

Rational® ClearCase®

Installation Guide

VERSION: 2003.06.00 AND LATER

PART NUMBER: 800-026154-000

WINDOWS EDITION

Legal Notices

Copyright ©1992-2003, Rational Software Corporation. All Rights Reserved.

Part Number: 800-026154-000

Version Number: 2003.06.00

This manual (the "Work") is protected under the copyright laws of the United States and/or other jurisdictions, as well as various international treaties. Any reproduction or distribution of the Work is expressly prohibited without the prior written consent of Rational Software Corporation.

The Work is furnished under a license and may be used or copied only in accordance with the terms of that license. Unless specifically allowed under the license, this manual or copies of it may not be provided or otherwise made available to any other person. No title or ownership of the manual is transferred. Read the license agreement for complete terms.

Rational Software Corporation, Rational, Rational Suite, Rational Suite ContentStudio, Rational Apex, Rational Process Workbench, Rational Rose, Rational Summit, Rational Unified process, Rational Visual Test, AnalystStudio, ClearCase, ClearCase Attache, ClearCase MultiSite, ClearDDTS, ClearGuide, ClearQuest, PerformanceStudio, PureCoverage, Purify, Quantify, Requisite, RequisitePro, RUP, SiteCheck, SiteLoad, SoDa, TestFactory, TestFoundation, TestMate and TestStudio are registered trademarks of Rational Software Corporation in the United States and are trademarks or registered trademarks in other countries. The Rational logo, Connexis, ObjecTime, Rational Developer Network, RDN, ScriptAssure, and XDE, among others, are trademarks of Rational Software Corporation in the United States and/or in other countries. All other names are used for identification purposes only and are trademarks or registered trademarks of their respective companies.

Portions covered by U.S. Patent Nos. 5,193,180 and 5,335,344 and 5,535,329 and 5,574,898 and 5,649,200 and 5,675,802 and 5,754,760 and 5,835,701 and 6,049,666 and 6,126,329 and 6,167,534 and 6,206,584. Additional U.S. Patents and International Patents pending.

U.S. Government Restricted Rights

Licensee agrees that this software and/or documentation is delivered as "commercial computer software," a "commercial item," or as "restricted computer software," as those terms are defined in DFARS 252.227, DFARS 252.211, FAR 2.101, OR FAR 52.227, (or any successor provisions thereto), whichever is applicable. The use, duplication, and disclosure of the software and/or documentation shall be subject to the terms and conditions set forth in the applicable Rational Software Corporation license agreement as provided in DFARS 227.7202, subsection (c) of FAR 52.227-19, or FAR 52.227-14, (or any successor provisions thereto), whichever is applicable.

Warranty Disclaimer

This document and its associated software may be used as stated in the underlying license agreement. Except as explicitly stated otherwise in such license agreement, and except to the extent prohibited or limited by law from jurisdiction to jurisdiction, Rational Software Corporation expressly disclaims all other warranties, express or implied, with respect to the media and software product and its documentation, including without limitation, the warranties of merchantability, non-infringement, title or fitness for a particular purpose or arising from a course of dealing, usage or trade practice, and any warranty against interference with Licensee's quiet enjoyment of the product.

Third Party Notices, Code, Licenses, and Acknowledgements

Portions Copyright ©1992-1999, Summit Software Company. All rights reserved.

Microsoft, the Microsoft logo, Active Accessibility, Active Client, Active Desktop, Active Directory, ActiveMovie, Active Platform, ActiveStore, ActiveSync, ActiveX, Ask Maxwell, Authenticode, AutoSum, BackOffice, the BackOffice logo, bCentral, BizTalk, Bookshelf, ClearType, CodeView, DataTips, Developer Studio, Direct3D, DirectAnimation, DirectDraw, DirectInput, DirectX, DirectXJ, DoubleSpace, DriveSpace, FrontPage, Funstone, Genuine Microsoft Products logo, IntelliEye, the IntelliEye logo, IntelliMirror, IntelliSense, J/Direct, JScript, LineShare, Liquid Motion, Mapbase, MapManager, MapPoint, MapVision, Microsoft Agent logo, the Microsoft eMbedded Visual Tools logo, the Microsoft Internet Explorer logo, the Microsoft Office Compatible logo, Microsoft Press, the Microsoft Press logo, Microsoft QuickBasic, MS-DOS, MSDN, NetMeeting, NetShow, the Office logo, Outlook, PhotoDraw, PivotChart, PivotTable, PowerPoint, QuickAssembler, QuickShelf, RelayOne, Rushmore, SharePoint, SourceSafe, TipWizard, V-Chat, VideoFlash, Visual Basic, the Visual Basic logo, Visual C++, Visual C#, Visual FoxPro, Visual InterDev, Visual J++, Visual SourceSafe, Visual Studio, the Visual Studio logo, Vizact, WebBot, WebPIP, Win32, Win32s, Win64, Windows, the Windows CE logo, the Windows logo, Windows NT, the Windows Start logo, and XENIX, are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or in other countries.

Sun, Sun Microsystems, the Sun Logo, Ultra, AnswerBook 2, medialib, OpenBoot, Solaris, Java, Java 3D, ShowMe TV, SunForum, SunVTS, SunFDDI, StarOffice, and SunPCi, among others, are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

Purify is licensed under Sun Microsystems, Inc., U.S. Patent No. 5,404,499.

