

Version 2003.06.13
Windows



Server Products Installation Guide

Version 2003.06.13
Windows



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Before using this information, be sure to read the general information under .“Notices,” on page 153

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About this book

This manual provides requirements and instructions for installing, configuring, and licensing IBM Rational products on servers for the first time. It is intended to help you plan and set up your IBM Rational environment.

- The procedures and requirements for installing and licensing IBM Rational desktop software are covered in the *IBM Rational® Software Desktop Products Installation Guide*.
- For information about upgrading an existing Rational Suite® installation, see the *IBM Rational Suite Upgrade Guide*.

Table 1 informs you whether the product has a client component or a server component or both. If the product includes both, see the *IBM Rational Software Server Products Installation Guide* and the *IBM Rational Software Desktop Products Installation Guide*. You can download IBM® documentation in HTML or PDF from the IBM Publications Center. Go to by going to <http://www.ibm.com/> and typing in "IBM Publications Center" in the Search engine

Table 1. Installation guide reference

Product	Client/Server	Installation Guide
IBM Rational Suite	Both	<i>IBM Rational Software Server Products</i> <i>IBM Rational Software Desktop Products</i>
ClearCase® LT (includes ClearCase Web)	Both	<i>IBM Rational Software Server Products</i> <i>IBM Rational Software Desktop Products</i>
ClearQuest®	Both	<i>IBM Rational Software Server Products</i> <i>IBM Rational Software Desktop Products</i>
ClearQuest MultiSite	Server	<i>IBM Rational Software Server Products</i>
IBM Rational ManualTest Web Execution	Both	<i>IBM Rational Software Server Products</i> <i>IBM Rational Software Desktop Products</i>
Rational Process Workbench®	Desktop	<i>IBM Rational Software Desktop Products</i>
Rational ProjectConsole(tm)	Both	<i>IBM Rational Software Server Products</i> <i>IBM Rational Software Desktop Products</i>
Purify®, PurifyPlus(tm), PureCoverage®, and Quantify®	Desktop	See the <i>IBM Rational PurifyPlus Family Release Notes</i> for the most current requirements and supported software.
QualityArchitect	Desktop	<i>IBM Rational Software Desktop Products</i>
RequisitePro® (includes RequisiteWeb)	Both	<i>IBM Rational Software Server Products</i> <i>IBM Rational Software Desktop Products</i>
Robot	Desktop	<i>IBM Rational Software Desktop Products</i>
Rose	Desktop	<i>IBM Rational Software Desktop Products</i>

Table 1. Installation guide reference (continued)

Product	Client/Server	Installation Guide
Rose Data Modeler	Desktop	Rose Data Modeler produces models for several database vendors. The vendor databases are listed in the <i>IBM Rational Software Desktop Products Installation Guide</i> . There are no special configuration instructions in either installation guide for Rose Data Modeler. To install and configure the databases, see the vendor documenting.
Rose RealTime	Desktop	IBM Rational Rose® RealTime has its own installation guide.
TeamTest	Both	<i>IBM Rational Software Server Products</i> (to configure Test datastore) <i>IBM Rational Software Desktop Products</i>
Test Agents (UNIX/Windows)	Desktop	<i>IBM Rational Software Desktop Products</i>
Test Enablers	Desktop	<i>IBM Rational Software Desktop Products</i>
Test Manager	Both	<i>IBM Rational Software Server Products</i> (to configure Test datastore) <i>IBM Rational Software Desktop Products</i>
IBM Rational Unified Process®	Desktop	See the <i>IBM Rational Software Desktop Products Installation Guide</i> for the list of supported Web browsers. There are no other pre- and post- installation requirements.
XDE(tm) Tester	Desktop	XDE Tester or the <i>Release Notes</i> for XDE Tester in your XDE Tester media kit. To upgrade from Robot J to XDE Tester, see the <i>IBM Rational Suite Upgrade Guide</i> .

Who should read this book

This manual is intended for database, system, and ClearCase administrators who are installing IBM Rational server products for the first time. All users must have experience with Microsoft® Windows® and UNIX® operating systems, system and database administration, version control software, and scripting languages.

Typographical conventions

This manual uses the following typographical conventions:

- *ccase-home-dir* represents the directory into which the ClearCase Product Family has been installed. By default, this directory is /opt/rational/clearcase on UNIX and C:\Program Files\Rational\ClearCase on Windows.
- *cquest-home-dir* represents the directory into which Rational ClearQuest has been installed. By default, this directory is /opt/rational/clearquest on UNIX and C:\Program Files\Rational\ClearQuest on Windows.

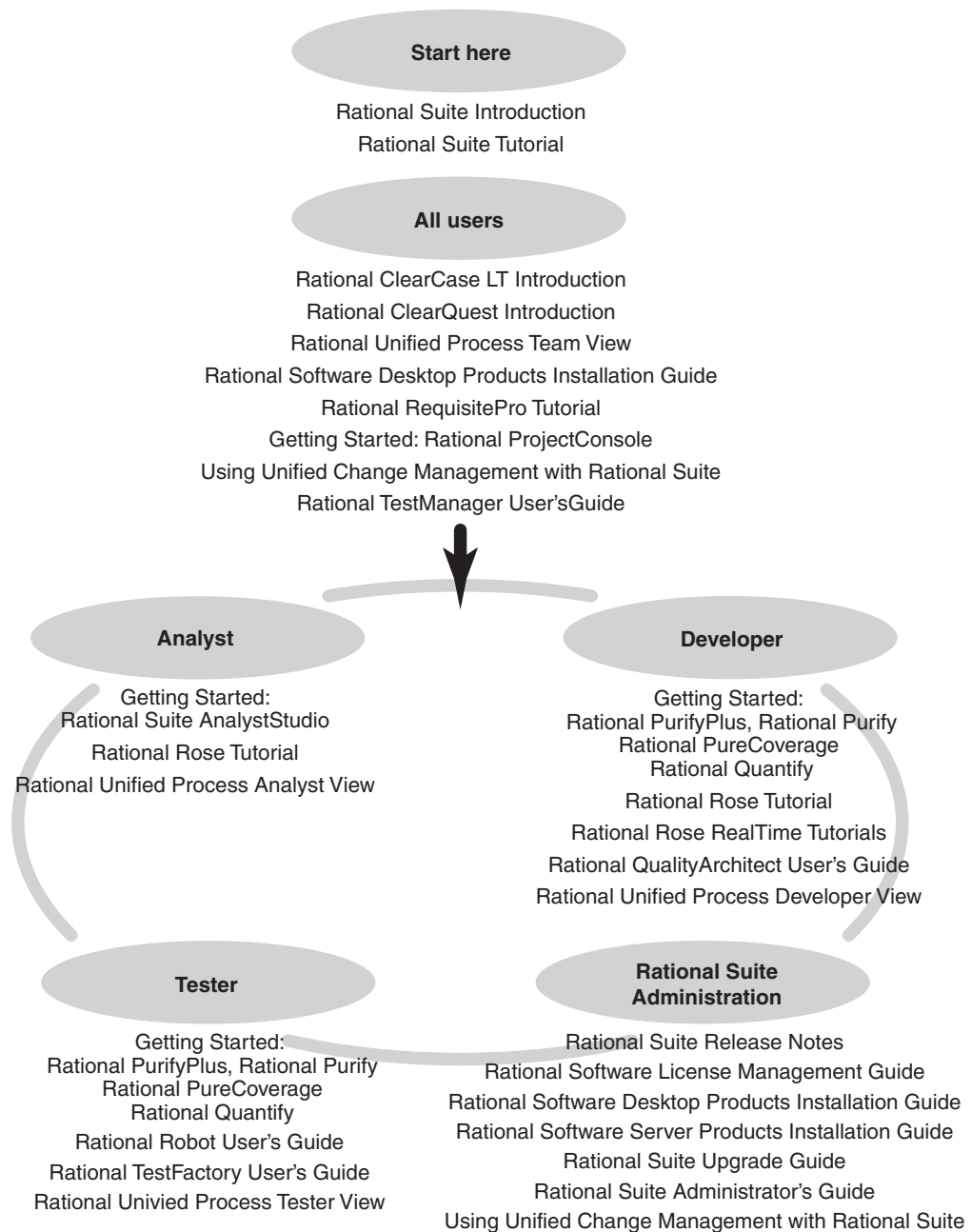
- **Bold** is used for names the user can enter; for example, command names and branch names.
- A *sans-serif font* is used for file names, directory names, and file extensions.
- A **sans-serif bold font** is used for GUI elements; for example, menu names and names of check boxes.
- *Italic* is used for variables, document titles, glossary terms, and emphasis.
- A monospaced font is used for examples. Where user input needs to be distinguished from program output, **bold** is used for user input.
- Nonprinting characters appear as follows: <EOF>, <NL>.
- Key names and key combinations are capitalized and appear as follows: SHIFT, CTRL+G.
- [] Brackets enclose optional items in format and syntax descriptions.
- { } Braces enclose a list from which you must choose an item in format and syntax descriptions.
- | A vertical bar separates items in a list of choices.
- ... In a syntax description, an ellipsis indicates you can repeat the preceding item or line one or more times. Otherwise, it can indicate omitted information.

Note: In certain contexts, you can use “...” within a pathname as a wildcard, similar to “*” or “?”. For more information, see the **wildcards_ccase** reference page.

- If a command or option name has a short form, a “slash” (/) character indicates the shortest legal abbreviation. For example:

lsc/heckout

Related information



Contacting IBM Rational Customer Support

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

The IBM software support Internet site provides you with self-help resources and electronic problem submission. The IBM Rational Software Support Home page can be found at <http://www.ibm.com/software/rational/support/>.

Voice Support is available to all current contract holders by dialing a telephone number in your country (where available). For specific country phone numbers, go to <http://www.ibm.com/planetwide/>.

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

- Your name, company name, ICN number, telephone number, and e-mail address
- Your operating system, version number, and any service packs or patches you have applied
- Product name and release number
- Your PMR number (if you are following up on a previously reported problem)

Chapter 1. Before you install

The information in this chapter is to help guide you through planning your installation of IBM Rational products, including Rational Suite. Use the checklists in this chapter to ensure that you meet the requirements before proceeding with server installations. To install Rational desktop and client products, see the *IBM Rational Software Desktop Products Installation Guide*. You can find all referenced documentation either in the *Rational Solutions for Windows Online Documentation* CD, or you can download the document in HTML or PDF from the **IBM Publications Center** by going to <http://www.ibm.com/> and typing in "IBM Publications Center" in the Search engine.

- If you are setting up IBM Rational Suite, see "Using your IBM Rational integrations" on page 1 and "Preparing to install IBM Rational Suite" on page 10.
- Table 3 on page 2 guides you through the rest of the chapter.

Removing previous releases of IBM Rational products

Before installing IBM Rational products from version 2003.06.13, if there are previous versions of Rational products installed, including the IBM Rational license server, you or your system administrator must see the *IBM Rational Suite Upgrade Guide*. You can find the guide in the *IBM Rational Solutions for Windows Online Documentation* CD-ROM, or you can download it from the IBM Publications Center. The only exception is IBM Rational ClearCase. You can install products with earlier versions of ClearCase.

Note: If you are using floating licenses, record the license server names before you upgrade IBM Rational products on your computer. After you install new IBM Rational products on your computer, reset the host names in the License Key Administrator.

Installing mixed versions with IBM Rational ClearCase

You can install mixed versions with IBM Rational ClearCase in the following cases:

- IBM Rational ClearQuest stand-alone or as part of Rational Suite with ClearCase 4.2 - 6.0.
- IBM Rational Suite with ClearCase 4.2 - 6.0.
- IBM Rational XDE with ClearCase 4.2 (fully patched) or 6.0.

Using your IBM Rational integrations

This section briefly describes IBM Rational documentation that you should consult before you install and configure IBM Rational products.

IBM Rational Suite integrations

Table 2 describes where you can find information about configuring IBM Rational Suite.

Table 2. Planning IBM Rational Suite integrations

To	See
Set up IBM Rational Suite with Unified Change Management	<p><i>User's and Administrator's Guide - Unified Change Management and Rational Suite</i> on the <i>Rational Solutions for Windows Online Documentation</i> CD-ROM or in the IBM Publications Center.</p> <p>(You do not have to use this installation guide. The <i>User's and Administrator's Guide</i> should provide all the information that you need.)</p>
<p>Plan your IBM Rational product integrations, such as RequisitePro and ClearQuest, and plan how you will use the IBM Rational Administrator.</p> <p>The Rational Administrator is automatically installed with IBM Rational Suite.</p>	<p><i>IBM Rational Suite Administrator's Guide</i> on the <i>Rational Solutions for Windows Online Documentation</i> CD-ROM, or in the IBM Publications Center.</p>

Preparing for IBM Rational server installations

Table 3 directs you to information in this manual that can help you perform server installations. To install IBM Rational desktop and client products, see the *IBM Rational Software Desktop Products Installation Guide*.

Table 3. IBM Rational server product pre-installation tasks

To	See
Upgrade IBM Rational products.	"Removing previous releases of IBM Rational products" on page 1.
Learn about specific IBM Rational integrations.	"Using your IBM Rational integrations" on page 1.
License your IBM Rational software.	Chapter 2, "Licensing your IBM Rational products," on page 43.
<p>Determine how you want to deploy your IBM Rational products.</p> <p>Use the IBM Rational Setup Wizard to install products directly from the CD or an IBM Web download, to set up a release area (enterprise deployment), or to perform silent installations.</p>	<ul style="list-style-type: none"> • "Selecting a deployment method" on page 3. • Chapter 3, "Installing IBM Rational products," on page 49.
Prepare for a Rational Suite installation.	"Preparing to install IBM Rational Suite" on page 10.
Prepare for a ClearCase LT installation.	"Preparing to install IBM Rational Suite" on page 10.
Prepare for a ClearQuest and ClearQuest MultiSite installation.	"Preparing to install ClearQuest and ClearQuest MultiSite" on page 20.
Prepare for a ProjectConsole installation.	"Preparing to install ProjectConsole" on page 34
Prepare for a RequisitePro installation.	"Preparing to install RequisitePro" on page 37.
Prepare for an IBM Rational testing products installation.	"Preparing to install IBM Rational testing products" on page 40.

Table 3. IBM Rational server product pre-installation tasks (continued)

To	See
Use the IBM Rational Administrator.	The Rational Administrator is installed with all IBM Rational Suite editions, RequisitePro, Robot, Sybase SQL Anywhere, and TestManager. For more information about the IBM Rational Administrator, see the <i>IBM Rational Suite Administrator's Guide</i> .
Apply a service release.	"Applying service releases" on page 68
Repair or modify IBM Rational products.	"Reinstalling a product (modify or repair)" on page 66
Remove IBM Rational products.	<ul style="list-style-type: none"> Chapter 10, "Removing IBM Rational products," on page 147 "Using the command line to remove a product" on page 64
Customize the IBM Rational Web Platform.	Chapter 9, "Customizing the Rational Web Platform," on page 137

Selecting a deployment method

The IBM Rational Setup Wizard provides several deployment methods. If you are planning the IBM Rational product installation for your work environment, select the deployment type that is most efficient for you and your users.

Table 4 describes each deployment type. You can find the instructions for each method in Chapter 3, "Installing IBM Rational products," on page 49.

Table 4. IBM Rational Setup Wizard deployment types

Type	Description
Desktop Installation from CD Image	This option enables you to install the product directly from the <i>Rational Solutions for Windows</i> CD onto your desktop or server. Place the CD into the CD drive of the computer and launch the Setup Wizard.
Web download	<p>Although this method does not appear in the Setup Wizard, it is a deployment option. It is possible for each user to download the product from the IBM Rational Licensing and Download center:</p> <ol style="list-style-type: none"> 1. Go to https://www6.software.ibm.com/reg/rational/rational-i. 2. Register with the Rational Download and Licensing Center. 3. Select Full Product Versions or Patches and Service Releases. 4. Select the Rational product that you want to install. 5. Select the version of the Rational product that you want to install. Click Continue to navigate to the Download page.
Enterprise Deployment	This option enables you to create a network release area and customize the product installation. Using the site defaults file created by the Setup Wizard, users can either install preset configurations of the product or install the product with different defaults.

Table 4. IBM Rational Setup Wizard deployment types (continued)

Type	Description
Silent Installation	<p>Although this method does not appear in the Setup Wizard, it is a deployment option. Silent installations ensure that all users have the same products, features, and options on their desktops. These installations can reduce your work as you deploy a product in your development environment. This option does not require users to select any options in the Setup Wizard.</p> <p>For more information, see “Setting up silent installations of IBM Rational products” on page 62.</p>

Determine if your users should install from a release area or from a CD or Web download

Before starting the installation, determine if you want to:

- Create a release area and site defaults file, or
- Install directly from the CD or IBM Web download.

The advantage of the release area is that multiple clients can install from a designated release area. When a service release becomes available it can be applied to the release area and then clients can reinstall from the updated release area.

If you set up a release area, determine if you will need one or more site defaults files to support the cross-section of users. To set up a release area and create one or more site defaults files, see Chapter 3, “Installing IBM Rational products,” on page 49.

Determining if your users should perform a silent installation

If you determine that you want users to install products from a release area, you may want to direct users to perform unattended installations. The advantage of a silent installation is that client users do not have to select options or make decisions. Silent installations ensure that all users have the same defaults and options on their desktops.

To set up and run a silent installation, see “Setting up silent installations of IBM Rational products” on page 62.

Administrator privileges

To install IBM Rational products on a Windows operating system, ensure you are logged on with appropriate privileges. You must be logged on to a Windows domain account that is a member of the local computer’s Administrators group. You must have the correct privileges regardless of the installation method (which includes silent installation) that you use.

Note: If you are not logged on with the appropriate privileges, the product fails to install. You do not see any data in the installation log file that incorrect privileges caused the failure.

Server system and software requirements

Table 5 provides the recommendations and requirements for operating IBM Rational server products in your environment. You may operate the software on computers that may not meet all the hardware recommendations. The recommendations in this table provide guidelines for good operating performance.

Table 5. Server requirements and recommendations

Item	Requirements and recommendations
Operating systems	<ul style="list-style-type: none">• Microsoft Windows 2003 Enterprise Server, no Service Pack• Microsoft Windows 2003 STD Edition, no Service Pack• Microsoft Windows XP Professional, Service Pack 1, 1a (See notes about Service Pack 2)• Microsoft Windows 2000 Server, Service Pack 2, 3, 4• Microsoft Windows 2000 Advanced Server, Service Pack 2, 3, 4• Microsoft Windows 2000 Professional, Service Pack 2, 3, 4• Microsoft Windows NT 4.0 Server, Service Pack 6a + SRP (Security Rollup Package, Q299444)• Microsoft Windows NT 4.0 Workstation, Service Pack 6a + SRP (Security Rollup Package, Q299444) (It is not supported as a Web server.) <p>Note:</p> <ul style="list-style-type: none">• The production release of Windows XP SP2 was not available for final testing at the time these requirements were finalized. To obtain the latest information about Windows XP SP2 support, go to IBM Rational Support at http://www.ibm.com/software/rational/support and search for "Rational products and Windows XP SP2". For more information about how Microsoft Windows XP SP2 affects IBM Rational products in this release, see "Compatibility with Third-Party Products" in the <i>IBM Rational Suites Release Notes</i>.• ClearQuest MultiSite Shipping Server supports only Windows 2000 Server, Service Pack 2, 3, 4, Windows 2000 Advanced Server, Service Pack 2, 3, 4, Windows NT 4.0 Server, Service Pack 6a + SRP (Q299444)• For more information about ClearCase for UNIX-Interoperability solutions and Network Attached Storage, see the <i>IBM Rational ClearCase Installation Guide</i>• Windows XP Home Edition is not supported in this release.• For the most up to date information about ClearCase UNIX platforms, see http://www.ibm.com/support. Click Search Technical Support and enter "ClearCase family supported releases".

Table 5. Server requirements and recommendations (continued)

Item	Requirements and recommendations
Hardware	<ul style="list-style-type: none"> • 500-600 MHz or higher • 256-512+ MB RAM ; More memory generally improves performance; required memory depends on the number of concurrent users, amount of data being requested, and the size of the database • 2 x physical memory is the recommended swap space • 250 MB or higher disk space for an IBM Rational point product <p>Note: For New ClearQuest Web minimum and recommended hardware requirements, see the <i>New ClearQuest Web Installation Guide</i>.</p>
ClearCase LT Server file storage space requirements	<ul style="list-style-type: none"> • ClearCase LT needs enough disk space on the server to contain the files and databases under source control. The amount of space required depends on the characteristics and use of the VOBs and views. • In addition to the free disk space required to load the ClearCase LT server, the server needs 0.5 to 1.0 MB for each user who will access the ClearCase Web interface through the ClearCase LT server.
Rational Suite disk space	<ul style="list-style-type: none"> • Rational Suite Enterprise – 1.6 GB (full), 1.2 GB (typical), 1.9 GB (Enterprise Deployment) • Rational AnalystStudio – 1.2 GB (full), 851 MB (typical) • Rational DevelopmentStudio – 1.4 GB (full), 1.1 GB (typical) • Rational DevelopmentStudio for UNIX (Windows components only) – 515 MB (full), 445 MB (typical) • Rational DevelopmentStudio – RealTime Edition – 1.4 GB (full), 1.1 GB (typical) • Rational DevelopmentStudio – RealTime Edition for UNIX (Windows components only) – 515 MB (full), 445 MB (typical) • Rational TeamTest – 645 MB (full), 583 MB (typical) • Rational Team Unifying Platform – 1.1 GB (full), 825 MB (typical) <p>Note: If Rational ProjectConsole is included in your Rational Suite, it requires 1+ GB for its repository.</p>
Point product disk space	<ul style="list-style-type: none"> • ClearCase LT Server: 264 MB (full) • ClearQuest MultiSite Administrator: 250 MB • Rational Shipping Server: 250 MB • Terminal Server (ClearQuest): 250 MB • RequisitePro: 192 MB (full), 176 MB (typical) • TestManager: 379 MB (full/typical)

Table 5. Server requirements and recommendations (continued)

Item	Requirements and recommendations
Databases	<p>ClearQuest Databases</p> <ul style="list-style-type: none"> • IBM DB2 UDB Express 8.1 • IBM DB2 UDB 7.2 with Fix Pack 8, 8.1 • ClearQuest ships with a DB2 UDB Components for Rational Products v8.1. This database will replace SQL Anywhere as the out-of-the-box offering in the next major release of ClearQuest. DB2 UDB Components for Rational Products v8.1 contains all the features and functionality of DB2 UDB Express v8.1. • Microsoft SQL Server 7.0, Service Pack 4; SQL Server 2000, Service Pack 2, 3, and more current versions. • Oracle 8.1.6, 8.1.7.3, 9.2, 10 • Sybase SQL Anywhere 5.5.05, 8.0.1, 8.0.2 (See additional information in the Sybase SQL Anywhere section of this table.) <p>Note:</p> <ul style="list-style-type: none"> • Sybase SQL Anywhere and Microsoft Access also support the desktop operating systems listed in the <i>IBM Rational Software Desktop Installation Guide</i>. You can use Windows XP Professional and Windows 2000 Professional as database servers for SQL Anywhere or Microsoft Access in a small development group. <p>ClearQuest also supports databases on UNIX operating systems. For the most current information, see http://www.ibm.com/support/. Click Technical Support Search and enter "supported ClearQuest platforms and databases".</p>
	<p>RequisitePro Enterprise Database</p> <p>Supports the same database vendors listed in the ClearQuest section, except Sybase SQL Anywhere</p> <p>Note: RequisitePro supports the same vendor databases and UNIX operating systems listed in the ClearQuest section.</p>
	<p>Rational TestManager Database</p> <ul style="list-style-type: none"> • Microsoft Access 2000, 2002 Service Pack 1, 2, 2003 on all supported workstations and professional server operating systems. • Sybase SQL Anywhere 8.0.2 (See additional information in the Sybase SQL Anywhere section of this table.)
	<p>Project Console</p> <ul style="list-style-type: none"> • See the Web Servers section in this table for supported Web server requirements. • ProjectConsole supports the full set of ClearQuest databases for the ProjectConsole data warehouse. • For the Template Builder, report server, and collection agent requirements, see the desktop requirements and recommendations section in the <i>IBM Rational Software Desktop Products Installation Guide</i>

Table 5. Server requirements and recommendations (continued)

Item	Requirements and recommendations
Sybase SQL Anywhere	<p>Sybase SQL Anywhere 8.0.2 is available on the <i>IBM Rational Solutions for Windows</i> installation CD or part of your IBM Web download package. It is configured to work only with Rational products. Select SQL Anywhere from the Product Selection list in the Rational Setup Wizard. .</p> <p>If you have installed Sybase SQL Anywhere 5.5 from Sybase and also from any of these IBM Rational products: IBM Rational ClearQuest, TestFactory, Robot, ProjectConsole, TestManager or TestManager Agent, you may experience a DLL conflict error. We recommend that you upgrade to the most recent Sybase SQL Anywhere database. For more information, contact IBM Rational Customer Support.</p>
Hosted development systems (remote sessions)	<p>ClearCase, ClearQuest, RequisitePro, Robot, Rose, and SoDA support hosted development on these platforms:</p> <ul style="list-style-type: none"> • Citrix MetaFrame 1.8, Service Pack 2 • Citrix MetaFrame XP Application Server • Microsoft Windows 2003 Enterprise Server, Windows Terminal Services • Microsoft Windows 2000 Advanced Server, Windows Terminal Services, Service Pack 2, 3, 4 <p>Note:</p> <ul style="list-style-type: none"> • ClearCase does not support Citrix MetaFrame 1.8. • TestManager does not support any version of Citrix MetaFrame or Windows Terminal Server. • You must use floating licenses for these products. Node-locked licenses are not supported.

Table 5. Server requirements and recommendations (continued)

Item	Requirements and recommendations
Web servers	<ul style="list-style-type: none"> • ClearCase Web, New ClearQuest Web, ProjectConsole Web, and RequisiteWeb use the Rational Web Platform. The Rational Web Platform runs on the server operating systems listed at the beginning of this table, except Windows XP Professional and Windows 2000 Professional. • To improve ClearQuest's maintainability and support, the ClearQuest Web ASP feature will be replaced with the New ClearQuest Web feature in ClearQuest v2003.06.13. The New ClearQuest Web feature is based on Java(c) technology which offers the flexibility to deploy on multiple hardware platforms. Those customers who choose to continue to use ClearQuest Web ASP will not be able to upgrade any other Rational products that are on the same web server to v2003.06.13 unless they first uninstall the ClearQuest Web ASP feature and then install v2003.06.13. • ClearCase and New ClearQuest Web support UNIX and LINUX platforms. For more information, see the <i>Installations Guides</i> for ClearCase UNIX and for New Rational ClearQuest Web. <p>For Rational ManualTest Web Execution:</p> <ul style="list-style-type: none"> • Microsoft Internet Explorer 5.0 or later on the Web server • Microsoft Internet Information Services 5.0 (IIS 5.0) on Windows XP and Windows 2000 • Microsoft Personal Web Server (PWS) from the Windows NT 4.0 Option Pack (available from Microsoft, www.microsoft.com) on Windows NT 4.0 Workstation • Microsoft Internet Information Server (IIS) from the Windows NT 4.0 Option Pack (available from Microsoft, www.microsoft.com) on Windows NT 4.0 Server <p>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 on Windows XP Professional, Windows 2000 Professional, or Windows NT 4.0 Workstation.</p>
Microsoft JVM	The Rational Setup Wizard does not install the Microsoft JVM with the products in this release nor does it remove the Microsoft JVM from previous Rational installations. Look in the product-specific release notes for more information.
Automated license key requests	Internet connection to request and receive license key files. For more information, see the <i>IBM Rational Software License Management Guide</i> .
Dual boot systems	Rational Suite does not support dual boot systems where both operating systems are on the same partition.
IBM Rational documentation	Adobe Acrobat Reader 4.x or higher to read online PDF files. Download the free Adobe Acrobat Reader from Adobe.com .

Table 5. Server requirements and recommendations (continued)

Item	Requirements and recommendations
Language support	<p>You can install IBM Rational Suite on these international operating systems:</p> <ul style="list-style-type: none"> • Simplified • Traditional Chinese • Dutch • French • German • Hebrew • Italian • Japanese • Korean • Swedish <p>All displays, menus, controls, wizards, reports, and user documentation are in U.S. English with the following exceptions: most of Rational Suite v2003.06.10, v2003.06.12, and v2003.06.13 are translated into Japanese.</p> <ul style="list-style-type: none"> • If you have a Traditional Chinese, Dutch, Hebrew, or Korean operating system, enter data (such as path names) in U.S. English or the ASCII character set. • If you have a Simplified Chinese, French, German, Italian, Japanese, or Swedish operating system, enter data in U.S. English or the native language character set. Regional date, time, currency, and numbering conventions are also supported for both input and output. • ClearCase and ClearQuest support the Spanish and Brazilian character set. • ClearCase supports the Korean character set.

Preparing to install IBM Rational Suite

Table 6 directs you to information that can help you perform IBM Rational Suite administrator installation tasks.

For the most current information related to IBM Rational Suite installation, see the *IBM Rational Suite Release Notes* in the *Rational Solutions for Windows Online Documentation* CD or you can download the release notes from the **Download** page in the **Rational Download and Licensing Center**. You can also view the release notes at the end of the Rational Suite installation, or click **Start > Programs > Rational Software > Rational Suite > Rational Suite readme** after you install the software.

Table 6. IBM Rational Suite installation checklist

Done	Task
Before installation	
	Follow the installation requirements for the point products in your IBM Rational Suite. If the product is a desktop product, the installation requirements are in the <i>IBM Rational Software Desktop Products Installation Guide</i> .
	License your IBM Rational Suite. See Chapter 2, "Licensing your IBM Rational products," on page 43.

Table 6. IBM Rational Suite installation checklist (continued)

Done	Task
	Plan your IBM Rational Suite environment. Determine how you want to set up your server configuration. You do not have to install the entire Rational Suite on these servers. You can select features of the Rational Suite, such as the ClearQuest Administration Tools, in the Rational Setup Wizard to install on the server computer. See “Planning your IBM Rational Suite environment” on page 11.
	Plan the order in which you will install and configure the IBM Rational Suite servers.
	Verify that your server configuration meets the hardware and software requirements for the products that you will be installing from this version of IBM Rational Suite. See “Server system and software requirements” on page 5.
	Use the checklist in “Preparing to install ClearCase LT” on page 14 to help you select a ClearCase LT server. You may want to install and configure the ClearCase LT server before you have client users install IBM Rational Suite on their desktops.
	Use the checklists in “Preparing to install ClearQuest and ClearQuest MultiSite” on page 20 to help you determine the ClearQuest and ClearQuest MultiSite database and Web server configuration within your IBM Rational Suite environment.
	Use the checklist in “Preparing to install ProjectConsole” on page 34 to help you select the ProjectConsole server, Template Builder, and data warehouse.
	Use the checklist in “Preparing to install RequisitePro” on page 37 to help you select your RequisitePro database server and Web server.
	Use the checklist in “Preparing to install IBM Rational testing products” on page 40 to help you select the vendor database to store your test data and the Web server for ManualTest Web Execution. To determine where to install other Rational testing products, see the <i>IBM Rational Software Desktop Products Installation Guide</i> .
	Determine how you want to deploy your IBM Rational Suite. For more information, see “Selecting a deployment method” on page 3.
Installing the IBM Rational Suite edition	
	To learn the procedures for installing Rational Suite, see Chapter 3, “Installing IBM Rational products,” on page 49.
After installation	
	Follow the post-installation procedures for the point products in your Rational Suite. The checklists in this chapter will help you track the post-installation tasks.
	Chapter 4, “After installation: configuring ClearCase LT,” on page 69.
	Chapter 5, “After installation: configuring databases and other ClearQuest tasks,” on page 73.
	Chapter 6, “After installation: configuring ProjectConsole,” on page 95
	Chapter 7, “After installation: configuring RequisitePro,” on page 101.
	Chapter 8, “After installation: configuring IBM Rational test tools,” on page 127.

Planning your IBM Rational Suite environment

To help you plan your Rational Suite environment, determine which computers will be servers. Servers need to be highly available, and may need extra memory and disk space. Table 7 describes the types of servers you may need. You will need

some of the same servers for installing IBM Rational Suite DevelopmentStudio for UNIX (Windows NT Components). Use the worksheet in Table 8 to help you plan your Rational Suite server environment.

Table 7. Servers used with IBM Rational Suite

Type of server	Description
License server	If you purchased floating licenses, install and set up a server to administer the licenses. For more information, see Chapter 2, “Licensing your IBM Rational products,” on page 43.
ClearCase LT server	<p>ClearCase LT is a client/server product. For guidelines about selecting and installing a ClearCase LT server, see “Preparing to install ClearCase LT” on page 14.</p> <p>If you install the ClearQuest Administration Tools on the ClearCase LT server, install them in a specific order. For more information, see:</p> <ul style="list-style-type: none"> • “Using the Getting Started Wizard for ClearQuest” on page 32. • “Using the Getting Started Wizard for ClearCase LT server and ClearQuest” on page 20.
IBM Rational Shipping Server	Both ClearCase MultiSite and ClearQuest MultiSite use the IBM Rational Shipping Server to transfer MultiSite packets. There are special considerations for installing the Rational Shipping Server in a ClearQuest and ClearCase MultiSite environment. For recommendations, see “ClearQuest MultiSite administration tools” on page 26 and “Rational Shipping Server” on page 27.
Database server	<ul style="list-style-type: none"> • If you are using commercial databases with IBM Rational Suite products, you probably want to install those databases on dedicated computers. The following IBM Rational tools require commercial databases: ClearQuest, ProjectConsole, and RequisitePro. • Microsoft Access Runtime is automatically installed when you install at least one IBM Rational Suite product on your system. • Sybase SQL Anywhere is available on the <i>Rational Solutions for Windows</i> installation discs, but it is configured to work only with specific IBM Rational products. • The Rational Administrator manages projects and data stores for RequisitePro, ClearQuest, and TestManager. It is included in all IBM Rational Suite editions. For more information about the Rational Administrator, see the <i>IBM Rational Suite Administrator's Guide</i>. • We recommend that you install and configure the database vendor software before you install the IBM Rational Suite server software.

Table 7. Servers used with IBM Rational Suite (continued)

Type of server	Description
Web server	<p>Web server components give users who do not have IBM Rational Suite client software on their desktops the opportunity to access project data.</p> <ul style="list-style-type: none"> The Rational Web Platform (RWP) is the Web server for ClearCase Web, ProjectConsole, and RequisiteWeb. Little or no configuration is required unless you want to customize RWP. To customized RWP, see Chapter 9, "Customizing the Rational Web Platform," on page 137. We recommend that you install RWP on a server that does not have to run any other Web servers. Installing RWP on a server that is already running another Web server may result in a port conflict that can cause RWP or the other Web server to fail on start-up. If this is impossible, we recommend that you configure the other Web server to use ports that are not being used by RWP. ManualTest Web uses the Microsoft Internet Information Server (IIS) 4.0 and 5.0.

Use the worksheet in Table 8 to help you plan your IBM Rational Suite environment.

Table 8. IBM Rational Suite environment worksheet

Product	Server name	Additional information (version, Suite or Point Product, node-locked licenses, patches or service releases)
Licenser Servers		
ClearCase LT Server (ClearCase Web Server, Rational Web Platform)		
ClearQuest + MultiSite		
Administration Tools		
Database Server		Database Vendor:
Web Server (Optional) (IIS)		
MultiSite Administration Tools		
Rational Shipping Server		
ProjectConsole:		
Server (Rational Web Platform + Report Server + Collection Agent)		
Report Server and Collection Agent (Optional)		
Template Builder		
Data Warehouse		Database Vendor:
RequisitePro		
Database Server		Database Vendor:
Web Server (Optional) (Rational Web Platform)		

Table 8. IBM Rational Suite environment worksheet (continued)

Product	Server name	Additional information (version, Suite or Point Product, node-locked licenses, patches or service releases)
Testing Products		
Test Datastore		Database Vendor:
ManualTest Web Server (IIS)		

Preparing to install ClearCase LT

This section helps you prepare to install the ClearCase LT server. To install the ClearCase LT client, see the *IBM Rational Software Desktop Products Installation Guide*.

For the most current information related to ClearCase LT features and known issues, see the *ClearCase LT Release Notes* in the *Rational Solutions for Windows Online Documentation* CD. You can view the release notes at the end of the ClearCase LT installation, or click **Start > Programs > Rational Software > Rational ClearCase LT > Rational ClearCase LT readme** after you install the software.

Migrating ClearCase LT to ClearCase

If you plan to upgrade to ClearCase in the future, you can upgrade ClearCase LT to ClearCase within the same version; for example, upgrade ClearCase LT 2003.06.00 to ClearCase 2003.06.00. For installation requirements, see the *IBM Rational ClearCase Installation Guide*.

ClearCase LT installation checklist

Use the checklist in Table 9 to help you set up the ClearCase LT server (and ClearCase Web server) and perform the required post-installation tasks.

Table 9. ClearCase LT Server installation checklist

Done	Task
Before Installation	
	License your IBM Rational software. See Chapter 2, "Licensing your IBM Rational products," on page 43.
	If you are evaluating ClearCase LT, see "Installing ClearCase LT for evaluation" on page 17.
	To understand ClearCase LT as a client/server product, see "Overview of ClearCase LT server and client computers" on page 15.
	The IBM Rational Web Platform software is an optional feature of the ClearCase LT server. See "ClearCase Web server" on page 16.
	Choose a computer that meets the system and software requirements in "Server system and software requirements" on page 5 and "Selecting a ClearCase LT server" on page 18. For ClearCase LT client system requirements and recommendations, see the "Before You Install" chapter in the <i>IBM Rational Software Desktop Products Installation Guide</i> . Note: For optimal performance, do not install the ClearCase LT server on the ClearQuest vendor database server.

