

Rational® Testing Products

INSTALLATION GUIDE

VERSION: 2002.05.00

PART NUMBER: 800-025130-000

WINDOWS

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Contents

Preface	vii
Audience	vii
Other Resources	vii
Contacting Rational Technical Publications	vii
Contacting Rational Technical Support	viii
1 Before You Begin	1
About Rational TestManager	1
About Rational Robot	1
About Rational TeamTest	2
About Rational Test Datastores	2
About Rational ClearQuest Databases	3
About Licensing	4
Hardware and Software Requirements	4
Before You Install Rational Testing Products	7
Installing Client Software for Performance Testing	7
Oracle Client Software	7
Sybase Client Software	8
SQL Server Client Software	8
TUXEDO Protocol Software	8
SAP Protocol Software	8
DCOM/COM+ Protocol Software	8
WebLogic/EJB Protocol Software	9
2 Installing Rational Testing Products	11
Installation Types	11
Installing Rational Robot, Team Test, and TestManager	12
When to Install Shared Files Yourself	14
Setting Up Silent Installations	15
Removing Your Software	15
Troubleshooting Your Installation	15

- 3 Upgrading from Previous Releases 17**
 - General Information About Upgrading 17
 - Upgrading from Recent Rational Test Releases 18
 - Upgrading Test Datastores 19
 - Upgrading from Older Rational Test Releases. 20
- 4 Installing Additional Software 21**
 - Installing and Removing the Network Driver 21
 - Installing the Network Driver on Windows NT 21
 - Removing the Network Driver from Windows NT 22
 - Installing the Network Driver on Windows XP or Windows 2000 23
 - Removing the Network Driver from Windows XP or Windows 2000 23
 - Supported Playback Environments on Agent Computers 24
 - Installing Rational Test Agents. 26
 - Installing a Windows Agent. 26
 - Starting a Windows Agent. 27
 - Installing a UNIX Agent 28
 - Removing a UNIX Agent. 30
 - Installing Rational Robot for Distributed Testing 30
 - Setting Up SQL Anywhere 30
 - Installing the SQL Anywhere Database Server Software 31
 - Defining User Privileges on Windows NT. 32
 - Defining User Privileges on Windows 2000 33
 - Creating a SQL Anywhere Database Server 33
 - Creating a SQL Anywhere Test Datastore 35
 - Converting a Test Datastore from Microsoft Access to SQL Anywhere 36
 - Managing a SQL Anywhere Database Server 37
 - Installing the Rational Test Enablers 37
 - Installing the Sample Applets. 39
 - Installing Crystal Reports. 39

Installing Rational ManualTest Web Execution	40
Software Requirements	41
About Shared Projects	41
Installing a Web Server	42
Configuring a Microsoft Internet Information Server	45
Configuring a Microsoft Personal Web Server	47
Setting Up a Web Browser (Optional)	49
Troubleshooting	49
Troubleshooting Your Web Server	51
Index	53

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 XP, Windows 2000, and Windows 98 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 Test Datastores* on page 2
- *About Rational ClearQuest Databases* on page 3
- *About Licensing* on page 4
- *Hardware and Software Requirements* on page 4
- *Before You Install Rational Testing Products* on page 7
- *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 26.

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 and performance tests for your Windows applications. For information, see the *Rational Robot User's Guide*.

- Rational® Administrator – Use to manage a Rational project. For information, see the *Rational Suite Administrator's Guide*.
- 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 *Rational TestManager User's Guide* 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. Robot installs ClearQuest, which includes specially designed defect forms.

About Rational Test Datastores

A Rational test datastore stores functional and performance testing assets and artifacts such as suites, test plans, test cases, reports, test logs, and scripts, as well as information about users, groups, and computers. When you create a new test datastore from the Administrator, you have the option of using two types of database engines: Microsoft Access or Sybase SQL Anywhere.

Microsoft Access - Microsoft Access is the default database engine for a test datastore. It is installed automatically when you install your Rational software. We recommend using Microsoft Access when no or very limited concurrent access to the test datastore is necessary. Microsoft Access is relatively low maintenance, but is better suited to single-user access.

Sybase SQL Anywhere - We recommend using this type of database engine when two or more concurrent users are going to be accessing a test datastore simultaneously. Data access for a SQL Anywhere database server is faster than for a comparably sized Microsoft Access database. However, a SQL Anywhere database does require more maintenance than a Microsoft Access database. The Sybase SQL Anywhere database server comes with your Rational software but does not install automatically. For information about setting up SQL Anywhere, please see *Setting Up SQL Anywhere* on page 30.

About Rational ClearQuest Databases

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

- 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 *Rational Suite Installation Guide*.
- 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	Use a Microsoft Access database. This is the default database and installs automatically when you install Rational software. Note: Rational ClearQuest Web does not support Microsoft Access databases. 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.
Eight or more concurrent users who will access the database over a wide-area network	Use the Sybase SQL Anywhere Database Server software that comes on Disc 2 of the <i>Rational Solutions for Windows CDs</i> . We recommend using a Window NT Server for your database server because a Windows NT Workstation allows only ten network connections.
Eight or more concurrent users and you want to use Microsoft SQL Server for your database	Use Microsoft SQLServer to create an empty database foundation to use with ClearQuest. For information about using Microsoft SQL Server for ClearQuest, see the <i>Rational ClearQuest Installation Guide</i> , available on the <i>Rational Solutions for Windows Online Documentation CD</i> .

