on the Web server, click **Typical** to install a Rational testing product.

Note: You do not need to install a Rational testing product on the Web server unless you want to create manual test scripts on the Web server. The Manual Test Web Execution component installs by default when you install any of the Rational testing products.

- i Follow the on-screen instructions to complete the installation.

The Rational Setup wizard displays a series of dialog boxes that guide you through the installation process and prompt you for information.

- j Click **Finish** when done.

Your system restarts.

- 2 Install Microsoft Windows NT 4.0 Option Pack or Microsoft Internet Information Services 5.0 on the Web server by doing one of the following:

- For a Web server running Windows 2000, install the Microsoft Internet Information Services 5.0 from the Windows 2000 CD.
- For a Web server running Windows NT 4.0 Server, install the Microsoft Internet Information Server (IIS) from the Windows NT 4.0 Option Pack.
- For a Web server running Windows 98, Windows 95, or Windows NT 4.0 Workstation, install the Microsoft Personal Web Server (PWS) from the Windows NT 4.0 Option Pack.

- 3 Install Microsoft Internet Explorer 5.0 or later on the Web server.

Note: Although a client can use Microsoft Internet Explorer 4.0, you must install Microsoft Internet Explorer 5.0 or later on the Web server.

- 4 Configure the Microsoft Access Driver to run a test case from a Web browser by doing the following:

- a Click **Start > Settings > Control Panel**.

- b Do one of the following:

For Windows 2000, double-click **Administrative Tools**, and then double-click **Data Sources (ODBC)**.

For Windows 98, 95, NT 4.0 Workstation and Server, double-click **ODBC Data Sources**.

- c Click the **Connection Pooling** tab.

- d Under **ODBC Drivers**, double-click **Microsoft Access Driver (*.mdb)**.

- e Select **Don't pool connections to this driver**, and then click **OK**.
 - f Click **OK**.
 - g Restart the system.
- 5 Configure the Web server to run a test case from a Web browser by doing one of the following:
- For a Web server running Windows 2000 Professional, Windows 98, Windows 95, or a Windows NT 4.0 Workstation, see *Configuring a Microsoft Personal Web Server* on page 49.
 - For a Web server running Windows NT 4.0 Server, Windows 2000 Server, or Windows 2000 Advanced Server, see the next section, *Configuring a Microsoft Internet Information Server*.

Configuring a Microsoft Internet Information Server

To configure the Microsoft Internet Information Server (IIS) on all versions of Windows 2000, Windows ME, or a Windows NT 4.0 Server:

- 1 Do one of the following:
 - For all Windows 2000 and Windows ME systems, click **Start > Settings > Control Panel**. Double-click **Administrative Tools**. Double-click **Internet Services Manager**.
 - For Windows NT 4.0, click **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Internet Information Server > Internet Service Manager**.
- 2 Optionally, double-click **Internet Information Server** to display all machines.
- 3 Double-click *machinename*
where *machinename* is the network name of the Web server.
- 4 Click **Default Web Site**.
- 5 Right-click, and then click **New > Virtual Directory**.
- 6 Do one of the following:
 - For Windows 2000 and Windows ME, click **Next**, and then go to the next step.
 - For Windows NT 4.0, go to the next step.

- 7 Type an alias for the directory where you installed your Rational software on the Web server.

For example: *TM*

Note: Write down this alias. You must use this alias to run a test case from a Web browser.

- 8 Click **Next**.

- 9 Type the drive and path of the location where you installed your Rational software, or click **Browse** to select the drive and path.

For example, the default location is:

c:\Program Files\Rational\Rational Test\www\manual script

- 10 Click Next.

- 11 Do one of the following:

For Windows 2000 and Windows ME, select the following options to allow privileges to the Rational project:

- **Read**
- **Run scripts (such as ASP)**

For Windows NT 4.0 Server, select the following options to allow privileges to the Rational project:

- **Allow Read Access**
- **Allow Script Access**
- **Allow Execute Access**

- 12 Do one of the following:

- For Windows 2000 and Windows ME, click **Next**, and then click **Finish**.
- For Windows NT, click **Finish**.

- 13 Right-click the new alias, and then click **Properties**.

- 14 Click the **Documents** tab.

Make sure that the following files appear under the **Enable Default Document** box:

- **Default.asp**

If these file do not appear, do the following:

- a Click **Add**.
- b Type **Default.asp**, and then click **OK**.