Table 9. ClearCase LT Server installation checklist (continued)

Done	Task
	Make sure you have administrator privileges on the system. See “Administrator privileges” on page 4.
	Determine how you want to deploy ClearCase LT server and the ClearCase LT client. See “Selecting a deployment method” on page 3.
	Know the name of the computer that is (or will be) the ClearCase LT server. We recommend that you install and configure the ClearCase LT server before your users install the ClearCase LT client or any IBM Rational Suite that includes a ClearCase LT client. See “Installing ClearCase LT client as part of a Rational Suite” on page 17.
	Verify that all computers on which you plan to install ClearCase LT are members of a Windows domain, and that all users who will use ClearCase LT have accounts in a Windows domain and have at least one domain group membership in common. See “Windows domain membership requirements” on page 16.
	Designate a domain group to which all ClearCase LT users belong as the ClearCase Users Group. See “Setting the CLEARCASE_PRIMARY_GROUP environment variable” on page 17.
	If you are using ClearCase LT with other products from the IBM Rational Suite, all products must be from the same Suite version number. For information about the order in which you should upgrade integrated products and convert schemas and data, see the <i>IBM Rational Suite Upgrade Guide</i> .
	IBM Rational Suite cannot be installed on a system that can boot multiple Windows NT installations. You can install ClearCase LT on such a system, but you must install it in separate directories for each version of the operating system. For more information, see the <i>IBM Rational ClearCase LT Release Notes</i> .
Installing ClearCase LT server	
	Before you install the software, see “ClearCase LT server setup” on page 19. To learn the procedures for installing ClearCase LT servers and clients, see Chapter 3, “Installing IBM Rational products,” on page 49.
After installation	
	Use the Getting Started Wizard to configure your ClearCase LT environment. See “Configuring ClearCase LT with the Getting Started Wizard” on page 69.
	Perform additional ClearCase LT server tasks. See “Additional configuration tasks” on page 69.

Overview of ClearCase LT server and client computers

This overview describes the client and server parts of ClearCase LT.

- **ClearCase LT server.** Every ClearCase LT client requires the services of a ClearCase LT *server computer* to manage all of the client’s access to VOB and view data. The ClearCase LT server runs server processes and supplies storage areas for VOB and view storage. A ClearCase LT client computer can access only one ClearCase LT server. A ClearCase LT server can support multiple VOBs and views, and can service the needs of many ClearCase LT clients.
- **Client.** Each ClearCase LT user works at a ClearCase LT client computer, running commands and programs, various user interfaces, and other software (for example, development tools, an IBM Rational Suite, and operating system utilities). ClearCase LT must be installed on each client.

A ClearCase LT community consists of a ClearCase LT server and one or more ClearCase LT clients. You may have multiple ClearCase LT communities at your site, but each client in a community can access only one ClearCase LT server. You can install a ClearCase LT client without installing a ClearCase LT server, but the client will not work until the server is installed and accessible by the client. The server computer should be adequately configured. See “Selecting a ClearCase LT server” on page 18.

Installing ClearCase LT server software on a system also installs ClearCase LT client software on that computer. ClearCase LT client software is installed on the ClearCase LT server to simplify evaluation, administration, and troubleshooting. If you are part of a small workgroup, you may want to use the ClearCase LT server as a client too, but we recommend using a dedicated server whenever possible.

Note: ClearCase LT cannot be installed on a computer that is a ClearCase system.

ClearCase Web server

The Rational Web Platform is a custom feature in the ClearCase LT server. It is not installed, by default, with the ClearCase LT server software. You do not have to configure this feature. In the few cases that you need to change the standard defaults, see Chapter 9, “Customizing the Rational Web Platform,” on page 137.

For clients to use the ClearCase Web server, give users the server name. For more information about how clients can access the ClearCase Web server, see the “Before You Install” chapter in the *IBM Rational Software Desktop Products Installation Guide*.

Note: If you install the ClearCase LT server on a server that is running any other Web servers, either RWP or the existing Web server can fail on start-up because of a port conflict. We recommend that you install RWP on a server that does not have to run any other Web servers. If this is impossible, we recommend that you configure the other Web server to use ports that are not being used by RWP. If you cannot do this, you must configure RWP to use ports not used by the other Web server. For more information, see “To change the default RWP HTTP port” on page 138.

Windows domain membership requirements

When installed on any Windows platform, the ClearCase LT server and its clients must be members of a Windows domain. To use ClearCase LT from any Windows platform, you must log on to a domain account (not a local, per-system user account).

All ClearCase LT users at your site should have accounts in the same domain if possible. Otherwise, you must configure ClearCase LT to allow access to ClearCase data by users in multiple domains using the procedures described in the *IBM Rational ClearCase Administrator's Guide*. In addition, all of the ClearCase LT users in a domain must be members of a domain group that your ClearCase LT administrator has designated as the ClearCase Users Group. See “ClearCase LT server setup” on page 19 and the *IBM Rational ClearCase Administrator's Guide* for more information about domain group membership requirements and domains in general.

Note: You may install ClearCase LT on a nondomain Windows computer if the computer does not need to communicate with other ClearCase LT clients or

servers and will be used only by one person. This type of configuration is not practical for production use, but may simplify an evaluation of ClearCase LT.

Setting the **CLEARCASE_PRIMARY_GROUP** environment variable

ClearCase LT access controls consider domain group membership information when determining a user's rights to access ClearCase data. In Windows, a user who logs on to a domain account may not be assigned the primary group specified by the Windows domain account management tools.

To ensure proper assignment, set the user environment variable **CLEARCASE_PRIMARY_GROUP** to refer to the correct primary group. The value of this variable must be the name of an existing domain group that includes the user as a member. All ClearCase users must be members of this group. This user environment variable (not system environment variable) must be set on every ClearCase computer. On Windows systems, set the value of **CLEARCASE_PRIMARY_GROUP** using the System program in Control Panel.

For more information on **CLEARCASE_PRIMARY_GROUP** and ClearCase access controls, see the *IBM Rational ClearCase Administrator's Guide*.

Installing ClearCase LT client as part of a Rational Suite

There is a specific order to installing ClearCase LT as part of an IBM Rational Suite. Install and configure a ClearCase LT server on a separate computer first. Then install the Rational Suite, which includes ClearCase LT client, on users' desktops.

To install the ClearCase LT server:

1. Select ClearCase LT in the **Product Selection** page of the Setup Wizard.
2. The next step depends on how you will install the ClearCase LT server:
 - If you are installing from a CD, select **Install server and client** software in the **Client/Server** page.
 - If you are installing the ClearCase LT server from a release area, the server option should already be selected for you.
 - If you are setting up a release area for ClearCase LT, select **Siteprep ClearCase Server** in the **Client/Server** page.

If you install the IBM Rational Suite before you try to install the ClearCase LT server on the same computer, (installing all ClearCase LT software on the same computer is not recommended unless you are evaluating ClearCase LT), the Setup Wizard detects the client software that is included in Rational Suite and does not install ClearCase LT server.

Installing ClearCase LT for evaluation

If you are installing ClearCase LT for evaluation purposes, either as a stand-alone product or as part of an IBM Rational Suite, you may want to use the same computer to simplify the evaluation process. To set up a single-system evaluation configuration:

1. Use the Setup Wizard on the installation CD to install the ClearCase LT server and client on the same computer. In the Wizard:
 - a. Select the **Desktop Installation from CD Image** deployment option.

- b. In the **Client/Server** page, select **Install server and client software** option. You can use this configuration to evaluate ClearCase LT as a stand-alone product.
2. To evaluate ClearCase LT as part of a Suite, re-run the Setup Wizard on the same computer and select the IBM Rational Suite that you want to evaluate.

Note: If you install the IBM Rational Suite before you install the ClearCase LT server on the same computer, the Setup Wizard detects the client software that is included in Rational Suite and does not install ClearCase LT server on the computer.

To correct this problem:

1. Reinstall the IBM Rational Suite. Use the **Change** option in **Add/Remove Programs**. Select **Modify the Existing Installation**. Clear ClearCase LT from the Rational Suite product feature list in the **Custom Setup** page. For more information, see “Reinstalling a product (modify or repair)” on page 66.
2. Reinstall the ClearCase LT server. Use the same procedure described in Step 1. Select the **Install server and client software** option in the **Client/Server** page.

Selecting a ClearCase LT server

We recommend that you install the ClearCase LT server before you install any ClearCase LT clients. The characteristics of the ClearCase LT server are critical to the performance and scalability of your entire ClearCase LT community. Selecting an appropriate ClearCase LT server is an important pre-installation step.

A ClearCase LT client on Windows can access a ClearCase LT server running either Windows or UNIX. If your site is using a ClearCase LT server running UNIX, you can skip the remainder of this section. For more information on configuring a ClearCase LT server running UNIX or Windows, see the *IBM Rational ClearCase Administrator's Guide*.

A ClearCase LT server running Windows is fully interoperable with ClearCase LT clients running either Windows or UNIX operating systems.

The ClearCase LT server runs a number of server processes for each VOB it supports. Because the server may have to support dozens, or even hundreds, of such processes, and support network access from many clients, we recommend that you follow the guidelines in this section when specifying the server's physical memory, storage, processor, and network interface hardware. In addition, you may want to use the performance tuning procedures described in the chapter “Improving VOB Host Performance” in the *IBM Rational ClearCase Administrator's Guide*.

Note: Use the Windows server, rather than the workstation, variant of the operating system (Windows 2000 Server, for example). Windows limits concurrent network access to systems on which Windows NT Workstation or Windows 2000 Professional software is installed to a maximum of 10 systems. If you anticipate that more than 10 ClearCase LT clients will need to access the ClearCase LT server simultaneously, install Windows NT Advanced Server or Windows 2000 Server software on your ClearCase LT server.

Server recommendations

To ensure adequate performance for all ClearCase LT clients, we recommend that you install ClearCase LT server software on a computer that meets or exceeds the following requirements:

- **Physical memory (RAM).** The minimum recommended main memory size is 128 MB or half the size of all the VOB databases the server will support, whichever is greater. To this amount, add: 7 MB of memory per VOB, regardless of VOB database size.
- **Disk capacity.** A VOB database must fit in a single disk partition, and VOB databases tend to grow significantly as development proceeds and projects mature. Although there is no rule of thumb for estimating how large a VOB will be, “Appendix F” in the *IBM Rational ClearCase Administrator’s Guide* provides some guidelines that may be useful in establishing VOB server disk capacity requirements.
- **Processing power.** A ClearCase LT server must have adequate CPU capacity. The definition of adequate in this context varies from one hardware architecture to another. With ClearCase LT and similar enterprise applications, server CPU capacity is a critical factor in performance of client operations.
- **High Availability.** The ClearCase LT server should be a robust system that does not need to be rebooted or taken offline frequently. It should be easily accessible over the network that’s on the same subnet as or at most one or two network hops from any ClearCase LT client.
- **Network Connectivity.** Nearly every access to a VOB places a load on the ClearCase LT server’s network interface; a high-bandwidth (100 MB/sec. or greater) network connection to the server is important.

Note: We recommend that you install the ClearCase LT server on a dedicated computer for optimal performance during production use. However, for evaluation purposes or for very small teams, you can install and run ClearCase LT server and a Rational Suite on a single computer.

ClearCase LT server setup

After the ClearCase LT server software has been installed for the first time, the Getting Started Wizard runs. The Getting Started Wizard does not run if you are upgrading an existing ClearCase LT server to a new version, or if you are reinstalling ClearCase LT server on a computer that has already been configured by the Getting Started Wizard.

The Getting Started Wizard creates two VOBs: one to hold UCM objects for the initial project, and one to hold source code (files and directories) for this project. For more information, see “Using the Getting Started Wizard for ClearCase LT server” on page 20.

ClearCase access controls require the user who creates a VOB and all users who access it to be members of the ClearCase Users Group. For more information, see “Setting the CLEARCASE_PRIMARY_GROUP environment variable” on page 17.

If you can, log on as a user who is both a local administrator on the ClearCase LT server and a member of the ClearCase Users Group. It will simplify installation and setup of the ClearCase LT server.

If you cannot log on as a user with this combination of group memberships, you can still install ClearCase LT with local administrator privileges. You will not be able to complete server setup until you log out, and then log on as a member of the ClearCase Users Group.

Using the Getting Started Wizard for ClearCase LT server

Use the Getting Started Wizard to set up a standard ClearCase LT environment on a single server. The Getting Started Wizard launches automatically after an initial installation of the ClearCase LT server. Use the online Help to complete these tasks:

- Sets up ClearCase LT software configuration management.
 - Creates storage directories for ClearCase VOBs and Views
 - Creates a ClearCase project VOB
 - Creates the initial ClearCase component VOB
 - Creates an initial ClearCase project
- Configures the ClearCase LT client on the ClearCase LT server only.

Using the Getting Started Wizard for ClearCase LT server and ClearQuest

If you are planning to install ClearQuest Administration Tools and the ClearCase LT server on the same computer, the Getting Started Wizard will configure the ClearCase LT server and performs the following tasks for ClearQuest:

- Creates a schema repository and user database
- Enables the UCM integration with ClearCase LT
- Create user accounts

To use the full capability of the Getting Started Wizard, we recommend an order of installation. For more information, see “Using the Getting Started Wizard for ClearCase LT server” on page 20.

Preparing to install ClearQuest and ClearQuest MultiSite

This section helps you prepare and plan ClearQuest and ClearQuest MultiSite server installations. To install the ClearQuest client (native or Web), see the *IBM Rational Software Desktop Products Installation Guide*.

For the most current information related to ClearQuest and ClearQuest MultiSite features and known issues, see the *IBM Rational ClearQuest and ClearQuest MultiSite Release Notes* in the *Rational Solutions for Windows Online Documentation* CD. You can also view the release notes at the end of the ClearQuest installation, or click **Start > Programs > Rational Software > Rational ClearQuest > Rational ClearQuest readme** after you install the software.

ClearQuest and ClearQuest MultiSite installation checklists

Use the following checklists to help you set up a ClearQuest and ClearQuest MultiSite environment and perform the required post-installation tasks:

- Table 10 on page 21
- Table 11 on page 21
- Table 12 on page 23
- Table 13 on page 23

The ClearQuest installation checklist for the native client is in the “Before You Install” chapter in the *IBM Rational Software Desktop Products Installation Guide*.

To learn more about the components of the ClearQuest and ClearQuest MultiSite environment, see “Installing a New ClearQuest Web configuration” on page 24.

Use Table 10 to help you evaluate ClearQuest. The evaluation includes a sample database.

Table 10. ClearQuest evaluation installation checklist

Done	Task
Before installation	
	Get a ClearQuest evaluation license key. See Chapter 2, “Licensing your IBM Rational products,” on page 43.
	Check the system and software requirements for the ClearQuest evaluation computer. See “Server system and software requirements” on page 5. See the “Before You Install” chapter of the <i>IBM Rational Software Desktop Products Installation Guide</i> for client system requirements and recommendations.
	Make sure that you have administrator privileges on the computer. See “Administrator privileges” on page 4.
Installing and configuring ClearQuest for evaluation	
	Install the ClearQuest features for evaluation directly from the CD-ROM or Web download. See “Installing IBM Rational ClearQuest for evaluation” on page 28.

Table 11. ClearQuest administration tools installation checklist

Done	Task
Before installation	
	License your IBM Rational software. See Chapter 2, “Licensing your IBM Rational products,” on page 43.
	Install and configure the empty vendor database before you install the ClearQuest Administration Tools. Use Table 12 to help you perform these tasks. After you have configured the vendor database, return to this checklist.
	Plan your ClearQuest and ClearQuest MultiSite configuration. See “Installing a New ClearQuest Web configuration” on page 24. Consider the following recommendations: <ul style="list-style-type: none"> • The ClearQuest Administration Tools (as well as the ClearQuest MultiSite Administration Tools) can be installed on the vendor database server or a separate computer. If you plan to install the ClearQuest Administration Tools on the same computer as the ClearCase LT server, see “Using the Getting Started Wizard for ClearQuest” on page 32. • We recommend that you install the database server and the ClearQuest Web Application server for New ClearQuest Web on different machines. For more information, see the <i>New Rational ClearQuest Web Installation Guide</i> • For optimal performance, do not install the ClearQuest Web Application server on the ClearCase LT server.
	Check the system and software requirements for ClearQuest servers. See the sections in the following bulleted list for pre-installation requirements: <ul style="list-style-type: none"> • “Server system and software requirements” on page 5. See the “Before You Install” chapter of the <i>IBM Rational Software Desktop Products Installation Guide</i> for client system requirements and recommendations. • “Setting up the VS.NET integration” on page 33. • “Compatibility issues” on page 33.

Table 11. ClearQuest administration tools installation checklist (continued)

Done	Task
	Make sure that you have administrator privileges on the computer. See “Administrator privileges” on page 4.
	Determine how you want to deploy ClearQuest Administration Tools and ClearQuest client software. See “Selecting a deployment method” on page 3. Note: You can enable e-mail notification on ClearQuest Windows clients. Tell users to look in the <i>IBM Rational Software Desktop Products Installation Guide</i> for instructions.
Installing ClearQuest Administration Tools	
	To learn the procedures for installing ClearQuest Administration Tools and other ClearQuest software, see “Installing IBM Rational products from the CD or Web download” on page 54. If you do not want to configure the ClearQuest databases yet, or you did not install and configure the vendor database software before installing ClearQuest Administration Tools and ClearCase LT server on the same computer, skip the database configuration pages in the Getting Started Wizard. Use the ClearQuest Maintenance Tool (“Creating ClearQuest databases” on page 93) to configure the ClearQuest schema repository and user database later.
After installation	
	<ul style="list-style-type: none"> If the ClearQuest Administration Tools will access a DB2 database, install the DB2 client software on the computer on which you installed the Administration Tools and create a DB2 alias. <p>See “Creating the ClearQuest databases” on page 88.</p>
	<p>Configure the ClearQuest schema repository and user database. You can use either the Getting Started Wizard (if the Administration Tools are on the ClearCase LT server) or the ClearQuest Maintenance Tool to create the ClearQuest databases (schema repository and user database).</p> <p>If you use the ClearQuest Maintenance Tool, see “Required configuration steps for ClearQuest” on page 88 and “Creating the ClearQuest databases” on page 88.</p>
	<ul style="list-style-type: none"> If the ClearQuest clients will access a DB2 version 7.x database, direct them to install the DB2 client software on their desktops and create a DB2 alias. <p>Client users can find the instructions in the “Before You Install” and “After You Install” chapters of the <i>IBM Rational Software Desktop Products Installation Guide</i>.</p>
	<p>Send the ClearQuest connection profiles (connections to the schema repository) to client users.</p> <p>You can either give users the schema repository information so they can create their own connections (“Creating a new connection” on page 90) or create a connection profile that users can import into their clients (“Creating a connection profile” on page 92 and “Importing a connection profile” on page 92).</p>
	Tell client users they can log in to the native ClearQuest client. See “Logging in to ClearQuest” on page 93.
	Ensure that users can send and receive e-mail notification. See “Configuring your ClearQuest client to receive e-mail notification” on page 93 and “Configuring the ClearQuest client to send e-mail notification” on page 93.
	Subscribe to the ClearQuest User Group (optional). See “Joining a Rational User Group” on page 88.

Table 12 helps you select and install the vendor database software. After you install the vendor software, configure it for ClearQuest and set up the ClearQuest user database and schema repository.

Table 12. ClearQuest vendor database installation checklist

Done	Task
Before installation	
	You do not have to install ClearQuest software on the vendor database server to configure the ClearQuest database (schema repository and user database). Note: For optimal performance, do not install the ClearQuest vendor database on the ClearCase LT server.
	Select a database vendor. Read the following sections: <ul style="list-style-type: none"> • “Installing IBM Rational ClearQuest for evaluation” on page 28. • “Server system and software requirements” on page 5 for a list of database vendors. • Table 15 on page 31. • “Setting up databases for ClearQuest MultiSite” on page 32 and Table 15 on page 31. Note: <ul style="list-style-type: none"> • ClearQuest MultiSite does not support Microsoft Access and SQL Server Anywhere. If you plan to replicate your ClearQuest database, do not select these database vendors. • New ClearQuest Web does not support Microsoft Access.
Installing vendor databases	
	Install the vendor software on the database server. Read the vendor documentation for instructions. Note: We recommend that you read Chapter 5, “After installation: configuring databases and other ClearQuest tasks,” on page 73 for any special considerations before you install the vendor software.
After installation	
	<ul style="list-style-type: none"> • Configure the user accounts. See the <i>IBM Rational ClearQuest Administrator's Guide</i>. • Configure the empty vendor databases. See Chapter 5, “After installation: configuring databases and other ClearQuest tasks,” on page 73. Note: Do not configure the ClearQuest schema repository and user database. You can perform those tasks after you install the ClearQuest Administration Tools. See Table 11 on page 21.

Use Table 13 to help you install the ClearQuest MultiSite Administration Tools. This installation checklist assumes that you have already installed the ClearQuest Administration Tools, configured the vendor database, and configured the ClearQuest schema repository and database (Table 11 and Table 12).

Table 13. ClearQuest MultiSite administration tools installation checklist

Done	Task
Before installation	
	License your IBM Rational software. See Chapter 2, “Licensing your IBM Rational products,” on page 43.
	Make sure that you have administrator privileges on the servers.

Table 13. ClearQuest MultiSite administration tools installation checklist (continued)

Done	Task
	Determine how you want to deploy ClearQuest MultiSite Administration Tools and the Rational Shipping Server. See “Selecting a deployment method” on page 3.
Installing ClearQuest MultiSite	
	To learn the procedures for installing the ClearQuest MultiSite Administration Tools and the Rational Shipping Server, see Chapter 3, “Installing IBM Rational products,” on page 49.
After installation	
	<ul style="list-style-type: none"> • If the ClearQuest MultiSite Administration Tools will access a DB2 database, install the DB2 client software on the computer on which you installed the Administration Tools and create a DB2 alias. <p>See “Installing the DB2 client” on page 33.</p>
	<p>To configure ClearQuest MultiSite, see:</p> <ul style="list-style-type: none"> • “Configuring databases for ClearQuest MultiSite” on page 74. • “Required configuration steps for ClearQuest MultiSite” on page 93. • “Optional configuration steps for ClearQuest MultiSite” on page 94.

Installing a New ClearQuest Web configuration

For installing instructions for New ClearQuest Web, see *IBM Rational New ClearQuest Web Installation Guide*

ClearQuest and ClearQuest MultiSite configuration

ClearQuest supports client users and ClearQuest administrators. The following sections describe the basic ClearQuest components in a ClearQuest Windows configuration:

- ClearQuest Administration Tools
- ClearQuest database server
- ClearQuest native client

The ClearQuest MultiSite product includes the following additional components:

- ClearQuest MultiSite Administration tools
- Rational Shipping Server

The following diagram illustrates one possible ClearQuest and ClearQuest MultiSite configuration. Install the client software on native clients and the ClearQuest Administrator computer (if you install all the administration tools on the same computer). You can install the Rational Shipping Server software on a separate server (the synchronization server). The arrows indicate the communication between components.

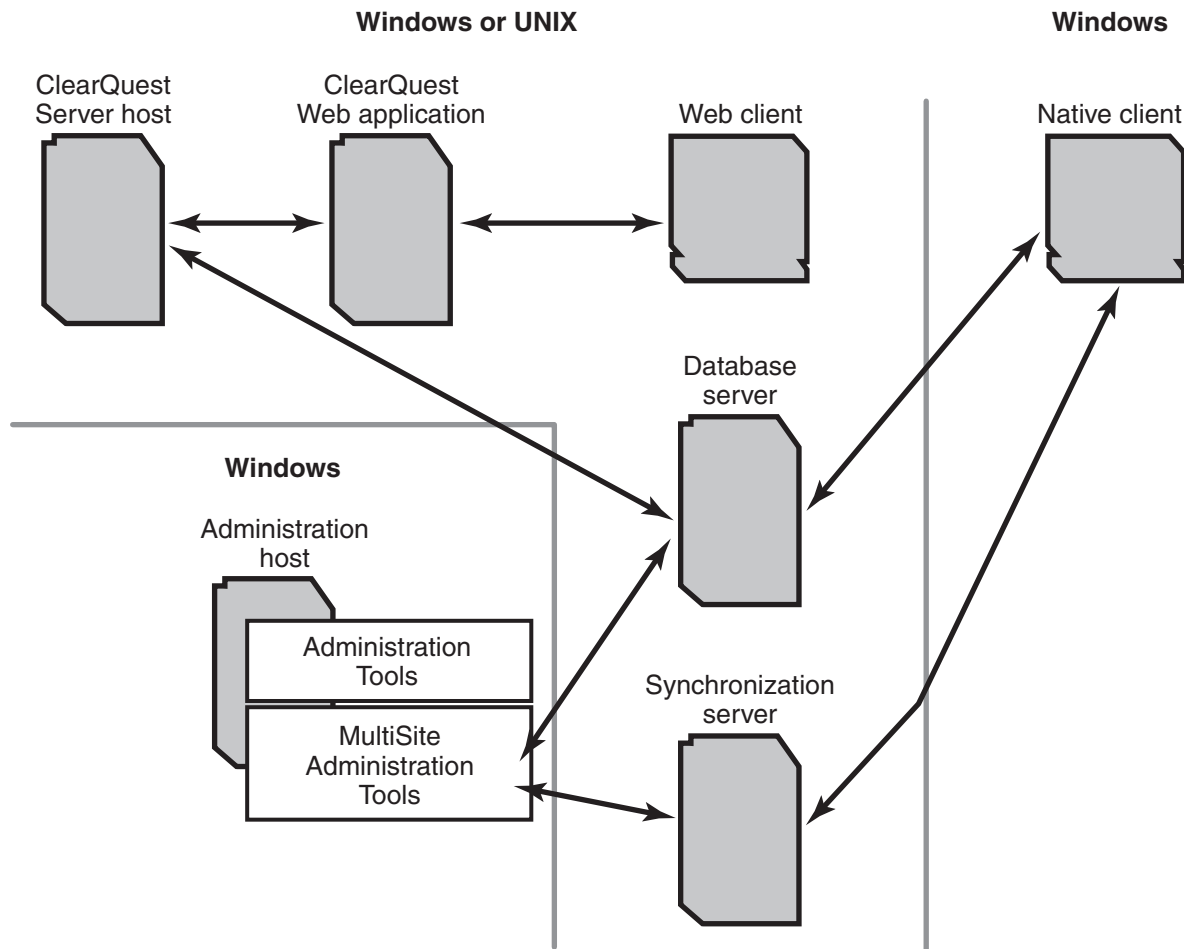


Figure 1. ClearQuest and ClearQuest MultiSite Configuration

ClearQuest administration tools

ClearQuest administrators access a ClearQuest schema repository using ClearQuest Administration Tools. A ClearQuest administrator can create and modify a schema repository using these tools.

The ClearQuest Administration Tools (as well as the ClearQuest MultiSite Administration Tools) can be installed on the vendor database server or on a separate computer.

If the ClearQuest Administration Tools access a DB2 database, install the DB2 client software on the computer on which you installed the Administration Tools.

ClearQuest database server

The vendor database supporting the ClearQuest and ClearQuest MultiSite schema repository and user databases can be installed on a Windows or a UNIX platform. For more information, see “Supported database servers for ClearQuest” on page 30.

We recommend that you install the vendor database and ClearQuest Web on different computers. You are not required to install ClearQuest software on the database server.

ClearQuest clients (native or Web)

ClearQuest client users access a ClearQuest user database using either a ClearQuest native client or a New ClearQuest Web client. ClearQuest native client users and New ClearQuest Web client users can create and update ClearQuest records in a ClearQuest user database.

To access the ClearQuest user database from a client, users must install either the ClearQuest client or a supported Web browser on their desktops. To install the ClearQuest native client, see the “Before You Install” chapter in the *IBM Rational Software Desktop Products Installation Guide*. To install a New ClearQuest Web client, see *IBM Rational New ClearQuest Web Installation Guide*.

If the ClearQuest native client accesses a DB2 database, install the DB2 client software on the client computer.

Note: If you plan to create a release area and have ClearQuest client users install the ClearQuest native client using a site defaults file, the site preparation process does not automatically import the connection profile. Users have to import the connection profile called `cqprofile.ini` with the ClearQuest Maintenance Tool. This procedure is explained in the *IBM Rational Software Desktop Products Installation Guide*. You can add a post-installation command to the site defaults file so clients users do not have to import the profile. For more information, see “Adding a post-installation command to the site defaults file” on page 57

Using Crystal Reports with ClearQuest Windows Clients: IBM Rational ClearQuest uses the integration with Crystal Reports reporting software to:

- Author report formats. Report authors can create new reports and edit the layout of existing report using the Crystal Reports Designer available through Crystal Reports Developers Edition.
- Run, view and print reports. Users with ClearQuest Windows and ClearQuest web clients can run reports on sets of ClearQuest records.
- Print records. Users with ClearQuest Windows clients can select a ClearQuest record from the results of a query results and print the record using a report format.

More information about reporting is available in the Rational ClearQuest client online help.

Installing Crystal Reports with ClearQuest Windows Clients: With Rational ClearQuest version 2003.06.13, the Crystal Report files needed to run and view reports are included with ClearQuest, and are installed automatically with ClearQuest Windows clients. The installed files are based on Crystal Reports version 10.0.

However, to author new report formats and to edit existing report formats, it is necessary to purchase a copy of Crystal Reports Professional edition or other Crystal Editions that contain Crystal Designer, version 10.0. To acquire a copy of Crystal Reports Professional Edition, contact Business Objects at: www.businessobjects.com. To install the Crystal Reports files needed for the New ClearQuest Web client, refer to the *IBM Rational New ClearQuest Web Installation Guide*.

ClearQuest MultiSite administration tools

If you are using ClearQuest MultiSite, the ClearQuest MultiSite Administration Tools must be installed on a Windows platform.

You have several options for where to install the MultiSite Administration Tools and the Rational Shipping Server. The following are suggested component locations:

- MultiSite Administration Tools and the ClearQuest Administration Tools are installed on one computer called the ClearQuest Administrator's computer; Rational Shipping Server is installed on a separate computer (the synchronization server). Neither component is located on the ClearQuest database server.
- MultiSite Administration Tools, ClearQuest Administration Tools, and the Rational Shipping Server are installed on the ClearQuest database server. You should do this only if your database server has enough memory and processing power to handle the extra work.
- MultiSite Administration Tools, ClearQuest Administrator Tools, and Rational Shipping Server installed on one computer that is designated as the ClearQuest Administrator's computer.

If the ClearQuest Administration Tools access a DB2 database, install the DB2 client software on the computer on which you installed the Administration Tools.

Note: If you choose to install ClearQuest MultiSite Administration Tools on the same machine as your SQL Server 7.0 or 2000 database, the ClearQuest MultiSite commands may fail if the SQL Server Client software is not also installed.

Rational Shipping Server

Both ClearCase MultiSite and ClearQuest MultiSite use the Rational Shipping Server to transfer MultiSite packets. It should be installed only on those computers that are responsible for replicating data to other sites. There are special considerations for installing the Rational Shipping Server in a ClearQuest and ClearCase MultiSite environment.

We recommend that you avoid configuring any one computer to run the Shipping Server and both products, because removing either ClearCase or ClearQuest from the computer will remove the Shipping Server that is used by both products and render the remaining product inoperable.

If you must install both ClearCase MultiSite and ClearQuest with the Shipping Server on the same computer, ensure you do the following:

- Install ClearCase first.
- Remove both products if you need to remove one product.

Caution: You should ensure that site defaults files for client computers do not specify installation of the ClearQuest Shipping Server. Any attempt to install ClearCase on a computer where ClearQuest and the Shipping Server are already installed will fail.

Note: This restriction does not apply to ClearCase LT because there is no ClearCase LT MultiSite product. You can install Rational Shipping Server from the *Rational Solutions for Windows* CD or from your IBM Web download package on a ClearCase LT server. When you select Rational ClearQuest, select the Shipping Server in the **Custom Setup** page of the Setup Wizard. See "Reinstalling a product (modify or repair)" on page 66.

Installing the Shipping Server with Rational Suite Enterprise

If you install Rational Suite Enterprise with the Shipping Server option from the CD or from the IBM Web download package, perform the tasks in the following table. If ClearCase is already installed, do not perform these tasks because it will cause serious ClearCase problems.

Note: These options are only needed if you are installing ClearQuest and Shipping Server from the CD or the IBM Web download package. If you are installing these product components from a Suite Enterprise release area, ignore these tasks.

Condition	Task
If the system will run both ClearCase, ClearQuest, and the Shipping Server	<ol style="list-style-type: none">1. Install ClearCase first. If you must install both on the same system, make sure the versions and ClearCase products are identical. For example, the ClearCase product on the system should be ClearCase, not ClearCase LT, and either be a server or have local VOBs and Views enabled.2. Install ClearQuest and the Shipping Server. Avoid installing the ClearQuest Shipping Server on a system where ClearCase (in particular, on a system with Rational products earlier than 2003.06.00 is installed. <p>Note: Do not install the Shipping Server on a system with a ClearCase that has no ALBD. The Shipping Server installs the ALBD and if ClearCase LT (for example) is installed, the system is rendered inoperable because it sees an ALBD running.</p>
After you install ClearQuest and the Shipping Server from the CD or Web download package	<ol style="list-style-type: none">1. Verify that the Shipping Server will not work with this command: shipping_server -ver noname Warning: Can not find a group named "clearcase". shipping_server 2003.06.13 (date and time)2. Apply the CQ_SS.reg file (contact IBM Rational Software Support) and verify the Shipping Server works: shipping_server -ver shipping_server 2003.06.00 (date and time)

Installing IBM Rational ClearQuest for evaluation

The following instructions assume that you will use one computer as the database server and the client.

To install ClearQuest for evaluation:

1. Log in as a user with Administrator rights on the local machine.

2. Insert the *Rational Solutions for Windows Disc 1* into the computer's CD-ROM drive. If you have downloaded the software using the IBM Download Director or a zip file, click **Setup.exe** after you have extracted the files from either the Download Director or the zip file.

The IBM Rational Setup Wizard starts automatically.

If autorun is disabled on your computer, click **Start > Run** and enter *cd_drive: \Setup.exe* where *drive* is the letter of the CD-ROM drive.

3. The **Welcome** page to the Setup Wizard appears. Click **Next** to launch the installation, and to advance through the following screens.
4. The **Product Selection** page lists all products available for installation.
5. In the **Deployment Method** page, select the **Desktop Installation from CD Image** option.
6. Choose to accept or not to accept the IBM Rational Software license agreement in the **License Agreement** page.
 - If you accept the license agreement, the installation Wizard continues.
 - If you do not accept the license agreement, exit the Setup Wizard by clicking **Cancel** and then **Finish**. For information about changes to the computer, see "Canceling a product installation" on page 66.
7. The **Destination Folder** page specifies the directory where the Wizard will install the IBM Rational product. If you want to change the location, click **Change**.

Note: The installation Wizard requires that all IBM Rational products be installed in the same directory.

8. The **Custom Setup** page provides product feature options for the software installation. Clear all features under IBM Rational ClearQuest.
If you want to clear features or select new features, click **Help**.

Note: For disk space requirements, see the "Server system and software requirements" on page 5. Do not use the number displayed in **Custom Setup** or the **Space** button on that page.

9. You do not have to enter information in these pages. (**Default Connection Profile** and **Email Transport Provider**) of the configuration wizard. Use the **Help** to fill in the information. Click **Done**.
10. Click **Install** on the **Ready to Install the Program** page to begin the installation.
11. A **Restart Windows** page appears if the Setup Wizard needs to restart your computer. If files required for the installation are in use during the Setup program and if the program needs to install shared components on your computer, the Setup Wizard may need to restart your computer.
Select **Restart** or **Don't Restart**. If you select **Don't Restart**, the Wizard reminds you that the installation cannot complete until Windows restarts.
After Windows restarts, the second part of the installation process starts automatically after you log on.
12. When the **Setup Complete** page appears, we recommend that you review the current information related to new features and known issues in the readme file. In addition, you can view the IBM developerWorks Web pages. Click **Finish** to complete the installation.
13. Import or enter your IBM Rational license key in the License Key Administrator. For instructions, see Chapter 3, "Installing IBM Rational products," on page 49.

14. To set up the evaluation database (Microsoft Access run-time files):
 - a. Click **Start > Program Files > Rational Software > Rational ClearQuest > Create Rational Evaluation Databases**.
 - b. Click **Create Evaluation Databases** in the Rational ClearQuest: Create Evaluation Databases dialog box. When the schema repository and database are created, click Exit.
 - c. Click **Start > Program Files > Rational Software > Rational ClearQuest**.
 - d. To log in to the user database, enter **admin** as the user id (no password is required) and select **SAMPL** in the database drop-down box.
 - e. Click **All Defects** to view all of the defects in the sample database.

Choosing a database vendor

When choosing a database vendor for the ClearQuest databases, see “Server system and software requirements” on page 5 for specific supported versions.

ClearQuest supports the following databases:

- Entry-level database: Microsoft Access (The run-time files are supplied with ClearQuest. The run-time files are not the full version of Microsoft Access.)
- Mid-level database: Sybase SQL Anywhere (Select this database as a separate product on the *Rational Solutions for Windows* CD-ROM. This software is not installed with ClearQuest.)
- High-end databases: Microsoft SQL Server on Windows, DB2 on Windows and UNIX, and Oracle on Windows and UNIX.

To decide which database vendor is best for your needs and determine how many simultaneous users you expect to have, use the following general guidelines:

- For initial testing and evaluation or for small groups (fewer than five users), you can use the entry-level database.
- For small- to medium-size groups (five to twenty users), you can use the mid-level database.
- For larger groups (over twenty users), large amounts of data, or to achieve better performance, use the high-end databases.