If You Have	Then
Eight or more concurrent users and you want to use Oracle software	Use Oracle to create an empty database foundation to use with ClearQuest. For information about using Oracle for ClearQuest, see the <i>Rational ClearQuest Installation Guide</i> , available on the <i>Rational Solutions for Windows Online Documentation CD</i> .

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 *Rational Software License Administrator's Guide* 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	Pentium class or equivalent, 200 MHz minimum (Pentium II 300 MHz or better recommended) CD ROM 800 MB free disk space (minimum installation) 128 MB RAM is the recommended minimum; more memory generally improves responsiveness. Video Resolution 1024x768 Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows XP, Windows 2000, or Windows 98 2nd edition

Rational Component	Minimum Requirements
Rational Robot	<p>Pentium class or equivalent, 200 MHz minimum (Pentium II 300 MHz or better recommended)</p> <p>CD ROM</p> <p>800 MB free disk space (minimum installation)</p> <p>128 MB RAM is the recommended minimum; more memory generally improves responsiveness.</p> <p>Video Resolution 1024x768</p> <p>Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows XP, Windows 2000, and Windows 98 2nd edition</p> <p>If you are developing or running test scripts written in the Visual Basic language, VB 6 on Windows 2000 or Windows NT is required.</p> <p>If you are developing or running Java test scripts, the JDK (IBM version 1.1.7B or Sun Microsystems versions 1.2.2 or 1.3.0) is required.</p> <p>If you are developing BEA WebLogic EJB scripts, you must have BEA WebLogic Server 6.0 installed on the same machine. For running, you need WebLogic 6.0 client software installed.</p>
Rational TestManager	<p>Pentium class or equivalent, 200 MHz minimum (Pentium II 300 MHz or better recommended)</p> <p>CD ROM</p> <p>800 MB free disk space (minimum installation)</p> <p>128 MB RAM is the recommended minimum; more memory generally improves responsiveness.</p> <p>1-3 MB RAM per virtual tester</p> <p>1-3 MB disk space per virtual tester</p> <p>Video Resolution 1024x768</p> <p>Microsoft Windows Millennium, Windows NT 4.0 (Service Pack 5 or 6a), Windows XP, Windows 2000, and Windows 98 2nd edition</p> <p>If you are running test scripts written in the Visual Basic language, VB 6 on Windows 2000 or Windows NT is required.</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) is required.</p> <p>If you are running BEA WebLogic EJB scripts, you need BEA WebLogic Server 6.0 client software installed.</p>

Rational Component	Minimum Requirements
Rational Test Agent software – Windows Systems	<p>Pentium class or equivalent (500 MHz or better recommended).</p> <p>128 MB memory.</p> <p>425 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 XP, Windows 2000, or Windows 98 2nd edition.</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 test scripts written in the Visual Basic language, VB 6 Service Pack 3 and Windows 2000, or VB 6 Service Pack 3 and Windows NT is required.</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) is required.</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, 2.7, or 2.8</p> <p>Red Hat 6 and 7 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) is required.</p> <p>If you are running BEA WebLogic EJB scripts, you need BEA WebLogic Server 6.0 client software installed.</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	<p>80 MB free disk space (minimum installation)</p>

Before You Install Rational Testing Products

Before you install Rational testing products, you must 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 do 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 3.
- 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 26.
- 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 need to know this when you install the Rational Test network driver. For information, see *Installing and Removing the Network Driver* on page 21.

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.

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, that is, the Windows 2000 Server or the Windows NT 4 Server.

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.

Note: Datastores created on the client can be stored on separate Servers that have Windows NT 4 or Windows 2000 operating systems with SQL software.

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 **before** you install any Rational testing products.

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/COM+ Protocol Software

Before you play back test scripts that use the DCOM/COM+ 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.

WebLogic/EJB Protocol Software

To generate test scripts that test a WebLogic/EJB server, you must install WebLogic on the appropriate Local computer.

To play back test scripts that test a WebLogic/EJB server, you must install WebLogic on the appropriate Local or Agent computer.

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

- *Installation Types* on page 11
- *Installing Rational Robot, Team Test, and TestManager* on page 12
- *Setting Up Silent Installations* on page 15
- *Removing Your Software* on page 15
- *Troubleshooting Your Installation* on page 15

Note: Please see the *Rational Suite Installation Guide* 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	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	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.

Type	Description
Network	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, Rational TeamTest, and TestManager.

- 1 Log on 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
where *drive* is the CD-ROM drive.
 - c Click **OK**.
- 3 At the Rational Software Setup screen, click **Next**.
 - 4 At the Choose Product screen, select one of the following from the list of available products:
 - Rational Robot
 - Rational TeamTest
 - Rational TestManager

Note: To install a Rational Test Agent, see *Installing Rational Test Agents* on page 26.

A green check mark next to a Rational product indicates you have a license key configured for that product. If you do not see a green check mark next to the product you want to install, you may want to install license keys before you install the product.

To configure a license key, click the **Configure Licenses** button to launch the Rational License Key Administrator (LKAD) and the License Key Administrator Wizard.

If you do not install the license keys before you install the product, the LKAD appears at the end of the installation.

For more information about software licenses, click **Help** or see the *Rational Software License Administrator's Guide*.

5 Click **Next**.

If you did not install the license keys before you installed the product, the Setup program displays a message. Select **OK** to install without licensing configured. Select **Cancel** to go back and configure licensing.

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

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

7 Select the setup configuration you prefer and click **Next**.

- **Typical** – Installs the most commonly used features for this product.
- **Custom** – Lets you specify which products or features to install.
- **Compact** – Installs the smallest subset of features needed to run this product.
- **Network** – 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.