Licensee shall not incorporate any GLOBEtrotter software (FLEXIm libraries and utilities) into any product or application the primary purpose of which is software license management.

BasicScript is a registered trademark of Summit Software, Inc.

Design Patterns: Elements of Reusable Object-Oriented Software, by Erich Gamma, Richard Helm, Ralph Johnson and John Vlissides. Copyright © 1995 by Addison-Wesley Publishing Company, Inc. All rights reserved.

Copyright ©1997 OpenLink Software, Inc. All rights reserved.

This software and documentation is based in part on BSD Networking Software Release 2, licensed from the Regents of the University of California. We acknowledge the role of the Computer Systems Research Group and the Electrical Engineering and Computer Sciences Department of the University of California at Berkeley and the Other Contributors in its development.

This product includes software developed by Greg Stein <gstein@lyra.org> for use in the mod_dav module for Apache (http://www.webdav.org/mod_dav/).

Additional legal notices are described in the legal_information.html file that is included in your Rational software installation.

Contents

- Preface v**
 - About This Manual v
 - ClearCase Documentation Roadmap vi
 - ClearCase Integrations with Other Rational Productsvii
 - Typographical Conventions viii
 - Online Documentation ix
 - Customer Support x

- Installation Overview 1**
 - Choosing an Installation Option 1
 - Upgrading from ClearCase LT 1
 - Additional Functionality 1
 - Installation Road Map 2
 - If You Are New to ClearCase 3

- Before You Install ClearCase 5**
 - Preinstallation Checklist 5
 - Reviewing the Release Notes 7
 - System Requirements 7
 - Supported Platforms 7
 - Supported Platforms for Rational Web Platform 7
 - Supported Platforms for ClearCase Mainframe Connectors Remote Build Feature 8
 - Supported File Systems 8
 - Windows/UNIX Interoperation 8
 - Disk Space Requirements 9
 - Disk Space Requirements for the Release Area 10
 - Disk Space Requirements for Individual Hosts 10
 - Software Requirements 10
 - Windows Server Software and ClearCase Servers 11
 - Using ClearCase and Windows Domains 11
 - Operating System Vendor Web Site 11
- Setting Up Your Environment for ClearCase 11
 - ClearCase Host Types 11
 - Designating Server and Client Hosts 13

| | |
|---|-----------|
| VOB Database Schema Versions | 13 |
| VOB Database Schema Versions and MultiSite | 14 |
| Ensuring Feature Compatibility Across Versions of ClearCase | 14 |
| Planning for MultiSite Installation | 15 |
| Ensuring MultiSite Compatibility with ClearCase | 16 |
| Compatibility Issues Across MultiSite Versions | 17 |
| Ensuring ClearQuest Compatibility with ClearCase | 18 |
| Planning for ClearCase Installations on Dual-Boot Computers | 18 |
| Enabling Remote Administration | 18 |
| Ensuring Compatible Character-Encoding Systems | 19 |
| Allocating Licenses | 19 |
| Allocating ClearCase Licenses | 19 |
| Allocating MultiSite Licenses | 20 |
| Environment-Specific Tasks | 21 |
| Initial Installation Tasks | 22 |
| Understanding the Installation Process | 22 |
| Planning Your Installation Location | 23 |
| Ensure Installation Directory Permissions | 23 |
| Planning the Installation or Upgrade Process | 24 |
| Installing for the First Time | 24 |
| Upgrading ClearCase Hosts | 25 |
| Logging In with Appropriate Privileges | 27 |
| Defining Domain Accounts | 27 |
| Select and Share a Release Area Location | 28 |
| Installing Internet Explorer | 28 |
| Creating a Release Area | 31 |
| Before You Begin | 31 |
| Running the Rational Setup Wizard | 32 |
| Creating Additional Site Defaults for a Release Area | 33 |
| Creating the Site Default File | 33 |
| Saving the Site Defaults File | 34 |
| Installing Using the Site Defaults File | 34 |
| Installing from a Release Area | 35 |
| Installing Servers and Clients from a Release Area | 35 |
| Starting the Installation by Using a Shortcut | 35 |
| Starting the Installation from the Rational Setup Wizard | 35 |
| Starting the Installation from the Command Line | 37 |

| | |
|--|-----------|
| Configuring Storage with the Server Storage Wizard | 37 |
| Postinstallation Procedures | 38 |
| Setting the ClearCase Primary Group | 39 |
| Reinstalling the FrontPage Web Authoring Integration | 39 |
| Specifying Windows Domain for Credential Mapping of UNIX Users | 40 |
| Reformatting for VOB Database Schema Version 54 | 40 |
| Using the Getting Started Wizard | 40 |
| Enabling MultiSite Synchronization | 41 |
| If Your Installation Was Not Successful | 41 |
| Viewing the ClearCase Log | 41 |
| Diagnosing Errors with ClearCase Doctor | 42 |
| Modifying, Repairing, or Removing ClearCase | 42 |
| Applying Service Releases | 43 |
| Installing and Using the Rational Download Manager | 43 |
| Evaluating ClearCase On a Local Computer | 45 |
| Selecting the Desktop Installation Option | 45 |
| Preparing for the Evaluation Installation | 45 |
| Performing the Evaluation Installation | 45 |
| Evaluating the Server and Client | 45 |
| Starting the ClearCase Tutorial | 47 |
| Completing the Evaluation | 47 |
| Using Silent Install | 49 |
| Editing the Site Defaults File with the Site Preparation Tool | 49 |
| Executing and Monitoring the Silent Install | 50 |
| Executing the Silent Install | 50 |
| Monitoring the Silent Install | 50 |
| Preparing the Target Computers | 51 |
| Running ClearCase Doctor to Analyze Target Computers | 51 |
| Executing Silent Install on Target Computers | 51 |
| Performing a Silent Uninstall | 52 |
| Environment-Specific Tasks During Preinstallation | 53 |
| Setting Up the IBM VisualAge for Java Integration | 53 |
| Installing VisualAge for Java | 53 |
| Running the Configuration Wizard | 53 |