Note: You can use more than one database vendor for ClearQuest databases. For example, you might want to use Oracle or Microsoft SQL Server databases for your schema repository and user databases, and a Microsoft Access database for your test database. However, we do not recommend using multiple database vendors when you are using ClearQuest MultiSite because case sensitivity rules are not consistent between vendors.

Supported database servers for ClearQuest

ClearQuest and ClearQuest MultiSite on Windows supports the operating systems and database vendors in Table 14 and Table 15.

Note: ClearQuest MultiSite does not support Microsoft Access, SQL Anywhere, or DB2 UDB Express databases.

Table 14. Supported database servers for ClearQuest

	SQL Anywhere			Access		
Version	5.5.05	8.0.1	8.0.2	2000	2002 SP1, 2	2003

Table 14. Supported database servers for ClearQuest (continued)

	SQL Anywhere			Access		
Windows 2003 Server, no SP, SP1			X			X
Windows 2000 ProSP 2, 3, 4, 5	X	X	X	X	X	X
Windows 2000 Server, SP 2, 3, 4, 5	X	X	X	X	X	X
Windows 2000 Advanced Server, SP 2, 3, 4, 5	X	X	X	X	X	
Windows XP SP 1, 2	X	X	X	X	X	X
Windows NT 4.0 Server SP 6a, SRP	X	X	X	X	X	
Windows NT 4.0 Work station SP 6a, SRP	X	X	X	X	X	

Table 15. Supported database servers for ClearQuest and ClearQuest MultiSite

	Microsoft SQL Server		Oracle (32 bit)			Oracle (64 bit)	DB2		
Version	7.0 SP 4	2000 SP 2, 3	8.1.6	8.1.7.3	9.2	10	UDB 7.2 with Fix Pack 8	UDB 8.1	UDB Express 8.1 (Not supported for MultiSite)
Windows 2003 Server, no SP, SP1		X			X	X (32 bit)		X	X
Windows 2000 Pro SP 2, 3, 4, 5									
Windows 2000 Server, SP 2, 3, 4, 5	X	X	X	X	X	X (32 bit)	X	X	X
Windows 2000 Advanced Server, SP 2, 3, 4, 5	X	X	X	X	X	X (32 bit)	X	X	X
Windows XP SP 1, 2					X	X (32 bit)			
Windows NT 4.0 Server SP 6a, SRP	X	X	X	X	X	X (32 bit)	X	X	X
Windows NT 4.0 Work station SP 6a, SRP	X	X	X	X	X	X (32 bit)	X	X	X
Solaris 2.6			X	X	X				

Table 15. Supported database servers for ClearQuest and ClearQuest MultiSite (continued)

	Microsoft SQL Server		Oracle (32 bit)			Oracle (64 bit)	DB2		
Solaris 7			X	X	X				
Solaris 8			X	X	X	X			
Solaris 9			X	X	X	X			
HP-UX 11.00 QPK1100			X	X	X				
HP-UX 11.11 Gold QPK11i, Bundle 11i			X	X	X	X			
AIX 4.3.3			X	X	X				
AIX 5.1				X	X	X	X	X	
AIX 5.2 (RISC)				X	X	X	X	X	
Red Hat Pro Linux 7.1				X					
Red Hat Pro Linux 7.2							X	X	X
Red Hat Pro Linux 7.3							X	X	X
Red Hat Pro Linux 8.0								X	X
Red Hat Enterprise Linux 2.1				X	X	X (32 bit and 64 bit)		X	X
Red Hat Enterprise Linux 3.0					X	X		X	X
SUSE LINUX Enterprise Server 8				X	X	X (32 bit)		X	X

Setting up databases for ClearQuest MultiSite

When you replicate an existing ClearQuest schema repository and user database, create empty vendor databases at the new site. However, do not create ClearQuest databases at the new site. For more information, see “Required configuration steps for ClearQuest MultiSite” on page 93.

Using the Getting Started Wizard for ClearQuest

You can use the Getting Started Wizard for ClearQuest to create a defect and change request database, an initial Unified Change Management (UCM) environment, and user accounts. To use the full capabilities of the Wizard, you must follow an order of installation on the server computer designated as the ClearCase LT server and the ClearQuest Administrator computer.

The following table assumes that you have configured and installed the supported vendor software on a database server.

Order of installation	Getting Started Wizard activities
First, ClearQuest Administration Tools	Getting Started Wizard launches automatically after you install the ClearCase LT software. The Wizard enables you to:
Second, ClearCase LT server and client software	<ul style="list-style-type: none"> • Create storage directories for ClearCase VOBs and View • Create a ClearCase project VOB • Create the initial ClearCase component VOB • Create an initial ClearCase project • Create a defect and change request database • Create an initial UCM environment • Create user accounts for ClearQuest

Note: If you are installing ClearCase instead of ClearCase LT, install ClearCase first, then install ClearQuest. To launch the Getting Started Wizard, click **Start Programs > Rational Software > Rational ClearCase > Administration > Getting Started Wizard**. The Wizard will perform the ClearQuest configuration tasks.

Installing the DB2 client

To access a DB2 ClearQuest database, install the DB2 client software on ClearQuest Windows clients and the ClearQuest Administration Tools computer (if applicable).

- To install DB2 client software for a DB2 ClearQuest database, follow the IBM DB2 database documentation. To create the alias, see the *IBM Rational Software Desktop Products Installation Guide*.

Note: The DB2 Administration Client must be installed on all computers.

Installing a Web server for New ClearQuest Web

If you are planning on using the New ClearQuest Web capability, see *IBM Rational New ClearQuest Web Installation Guide*.

Installing Web browsers

If you are planning on using the New ClearQuest Web capability, ensure that all client machines that will be using a ClearQuest Web client have the appropriate browser versions. See “Server system and software requirements” on page 5 for information on the supported browsers and the *IBM Rational New ClearQuest Web Installation Guide*.

Setting up the VS.NET integration

When ClearCase LT is installed, the ClearQuest with VS.NET integration is automatically configured at installation. After installing ClearQuest, when you start VS.NET, the **Workspace Tree** control and the **Activity Grid Control** will support the ClearQuest integration.

Compatibility issues

With IBM Rational products

This version of Rational ClearQuest 2004.06.13 is compatible with all other Rational Suite Version 2004 products. It is not compatible with previous releases before version 2003.06.00 of ClearQuest or Rational Suite.

With SQL Server 2000 installation

During the installation process for Microsoft SQL Server 2000, you have the option of selecting Windows only authentication or mixed mode (Windows and SQL Server) authentication. Select mixed mode authentication for ClearQuest to function properly.

Later in the installation process for Microsoft SQL Server 2000, you are prompted for a database instance name. The database instance name must be the same as the computer name of the machine on which you are installing. The instance name can be accomplished by leaving the instance name blank and accepting the default. If an instance name is required, several issues arise:

- Clients running earlier versions of MDAC (such as 2.1.2) will not be able to connect to the database.
- UNIX clients cannot connect to the SQL Server database if you implement a database instance name.
- You will need to install the SQL Server client on the client computer or manually edit the registry. The following is an excerpt from the Microsoft white paper, *Upgrading to SQL Server 2000*:

When using the SQL Server client connectivity components from SQL Server 7.0 or earlier, you must set up an alias using the Client Network Utility before you connect to a named instance of SQL Server 2000. For example, on a SQL Server 7.0 client, to connect to a named instance of SQL Server 2000, you must add an alias that points to `\\computername\pipe\MSSQL$instance\sql\query`. If you use an alias name of `computername\instance`, clients can connect by specifying this name in the same way that SQL Server 2000 clients do. For the TCP/IP Sockets and NWLink IPX/SPX Net-Libraries, you must use the Client Network Utility to define an alias on the client that specifies the port address on which the named instance is listening.

For more information, go to the Microsoft support Web site at <http://support.microsoft.com>.

Preparing to install ProjectConsole

This section explains how to install and set up ProjectConsole software on the Web server, report server and collection agent computers, repository, and Template Builder. This information is intended for administrators who are responsible for setting up ProjectConsole for use by the entire development team.

For the latest ProjectConsole and Template Builder installation information, see the *IBM Rational Suite Release Notes* on the *Rational Solutions for Windows Online Documentation* CD or go to the IBM Publications Center (<http://www.ibm.com/shop/publications/order>). You can also view the release notes at the end of the Rational Suite installation, or click **Start > Programs > Rational Software > Rational Suite > Rational Suite readme** after you install the software.

Use the checklist in Table 16 to help you set up ProjectConsole and perform required post-installation tasks.

Table 16. Project Console installation checklist

Done	Task
	Before installation

Table 16. Project Console installation checklist (continued)

Done	Task
	License your Rational software. See Chapter 2, “Licensing your IBM Rational products,” on page 43.
	Check the system and software requirements for the ProjectConsole server computer and data warehouse. See “Server system and software requirements” on page 5.
	Make sure that you have administrator privileges on the server computers. See “Administrator privileges” on page 4.
	Determine if you need additional ProjectConsole report servers and collection agents. See the following sections: <ul style="list-style-type: none"> • “Setting up the ProjectConsole server” on page 36. • “Setting up additional ProjectConsole report servers and collection agents (optional)” on page 36.
	Determine how you want to deploy the ProjectConsole server, additional report servers and collection agents (if necessary), and Template Builder in your environment. These features are included by default in your Rational Suite installation. See “Selecting a deployment method” on page 3.
	Select the data warehouse software. See the following sections: <ul style="list-style-type: none"> • “Setting up the ProjectConsole repository” on page 36. • “Server system and software requirements” on page 5. • “Supported database servers for ClearQuest” on page 30. • “With SQL Server 2000 installation” on page 34.
	Install and configure the vendor database software. Read the vendor documentation for installation instructions. Then see Chapter 5, “After installation: configuring databases and other ClearQuest tasks,” on page 73. Use the instructions for configuring a vendor database, but do not use the instructions for configuring a ClearQuest schema repository and user database. <ul style="list-style-type: none"> • Although SQL Anywhere 8.0.2 software is listed as a separate product on the Rational Solutions for Windows installation CD, it is automatically installed with the ProjectConsole server components. • If you are using Oracle or DB2 as your data warehouse server, install the Oracle or DB2 client software on any additional report server and collection agent computers and create database aliases. See “Installing the DB2 client” on page 33. • Do not install the database client software on the ProjectConsole Web clients.
	Determine where you want to install the Template Builder software. See “Installing ProjectConsole template builder” on page 37.
Installing the ProjectConsole components	
	To learn the procedures for installing the ProjectConsole software, see Chapter 3, “Installing IBM Rational products,” on page 49.
After installation	
	Configure the ProjectConsole server and additional ProjectConsole report server and collection agents (optional). See Chapter 6, “After installation: configuring ProjectConsole,” on page 95.
	Configure the ProjectConsole security database. See Chapter 6, “After installation: configuring ProjectConsole,” on page 95.
	Configure the data warehouse and repository. See Chapter 6, “After installation: configuring ProjectConsole,” on page 95.

Table 16. Project Console installation checklist (continued)

Done	Task
	<p>Tell users to log in to the ProjectConsole server. See the <i>IBM Rational Software Desktop Products Installation Guide</i>.</p> <p>Note: To launch either the Designer or Dashboard, cookies need to be enabled. This is true for all Browser types.</p>

Setting up the ProjectConsole server

The ProjectConsole server combines the Rational Web Platform (RWP), a report server, and a data collection agent.

To set up the ProjectConsole server, do the following:

1. Install the Rational Suite and ProjectConsole components. The Rational Web Platform, report server, and data collection agent are installed on the server computer automatically.
2. To use the ProjectConsole server to collect data, configure the report server and collection agent software on the server computer. Setting up additional computers as report servers and collection agents is optional.

A collection agent provides the ProjectConsole server access to project data from Rational Projects or Microsoft Project. It collects artifacts from these data repositories for the Web server and stores the artifacts in a data warehouse.

Note: Installing RWP on a server that is already running another Web server may result in a port conflict that can cause RWP or the other Web server to fail on start-up. We recommend that you install RWP on a server that does not have to run any other Web servers. If this is impossible, we recommend that you configure the other Web server to use ports that are not being used by RWP. If you cannot do this, you must configure RWP to use ports not used by the other Web server. For more information, see “To change the default RWP HTTP port” on page 138.

Setting up additional ProjectConsole report servers and collection agents (optional)

To set up and run an additional computer as a ProjectConsole report server and collection agent, perform the following tasks:

- Install the ProjectConsole report server and data collection agent software. You can install these features as a stand-alone product by clearing all other features in the Setup Wizard.
- Configure the collection agent software. See “Configuring the ProjectConsole services” on page 95.

Setting up the ProjectConsole repository

The ProjectConsole repository is used to store collected data, navigation tree structure information, and user (and group) authentication information in ProjectConsole.

The security database is created from SQL Anywhere 8.0.1 software. SQL Anywhere is automatically installed with the ProjectConsole server components. It contains information about the ProjectConsole navigation tree structure and authentication information for all users and groups.

Preparing the data warehouse

Create the repository only after you have installed the ProjectConsole server and created your data warehouse. The data warehouse is the database server in which ProjectConsole stores the data collected from software development tools as well as IBM Rational point products. You manage the data warehouse with the ProjectConsole Maintenance Tool.

If you want to start using ProjectConsole in a production environment, we recommend that you create a new data warehouse using SQL Anywhere, SQL Server, Oracle, or DB2. Microsoft Access (run-time files only) is provided for demonstration purposes. Although you can use a Microsoft Access database, SQL Anywhere, SQL Server, Oracle, and DB2 are more robust and better suited for an enterprise-scale data warehouse.

The database requirements and preparation for the ProjectConsole data warehouse are identical to those of Rational ClearQuest.

Installing ProjectConsole template builder

You can install Template Builder on any computer on which you want to create or modify ProjectConsole report templates. You can install Template Builder on the ProjectConsole server, on a ProjectConsole report server and collection agent computer, or on a computer that has neither the Web server components nor the report server and collection agent software installed. To test the templates created in Template Builder, the source point product must be installed on the Template Builder computer.

To generate reports using Template Builder templates, it is not necessary to install Template Builder on the ProjectConsole server.

If you use Template Builder to create templates on a computer that does not also have the ProjectConsole report server and collection agent software installed, save the templates in the Templates folder in the ProjectConsole installation directory on the server computer.

Note: If you install Template Builder on a computer that also has the report server and collection agent software installed, you do not have to save the templates on the Web server.

Preparing to install RequisitePro

Rational RequisitePro includes a database server and Web server (optional). This section describes how to install and set up these RequisitePro features.

For the most current information related to RequisitePro features and known issues, refer to the release notes on the *Rational Solutions for Windows Online Documentation* CD or the IBM Publications Center (<http://www.ibm.com/shop/publications/order>). The release notes also appear at the end of the RequisitePro installation and are available from a link in the **Let's Go Rational RequisitePro** application, which appears when you first launch RequisitePro. After the program is installed, you can access them from the Start Menu by clicking **Start > Programs > Rational Software > Rational RequisitePro > Release Notes**.

Use the checklist in Table 17 to help you set up RequisitePro and RequisiteWeb (optional) and perform required post-installation tasks.

Table 17. RequisitePro servers installation checklist

Done	Task
Before installation	
	License your Rational software. See Chapter 2, “Licensing your IBM Rational products,” on page 43.
	Determine how you want to deploy RequisitePro servers and the client software to users. See “Selecting a deployment method” on page 3.
	Select a vendor database and check the system and software requirements for the RequisitePro database. See the following sections: <ul style="list-style-type: none"> • “Server system and software requirements” on page 5. • “Configuring the RequisitePro database” on page 39.
	Determine if you want to install and set up a RequisiteWeb server. Check the system and software requirements for RequisiteWeb. See the following sections: <ul style="list-style-type: none"> • “Server system and software requirements” on page 5. • “Configuring RequisiteWeb” on page 40. Note: RequisitePro client users can also use RequisiteWeb.
	Ensure that you have administrator privileges on the servers. See “Administrator privileges” on page 4.
	Determine if you want to use the IBM Rational E-Mail Reader. See “Configuring e-mail for discussions” on page 40. Note: RequisitePro client users can also use RequisiteWeb.
	Preview the options that you install in each RequisitePro server installation. See “Custom setup options for RequisitePro servers” on page 39.
Installing RequisitePro	
	Install the vendor software on the database server. Read the vendor documentation for instructions.
	To learn the procedures for installing RequisitePro (database setup and Web server features) servers and clients, see Chapter 3, “Installing IBM Rational products,” on page 49.
After installation	
	Configure the RequisitePro database. See “Configuring DB2 for IBM Rational RequisitePro” on page 101, “Configuring Oracle for RequisitePro” on page 105, or “Configuring SQL Server for RequisitePro” on page 111.
	If you chose DB2 or Oracle software for your database server, install the database client software on the RequisiteWeb server and create an alias. See also “Installing DB2 and Oracle database client software” on page 39 and “Defining database aliases on each RequisitePro client” on page 110.
	If the RequisitePro clients will access an DB2 or Oracle database, direct them to install database client software on their desktops and create an alias on each client.
	Configure the RequisiteWeb Server. See “Setting up RequisiteWeb” on page 114.
	Give users the RequisiteWeb URL (optional) so they can log into RequisiteWeb. See the <i>Rational Software Desktop Products</i> .
	Configure e-mail for RequisitePro discussions. See “Configuring the Rational E-Mail Reader” on page 113.

Table 17. RequisitePro servers installation checklist (continued)

Done	Task
	The Rational Administrator is installed with RequisitePro. For more information about the Rational Administrator, see the <i>Rational Suite Administrator's Guide</i> .

Custom setup options for RequisitePro servers

Table 18 describes the Custom Setup options in a RequisitePro server installation.

Table 18. Custom setup options for Rational RequisitePro

Option	Description
Database Setup	This option includes schema creation scripts and setup instructions.
Sample Projects	This option includes a set of sample projects to get started with RequisitePro.
Web Server Components for RequisiteWeb	This option includes RequisiteWeb server program files and setup instructions.

Configuring the RequisitePro database

RequisitePro can be used with DB2, Oracle, Microsoft SQL Server and Microsoft Access databases. To create and access RequisitePro projects in DB2, Oracle, or Microsoft SQL Server databases, configure a schema on your database server. Refer to DB2, Oracle, or Microsoft documentation for information on installing database software.

See Chapter 7, “After installation: configuring RequisitePro,” on page 101 for how to configure the DB2, Oracle, or SQL Server database for RequisitePro projects. The RequisitePro Data Transport Wizard enables you to move a Rational RequisitePro project from one database to another.

Installing database configuration scripts

If you are setting up an DB2, Oracle, or SQL Server database and choose the default installation of RequisitePro, the Setup Wizard installs schema creation scripts in the following locations on your local server:

- C:\Program Files\Rational\RequisitePro\database\db2
- C:\Program Files\Rational\RequisitePro\database\oracle
- C:\Program Files\Rational\RequisitePro\database\sqlserver

Installing DB2 and Oracle database client software

For users to access RequisitePro projects on DB2 or Oracle databases, they must install database client software on their desktops.

RequisiteWeb users do not have to install RequisitePro software or the Oracle client software on their desktops. To configure a RequisitePro Web server that will access a DB2 or Oracle database, install the database client software on the Web server.

To install DB2 or Oracle client software, follow the database product documentation.

Configuring RequisiteWeb

Rational RequisiteWeb allows clients to read, create, and modify RequisitePro project requirements across an intranet. RequisiteWeb uses the Rational Web Platform (RWP) and Netscape Navigator and Microsoft Internet Explorer to provide client access to RequisitePro project data. RequisiteWeb must be installed on a Windows server. See “Custom setup options for RequisitePro servers” on page 39 for the specific **Custom Setup** option to select in the Setup Wizard. After you configure the database and install the RequisiteWeb components on the Web server, see “Setting up RequisiteWeb” on page 114.

Note: Installing RWP on a server that is already running another Web server may result in a port conflict that can cause RWP or the other Web server to fail when started. We recommend that you install RWP on a server that does not have to run any other Web servers. If this is impossible, we recommend that you configure the other Web server to use ports that are not being used by RWP. If you cannot do this, you must configure RWP to use ports not used by the other Web server. For more information, see “To change the default RWP HTTP port” on page 138.

Configuring e-mail for discussions

The Rational E-Mail Reader offers full e-mail integration with RequisitePro by associating an e-mail handler with each RequisitePro project. Initial discussion items and replies are automatically stored in the RequisitePro database and sent to discussion participants via e-mail. Participants can reply to the discussion items using their e-mail, as well as from within RequisitePro. See “Configuring the Rational E-Mail Reader” on page 113 for more information.

Preparing to install IBM Rational testing products

This section explains what you need to know before you install IBM Rational testing products. With Rational testing products, you can plan, develop, and execute both functional and performance tests for your Windows applications, as well as manage all testing activities — planning, design, development, execution, and analysis - using IBM Rational TestManager.

For the most current information related to features and known issues in IBM Rational testing products, refer to the release notes on the *Rational Solutions for Windows Online Documentation* CD or go to the IBM Publications Center (<http://www.ibm.com/shop/publications/order>). The release notes also appear at the end of each product installation. After a testing product is installed, you can access the release notes by clicking **Start > Programs > Rational Software > Rational <testing product> > Rational <testing product> readme**.

Use the checklist in Table 19 to help you set up your test environment and perform post-installation tasks.

Table 19. IBM Rational testing products installation checklist

Done	Task
Before installation	
	Get the license keys for your IBM Rational testing products. See Chapter 2, “Licensing your IBM Rational products,” on page 43.
	Make sure you have administrator privileges on server systems. See “Administrator privileges” on page 4.

Table 19. IBM Rational testing products installation checklist (continued)

Done	Task
	Check the system and software requirements for IBM Rational testing products. See “Server system and software requirements” on page 5.
	Determine how you want to deploy the testing products in your environment. See “Selecting a deployment method” on page 3.
	Make sure that all computers have TCP/IP installed. Install updates to your network software.
	Verify that the computers are communicating with each other. (If you have any problems, see your network administrator.)
	Decide which type of database you need for your IBM Rational Test Datastore. For more information, see “About IBM Rational test datastores” on page 41.
	Ensure that you have “Server” Service or LanMan Service, which is a part of the “File and Printer Sharing for Microsoft Networks. This is required to run Nutcracker, a required component of TestManager.
	If you want to convert a Microsoft Access test datastore to a SQL Anywhere test datastore, see “Converting a Microsoft Access test datastore” on page 42.
	Decide whether you want to attach the ClearQuest database to an IBM Rational Administrator project. For more information about using the Rational Administrator, see the <i>IBM Rational Suite Administrator’s Guide</i> . The Rational Administrator is included in RequisitePro, Robot, SQL Anywhere, TestManager, and Rational Suite editions.
Installing IBM Rational Testing products	
	To learn the procedures for installing Rational ManualTest Web, Sybase SQL Anywhere, or other testing products that include Microsoft Access and the Rational Administrator, see Chapter 3, “Installing IBM Rational products,” on page 49. Note: For Sybase SQL Anywhere, we recommend using a dedicated server for optimal performance. All clients should have network access to this computer
After installation	
	To set up the Web server for ManualTest Web Execution, see “Configuring IBM Rational ManualTest Web Execution” on page 131.
	Create the test datastore. See “Configuring test datastores” on page 127 and the <i>IBM Rational Suite Administrator’s Guide</i> . If you are converting a Microsoft Access test datastore to a SQL Anywhere test datastore, see “Converting a test datastore from Microsoft Access to SQL Anywhere” on page 130.

About IBM 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 IBM 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 *IBM Rational TestManager User Manual*.

About IBM Rational test datastores

An IBM 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 Rational Administrator, you have the option of using two types of database engines: Microsoft Access or Sybase SQL Anywhere.

Note: The Rational Administrator is included in RequisitePro, Robot, Sybase SQL Anywhere, TestManager, and Rational Suite editions. For information about the Rational Administrator, see the *IBM Rational Suite Administrator's Guide*.

- **Sybase SQL Anywhere** - This is the default database engine for the test datastore. We recommend using this type of database engine when two or more concurrent users access a test datastore simultaneously. Data access for an SQL Anywhere database server is faster than for a comparably sized Microsoft Access database. However, an SQL Anywhere database does require more maintenance than a Microsoft Access database.
- **Microsoft Access** - The run-time files are installed automatically when you install your Rational software. (The Microsoft Access run-time files are not the full version of Microsoft Access.) IBM recommends 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.

Converting a Microsoft Access test datastore

If you have a Microsoft Access test datastore and want to convert it to an SQL Anywhere test datastore, perform the following tasks:

- Install the Sybase SQL Anywhere software.
- Back up your test datastore before starting the conversion.

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

Installing the SQL Anywhere database software

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

- For the installation procedure, see Chapter 3, "Installing IBM Rational products," on page 49. Select SQL Anywhere in the **Product Selection** page.

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

- For information about setting up SQL Anywhere, see Chapter 8, "After installation: configuring IBM Rational test tools," on page 127.

Chapter 2. Licensing your IBM Rational products

This chapter provides quick information for customers who are licensing their IBM Rational products for the first time. You can request and install license keys before or after installing your IBM Rational products. Most IBM Rational products require a license key to launch the product.

The *IBM Rational Software License Management Guide* describes the web-based license manager AccountLink, IBM Rational Common Licensing, License Key Administrator (LKAD), and redundant license servers. It also provides instructions for requesting, installing, upgrading, and moving floating, named-user floating, and node-locked license keys.

This chapter explains product-specific licensing information:

- “Suite versus point-product licenses” on page 44
- “Licensing on hosted development systems” on page 44
- “Licensing ClearCase LT” on page 44
- “Licensing ClearQuest” on page 45
- “Licensing ClearQuest MultiSite” on page 45
- “Licensing Sybase SQL Anywhere” on page 45
- “Licensing Web clients” on page 46
- “Licensing Windows NT components for DevelopmentStudio on UNIX” on page 46

See Table 20 for instructions in basic licensing tasks.

Table 20. Basic licensing tasks

To	Task
Get your permanent (or Term License Agreement) license key. Term License Agreement means the license key has an expiration date built into it.	Use your <i>Important Licensing and Installation Information</i> document or <i>Proof of Entitlement</i> certificate to request permanent license keys from AccountLink, IBM Rational’s web-based license key management tool. Go to https://www6.software.ibm.com/reg/rational/rational-i.. Click Request and Manage License Keys . See “Using AccountLink to request permanent license keys” on page 46.
Get your evaluation license key.	Get the license key from your IBM Rational sales representative.
Install node-locked license keys on your desktop.	Use the License Key Administrator (LKAD) Wizard to install your license keys. The LKAD Wizard launches at the end of installation or you can open the LKAD from the Start Menu under the Rational Software folder. See “Importing permanent license keys” on page 47 and “Entering temporary license keys” on page 47. Note: If you have purchased an authorized user license, you can request multiple node-locked keys to use the product on multiple machines at the same time.

Table 20. Basic licensing tasks (continued)

To	Task
Install floating or named-user license keys on the IBM Rational license server.	<ol style="list-style-type: none"> 1. Install the IBM Rational license server software. You do not have to have a license key to operate the license server software. Follow the instructions in the <i>IBM Rational Software License Management Guide</i> or use the installation procedures in Chapter 3, “Installing IBM Rational products,” on page 49. If you use the installation procedures in this guide, select the Rational License Server in the Product Selection page. 2. Use the License Key Administrator (LKAD) Wizard to install the license keys. The LKAD Wizard launches at the end of installation or you can open the LKAD from the Start Menu under the Rational Software folder. See “Importing permanent license keys” on page 47 and “Entering temporary license keys” on page 47. 3. Start the license server. See the <i>IBM Rational Software License Management Guide</i> or the License Key Administrator Help. 4. Give users the name of the license server. See “Configuring clients to use single or multiple license servers” on page 48.
Configure client desktops to request licenses from the IBM Rational license server.	<ol style="list-style-type: none"> 1. Create a release area and site defaults file. See “Creating a release area and site defaults file” on page 55. 2. Give users the shortcut to the release area. Or, 3. Give users the name of the Rational license server. They can use the License Key Administrator (LKAD) Wizard to specify the license server. The LKAD Wizard launches at the end of installation. See “Configuring clients to use single or multiple license servers” on page 48.

Suite versus point-product licenses

An IBM Rational license key indicates whether it enables a Rational Suite license, such as IBM Rational Suite DevelopmentStudio, or a point-product license, such as IBM Rational Purify. An IBM Rational Suite license key lets you run all of the products contained within the Rational Suite concurrently. It causes the check-out of a single floating or node-locked license.

Licensing on hosted development systems

The IBM Rational products that support the hosted development systems in “Server system and software requirements” on page 5 require floating licenses.

Licensing ClearCase LT

This section describes ClearCase LT licensing.

- The ClearCase LT server and ClearCase LT client require separate floating licenses when they are installed on separate computers. If you are evaluating ClearCase LT, you need only one floating license because the ClearCase LT server acts as both server and client.
- ClearCase LT can use a node-locked Rational Suite license key. After you have installed the node-locked license, use the License Usage Mapper to specify that ClearCase LT is to use the Rational Suite key. Rational does not provide a stand-alone node-locked license for ClearCase LT. See the *IBM Rational Software License Management Guide* or the License Key Administrator Help for more information about the License Usage Mapper.

Licensing ClearQuest

Each ClearQuest native client requires access to a floating license or node-locked license.

Licensing ClearQuest MultiSite

ClearQuest MultiSite requires both a ClearQuest license and a ClearQuest MultiSite license. Any access to a replicated database requires both a ClearQuest and a ClearQuest MultiSite license.

You can calculate the number of ClearQuest MultiSite licenses your site needs by determining how many developers will access replicated databases. If all of your developers will access replicated databases, you need the same number of ClearQuest MultiSite licenses as ClearQuest licenses. If not all developers will access replicated databases, you can purchase fewer ClearQuest MultiSite licenses.

For example, a company has two sites, with 20 developers at site A and 5 developers at site B. The company has three databases at site A; two of them will be replicated to site B and one will not be replicated. Five of the developers at site A will access only the unreplicated database, and the remaining 15 will work in all databases. All of the developers at site B will access replicated databases. Therefore, the company needs to purchase the following numbers of licenses:

Site	Number of ClearQuest Licenses	Number of ClearQuest MultiSite Licenses
A	20	15
B	5	5

Note: This example assumes that you purchase a ClearQuest license for each user. If you have fewer ClearQuest licenses than users, you can purchase a proportional number of ClearQuest MultiSite licenses. For example, if site B purchased three ClearQuest licenses, they would also purchase three ClearQuest MultiSite licenses.

Licensing Sybase SQL Anywhere

The SQL Anywhere database software on the *Rational Solutions for Windows CD* or from your IBM Web download package does not require a separate license. It is configured to work only with IBM Rational products.

Licensing Web clients

To use ClearCase Web, new ClearQuest Web, ManualTest Web, ProjectConsole, and RequisiteWeb your license administrator should install floating licenses on a Rational license server. The Rational Web Platform server requests a license key from the Rational license server on behalf of each Web client. You do not have to install a license key on your desktop to use the Web client.

Licensing Windows NT components for DevelopmentStudio on UNIX

To run the Windows NT components for DevelopmentStudio on UNIX, request a floating license from AccountLink (<https://www6.software.ibm.com/reg/rational/rational-i>). Click **Request and Manage License Keys** after you register with the Rational Download and Licensing Center. When you receive the permanent license key file from AccountLink, import the file on the IBM Rational license server.

- A UNIX license server can serve floating licenses to Windows and UNIX clients. To set up a Rational license server on a UNIX system, see the *IBM Rational Software License Management Guide*.
- A Windows license server can serve floating licenses to Windows and UNIX clients.

Using AccountLink to request permanent license keys

In AccountLink, you can order and return permanent node-locked, floating, and named-user floating license keys for Windows and UNIX products. Use your *Important Licensing and Installation Information* document or *Proof of Entitlement* certificate to provide the required information.

Note: AccountLink does not support temporary license key transactions.

The AccountLink interface offers three license transactions:

Transaction	Description
Get License Key(s)	<p>Register a license key or keys to a specific machine. To order a permanent key, you need the license key type required for each component, product account number, the host name and host ID, or ethernet address of the license server or client.</p> <p>You can register:</p> <ul style="list-style-type: none">• IBM Rational Windows or UNIX products that will be served from an IBM Rational license server.• Single, multiple, or redundant IBM Rational license servers on Windows or UNIX systems.• Remote Windows or UNIX computers; you do not need to sit at the computer that you are requesting license keys for. <p>To find out more about the host name and host ID, see the <i>IBM Rational Software License Management Guide</i>. To order permanent license keys for a redundant server environment, specify the redundant servers' host IDs in the following order:</p>

- Primary license server
- Secondary license server
- Tertiary or backup license server

The clients communicate with the redundant servers in that order.

Return License Key(s)

Return the existing license key to your account. This adjusts the count of registered products in your account and enables you to receive a license key for another computer. To learn more about returning license keys, see *IBM Rational Software License Management Guide*.

Request a Copy of a License File

This request will provide you with the most recent license keys currently registered to the host specified. You may need this transaction when your hard disk is reformatted, you need to restore the software on your system, or your license keys become corrupt. This transaction does not require that you return or add license keys.

Importing permanent license keys

Use the License Key Administrator (LKAD) or the LKAD Wizard to import the license key file either on your desktop (node-locked license) after you install the product or on the license server (floating license) after you install the license server software. To install named-user floating license keys, see the *IBM Rational Software License Management Guide*.

Note: You must have local administrative privileges on the computer to import the license key into the LKAD or LKAD Wizard.

To import a license key file in the LKAD:

1. Select **License Keys > Import License Key(s)** on the menu bar.
2. In the **Import License Key(s)** dialog box, find the *.upd or *.txt file (license key file) and highlight it.
3. Click **Open**. The default location for the license key file is *<Install Path>\Rational\common*.
4. Click the **Import** button in the **Confirm Import** dialog box.

Other Methods

- If your e-mail program supports launching programs from file attachments, double-click the .upd or .txt attachment in the e-mail notification you received from IBM Rational Software. Select **Open it** in the **Opening Mail Attachment** dialog box. Click **Import** in the **Confirm Import** dialog box.
- Save the file attachment to any folder and double-click the license file.
- Use the LKAD Wizard.

Entering temporary license keys

Temporary license keys can be entered in the License Key Administrator (LKAD). If you are entering temporary floating keys, enter them after you have installed the IBM Rational license server software.

Note: You must have local administrative privileges on the computer to import the license key into the LKAD or LKAD Wizard.

To enter license information in the LKAD:

1. Select **License Keys > Enter a License** in the menu bar of the License Key Administrator.
2. Select the type of license.
3. In the next dialog box, enter the following information:
 - Product
 - Expiration Date
 - License Key
 - Quantity (if you are installing a floating license key)
4. Click **Finish**. The License Key Administrator adds this information to the license key *.dat file in <Install Path>\Rational\common .

Configuring clients to use single or multiple license servers

Enter the license server's host name in the License Key Administrator (LKAD) of your client desktop. Your license administrator should tell you whether the license server has been started before you specify the license server.

The following procedure lets you specify one or multiple license servers on your desktop. Do not use the following procedure to enter redundant servers.

To enter the license server host names on a client desktop:

1. Select **Settings > Client/Server Configuration**.
2. Click **Add Server**.
3. Single should be the default value next to **Server Type**. Enter the host name of the license server in the **Values** column next to **Server Name** by clicking **New-Server**. Press Enter after entering the host name.

Additional Servers

If your system administrator has given you the host names of additional license servers, click **Add Server** and enter the host name for each server.

4. Click **OK** after you have entered all servers.

Chapter 3. Installing IBM Rational products

Use the IBM Rational installation program for initial and upgrade installations of IBM Rational products. This chapter describes the IBM Rational Setup Wizard and how the Wizard can help you deploy products directly from the *Rational Solutions for Windows* CD-ROM, from the IBM Web site, from a release area on a network, and in silent installation mode. For descriptions of these methods, see “Selecting a deployment method” on page 3. If you are upgrading from a previous release of Rational Software, see the *IBM Rational Suite Upgrade Guide*.

Note: See the *IBM Rational Software Desktop Products Installation Guide* for more information about installing and configuring desktop or client software.

Removing previous releases of IBM Rational products

Before installing IBM Rational products from version 2003.06.13, if there are previous versions of Rational products installed, including the IBM Rational license server, you or your system administrator must see the *IBM Rational Suite Upgrade Guide*. You can find the guide in the *IBM Rational Solutions for Windows Online Documentation* CD-ROM, or you can download it from the IBM Publications Center. The only exception is IBM Rational ClearCase. You can install products with earlier versions of ClearCase.

Note: If you are using floating licenses, record the license server names before you upgrade IBM Rational products on your computer. After you install new IBM Rational products on your computer, reset the host names in the License Key Administrator.

Deploying IBM Rational products

Use Table 21 to help you find the correct procedures for the deployment method that you have selected for your users. Read the referenced sections in the order in which they are listed. To install ClearCase LT or ClearQuest for evaluation, see “Installing ClearCase LT for evaluation” on page 17 or “Installing IBM Rational ClearQuest for evaluation” on page 28” Installing IBM Rational ClearQuest for evaluation.

Table 21. Deployment methods

Method	See
Install directly from the <i>IBM Rational Solutions for Windows</i> CD-ROM.	<ul style="list-style-type: none">• “Using the Setup Wizard” on page 50.• “Using the Custom Setup page” on page 52.• “Specifying the IBM Rational license server” on page 53.• “Installing IBM Rational products from the CD or Web download” on page 54.• “Post-installation tasks” on page 65.