8 For each additional, older product listed, we recommend that you either:

- **Upgrade it** – Complete this installation, and 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 15 for the removal procedure.

9 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.

- 10** At the Rational Confirmation screen, view the selections that you have made and, if they are correct, click **Next**.

When Setup prompts you to insert Disk-02 in the CD-ROM drive, insert the disk and click **OK**.

When Setup prompts you to insert Disk-01 in the CD-ROM drive, insert the disk and click **OK**.

The Error Summary dialog box displays errors from the first part of the software installation. If the installation is successful, this dialog box does not appear.

- 11** Click **Finish** when done.

- 12** You must shut down and restart your computer to finish the installation. Log on 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 *Rational Software License Administrator's Guide* 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. Alternatively, 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.

Setting Up Silent Installations

A silent installation lets you perform an installation of a Rational Software product, using the same parameters, repeatedly on a number of systems. Silent installations save system administrators time and also control which products the users can use. Refer to *Rational Suite Installation Guide* for more information.

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 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.

Upgrading from Previous Releases

3

This chapter is organized as follows:

- *General Information About Upgrading* on page 17
- *Upgrading from Recent Rational Test Releases* on page 18
- *Upgrading from Older Rational Test Releases* on page 20

General Information About 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.

If you have integrations with products such as ClearQuest, RequisitePro®, etc., use ClearQuest Designer to upgrade these first. Once you have upgraded the packages, upgrade the test datastores as described on page 19.

Upgrading from Recent Rational Test Releases

Use the following procedure if you are upgrading to 2002.05 from Rational Test Releases 2001A.04 or 2001.03. If you are upgrading from Release 2000.02.10 or earlier, refer to *Upgrading from Older Rational Test Releases* on page 20:

1 Install Rational Test 2002.05. For details, see *Installing Rational Robot, Team Test, and TestManager* on page 12.

2 Upgrade your TestStudio®.

- Start the ClearQuest Designer:

Click **Start > Programs > Rational Suite TestStudio > Rational ClearQuest RationalClearQuest Designer**.

- If the Open Schema Wizard appears, click **Cancel**.
- From the Designer menu, click **Package > Upgrade Installed Packages** to display the Upgrade Installed Packages wizard.
- On the **Select a schema to upgrade** page, the wizard lists the available schema repositories. Select the schema you want to upgrade.

The Upgrade Installed Packages wizard checks out the schema, analyzes which packages need upgrading, and determines whether any prerequisites to those packages are required.

- On the **Status** page, note the list of packages that need upgrading and click **Upgrade**.
- After the package upgrades successfully, click **Exit** to close the Wizard.

3 Apply schema changes to the ClearQuest database:

- Start the ClearQuest Designer if it is not already open:

Click **Start, > Programs > Rational Suite TestStudio > Rational ClearQuest > Rational ClearQuest Designer**.

- If the Open Schema Wizard appears, click **Cancel**.
- From the Designer menu, select **Database > Upgrade Database**.

A message warns you that this action cannot be reversed, recommends that you back up your databases before proceeding, and asks you if you want to continue. If you have backed up your databases, click **Yes**.

- Select the user database from the list in the Upgrade Database Wizard. Click **Next**.

- On the next page, select the schema master database version from the list. If your most recent version does not appear in this list, it probably is not checked in. In that case, click **Cancel** to quit this wizard. On the Designer menu, click **File > Open Schema**, and check in the schema. You can now restart this process
- Click **Finish**.

When the upgrade completes, a message appears saying that the database has been upgraded successfully.

If you created datastores in previous Rational Test releases, refer to the next section, *Upgrading Test Datastores*, to make them compatible with Release 2002.05.

For detailed procedures about upgrading ClearQuest packages and the database, see the section on “Updating ClearQuest” in the *Rational Suite Installation Guide*. 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 *Rational Suite Installation Guide* to successfully perform the upgrade. The *Rational Suite Installation Guide* is available on the Online Documentation CD.

Upgrading Test Datastores

Datastores created in Rational Test Releases 2001A.04 or 2001.03 are not compatible with the latest version, 2002.05. Before TestManager or Robot Versions 2002.05 can connect to and operate against the test assets contained in the datastores, you must first use Administrator to upgrade them as follows:

- 1 Start the Administrator: click **Start > Programs > Rational Suite > Rational Administrator**.
- 2 In the left pane of the Administrator, select a project, right-click it, and select **Connect**.
- 3 In the Administrator, select **File > Upgrade Project Assets**.

The Administrator displays a dialog box listing all registered assets.

- 4 Select the .RSP file to upgrade the datastores associated with the project and click **OK**.

The program displays a progress dialog. When the process is complete, you can view the log generated during the upgrade.

Once upgraded, the datastore cannot be used with earlier versions of TestManager or Robot.

Refer to *Rational Suite Administrator's Guide* for more information on creating and upgrading datastores.

Refer to *Rational TestManager User's Guide* for more information on new features associated with the upgrade.

Upgrading from Older Rational Test Releases

If you are upgrading to 2002.05 from Rational Test Releases 2000.02.10 and earlier, refer to Chapter 6, "Upgrading from Earlier Versions of Rational Suite" in the *Rational Suite Installation Guide*. This manual is available on the Rational Solutions for Windows Documentation CD and is also available for Web download at www.rational.com.