15 Click the **Directory Security** tab.

16 Under **Anonymous and Authentication Control**, click **Edit**.

17 Make sure that you select the Allow Anonymous Access check box, and then click **Edit**.

18 Do one of the following:

- For Windows 2000 and Windows ME, clear the **Allow IIS to control password** check box, and then go to the next step.
- For Windows NT 4.0, Clear the **Enable Automatic Password Synchronization** check box, and then go to the next step.

19 Type the **Username and Password** for the user account either on this Web server (if the project is on the Web server), or on the domain (to access shared projects on other systems in the domain).

All web clients use this user account to access a Rational project either on a Web server or on the domain (to access shared projects on other systems in the domain). This user account must have privileges to read and write into a Rational project. If you want Web clients to have access to a Rational project, you must log into this account when you create a new Rational project or register an existing Rational project using the Rational Administrator.

Note: By configuring the privileges to this account, you can restrict access to certain shared projects. For more information about setting privileges, see your Microsoft Windows 2000 or Windows NT 4.0 documentation.

20 Click **OK** to close all windows.

Configuring a Microsoft Personal Web Server

Note: If you use Windows NT 4.0 Workstation or Windows 2000 Professional with the Personal Web Server, you can access only local projects. To access shared projects with Windows 2000 Professional, Windows 98, or Windows 95, you must run PWS under a domain user account.

To configure the Microsoft Personal Web Server (PWS) on a Windows 2000 Professional, Windows 98, Windows 95, or Windows NT 4.0 Workstation server:

1 Do one of the following:

- For Windows 2000 Professional, be sure to install the Internet Information Services 5.0 (IIS 5.0) from the Windows 2000 Professional CD.

- For Windows 98, Windows 95, or Windows NT 4.0 Workstation, be sure to install the Microsoft Personal Web Server (PWS) from the Windows NT 4.0 Option Pack (available from Microsoft, www.microsoft.com).
- 2 Do one of the following:
 - For Windows 2000 Professional, click **Start > Settings > Control Panel**. Double-click **Administrative Tools**. Double-click **Personal Web Manager**.
 - For Windows 98, Windows 95, or Windows NT 4.0 Workstation, click **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Personal Web Server > Personal Web Manager**.
 - 3 Click **Advanced**.
 - 4 Select **<Home>**.
 - 5 Click **Add**.
 - 6 Under **Directory**, type the drive and path of the location where you installed your Rational software, or click **Browse** to select the drive and path.

For example, the default location is:

```
c:\Program Files\Rational\Rational Test\www\manual script
```
 - 7 Under **Alias**, type the alias for the directory where you installed your Rational software on the Web server

For example: *TM*

Note: Write down this alias. You must use this alias to run manual test scripts on this Web server through a Web browser.
 - 8 Do one of the following:
 - For Windows 2000 Professional – Under Access permissions, select Read and Script Source Access. Under Application permissions, select Execute (including scripts).
 - For Windows 98, Windows 95, or Windows NT 4.0 Workstation – Under Access, click all of the following: Read, Execute, and Scripts.
 - 9 Click **OK**.
 - 10 Do one of the following:
 - For Windows 98, Windows 95, or Windows NT 4.0 Workstation, click **Properties > Exit**.
 - For Windows 2000 Professional, click **File > Close**.

- 11 Complete the steps for either Windows 2000 Professional or for Windows 98, Windows 95, or Windows NT 4.0 Workstation

For Windows 2000 Professional:

- a Click **Start > Settings> Control Panel**.
- b Double-click **Users and Passwords**.
- c Under the **User Name** column, select:
IUSR_machinename
where *machinename* is the name of the Web server.
- d Click **Properties**.
- e Click the **Group Membership** tab.
- f Under **Other**, select **Administrators**.
- g Click **OK**. Click **OK** again.
- h Restart the system.

If you have Windows 98, or Windows 95 you are finished with the configuration. If you have a Windows NT 4.0 Workstation, do the following:

- a Click **Start > Programs > Administrative Tools (Common) > User Manager**.
- b Under the **User Name** column, select:
IUSR_machinename
where *machinename* is the name of the Web server.
- c Click **User > Properties**.
- d Click **Groups**.
- e Under **Not members of**, select **Administrators**, and then click **Add**.
- f Click **OK**. Click **OK** again.
- g Click **User > Exit**.