Table 21. Deployment methods (continued)

Method	See
Download the software from the IBM Web site.	<ol style="list-style-type: none"> 1. Go to www.rational.com/licensing. 2. Select Rational Download and Licensing Center and register with IBM Web membership. 3. Select Full Product Versions or Patches and Service Releases. 4. Select the Rational product that you want to install. 5. Select the version of the Rational product that you want to install. Click Continue to navigate to the Download page.
Create a release area and site defaults file using the Setup Wizard.	<ul style="list-style-type: none"> • “Using the Setup Wizard” on page 50. • “Specifying the IBM Rational license server” on page 53. • “Creating a release area and site defaults file” on page 55.
Create multiple site defaults files for a release area.	“Running the Site Preparation Wizard to create multiple sitedef files” on page 59.
Install from a release area on a network (using the standard configuration or customizing the client configuration on your desktop).	<ul style="list-style-type: none"> • “Installing IBM Rational products from a release area” on page 59. • “Post-installation tasks” on page 65.
Cancel a product installation.	“Canceling a product installation” on page 66, or “Canceling a silent installation” on page 64.
Reinstall the product (modify or repair).	“Reinstalling a product (modify or repair)” on page 66.
Set up a silent installation in a release area.	“Setting up silent installations of IBM Rational products” on page 62.
Perform a silent installation.	<ul style="list-style-type: none"> • “Performing a silent installation” on page 63. • “Post-installation tasks” on page 65.
Remove a product.	Chapter 10, “Removing IBM Rational products,” on page 147, or “Using the command line to remove a product” on page 64.
Use command line syntax.	“Command line syntax” on page 67.
Troubleshooting your installation.	“Rational Setup Wizard warnings and blocks” on page 68
Apply a service release.	“Applying service releases” on page 68.

Using the Setup Wizard

Use the IBM Rational Setup Wizard to install IBM Rational Software products. The Setup Wizard arrives in your product shipment or in your software download.

Rational_install log

The Setup Wizard does not display an error summary. The log of installation activities called Rational_install.log records all installation activities. You and a Customer Support representative can use the log to trace most installation errors.

By default, the install log file is in the TEMP directory. The location of the directory depends on the TEMP environment variable set on the computer. To find the location, open a command Window and type **echo %TEMP%** at the MS-DOS prompt.

This folder and file may be hidden. To display them in Windows Explorer, set **Show Hidden Files and Folders**.

Note: The installation log is not cumulative. Performing another installation or performing a repair or modify of an installation overwrites the existing log file. If you need to save the log, either copy it to a different location or rename it before you install another product.

Before you start the IBM Rational Setup Wizard

The following general requirements are necessary to run the IBM Rational Setup Wizard on the system.

- Stop all applications, including SQL Anywhere services, before you begin the installation.
- Make sure you have administrator privileges before installing Rational products.
- To use the Rational Setup Wizard on a Windows operating system, you must have Windows administrator privileges on the local computer. Log in as one of the following users:
 - Local administrator
 - Member of the local administrator's group
 - Domain administrator who is a member of the local administrator's group
- Turn off all virus protection software. These programs often run in the background and interfere with the performance of the installation application because the virus protection checks each file that is installed.
- Make certain that the system meets the minimum requirements and the correct operating system.
- The Setup Wizard uses C:\Program Files\Rational as the default installation path.
- The Setup Wizard installs Microsoft Core Components and some additional files on the same drive as the operating system (often the C:\ drive), even if you have specified an alternate drive for installation. These files can require 5-15 MB of temporary disk space on your hard drive.
- The Setup Wizard requires that you install all IBM Rational products in the same directory. If you already have Rational products installed on the computer, the Setup Wizard installs additional Rational products in the same directory.
- Do not install your Rational software to a network location under Windows 9.x. In certain situations, the installation needs to reboot to install files that have been locked by the operating system during installation. The reboot frees these files so that they can be replaced before they become locked again. Installing Rational software to a network location prevents this action from occurring because the network connections are not ready.
- Make sure that you have a current backup of your registry and system directories.

- When you install this release 2003.06.13 on a multiprocessor machine, disable the additional processors before installing the software. Consult your computer manufacturer for information on how to disable additional processors.
- Turn off any user interface managers or environments that run on Microsoft Windows.

Registry Size

If you encounter the following system error during the installation, follow the instructions. "Your maximum registry size is too small. To ensure that Windows runs properly, increase your maximum registry size. For more information, see Help."

Interrupting an Installation

Interrupting an installation that is in progress may leave your computer in an indeterminate state. If you try to close the Setup wizard window while the installation is in progress, you are asked to confirm that you want to exit from the incomplete installation.

Using the Custom Setup page

Use Table 22 to help you install the correct server features for your product when you install the product from the installation CD, from the IBM Web download package, or when you customize your own configuration as you install from a release area.

The **Custom Setup** page lists the features for the product to be installed. The feature list in a Rational Suite edition includes IBM Rational point products. The **Custom Setup** page opens in Step 9 on page 54 of the procedure in "Installing IBM Rational products from the CD or Web download" on page 54.

Note: For disk space requirements, see the "Server system and software requirements" on page 5. Ignore the number displayed in **Custom Setup** and do not use the **Space** button on that page.

Table 22. Server custom setup in the Setup Wizard

To install	Choose product	Custom options	Notes
Rational Suite Edition	Rational Suite	The products included in the Suite edition will be selected. For example, under ClearQuest, you will see the ClearQuest Administration Tools, Web server, and so on.	<ul style="list-style-type: none"> • Does not install the ClearCase LT Server. • Under each product in the Rational Suite, you will see features displayed as they are displayed in the rest of the Custom Options column.
ClearCase LT server	ClearCase LT	<ul style="list-style-type: none"> • ClearCase Microsoft Visual Studio.NET • Web server 	<ul style="list-style-type: none"> • Install from CD-ROM or from the Web: Select the server and client software option for the ClearCase LT server in the Client/Server page. • Create Release Area: Select Siteprep ClearCase Server in the Client/Server page.
ClearQuest Administration Tools	ClearQuest	Administration Tools	To plan your ClearQuest configuration, see "Preparing to install ClearQuest and ClearQuest MultiSite" on page 20. No other ClearQuest features are required.

Table 22. Server custom setup in the Setup Wizard (continued)

To install	Choose product	Custom options	Notes
ClearQuest MultiSite Administration Tools	ClearQuest	MultiSite Administration Tools	To plan your ClearQuest configuration, see “Preparing to install ClearQuest and ClearQuest MultiSite” on page 20. No other ClearQuest features are required.
ClearQuest database	SQL Anywhere 8.0.2	See Notes.	<ul style="list-style-type: none"> Do not select Rational ClearQuest in the Setup Wizard’s Product Selection page. Install SQL Anywhere as a separate product. To install other vendor database software, read the vendor documentation. No ClearQuest features are required when you install the vendor database.
ClearQuest MultiSite	Rational Shipping Server	See Notes.	To plan your ClearQuest configuration, see “Preparing to install ClearQuest and ClearQuest MultiSite” on page 20. No other ClearQuest features are required.
New ClearQuest Web	ClearQuest	ClearQuest Server and ClearQuest Web Application	To plan your New ClearQuest Web configuration, see <i>IBM Rational New ClearQuest Web Installation Guide</i> .
ManualTest Web Execution	Any Rational Suite, Robot, TeamTest, TestManager	<ul style="list-style-type: none"> Web Server Components Rational ManualTest Web Execution 	You do not have to install any other IBM Rational testing product on the server. You can clear all the other features.
ProjectConsole software	Any Rational Suite	<ul style="list-style-type: none"> ProjectConsole Web Server Components (includes Report Server and Data Collection Agent software) ProjectConsole Report Server and Data Collection Agent (Select this option if you want to configure additional Agents) ProjectConsole Template Builder 	<p>ProjectConsole is included in all Rational Suite editions.</p> <p>If you create a release area for Rational Suite, do not select the ProjectConsole Web server components. If you do select them, every user who installs from that release area will see the ProjectConsole Web server components (and Rational Web Platform) software loaded and running on their computers.</p>
RequisitePro Database	RequisitePro	<ul style="list-style-type: none"> Database Setup Sample Projects 	If you are installing RequisitePro on a client, you do not need to install the Database Setup.
RequisiteWeb	RequisitePro	<ul style="list-style-type: none"> Web Server Components Rational RequisiteWeb 	Do not install RequisiteWeb on a computer that has JIntegra already installed.

Specifying the IBM Rational license server

You can provide a license server name in the Setup Wizard if you are using floating licenses. You may provide the license server name if you plan to have users install from a release area or run a silent installation from the release area. If your product requires a license key and you do not provide the server name, users will see the License Key Administrator (LKAD) start at the end of the installation.

Installing IBM Rational products from the CD or Web download

This section describes a typical installation of a Rational product from the *IBM Rational Solutions for Windows* CD-ROM or from a software package that you downloaded from the IBM Web site. The Setup Wizard Program guides you through the software installation regardless of the deployment method. If you are installing ClearCase LT or ClearQuest for evaluation, see “Installing ClearCase LT for evaluation” on page 17 or “Installing IBM Rational ClearQuest for evaluation” on page 28”.

1. Log in as a user with Administrator rights on the local machine.
2. Insert the *IBM Rational Solutions for Windows* Disc 1 into the computer's CD-ROM drive. If you have downloaded the software using the Download Director or a zip file, click Setup.exe after you have extracted the files from either the Download Director or the zip file.

The Setup Wizard starts automatically.

If autorun is disabled on your computer, click **Start > Run** and enter `cd_drive:\Setup.exe` where drive is the letter of the CD-ROM drive.

3. The **Welcome** page to the Setup Wizard opens. Click **Next** to start the installation, and to advance through the following screens.
4. The **Product Selection** page lists all products available for installation. Select the product you want to install.
5. Select the **Desktop Installation from CD Image** option in the **Deployment Method** page.
6. If you are installing ClearCase LT, you will see the **Client/Server** page. The client software on the clients will not work until you have installed and configured the server and client software).
 - If you are installing and configuring the server software, select **Install the server and client software**.
 - If you are installing client software, select **Install the client software only**.
7. Choose to accept or not to accept the IBM Rational Software license agreement in the **License Agreement** page.
 - If you accept the license agreement, the installation Wizard continues.
 - If you do not accept the license agreement, exit the Setup Wizard by clicking **Cancel** and then **Finish**. For information about changes to the computer, see “Canceling a product installation” on page 66.
8. On the **Destination Folder** page, specify the directory where you want to install the IBM Rational product. If you want to modify the location, click **Change**.

Note: The installation Wizard requires that all IBM Rational products be installed in the same directory.

9. The **Custom Setup** page provides product feature options for the software installation. You can either accept the default typical features on the page or you can customize the installation. Refer to the table in “Using the Custom Setup page” on page 52 for the product features that you want to install.

If you want to clear features or select new features, click **Help**.

Note: For disk space requirements, see the “Server system and software requirements” on page 5. Ignore the number displayed in **Custom Setup** and do not use the **Space** button on that page.

10. Depending on the product that you have selected, you will see one or more custom configuration pages in the wizard. Use the Help to provide instructions in this section of the configuration wizard.
 - Enter the required information in each page of the wizard. (All required information displays in the left panel of the wizard with a red dot.)
 - To navigate through the pages, you can either click **Next** to see them sequentially or click on the page title in the left pane to access the page directly and nonsequentially.

When you complete the last page, click **Done**.
11. Click **Install** on the **Ready to Install the Program** page to begin the installation.
12. A **Restart Windows** page opens if the Setup Wizard needs to restart your computer. If files required for the installation are in use during the IBM Rational Setup program and if the program needs to install shared components on your computer, the Setup Wizard may need to restart your computer.

Select **Restart** or **Don't Restart**. If you select **Don't Restart**, the Wizard reminds you that the installation cannot complete until Windows restarts. After Windows restarts, the second part of the installation process starts automatically after you log on.
13. When the **Setup Complete** page opens, we recommend that you review the current information related to new features and known issues in the readme file. In addition, you can view the IBM developerWorks Web pages. Click **Finish** to complete the installation.

Creating a release area and site defaults file

A release area contains site defaults files and all the files that will be used in subsequent installations. For example, part of setting up a release area is to specify information, such as client software and license servers. This information is stored in a site defaults file and used when an IBM Rational product, such as ClearCase LT or ClearQuest, is installed on clients.

There are two methods for creating site defaults files. Both methods create a disk image of product files in a shareable directory on the network. The first method creates a release area (Enterprise Deployment). The second method (Site Preparation Wizard) does not create a release area. You can also use these methods to install the product on your computer after creating a site defaults file.

- Run the Setup Wizard on the *IBM Rational Solutions for Windows* CD-ROM or click Setup.exe after you have extracted the files from either the IBM Download Director or the package zip file.. See "Using the Setup Wizard to create a release area and site defaults file" on page 56 for more information.

Note: When you create a release area from CD-ROM, you may be required to replace the first CD-ROM after the second CD-ROM is finished copying.

- Run the Site Preparation Wizard multiple times to create multiple site defaults files. See "Running the Site Preparation Wizard to create multiple sitedef files" on page 59 for more information.

Note: Do not use the Enterprise Deployment option in the Setup Wizard or the Site Preparation Wizard on Windows 9x computers. You cannot create a site defaults file or release area on Windows 9x systems.

Using the Setup Wizard to create a release area and site defaults file

This section explains how you can use the Setup Wizard to create a release area and populate it with site defaults files. You can create a meaningful name for each site defaults file, such as CQdevelopers.dat. By default, the file is named sitedefs.dat if you do not specify a name for it. Do not name a file with an additional suffix, such as sitedefs.developers.dat.

The maximum root path for the release area of an Enterprise deployment installation may be around 30-35 characters. This character limit changes depending on the product being installed and how long the paths are for the files each installs. You may also be different error messages when the root path is beyond the maximum.

You can use this release area to install IBM Rational servers. Client users can use this release area to install IBM Rational products on their desktops.

If you plan to apply a service release to a release area, see the instructions at the end of the following procedure.

1. Make the release area directory shareable. Even if the drive containing that directory is already shareable, making the directory itself shareable makes it easier to find the product release area.
 - a. In Windows Explorer, right-click the network release area to display the directory shortcut menu.
 - b. Click **Sharing**. The **Properties** page opens.
 - c. On the Sharing tab, click **SHARE this folder** and supply a meaningful share name, such as ClearQuest 6.0 Release Area.

Note: The Setup Wizard creates a shortcut to the site defaults file only if the release area is created under a network share. The shortcut opens in the release area, for example, as sitedefs or CQdevelopers without the suffix .dat.

2. Log in as a user with Administrator rights on the local computer.
3. Insert the *IBM Rational Solutions for Windows* Disc 1 into the computer's CD-ROM drive. If you have downloaded the software using the Download Director or a zip file, click Setup.exe after you have extracted the files from either the Download Director or the zip file.

The Setup Wizard starts automatically.

If autorun is disabled on your computer, click **Start > Run** and enter `cd_drive:\Setup.exe` where drive is the letter of the CD-ROM drive.

The Setup Wizard Program guides you through the software installation.

Click **Next** to open the page.

4. The **Product Selection** page lists all products available for installation. Select the product that you want to create a release area for. Click **Next**.
5. Select the **Enterprise Deployment** option in the **Deployment Method** page. Click **Next**.
6. Depending on the product you have selected, you will see one or more custom configuration pages in the wizard. Use the **Help** to provide instructions in this section of the wizard.

Enter the required information in each page of the wizard. (All required information displays in the left panel of the wizard with a red dot.)

To navigate through the pages, you can either click **Next** to see them sequentially or click on the page title in the left pane to access the page directly and nonsequentially.

7. In the **Completion** pages, you are required to fill in the **Description** page and the **Create a Release Area** page. The **Launch Installation** is optional.
 - a. In the **Description** page, enter a description for users. When you are done, click **Next**.
 - b. In the **Create a Release Area** page, enter the release area location and filename for the site defaults file (*.dat) that will be created.

Note: Do not use multibyte characters.

- If you want to install software on your computer based on the site defaults that you just entered, click **Next** to go to the **Launch Installation** page. Select **Launch installation** using these settings. You will save the site defaults information to a file and then proceed with the installation on your computer. Click **Done** and then **Next**.

Skip to “Installing the product on your computer” on page 58 for the rest of the instructions.

- If you only want to create a release area, click **Done** and then **Next** to create the site defaults file.
8. When the **Setup Complete** page opens, we recommend that you review the current information related to new features and known issues in the readme file. In addition, you can view the IBM developerWorks Web pages. Click **Finish** to complete the installation of the release area.

For more information about how to install products from this release area, see “Installing IBM Rational products from a release area” on page 59.

Note: If you want to apply a service release to the Rational products in your environment, you must recreate the release area as if users will be installing the products on their desktops for the first time. This new release area will be used to:

- Update Rational desktop products.
- Install Rational desktop products.

After creating this new release area, we recommend that you disable the “old” release area. This will help prevent access to the previous version of Rational products and still allow access if any user needed to restore a system to the previous version of Rational products.

Adding a post-installation command to the site defaults file

You can add a post-installation command to the sitedefs.dat file, to run the ClearQuest installutil program with the appropriate parameters so users do not have to restore existing database connections through the ClearQuest Maintenance Tool.. The following command must be entered into the Properties section of the sitedefs.dat file: `POST_INSTALL_CMD = [installdir]\ClearQuest\installutil.exe clientregisterschemarepo -dbset [dbsetname] [VendorString] [Server] [DatabaseName] [ReadOnlyLogin] [ReadOnlyPassword] ""`

where:

- `installdir` is the location you entered in the Site Preparation Tool to install the products.
- `dbsetname` is the name displayed when you start ClearQuest Maintenance Tool.
- `VendorString` is the type of database (Access, SQL_Server, and so on).

- Server is the name of the database server.
- DatabaseName is the name of the database.
- ReadOnlyLogin is the read-only login ID for the database.
- ReadOnlyPassword is the unencrypted read-only password for the database.

Most of the preceding data is available in the cqprofile.ini. The read-only login and password parameters are used by this command to set the user's privileges to those in the ClearQuest database. The password must be entered unencrypted. It is displayed encrypted in the cqprofile.ini file. The final parameter ("") at the end of the command must be entered but is reserved for future use.

Installing the product on your computer

When you create a release area, you have the option to install the product on your desktop.

1. In the **Launch Installation** page, select **Launch installation using these settings** and then click **Done** and then **Next**.
2. When the **Rational Setup Wizard Completed** page opens, click **Finish** to complete the installation of the release area.
3. When the installation begins, click **Next**. Choose to accept or not to accept the IBM Rational Software license agreement in the **License Agreement** page.
 - If you accept the license agreement, the Setup Wizard continues.
 - If you do not accept the license agreement, exit the Setup Wizard by clicking **Cancel** and then **Finish**. For information about changes to the computer, see "Canceling a product installation" on page 66.
4. Specify the Destination folder, and then click **Next**, or change the destination by clicking **Change**.
5. In the **Site Default Configuration** page, you will see the **Release Area Description** that you entered previously. Decide whether you want the site defaults that you set installed on your computer. Either click **Use the standard configuration** (These are site defaults that you set.) or **I will create my own custom client configuration**.
 - If you select I will create my own custom client configuration:
 - The **Custom Setup** page displays product features to select. For more information, see "Using the Custom Setup page" on page 52.

Note: For disk space requirements, see the "Server system and software requirements" on page 5 "Server system and software requirements" on page 4. Do not use the number displayed in Custom Setup or the **Space** button on that page.

- When you click **Next**, you can change any of the existing site default values. (Any changes to the site default values apply only to this single installation.) After modifying the values, click **Done** and then click **Install to begin the installation**.
 - If you select **Use the standard configuration**, then the features for the existing site default values will be used for the installation. Click **Next** and then click **Install** to begin the installation.
6. A **Restart Windows** page opens if the Setup Wizard needs to restart your computer. If files required for the installation are in use during the Setup program and if the program needs to install shared components on your computer, the Setup Wizard may need to restart your computer.

Select **Restart** or **Don't Restart**. If you select **Don't Restart**, the Wizard reminds you that the installation cannot complete until Windows restarts.

After Windows restarts, the second part of the installation process starts automatically after you log on.

7. When the **Setup Complete** page opens, we recommend that you review the current information related to new features and known issues in the readme file. In addition, you can view the IBM developerWorks Web pages. Click **Finish** to complete the installation.

Running the Site Preparation Wizard to create multiple sitedef files

In some cases, your site may require multiple site defaults files. For example, if two groups, say a database administrator's group and a client user group, both use ClearQuest but need to work with different default settings (such as ClearQuest features), then you can create one site defaults file for each group.

To create multiple site defaults for a release area:

1. Create the initial release area by following the instructions in "Using the Setup Wizard to create a release area and site defaults file" on page 56. Set up this area with the site-specific parameters relevant to the first group of users.
2. Select the site defaults file created in Step 1 (`sitedefs.dat`, for instance) as a starting point by clicking **File > Open** or typing the command **siteprep.exe <sitedefs.dat>**. The Site Preparation Wizard displays the values set in `sitedefs.dat`. Keep the values that apply to both groups and change the ones according to the needs of the second group.

Note: If you double-click `siteprep.exe` in the release area or use the command **siteprep.exe** without the site defaults filename, the Site Preparation Wizard starts without displaying the values set in the existing site defaults file.

3. Click **File > Save** as to save a new site defaults file. You are prompted to enter a file name and folder for the new site defaults file:
 - If you started the site preparation on the command line and specified a file-name argument for the site defaults file, for example, `sitedefs.dat`, the **Folder and File** name boxes display this information. You could save the modified site defaults files with a new file name, for example `sitedefs_cqclient.dat`.
 - If no file name was previously specified, the File name box is blank. Type a file name that does not currently exist in the release area.

Note: If you enter the name of an existing site defaults file, a warning message opens. You can overwrite the existing file or specify a different file name to create a new site defaults file.

According to your needs, you can create additional site defaults files in this way.

Installing IBM Rational products from a release area

When users install products from a release area that you designate, in most cases, they accept the defaults as presented on the installation screens. Users who do not want to accept the defaults should speak to you before they make changes.

Note: If you are upgrading from a release area, some of the dialogs may indicate an upgrade instead of a new installation. Make sure all Rational products on your computer were updated to version 2003.06.13. The updated version

number will appear for all Rational products, regardless of whether or not a product change was applied to them in this upgrade.

Installing from a release area includes the following steps:

1. Create one or more site defaults files in a release area by using the Setup Wizard or the Site Preparation Wizard. Give users the path to the site defaults file or have them click the shortcut to the site defaults file created by the Setup Wizard. For instructions, see “Using the Setup Wizard to create a release area and site defaults file” on page 56.
2. Users can then access the release area from the command line or click the shortcut. The command line or shortcut will start the Setup Wizard on their desktops. The Setup Wizard will use the settings in the site defaults file to install the product.
3. To install products from a release area, users can use the standard configuration set by you or they can customize the standard client configuration for their desktops. For more information, see the following procedures.

Note: If users type only `siteprep.exe` in the command window or click `siteprep.exe`, the Setup Wizard uses the settings in `sitedefs.dat` (the default site defaults file name). If there are other site defaults files, such as `developers_cq.dat`, that you would like them to use, tell them to specify `developers_cq.dat` or click the specific shortcut, `developers_cq` or `developers_cq.lnk`.

If users click `siteprep.exe` (without specifying a site defaults file name) and there is no site defaults file called `sitedefs.dat` in the release area, the Site Preparation Wizard starts to create a new site defaults file.

Using a standard configuration

Before following these instructions, read the overview information in the previous paragraphs. You or your administrator must create a release area and a site defaults file before you can install a product from the release area.

To install a default configuration from the release area:

1. Log on as a user with local administrator privileges.
2. To install a product using the settings in a specific site defaults file, either specify the name of the site defaults file on the command line or click the associated site defaults shortcut in the release area. For example, to install ClearQuest using the settings in **sitedefs_cqclient.dat**, map a network drive from your computer to the shared release area. Then,
 - In the DOS Windows, use the **cd** command to navigate to the root directory of the release area. Then enter, for example, `setup.exe sidedefs_cqclient.dat`, or
 - In Windows Explorer, expand the mapped drive and launch the shortcut, for example, `sitedefs_cqclient.lnk` or `sitedefs_cqclient`.
3. The IBM Rational Setup Wizard guides you through the software installation. In each page, click **Next** to open the next page. Click **Help** for more information.

The **License Agreement** page displays the IBM Rational Software license agreement.

- If you accept the license agreement and click **Next**, the installation continues.
- If you do not accept it, the installation does not let you proceed further. Click **Cancel** and exit from the installation. You will not see any visible changes to

the system. The program returns your system to the state it was in before you launched the Rational Setup Wizard.

Note: If you do not have the correct version of Windows Installer software on your computer, the Setup Wizard will install it for you. Canceling the installation does not remove the updated version of Windows Installer. In some cases, you may have to restart the computer.

4. The **Destination Folder** page displays the default destination folder for the installation. Click **Change** to select a different destination folder for the installation. Click **Next**.
5. Click **Use the standard configuration** on the **Site Default Configuration** page. The default features for the product and the existing site default values will be used for the client installation. Click **Next**.
6. Click **Install** to begin the installation on your client desktop.
7. A **Restart Windows** page opens if the Setup Wizard needs to restart your computer. If files required for the installation are in use during the Setup Wizard, and if the Wizard needs to install shared components on your computer, the Setup Wizard may need to restart your computer.
Select **Restart** or **Don't Restart**. If you select **Don't Restart**, the Wizard reminds you that the installation cannot complete until Windows restarts.
After Windows restarts, the second part of the installation process starts after you log on.
8. When the **Setup Complete** page opens, IBM recommends that you review the current information related to new features and known issues in the readme file. In addition, you can view the IBM developerWorks Web pages. Click **Finish** to complete the installation.

Customizing your own configuration

Before following these instructions, read the overview of installing a product from a release area in this section. You or your administrator must create a release area and a site defaults file before you can install a product from the release area.

To customize a configuration for a specific computer:

1. Log on as a user with local administrator privileges.
2. To install an IBM Rational product using the settings in a specific site defaults file, either specify the name of the site defaults file on the command line or click the associated site defaults shortcut in the release area. For example, to install ClearQuest using the settings in `sitedefs_cqclient.dat`, map a network drive from your computer to the shared release area. Then,
 - In the DOS Window, use the `cd` command to navigate to the root directory of the release area. Then enter, for example, `setup.exe sidedefs_cqclient.dat`, or
 - In Windows Explorer, expand the mapped drive and launch the shortcut, for example, `sidedefs_cqclient.lnk` or `sidedefs_cqclient`.
3. The Setup Wizard runs and guides you through the software installation. In each page, click **Next** to open the next page. Click **Help** for more information.
4. The **License Agreement** page displays the IBM Rational Software license agreement.
 - If you accept the license agreement and click **Next**, the installation continues.
 - If you do not accept it, the installation does not let you proceed further. Click **Cancel** and exit from the installation. You will not see any visible changes to the system. The program returns your system to the state it was in before you launched the Setup Wizard.

Note: If you do not have the correct version of Windows Installer software on your computer, the Setup Wizard will install it for you. Canceling the installation does not remove the updated version of Windows Installer. In some cases, you may have to restart the computer.

5. The **Destination Folder** page displays the default destination folder for the installation. If you want to select a different destination folder for the installation, click **Change**.
6. Click **I will create my own custom client configuration** on the **Site Default Configuration** page.
 - The Custom Setup page displays product features to select. For more information about features for your product, see the "Using the Custom Setup page" section.

Note: For disk space requirements, see the *System and Software Requirements* table in the *Before You Install* chapter of this guide. Do not use the number displayed in **Custom Setup** or the **Space** button on that page.

- When you click **Next**, you may change any of the existing site default values. (Any changes to the site default values apply only to this single installation.) After modifying the values, click **Done**.
7. Click **Install** to begin the installation on your client desktop.
 8. A **Restart** Windows page opens if the Setup Wizard needs to restart your computer. If files required for the installation are in use during the Setup Wizard and if the Wizard needs to install shared components on your computer, the Setup Wizard may need to restart your computer.

Select **Restart** or **Don't Restart**. If you select **Don't Restart**, the Wizard reminds you that the installation cannot complete until Windows restarts.

After Windows restarts, the second part of the installation process starts automatically after you log on.
 9. When the **Setup Complete** page opens, we recommend that you review the current information related to new features and known issues in the readme file. In addition, you can view the IBM developerWorks Web pages. Click **Finish** to complete the installation.

Setting up silent installations of IBM Rational products

Silent installation is a method of installing Rational products on client computers without intervention from users. It greatly reduces the work of an administrator during a deployment. It also ensures that the correct software configuration is installed on each server and desktop.

This section describes how to set up and perform a silent installation. The basic steps are explained in the following list.

1. Create a site defaults file and a release area (optional) on the network.
 - a. Use the **Enterprise Deployment** option in the Rational Setup Wizard to create a site defaults file and a release area to deploy the product to your users. See "Creating a release area and site defaults file" on page 55 for the procedure.

Or use the Site Preparation Wizard by double-clicking `siteprep.exe` in the CD-ROM image or IBM download package (or run `siteprep.exe` on the command line) to create a site defaults file without the release area.
 - b. You can customize site defaults files for different sets of users. For more information, see "Running the Site Preparation Wizard to create multiple sitedef files" on page 59.

2. Use the **setup.exe /g** command to start the Setup Wizard and test the site defaults file. You should not see any installation screens displayed on your computer during the installation. (See “Performing a silent installation” on page 63 for the full command.)

The file directs the Rational Setup Wizard to install program files in a specific directory on your computer. If a restart is required, your computer restarts automatically. After the restart, you must log on manually. The installer then restarts and finishes. When the installation finishes, you do not see an installation complete screen.

If you did not specify the license server in the site defaults file, you or your users may have to manually configure licensing after the Setup Wizard finishes.

3. Give users the following information so they can perform silent installations on their computers.
 - Path to the site defaults file and the **setup.exe** executable in the release area or the shortcut to the site defaults file. (The shortcut will not have a **.dat** suffix.)
 - Silent installation commands.
 - Installation directory (where the Setup Wizard will install the files on your desktop).
 - License key information, if necessary.
 - Ensure that users remove all IBM Rational products from their desktops. Users who install silently do not see the message to remove previous versions of IBM Rational products. The installation does not proceed until all products are removed. The message is saved in the user’s installation log file. If the installation fails, direct users to the log file. For more information about this file, see “Rational_install log” on page 51.

Note: For information about **setup.exe** command line parameters, see “Command line syntax” on page 67 or type **setup / ?**.

Performing a silent installation

After you have created the site defaults file, test it with the following commands, where *<local drive>:* is a mapped drive or path to **setup.exe**. There is a space between **setup.exe** and command **/g** and a space between **/g** and the path to the **sitedefs.dat** file which is **C:\sitedefs.dat**.

<local drive>:\setup.exe /g <C:\sitedefs.dat>

Note: You must specify the absolute pathnames to both **setup.exe** and *<sitedefs.dat>* when you perform a silent installation, unless you have mapped the files to a disk drive on your computer.

By default, the installation log file (**rational_install.log**) is created in your computer **TEMP** directory. To find the Temp directory, open a command prompt and type **echo %TEMP%**. The location of the directory depends on the system environment variable set on the computer.

Note: If the Setup wizard detects insufficient disk space on the desktop, the wizard will cancel the installation and note the error in the **Rational_install.log** in your **TEMP** directory.

If you are not logged on to a Windows domain account that is a member of the local computer’s Administrators group, the product fails to install. Some Setup

Wizard components do not install unless the user is logged in with the appropriate privileges. These components don't log information in the installation log file.

Canceling a silent installation

There is no command to cancel a silent installation.

Using the command line to remove a product

To remove a Rational product in the current releases (2003.06.00), use the following commands. These commands will not remove earlier versions of Rational products.

```
<local drive>:\msiexec.exe /X <path to product>.msi /qn
```

The variable *<local drive>*:\ must be a mapped drive or path to msiexec.exe. The variable *<path to product>.msi*, such as ClearQuest.msi, is the path to the MSI file in your network-wide release area used by ClearQuest, for example, during installation. In the release area, that MSI file exists in the Setup directory. The command /x indicates an uninstall operation and /qn indicates no user interfaces are displayed during the uninstall operation.

Note: You must specify the absolute path names to both msiexec.exe and *<path to product>.msi* when you perform a silent uninstall, unless you have mapped the files to a disk drive on your computer.

For more information about the msiexec.exe command, and associated command line options, see the Microsoft Windows Installer Platform Software Developer's Kit documentation at <http://www.microsoft.com/windows/reskits/webresources/default.asp>.

Using post-installation commands

The **POST_INSTALL_CMD** is used to run a process or executable, such as winword.exe or cscript.exe. When you set this property, the command is run after the installation completes. To include arguments with the command, use **POST_INSTALL_CMD_ARGS** in addition to **POST_INSTALL_CMD**.

Before you follow the instructions in the next two sections, read these requirements:

- Enter an arguments file in the **POST_INSTALL_CMD_ARGS** property.
- If an arguments file is in an IBM Rational directory subfolder, include the path to the file.

Running post_install_cmd from the command line

To specify a command from the command line, use setup.exe's /V command.

Example:

```
setup.exe /V POST_INSTALL_CMD=<notepad.exe>
```

```
POST_INSTALL_CMD_ARGS=<myfile.txt>
```

Running the command by modifying the site defaults file

To specify a command from a .dat file, add or modify properties in the *Properties* section of the file. If there is no *Properties* section, add a section to the file. Include the full pathname to the postinstallation executable that you want to start from the .dat file.

Example:

...

...

[Properties]

POST_INSTALL_CMD=<notepad.exe>

POST_INSTALL_CMD_ARGS=<myfile.txt>

...

...

Post-installation tasks

The following sections apply to all deployment types.

Licensing

If you do not see the License Key Administrator (LKAD) start at the end of the installation, your product is either licensed or does not require a license. Skip to “Product installation checklist” on page 66.

You or your users may see the License Key Administrator (LKAD) start at the end of a product installation for any of the reasons the following table.

Table 23. LKAD launch

Deployment Type	Reason
Desktop installation from CD-ROM image or Web download.	<ul style="list-style-type: none">• You did not provide an IBM Rational license server name in the Setup Wizard.• The product requires a node-locked license key.
Install from a Release Area (Enterprise Deployment)	<ul style="list-style-type: none">• You did not provide an IBM Rational license server name when you created the site defaults file. Or,• The product requires a node-locked license key.
Silent Installation	<ul style="list-style-type: none">• You did not provide an IBM Rational license server name when you created the site defaults file.Or• The product requires a node-locked license key.

If you see the LKAD, you or your users must perform the following tasks to license the product.

Table 24. LKAD tasks

To configure	Task	See
Floating License Key	Enter the name of the Rational license server in the LKAD.	<ul style="list-style-type: none">• Chapter 2, “Licensing your IBM Rational products,” on page 43• Chapter 2, “Licensing your IBM Rational products,” on page 45, or• <i>IBM Rational Software License Management Guide</i>, or• LKAD Help
Node-Locked License Key	Import the node-locked license key in the LKAD.	<ul style="list-style-type: none">• Chapter 2, “Licensing your IBM Rational products,” on page 43• LKAD Help

Product installation checklist

Perform the postinstallation tasks for the product you have just installed. If you are unsure whether the product requires any configuration, see Chapter 1, “Before you install,” on page 1 and look for the product’s installation checklist.

Canceling a product installation

If you click **Cancel** any time during the installation procedure or before the installation completes, you will not see any visible changes to the system. The program returns your system to the state it was in before you launched the Setup Wizard.

Note: If you do not have the correct version of Windows Installer software on your computer, the Setup Wizard will install it for you. Canceling the installation does not remove the updated version of Windows Installer. In some cases, you may have to restart the computer.

Reinstalling a product (modify or repair)

To modify or repair a Rational installation, use **Add or Remove Programs**.

Note: Before you perform a Modify or Repair installation of any product, save the original installation log to a different location or rename it. Otherwise, it will be overwritten.

To remove the product, see Chapter 10, “Removing IBM Rational products,” on page 147.

1. Log in as a user with Administrator rights on the local computer on which you want to install the product.
2. Click **Start > Settings > Control Panel > Add or Remove Programs**.
3. Highlight the IBM Rational product and click **Change**.
 - **Modify the Existing Installation.** Choosing this option enables you to change which products and product features are installed. The Setup Wizard provides the **Custom Setup** page for you to clear or select features. For example, you included the ClearQuest MultiSite Administration Tools in

your ClearQuest client installation and you want to install the client without this feature. To reinstall the ClearQuest client, clear this product feature in the **Custom Setup** page and reinstall the ClearQuest client.

Click **Modify** and then click **Next** to select or clear features in the **Custom Setup** page. Click **Next** and then click **Install** to begin the installation.

- **Repair the Existing Installation.** Choosing this option enables you to repair a damaged registry or replace files that you may have inadvertently deleted. This option does not repair incomplete or unsuccessful installations.

Note: A fatal error occurs when you click the **Space** button in the **Custom Setup** page. To prevent the Setup Wizard from aborting the modify action, do not click **Space**.

To begin the repair, click **Repair** and then click **Next** and then click **Install**. At the end of the operation, the status of the repair is displayed.

Command line syntax

This section provides the syntax for setup.exe.

Table 25. Command line syntax

Setup.exe command parameter	Description
setup	Starts the IBM Rational Setup Wizard
<i><local drive></i>	Specifies path to setup.exe.
/g	Starts the silent install session.
<i><path to sitedefs.dat></i>	Specifies the path to the site defaults file.
msiexec.exe /x	Starts the silent uninstall session.
/qn	Indicates no user interfaces are displayed during the operation.
<i><path to product>.msi</i>	Specifies path to product's MSI file. The MSI file is used by ClearQuest, for example, during installation. The MSI file exists in the Setup directory in the release area.
/l	Specifies the name and location of the install log file. By default, the log of installation activities called Rational_install.log is in the TEMP directory.