| | |
|--|----|
| Installation of the UCM Integration with Rational ClearQuest | 54 |
|--|----|

Upgrading from ClearCase LT 57

| | |
|---|-----------|
| Upgrade Checklist | 57 |
| What Happens When You Upgrade? | 58 |
| Upgrade Options | 58 |
| Simple Upgrade Option | 58 |
| Upgrade-and-Merge Option | 58 |
| Upgrade Considerations | 59 |
| ClearCase License Server and Registry Server Hosts | 59 |
| Registry Regions | 59 |
| VOB Access Between Windows and UNIX | 60 |
| Issues with Interoperability and Dynamic Views | 60 |
| Preparing to Upgrade | 61 |
| Acquiring ClearCase Licenses | 61 |
| Establishing Your ClearCase Release Area | 61 |
| Remove All ClearCase LT Views | 62 |
| The Simple Upgrade Procedure | 62 |
| If You Cannot Upgrade All Your Clients at the Same Time | 62 |
| Performing the Upgrade | 63 |
| The Upgrade-and-Merge Procedure | 64 |
| Performing the Upgrade and Merge | 64 |
| Creating New UCM Views That Use Existing Streams | 66 |
| cclt2cc Command Line Options | 67 |
| SYNOPSIS | 67 |
| OPTIONS AND ARGUMENTS | 67 |
| Tag Registry Password | 67 |
| VOBs to Upgrade | 67 |
| Destination Region | 68 |
| VOB Tag Prefix | 68 |