This chapter is organized as follows:

- *Installing and Removing the Network Driver* on page 21
- *Supported Playback Environments on Agent Computers* on page 24
- *Installing Rational Test Agents* on page 26
- *Installing Rational Robot for Distributed Testing* on page 30
- *Setting Up SQL Anywhere* on page 30
- *Installing the Rational Test Enablers* on page 37
- *Installing the Sample Applets* on page 39
- *Installing Crystal Reports* on page 39
- *Installing Rational ManualTest Web Execution* on page 40

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 XP, 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** and 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 XP or Windows 2000

To install the Rational Test network driver on Windows XP or 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 XP or Windows 2000

To remove the network driver from a Windows 2000 or a Windows XP computer:

- 1 Click **Start > Settings > Network and Dialup Connections**.
- 2 Right-click **Local Area Connection**, and select **Properties** from the shortcut menu.
- 3 Select **Rational Test 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 testing 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 4 Agent Platforms for Performance Testing

	<i>Win NT Win XP Win 2000</i>	<i>Win ME Win 98, 2nd ed.</i>	<i>Sun OS 2.6 Solaris 7 Solaris 8</i>	<i>HP-UX 11 AIX 4.3</i>	<i>DYNIX/ptx</i>	<i>Red Hat Linux 6 & 7</i>
HTTP & HTTP/ SSL	Yes	No	Yes	Yes	No	Yes
Oracle	Yes	No	Yes	Yes	Yes	Yes
Sybase	Yes	No	Yes	Yes	No	No
Tuxedo & Jolt	Yes	No	Yes	Yes	Yes	Yes
SQL Server	Yes	No	Yes, except extended stored procedures	Yes, except extended stored procedures	No	No
ODBC*	Yes	No	No	No	No	No
SAP VU	Yes	No	No	No	No	No

Table 4 Agent Platforms for Performance Testing (continued)

	<i>Win NT Win XP Win 2000</i>	<i>Win ME Win 98, 2nd ed.</i>	<i>Sun OS 2.6 Solaris 7 Solaris 8</i>	<i>HP-UX 11 AIX 4.3</i>	<i>DYNIX/ptx</i>	<i>Red Hat Linux 6 & 7</i>
DCOM/ COM+	Yes	No	No	No	No	No
CORBA (Visibroker 3.x only)	Yes	No	Yes	No	No	No
WebLogic /EJB	Yes	Yes	No	No	No	Yes
JAVA	Yes	Yes	Yes	No	No	Yes

* Including ODBC for SQL Server 7 and 2000.

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

Table 5 Playback Environments for GUI Testing

	<i>Win NT Win XP Win 2000</i>	<i>Win 98, 2nd ed.</i>	<i>Solaris</i>	<i>HP-UX AIX</i>	<i>DYNIX/ptx</i>	<i>Linux</i>
SQA Basic	Yes	Yes	No	No	No	No

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:

- Add workload to the server, if you are running a performance test.
- Run test scripts on more than one computer. If you are running a functional test, you can save time by running the test scripts on the next available Agent computer instead of running them all on the local computer. Of course, your test scripts must be modular.
- Test configurations. If you are testing various hardware and software configurations, you can run test scripts on specific Agent computers that are set up with these configurations.

Note: The same version of Rational testing software must be installed on the Local and Agent computers; otherwise, they donot work together.

Note: When projects containing GUI or Manual scripts are to be shared, create the project in a shared directory using the Uniform Naming Convention (UNC). UNC paths are required for GUI test scripts and Manual test scripts that are run on Agent computers. For more information about creating a shared directory, see the *Rational Suite Administrator's Guide* or the Rational Administrator Help.

Installing a Windows Agent

To install Agent software on a Windows computer:

- 1 Log on 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` and click **OK**, where *drive* is the CD drive you are using.
- 3 In the Rational Software Setup screen, click **Next**.
- 4 Select Rational Test Agent from the list of available products and click **Next**.

- 5 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.
- 6 Select the setup configuration you prefer, and then click **Next**.

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

 - **Typical** – Installs the most commonly used features for this product.
 - **Custom** – Lets you specify which products or features to install.
 - **Compact** – Installs the minimal software needed to run this product.
- 7 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.
- 8 In the last dialog box, click **Finish**.

You must restart your computer to finish the installation.
- 9 Log on 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 on as root.
- 2 Create the installation directory:

```
# mkdir -p /usr/rational/test
```
- 3 Insert the Rational Test Agent Disc 1 CD into your CD drive.
- 4 If the CD does not automount, 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/cdrom01/solaris_agent
```

For an Agent on an HP-UX operating system:

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

For an Agent on an AIX operating system:

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

For an Agent on a Red Hat 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 -pdm /usr/rational/test
```

6 Set the RATL_RTHOME and PATH environment variables:

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

7 Change your directory to the directory that contains the installation script.

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

8 Run the installation script.

```
# sh agent_install
```

9 Start the UNIX Agent.

```
# sh RTsagt
```

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 the process:

```
kill pid
```

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

Installing Rational Robot for Distributed Testing

To record GUI test scripts on multiple computers, you must 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 *Rational Software License Administrator's Guide* or the Rational License Key Administrator Help.

To install Robot, follow the Rational Setup. For information, see *Installing Rational Robot, Team Test, and TestManager* on page 12.

Setting Up SQL Anywhere

To create a SQL Anywhere database server, the following tasks need to be completed:

- Install the Sybase SQL Anywhere Server software.

Note: SQL Anywhere is available on the Rational Solutions CD and can be installed using the Rational Software Setup wizard.

Note: We recommend using a dedicated machine for optimal performance. All clients should have network access to this computer.