For example, to create a site defaults file, enter on the command line:

<local drive>:\setup <path to sitedefs.dat>

Rational Setup Wizard warnings and blocks

If you encounter blocks or warnings during the installation procedure, consult the following table if you do not remember the entire message.

Table 26. Warnings and blocks

Warning/Block	Solution
You are attempting to install on an unsupported operating system.	IBM recommends that you install on a supported operating system. Your IBM Rational product's <i>Release Notes</i> for a complete list of supported operating systems and service packs.
You are attempting to install on a system with an unsupported browser.	See your IBM Rational product's <i>Release Notes</i> for a complete list of supported browsers before using Rational Unified Process, ProjectConsole, Rose, Web Publisher, and XDE Web Publisher.
You are attempting to install on a system that has an version of Office that is not compatible with SiteCheck.	See your IBM Rational product's <i>Release Notes</i> for a complete list of supported versions.
You are attempting to install on an unsupported version of WebSphere Studio.	It is recommended that you use a supported version. For the complete list of supported operating systems, see the <i>Release Notes</i> .
MDAC and ODBC	If the correct MDAC and ODBC drivers are not installed on your computer, the Setup Wizard installs version 2.7 of the Microsoft Data Access Components (MDAC) and Open Database Connectivity (ODBC) drivers. For more information, read Microsoft Knowledge Base Article 216149.

Applying service releases

To find an IBM Rational Software service release:

1. Log into the Rational Download and Licensing Center at <https://www6.software.ibm.com/reg/rational/rational-i>.
2. Select **Patches and Service Releases**.
3. Select the Rational product that you want to install.
4. Select the version of the Rational product that you want to install. Click **Continue** to navigate to the **Download** page.

You can also download the service release notes from the Download page. The release notes provides service release features, restrictions, and instructions. Use this information to install a Rational service release.

Note:

- If you need to apply a service release to a release area, see the instructions in "Creating a release area and site defaults file" on page 55.
- When you apply a service release to a 2003.06.13 Rational Suite release, you may receive one or more "Source File Not Found" warnings about files in the ...\\Classics\\Projects\\... folder. You can ignore these warnings because they are only used by the ProjectConsole Web server components when accessing the ProjectConsole sample site.

Chapter 4. After installation: configuring ClearCase LT

After the initial installation of the ClearCase LT server, run the Getting Started Wizard, import any existing files that you want to place under ClearCase LT control, and make any necessary adjustments to the operating environment. To configure the ClearCase Web interface, see “Configuring ClearCase LT with the Getting Started Wizard” on page 69.

Note: These steps are not required if you are upgrading an existing installation.

Configuring ClearCase LT with the Getting Started Wizard

The Getting Started Wizard configures your ClearCase LT environment with the standard set of site defaults. The Wizard launches automatically after installing the Server directly from the CD or from a release area. Click **Next** or **Back** to navigate through the wizard screens. If you need help completing fields in the wizard, refer to the online Help, on the left side of the wizard window.

Canceling and rerunning the Getting Started Wizard

You can safely cancel the Getting Started Wizard at any time and rerun it by clicking **Start > ClearCase Administration > ClearCase Administration Console > Getting Started Wizard**.

The wizard will not perform any configuration until you reach the Summary screen.

Additional configuration tasks

After the initial installation of a Rational ClearCase LT server, perform these additional tasks.

1. If you have not already done so, we recommend that you review the *Release Notes* for Rational ClearCase LT. They contain the most current information related to ClearCase LT features and known issues.
2. To install ClearCase LT on your client computers, follow the instructions in the *IBM Rational Software Desktop Products Installation Guide*.
3. ClearCase LT provides support for importing data and metadata from a variety of third-party configuration management and source code control systems. It also provides support for importing ordinary files and directories into ClearCase.

You may want to import files and directories from another configuration management system or directly from the file system and put them under ClearCase control. For more information, see the *IBM Rational ClearCase Administrator's Guide*.

4. After you set up the ClearCase LT server, review the procedures for the administration of VOB and view storage directories described in the *IBM Rational ClearCase Administrator's Guide*.
5. To configure the ClearCase Web interface, see “Configuring the ClearCase Web interface” on page 70.

ClearCase LT documentation

The following documents are available on the Rational Solutions for Windows Online Documentation CD:

- *IBM Rational ClearCase LT Introduction*
- *IBM Rational ClearCase Administrator's Guide*
- *IBM Rational ClearCase LT Release Notes*

Configuring the ClearCase Web interface

For many sites, the ClearCase Web interface requires no special configuration; any host on which RWP is installed can support this interface:

`http://hostname[:port]/ccweb`

where *hostname* is the name of the RWP host and *port* is an optional port number if RWP has been configured to use a port other than 80 for HTTP (see “To change the default RWP HTTP port” on page 138).

Note: When RWP runs on a Windows computer, ClearCase Web interface users must be given permission to **Log On Locally** to the RWP server. Windows does not grant this permission by default.

The remainder of this section explains how you can edit the ClearCase Web interface configuration file

`ccase-home-dir/config/ccweb/ccweb.conf`

if you need to modify the default configuration of the ClearCase Web interface.

Note: Do not confuse this file with the ClearCase Web interface support file for RWP. This support file is installed as `C:\Program Files\Rational Software\common\rwp\ccweb.conf`. It should not be modified.

Specifying the ClearCase primary group

At sites where ClearCase users on Windows set the `CLEARCASE_PRIMARY_GROUP` environment variable (read about *Setting the ClearCase Primary Group* in the *IBM Rational ClearCase Administrator's Guide*), you must also specify that primary group for ClearCase Web interface users by modifying this line in the `ccweb.conf` file:

`-primary_group group-name`

where *group-name* is the name of a domain group that will be used as the `CLEARCASE_PRIMARY_GROUP` for all users who access the ClearCase Web interface on this host.

Note: When users from multiple domains access the ClearCase Web interface, you must enable domain (described in *Using Proxy Groups and Domain Mapping in Windows NT Domains* in the *IBM Rational ClearCase Administrator's Guide*) on the RWP host and specify an appropriate value for `-primary_group` in `ccweb.conf`.

Web view storage

The ClearCase Web interface normally creates Web view directories on the RWP server host. These directories are used for temporary storage of files that are checked out or ready to be created as elements. Therefore, they must be on a disk volume that has enough space for the number of Web views to be supported. We suggest allocating 0.5 MB to 1 MB of disk space for each Web view.

On Windows, these directories are normally created under
C:\Program Files\Rational Software\ClearCase\var\ccweb

If the default Web view storage directory is not appropriate, you can select a different area by modifying `ccweb.conf`. Add the line

–view_storage *pathname*

where *pathname* is the directory in which you want the Web view directories to be created. This directory must be local to the RWP host.

Note: Although the ClearCase Web interface may create a separate directory for Web view storage, it continues to store executable and administrative files in `ccase-home-dir/ccweb`.

Limiting upload size

To better manage Web view storage or reduce the possibility of denial-of-service attacks, you may want to limit the size of files that can be uploaded to the RWP server. To do so, modify the following line in the `ccweb.conf` file:

–upload_limit *size*

where *size* is the approximate desired size limit in bytes. An attempt to upload a file that is too large results in an error message in the Client Upload output window.

Specifying a session timeout

You can configure the session timeout interval, which controls how long a user login remains valid. The default value is 14400 seconds (four hours). You can change this default by modifying the line

–session_timeout *seconds*

in `ccweb.conf`, where *seconds* is an integer number of seconds between 600 (10 minutes) and 2147483647 (about 68 years). Values less than 600 are interpreted as 600.

Specifying a directory for temporary storage

You can designate a directory where the ClearCase Web interface stores temporary files by adding a line of the form

–tmpdir *directory-name*

to `ccweb.conf`, where *directory-name* is a directory on the RWP host in which the ClearCase Web interface has permission to create and delete files. If this line is not present in `ccweb.conf`, the ClearCase Web interface uses the value of the TMP or TEMP environment variables, if they exist.

Permission to download applets on Windows

Internet Explorer typically requires a user to have local administrator privileges to download applets, including those used by the ClearCase Web interface. After these applets have been downloaded (the first time the Web interface is used), they do not have to be downloaded again unless a ClearCase patch or new ClearCase release changes them.

Chapter 5. After installation: configuring databases and other ClearQuest tasks

After you install IBM Rational ClearQuest, you need to create and configure the vendor databases for ClearQuest, New ClearQuest Web, and ClearQuest MultiSite.

ClearQuest, New ClearQuest Web, and ClearQuest MultiSite require at least two databases:

- A schema repository: This is the master database where ClearQuest and ClearQuest MultiSite store the schemas.
- A user database: This is where data entered by ClearQuest users is stored. You can have as many user databases as you need.

This chapter describes the following configuration tasks:

- Database case sensitivity
- Supported character sets
- Configuring empty vendor databases (Microsoft Access, Sybase SQL Anywhere, Microsoft SQL Server, Oracle Server and IBM DB2)
- Creating ClearQuest databases (you will be replicating these databases for ClearQuest MultiSite)
- Connecting to ClearQuest databases
- Enabling e-mail notification
- Joining a Rational User Group
- Replicating ClearQuest databases for ClearQuest MultiSite
- Configuring the MultiSite Control Panel (Shipping Server only)

The optional post-installation configuration steps for ClearQuest MultiSite are:

- Setting up mastership for records
- Configuring the MultiSite Control Panel
- Automating synchronization

Prerequisites

The following sections assume that you have:

- Installed the vendor database software on the database server.
- Installed DB2 client software on client desktops, the ClearQuest Server, and the administration tools computer. Client aliases need to be created on these computers, see: *IBM Rational Software Desktop Products Installation Guide*
- Installed the ClearQuest Administration Tools and the ClearQuest MultiSite Administration Tools on the database server or a separate computer. See “ClearQuest administration tools” on page 25 and “ClearQuest MultiSite administration tools” on page 26.
- Configured user accounts. If you have not, see the *IBM Rational ClearQuest Administrator’s Guide*.

Database case sensitivity

In two scenarios it is mandatory that your database sensitivity settings are consistent:

- When you are moving a database from one database vendor type to another.
- When you are using ClearQuest MultiSite and are using multiple synchronized databases created from different vendor databases.

The following table summarizes the case-sensitivity properties of the supported vendor databases.

Database Vendor	Default Setting	Possible Settings	Comments
Microsoft Access	Case-insensitive	Case-insensitive	Microsoft Access databases are case-insensitive.
SQL Anywhere	Case-insensitive	Case-insensitive, Case-sensitive	All databases are created as case-insensitive, this setting can be changed to make it case-sensitive.
DB2	Case-sensitive	Case-sensitive	Case sensitivity is applicable to data only and not database object names.
SQL Server	Case-insensitive, Case-sensitive	Case-insensitive, Case-sensitive	Case sensitivity can be decided either by using the installation time option or database creation time option. Note: Case sensitivity applies to database object names as well as data.
Oracle	Case-sensitive	Case-sensitive	The case sensitivity is applicable to data only and not database object names.

Supported character sets

The ClearQuest databases support the following character sets for a ClearQuest Windows environment:

- 1252 - Western European/English
- 932 - Japanese
- 936 - Simplified Chinese
- 20127 - ASCII

For more information, see the *IBM Rational ClearQuest Administrator's Guide*.

Configuring databases for ClearQuest MultiSite

If you are installing ClearQuest MultiSite, do not create ClearQuest databases at the replica site. When you replicate an existing ClearQuest database set, you must create empty vendor databases at the new site. If you create ClearQuest databases at the new site, import of the replica-creation packets will fail.

Configuring Microsoft Access for ClearQuest

Note: New ClearQuest Web and ClearQuest MultiSite do not support Microsoft Access databases.

To use ClearQuest with Microsoft Access:

1. Create one shared directory on the computer for the directory that will contain your Microsoft Access databases.
2. Make a note of the UNC path of the share directory. The path should be of the form:

`\\machine_name \<share_name>\<database_directory>\`

For example:

`\\developmentserver\project34share\clearquestdbs \`

The first time you run ClearQuest, you are asked to create a schema repository. Specify this path and provide a file name for the schema repository. ClearQuest then creates and initializes the appropriate Access databases in this directory.

Configuring SQL Anywhere for ClearQuest

Note: ClearQuest MultiSite does not support SQL Anywhere databases.

To create a SQL Anywhere database server, complete the following tasks:

- Install the Sybase SQL Anywhere Server software.

Note: SQL Anywhere 8.0.2 is available on the *Rational Solutions for Windows* Disc 1 CD and can be installed using the Rational Software Setup Wizard.

- Choose or create a user account to run the SQL Anywhere database server and set user privileges for that account. For more information, see “Defining user privileges” on page 75.
- Create an SQL Anywhere database server. See “Creating an SQL Anywhere database server” on page 77.

Note: SQL Anywhere databases are created as case-insensitive databases. To migrate to a different database vendor, evaluate your database case sensitivity settings. For more information, see “Database case sensitivity” on page 74.

Defining user privileges

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

1. Make sure you have installed the Sybase SQL Anywhere server software.
2. Do one of the following to create a user account:

Windows Software

Action

Windows NT Workstation

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

Windows NT Server

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

Click **User > Select Domain**, type the local machine name in the **Domain** box, and click **OK**.

If the user does not already exist, click **User > New User** to create the user.

Windows 2000 Workstation

Click **Start > Settings > Control Panel > Users and Passwords**.

Windows 2000 Server

Click **Start > Settings > Control Panel > Computer Management > Local Users and Groups**.

Click **User > Action > New User**, type the user name and password and click **Create**.

Windows XP Professional

Click **Start > Settings > Control Panel > User Accounts**.

Click **Add** to complete the **Add New User Wizard**.

For Windows NT Workstation or Server:

1. From the **User Manager** window, click **Policies > User Rights**.
2. Select **Show Advanced User Rights** option.
3. In the right list box of the **User Rights Policy** dialog, select **Access this computer from network**.
4. Click **Add**.
5. From **List Names From** list, select the domain of the account running the SQL Anywhere database server.
6. Click **Show Users**.
7. In the **Names** list, select the account running the SQL Anywhere database server.
8. Click **Add**, and then click **OK**.
9. In the right list box of the **User Rights Policy** dialog box, select **Log on as a service**.
10. Repeat Step 4 on page 76 through Step 8 on page 76.
11. In the right list box of the **User Rights Policy** dialog box, select **Log on locally**.
12. Repeat Step 4 on page 76 through Step 8 on page 76.
13. Click **OK**.
14. Click **User > Exit**.

For Windows 2000 Workstation or Server and XP Professional:

1. Click **Start > Settings > Control Panel > Administrative Tools > Local Security Policy**.
2. Expand the **Security Settings** folder, expand the **Local Policies** and then click the **User Rights Assignment** folder.
3. In the right pane, select **Access this computer from network** and right-click to select **Security**.
4. Click **Add** and from the **Look in** list, select the domain of the account running the SQL Anywhere database server.
5. In the **Names** list, select the account running the SQL Anywhere database server. Click **Add**, and then click **OK**.

6. In the right list box of the **Local Security Settings** dialog box, select **Log on as a service**.
7. Repeat Step 4 on page 76 through Step 5 on page 76.
8. In the right list box of the **Local Security Settings** dialog box, select **Log on locally**.
9. Repeat Step 4 on page 76 through Step 5 on page 76.
10. Click **OK**. Then exit the **Local Security Settings** dialog box.

Creating an SQL Anywhere database server

An 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 datastores.

To create a SQL Anywhere database server:

1. Click **Start > Programs > Rational Software > SQL Anywhere 8.0 > Sybase Central**.
2. In the left pane, click **Services** under **Adaptive Server Anywhere 8**.
3. In the right pane, double-click **Add Service** to launch the **Create New Service wizard**.
4. In the **Choose Name** dialog box enter the name of the service and click **Next**.
5. In the **Choose Service Type** dialog box, select **Network Database Server** and click **Next**.
6. The **Choose Path Name** dialog box displays the default path for the executable file for the new service. This is the path to the SQL Anywhere database server executable (dbsrv8.exe) that exists in the SqlAnywhere8\WIN32 subdirectory within the Rational install directory. This should be set by default.
7. In the **Specify Parameters** dialog, enter the following options:

Option	Description
-n	The database service name. The name you enter here is required when creating a ClearQuest database or IBM Rational test datastore.
-gd	Database starting permission. The level can be dba, all or none. You must specify all to allow all users to start new databases

8. In the **Choose Account** dialog box, click **Other**, select **Administrator** or **Guest**, 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 effect. Click **Yes** to grant the privilege when the service is installed.

9. In the **Choose Startup Type** dialog box, select the manner in which the service will be started (we recommend **Automatic**) and click **Next**.
10. In the last dialog box, we recommend that you select **Start the service now**. Then click **Finish** to create the service.

Backing up and restoring SQL Anywhere databases

To obtain information on backing up and restoring SQL Anywhere databases:

1. Click **Start > Programs > Rational Software > SQL Anywhere 8.0 > Sybase Central**.
2. Click **Help > Adaptive Server Anywhere 8 Plug-in > Help Topics**.
3. Click the **Adaptive Server Anywhere Data Administration Guide** and then click to open the **Backup and Data Recover** chapter.

Configuring Microsoft SQL Server for ClearQuest

Install SQL Server 7 or 2000 on a supported platform (see “Server system and software requirements” on page 5) For instructions, see the product documentation.

When installing SQL Server, follow these guidelines:

- Your SQL Server databases must be in the same network domain as both your ClearQuest Web server and any ClearQuest clients or tools that must connect to the database. If they are not in the same domain, you will get errors. For more information:
 - See the Microsoft KnowledgeBase Article Q152828 at <http://www.microsoft.com/>. To locate the article, click the **Search** at the top of the page, and enter the article number.
 - See the IBM Rational Customer Support TechNote 8148, “How do I access an SQL Server database in another domain?” at <http://www.ibm.com/software/rational/support/>.
- Select one of the following sort-order options:
 - **Dictionary order, case-sensitive.**
 - **Dictionary order, case-insensitive.**

If you change sort orders after installing SQL Server, you must rebuild the SQL databases and reload the data.

Note: Changing the sort orders affects the case-sensitivity of ClearQuest queries. If you want ClearQuest queries to be case-insensitive, set the order here. For more information, see “Database case sensitivity” on page 74.

- You must set up an empty SQL Server database for the ClearQuest schema repository and an empty SQL Server database for each ClearQuest user database. To create the databases:
 1. Verify server registration.
 2. Create an empty database.
 3. Set up a backup procedure for the database.
- Create an SQL Server login with the **db_owner** role to be used for the ClearQuest database logins. ClearQuest uses the same login for all connections.

Note: Do not use the SA (system administrator) login. During an upgrade or move, ClearQuest requires empty databases. If you use the SA login, ClearQuest can see the system tables; it assumes the database is not empty and does not let the process continue.

When installing SQL Server 2000, select the default registration name for your database server, which makes the registration name the same as your server’s host name.

Registering the SQL Server computer

You must first determine whether the computer is registered. To do so, click **Programs > Microsoft SQL Server 7.0 > Enterprise Manager or Programs > Microsoft SQL Server > Enterprise Manager**.

For SQL Server 2000, click **Programs > Microsoft SQL Server > Enterprise Manager or Programs > Microsoft SQL Server > Enterprise Manager**. Select your Windows server in the SQL Server Group.

If your server is registered, go to “Creating a SQL Server database” on page 79. If your server is not shown, register it now. To register your server:

1. Right-click the **SQL Server Group** and select **New SQL Server Registration**. The **Register SQL Server Wizard** appears. Click **Next**.
When installing SQL Server 2000, accept the default registration name for your database server. Doing so makes the registration name the same as your server’s host name.
2. Select a server name, and click **Next**.
Record the server name; you will use it during the ClearQuest installation.
3. On the **Select an Authentication Mode** page, select **SQL Server Authentication**, and then click **Next**.
4. Select **Login automatically using my SQL Server account information**. Type **SA** in the **Login name** box, and type your **SA** password in the **Password** box. Then click **Next**. (The SA user has the privilege to create logins and databases.)
5. Add this server to an existing group or create a new group. Then click **Next**.
6. Click **Finish**. The server appears in the list of servers.
7. In the status window, verify that registration completed successfully and then click **Close**.

Creating a SQL Server database

To create an empty database for the schema repository and the user database:

1. On the **Start** menu, click **Programs > Microsoft SQL Server 7.0 > Enterprise Manager or Programs > Microsoft SQL Server > Enterprise Manager**.
2. For SQL Server 7, double-click the server name in the **SQL Server Group** to open the **Getting Started Taskpad** in the right pane. Click **Administer SQL Server > Create a database** to start the **Create Database Wizard**.

For SQL Server 2000, double-click the server name in the SQL Server Group and then click the **Wizards** tab in the right pane. Click **Setup a Database > Create a database** to start the **Create Database Wizard**. Click **Next**.

3. In the **Database name** box, type the database name and specify a file system location for the database and the log. Click **Next**.

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

4. Accept the default name for the database files and click **Next**. Define the database file growth parameters. Click **Next**.

Note: Allocate at least 50 MB for the schema repository and at least 15 MB for every 1,000 records that you expect each user database to store.

5. Define the transaction log file growth parameters. Click **Next**.
6. Click **Finish**.
7. Create a database maintenance plan.

You are prompted to create a **Database Maintenance Plan**. The **Database Maintenance Plan Wizard** helps you set up a database backup routine. We strongly recommend that you set up automated nightly backups for all ClearQuest databases.

For SQL Server 7

To set the properties for the new database:

1. Select the new database in the server's databases folder.
2. Right-click the database and click **Properties**.
3. On the Options tab, select the following settings, which keep the log file from growing too large:
 - **Select into / bulk copy**
 - **Truncate log on checkpoint**
4. Click **Apply**.

For SQL Server 2000

To control the log file size in SQL 2000, be sure to create a maintenance plan that performs a daily backup of both the database and log file. The log file is then truncated each day after the daily backup.

Repeat Step 1 on page 79 through Step 6 on page 79 for each empty user database that you want to create.

Creating SQL Server logins

You must create a db_owner login for each ClearQuest database (schema repository and each user database). To do so, select the db_owner role for each login that you create.

Note: Do not use the SA (system administrator) as the owner login of a ClearQuest database. During an upgrade or move, ClearQuest requires empty databases. If the SA login is used, ClearQuest can see the system tables; it assumes the database is not empty and does not let the process continue.

To create a db_owner login for the empty databases for the schema repository and user databases:

1. On the **Start** menu, click **Programs > Microsoft SQL Server 7.0 > Enterprise Manager or Programs > Microsoft SQL Server > Enterprise Manager**.
2. In the left pane of the **Enterprise Manager**, expand the **Security** folder. Right-click **Logins** and click **New Login** to create a new user for the schema repository database. The **SQL Server Login Properties - New Login** dialog box opens.
3. On the **General** tab, select **SQL Server Authentication**.

Note: ClearQuest requires a SQL Server login for each database and does not support Windows NT authentication. You must configure the SQL Server to operate in mixed mode (that is, Windows NT Authentication and SQL Server Authentication). To set this property by using **Enterprise Manager**, right-click the server and select **Properties**. In the **Properties** dialog box, on the **Security** tab, click **Windows NT Authentication and SQL Server Authentication**.

4. On the **General** tab, type a user name and password in the **Name** and **Password** boxes.

In the Defaults area, select your database and leave the **Language** set to *<Default>*.

5. On the **Server Roles** tab, verify that no server roles are granted on the **Server Role** list.
6. On the **Database Access** tab, select the new database from the **Permit** list to grant the login permission. Under **Permit** in database role, select db_owner and public. Do not grant the user any other privileges.
7. Click **OK** and verify your password.
8. Repeat Step 1 on page 80 to Step 7 on page 81 for each ClearQuest user database that you have created. When repeating Step 2 on page 80, double-click on the user name that you created for the schema repository in the right pane of the **Enterprise Manager**. On the **General** tab, the information for the **Name** and **Password** boxes will be completed.

Ensuring SQL Server client connectivity

To ensure connectivity to ClearQuest database, ClearQuest clients require Microsoft Data Access Components (MDAC) 2.7. If MDAC 2.7 is not present on the host when ClearQuest is installed, it is installed.

Configuring the Oracle server for ClearQuest

If you are using an Oracle database, see the Oracle documentation to install and create the databases. If you plan to support multiline searches for database fields, we recommend to use CLOB support. If you choose to not use a CLOB data type to support multiline searching, refer to the Oracle documentation for information on setting up IntermediaText.

When you set up your Oracle databases, follow these guidelines:

- Create an Oracle database instance or identify one to use for ClearQuest data.
- Create two or more database user accounts (each with its login):
 - The user login for the ClearQuest schema repository.
 - One user login for each ClearQuest user database.
- Grant each user login the Connect and Resource roles only.

Note: We recommend that you associate each database user with a unique default tablespace. In the Oracle database, users can share the temporary tablespaces, but these must be separate from the Oracle system tablespace.

Oracle is a case-sensitive database. If you are using ClearQuest MultiSite or want to migrate to a different vendor, you should evaluate your database case sensitivity settings. For more information, see “Database case sensitivity” on page 74.

Enabling Oracle CLOB data type support

This release provides CLOB (Character Large Object) support for Oracle databases. With this release, you can create a column for **multiline_text** field types by setting the column type as **CLOB**. In order to do this, when you create the schema repository or user database using either the Maintenance Tool or Designer, you must specify the **LOB_TYPE** as **CLOB** in the **Connect Options** field. See the *IBM Rational ClearQuest Release Notes* for guidelines when specifying either **CLOB** or **LONG** as the data type for new Oracle databases.

Creating IBM DB2 databases for ClearQuest

To use ClearQuest with IBM DB2 databases, you must install a supported release of DB2 on your database server. DB2 is a case-sensitive database.

Note: When installing a DB2 database on a supported AIX platform, make sure the filesystem where the database resides is **large file enabled** to enable database control files to grow over 2 GB.

If you are using ClearQuest MultiSite or want to migrate to a different database vendor, you should evaluate your database case sensitivity settings. For more information, see “Database case sensitivity” on page 74.

There are two methods for configuring the DB2 database software for ClearQuest. The first method is recommended for performance reasons. It is easier to set up and administer. The first method requires that you create a single DB2 database in one DB2 database server. Then, you create the ClearQuest schema repository and one or more user databases in the single DB2 database. The second method requires that you create multiple DB2 databases for the ClearQuest databases on the DB2 database server. You may need to use the second method if you need ClearQuest clients to interoperate with ClearQuest databases in which ClearQuest software older than v2003.06.00 is installed.

The following sections provide instructions for creating an empty DB2 database for versions 7.x and 8.1 (full and Express). They assume that you are performing these steps on the machine in which the DB2 server is installed and that users who will be accessing the database are members of the public group..

- If you choose the single DB2 database method, use the applicable instructions for the DB2 version that you have installed to create one empty DB2 database. Then create a user account for each ClearQuest database at the operating system level. For those instructions, see your operating system documentation. When you create the ClearQuest schema repository and user databases later on, use the same database name, but use different user accounts created at the system level to own the ClearQuest databases. For example, if you create “cqrepo” and “cqdata” user ids at the operating system level, “cqrepo” could own the schema repository database and “cqdata” could own the user database under the single DB2 database “cqdb”.
- If you use the second method, go through the same set of instructions for the DB2 version that you have installed to create an empty DB2 database for each ClearQuest database (schema repository and one more user databases).

For DB2 7.x

If you are using the single DB2 method, create the user ids for the Clearquest databases as explained above. The following procedure assumes that the public group is assigned permissions by default. When you assign permissions to the DB2 user names that will be accessing the database, the permissions should match those of the public group. If you are using the multiple database method, repeat these instructions for each ClearQuest database.

To create a DB2 database:

1. Click **> Start > Programs > IBM DB2 > Control Center**.
2. Enter the login name and password for the DB2 administrator account and click **OK**.

3. In the DB2 Control Center, expand the **All Cataloged Systems** tab, and expand the host name tab that corresponds to the database server name. Expand the **Instances** tab and expand the **DB2** tab.
4. Ensure that all DB2 services are running on the DB2 server computer. Right-click the **Databases** folder and click **Create > Database using Wizard**.

Note: If the database creation is not successful, run the following command:

db2

db2> **connect to** *database-name*

db2> **bind db2schema.bnd blocking all grant public**

db2> **disconnect all**

5. In the **Database name** box, type the name of the database.

Note: DB2 supports database names of up to eight characters.

6. Select a default drive and type an alias name in the **Alias** box. Optionally, provide a comment in the **Comment** box. Click **Finish**.
7. Expand the **Database name** folder for the database you have created.
8. Right-click the **Buffer Pools** folder and then click **Create**. In the **Create Buffer Pool** dialog box:
 - a. Type a Buffer pool name (such as BFP16K) and select **Page size = 16**.
 - b. Accept the default for **Size** in 16 KB pages.
 - c. Clear the **Use extended storage** and **Use default bufferpool size** check boxes if selected.
 - d. Click **OK**.
9. Right-click the **DB2** folder, and click **Stop**. Select the **Disconnect all applications** check box in the **Confirm Stop** dialog box. Then, from the **DB2** folder, click **Start** to restart the database with buffer pool activated.
10. Under the database-name folder for the database you have created, right-click the **Table Spaces** folder and click **Create > Table space**. In the **Create Table Space** dialog box:
 - a. Type a name in the **Table space name** box (for example: TSPRGR16K), set the **Type of table space** to **Regular** and set **Space management** to **System**.
 - b. In the **Container name** section, click **Add**. In the **Add Container** dialog box, type a name in the **Container** box (for example; cntr1a_16K) and click **OK**. The container name then appears in the **Create Table Space** dialog box.
11. Click **Advanced** to open the **Advanced** dialog box:
 - a. Set **Page size** to **16**, then select the buffer pool name created in Step 8 and click **OK**.
 - b. Click **OK** to close the **Create Table Space** dialog box.
 - c. In the right pane of the **Control Center**, right-click the new tablespace name you have created and select **Privileges**.
 - d. On the **Group** tab, click **Add**, select the **Public group**, and click **OK**. Set the **Privileges: Use area** to **Yes** and click **OK**.
12. Under the database-name folder for the database you have created, right-click the **Table Spaces** folder and click **Create > Table space**. In the **Create Table Space** dialog box:
 - a. Type a name in the **Table space name** box (for example: TSPTMP16K), set **Type of table space** to **System Temporary** and set **Space management** to **System**.

- b. In the **Container name** section, click **Add**. In the **Add Container** dialog box, type a name in the **Container** box (for example; cntr1b_16K) and click **OK**. The container name then appears in the **Create Table Space** dialog box.
13. Click **Advanced** in the **Advanced** dialog box:
 - a. Set **Page size** to 16, then select the buffer pool name created in Step 8 and click **OK**.
 - b. Click **OK** to close the **Create Table Space** dialog box.
14. Right-click the instance name folder, and click **Stop**. (Remember to select the **Disconnect all applications** check box in the **Confirm Stop** dialog box.), Then, from the Instance folder name, click **Start** to restart the database using the larger page size.
15. In the left pane of the **Control Center**, for each database created, right-click the *database-name* folder and select **Configure** to open the **Configure Database** dialog box.
 - a. On the **Performance** tab, set the values for **Application heap size**, **Application control heap size**, and **Sort heap size** of 1024.
 - b. On the **Log** tab, set the value for these parameters: **Log File size** to 1000, **Number of Primary Log Files** to 15, and **Number of Secondary Log Files** to 10.
16. In the right pane of the **Control Center**, right-click the new database that you have created and select **Privileges**.
17. On the **Group** tab, click **Add**, select the **Public group**, and click **OK**. Set the **Privileges: Use area** to **Yes** and click **OK**.
18. Click **OK**.
19. Drop the first **Tablespace** that you created.
20. Right-click the **DB2** folder and click **Stop**. Then click **Start** to restart the database with the configuration parameters.

For DB2 and DB2 UDB Express 8.1

If you are using the single DB2 method, create the user ids for the Clearquest databases as explained above. The following procedure assumes that the public group is assigned permissions by default. When you assign permissions to the DB2 user names that will be accessing the database, the permissions should match those of the public group. If you are using the multiple database method, repeat these instructions for each ClearQuest database.

To create a DB2 database:

1. Click **Start > Programs > IBM DB2 > General Administration Tools > Control Center**.
2. Enter the login name and password for the DB2 administrator account and click **OK**.
3. In the DB2 Control Center, expand the **All Cataloged Systems** tab, and expand the host name tab that corresponds to the database server name. Expand the **Instances** tab and expand the **DB2** tab.
4. Ensure that all DB2 services are running on the DB2 server host. Right-click the **Databases** folder and click **Create > Database using Wizard**.

Note: If the database creation is not successful, run the following command:

db2

db2> **connect to** *database-name*

```
db2> bind db2schema.bnd blocking all grant public
db2> disconnect all
```

5. In the **Database name** box, type the name of the database.

Note: DB2 supports database names of up to eight characters.

6. Select a default drive and type an alias name in the **Alias** box. Optionally, provide a comment in the **Comment** box. Click **Finish** and then click **No** when prompted to start the **Configuration Advisor**.
7. Expand the **Database** name folder for the database you have created.
8. Right-click the **Buffer Pools** folder and then click **Create**. In the **Create Buffer Pool** dialog box:
 - a. Type a **Buffer pool name** (such as BFP16K) and set **Page size** to **16**.
 - b. Accept the default for **Size** in **16 KB** pages.
 - c. Clear the **Use extended storage** and **Use default bufferpool size** check boxes if selected.
 - d. Click **OK**.
9. Right-click the **DB2** folder, and click **Stop**. Select the **Disconnect all applications** check box in the **Confirm Stop** dialog box. Then, from the **DB2** folder, click **Start** to restart the database with buffer pool activated.
10. Under the *database-name* folder for the database you have created, right-click the **Table Spaces** folder and click **Create > Table space**. In the **Create Table Space Wizard**:
 - a. Type a name in the **Table space name** box (for example: TSPRGR16K) and then click **Next**.
 - b. Set the **type of table space** to **Regular** and then click **Next**.
 - c. Select the buffer pool that you created in Step 8 and then click **Next**.
 - d. Set **space management** to **System-managed** space and then click **Next**.
 - e. On the **Define containers for this table space** page, click **Add**. In the **Define Container** dialog box, type a name in the **Container** box (for example; cntr1a_16K) and click **OK**. The container name then appears on the **Define containers for this table space** page. Click to select this container name and then click **Next**.
 - f. On the **Specify the extent and prefetch sizes for this table space** page, click to select the average size of a table in this table space. Click **Next**.
 - g. On the **Describe hard drive specification** page, define the specifications for the hard drive where the DB2 database resides. Click **Next**.
 - h. On the **Specify the dropped table recovery option for your new table space** page, if you want to recover the table space, click the **Enable dropped table recovery** option. Click **Next** and then click **Finish**.
11. In the right pane of the **Control Center**, right-click the new tablespace name you have created and select **Privileges**. On the **Group** tab, click **Add**, select the **Public** group, and click **OK**. Set the **Privileges: Use area** to **Yes** and click **OK**.
12. Under the *database-name* folder for the database you have created, right-click the **Table Spaces** folder and click **Create > Table space**. In the **Create Table Space Wizard**:
 - a. Type a name in the **Table space name** box (for example: TSPTMP16K) and then click **Next**.
 - b. Set the type of table space to **System temporary** and then click **Next**.
 - c. Select the buffer pool that you created in Step 8 and then click **Next**.

- d. Set **space management** to **System-managed space** and then click **Next**.
 - e. On the **Define containers for this table space** page, click **Add**. In the **Define Container** dialog box, type a name in the **Container** box (for example; cntr1b_16K) and click **OK**. The container name then appears on the **Define containers for this table space** page. Click to select this container name and then click **Next**.
 - f. On the **Specify the extent and prefetch sizes for this table space** page, click to select the average size of a table in this table space. Click **Next**.
 - g. On the **Describe hard drive specification** page, define the specifications for the hard drive where the DB2 database resides. Click **Next**.
 - h. On the **Specify the dropped table recovery option for your new table space** page, if you want to recover the table space, click the **Enable dropped table recovery** option. Click **Next** and then click **Finish**.
13. Right-click the **DB2** folder, and click **Stop**. Select the **Disconnect all applications** check box in the **Confirm Stop** dialog box. Then, from the **DB2** folder name, click **Start** to restart the database using the larger page size.
 14. In the left pane of the **Control Center**, for each database created, right-click the *database-name* folder and select **Configure Parameters** to open the **Database Configuration** dialog box.
 - a. Under the **Performance** section, set the values for APP_CTL_HEAP_SZ, APPLHEAPSZ, and SORTHEAP to **1024**.
 - b. Under **Logs** section, set the values for LOGFILSIZ to **1000**, LOGPRIMARY to **15**, and LOGSECOND to **10**.
 - c. Click **OK**.
 15. In the right pane of the **Control Center**, right-click the new database that you have created and select **Privileges**.
 16. On the **Group** tab, click **Add**, select the **Public group**, and click **OK**. Set the **Privileges: Use area** to **Yes** and click **OK**.
 17. Drop the first **Tablespace** that you created.

Installing a DB2 client

To use the DB2 database, all ClearQuest client hosts on Windows must install DB2 client software on their local computers. To install DB2 client software, see the IBM documentation.

Note: The DB2 Administration Client must be installed on all hosts accessing a DB2 database.

After the installation is complete, see “Creating a DB2 database alias” on page 86.

Creating a DB2 database alias

Before using a ClearQuest Windows client to access a ClearQuest DB2 version database, you must use the Client Configuration Assistant to create a database alias for each physical ClearQuest database you will use. The administrator will assign a specific DB2 alias name to use when creating the DB2 database alias.

Note: Creating a database connection between a DB2 8.1 client and DB2 7.2 Server is not allowed. You cannot make a connection between a DB2 8.1 client and DB2 7.2 server. The following are the supported combinations:

- DB2 7.x client to DB2 7.x server
- DB2 7.x client to DB2 8.1 server

- DB2 8.1 client to DB2 8.1 server

Using any other combination of client and server versions is neither supported nor recommended.