Preface

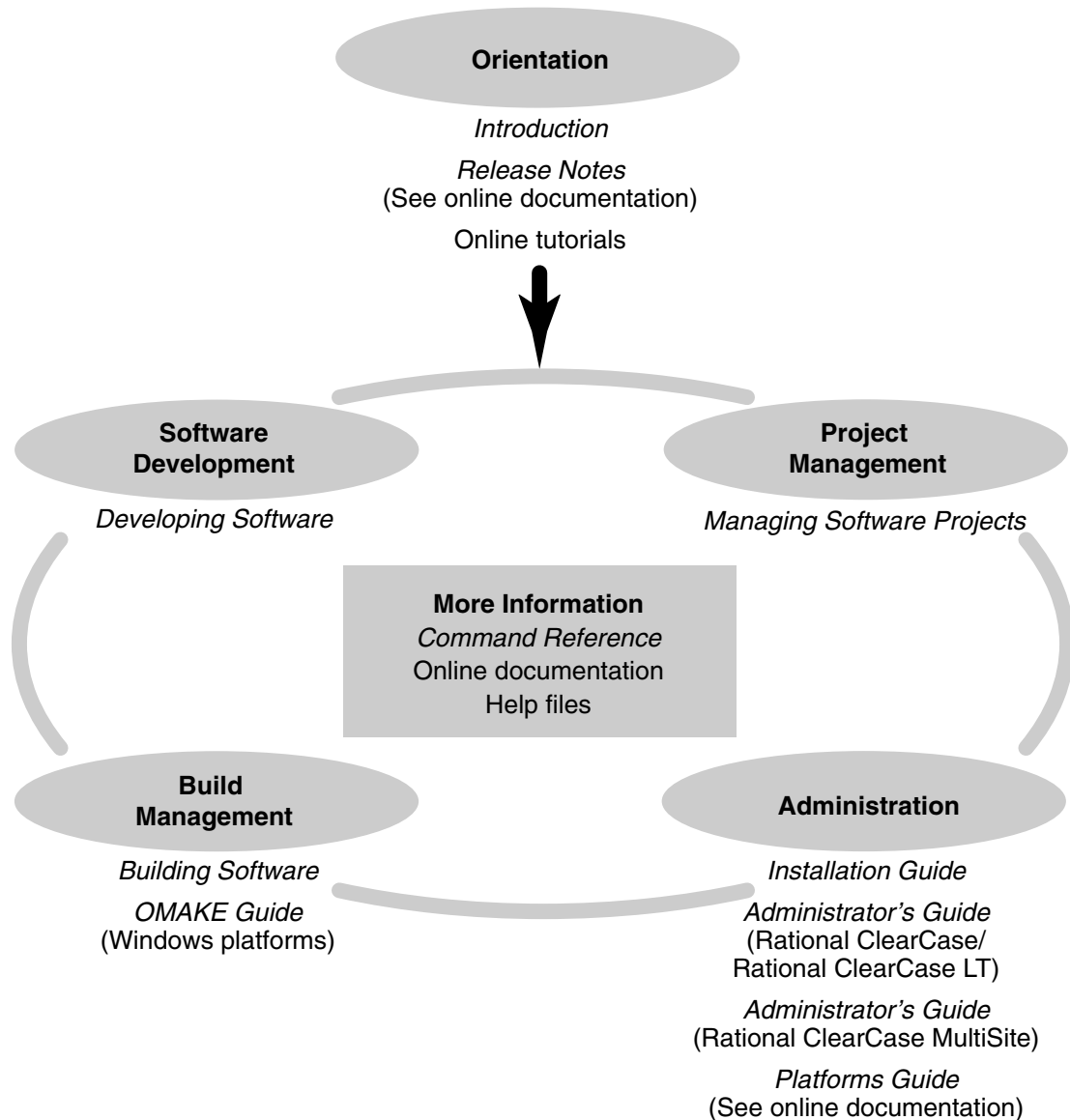
About This Manual

The manual describes how to install Rational ClearCase on the Windows platform. Read this manual to understand the basics of installing ClearCase; then refer to the *Administrator's Guide* for Rational ClearCase for information about configuring and maintaining your environment.

This manual is intended for use by a system administrator, who is setting up ClearCase in a production environment.

For a complete list of ClearCase integrations, refer to the Rational Web site at www.rational.com.

ClearCase Documentation Roadmap



ClearCase Integrations with Other Rational Products

| Integration | Description | Where it is documented |
|------------------------------|--|---|
| Base ClearCase-ClearQuest | Associates change requests with versions of ClearCase elements. | ClearCase: <i>Developing Software</i> ClearCase: <i>Managing Software Projects</i> ClearQuest: <i>Administrator's Guide</i> |
| Base ClearCase-Apex | Allows Apex developers to store files in ClearCase. | <i>Installing Rational Apex (UNIX)</i> |
| Base ClearCase-ClearDDTS | Associates change requests with versions of ClearCase elements. | <i>ClearCase ClearDDTS Integration</i> |
| Base ClearCase-PurifyPlus | Allows developers to invoke ClearCase from PurifyPlus. | PurifyPlus Help |
| Base ClearCase-RequisitePro | Archives RequisitePro projects in ClearCase. | <i>RequisitePro User's Guide</i> RequisitePro Help |
| Base ClearCase-Rose | Stores Rose models in ClearCase. | Rose Help |
| Base ClearCase-Rose RealTime | Stores Rose RealTime models in ClearCase. | <i>Rose RealTime Toolset Guide</i> <i>Rose RealTime Guide to Team Development</i> |
| Base ClearCase-SoDA | Collects information from ClearCase and presents it in various report formats. | <i>Using Rational SoDA for Word</i> <i>Using Rational SoDA for Frame</i> SoDA Help |
| Base ClearCase-XDE | Stores XDE models in ClearCase | XDE Help |
| UCM-ClearQuest | Links UCM activities to ClearQuest records. | ClearCase: <i>Developing Software</i> ClearCase: <i>Managing Software Projects</i> ClearQuest: <i>Administrator's Guide</i> |
| UCM-PurifyPlus | Allows developers to invoke ClearCase from PurifyPlus. | PurifyPlus Help |

| Integration | Description | Where it is documented |
|--------------------|---|--|
| UCM-RequisitePro | Allows RequisitePro administrators to create baselines of RequisitePro projects in UCM, and to create RequisitePro projects from baselines. | <i>RequisitePro User's Guide</i> RequisitePro Help <i>Using UCM with Rational Suite</i> |
| UCM-Rose | Stores Rose models in ClearCase. | Rose Help <i>Using UCM with Rational Suite</i> |
| UCM-Rose RealTime | Associates activities with revisions. | <i>Rose RealTime Toolset Guide</i> <i>Rose RealTime Guide to Team Development</i> |
| UCM-SoDA | Collects information from ClearCase and presents it in various report formats. | <i>Using Rational SoDA for Word</i> <i>Using Rational SoDA for Frame</i> SoDA Help |
| UCM-TestManager | Stores test assets in ClearCase. | <i>Rational TestManager User's Guide</i> TestManager Help <i>Using UCM with Rational Suite</i> |
| UCM-XDE | Stores XDE models in ClearCase | XDE Help |
| UCM-XDE Tester | Stores XDE Tester Datastores in ClearCase | XDE Tester Help |

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 “medial dot” (`·`) character indicates the shortest legal abbreviation. For example:

`lsc.heckout`

Online Documentation

The ClearCase Product Family (CPF) includes online documentation, as follows:

Help System: Use the **Help** menu, the **Help** button, or the F1 key. To display the contents of the online documentation set, do one of the following:

- On UNIX, type **cleartool man contents**
- On Windows, click **Start > Programs > Rational Software > Rational ClearCase > Help**
- On either platform, to display contents for Rational ClearCase MultiSite, type **multitool man contents**
- Use the **Help** button in a dialog box to display information about that dialog box or press F1.

Reference Pages: Use the **cleartool man** and **multitool man** commands. For more information, see the **man** reference page.

Command Syntax: Use the **-help** command option or the **cleartool help** command.