- Choose or create a user account to run the SQL Anywhere database server and set user privileges for that account. See *Defining User Privileges on Windows NT* on page 32 or *Defining User Privileges on Windows 2000* on page 33.
- Create a SQL Anywhere database server. (See procedure on page 33.)

Note: We recommend that you run the SQL Anywhere Server process on the same file server the datastore resides on.

Installing the SQL Anywhere Database Server Software

When you install the SQL Anywhere database server software, the Rational Administrator and other Rational components that you need to manage Rational projects and test datastores in a networked, client/server environment are also installed. However, we strongly suggest that you install the server software along with a full install of the Rational product that you purchased. The SQL Anywhere database server software provides tools, samples, and related library files for your SQL Anywhere database server.

Installing the SQL Anywhere database server software does not require a separate license.

Note: You must install the SQL Anywhere database server software on a network server running Microsoft Windows NT or Microsoft Windows 2000 Server or Workstation. No additional licenses are required.

To begin the installation:

- 1 Turn on the computer to start Windows.
- 2 Log on using an account with Administrator privileges.
- 3 Quit any applications before installing the software.
- 4 Insert the Rational Solutions CD into your CD drive. The installation program should start automatically. If the installation program does not start automatically:
 - a Click **Start > Run**.
 - b Type *drive:\SETUP.EXE* and click **OK**.
- 5 At the Rational Software Setup screen, click **Next**.
- 6 At the Choose Software screen, select **Sybase SQL Anywhere Database Server 5.5.05** and click **Next**.
- 7 At the License Agreement screen, read the terms of the license agreement carefully, click **Yes, I accept the agreement**, and click **Next**.

If you do not accept the agreement, the Setup program ends.
- 8 To complete the install, accept the defaults on the next several screens by clicking **Next**.

Defining User Privileges on Windows NT

To define privileges for a user account running a SQL Anywhere database server:

- 1 Make sure you have installed the Sybase SQL Anywhere Server software.
- 2 Do one of the following:
 - a If your Windows NT computer is running Windows NT Workstation software, click **Start > Programs > Administrative Tools (Common) > User Manager**.
 - b If your Windows NT computer is running Windows NT Server software:
 - i Click **Start > Programs > Administrative Tools (Common) > User Manager for Domains**.
 - ii Click **User > Select Domain** and type the local machine name in the **Domain** box, and then click **OK**.
Note: If the user does not already exist, create the user (**User > New User**).
- 3 Click **Policies > User Rights** to open the User Rights Policy dialog box.
- 4 Select **Show Advanced User Rights**.
- 5 In the **Right** list box of the User Rights Policy dialog box, select **Access this computer from network**.
- 6 Click **Add**.
- 7 In **List Names From**, select the domain of the account running the SQL Anywhere database server.
- 8 Click **Show Users**.
- 9 In the **Names** list, select the account running the SQL Anywhere database server.
- 10 Click **Add**, and click **OK**.
- 11 In the **Right** list box of the User Rights Policy dialog box, select **Log on as a service**.
- 12 Repeat Steps 7 through 10.
- 13 In the **Right** list box of the User Rights Policy dialog box, select **Log on locally**.
- 14 Repeat Steps 7 through 10.
- 15 Click **OK**.
- 16 Click **User > Exit**.

Defining User Privileges on Windows 2000

To define privileges for a user account running a SQL Anywhere database server:

- 1 Make sure you have installed the Sybase SQL Anywhere Server software.
- 2 Do one of the following:
 - a If you are running on a Windows 2000 Server, click **Start > Programs > Administrative Tools > Local Security Policy**.
 - b If you are running Windows 2000 Professional:
 - i Click **Start > Settings > Control Panel**.
 - ii Select **Administrative Tools**.
 - iii Select **Local Security Policy**.
- 3 Select **Local Policies>User Rights Assignments**.
- 4 In the right pane of the Local Security Settings dialog box, double-click **Log on as a service** and click **Add**.
- 5 In the **Look In** field of the Select Users or Groups dialog box, select the domain of the account running the SQL Anywhere domain server.
- 6 In the **Name** list, select the account running the SQL Anywhere database server and click **Add**.
- 7 Click **OK** twice to return to the Local Security Settings dialog box.
- 8 Close the Local Security Settings dialog box.

Creating a SQL Anywhere Database Server

A SQL Anywhere database server is a process that runs on the database server machine. Its function is to coordinate all activity against your SQL Anywhere databases. You can create one SQL Anywhere server to provide access to all of your database files, including all of the ones in your test datastore(s).

To create a SQL Anywhere database server:

- 1 From the **Start** menu, click **Rational Administrator**.
- 2 Click **Tools > Sybase Central**.
- 3 In the left pane, click **Services** under **Sybase SQL Anywhere**.
- 4 In the right pane, double-click **Add Service** to launch the Create New Service wizard.
- 5 Click **Next**.

- 6 In the Choose Service Type dialog box, select **Network Server** and click **Next**.
- 7 In the Choose Name and Startup dialog, enter the name of the service, select the manner in which the service will be started (we recommend **Automatic**), and click **Next**.

Note: Do not use spaces or nonalphanumeric characters in the server name. (Underscores are acceptable.)

The Choose Path Name dialog displays the default path for the executable file for the new service. This is the path to the SQL Anywhere database server executable (DBSRV50.EXE) that exists in the SQLANY50\WIN32 subdirectory within the Rational install directory. This should be set by default.

Note: A Windows 2000 defect causes the path to display incorrectly on the Choose Path Name dialog. In that case, click **Browse** to locate the DBSRV50.EXE.