1. For DB2 7.x, click **Start > IBM DB2 > Client Configuration Assistant**. For DB2 8.1, click **Start > IBM DB2 > Set-up Tools > Configuration Assistant**.
2. For DB2 7.x, in the **Welcome** dialog box, click **Add database**. Then, click **Search the network** and click **Next**. For DB2 8.1, in the DB2 Message dialog box, click **Yes**. Then, click **Search the network** and click **Next**.
3. Expand the **Known Systems** folder. If you see the DB2 database server host on which the ClearQuest database resides, expand it and select the database name for which you want to create an alias. Click **Next**.

Note: If you do not see the DB2 server host you need, expand the **Other Systems** folder. If you still do not see the host, talk to your ClearQuest database administrator. There may be a network problem.

4. Type an alias name in the **Database alias** box. Type an optional comment in the **Comment** box and click **Next**.
5. Clear the **Register this database for ODBC** option if it is selected. Click **Finish**.
6. A confirmation dialog box opens. To test access to the DB2 database, click **Test Connection** and type the user name in the **User ID** box and password in the **Password** box.

If the connection fails, attempt to connect by using the following command:

db2

db2> catalog TCPIP node node-name remote host-name server port-number

db2> catalog database database-alias at node node-name

db2> terminate

When a ClearQuest client uses the ClearQuest Maintenance Tool to create a schema repository or to configure the connection to the DB2 database server, the Database alias, created when using the DB2 client, is entered in the **Database** box on the Maintenance Tool.

Other ClearQuest and ClearQuest MultiSite post-installation tasks

There are several post-installation configuration steps that are required to complete the ClearQuest installation process. Other post-installation configuration steps are optional, depending on which installation options you selected.

The required post-installation configuration steps for ClearQuest are:

- Creating ClearQuest databases (schema repository and user database)
- Connecting to ClearQuest Databases
- Enabling e-mail Notification for the Windows User

There are several post-installation configuration steps that are required to complete the ClearQuest MultiSite installation process. Other ClearQuest MultiSite post-installation configuration steps are optional, depending on which installation options you selected.

The required post-installation configuration steps for ClearQuest MultiSite are:

- Creating ClearQuest databases
- Replicating ClearQuest databases
- Configuring the MultiSite Control Panel (Shipping Server only)

The optional post-installation configuration steps for ClearQuest MultiSite are:

- Setting up mastership for records
- Configuring the MultiSite Control Panel
- Automating synchronization

Joining a Rational User Group

After installing ClearQuest you can join a Rational User Group. The Rational User Group is an e-mail forum where you can share your experiences, pose questions, or obtain useful information from other ClearQuest users. To subscribe to the group, visit the IBM developerWorks Web site at: <http://www-136.ibm.com/developerworks/rational/community/>.

Required configuration steps for ClearQuest

The required configuration steps for ClearQuest are:

- Create ClearQuest databases
- Connect to ClearQuest databases
- Enable e-mail notification

Creating the ClearQuest databases

After you install ClearQuest and create the necessary empty vendor databases, you must create the ClearQuest databases (schema repository and user databases). Initially, you can create a sample user database to learn more about the product. You can create your user databases later. For more information about configuring an evaluation database, see “Installing IBM Rational ClearQuest for evaluation” on page 28.

Creating a schema repository

To create a new schema repository:

1. Click **Programs > Rational Software > Rational ClearQuest > ClearQuest Maintenance Tool**.
2. Click **Schema Repository > Create**.
3. In the **Existing Connections** area, type a name for the schema repository connection, and press enter.
4. In the **Schema Repository Properties** area, select a vendor database from the **Vendor** list.

Then enter the required information for your vendor database.

For Access

In the **Physical Database Name** box, type the entire path to the schema repository using a UNC style path. For example:

```
\\DevServer\ProjectShare\CQ_DBS\schema_repo.mdb
```

You can browse to the directory containing the database. Be sure to browse using the Network Neighborhood to preserve the UNC style path name.

For SQL Anywhere

1. In the **Physical Database Name** box, type the path to the schema repository using a UNC style path. For example:

\\DevServer\Project\CQ_DBS\schema_repo.db

You can browse to the directory containing the database by using Network Neighborhood, which preserves the UNC style path name. To do so:

2. Type the name of the database server.
3. Select the protocols used to communicate with the SQL Anywhere server.
4. Type the database host name.
5. Type the connect options in the **Connect Options** box. The default connect option is **SERVER_VER=8.0**; use this option to connect to a SQL Anywhere 8.0.1 or 8.0.2 database. For more information on using connect options, see the *IBM Rational ClearQuest Documentation Supplement*.

For SQL_SERVER

1. In the **Physical Database Name** box, type the database name for SQL Server schema repository.
2. Type the name of the database server in the **Database Server Name** box.

Note: Each ClearQuest native client must be able to access this server host by using the name exactly as it appears in this entry.

3. Type the database owner (DBO or Administrator) user name in the **Administrator Name** box.
4. Type the password for the database owner (DBO or Administrator) in the **Administrator Password** box.
5. Type the connect options in the **Connect Options** box. For more information using connect options, see *IBM Rational ClearQuest Documentation Supplement*.

For ORACLE

1. Type the server name in the **Server** box.
2. Type the SID or database instance name in the **SID** box.
3. Type the user name you created for the schema repository in the **User Name** box.
4. Type the password for the user name in the **Password** box.
5. Type the connect options in the **Connect Options** box. The default connect option is **LOB_TYPE=CLOB**; CLOB (Character Large Object) supports multiline searching for Oracle databases. For more information using connect options, see *IBM Rational ClearQuest Documentation Supplement*.

For DB2

1. Select DB2 in the **Vendor** box.
2. Type the Database Alias name (Database Alias pointing to the DB2 database).
3. Type the DB2 login created for the schema repository.
4. Type the password for the login.
5. Click **Next**.
6. In the schema definition area:
 - a. Select the ClearQuest data code page from the **ClearQuest Data Code Page** box.
 - b. (Optional) Select the **Create sample database** option.
 - c. In the Schema to use list, select the schema to use. For information about the schema options, see the *IBM Rational ClearQuest Administrator's Guide*.
 - d. In the **Database Name** box, type the database name for the schema repository.

- e. In the **Description** box, type a description.
7. (Optional) If the **Create sample database** option was selected, in the **Sample User Database** area, enter the properties of the database designated for the sample database.
8. Click **Finish**. In the **Status** dialog box, verify the successful creation of the schema repository.

Creating a user database

After you create a schema repository, you can create ClearQuest user databases with the ClearQuest Designer.

1. Click **Start > Programs > Rational Software > Rational ClearQuest > ClearQuest Designer**.
2. In the **Schema Repository** dialog box, select the schema repository to use for creating a user database.
3. In the **ClearQuest Designer Login** dialog box, log on with the default ClearQuest administrator login name and password. The default user name is **admin**; the password is **Null** and should be left blank. You can change this password and create a new login at your earliest convenience. Click **OK**.
4. When the **Open Schema** dialog box opens, click **Cancel**.
5. Click **Database > New Database**.
6. Type a logical database name in the **Logical Database Name** box for the user database you want to create. This name can be up to five characters. Click **Next**.
7. Select the vendor database you plan to use and type the properties appropriate for that vendor. (For more information, see “Creating a schema repository” on page 88.) Then, click **Production Database** or **Test Database**. Click **Next**.
8. Click **Next** to accept the default **Timeout** and **Poll Interval** polling parameters.
9. Select a schema with which to associate your user database.
10. Click **Finish**.

Connecting to ClearQuest databases

After installing ClearQuest, client users will need to connect to an existing schema repository. As the ClearQuest administrator, you have two methods of providing ClearQuest Windows client users with the database properties information:

- You can provide ClearQuest client users with the database properties for the schema repository and the client users can create a new connection (see “Creating a new connection” on page 90).
- You can create a connection profile for client users to connect to the schema repository (see “Using connection profiles” on page 92).

Note: If you are using DB2 as your ClearQuest database, your users will need to install DB2 client software before connecting to ClearQuest. For more information, direct your users to *Before You Install* and *After You Install* chapters in the *IBM Rational Software Desktop Products Installation Guide*.

To connect the ClearQuest Windows user to a schema repository, use the ClearQuest Maintenance Tool.

Creating a new connection

To create a new connection:

1. Click **Programs > Rational Software > Rational ClearQuest > ClearQuest Maintenance Tool**.
2. Click **Connection > New**.
3. In the **Existing Connections** area, name the alias by typing a name in the highlighted item.
4. In the **Schema Repository Properties** group box, specify the properties of the vendor database designated for the schema repository. Select a vendor database from the drop-down list and type the required vendor database properties.

Database	Properties
-----------------	-------------------

MS_ACCESS	Type the entire path to the schema repository using a UNC style path. For example:
------------------	--

\\DevServer\ProjectShare\CQ_DBS\schema_repo.mdb

You can browse to the directory containing the database. Be sure to browse using the Network Neighborhood to preserve the UNC style path name.

SQL_ANYWHERE	Type the path to the schema repository using a UNC style path. For example:
---------------------	---

\\DevServer\ProjectShare\CQ_DBS\schema_repo.mdb

You can browse to the directory containing the database by using Network Neighborhood, which preserves the UNC style path name. To do so:

- Type the name of the database server.
- Type the protocols used to communicate with the SQL Anywhere server.
- Type the database host name.
- Type the connect options. For more information using connect options, see *IBM Rational ClearQuest Documentation Supplement*.

SQL_SERVER	Type the SQL Server database name for the database containing the schema repository.
-------------------	--

- Type the name of the physical database database.
- Type the name of the database server.
- Type the schema repository or read-only user login.
- Type the password for the schema repository or read-only login.
- Type the connect options. For more information using connect options, see *IBM Rational ClearQuest Documentation Supplement*.

ORACLE	Type the Oracle server name and the SID (database instance name) for the database containing the schema repository .
---------------	--

- Type the Oracle login created for the schema repository.
- Type the password for the login.
- Type the connect options. For more information using connect options, see *IBM Rational ClearQuest Documentation Supplement*.

- DB2** For DB2, type the Database Alias name (Database Alias pointing to the DB2 database) and the DB2 login and password.
- Type the DB2 login created for the schema repository.
 - Type the password for the login.

5. Click **Finish**.

Using connection profiles

Rather than asking users to enter database connection information when they need to connect to a schema repository, you can create connection profiles that can be used as shortcuts.

Connection profiles allow you to save database settings for later use, or for distribution to a team, to make it easier to reconnect to a ClearQuest schema repository.

Both ClearQuest administrators and ClearQuest client users can import and export connection profiles for later use.

Use the ClearQuest Maintenance Tool to export and import connection profiles.

Creating a connection profile

When you create a connection profile, you export your connection information to a file that can later be imported.

1. From the **Start** menu, click **Programs > Rational Software > Rational ClearQuest > ClearQuest Maintenance Tool**.
2. Click **File > Export Profile**.
3. In the **Export Connection** area, select the connections that you would like to include in your profile.
4. In the **File Name** box, type the pathname and file name for the profile. Connection profiles must be saved with a **.ini** extension.
Optionally, you can click **Browse** to select a location to save the profile.
5. Make the profile available to ClearQuest Windows client users to import the connection information for the ClearQuest database.

Importing a connection profile

To use a previously created connection profile, import the connection profile.

1. From the **Start** menu, click **Programs > Rational Software > Rational ClearQuest > ClearQuest Maintenance Tool**.
2. Click **File > Import Profile**.
3. In the **Import Profile Information** area, type the path and file name of the profile you would like to import.

Note: After completing a ClearQuest client installation from a release area, when the Import page displays, the default location of the profile (that was defined using the Site Preparation Wizard) is pre-populated in the **Import Profile Information** area.

4. Click **Next**.
5. Click to select the connections to import and verify the Schema Repository Properties information, then click **Finish**.

Logging in to ClearQuest

After you create a new connection to a schema repository using the ClearQuest Maintenance Tool, you and your users can login to the schema repository and select the user database you want to access. To login:

1. Click **Start > Programs > Rational Software > Rational ClearQuest > ClearQuest**.
2. If you have created connections to more than one schema repository, select a schema repository from the **Rational ClearQuest Schema Repository** dialog and then click **Next**.
3. Type your user name and password and then select a user database and then click **OK**. The ClearQuest client opens and you can begin to use ClearQuest.

Note: If you open a **Warning - Invalid Login** dialog box, click the **Details** option in this dialog for further information.

Configuring your ClearQuest client to receive e-mail notification

To configure ClearQuest clients running on Windows to receive e-mail notification, see the *IBM Rational ClearQuest - After Install* section in the *IBM Rational Software Desktop Products Installation Guide*.

Configuring the ClearQuest client to send e-mail notification

If you configure a site default e-mail address when creating the release area, this e-mail address is configured by default when users install the ClearQuest for Windows client software.

After installing ClearQuest for Windows, your users can enable e-mail notification if a site default e-mail address is not defined, or they can change their default e-mail address. For instructions, see the *IBM Rational ClearQuest - After Install* section in the *IBM Rational Software Desktop Products Installation Guide*.

Required configuration steps for ClearQuest MultiSite

The required post-installation configuration steps for ClearQuest MultiSite are:

- Creating ClearQuest databases
- Replicating ClearQuest databases

Creating ClearQuest databases

For instructions on how to create ClearQuest databases, see “Creating the ClearQuest databases” on page 88.

Replicating ClearQuest databases

To begin using ClearQuest MultiSite, replicate your ClearQuest databases. For instructions, see the *IBM Rational ClearQuest MultiSite Administrator's Guide*.

If you plan to use the IBM Rational Shipping Server to send replica creation packets, first configure the MultiSite Control Panel. For instructions, see “Configuring the MultiSite control panel” on page 94.

Optional configuration steps for ClearQuest MultiSite

The optional post-installation configuration steps for ClearQuest MultiSite are:

- Setting up mastership for records
- Configuring the MultiSite Control Panel
- Automating synchronization

Setting up mastership for records

At the working schema repository site, modify your schema and add the `ratl_mastership` field to the record form of any record type you will use with ClearQuest MultiSite. By allowing the user to access this field on the record form, any ClearQuest user can change the mastership of any record, if they are at the master replica of the record and have the correct permissions.

For more information about mastership, see the *IBM Rational ClearQuest MultiSite Administrator's Guide*.

Configuring the MultiSite control panel

The MultiSite Control Panel controls the operation of the store-and-forward facility on the synchronization server computer. It manages the locations of the storage bays that store and receive update packets sent to and from other replicas. If you want to use the IBM Rational Shipping Server to send replica creation packets, configure the MultiSite store-and-forward facility before attempting to replicate your databases.

To open the MultiSite Control Panel:

1. Click **Start > Settings > Control Panel**.
2. Double-click the **MultiSite** icon.

For information about the MultiSite Control Panel settings, see the MultiSite Control Panel reference page in the *IBM Rational ClearQuest MultiSite Administrator's Guide*.

Automating synchronization

You can use MultiSite scripts and utilities to automate all phases of replica synchronization. For information about how to automate your synchronization process, see the *IBM Rational ClearQuest MultiSite Administrator's Guide*.

Chapter 6. After installation: configuring ProjectConsole

This chapter explains how to configure the ProjectConsole software after installation. It describes how to set up ProjectConsole on the ProjectConsole Web server (includes report server and collection agent software), repository, and, optionally, on separate report server and collection agent computers.

Prerequisites

The following sections assume you have:

- Set up the data warehouse using the procedures in the ClearQuest sections of this manual.
- Installed the ProjectConsole server and report server and data collection agent on the server computer.

Viewing Microsoft Access sample data

During the ProjectConsole server components installation, the IBM Rational Setup Wizard automatically creates two Microsoft Access ProjectConsole sample database files, which are part of the ProjectConsole repository:

- *InstallDir\sample_db_files\InitialPjCMaster.mdb* (the schema repository database)
- *InstallDir\sample_db_files\InitialPjCWarehouse.mdb* (the data warehouse)

After you install ProjectConsole components on the server, restart the ProjectConsole server. For instructions, see “To stop and restart RWP” on page 141. (See “Viewing ProjectConsole server startup error information” on page 100 if it does not start.)

You can log in to the ProjectConsole Web site from a ProjectConsole client and start browsing the sample repository data. For information about how to log in to the ProjectConsole Web site from a client, see Logging In to the ProjectConsole Web Site in the *IBM Rational Software Desktop Products Installation Guide*.

Setting up users and groups

After you install and set up the ProjectConsole server, log in as a ProjectConsole administrator by entering **admin** in the User ID box and **changeit** in the Password box. To ensure ProjectConsole Web site security, we recommend that you set up users (with user IDs and passwords) and groups for your development team immediately after you set up the ProjectConsole server.

For information about setting up users and groups and managing site security, see the ProjectConsole Help.

Configuring the ProjectConsole services

This section describes how to use the ProjectConsole Maintenance Tool to configure ProjectConsole software on the ProjectConsole server and on any separate computers on which you have installed the report server and collection agents.

- For more information about the IBM Rational Web Platform (RWP), the ProjectConsole Web server components, see Chapter 9, “Customizing the Rational Web Platform,” on page 137.
- For detailed information about the options available in the ProjectConsole Maintenance Tool, see Rational ProjectConsole Maintenance Tool Help.
- After you install ProjectConsole components on the server, restart the ProjectConsole server (See “Viewing ProjectConsole server startup error information” on page 100 if it does not start.)

Configuring the ProjectConsole server and additional report server and collection agent

To configure the ProjectConsole services on the server or on an additional report server and collection agent:

1. Click **Start > Programs > Rational Software > Rational ProjectConsole > Rational ProjectConsole Maintenance Tool**.
2. Leave **Configure the ProjectConsole services** selected. Click **Next**.
3. In the Web server name box, type the name of the ProjectConsole server.
4. In the Web server port box, if the ProjectConsole Web server uses a port other than the default port (80 for http and 443 for https), clear the default port number, and then type the correct number.
5. To ensure secure data transactions, next to Web server protocol, click https.

Note: After you click https, the value displayed in the Web server port box changes from “80” to “443.”

6. If the ProjectConsole server is running behind a firewall, and the name of this server computer is not visible outside the firewall, perform the following steps. Otherwise, skip to Step 7 on page 96.
 - a. In the RMI server name box, type the ProjectConsole server hostname or IP address for the RMI server to send in RMI connection reply messages.
 - b. In the RMI server port box, type the port number on the ProjectConsole server that the RMI server should use instead of a dynamic client connection port.

Note: These values are set in the `server.ini` file.

- c. Configure the firewall to route requests on both the static ProjectConsole RMI server port and the dynamic RMI server port to the ProjectConsole server computer.
 - d. Configure the firewall to route requests on the http (or https) listening port to the ProjectConsole server.
After you complete this procedure, http requests are routed to the Rational Web Platform server components on the ProjectConsole server, and RMI connections to the Dashboard and Designer are correctly routed to the ProjectConsole server.
7. In the **Connection retry interval** box, type the number of minutes for the report server and collection agents to wait after failing to connect to the Web server before trying to connect again.
 8. To control the debug information that the Web server (and any report servers and collection agents) generate and save to the log files, in the Trace level list, select one of the following trace level values:

- Tracing is disabled: Logged information excludes errors and diagnostic messages.
 - Trace errors only: Logged information includes errors, but excludes messages.
 - Trace errors and warnings: Logged information includes both errors and messages.
 - Trace all messages: Logged information includes all diagnostic messages.
 - Trace all messages (with call stack): Logged information includes all diagnostic messages and a call stack to help trace the sources of errors.
9. In the **Log file** directory box, leave the default directory path for generated log files (C:\Programs\Rational\ProjectConsole\logs), or enter a different directory for log files.
 10. In the **Text template** directory box, leave the default value (C:\Programs\Rational\ProjectConsole\templates\Designer), or enter a different directory for text templates.
 11. In the **Artifact repository** box, leave the default value (C:\Classics\Projects\Webshop), or enter a different directory for storing development artifacts.
 12. After you provide the required information, click **Finish**.

Creating a ProjectConsole repository

The following section contains information about how to create a ProjectConsole repository based on Microsoft Access, SQL Anywhere, SQL Server, Oracle, and DB2 database types. If you need to connect to an existing ProjectConsole repository, see the *IBM Rational ProjectConsole Release Notes* and look for Rational ProjectConsole Maintenance tool.

The ProjectConsole Maintenance Tool helps you create a repository for each supported database type.

To create a ProjectConsole repository:

1. Click **Start > Programs > Rational Software > Rational ProjectConsole > Rational ProjectConsole Maintenance Tool**.
The ProjectConsole Maintenance Tool starts.
2. Click **Create** or **Copy** a ProjectConsole repository. Click **Next**.
3. Under ProjectConsole repository information, in the **Copy from** repository list, select one of the following repositories to initialize your new repository:
 - PjC Sample Site - This repository contains all of the elements of the ClassicsCD.com sample ProjectConsole Web site. This includes sample users and groups, a Web site navigation tree, as well as source templates, mappings, target tables, scheduled tasks, metric panels, and collected sample measurement data.

Note: If you use the PjC Sample Site to initiate a new repository, you can modify it for use with your own data later.

- PjC Empty Site - This repository contains an empty ProjectConsole site with an empty Web site navigation tree, minimal users and groups, and an empty data warehouse.

Note: You can use the PjC Empty Site as a starting point for building a ProjectConsole Web site from scratch.

- PjC Demo - The PjC Demo is the ProjectConsole Sample Site. After the installation is complete, this is the site to which ProjectConsole is connected.

Note: The three out-of-the-box repositories in the **Copy from** repository list are read-only and can only be used as starting points for a new repository.

For information about dimension tables and measure tables, see Rational ProjectConsole Designer Help. For information about metrics displays, see Rational ProjectConsole Dashboard Help.

4. In the **New repository name** box, type a name for the new repository.
5. Under Data warehouse information, in the **Database type** list, select the vendor for the databases in your new ProjectConsole repository.
6. The remaining information you must enter next under Data warehouse information depends on the database type you selected.

For Microsoft Access databases:

- a. In the Schema repository box, type the full shared Universal Naming Convention (UNC) name for the schema repository you created, using the following syntax:

```
\\servername\sharename\directory\databasename
```

Example:

```
\\server1\share1\directory1\PjCschema repository.mdb
```

Note: If you do not specify a schema repository database, the Maintenance Tool uses the following default value:

```
ProjectConsole install directory\DataRepository\< new repository name>\SchemaRepository.mdb
```

- b. In the Data warehouse box, type the full shared UNC name for the data warehouse you created, using the following syntax:

```
\\servername\sharename\directory\databasename
```

Example:

```
\\server1\share1\directory1\PjCdatawarehouse.mdb
```

Note: If you do not specify a data warehouse database, the Maintenance Tool uses the following default value:

```
ProjectConsole install directory\DataRepository\< new repository name>\SchemaRepository.mdb
```

```
ProjectConsole install directory\DataRepository\< new repository name>\DataRepository.mdb
```

Note: If ProjectConsole was installed in a location other than the default directory, the Maintenance Tool uses the correct directory.

For DB2 databases:

- a. Under Schema repository information, type the name of the DB2 schema repository you created.
- b. Under Schema repository information, type the username required to log in to the schema repository in the Username box.
- c. Under Schema repository information, type the password required to log in to your schema repository in the Password box.
- d. Under Data warehouse information, type the name of the DB2 data warehouse you created in the Data warehouse box.
- e. Under Data warehouse information, type the username required to log in to the data warehouse in the Username box.

- f. Under Data warehouse information, type the password required to log in to the data warehouse in the Password box.

For Oracle databases:

- a. Under Schema repository information, type the SQLNet Alias that points to the Oracle schema repository you created.
- b. Under Schema repository information, type the Oracle login you created for the schema repository in the Username box.
- c. Under Schema repository information, type the password for the Oracle login you created in the Password box.
- d. Under Data warehouse information, type the SQLNet alias that points to the Oracle data warehouse you created in the Data warehouse box.
- e. Under Data warehouse information, type the Oracle login you created for the data warehouse in the Username box.
- f. Under Data warehouse information, type the password for the Oracle login you created in the Password box.
- g. In the Connect options box, type the Oracle versions installed on the database server and on the client machine using the following format:

SERVER_VER=8.X

CLIENT_VER=8.X

If the database server is a machine other than the ProjectConsole server, then the ProjectConsole server is the client.

Note: ProjectConsole supports Oracle versions 8.0 and 8.1.

For SQL Anywhere databases:

- a. In the Schema repository box, type the full shared Universal Naming Convention (UNC) name for the schema repository you created, using the following syntax:

\\servername\sharename\directory\filename

Example:

\\server1\share1\directory1\PjCschemarepository

Note: If you do not specify a schema repository database, the Maintenance Tool uses the following default value:

ProjectConsole install directory\DataRepository\< new repository name>\SchemaRepository.db

- b. In the Data warehouse box, type the full shared UNC name for the warehouse database you created, using the following syntax:

\\servername\sharename\directory\filename

Example:

\\server1\share1\directory1\PjCdatawarehouse

Note: If you do not specify a data warehouse database, the Maintenance Tool uses the following default value:

ProjectConsole install directory\DataRepository\< new repository name>\DataRepository.db

- c. In the Database server box, type the name of the SQL Anywhere database server.
- d. Next to Protocol(s), select the check boxes for the protocols to use to communicate with the SQL Anywhere server.

- e. In the Hostname(s) (n1, n2,-) box, type the name or names of the database server or servers. Separate multiple database server names with commas.
- f. In the Connect options box, specify the version of SQL Anywhere installed on your database server machine using the following format:

SERVER_VER=8.X

- g. Create a SQL Anywhere Service. Add a parameter to the SQL Anywhere service for the data warehouse so that it runs on a different port: -x TCPIP(ServerPort=3644). Then start the service.

For SQL Server databases:

- a. In the Database server box, type the name of the SQL Server database server.
 - b. Under Schema repository information, type the name of the SQL SERVER database you created for the schema repository in the Schema repository box.
 - c. Under Schema repository information, type the database owner (DBO or Administrator) login you created for the schema repository in the Username box.
 - d. Under Schema repository information, type the password for the database owner login in the Password box.
 - e. Under Data warehouse information, type the name of the SQL Server data warehouse you created in the Data warehouse box.
 - f. Under Data warehouse information, type the SQL Server user name that you set up to log in to the data warehouse as db_owner in the Username box.
 - g. Under Data warehouse information, type the password that you set up to log in to the data warehouse as db_owner in the Password box.
7. Click **Finish**.
- After ProjectConsole creates the repository, it displays the text "Operation complete." (This can take some time, depending on whether you are creating an empty repository or one that contains data.)
8. To quit the Maintenance Tool, click **Exit**. To return to the first screen, click **Done**.

Viewing ProjectConsole server startup error information

If an error message is displayed during ProjectConsole server startup, use the error log file to determine the cause.

If an error occurs during server startup, do the following:

1. On your desktop, right-click **My Computer**, and then click **Manage** on the shortcut menu.
The Computer Management window is displayed.
2. On the **Tree** tab in the left pane, expand **Services and Applications**, and then click **Services**.
3. In the right pane, right-click Rational Web Platform, ReqWeb Servlet engine, and then click **Stop** on the shortcut menu.
4. Close the **Services** Window.
5. Open the error log file, which is located in the following directory:
InstallDir\logs\server.log
6. Examine the log file contents to see the source of the error.

Chapter 7. After installation: configuring RequisitePro

This chapter describes how to configure DB2, Oracle, and Microsoft SQL Server databases for RequisitePro projects, configure the Rational E-Mail Reader, and set up RequisiteWeb.

Note: The project database must be set up before you can configure RequisiteWeb.

Prerequisites

This chapter assumes you have:

- Installed DB2 UDB, Oracle, or Microsoft SQL Server on the database server. Refer to DB2, Oracle, or Microsoft documentation for information on installing Oracle, or Microsoft SQL Server.
- Installed client software on client desktops and the RequisiteWeb server (if DB2 or Oracle is the database that you have selected). Refer to the DB2 or Oracle documentation for all questions regarding that product. To access RequisitePro projects that are stored in an DB2 or Oracle database, you must configure DB2 or Oracle client software on the Web server.
- Installed the DB2, Oracle, or SQL Server database configuration scripts on the database server “Preparing to install RequisitePro” on page 37” and Chapter 3, “Installing IBM Rational products,” on page 49.

Configuring DB2 for IBM Rational RequisitePro

RequisitePro offers the capability of using DB2 UDB for your RequisitePro project database. To create and access RequisitePro projects in the DB2 database, follow the instructions in this document for enabling your DB2 database compatibility. RequisitePro supports multiple projects within a single DB2 schema. For information about creating a RequisitePro project, see the *IBM Rational Software Desktop Products Installation Guide*. The following procedures include database management information for setting up a DB2 schema to accommodate Requisite projects.

For the most current information related to DB2 database configuration, refer to the *Configuring DB2 for IBM Rational RequisitePro* document at the following default location on your computer after installation:

C:\Program Files\Rational\RequisitePro\help\DB2Setup.html

DB2 Database Administration

In order to configure access to DB2 for RequisitePro projects, the database administrator must establish the following:

- DB2 database server
- DB2 database name for storing RequisitePro projects (see the following procedure)

Note: The RequisitePro database will be created in your default instance.

- Operating system user id and password on your DB2 server for logging in to the DB2 database

Security

To enable only database administrators to perform database operations, such as dropping a database, perform the following steps:

1. Create an operating system group; for example, DB2ADS.

Note: Your group name must be 8 characters or less.

2. Assign the DB2 administrators user ID to this group.
3. From the DB2 Control Center, right-click the instance that will contain your RequisitePro database(s) and select **Configure Parameters**.
4. Under the Administration node, set the **SYSADM_GROUP** equal to the operating system group you created in step 1; for example, DB2ADS.

Creating a DB2 Schema for RequisitePro

The RequisitePro DB2 scripts allow the creation of multiple databases and schemas on your DB2 server. **Use the scripts listed below to create a RequisitePro database and schema** within DB2 for storing your projects. The RequisitePro DB2 scripts are designed to initially allocate disk space for the various database tables and indexes that are used by RequisitePro, based on the following approximations:

- 25 projects
- 250 documents (10 per project)
- 125 document types (5 per project)
- 125 requirement types (5 per project)
- 1,250 user defined attributes (10 per requirement type)
- 125 user groups (5 per project)
- 100 users
- 12,500 requirements (500 per project)
- 12,500 discussions (500 per project)

The scripts simply provide an initial size for the RequisitePro schema. They in no way imply any constraints on size or number of projects.

As database administrator, you can customize the scripts to adjust the buffer pool size as well as tablespace allocations for tables and indexes in order to accommodate your organization's intended use of RequisitePro. See the section "Editing Scripts" on page 103, below.

Schema Creation Scripts

The following scripts are used for creating a RequisitePro schema within your DB2 database:

CREATEDB.SQL Creates a database.

BUFFPOOL.SQL Allocates memory to be used for performing database queries.

TABLESPACE.SQL Creates tablespaces for data and indexes. Creates disk files to support these tablespaces.

TABLES.SQL Creates tables and a primary key for each table.

Note: This script will create a schema with the same name as the DB2 server's operating system user ID.

INDEXES.SQL Creates indexes on tables to enhance performance.

FOREIGN.SQL Creates foreign key relationships between tables.

DATA.SQL Inserts initial data into the database.

TRIGGERS.SQL Creates triggers.

PUTPROCS.SQL Loads stored procedures into a schema.

PACKAGE.SQL Generates GRANT.SQL

GRANT.SQL Grants permissions to run stored procedures.

Copying the RequisitePro Scripts

The database creation scripts are located by default in the directory C:\Program Files\Rational\RequisitePro\database\Oracle. Copy the scripts to a subdirectory on your DB2 database server.

Notes:

- Be sure to remove the "read only" option for each script.
- Be sure that the path of the scripts subdirectory does not contain any spaces.
- If your database server is running on an international operating system, be sure that the path to these scripts does not include folders with double-byte character names.

Editing Scripts

The following tasks need to be done in order:

1. Create an operating system user on your DB2 server; for example, reqpro.
2. Open each script and replace the following tags:

User	Replace With
<database>	Database name to be created
<instance>	The instance in which you are creating your database Note: The instance must already exist.
<user>	DB2 server operating system user
<password>	DB2 server operating system user password
<db2admin>	Administrator user ID specified during your DB2 install
<db2admin_pwd>	Administrator user password specified during your DB2 install
<path1>	Drive and path for storing system managed tablespace files for temporary data such as sorting information (must be different from path2 and path3)
<path2>	Drive and path for storing system managed tablespace files for temporary data such as sorting information (must be different from path1 and path3)
<path3>	Drive and path for storing database managed tablespace files for storing tables and indexes (must be different from path1 and path2)
<script_path>	Location of scripts on your database server

3. Make sure the <path1>, <path2>, and <path3> directories, described above, exist.

Note: The following two steps are optional.

4. Update buffpool.sql SIZE clauses according to DB2 tuning guidelines.

5. Update tablespace.sql to increase the number of pages for each data file.

After you have edited the scripts, be sure you are logged in to your DB2 server as an administrator in order to run the scripts. Use the DB2 Command Window to issue the script commands. Run the scripts in the following order with the indicated syntax:

Note: If you receive a "sql0598w" warning after running the tables.sql script, disregard it.

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\createdb.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\buffpool.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\tablespace.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\tables.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tvf C:\scripts\foreign.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\indexes.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\data.sql
```

```
db2 -l <path_to_scripts>\createdb.log -td@ -f C:\scripts\triggers.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\putprocs.sql
```

```
db2 -l <path_to_scripts>\createdb.log -td@ -f C:\scripts\package.sql
```

```
db2 -l <path_to_scripts>\createdb.log -tf C:\scripts\grant.sql
```

```
db2 terminate
```

User ID for Accessing DB2 Database

All RequisitePro projects must access the DB2 database using the same DB2 server user ID, which was created during the schema creation process, described above.

After connecting to a DB2 database, RequisitePro uses its own user and user group information to control access to a project.

Using Multiple Projects within a DB2 Database

RequisitePro supports multiple projects within a single DB2 schema. Refer to the procedure "Setting Up PCs for DB2 Access" for instructions on adding a project to a DB2 database within RequisitePro.

Setting Up PCs for DB2 Access

Use the DB2 Connect Personal Edition to create a DB2 alias on your client PC to access the DB2 database server. If you plan to share projects with other users, be sure to use a consistent database alias, as determined by your database administrator or project administrator.

Note: Make sure that the **Register this database for ODBC** check box is cleared.

Creating a Project in DB2

For information on creating a RequisitePro project in DB2, see *Creating a Project in DB2* in the *After Install* chapter of the *IBM Rational Software Desktop Products Installation Guide*. Use the same schema name for each of your RequisitePro projects.

Configuring Oracle for RequisitePro

To create and access RequisitePro projects in the Oracle database, follow the instructions in this section for enabling Oracle database compatibility. RequisitePro supports multiple projects within a single Oracle schema. The following section provides database management information for setting up an Oracle schema to accommodate Requisite projects. To create a RequisitePro project in the Oracle database, see the *IBM Rational Software Desktop Products Installation Guide*.

For the most current information related to Oracle database configuration, refer to the *Configuring Oracle for IBM Rational RequisitePro* document at the following location on your computer after installation:

C:\Program Files\Rational\RequisitePro\help\OracleSetup.html

Oracle database administration

Be sure to set the initialization parameter, `OPEN_CURSORS`, to at least 110.

To configure access to Oracle for RequisitePro projects, establish the following:

- Oracle database server name (TCP/IP Host Name)
- Oracle database alias or service name
- Oracle schema name for storing RequisitePro projects (see procedure below)
- Your user ID for logging on to the Oracle database
- Your user password for logging on to the Oracle database

The following sections provide instructions for configuring the last three of these items.

Creating an Oracle schema for RequisitePro

Oracle database administration enables you to create multiple schemas within your Oracle database instance. The RequisitePro database implementation is compatible with all Oracle-supported platforms. Use the scripts listed below to create a RequisitePro user and schema within Oracle for storing your projects. The RequisitePro scripts are designed to initially allocate disk space for the various database tables and indexes that are used by RequisitePro, based on the following approximations:

- 25 projects
- 250 documents (10 per project)
- 125 document types (5 per project)
- 125 requirement types (5 per project)
- 1,250 user defined attributes (10 per requirement type)
- 125 user groups (5 per project)
- 100 users
- 12,500 requirements (500 per project)
- 12,500 discussions (500 per project)

The scripts provide an initial size for the RequisitePro schema. They do not place constraints on size or number of projects.

Extents are set to the same size as the initial allocations. They define additional table space that Oracle will allocate if the original allocation becomes insufficient. You can customize the scripts to adjust the table space allocations for tables and indexes to accommodate your organization's intended use of RequisitePro. See the section "Editing scripts" on page 107.

Schema creation scripts

The following scripts are used for creating a RequisitePro schema within your Oracle database. They can be run automatically by executing the main script, CREATE_REQPRO, as described in the procedure "Creating a schema" on page 108, or you can run them individually as needed.

CREATE_REQPRO.	Establishes a log that can be used to review the results of running the script and runs the other scripts, listed below.
TABLESPACE.	Creates table spaces for data and indexes. Creates disk files to support these table spaces.
CREATE_USER.	Creates the default RequisitePro user (REQPRO) and password (REQPRO) and connects to the database with that user ID.
TABLES.	Creates tables for the RequisitePro database.
PRIMARY.	Creates primary keys for each table in RequisitePro.
INDEXES.	Creates indexes for the RequisitePro database.
FOREIGN.	Creates foreign key relationships between tables.
FUNCTIONS.	Creates customer-defined functions for use within RequisitePro.
SEQUENCE.	Creates sequences and triggers for auto-sequencing primary keys.
PROCEDURES.	Creates stored procedures for use within RequisitePro.
DATA.	Inserts data into the RqKeys and RqRequisite tables.
GRANT_ROLE.	Creates a user role with access to the RequisitePro schema objects.

Copying the RequisitePro scripts

If you chose the default installation when installing RequisitePro, the database creation scripts are, by default, located in C:\Program Files\Rational\RequisitePro\database\Oracle.

Copy the scripts to a subdirectory on your Oracle database server. We suggest that you create an "Oracle" directory below the home directory on the server.

Note: If your database server is running on an international operating system, be sure that the path to these scripts does not include folders with double-byte character names.

Editing scripts

Changing the name of your schema (optional): To change the name of your schema to a different entry other than the default, modify the following entries in the Create_ReqPro script:

```
#DEFINE ReqPro_Data= schemaName_DATA
#DEFINE ReqPro_Index=schemaName_INDEX
```

Modifying the user name and password (optional): To create the schema with a different entry than the default user name and password values of "ReqPro", modify the following entries:

```
DEFINE USR=reqpro
DEFINE PWD=reqpro
```

Note: Do not use non-English characters when entering the password for the schema.

Specifying the path for the schema scripts: Edit the DEFINE PATH entry to indicate the full path where the RequisitePro Oracle scripts are located. The suggested path (from "Copying the RequisitePro scripts" on page 106) is:

```
DEFINE PATH="$HOME/sql/"
```

Note: Do not use spaces when entering the full path to the RequisitePro SQL scripts location. If your environment limits your path to a maximum 8-character name for directories, reflect this format in your entry.

Indicating data and index files directory: Edit the DEFINE ORACLE_DATA entry to indicate the path and directory where the data file for the data table space will be created:

```
DEFINE ORACLE_DATA=<full path>/ORACLE_DATA/
```

Edit the DEFINE ORACLE_INDEX entry to indicate the path and directory where the data file for the index table space will be created:

```
DEFINE ORACLE_INDEX=<full path>/ORACLE_INDEX/
```

Note: You must create both the ORACLE_DATA and the ORACLE_INDEX subdirectories in your path before running the script.

Specifying a temporary tablespace: Edit the DEFINE TEMP entry in the CREATE_REQPRO script to assign temporary tablespace for storing temporary objects for the user's operations.