Tutorial: Provides a step-by-step tour of important features of the product. To start the tutorial, do one of the following:

- On UNIX, type **cleartool man tutorial**
- On Windows, click **Start > Programs > Rational Software > Rational ClearCase > ClearCase Tutorial**

PDF Manuals: Navigate to:

- On UNIX, *ccase-home-dir/doc/books*
- On Windows, *ccase-home-dir\doc\books*

Customer Support

If you have any problems with the software or documentation, please contact Rational Customer Support by telephone, fax, or electronic mail as described below. For information regarding support hours, languages spoken, or other support information, click the **Support** link on the Rational Web site at **www.rational.com**.

| Your location | Telephone | Facsimile | Electronic mail |
|---------------------------------|---|--|------------------------------------|
| North America | 800-433-5444 toll free or 408-863-4000 Cupertino, CA | 408-863-4194 Cupertino, CA 781-676-2460 Lexington, MA | support@rational.com |
| Europe, Middle East, and Africa | +31-(0)20-4546-200 Netherlands | +31-(0)20-4546-201 Netherlands | support@europe.rational.com |
| Asia Pacific | 61-2-9419-0111 Australia | 61-2-9419-0123 Australia | support@apac.rational.com |

Rational ClearCase is a comprehensive software configuration management system that manages multiple variants of evolving software systems and tracks changes.

ClearCase maintains a complete version history of all software development artifacts, including code, requirements, models, scripts, test assets, and directory structures. It performs audited system builds, enforces site-specific development policies, offers multiple developer workspaces, and provides advanced support for parallel development. ClearCase includes Unified Change Management (UCM), an optional, out-of-the-box process for organizing software development teams and their work products.

Choosing an Installation Option

This manual describes the following installation options:

- **Enterprise deployment.** This is the standard installation option. It allows you to install ClearCase with a set of customized site defaults.
- **Desktop installation from CD image.** Choose this type of installation when you are installing ClearCase on a single computer, usually for evaluation purposes. This option is not recommended for production use.

The *Installation Road Map* on page 2 presents the sequence of the installation. Use the task checklists in this manual to ensure that you complete each step of the installation.

Upgrading from ClearCase LT

Rational ClearCase LT can be easily upgraded to Rational ClearCase. ClearCase includes a tool that helps you automate the upgrade process, though a few manual steps may be required to upgrade certain configurations. The upgrade preserves all of your VOB data. For more information, see Appendix D, *Upgrading from ClearCase LT*.

Additional Functionality

ClearCase supports a number of powerful features not available in ClearCase LT:

- Ability for a client to access multiple servers
- Dynamic views, using the ClearCase multiversion file system (MVFS)
- ClearCase build auditing tools
- An expanded ClearCase registry that supports registry regions
- Compatibility with MultiSite, which you can purchase to provide support for geographically dispersed development teams

For more information about these and other ClearCase features, see the *Introduction to Rational ClearCase* and *Managing Software Projects*.

Installation Road Map

- 1 Read the *Release Notes*.
- 2 Read Chapter 1, *Installation Overview*, to get an overview of the installation options available.
- 3 Read Chapter 2, *Before You Install ClearCase*, to verify that your installation environment meets all requirements.
- 4 Select the option you want to use.
 - The **Enterprise deployment** option allows you to create a release area. A release area is a central location on your network, accessible by all hosts, that contains site defaults used in the installation process. You create a release area by choosing from a number of site default parameters. After the release area is set up, any number of clients and servers can be installed from this release area. For more information, see Chapter 3, *Creating a Release Area* and Chapter 4, *Installing from a Release Area*.
 - The **Desktop installation from CD image** option installs both server or client directly from the CD, rather than creating a release area. If you do not create a release area, it is difficult to maintain your ClearCase installation. Therefore, we do not recommend installing from the CD, except when you are installing ClearCase on a single computer, as in an evaluation.

See Table 1 for a summary of the recommended reading path.

Table 1 Recommended Reading Path for ClearCase Installation Documentation

| Scenario | Reading path |
|--|--|
| <p>If you are a new ClearCase user or are upgrading from an existing version of ClearCase, use the Enterprise deployment option.</p> | <p>Chapter 1, <i>Installation Overview</i> Chapter 2, <i>Before You Install ClearCase</i> Chapter 3, <i>Creating a Release Area</i> Chapter 4, <i>Installing from a Release Area</i></p> |
| <p>If you are upgrading from ClearCase LT to ClearCase, use the Enterprise deployment option. However, you must first upgrade your ClearCase LT installation to ClearCase. Follow the procedure in Appendix D. Reference Chapter 3 and Chapter 4 as directed.</p> | <p>Chapter 1, <i>Installation Overview</i> Chapter 2, <i>Before You Install ClearCase</i> Appendix D, <i>Upgrading from ClearCase LT</i></p> |
| <p>If you want to evaluate the product on a local computer, use the Desktop install from CD image option.</p> | <p>Chapter 1, <i>Installation Overview</i> Chapter 2, <i>Before You Install ClearCase</i> Appendix A, <i>Evaluating ClearCase On a Local Computer</i></p> |
| <p>If you want to use the silent install feature to install ClearCase on other computers from a networkwide release area, use the Silent Install feature.</p> | <p>Appendix B, <i>Using Silent Install</i></p> |
| <p>If you want to download and apply a service release, use the Rational Download Manager.</p> | <p>Chapter 5, <i>Applying Service Releases</i></p> |

If You Are New to ClearCase

If you have not used ClearCase before, the *Introduction* explains some basic terms and concepts. It is not necessary to read that book before installing the product, but it is helpful to become acquainted with the basics of VOBs and views.