Setting Up a Web Browser

You can use Netscape Navigator 4.0 (or later) or Microsoft Internet Explorer 4.0 (or later) as your Web browser to run a test case. You can use your Web browser on a system running any operating system software.

Netscape Navigator

To set up a Netscape Navigator browser to run a test case:

- 1 Start Netscape Navigator.
- 2 Click **Edit > Preferences**. Under Category, click **Advanced**.
- 3 Double-click **Advanced**, and then click **Cache** to display the Cache panel.
- 4 In the Cache panel, click **Every time**.
- 5 Click **OK**.

Microsoft Internet Explorer

To set up a Microsoft Internet Explorer browser to run a test case:

- 1 Start Internet Explorer.
- 2 Do one of the following:
 - For Internet Explorer 5.0 or later, click **Tools > Internet Options**.
 - For Internet Explorer 4.0, click **View > Internet Options**.
- 3 Click the **General** tab.
- 4 Under **Temporary Internet files**, click **Settings**.
- 5 Under **Check for newer versions of stored pages**, click **Every visit to the page**.
- 6 Click **OK**. Click **OK** again.

Troubleshooting

This section lists some problems you may experience when running a test case from a Web browser, a description of each problem, and how to correct each problem.

Note: The error message in this troubleshooting section are ManualTest Web Execution error messages, not Web browser error messages.

Problem – Your Rational projects do not appear when you log into a Rational project. (You type `http://machinename/alias` and log into a Rational project.)

Error message – None.

Solution – All web clients use the same user account to access a Rational project either on a Web server (if the project is on the Web server), or on the domain (to access shared projects on other systems in the domain).

There are two things to check:

- Check to make sure that this user account has privileges to read and write into a Rational project. (Ask your administrator to check the privileges of the user account that they set up on the Web server.)
- To allow Web clients access, you must also log into this account when you create a new Rational project or register an existing Rational project using the Rational Administrator.

Problem – You cannot connect from a Web browser to a Web server running the Microsoft Personal Web Server (PWS).

Error message – None.

Solution – If you restart a Web server running PWS, PWS may not start automatically when the server restarts. This is an intermittent problem. To fix the problem, restart PWS.

To restart PWS:

- 1 Click **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Personal Web Server > Personal Web Manager**.
- 2 Under **Publishing**, click **Start**.
- 3 Click **Properties > Exit**.

Problem – When you log into a project from a Web browser, you get this error message.

Error message – Unable to connect to project.

Solution – Make sure the Web server privileges are set correctly. For information about setting privileges, see *Configuring a Microsoft Internet Information Server* on page 47 or *Configuring a Microsoft Personal Web Server* on page 49.

Problem – You get an error message when you select a manual test script.

Error message – Error message that includes `Server.ObjectCreate` in the message.

Solution – Make sure that you or the Web server administrator installs Microsoft Internet Explorer 5.0 or later on the Web server.

Problem – When you type text in a dialog box and submit it, you get erratic behavior. Alternatively, when you open a manual test script, results and comments are already filled in from the last session.

Error message – None.

Solution – Disable caching on your Web browser. For information about disabling caching, see *Setting Up a Web Browser* on page 51.

Problem – After you connect to the Web server, a Login dialog box appears. In the Login dialog box, the project select list is empty.

Error message – None.

Solution – Create a project and create manual test scripts, or register an existing project that contains manual test scripts.

To create a project or register an existing project:

- 1 Do one of the following:
 - For IIS, log into the user account of the virtual directory that you configured to run a test case. For information, see *Configuring a Microsoft Internet Information Server* on page 47.
 - For PWS, log into the user account that the Web server runs under. For information, see *Configuring a Microsoft Personal Web Server* on page 49.
- 2 Start the Rational Administrator and create a new project, or register an existing project. For information about creating or registering a project, see the *Using the Rational Administrator* manual or the Rational Administrator online Help.
- 3 If you create or register a shared project, make sure that the privileges for the project directory are set for the virtual directory user account for IIS, or for the user account that the Web server runs under for PWS.
- 4 Restart the Web server.

Troubleshooting Your Web Server

If you have problems with your Web server, check to make sure that your Web server meets the software requirements. For information, see *Software Requirements* on page 44.

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