```
DEFINE TEMP=TEMP
```

Make sure that the value for this entry is a valid, existing tablespace in your Oracle database. Some versions of Oracle use "TEMPORARY_DATA" rather than "TEMP." Your installation of Oracle may contain a custom name for the temporary tablespace.

Customizing disk space allocation for database objects: The schema creation scripts are designed to allocate disk space for the various database tables and indexes that are used by an average set of RequisitePro projects, as described in "Creating an Oracle schema for RequisitePro" on page 105.

If you anticipate a much larger or smaller requirement for your organization's use of RequisitePro, you can customize the disk space allocation specified in the CREATE_REQPRO script to accommodate your projected capacity.

Edit the following sizing variables:

SMALL	= 10K
MEDIUM	= 100K
LARGE	= 1000K
REQS	= 6000K
REQHIST	= 75000K

Note: The last two variables, REQS and REQHIST, are used for the requirements (RqRequirements) and requirement history (RqRequirementHistory) tables, respectively.

Edit the DEFINE DATA_SIZE and DEFINE INDEX_SIZE entries to reflect the change in the total size of the database caused by your edits to the sizing variables.

Modifying the limits of the VARCHAR2 data type: RequisitePro uses the VARCHAR2 data type to store searchable text for requirement text, revision history reasons, and textual attribute values.

The RequisitePro Oracle scripts set the limit on this data type to 2000 characters. Current versions of Oracle support up to 4,000, allowing you to expand the constraints on the size of the searchable text. To modify this limit, increase the MAX_VARCHAR value in the CREATE_REQPRO script from 2000 to a maximum of 4000.

Creating a schema

Perform the following procedure to create a RequisitePro schema in Oracle:

1. Edit the CREATE_REQPRO script, as described in the section “Editing scripts” on page 107.
2. On the Oracle database server, log on to SQL*Plus with system administrator permissions.

Note: If you run SQL*Plus from a remote client, you need to edit the RequisitePro CREATE_USER script. Change the entry connect &3/&4 to the following:

connect &3/&4@<target Oracle database server alias>

3. Run the CREATE_REQPRO script using the command:

@<setup directory>\CREATE_REQPRO

This script runs the schema creation scripts. A message appears upon successful completion of the schema creation. If errors occur or the completion message is not displayed, review the log CREATE_REQPRO.LOG.

User ID for accessing Oracle database

All RequisitePro projects should access the Oracle database using the same user ID, which was created during the schema creation process, already described. The initial user name and password created by the script are "reqpro" and "reqpro," unless you modified the CREATE_REQPRO script, as described in “Editing scripts” on page 107. You can also change the password using your Oracle database utilities.

Each user does not need a separate Oracle account because RequisitePro uses its own user and user group tables to control access to a project.

Using multiple projects within an Oracle database

RequisitePro supports multiple projects within a single Oracle schema. Refer to the section *Creating a Project in Oracle* in the *IBM Rational Software Desktop Products Installation Guide* for instructions on adding an Oracle database project within RequisitePro. Use the same schema name for each of your RequisitePro projects.

Connecting projects across databases

Perform the following steps to enable cross-project traceability between projects in distributed Oracle databases. Refer to the following sections for details.

- Creating a reference to the remote database instance
- Creating a database link to the remote database
- Defining database aliases on each RequisitePro client

Creating a reference to the remote database instance

To run traceability queries between projects in distributed Oracle databases, define a reference in each database instance that refers to the remote database instances. Edit the `tnsnames.ora` file, located on the Oracle server, to define the name, host, port, and protocol of the remote service.

The following example shows the syntax for defining the database instance "server02" as a remote database server to "server01" in the `tnsnames.ora` file:

```
Server02.world =  
  
(DESCRIPTION =  
  
(ADDRESS_LIST =  
  
(ADDRESS =  
  
(COMMUNITY = tcp.world)  
  
(PROTOCOL = TCP)  
  
(Host = server02)  
  
(Port = 1521)))  
  
(CONNECT_DATA = (SID = ORCL)))
```

In similar fashion, the "server02" database instance needs an entry to define the remote "server01" database instance:

```
Server01.world =  
  
(DESCRIPTION =  
  
(ADDRESS_LIST =  
  
(ADDRESS =  
  
(COMMUNITY = tcp.world)  
  
(PROTOCOL = TCP)
```

(Host = server01)

(Port = 1521)))

(CONNECT_DATA = (SID = ORCL)))

Note: This feature was tested using TNSNAMES for service name resolution. Use of Oracle Names Server or any other name server mechanism requires a different setup.

Creating a database link to the remote database

Next, create a database link to each remote database in each database instance using a SQL utility. The link should be defined under the user account that owns the RequisitePro schema. The following example shows the required syntax for linking to "server02" from "server01":

```
CREATE DATABASE LINK server02.world
CONNECT TO reqpro IDENTIFIED BY reqpro
USING 'server02.world';
```

A similar statement should be run on the server02 database instance in order to define a link to server01.

If the **db_name.db_domain** does not result in a unique name for each database for which a link is required, use the **@connection_qualifier** syntax to create a unique name.

This naming convention will work regardless of the setting of the **global_names** parameter in the **init.ora** file.

Defining database aliases on each RequisitePro client

Define SQL*Net database aliases or Net8 service names (resulting in local **tnsnames.ora** file entries) on each RequisitePro client (or shared centrally on a network) for each database instance. The database alias or service name on the client **MUST** match the database link you defined in the "Creating a reference to the remote database instance" on page 109 and "Creating a database link to the remote database" on page 110 for RequisitePro cross-project traceability to function correctly.

Setting up desktops for Oracle access

Direct users to use the Oracle SQL*Net or Net8 Easy Configuration tool to configure access from their clients to the Oracle database server. If they plan to share projects with other users, they must use a consistent database alias or service name.

Creating a project in Oracle

For information on creating a RequisitePro project in Oracle, see *Creating a Project in Oracle* in the *After Install* chapter of the *Rational Software Desktop Products Installation Guide*. Use the same schema name for each of your RequisitePro projects.

Configuring SQL Server for RequisitePro

To create and access RequisitePro projects in a SQL Server database, follow the instructions in this section for enabling SQL Server database compatibility. RequisitePro supports multiple projects within a single SQL Server schema. RequisitePro database implementation is compatible with all Microsoft SQL Server-supported platforms. This section includes database management information for setting up a SQL Server schema to accommodate RequisitePro projects. To create a RequisitePro project in the SQL Server database, see the *IBM Rational Software Desktop Products Installation Guide*.

For the most current information related to SQL Server database configuration, refer to the *Configuring SQL Server for IBM Rational RequisitePro* that is, by default, at the following location on your system after installation:

C:\Program Files\Rational\RequisitePro\help\SQLsetup.html

Note: If you have an existing RequisitePro database in SQL Server, and your SQL Server software was upgraded to version 7.0 from a previous version, then you must run the following stored procedure in SQL Server to set the database compatibility level to SQL Server 7.0:

```
sp_dbcmptlevel <database name>, 70
```

for example:

```
sp_dbcmptlevel RequisitePro, 70
```

The preceding procedure is required to prevent SQL Server Syntax Errors in RequisitePro.

The following installation and configuration tasks need to be accomplished before performing the RequisitePro with SQL Server integration described in this document.

Note: RequisitePro can be used with SQL Server 2000 "Named Instances."

SQL Server database administration

Before you configure access to SQL Server from RequisitePro, establish the following:

- SQL Server machine name (TCP/IP Host Name).
- SQL Server default database for RequisitePro projects, such as "RequisitePro."
- A user ID for logging on to the SQL Server database, such as "ReqPro."
- A user password for logging on to the SQL Server database, such as "reqpro."

Note: Database names that contain spaces are not supported for use with RequisitePro projects.

The following sections provide instructions for configuring the last three of these items.

Creating a SQL Server schema for RequisitePro

Use the following instructions to create a SQL Server database and schema for RequisitePro projects. The initial database size is based on the following approximations for your use of RequisitePro:

- 25 projects
- 250 documents (10 per project)
- 125 document types (5 per project)
- 125 requirement types (5 per project)
- 1,250 user-defined attributes (10 per requirement type)
- 125 user groups (5 per project)
- 100 users
- 12,500 requirements (500 per project)
- 12,500 discussions (500 per project)

To create a database in SQL Server 7.0, do the following:

1. Enter a name for the RequisitePro database. The database has an .MDF extension. The recommended database name is "RequisitePro."

Note: If you use a different database name, modify the database configuration scripts to reflect the actual name.

2. Set the initial size of the database to 150 MB.
3. Set the initial size of the transaction log file (.LDF) to one third the size of the database (in this case, 50 MB).

Schema creation scripts

The scripts listed are used for creating a RequisitePro schema within your SQL Server database.

- Login and User. Creates a default RequisitePro login and user. For more information refer to the section , "Default Login and User."
- Tables and Indexes. Creates the tables and indexes required by RequisitePro.
- Triggers. Creates triggers that enforce cascading deletes.
- Initial Data. Inserts data required by RequisitePro when it first runs.

Copying the RequisitePro scripts

If you choose the default installation when installing RequisitePro, the database creation scripts are, by default, located in
C:\Program Files\Rational\RequisitePro\database\sqlserver.

Copy the scripts to a subdirectory on your SQL Server database server. IBM recommends that you create a "sql" directory below the home directory on the server.

Running schema creation scripts

The scripts listed are used for creating a RequisitePro schema within your SQL Server database. Run the scripts in the sequence presented. Run the scripts individually using the SQL Server Query Analyzer. Select the RequisitePro database in the database drop-down list when running the scripts.

Note: In order to execute the provided SQL Server database scripts you must be logged in as 'sa' or as a user with "System Administrator" and "Security Administrator" privileges.

1. login and user.sql
2. tables and indexes.sql
3. triggers.sql
4. initial data.sql

Default login and user

The schema creation scripts, already described, create default user information for accessing and creating projects in SQL Server. The user name also establishes the ownership and name of the schema (by default, "reqpro"). The default user permissions are required for use with RequisitePro.

Note: If you modify the login and user.sql script to use a different login and user name, you need to modify subsequent scripts.

Note: Do not use non-English characters when entering the password for the schema.

The scripts create the following default user information:

User	Login	Password
ReqPro	ReqPro	reqpro

The ReqPro user is assigned the following statement permissions in SQL Server:

User	Statement Permissions
ReqPro	Create Default, Create Procedure, Create Rule, Create Table, Create View

As the owner of the RequisitePro database objects, the ReqPro user is automatically assigned the following database permissions in SQL Server:

User	Database Permissions
ReqPro	Select, Insert, Update, Delete, DRI on all Tables and Views

Creating a project in SQL Server

For information on creating a RequisitePro project in SQL Server, see *Creating a Project in SQL Server* in the *After Install* chapter of the *for IBM Rational Software Desktop Products Installation Guide*. Use the same schema name for each of your RequisitePro projects.

Configuring the Rational E-Mail Reader

Use the Rational E-mail Reader application to configure e-mail for all discussion participants with a valid e-mail address in their RequisitePro user information. The Rational E-mail Reader application is included with your Rational Software installation at the following default location:

c:\Program Files\Rational\common\mailreader.exe

Discussion e-mail configuration requirements

- You must configure a unique e-mail address for each RequisitePro project
- For RequisitePro and RequisiteWeb: To enable e-mail for RequisiteWeb discussions, configure discussion e-mail using the SMTP protocol option in the Rational E-mail Reader. The MAPI protocol option is not supported for RequisitePro and RequisiteWeb.
- To complete the Rational E-mail Reader setup for SMTP protocol, you need the following information from your e-mail administrator:
 - SMTP Server name

- POP3 Server name
- E-mail address; one for each RequisitePro project
- POP3 server login and password for the e-mail address
- Be sure to specify a Log File Path on the **Reader Information and Options** tab in the Rational E-mail Reader.
- When configuring e-mail with the Rational ClearQuest Mail service, stop the service before configuring and restart the service when done.
- For networked-based projects, configure the properties of the Rational ClearQuest Mail service on the **Log On** tab. Select **This account** and enter your domain username and password. When browsing for an account name see the "examples" link in the **Select User** dialog box.
- The E-mail Setup option on the RequisitePro Tools menu does not configure e-mail for RequisiteWeb discussions. Use the Rational E-mail Reader to configure e-mail for RequisiteWeb discussions.

Note: Refer to the online Help in the Rational E-mail Reader for more information.

Setting up RequisiteWeb

To operate RequisiteWeb, see the following sections:

- Configuring the RequisiteWeb server on the Rational Web Platform (RWP)
- Testing RequisiteWeb
- Managing RequisitePro Projects for RequisiteWeb

For more information about the Rational Web Platform, see Chapter 9, "Customizing the Rational Web Platform," on page 137.

For the most current information on RequisiteWeb, including installation, configuration, and known issues, refer to the *Installing and Configuring Rational RequisiteWeb* document that is on the IBM Rational Solutions for Windows CD at:

`\Doc\RequisiteWebInstall.html`

It is also located, by default, in your RequisiteWeb installation at:

`C:\Program Files\Rational\Doc\RequisiteWebInstall.html`

The *Installing and Configuring Rational RequisiteWeb* document is also available online in RequisitePro and is also available in the *IBM Rational RequisitePro Release Notes*.

Prerequisites

The following instructions assume you have:

- Configured the RequisitePro project database.
- Installed the RequisiteWeb components. If you have not installed these components, see the *Before You Install* chapter and Chapter 3, "Installing IBM Rational products," on page 49.
- To access RequisiteWeb from clients, users should install one of the supported Web browsers listed in the desktop requirements and recommendations table in the *IBM Rational Software Desktop Products Installation Guide*. No additional client installation is required.

- Microsoft Word must be installed on the client system in order to edit offline Word documents.
- For proper RequisiteWeb operation, client users should set their browsers to allow cookies and enable JavaScript.

Configuring the RequisiteWeb server

This section describes how to configure the RequisiteWeb components on your Rational Web Server and describes how to perform the following tasks:

- Create the ReqWebUser.
- Add the ReqWebUser to the Local Administrator group.
- Assign DCOM permissions to the Local Administrators group.
- Edit the RequisiteWeb configuration file (optional).
- Enable the Secure Socket Layer (SSL).
- Grant ReqWebUser Access to Network Projects
- Configure RequisiteWeb for Internet Use

Note: To access RequisitePro projects that are stored in a DB2 or Oracle database, you must configure client software on the server. If you are using Oracle version 8.1.7, install the Oracle client software before installing RequisiteWeb.

Creating the ReqWebUser

RequisiteWeb requires that you create a RequisiteWeb user. The RequisiteWeb user can be given any name. For the purposes of this guide, the user will be called ReqWebUser. This user will be granted the necessary permissions for RequisiteWeb to operate properly. If all RequisitePro projects that will be accessible through ReqWeb will be located on drives that are local to the RequisiteWeb server, create ReqWebUser as a local user on the RequisiteWeb server. Otherwise (if any of the projects accessible through ReqWeb are located on network file shares within your domain), create ReqWebUser as a domain user on your primary domain controller server and grant rights to your project directory.

Note: If you create the ReqWebUser user on the Windows domain server, be sure to log in to your Windows domain server as an administrator.

Table 27 describes how to create the ReqWeb user.

Table 27. Creating the RequisiteWeb User

Step	Windows NT 4.0	Windows 2000 Server/Windows Server 2003
1	On the domain server, click Start > Programs > Administrative Tools (Common) > User Manager for Domains .	On the domain server, click Start > Programs > Administrative Tools > Computer Management .
2	Click User > New User .	Expand Domain Users and Groups . Right-click Users ; select New User .
3	In the Username field, type ReqWebUser and type a password of your choice.	In the Username field, type ReqWebUser and type a password of your choice.
4	Clear the check box User must change password at next login , and select the check box Password never expires . Click Add ; click Close .	Clear the check box User must change password at next login , and select the check box Password never expires . Click Create ; click Close .
5	Close the User Manager application.	Close the Computer Management application.

Adding the ReqWebUser to the local administrator group

Table 28 shows how to add the ReqWebUser to the local administrator group.

Note: Be sure to log in to your RequisiteWeb server as an administrator for the following procedure.

Table 28. Adding the ReqWebUser to the local administrator group

Step	Windows NT 4.0	Windows 2000 Server/Windows Server 2003
1	On the Windows server, click Start > Programs > Administrative Tools (Common) > User Manager for Domains .	On the Windows server, click Start > Programs > Administrative Tools > Computer Management .
2	Click User > Select Domain , select your domain server, and type your machine name. Click OK .	Expand Local Users and Groups . Select Groups . Right-click Administrators and select Add to Group . In the Administrators Properties dialog box, click Add .
3	In the Groups column, double-click Administrators .	A user selection dialog box appears. <ul style="list-style-type: none">• For Windows 2000 Server: At the Look in box, select the domain where you created the ReqWebUser.• For Windows 2003 Server: Click Advanced. Click Locations and select the domain where you created the ReqWebUser. Click OK. Click Find Now.
4	In the Local Group Properties dialog box, click Add . Select your Domain Server in the List Names From list. Select ReqWebUser in the Names list and click Add . Click OK .	Select the ReqWebUser and click Add .
5	Click OK in the Local Group Properties dialog box to close it.	Click OK to close the dialog box. Click OK to finish.
6	Close the User Manager application.	Close the Computer Management application.

Assigning DCOM permissions to the local administrators group

RequisiteWeb uses DCOM to launch Microsoft Word. To achieve this, the ReqWebUser should be a member of the Administrators group on the RequisiteWeb server.

Note: If you have not already installed Microsoft Word on your RequisiteWeb server, you must do so now.

For Windows Server 2003:

To assign access permissions to the local administrators group (in Windows Server 2003):

1. On the **Start** menu, click **Run**, and type **dcomcnfg**. The Component Services dialog box appears.
2. Expand Console Root > Component Services > Computers.
3. Right-click My Computer and select Properties.

Note: If you see the DCOM Configuration Warning dialog box, close the warning and proceed to the next step.

4. Select the Default COM Security tab. In Access Permissions, click Edit Default. In the Access Permission dialog box, click Add.
5. At the Select Users or Groups dialog box, click Locations.

6. At the Locations dialog box, select your local machine from the Location list. Click OK.
7. At the Select Users or Groups dialog box, click Advanced. Click Find Now.
8. In the Name list, select the Administrators group and click OK. Click OK.
9. At the Access Permission box, verify that the Allow Access check box is selected.
10. Click OK to return to the My Computer Properties dialog box.

To assign launch permissions to the local administrators group (in Windows Server 2003):

1. At the Default COM Security tab, in Launch Permissions, click Edit Default.
2. At the Launch Permission dialog box, verify that the Launch Permission Allow check box is selected.
3. Click OK twice.
4. Close the Component Services dialog box and restart your system.

For Windows 2000 Servers and Windows NT Server:

To assign access permissions to the local administrators group (in Windows 2000 and NT):

1. On the **Start** menu, click **Run**, and type **dcomcnfg**.

Note: At this point you may see the DCOM Configuration Warning dialog box. Close the warning and proceed to the next step.

2. Select the **Default Security** tab. Under **Default Access Permissions**, click the **Edit Default** button.
3. In the **Registry Value Permissions** dialog box, click **Add**.
4. At the **Add Users and Groups** dialog box, select your local machine from the **List Names From** drop-down list box.
5. Select the **Administrators group** in the **Names list** and click **Add**.
6. At the **Type of Access** field, select **Allow Access**. Click **OK** twice to return to the Distributed COM Configuration Properties dialog box.

To assign launch permissions to the local administrators group (in Windows 2000 and NT):

1. Select the **Default Security** tab. Under **Default Launch Permissions**, click the **Edit Default** button.
2. In the **Registry Value Permissions** dialog box, click **Add**.
3. At the **Add Users and Groups** dialog box, select your local machine from the **List Names From** drop-down list box.
4. Select the **Administrators group** in the **Names list** and click **Add**.
5. At the **Type of Access** field, select **Allow Launch**. Click **OK** twice to return to the Distributed COM Configuration Properties dialog box.
6. Close DCOM and restart your system.

Editing the RequisiteWeb configuration file (optional)

Edit the RequisiteWeb configuration file to relocate the catalog.txt file. This file is used to locate RequisitePro projects.

To use customized RequisiteWeb settings, open the following file in a text editor (the default location is shown):

C:\Program Files\Rational\common\rwp\webapps2\ReqWeb\WEB-INF\classes\config.txt

Considerations:

- Rational Web Platform must be restarted for configuration changes to take effect. Follow the instructions for “Starting and Stopping the Rational Web Platform” in this manual.
- We recommend that you back up the config.txt file before making changes.
- We recommend that you contact RequisiteWeb customer support before you change any config.txt settings not listed in this table.
- This procedure assumes that you have installed the RequisiteWeb application on your C:\ drive. Substitute the appropriate drive, if necessary, when performing this step.

Settings	Description	Default
RPXCatalog	The path to the project catalog file that is used to locate RequisitePro projects. For example: RPXCatalog=C:\Program Files\Rational\RequisitePro\ReqWeb\Projects\catalog.txt	<blank>

Enabling SSL (Secure Socket Layer)

RequisiteWeb supports SSL, an encryption system that ensures the confidentiality of data exchanged between RequisiteWeb and a client web browser. To use SSL with RequisiteWeb, follow the instructions in Chapter 9, “Customizing the Rational Web Platform,” on page 137.

Note: If you are using a proxy server, it is not necessary to configure RWP to enable SSL. Instead, enable SSL on the proxy server.

Granting ReqWebUser access to network projects

Use the instructions in this section if you have projects on network file shares within your domain that are accessible through RequisiteWeb.

Table 29. Granting ReqWebUser access to network projects

Step	Windows NT 4.0	Windows 2000 Server/Windows Server 2003
1	Go to Start > Settings > Control Panel > Services .	Go to Start > Settings > Control Panel > Administrative Tools > Services .
2	Locate and double-click the Rational Web Platform, ReqWeb servlet engine service to display the Service dialog box.	Locate the Rational Web Platform, ReqWeb servlet engine service and double-click the icon to display the Properties dialog box.
3	In the Service window under Log On As, click This Account and enter the ReqWebUser and password that you created. Click OK to close the Service window.	Select the Log On tab and click This account . Enter the ReqWebUser and password that you created and click Apply . Click OK and close the Rational Web Platform window.
4	Stop and start the Rational Web Platform, ReqWeb servlet engine service and start the Rational Web Platform, HTTP server service to finish.	Start or restart the Rational Web Platform, ReqWeb servlet engine service to finish.

Reboot required: At this point you must restart your system. After rebooting, log in as the same user to complete the installation procedure.

Configuring RequisiteWeb for Internet Use

This section describes how to configure your network to provide Internet access to RequisiteWeb. In addition to the overview below, the following procedures are provided:

- Using IBM HTTP Server as a Reverse Proxy Server
- Using Apache 2.x as a Reverse Proxy Server
- Determining the URL to RequisiteWeb

Your organization's customers, contractors, and remote team members can now access RequisiteWeb using the Internet. Internet access to live requirements data using RequisiteWeb provides timely, invaluable feedback between your development team and other requirements stakeholders.

When configuring Internet access for RequisiteWeb, you must take careful steps to protect your organization's intellectual property and infrastructure. For this reason, we recommend setting up a firewall to protect your corporate network. You should use a reverse proxy server to monitor and control all access across the firewall between the Internet and resources such as RequisiteWeb on your corporate network. This central access point allows you to focus on securing the proxy server instead of securing every machine on your corporate network. A proxy server also conceals information on your corporate network from Internet users, including the names, locations, and implementation details of resources.

Note: Network security, firewall configuration, and proxy server configuration are complex issues requiring the attention of trained IT staff.

The following steps summarize the configuration tasks for providing Internet access to RequisiteWeb:

1. Install and configure firewall software or hardware to protect your corporate network from unauthorized access. The firewall should allow Internet users to connect to the proxy server using HTTP or HTTPS.
2. Identify and configure an appropriate reverse proxy server. This machine will be publicly exposed to the Internet via one network interface and connected to your corporate network (LAN or WAN) on another interface. This machine can also act as the firewall by running the appropriate software.
3. Select, install, and configure reverse HTTP proxy software to provide access to RequisiteWeb from the Internet. To protect the confidentiality of your requirements data, configure this software to require Internet users connecting to RequisiteWeb to use the encrypted HTTPS protocol.

This document provides guidance on configuring the following reverse HTTP proxy software solutions to work with RequisiteWeb:

- Apache 2
- IBM HTTP Server versions 2.0.42.2 or higher. Note that version 2.0.42.2 requires a patch; refer to the support Web site:
<http://www.ibm.com/software/webservers/htpservers/support.html>; search for PQ77489. Later versions do not require this patch.

Using IBM HTTP Server as a Reverse Proxy Server:

To provide access to RequisiteWeb using the IBM HTTP server as a reverse proxy server:

1. Install IBM HTTP Server version 2.0.42.2 or higher on the proxy server. Note that version 2.0.42.2 requires a patch, as described above.

Note: See the IBM HTTP Server documentation for detailed installation instructions.

2. Configure the IBM HTTP Server to load the necessary modules by including the following lines in the server configuration context in httpd.conf:
LoadModule ibm_ssl_module modules/mod_ibm_ssl.so LoadModule proxy_module modules/mod_proxy.so LoadModule proxy_http_module modules/mod_proxy_http.so
3. Configure the IBM HTTP Server to use secure connections. See the section "Getting started quickly with secure connections" in the IBM HTTP Server documentation.
4. Configure the IBM HTTP Server to act as a reverse proxy to RequisiteWeb as shown in the following example.

The following is an example excerpt from the server configuration context of httpd.conf that configures the IBM HTTP Server to proxy requests for RequisiteWeb to a server named "rw.rational.com":

```
<IfModule mod_proxy.c>

# Disable forward proxy requests

ProxyRequests Off

# Allow requests from selected hosts or domains

<Proxy *>

Order Allow,Deny

#Allow from rational.com

</Proxy>

#Configure accessto RequisiteWeb

ProxyPass /ReqWeb http://rw.rational.com/ReqWeb

ProxyPass /reqweb http://rw.rational.com/reqweb

ProxyPassReverse /ReqWeb http://rw.rational.com/ReqWeb

ProxyPassReverse /reqweb http://rw.rational.com/reqweb

ProxyPass /ReqWebSetup http://rw.rational.com/ReqWebSetup

</IfModule>
```

Note: You must specify your own "Allow from" directive, based on which hosts you want to allow to access RequisiteWeb.

Note: You must replace "rw.rational.com" with the actual name of the RequisiteWeb server on your corporate network.

Caution: The above example allows unencrypted HTTP access to RequisiteWeb. To require encrypted HTTPS connections, move the above configuration lines into the virtual host context of the virtual host used for secure connections. A virtual host context for secure connections usually contains KeyFile and SSLEnable directives and looks like this:

```
# Accept connections on port 443

Listen 443

# Create a virtual host for secure connections

<VirtualHost _default_:443>

# Set the key database file containing certificate

KeyFile "C:/Program Files/IBM HTTP Server 2.0/key.kdb"

# Enable SSL

SSLEnable

# move RequisiteWeb proxy directives here to require HTTPS

</VirtualHost>
```

Using Apache 2 as a Reverse Proxy Server:

1. Install Apache 2 on the proxy server, including the following modules:
 - mod_ssl - this module enables HTTPS connections, encrypting traffic between the Internet and the proxy server using secure sockets layer (SSL)
 - mod_proxy - this module enables Apache to act as a forward or reverse proxy server
 - mod_proxy_http - this module enables HTTP connections between the proxy server and the RequisiteWeb server

Note: In order to obtain a binary version of Apache 2 that contains mod_ssl, you will most likely need to build Apache 2 from source. See the Apache 2 documentation at <http://www.apache.org>.

2. Configure Apache 2 to load the necessary modules by including the following lines in the server configuration context in httpd.conf:

```
LoadModule ssl_module modules/mod_ssl.so
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_http_module modules/mod_proxy_http.so
```
3. Configure mod_ssl as normal. See the documentation for your release of Apache 2.
4. Configure Apache 2 to act as a reverse proxy to RequisiteWeb. The following is an example excerpt from the server configuration context of httpd.conf that configures Apache to proxy requests for RequisiteWeb to a server named "rw.rational.com":