Before You Install ClearCase

2

It is critical that you review the information in this chapter to prepare your environment for installation of Rational ClearCase.

Preinstallation Checklist

Table 2 lists all recommended prerequisites and includes cross-references for additional information about installing ClearCase.

Table 2 Preinstallation Checklist

| Done | Task | Reference |
|------|---|---|
| | Review release notes. | <i>Reviewing the Release Notes</i> on page 7 |
| | Ensure that your installation meets all system requirements. | <i>System Requirements</i> on page 7 |
| | Learn about the different host types that are used by ClearCase. | <i>ClearCase Host Types</i> on page 11 |
| | Designate which hosts assume each logical host type. | <i>Designating Server and Client Hosts</i> on page 13 |
| | Ensure that you select the appropriate VOB database schema version. | <i>VOB Database Schema Versions</i> on page 13 |
| | If you are running different versions of ClearCase on multiple ClearCase hosts, ensure compatibility of clients and servers among the various versions. | <i>Ensuring Feature Compatibility Across Versions of ClearCase</i> on page 14 |
| | If you plan to install ClearCase MultiSite, ensure that your environment is compatible. | <i>Planning for MultiSite Installation</i> on page 15 |

Table 2 Preinstallation Checklist

| Done | Task | Reference |
|-------------|---|---|
| | If you plan to install Rational ClearQuest, ensure that your environment is compatible. | <i>Ensuring ClearQuest Compatibility with ClearCase on page 18</i> |
| | Plan for ClearCase installations on a dual-boot computer. | <i>Planning for ClearCase Installations on Dual-Boot Computers on page 18</i> |
| | Decide whether to enable Remote Administration. | <i>Enabling Remote Administration on page 18</i> |
| | Ensure that your system supports compatible character encoding schemes across ClearCase clients. | <i>Ensuring Compatible Character-Encoding Systems on page 19</i> |
| | Decide how many ClearCase and MultiSite licenses you need and how to allocate these licenses on your network. | <i>Allocating Licenses on page 19</i> |
| | Determine whether you need to perform any tasks dependent on your unique environment. | <i>Environment-Specific Tasks on page 21</i> |
| | Learn about the installation process. | <i>Understanding the Installation Process on page 22</i> |
| | Plan where you will install the product. | <i>Planning Your Installation Location on page 23</i> |
| | Make an installation or upgrade plan. | <i>Planning the Installation or Upgrade Process on page 24</i> |
| | Log in with appropriate privileges. | <i>Logging In with Appropriate Privileges on page 27</i> |
| | Define or ensure that you have defined the ClearCase administrator's group and the ClearCase Server Process User. | <i>Defining Domain Accounts on page 27</i> |
| | Create or select a release area location and share the directory. | <i>Select and Share a Release Area Location on page 28</i> |
| | Install Internet Explorer. | <i>Installing Internet Explorer on page 28</i> |

Reviewing the Release Notes

Before beginning the installation process, review the *Release Notes* for Rational ClearCase and ClearCase MultiSite for any recent changes and additions to the material in this manual. The *Release Notes* are available on the product CD in the \ClearCase\doc directory. They are also available in the release area, following product installation.

System Requirements

Use this section to determine compatibility of your platforms, file system, hardware, software, and network before you install ClearCase.

See the *Release Notes* for the latest updates.

Supported Platforms

Version 2003.06.00 of ClearCase and MultiSite run on the platforms listed in Table 3.

Table 3 Supported Platforms for ClearCase and MultiSite

| Hardware platform | Operating system |
|-------------------|---|
| Intel x86 | Windows NT 4.0 SP6a (but not 4.0 SP6) and SRP – Security roll up Package, (Microsoft Knowledge Base Article - Q299444) Windows 2000 SP2, SP3 Windows XP Professional SP1 ¹ Windows Server 2003 ² |

1. Rational ClearCase 2003.06.00 clients support the latest Windows 2000, Windows NT, and Windows XP Professional releases. Older releases of Windows, such as Windows 95, Windows 98, Windows Me, and Windows NT 4.0 SP4, are no longer supported with this release. We do not support Windows XP Home Edition. Customers who require support for earlier releases of Windows must run an earlier version of ClearCase that supports those releases
2. The ClearCase Mainframe Connectors Remote Build Feature has not yet been tested with Windows Server 2003.

Supported Platforms for Rational Web Platform

The Rational Web Platform (RWP) provides support for Web interfaces to Rational ClearCase and other Rational products. All supported ClearCase platforms support RWP. RWP is installed by default on all servers.

The host must have adequate disk space available for the Web views that are created by ClearCase Web interface users. Rational recommends 0.5 - 1MB of space per view.

Supported Platforms for ClearCase Mainframe Connectors Remote Build Feature

If you plan to install the ClearCase Mainframe Connectors Remote Build Feature, see the appropriate tables for platform requirements for the client (Table 3) and server (Table 4). You must use TCP/IP to use this feature.

For more information, see the *User's Guide* for Rational ClearCase MainFrame Connectors.

Table 4 Server Requirements for ClearCase Mainframe Connectors Remote Build Feature

| Hardware platform | Operating system |
|-------------------|---|
| IBM System/390 | OS/390 2.10, including UNIX System Services (USS) |
| IBM zSeries | OS/390 2.10, including USS z/OS 1.3, including USS |

Supported File Systems

Table 5 lists the file systems that ClearCase supports.