- 8 Click **Next**.
- 9 In the Specify Parameters dialog use the -n flag and enter the database server name; for example:

-n MyDBServer

The database server name is the only required parameter for Rational tools. The name you enter here is required when creating a ClearQuest database or Rational Test datastore.

- 10 Click **Next**.
- 11 In the Choose Account dialog, click **Other**, select **Administrator**, enter a password, enter the same password again to confirm, and click **Next**.

Note: The account you specify must have Log on as a Service privilege. If the account does not have this privilege, Sybase displays a message to that affect. Click **Yes** to grant the privilege when the service is installed.
- 12 In the Choose Options dialog, we recommend that you select **Start service when created** and click **Next**.
- 13 The Ready to Create New Service dialog displays the settings you have selected. Confirm that the settings are correct and click **Finish**.

Creating a SQL Anywhere Test Datastore

Note: You must install the Sybase SQL Anywhere software and create a SQL Anywhere database server before you create a SQL Anywhere test datastore.

To create a SQL Anywhere test datastore:

- 1 Click **Start > Programs > Rational Product > Rational Administrator**.
- 2 In the left pane, right-click a project to configure and select **Configure Project**.
- 3 Under **Test Assets**, click **Create**.
- 4 Type the path of the new test datastore or click **Browse** to select a path. If you are going to use SQL Anywhere as the database engine, specify a path to a directory on the computer that is running the SQL Anywhere database server.
- 5 Optionally, choose the initialization options you want:
 - To initialize the test assets from an existing test datastore, select **Initialize Assets from the following Test Datastore**. Type the path of the existing test datastore, or click **Browse** to select a path.

Note: It does not matter what database type the source datastore uses.
 - To initialize the test users and groups in the new test datastore from an existing Rational project, select **Initialize Test Users and Groups from the Rational Project**. Enter or browse to the path of the existing Rational project.
- 6 Click **Advanced Database Setup** in the Create Test Datastore dialog.
- 7 In the Advanced Database Setup dialog:
 - a Click the Use Sybase SQL Anywhere for database engine button.
 - b Specify the name of the SQL Anywhere database server. This should be the same name you specified when creating the SQL Anywhere database server in Step 7 in *Creating a SQL Anywhere Database Server* on page 34.
 - c Select the protocols that the client computers running Rational Test will use to communicate with the SQL Anywhere database server. You may need to confer with your IT department or appropriate network specialist.
 - d Optionally, specify a comma-separated list of computer names or computer IP Addresses — running SQL Anywhere database servers — that can be quickly searched. This is particularly important when the computer(s) running the SQL Anywhere servers is not in the immediate network segment (or subnetwork).
- 8 Click **OK** to return to the Create Test Datastore dialog.
- 9 Click **OK** to finish creating the test datastore.

Converting a Test Datastore from Microsoft Access to SQL Anywhere

You use the Test Datastore Properties dialog to convert an existing Microsoft Access test datastore to SQL Anywhere test datastore.

Important: You cannot change a SQL Anywhere test datastore to a Microsoft Access test datastore.

Note: You must install the Sybase SQL Anywhere software and create a SQL Anywhere database server before you change an existing Microsoft Access test datastore to a SQL Anywhere test datastore.

Note: We recommend backing up your test datastore before starting the conversion.

Note: All test datastore users must log off of a Rational project before you change the database engine of a Rational Test datastore.

Note: When you change from a Microsoft Access test datastore to a SQL Anywhere test datastore, the Crystal Reports dictionaries are replaced. All modifications out of the box to the Crystal Reports dictionaries are lost.

To convert an existing Microsoft Access test datastore to a SQL Anywhere test datastore:

- 1 Select the project to which you want to connect. Click **File > Connect**.
- 2 Select a Test datastore in the project hierarchy of the left (project) pane.
- 3 Click **Edit > Properties**.
- 4 Click **Advanced Database Setup**.
- 5 In the Advanced Database Setup dialog:
 - a Click **Use Sybase SQL Anywhere for database engine**.
 - b Specify the name of the SQL Anywhere database server. This should be the same name you specified when creating the SQL Anywhere database server in Step 7 in *Creating a SQL Anywhere Database Server* on page 34.
 - c Select the protocols that the client computers running Rational Test will use to communicate with the SQL Anywhere database server. You may need to confer with your IT department or appropriate network specialist.
 - d Optionally, specify a comma-separated list of computer names or computer IP Addresses — running SQL Anywhere database servers — that can be quickly searched. This is especially important when the computer(s) running the SQL Anywhere servers is not in the immediate network segment (or subnetwork).

- 6 Click **OK** to convert the test datastore to SQL Anywhere. If the operation fails to complete successfully, the original configuration is reset, leaving Microsoft Access as the database engine in use.
- 7 Click **OK** to close the Test Datastore Properties dialog.

Managing a SQL Anywhere Database Server

See the Sybase online Help for more information about managing a SQL Anywhere Database Server.

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 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 nonintrusive 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).

Note: The Rational Test Enabler for Java is intended to work from a Custom or Typical installation only. The Rational Test Enabler for Java does not work if you do a network install of Rational Suite. Installation of the Java Enabler customizes your computer and updates files that were installed on your computer. When you do a minimal/network install, the files that need to be updated are on your CD as read-only files and cannot be updated.

- **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 *Rational Robot User's Guide*.

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 Select Rational Test Enablers and click **Finish**.

The Rational Test Enablers installation starts.