```
<IfModule mod_proxy.c>
```

```

# Disable forward proxy requests
ProxyRequests Off
# Allow requests from selected hosts or domains
<Proxy *>
Order Allow,Deny
#Allow from rational.com
</Proxy>
# Configure reverse proxy requests for RequisiteWeb
ProxyPass /reqweb http://rw.rational.com/ReqWeb
ProxyPass /ReqWeb http://rw.rational.com/ReqWeb
ProxyPassReverse /reqweb http://rw.rational.com/ReqWeb
ProxyPassReverse /ReqWeb http://rw.rational.com/ReqWeb
ProxyPass /ReqWebSetup http://rw.rational.com/ReqWebSetup
# Require SSL between browsers and the proxy server for ReqWeb
<Location ~ "^/(ReqWeb|reqweb)">
SSLRequireSSL
</Location>
</IfModule>

```

Note: You must specify your own "Allow from" directive, based on which hosts you want to allow to access RequisiteWeb.

Note: You must replace "rw.rational.com" with the actual name of the RequisiteWeb server on your corporate network.

Note: The "SSLRequireSSL" directive is optional. Comment it out if you do not want to require encrypted HTTPS connections.

Determining the URL to RequisiteWeb: After you configure your proxy server to access RequisiteWeb, your proxy server appears as if it is a RequisiteWeb server to your Internet users. Internet users can access RequisiteWeb using a URL starting with "http://" or "https://", followed by the fully qualified Internet host name of the proxy server, such as rw.rational.com , and ending with "/ReqWeb" or "/reqweb".

Local users within your corporate LAN or WAN can use the same URL or replace the fully qualified name of the proxy server with the internal name of the proxy server or the RequisiteWeb server. Using the internal name of the RequisiteWeb server provides the best performance because it bypasses the proxy server; however, RequisiteWeb administrators may prefer that all users access RequisiteWeb using the proxy server host name, because this allows the administrator to replace the RequisiteWeb server or change its name transparently.

RequisiteWeb and IIS

RequisiteWeb uses Rational Web Platform (RWP) as its Web service. Because RWP and IIS can conflict with one another you must choose one of the following options to run RequisiteWeb on a server with IIS running:

- Disable IIS
- Change and redirect the default RWP HTTP port

Disable IIS:

If you choose to disable IIS, any programs using IIS will no longer work. Table 30 shows how to disable IIS.

Table 30. Disable IIS

Step	Windows NT 4.0	Windows 2000 Server/Windows Server 2003
1	Click Start > Settings > Control Panel > Services .	Click Start > Settings > Control Panel > Administrative Tools > Services .
2	Locate and select the World Wide Web Publishing service.	Locate the World Wide Web Publishing service and double-click the icon to display the Properties dialog box.
3	In the Services window, click Stop and change the Startup type to Disabled .	On the General tab under Server status, click Stop and change the Startup type to Disabled . Click OK and close the Services window.
4	Click Close .	Click OK to close the dialog box. Close the Internet Services Manager .

Change and redirect the default RWP HTTP port: The following steps allow RequisiteWeb and IIS to coexist. To change and redirect the default RWP HTTP port:

1. Change the default RWP HTTP port (80) in your `rwpl.conf` file. Follow the instructions in "To change the default RWP HTTP port" on page 138.
2. Create a virtual directory for RequisiteWeb on your RequisiteWeb server:
 - a. Launch the Internet Services Manager by doing one of the following:
 - In Windows NT 4.0, click **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Internet Information Server > Internet Service Manager**.
 - In Windows 2000 Server, click **Start > Programs > Administrative Tools/Internet Services Manager**.
 - b. Right-click the **Default Web Site** and select **New Virtual Directory**.
 - c. In the **Virtual Directory Creation Wizard**, click **Next** and type **ReqWeb** as the alias.
 - d. Click **Next** and browse to and select:
C:\Program Files\Rational\common\RWP\webapps2\ReqWeb and click **Next**.
 - e. Click **Next** and **Finish** to complete the wizard.
3. In the properties of your newly created Virtual Directory, select a redirection to a URL and redirect to: `http://<server name>:<new port>/reqweb`.
4. Close the Internet Services Manager and restart the Rational Web Platform. Follow the instructions "To stop and restart RWP" on page 141.

Testing RequisiteWeb

To test a RequisitePro project in RequisiteWeb:

1. Open a Web browser.
2. Set the URL address to "`http://<server name>/reqweb`" on your RequisiteWeb server and press Enter.

Note: If your Internet Explorer window is blank, select **Tools > Internet Options**. At the Security tab, add **RequisiteWeb** to your list of trusted sites. Refresh your browser view of RequisiteWeb, if necessary.

3. Select a RequisitePro project that contains documents from the Project list. If your project does not appear on the list, refer to the procedure “Managing RequisitePro projects for RequisiteWeb” on page 124.
4. Type your RequisitePro **User name** and **Password** and click **Log in**.
5. Select a document in the Explorer and open it. If the document opens correctly, the test is successful; RequisiteWeb is properly installed.

Note: If the Microsoft Word installer opens, you must allow it to complete.

Managing RequisitePro projects for RequisiteWeb

Although RequisiteWeb provides features for accessing and editing requirements and documents in projects, you must use the full RequisitePro PC client application to create projects and documents. RequisitePro offers project templates and other management tools for creating and modifying project structure and security. For more information, refer to the *Rational RequisitePro User's Guide* or the RequisitePro online Help.

Using the RequisiteWeb projects catalog

RequisiteWeb uses a catalog text file to provide access to RequisitePro projects. By default, the file contains entries for the RequisitePro Learning Project and another sample project. The projects that are listed in your catalog file are displayed in the Projects drop-down list box on the RequisiteWeb logon page.

To add your own projects to the catalog, you must type the full path for the project file, which has a .rqs extension.

Note: Be sure that all projects that are listed in the Web server catalog.txt are accessible at all times. If any project in this file is unavailable, Web server performance for available projects may be affected.

Editing the RequisitePro projects catalog

To edit the catalog, perform the following procedure on the RequisiteWeb server:

1. Navigate to the directory:
C:\Program Files\Rational\RequisitePro\ReqWeb\Projects

Note: If your projects are installed in a directory other than C:\ you must edit the catalog.txt file to reflect the correct installation directory.

2. Using a text editor, open the catalog.txt file.
3. Create an entry on each line with the full path to the RequisitePro project file. Copy the format of the default project entries.

Note: Use a full path for local projects on the RequisiteWeb server. To access projects on another server, you must specify a Universal Naming Convention (UNC) path to the shared folder containing the RequisitePro .rqs file. For example, \\server_name\full_path\my_project.rqs.

4. Save and close the catalog.txt file.

Note: To view updates to the catalog.txt file, you must log off RequisiteWeb and then select a project at the RequisiteWeb project “log in” page.

Database projects

RequisiteWeb can open Access-, SQL Server-, DB2-, and Oracle-based projects that are not physically located on the RequisiteWeb server; however, the ReqWebUser

domain user must have Change or Modify permission for the directory containing the RequisitePro (.rqs) project file on the remote project server.

Note: To run the SQL Server database scripts, you must be logged in as **sa** or as a user with "System Administrator" and "Security Administrator" privileges.

Chapter 8. After installation: configuring IBM Rational test tools

To complete the setup of your testing environment, configure test datastores and the Web server for IBM Rational ManualTest Web Execution. The first section of this chapter explains how to configure test datastores using the IBM Rational Administrator. The second part describes how to install and configure the Web server for ManualTest Web Execution, a component of Rational TestManager.

Configuring test datastores

Follow the instructions in the next sections for creating a Microsoft Access or Sybase SQL Anywhere test datastore or converting a Microsoft Access test datastore to a SQL Anywhere test datastore.

Prerequisites for creating new databases

The following sections assume that you have:

- Installed Sybase SQL Anywhere on the database server (if you have selected this database for your test datastore).
- Installed a product that includes the IBM Rational Administrator. The Rational Administrator is installed with RequisitePro, Robot, SQL Anywhere, TestManager, and Rational Suite editions. You need the Rational Administrator to set up your test datastore. For more information about the Rational Administrator, see the *IBM Rational Suite Administrator's Guide*.

Creating a Microsoft Access test datastore

To create a Microsoft Access 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**. The Rational Administrator launches the **Create Test Datastore Wizard**.
4. Click **Microsoft Access**. Click **Next**.
5. Type the path of the new test datastore or click **Browse**.
6. Click **Finish**.

Setting up SQL Anywhere

To create a SQL Anywhere database server, complete the following tasks:

- 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 128 or “Defining user privileges on Windows 2000 and Windows XP” on page 128.
- Create a SQL Anywhere database server. See “Creating a SQL Anywhere database server” on page 129.

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

Defining user privileges on Windows NT

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

1. Make sure you have installed the Sybase SQL Anywhere Server software.
2. If your Windows NT computer is running Windows NT Workstation software, click **Start > Programs > Administrative Tools (Common) > User Manager**.
3. If your Windows NT computer is running Windows NT Server software:
 - a. Click **Start > Programs > Administrative Tools (Common) > User Manager for Domains**.
 - b. Click **User > Select Domain** and type the local machine name in the Domain box. Click **OK**.

Note: If the user does not already exist, create the user (**User > New User**).

4. Click **Policies > User Rights** to open the **User Rights Policy** dialog box.
5. Select **Show Advanced User Rights**.
6. In the **Right list** box of the **User Rights Policy** dialog box, select **Access this computer from network**.
7. Click **Add**.
8. In **List Names from**, select the domain of the account running the SQL Anywhere database server.
9. Click **Show Users**.
10. In the **Names list**, select the account running the SQL Anywhere database server.
11. Click **Add** and click **OK**.
12. In the **Right list** box of the **User Rights Policy** dialog box, select **Log on as a service**.
13. Repeat Step 7 on page 128 through Step 10 on page 128.
14. In the **Right list** box of the **User Rights Policy** dialog box, select **Log on locally**.
15. Repeat Step 7 on page 128 through Step 10 on page 128.
16. Click **OK**.
17. Click **User > Exit**.

Defining user privileges on Windows 2000 and Windows XP

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. If you are running on a Windows 2000 Server, click **Start > Programs > Administrative Tools > Local Security Policy**.
3. If you are running Windows 2000 Professional:
 - a. Click **Start > Settings > Control Panel**.
 - b. Select **Administrative Tools**.
 - c. Select **Local Security Policy**.
4. Select **Local Policies > User Rights Assignments**.
5. In the right pane of the **Local Security Settings** dialog box, double-click **Log on as a service** and click **Add**.
6. In the **Look In** field (on Windows 2000) or **From this Location** field (on Windows XP) of the **Select Users or Groups** dialog box, select the domain of the account running the SQL Anywhere domain server.

7. In the **Name list**, select the account running the SQL Anywhere database server and click **Add**.
8. Click **OK** twice to return to the **Local Security Settings** dialog box.
9. Close the **Local Security Settings** dialog box.

Creating a SQL Anywhere database server

An SQL Anywhere database server is a process that runs on the database server computer. 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 datastores.

To create an SQL Anywhere database server:

1. From the **Start** menu, click **Program Files > Rational Software > SQL Anywhere 8.0 > Sybase Central**.
2. In the left pane, click **Services** under Sybase SQL Anywhere.
3. In the right pane, double-click **Add Service** to launch the **Create a New Service Wizard**.
4. Enter the name of the new service, then click **Next**.
Do not use spaces or nonalphanumeric characters in the server name. Underscores are acceptable.
5. Select **Network Database Server** as the type of service to create, then click **Next**.
6. The next window displays the default path for the executable file for the new service. To accept the path, click **Next**.
This path is set by default. The SQL Anywhere database server executable file (DBSRV8.EXE) resides in the SQLANYWHERE8\WIN32 directory within the IBM Rational installation directory.
7. Specify the database parameters **-n** and **-gd** to indicate the database server name and that all users can change the database. For example:
`-n MyDBServer -gd all`

Note: The name you enter here is required when creating a SQL Anywhere database for a Rational Test datastore

8. Specify the user account for the database. Click **Other**, select **Administrator**, specify a password twice, then click **Next**.

Note: The specified account must have administrator privileges on the system on which the server resides and at least read and write privileges on the system where any associated test datastore resides.

Also, the account you specify must have **Log on as a Service** privilege. If the account does not have this privilege, Sybase might display a message to indicate this. Click **Yes** to grant the privilege when the service is installed.

9. Choose the manner in which the service starts, and click **Next**. IBM recommends **Automatic**.
10. Select **Start service** when created, and click **Finish**.

Creating a SQL Anywhere test datastore

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 Software > Rational Administrator**.
2. In the left pane, right-click a project to configure and select **Configure Project**.
3. Under **Test Assets**, click **Create**. The Rational Administrator launches the **Create Test Datastore Wizard**.
4. Click **Next**.
5. Enter the path of the new test datastore or click **Browse** and enter **\testdatastore**.
6. 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 on page 129 in “Creating a SQL Anywhere database server” on page 129.
 - Select the protocols that the client computers running Rational Test use to communicate with the SQL Anywhere database server. You may need to confer with your IT department or network specialist.
 - 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, running the SQL Anywhere servers, are not in the immediate network segment (or subnetwork).
7. Click **Next**. Specify a project or datastore to initialize from. Click **Next**.
8. Click **Finish**.

Converting a test datastore from Microsoft Access to SQL Anywhere

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

Before you start the conversion:

- Back up your test datastore before starting the conversion.
- Install the Sybase SQL Anywhere software and create an SQL Anywhere database server before you change an existing Microsoft Access test datastore to an SQL Anywhere test datastore. For more information, see “Setting up SQL Anywhere” on page 127.
- Make sure all test datastore users log off a Rational project before changing the database engine of a Rational Test datastore.

To convert an existing Microsoft Access test datastore to an 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 on page 129 in “Creating a SQL Anywhere database server” on page 129.
 - c. Select the protocols that the client computers running Rational Test 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 computers 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 an SQL Anywhere Database Server.

Configuring IBM Rational ManualTest Web Execution

Follow the instructions in the next sections to install and configure the ManualTest Web server.

Prerequisite

The following sections assume that you have installed the ManualTest Web Execution software on the server.

Installing a Web server

To install a Web server:

1. Install Microsoft Windows NT 4.0 Option Pack or Microsoft Internet Information Services 5.0 on the Web server by performing one of the following procedures:
 - 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.
2. Install Microsoft Internet Explorer 5.0 or later on the Web server.

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

3. Configure the Microsoft Access Driver by doing the following procedures:
 - a. Click **Start > Settings > Control Panel**.
 - b. Do one of the following procedures:
 - 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**.
 - a. Click the **Connection Pooling** tab.
 - b. Under ODBC Drivers, double-click **Microsoft Access Driver (*.mdb)**.
 - c. Select **Don't pool connections to this driver** and click **OK**.
 - d. Click **OK**.

- e. Restart the system.
4. Configure the Web server to run a test case from a Web browser by doing one of the following procedures:
 - 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 134.
 - 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” on page 132.

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 procedures:
 - 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 procedures:
 - For all Windows XP systems, double-click *computername* where *computername* is the network name of the Web server.
 - 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 click **New > Virtual Directory**.
6. Do one of the following procedures:
 - 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 IBM 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 IBM Rational software, or click **Browse** to select the drive and path.
For example, the default location is:
C:\Program Files\Rational Software\Rational Test\www\manual script
10. Click **Next**.
11. Do one of the following procedures:

- For Windows XP and Windows 2000, 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 procedures:
 - For Windows XP and Windows 2000, click **Next**, and click **Finish**.
 - For Windows NT, click **Finish**.
 13. Right-click the new alias and 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 files do not appear, do the following procedures:
 - a. Click **Add**.
 - b. Type **DEFAULT.ASP** and 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 procedures:
 - 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 computers 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 administrator 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 procedures:
 - 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 IBM Rational software, or click **Browse** to select the drive and path.
For example, the default location is:
`C:\Program Files\Rational Software\Rational Test\www\manual script`
7. Under Alias, type the alias for the directory where you installed your IBM 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, do the following procedure:
 - 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.
12. Click **User > Exit**.
13. Click **OK**. Click **OK** again.

Troubleshooting your Web server

If you have problems with your Web server, ensure that your Web server meets the software requirements.

Problem	Error message	Solution
You cannot connect from a Web browser to a Web server running the Microsoft Personal Web Server (PWS)	None.	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**.

Chapter 9. Customizing the Rational Web Platform

The IBM Rational Web Platform (RWP) provides server-side support for Web interfaces to the Rational products, Rational ClearCase, Rational ProjectConsole, and Rational RequisiteWeb. RWP is installed with a default configuration, which is suitable for most sites. Some sites may need to modify the RWP configuration after installation to accommodate various host- or site-specific requirements. For example:

- To make RWP use a different HTTP port number
- To change RWP logging defaults
- To configure access to RWP from another Web server acting as a proxy
- To configure RWP to use secure sockets

This section explains how to edit the RWP configuration files to make some of the more common changes in the default configuration. It also includes information on configuring the ClearCase Web interface.

The Rational Web Platform includes a Web server based on the Apache HTTP Server version 2.x and a servlet engine based on the Tomcat servlet container version 4.x. Additional information about the Apache HTTP Server is available at www.apache.org. Additional information about the Tomcat servlet container is available at jakarta.apache.org.

On Windows, RWP creates a second instance of the servlet engine for use if needed.

Note: The IBM Rational Web Platform supports only the Web interfaces to IBM Rational products. Using it to serve other Web applications or content is not supported.

RWP installation directory

RWP is normally installed in the following directory:

The default RWP installation directory can be changed at installation time by supplying a different path when prompted by the installation program.

RWP configuration files

RWP configuration is specified in several files. The following files are normally installed in the conf subdirectory of the RWP installation directory:

- `rwpl.conf` specifies configuration parameters for the RWP server.
- `ssl.conf` specifies configuration parameters for secure sockets if they are used by the RWP server.
- `server.xml` specifies configuration parameters for the RWP servlet engine.
- On Windows, `server2.xml` specifies configuration parameters for the RWP ReqWeb servlet engine.
- `workers.properties` specifies configuration parameters for the connections between RWP and RWP servlet engines.

You can edit these files with any text editor. They include explanations of all configuration parameters. This section describes a few of the parameters that you may need to change.

Note: After changing any configuration parameter in any of these files, you must stop and restart RWP before the change takes effect. See “To stop and restart RWP” on page 141.

Configuration file reference versions

The RWP installation directory includes reference versions of all configuration files.

The installation program uses these reference versions to determine whether configuration files have been customized. Do not make any changes to them.

To change the default RWP HTTP port

The port on which RWP listens for HTTP requests is defined by the **Listen** parameter in `rwp.conf`. For example,

Listen 80

tells RWP to listen on port 80 (the default for HTTP). You may change this to specify any available port number. For example:

Listen 8000

tells RWP to listen on port 8000.

Note: If you change the RWP HTTP port number to anything other than 80, all URLs that reference RWP must include the port number. For example:

`http://RWP_host.domain:8000/ccweb`

To change the default RWP servlet engine ports

The ports on which the RWP servlet engine communicates with RWP are defined in the `server.xml` and `server2.xml` files as well as the `workers.properties` file. Table 31 lists default port numbers, port uses, and the files in which the port numbers are defined.

Table 31. Default RWP servlet engine ports

Port number	Description	Location
8009 (8010 on HP-UX)	Used for communication between RWP and the RWP servlet engine	<code>server.xml</code> , <code>workers.properties</code>
8010	Used for communication between RWP and the RWP ReqWeb servlet engine (Windows only)	<code>server2.xml</code> , <code>workers.properties</code>
8005 (8006 on HP-UX)	RWP servlet engine shutdown port	<code>server.xml</code>

If any of these ports is used by another application on the RWP host, we recommend that you reconfigure that application to use different ports. If you cannot, you must change the ports RWP uses.

The following example, from `server.xml`, defines port 8009 as the port used for internal communication between RWP and the RWP servlet engine:

```
<Connector className="org.apache.jsp.tomcat4.Ajp13Connector"
    port="8009" minProcessors="5" maxProcessors="75"
    acceptCount="10" debug="0"/>
```

To change either port, change the value of the port attribute of the appropriate Connector element. For example, the **port="8088"** attribute in the line

```
<Connector className="org.apache.jsp.tomcat4.Ajp13Connector"
    port="8088" minProcessors="5" maxProcessors="75"
    acceptCount="10" debug="0"/>
```

causes internal communication between RWP and the servlet engine to use port 8088.

Note: If you change the port attribute of the **Ajp13Connector** element in `server.xml`, you must also change the port in this line of the `workers.properties` file:

```
worker.ajp13.port=8009
```

If you change the port attribute of the **Ajp13Connector** element in `server2.xml`, you must also change the port in the **worker.ajp13_2.port** line of `workers.properties`. These files exist only on Windows hosts where RWP supports a second instance of the RWP servlet engine.

To configure RWP logging

A number of configuration parameters related to access, error, and event logging in `rwpl.conf` are grouped under the heading **Logging-related directives**. You may want to change any of the following:

- **ErrorLog** specifies the name of the file where errors are logged. For example, `ErrorLog logs/error.log` specifies that errors will be logged in the file `logs/error.log` under the RWP installation directory.

Note: Any RWP log file may be piped to the `rotatelogs` command, as described in “Log rotation and log cleanup” on page 140.

- **LogLevel** specifies the type and severity of errors to be logged. For example, `LogLevel warn` specifies that errors up to and including warnings will be logged. Table 32 lists the various log levels in order of decreasing severity. Specifying any of these values for **LogLevel** logs events of that severity and all lower severities.

Table 32. RWP log levels

LogLevel	Messages logged
emerg	Emergency messages about events that may render the server inoperable (highest severity)
alert	Conditions that should be corrected immediately
crit	Critical conditions such as hardware or system errors
error	All other errors
warn	Warning messages
notice	Conditions that may require special handling

Table 32. RWP log levels (continued)

LogLevel	Messages logged
info	Informational messages (lowest severity)
debug	Debugging RWP

- **LogFormat** specifies the format in which events are logged. You can choose one of the predefined formats (for example, **common**), or you can define your own format. For more information about format tokens and the rules for constructing log file strings, see the documentation for **mod_log_config** at www.apache.org.
- **CustomLog** specifies the name of the file in which RWP access requests are logged. For example,
CustomLog logs/access.log common
specifies that access requests will be logged in the file logs/access.log under the RWP installation directory in the **common** log file format.

Log rotation and log cleanup

On RWP hosts where ClearCase is installed, the scheduled Weekly Log Scrubbing job removes all RWP log files that are more than 30 days old. You can modify this job as described in the *IBM Rational ClearCase Administrator's Guide* to change the frequency with which the job runs, the age of the log files it removes, or any other aspect of its operation.

Note: If you change any of the default RWP log locations on a host where ClearCase is installed, you must also modify the cleanuplogs script so that it looks for these logs in their new location.

On RWP hosts that do not have ClearCase installed, you must periodically run the following program to remove old log files:

n On Windows, the perl script cleanuplogs.pl, located in the RWP bin directory.

Use a scheduled-execution program supplied by the operating system (at on Windows) to run these scripts, or run them manually.

To change the user account used by RWP

On installation, RWP is configured to run with the identity of a built-in user account. You can change this account if necessary by using one of the procedures described in this section.

To change the RWP user account on Windows

On Windows computers, RWP is started at boot time by the Windows Service Control Manager and runs with the identity of the built-in **LocalSystem** account (NT AUTHORITY\SYSTEM).

To change the identity under which RWP runs on Windows:

1. Run the Services application (in **Control Panel > Services** or **Control Panel > Administrative Tools > Services**). RWP includes the following services:
 - Rational Web Platform, HTTP Server
 - Rational Web Platform, servlet engine
 - Rational Web Platform, ReqWeb servlet engine

- Caution:** The HTTP Server and servlet engine must run as LocalSystem on a Windows RWP host that is supporting the ClearCase Web interface. If these services run as any other user, the ClearCaseWeb interface will fail. The ReqWeb servlet engine can run as another account if necessary.
2. Edit each service's **Log On** properties to specify either a local or domain account.
 3. Run **rwpl_restart** to stop and restart RWP (see "To stop and restart RWP" on page 141).

To stop and restart RWP

RWP is normally started at boot time. If you need to stop or restart RWP (for example, to force it to re-read a changed configuration file), use one of the following commands, which are normally installed in the RWP bin directory:

- **rwpl_startup** starts RWP if it is not already running.
- **rwpl_shutdown** stops RWP and any associated servlet engine processes.
- **rwpl_restart** runs the **rwpl_shutdown** and **rwpl_startup** commands, in that order, to restart RWP.

Note: Commands that stop and start ClearCase do not affect RWP.

To configure access to RWP from another Web server

Some sites may need to access RWP by proxy or redirection from another Web server. In this configuration, the other Web server redirects specific URLs to an RWP process running on the same server but using a different port, or running on a separate server. Two common use cases require this type of configuration.

- **RWP and another Web server must run on the same host.** We recommend that you install RWP on a host that does not have to run any other Web servers. If this is impossible, we recommend that you configure the other Web server to use ports that are not being used by RWP. If you cannot do this, you must configure RWP to use ports not used by the other Web server (see "To change the default RWP HTTP port" on page 138) and optionally configure the other Web server to redirect URLs for Rational Web clients to RWP.
- **RWP must run behind a firewall.** To restrict access to RWP, a Web server running on the public side of a firewall can be configured to pass specific URLs to an RWP instance running on the other side of the firewall.

Follow the instructions in this section to enable a proxied or redirected configuration that provides access to RWP from either of the following Web servers:

- Apache HTTP Server
- Microsoft Internet Information Server (IIS)

Note: Instructions for configuring proxied or redirected access to a Rational Web application are specific to the application and the Web server acting as the proxy. Only the Web servers and Rational Software products that are specifically cited in this section can be supported in a proxied or redirected configuration.

Configuring mod_proxy support for Apache

To configure an instance of Apache HTTP Server to support proxy access to RWP, you must configure the Apache HTTP Server with proxy support supplied by the

Apache **mod_proxy** module. Detailed information about how to do this is available at www.apache.org. The following is a summary of the steps you will probably need to take:

1. Configure the Apache HTTP Server to load the **mod_proxy** module and the other modules on which it depends. This typically requires you to uncomment various **LoadModule** directives related to **mod_proxy** support in the Apache `httpd.conf` file. For example

```
LoadModule proxy_module modules/mod_proxy.so
```

```
LoadModule proxy_connect_module modules/mod_proxy_connect.so
```

```
LoadModule proxy_http_module modules/mod_proxy_http.so
```

You also need to uncomment the **ProxyRequests On** directive in the

<IfModule mod_Proxy.c> block in `httpd.conf` :

```
<IfModule mod_Proxy.c>
```

```
ProxyRequests On
```

```
</IfModule>
```

2. Add the appropriate **ProxyPass** and **ProxyPassReverse** directives within the **<IfModule mod_proxy.c>** block in `httpd.conf`. **ProxyPass** and **ProxyPassReverse** directives are application specific:

For the ClearCase Web interface, add these **ProxyPass** and **ProxyPassReverse** directives:

```
ProxyPass /ccweb http://hostname[:port]/ccweb
```

```
ProxyPassReverse /ccweb http://hostname[:port]/ccweb
```

```
ProxyPass /Java_Plugins http://hostname[:port]/Java_Plugins
```

```
ProxyPassReverse /Java_Plugins http://hostname[:port]/Java_Plugins
```

Where *hostname* is the name of the RWP server host and *port* is an optional port number, which you must specify if you have changed the default port on which RWP listens for HTTP requests (see “To change the default RWP HTTP port” on page 138). For example, the following directives would configure the proxy server to support access by the ClearCase Web interface to an RWP process listening on port 81 of a host named **RWP_host**.

```
ProxyPass /ccweb http://RWP_host:81/ccweb
```

```
ProxyPassReverse /ccweb http://RWP_host:81/ccweb
```

```
ProxyPass /Java_Plugins http://RWP_host:81/Java_Plugins
```

```
ProxyPassReverse /Java_Plugins http://RWP_host:81/Java_Plugins
```

Note: The URLs specified in this example must be written in the `httpd.conf` file exactly as specified, with the exception of the host name and optional port number.

Configuring URL redirection for Internet Information Server

If RWP must coexist on a server with an instance of Microsoft Internet Information Server (IIS) that listens for HTTP requests on port 80, you must reconfigure RWP to listen for HTTP requests on a different port (see “To change the default RWP HTTP port” on page 138) and then do one of the following procedures:

- Include a port specifier (for example `http://hostname:81/ccweb/`) in the URLs used by Rational Web interfaces served by this instance of RWP.
- Use the IIS redirection facility to force Rational Web interface URLs directed to port 80 (and received by IIS) to be redirected to RWP.

To configure IIS to use redirection:

1. Run the IIS configuration utility (Internet Services Manager).
 2. Create a new virtual directory in the IIS Default Web Site folder:
 - For the **Virtual Directory Alias**, pick a name that reflects the name of the Web client that will use the virtual folder (for example, **ccweb**).
 - For the **Web Site Content Directory**, you must specify a physical directory on the Web server host. Although this directory must exist on the host, it will not be used to hold any Web site content after you configure redirection in Step 4. We recommend that you create a new directory for this purpose and apply protections to it that reduce the chances of its being accidentally deleted.
- Note:** If you create this directory as a subdirectory of the RWP installation directory, it will be deleted if RWP is reinstalled on the host.
- For **Access Permissions**, specify **Read** and **Run scripts**.
 3. Right-click the virtual directory you created in Step 2 and open its Properties dialog box.
 4. In the **When connecting to this resource, the content should come from** section of the **Virtual Directory** tab, select **A redirection to a URL**.
 5. In the **Redirect to:** box, type the URL used by the Rational Web interface that you are redirecting to RWP. For example, to redirect the ClearCase Web interface (**ccweb**) to use an instance of RWP listening on port 81, type

http://hostname:81/ccweb/

where *hostname* is the name of the host running RWP and IIS.

6. In the **The client will be sent to** section, select the exact URL entered above.
7. Verify that browsing to the URL `http://hostname/ccweb` redirects you to the ClearCase Web interface at the URL specified in 5.

Configuring RWP to use Secure Sockets

To provide secure communications between Rational Web clients and RWP, you can configure RWP to support the Secure Sockets Layer (SSL) protocol. To do this, you need to take the following steps:

1. Edit the RWP configuration files to enable SSL support.
2. Modify client URLs as needed to specify the HTTPS protocol.
3. Stop and restart RWP.

Procedures for configuring RWP to support SSL are the same as those for configuring any Apache HTTPD that uses the **mod_ssl** module. These procedures are fully documented at mod_ssl.org ; a summary of the configuration steps is presented here.

The first step in using SSL is to obtain a certificate from a certification authority (CA). RWP includes the **openssl** program (installed in the RWP bin directory), which you can use to generate a self-signed certificate for testing purposes and also obtain a certificate and key from a CA. For more information on **openssl**, see openssl.org .

You can run **openssl** in the RWP bin directory to generate a self-signed certificate and a matching private key and then install them in the locations specified in 2 on page 144 and 3 on page 144 of the following procedure.

Note: If you do not have the right to create files in the specified **-out** directory, this command will fail.

To configure RWP to accept SSL connections:

1. Configure RWP to include the `ssl.conf` configuration file. Uncomment this directive in `rwpl.conf` :

```
Include conf/ssl.conf
```

Note: The `ssl.conf` file includes a **Listen** directive that specifies the port on which RWP will listen for HTTPS requests. The default is port 443. You can change this in the same way that you change the default HTTP port. If you want RWP to listen only for HTTPS requests, comment out the **Listen** directive in the `rwpl.conf` file.

2. Install the certificate. The default location of the certificate file is specified in this directive in the `ssl.conf` file:

```
SSLCertificateFile rwp-root-dir/conf/server.crt
```

where *rwp-root-dir* represents the directory in which RWP is installed on the host. If you install the certificate file in a different location, make sure that this line in `ssl.conf` references that location.

3. Install the key. The default location of the key file is specified in this directive in the `ssl.conf` file:

```
SSLCertificateKeyFile rwp-root-dir/conf/server.key
```

If you install the key file in a different location, verify that this directive references that location.

4. Stop and restart RWP.

Note: To configure a Web application to use SSL, specify the **https** protocol in the application URL. For example:

```
https://RWP_host.domain/ccweb
```

Configuring secure access to RWP

There are a number of ways to configure RWP to use SSL to provide secure communications with Rational Web clients such as **ccweb**. Figure 2 shows a typical configuration that allows **ccweb** clients on the public Internet to access RWP through a firewall. Communications between client Web browsers and the RWP host supporting **ccweb** use the HTTPS protocol and are secured by SSL. Communications between RWP and the ClearCase servers on the corporate intranet use ordinary ClearCase remote procedure calls (RPCs) and are not secure. ClearCase RPCs cannot communicate through a firewall, so you cannot place a firewall between RWP and the ClearCase servers used by **ccweb**.

In the configuration shown in Figure 2, the `ccweb` URL would be:

```
https:// hostname/ccweb
```

where *hostname* is the name of the RWP server host. HTTPS communications between the ClearCase Web client and RWP would use port 443, the default for HTTPS.

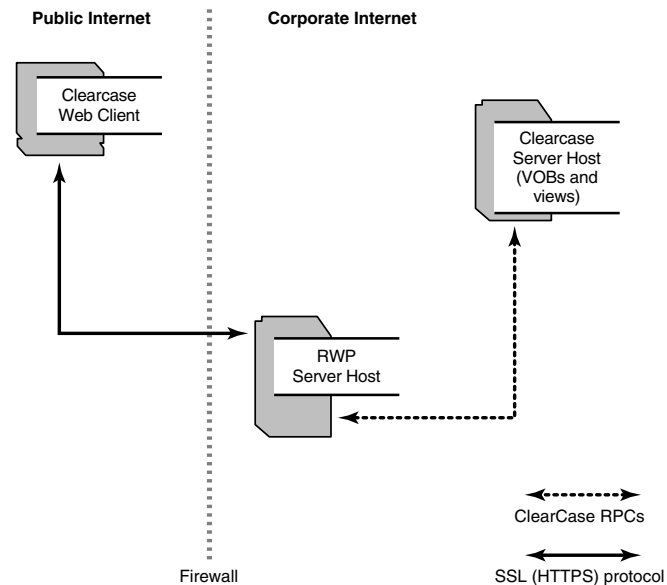


Figure 2. Secure communications between ccweb and RWP

Other modifications to RWP

IBM does not recommend that you modify any RWP configuration files other than those described in this section. Some of the configuration options cannot be changed without adversely affecting the operation of RWP. Any configuration change not recommended in this section should be carefully evaluated before introducing them into a production environment.

Chapter 10. Removing IBM Rational products

This chapter describes how to remove IBM Rational products from your servers. For information about removing desktop or client products, see the *IBM Rational Desktop Products Installation Guide*.

Before you remove IBM Rational software

This section provides general requirements for removing IBM Rational server products. It also describes which components the Setup Wizard does or does not remove from the computer.

- If you plan to move the application to another system, first return the license key file to your IBM Rational Software account. To return a node-locked or floating license key, use AccountLink. To find AccountLink, go to <https://www6.software.ibm.com/reg/rational/rational-i> and click **Request and Manage License Keys**. For more information about moving licenses or returning licenses, see the *IBM Rational Software License Management Guide*.
- Removing an IBM Rational product does not delete the license key file, project databases, and other files that you created while using the product. If you plan to install an upgrade of the IBM Rational product to a different drive or use a new installation path, back up these files and manually remove them. If you do not remove them, the Setup Wizard may find these files and install the application in the previous location instead of the new location.
- Before removing the IBM Rational products (including the IBM Rational license server) from clients, record the specified license serve hostnames in the License Key Administrator (LKAD).
 1. Launch the LKAD from **Start > Programs > Rational Software > Rational License Key Administrator**.
 2. Find the hostnames in **Settings > Client/Server Configuration**.
 3. After you install the new IBM Rational products, reset the license server name in the (LKAD). The LKAD Wizard should launch after the installation. If the Wizard does not launch, use **Start > Programs > Rational Software > Rational License Key Administrator**.
- Removing ClearCase LT does not remove ClearCase LT data from the computer. If you reinstall ClearCase LT on the same computer, you must install ClearCase LT to the same directory to see the previous data.
- To remove IBM Rational products from a Windows NT, 2000, or XP computer, you must have Windows administrator privileges on the local system.
- Make sure that no one is using the application or any associated files. You cannot remove files that are in use.

Before you remove ClearCase data from the ClearCase LT server

You should never remove ClearCase data from a computer unless that data was used for purposes of evaluation only and you have no intention of saving it or using it in a production capacity.

To completely remove ClearCase data from the ClearCase LT server, take the following steps before you remove ClearCase LT:

1. Use the ClearCase Administration Console or the **cleartool lsvo** command to locate all VOBs on the ClearCase LT server. Then use the ClearCase Administration Console or the **cleartool rmvo** command to remove the VOBs.
2. Use the ClearCase Administration Console or the **cleartool lsview** command to locate all views. Then use the ClearCase Administration Console or the **cleartool rmview** command to remove the views.
3. Use the ClearCase Administration Console or the **cleartool lsstgloc** command to locate all server storage locations on the ClearCase LT server. Then use the ClearCase Administration Console or the **cleartool rmstgloc** command to remove the storage locations.
4. To remove registry values, use **regedit** to remove these lines:
HKLM\Software\Atria\ClearCase\CurrentVersion\ServerSetupComplete
HKLM\Software\Atria\ClearCase\CurrentVersion\CredmapAllowedDomainList
5. Delete the ClearCase/var directory from the installation directory.

Before you remove RequisiteWeb

RequisiteWeb installs a new project catalog containing paths to new sample projects. Be sure to make a copy of your existing catalog.txt file before removing RequisiteWeb. If you are upgrading from an earlier release of RequisiteWeb, the catalog.txt file should be located in the following default directory: C:\Program Files\Rational\RequisitePro\ReqWeb\Projects.

Add your previous catalog.txt entries to the new catalog file that is installed with the new version of RequisiteWeb in the default directory:

C:\Program Files\Rational\RequisitePro\ReqWeb\Projects

Note: Your existing webapps2 directory will be deleted when you remove RequisiteWeb. To preserve your configuration files or any other files in your webapps2 directory, you must relocate those files before removing RequisiteWeb.

For more information, see “Managing RequisitePro projects for RequisiteWeb” on page 124.

Removing IBM Rational software

Use the Windows Add or Remove Programs control panel to select and remove the IBM Rational product. Click **Start > Settings > Control Panel > Add or Remove Programs**. Highlight the product and click Remove.

To remove data and additional software for RequisiteWeb, see

- “Removing RequisiteWeb 2003.06.00” on page 148.
- “Removing RequisiteWeb 2002.05.X” on page 149.
- “Removing RequisiteWeb 2001A” on page 150.

Removing RequisiteWeb 2003.06.00

1. Use the **Add/Remove Programs** function in the Windows Control Panel to select and remove RequisiteWeb.
2. Using **dcomcnfg**, remove the Local Administrators Group from “Default launch permissions” and “Default access permissions.”
3. If ReqWebUser is no longer in use, remove this user.

4. RequisitePro project data, backup files, and log files may still exist on the server. The log files are located at C:\Program Files\Rational\common\rwp\logs\ .

Removing RequisiteWeb 2002.05.X

To remove RequisiteWeb from a Windows NT or Windows 2000 server, you must have Windows administrator privileges on that computer. Use the following instructions to:

- Delete the ReqWeb and Jakarta virtual directories
- Remove the Jakarta ISAPI Filter
- Restart the IIS Admin Service
- Remove the RequisiteWeb program files

Note: To remove RequisiteWeb 2001A, see “Removing RequisiteWeb 2001A” on page 150.

Deleting the ReqWeb and Jakarta virtual directories

1. Launch the Internet Services Manager by performing one of the following procedures:
 - Click **Start > Run**, and type **inetmgr**. Click **OK**.
 - In Windows NT 4.0, click **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Internet Information Server > Internet Service Manager**.
 - In Windows 2000 Server, click **Start > Programs > Administrative Tools/Internet Services Manager**.
2. Select the **Default Web Site** and click the **Stop** button on the toolbar.
3. Right-click the ReqWeb virtual directory and select **Delete**.
4. Right-click the Jakarta virtual directory and select **Delete**. Leave the Internet Services Manager open.

Removing the Jakarta ISAPI Filter

1. Right-click the Default Web Site and select **Properties**. The Default Web Site Properties dialog box opens. Click the **ISAPI Filters** tab and select the **jakarta** filter.
2. Click **Remove** and then click **OK** to close the dialog box.

Restarting the IIS Admin Service

Perform the tasks in the following table. Refer to the column that corresponds to your operating system

Step	Windows NT 4.0	Windows 2000
1	Close the Internet Service Manager.	In the Internet Services Manager, right-click the server name.
2	At the Start/Run command line, type cmd .	Select Restart IIS .
3	In the MS-DOS window, type the following: net stop w3svc net start w3svc	At the Stop/Start/Reboot dialog box, select Restart Internet Services on <server name> .
4	Type exit to close the MS-DOS window.	Click OK to close the dialog box. Close the Internet Services Manager.

Removing the RequisiteWeb Program

After using **Add/Remove Programs** in the Windows Control Panel to remove RequisitePro and the uninstallation process is complete (including restarting the server), check to see if the C:\Program Files\Rational\RequisitePro\ReqWeb directory is still present on the server. If so, delete the ReqWeb directory and its subdirectories. You must also perform the following steps to edit your system variables:

1. On the start menu, click **Settings > Control Panel**. In the Control Panel, double-click the **System** icon. The System Properties dialog box opens.
2. Do one of the following procedures:
 - In Windows 2000, at the Advanced tab, click **Environment Variables**.
 - In Windows NT, click the **Environment** tab.

Locate the PATH system variable and remove the following from your PATH directory:

C:\Program Files\Rational\common\java\jre\bin

Removing RequisiteWeb 2001A

To remove RequisiteWeb from a Windows NT or Windows 2000 server, you must have Windows administrator privileges on that machine. Use the following instructions to:

- Stop and remove the RqTomcat Service
- Remove the ReqWeb and Jakarta virtual directories
- Remove RequisiteWeb 2001A
- Remove the Tomcat_Home and Java_Home system variables

Stop and Remove the RqTomcat Service

Step	Windows NT 4.0	Windows 2000
1	Click Start > Settings > Control Panel > Services .	Click Start > Settings > Control Panel > Administrative Tools > Services
2	Locate and select the RqTomcat service.	Locate the RqTomcat service and double-click the icon to display the Properties dialog box.
3	In the Services window, click Stop .	On the General tab under Service status, click the Stop button. Click OK and close the Services window.
4	Click Close to finish.	Click OK to close the dialog box. Close the Internet Services Manager.

After you stop the RqTomcat service you must perform the following steps to remove the service from your system:

1. Open an MS-DOS shell and navigate to the following directory:
C:\ProgramFiles\Rational\jakarta-tomcat\bin
2. Type the following at the MS-DOS prompt:
jk_nt_service -R RqTomcat
3. Close the MS-DOS shell.

Remove the ReqWeb and Jakarta Virtual Directories

1. Launch the Internet Services Manager by doing one of the following:
 - In Windows NT 4.0, click **Start > Programs > Windows NT 4.0 Option Pack > Microsoft Internet Information Server > Internet Service Manager**.
 - In Windows 2000 Server, click **Start > Programs > Administrative Tools > Internet Services Manager**.
2. Under the **Default Web Site**, locate the ReqWeb and Jakarta virtual directories. Right-click each of the directories and select **delete**.
3. Right-click the **Default Web Site** and select **Properties**.
4. At the **ISAPI Filters** tab, locate the **jakarta** filter. Right-click the **jakarta** filter and select **delete**.
5. Click **OK** and close the Internet Services Manager.

Remove RequisiteWeb 2001A

After using **Add/Remove Programs** in the Windows Control Panel to remove RequisitePro and the uninstallation process is complete (including restart the server), check to see if the following directories are still present on the server:

C:\Program Files\Rational\RequisitePro

C:\Program Files\Rational\jakarta-tomcat

If so, delete both directories and their subdirectories.

Remove the Tomcat_Home and Java_Home system variables

1. On the start menu, click **Settings > Control Panel**. In the Control Panel, double-click the **System** icon. The System Properties dialog box opens.
2. Do one of the following procedures:
 - In Windows 2000, at the Advanced tab, click **Environment Variables**.
 - In Windows NT, click the **Environment** tab.
3. Locate the TOMCAT_HOME and JAVA_HOME system variables and delete them from your system.

Note: Restore back up projects and your catalog.txt file to their original locations.

Removing TestManager

If you are upgrading to this release of TestManager, v. 2003.06.13, from the previous release (v. 2003.06), remove the Nutcracker executable and restart your computer before you install the current version. To remove the Nutcracker executable: Click OK. Before you start to install v. 2003.06.00, restart your computer.

1. Click **Start > Settings > Control Panel**.
2. In the Control Panel, double-click the **Add/Remove Programs**.
3. Select **Nutcracker**, and then click **Remove**.

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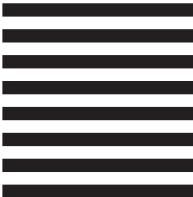
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