Table 5 Supported File Systems by Platform

| Platform | Supported file systems |
|--------------|-------------------------------------|
| Windows NT | FAT, NTFS, LANMAN, NFS ¹ |
| Windows 2000 | FAT, FAT32, NTFS, LANMAN |
| Windows XP | FAT, FAT32, NTFS, LANMAN |

1. See Table 6 for more information about NFS platforms

Windows/UNIX Interoperation

This section provides information about ClearCase support for file access between Windows and UNIX platforms, as it pertains to version 2003.06.00. As of this release, ClearCase supports these Windows/UNIX interoperation products:

- ClearCase File Server

- The third-party NFS client products listed in Table 6
- The third-party SMB server products listed in Table 7

Table 6 Supported NFS Client Products for Windows

| Product | Supported product releases |
|--|----------------------------|
| Hummingbird NFS Maestro | 7.0.0.1, 7.1.0.6, 8.0.0.4 |
| Shaffer Solutions Corporation DiskAccess | 5.0 or 5.1 |

Table 7 Supported SMB Server Products for Windows NT

| Product | Platform | Supported product releases |
|---|----------------------|--|
| LSI Logic Storage Systems TotalNET Advanced Server (TAS) | Solaris 2.6 or later | 5.4.1 patch 3, 6.0, 6.1, 7.0 |
| | HP-UX 11.0 or later | 5.4.1 patch 3; 6.0, 6.1, 7.0 |
| | AIX 4.3.2 and above | TAS 6.0, 7.0 |
| SAMBA (available from http://www.samba.org) | Solaris 8 or later | SAMBA 2.0.7, 2.2, 2.2.6, 2.2.7a, 2.2.8 |
| | HP-UX 11.0 or later | Samba 2.0.7, 2.2, 2.2.6, 2.2.7a, 2.2.8 |
| | AIX 5.1 | Samba 2.2, 2.2.6, 2.2.7a, 2.2.8 |
| | Linux RedHat 7.2 | Samba 2.2, 2.2.6, 2.2.7a, 2.2.8 |

For more information about using these products with ClearCase, see the *Administrator's Guide* for Rational ClearCase.

Disk Space Requirements

This section describes disk space requirements for running Rational ClearCase and ClearCase MultiSite.

Disk Space Requirements for the Release Area

The file system of the networkwide release host must have sufficient disk space to hold the release area. The minimum disk space required for each release area is 200 MB.

Disk Space Requirements for Individual Hosts

Table 8 shows the approximate disk space requirements for a new installation of ClearCase. These figures are for ClearCase files and upgraded system files only. The installation also needs 15 MB of temporary disk space.

Table 8 Disk Space Required for ClearCase Files and Upgraded System Files

| ClearCase installation type | Disk space required |
|--|---------------------|
| Windows NT, Windows XP, and Windows 2000 client or server using standard installation with dynamic views (5 MB additional to support MVFS installation), local VOBs, and local views | 200 MB |
| Windows NT, Windows XP, and Windows 2000 client or server with all optional components | 240 MB |

In addition, snapshot view directories need enough disk space to contain all files loaded into the snapshot views and all view-private files added to the views. The amount of space required depends on the number and size of the files in the views.

Any host that must contain VOB storage or view storage directories must have enough disk space to contain the files and databases used for storage of these directories. The amount of space required depends on the characteristics and use of the VOBs and views.

Software Requirements

ClearCase and MultiSite require additional software:

- Windows workstation or Windows server.
- A Web browser, either Netscape (version 7.0) or Internet Explorer (5.5, or 6.0). Internet Explorer does not have to be the default browser, but is required for some ClearCase features, including the ClearCase Explorer, the HTML DiffMerge tool, and the ClearCase Administration Console. Rational recommends using Internet Explorer 5.5 SP2 or later.

- IIS Web server software and the FrontPage Server Extensions (FPSE) are required if acting as a server for the ClearCase integrations with Microsoft FrontPage 98, Microsoft FrontPage 2000, or Visual InterDev.

Windows Server Software and ClearCase Servers

Windows workstations impose a limitation on concurrent access: a maximum of 10 systems can access a Windows system simultaneously by means of file system mounts or UNC names. If you anticipate this level of use, install Windows server software on your primary ClearCase servers.

Using ClearCase and Windows Domains

ClearCase is a distributed client/server application; many operations initiated on client hosts are completed by server processes elsewhere in the network. Therefore, all ClearCase hosts running Windows must belong to a Windows domain or an Active Directory domain, except when running a single-host evaluation copy of ClearCase.

To use ClearCase from a supported Windows host, you must log on to a domain account (not a local, per-system user account). For more information about Windows Domains, see the *Administrator's Guide*.

Operating System Vendor Web Site

You can find up-to-date information about Microsoft Windows operating system issues at the Microsoft Web site, <http://www.microsoft.com>.

Setting Up Your Environment for ClearCase

The proper system infrastructure is critical if you are setting up a new ClearCase environment.

ClearCase Host Types

When you install ClearCase on a computer, you specify whether to configure the computer as a server or a client:

- A server is a reliable computer that supports VOBs and views that are accessed by other computers on a local area network.
- A client is a computer on which a ClearCase user works, typically using one or more views to access VOBs on servers.