- 5 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
- 6 Follow the on-screen instructions to complete the installation.

Installing the Sample Applets

The Rational sample applets are included:

- **Small sample applets** – You can install sample applets for Java, HTML, Oracle Forms, PowerBuilder, and Visual basic development environments.

To install the sample applets:

- 1 Install Robot, Rational TeamTest, TestStudio, or EnterpriseStudio. For information about installing Robot and Rational TeamTest, see *Installing Rational Robot, Team Test, and TestManager* on page 12.

Note: You cannot install the Rational sample applets if your only installed Rational testing product is 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 *Rational TestManager User's Guide*.

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 need only 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 cannot 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 must install and configure a Web server with ManualTest Web Execution software and configure a Web browser on each client to access a Rational project. Use a Web browser to run a test case with a manual test script implementation, and type the *computername*, 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 42 and *Setting Up a Web Browser (Optional)* on page 49.

Software Requirements

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

For the Web server:

- Windows XP Professional, Windows 2000 Professional, Windows 2000 Server, Windows 2000 Advanced Server, Windows 98, 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 XP and Windows 2000	Microsoft Internet Information Services 5.0 (IIS 5.0) from the Windows CD
Windows 98 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 cannot use a shared or networked project with the Windows XP Professional, 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.

Note: UNC paths are required for GUI test scripts that are run on Agent computers.

(For more information about creating a shared directory, see the *Rational Suite Administrator's Guide* 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 on 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 At the Choose Product screen, select one of the following Rational testing products from the list of available products:
 - Rational Robot
 - Any Rational Suite product
 - Rational TeamTest
 - Rational TestManager

A green check mark next to a Rational product indicates you have a license key configured for that product. If you do not see a green check mark next to the product you want to install, you may want to install license keys before you install the product.

To configure a license key, click the **Configure Licenses** button to launch the Rational License Key Administrator (LKAD) and the License Key Administrator Wizard.

If you do not install the license keys before you install the product, the LKAD appears at the end of the installation.

For more information about software licenses, click **Help** or see the *Rational Software License Administrator's Guide*.

g Click **Next**.

If you did not install the license keys before you installed the product, the Setup program displays a message. Select **OK** to install without licensing configured. Select **Cancel** to go back and configure licensing.

h Read the terms of the license agreement carefully, select **Yes, I accept the agreement**, and click **Next**.

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

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

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

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

Expand **Web Server Components**.

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

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.

- If you do not want to create manual test scripts on the Web server machine using the manual test client and only want to set up a Web server to run scripts:

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

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

Expand **Web Server Components**.

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

j 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.

k 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 XP or Windows 2000, install the Microsoft Internet Information Services 5.0 from the Windows 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 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 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 and 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, or a Windows NT 4.0 Workstation, see *Configuring a Microsoft Personal Web Server* on page 47.
 - For a Web server running Windows NT 4.0 Server, Windows XP Professional, 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 XP, Windows 2000, or a Windows NT 4.0 Server:

- 1 Do one of the following:
 - For all Windows XP systems, click **Start > Control Panel**. Double-click **Administrative Tools**. Double-click **Internet Services Manager**.
 - For all Windows 2000 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 Do one of the following:
 - For all Windows XP systems, double-click *computername* where *computername* is the network name of the Web server and double-click **Web Sites**.
 - For all Windows 2000 and Windows NT 4.0 systems, double-click *computername* where *computername* 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 XP and Windows 2000, 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 XP and Windows2000, 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 XP and Windows 2000, 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.

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

- **Default.asp**
- **Default.htm**

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 XP and Windows 2000, 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).

Note: Windows XP does not support the assignment of the Administrator user as the access user of a web client.

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 onto this account when you create a new Rational project or register an existing Rational project using the 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 or Windows 98, you must run PWS under a domain user account.

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

- 1** For Windows 98 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 98, click **Start > Programs > Microsoft Personal Web Server > Personal Web Manager**.

- For 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 For Windows 98 or Windows NT 4.0 Workstation, under Access, click all of the following: **Read**, **Execute**, and **Scripts**.

9 Click **OK**.

10 Click **Properties > Exit**.

11 Complete the steps for either Windows 98 or Windows NT 4.0 Workstation.

If you have Windows 98 you are finished with the configuration. If you have a Windows NT 4.0 Workstation,

a Click **Start > Programs > Administrative Tools (Common) > User Manager**.

b Under the **User Name** column, select:

`IUSR_ computername`

where *computername* 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 (Optional)

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 messages 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 onto a Rational project. (You type `http://computername/alias` and log onto 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 onto this account when you create a new Rational project or register an existing Rational project using the 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 onto a project from a Web browser, you receive an 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 45 or *Configuring a Microsoft Personal Web Server* on page 47.

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 observe 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 (Optional)* on page 49.

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 onto 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 45.
 - For PWS, log onto the user account that the Web server runs under. For information, see *Configuring a Microsoft Personal Web Server* on page 47.
- 2 Start the Administrator and create a new project, or register an existing project. For information about creating or registering a project, see the *Rational Suite Administrator's Guide* 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, ensure that your Web server meets the software requirements. For information, see *Software Requirements* on page 41.

Index

A

- Access database 2
- Access test datastore
 - converting 35
- ActiveX Test Control
 - about 37
 - installing 38
- Agent computers
 - installing 26, 28
 - requirements 6
 - starting 27, 29, 30

B

- browsers
 - requirements for running manual test scripts on the Web 41
 - setting up Microsoft Internet Explorer 49
 - setting up Netscape Navigator 49

C

- Classics Online application
 - installing 39
- client software
 - DCOM 8
 - installing 7
 - Oracle 7
 - SAP 8
 - SQL Server 8
 - Sybase 8
 - TUXEDO 8
 - WebLogic/EJB Protocol Software 9
- compact installation 11
- configuring
 - Microsoft Internet Information Server 45
 - Microsoft Personal Web Server 47

- converting datastores 18
- converting, when to 17
- Crystal Reports
 - installing 39
 - requirements 6
- custom installation 11

D

- Database Server 30
- database types
 - Rational ClearQuest 3
- datastores
 - converting from earlier versions 18
- DCOM client software 8
- distributed testing 30

E

- errors in installation 15
- Ethernet network 7
 - installing driver 22
 - switching to Token Ring 22

F

- full installation 11

H

- hardware requirements
 - Agent computers 6
 - Rational ClearQuest Web 6
 - Rational Robot 5
 - Rational TeamTest 4
 - Rational TestManager 5

I

IIS. *See* Microsoft Internet Information Server

installation, types of 11

installing

ActiveX Test Control 38

Agent computers 26, 28

Classics Online application 39

client software 7

Crystal Reports 39

ManualTest Web Execution component 42

Microsoft Internet Information Server 42

Microsoft Personal Web Server 42

Oracle client software 7

Rational ActiveX Test Control 38

Rational Test Enablers 38

Rational Test Java Enabler 38

Rational Test Oracle Forms Enabler 38

Rational Test Visual Basic Enabler 38

SAP client software 8

SQL Server client software 8

Sybase client software 8

Test network driver 21

TUXEDO client software 8

Web servers 42

Windows NT Option Pack 4.0 42

installing a UNIX Agent 28

L

laptop installation 11

M

manual test scripts on the Web

troubleshooting 49

ManualTest Web Execution component

installing 42

Microsoft Access 2

Microsoft Access test datastores

converting 36

Microsoft Internet Explorer, setting up to run test

cases remotely 49

Microsoft Internet Information Server

configuring 45

installing 43

Microsoft Personal Web Server

configuring 47

installing 43

N

Netscape Navigator

setting up to run test cases remotely 49

Network 12

network drivers

installing 21

uninstalling 22

network installation 12

network recording

installing network drivers for 21

networks, switching 22

O

Oracle

client software 7

P

project assets

upgrading 18

projects, shared 41

PWS. *See* Microsoft Personal Web Server

R

Rational ActiveX Test Control

about 37

installing 38

Rational ClearQuest

about special version of 2

choosing type of database for 3

Rational ClearQuest Web 3

requirements 6

Rational LoadTest 7

- Rational Robot
 - about 1
 - installing 30
 - requirements 5
- Rational Suite PerformanceStudio 7
- Rational TeamTest
 - about 2
 - requirements 4
- Rational test datastores 2
- Rational Test Enablers, installing 38
- Rational Test Java Enabler
 - about 37
 - installing 38
- Rational Test network driver, installing 21
- Rational Test Oracle Forms Enabler
 - about 38
 - installing 38
- Rational Test Visual Basic Enabler
 - about 38
 - installing 38
- Rational testing products
 - before you install 7
 - client software 7
 - installing network drivers 21
 - installing Test Agents 26
 - starting agents 27
- Rational TestManager
 - about 1
 - requirements 5

S

- SAP client software 8
- shared files 14
- sharing projects 41
- silent installations 15
- software
 - installing client 7
 - Oracle clients 7
 - SAP clients 8
 - SQL Server clients 8
 - Sybase clients 8
 - TUXEDO clients 8

- software requirements
 - Agent computers 6
 - Crystal Reports 6
 - Rational ClearQuest Web 6
 - Rational Robot 5
 - Rational TeamTest 4
 - Rational TestManager 5
- software requirements for Web servers 41
- software, DCOM client 8
- SQA Suite 6.x
 - installing Rational Robot and 7
 - installing Rational TeamTest and 7
- SQL Anywhere
 - setting up 30
- SQL Anywhere database 2
- SQL Anywhere database server 30
 - creating 32, 33
 - defining user privileges 32
 - installing software 31
 - managing 36, 37
- SQL Anywhere test datastore 35
- SQL Anywhere test datastores
 - converting to 36
 - creating 35
- SQL Server client software 8
- starting
 - UNIX Agents 29, 30
 - Windows Agents 27
- Sybase 2
- Sybase client software 8
- Sybase SQL Anywhere 2
- Sybase SQL Anywhere database 2

T

- test cases
 - running remote 49
 - Web browsers for running remote 49
- test datastores
 - about 2
 - converting 35
 - creating 35
 - upgrading 19

- Token Ring network 7
 - installing driver 22
 - switching to Ethernet 22
- troubleshooting
 - installations 15
 - manual test scripts on the Web 49
 - Web servers 51
- TUXEDO client software 8
- typical installation 11

U

- UNC, using for directory names 41
- Uniform Naming Convention. *See* UNC
- uninstalling
 - network drivers 22
 - software 15
- UNIX Agents
 - installing 28
 - requirements 6

- starting 29, 30
- upgrading
 - when to 17
- user privileges
 - defining for an SQL Anywhere database 32

W

- Web browsers, setting up to run test cases
 - remotely 49
- Web servers
 - installing 42
 - troubleshooting 51
- WebLogic/EJB client software 9
- Windows Agents
 - installing 26
 - requirements 6
- Windows NT
 - defining SQL Anywhere database user
 - privileges 32