Various system tasks are assigned to server hosts. Use these descriptions to understand and plan the number and types of each host you need to allocate for your installation. You can designate a single computer as the server that handles multiple server functions. For more information, see the *Administrator's Guide*.

- **Server host.** Any host on which a VOB or view is created is a server host. Some hosts may be dedicated servers on which client software is rarely used. Other server hosts double as clients. All server hosts, as well as the registry and license server host, must run ClearCase.
- **Registry server host.** One host in the network acts as the ClearCase registry server host. Each host is assigned to a particular registry server host at ClearCase installation time. This host stores access-path information for all the VOBs and views in the network. ClearCase client and server programs on all hosts communicate with the registry server when accessing ClearCase data. See *Setting Up the Registry and License Server Hosts for the First Time* on page 24 and *Upgrading ClearCase Hosts* on page 25 for details about setting up a registry server host.
- **License server host.** One or more hosts in the network act as license server hosts, authorizing and limiting ClearCase use according to the terms of your license agreement. Each host on which ClearCase is installed is assigned to a particular license server host and communicates with that host periodically. See *Setting Up the Registry and License Server Hosts for the First Time* on page 24 and *Upgrading ClearCase Hosts* on page 25 for details about setting up a license server host.
- **Networkwide release host.** One host in the network acts as the networkwide release host. A directory on this host stores an entire ClearCase release that has been extracted from distribution media or downloaded from Rational. When necessary, patches can be applied to a release area to update the entire release with the latest enhancements and defect fixes. The networkwide release host does not need to run ClearCase.
- **Rational Web Platform (RWP) host.** If you want to use the ClearCase Web interface, you need at least one RWP host.

Rational recommends that the RWP server host have an additional 128 MB of physical memory beyond what is required to support any VOBs and views on the host. Unless the RWP host is the ClearCase LT server, we do not recommend using the RWP host as a VOB- or view-server host. RWP is installed automatically with ClearCase LT.

Caution: Installing RWP on a host 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 startup. Rational recommends that you install RWP on a host that does not have to run any other Web servers. If this is impossible, configure the other Web server to use ports that are not being used by RWP. The default port number used by RWP is

80. If you cannot use this port for RWP, you must configure RWP to use another port by running the Site Preparation Tool (see Chapter 3, *Creating a Release Area*).

For more details about RWP, see the *Administrator's Guide* for Rational ClearCase.

Designating Server and Client Hosts

If you are setting up a ClearCase installation for the first time, Rational recommends that you designate and configure the registry and license server hosts first. You can install the registry and license server hosts on the same computer or on different computers.

You must first set up the registry and license server hosts by creating a release area and installing the hosts from that release area, using a set of site defaults that you define. After you set up the registry and license server hosts, you configure other server hosts where clients can create VOBs and views.

You must also designate the computers you use as clients. All Windows clients can support dynamic views (if you have installed MVFS), local VOBs, and snapshot views.

The features installed on a ClearCase computer depend on site defaults chosen by the administrator. Users can override these defaults in the installation process.

VOB Database Schema Versions

ClearCase supports two VOB database schema versions: the older format (schema version 53) and the newer format (schema version 54).

Choosing schema version 54 format provides these features:

- Improved support for Windows security.
- Active Directory support. Schema version 54 is required when using ClearCase in Active Directory environments.
- Files can expand beyond 2 GB in the VOB database.

If you are an existing ClearCase customer, choose the format you currently use. Run the **cleartool -ver** command to see the current VOB database schema version.

If you are a new ClearCase customer, choose schema version 54 (the default).

Note: If you are currently using schema version 53 and select schema version 54, you must reformat your VOBs to use the newer format. Until you do, users cannot access VOB data. For more information about reformatting your VOBs, see the *Administrator's Guide* for Rational ClearCase.

If you have an existing ClearCase installation that uses schema version 53 and you select the same VOB format for this installation, and then change your mind, you can reinstall ClearCase, select schema version 54, and reformat your VOBs.

If you have an existing installation that uses schema version 53 and you select schema version 54 for this installation but change your mind before having reformatted your VOBs, you can reinstall ClearCase and select schema version 53. But if you have already reformatted your VOBs, you cannot revert to the older VOB format.

VOB Database Schema Versions and MultiSite

If a server host contains replicated VOBs using ClearCase MultiSite, Rational recommends that all servers of the same set of replicas use the same VOB format.

See *Upgrading to a New Schema Version* on page 17 for more information.

Ensuring Feature Compatibility Across Versions of ClearCase

Even the simplest ClearCase operation invokes a chain that can involve several components. For example, the act of checking out a file element involves a client program (running on the developer's workstation), which acts through a particular view (located on that workstation or elsewhere) and uses a particular VOB (typically located on a dedicated server host). If all hosts in this operation are running the same ClearCase version, compatibility is guaranteed.

Table 9, Table 10, and Table 11 show the compatibility paths when all hosts are not running the same ClearCase version. In these tables, client means ClearCase client software. In each table, a component in a row can use a component in a column if there is a **yes** at the intersection of the row and column. For example, Table 9 shows that a 2002.05.00 view can use a 2002.05.00 VOB or a 2003.06.00 VOB, but a 2003.06.00 view cannot use a 2002.05.00 VOB.

Table 9 Compatibility: Views with VOBs

| | 4.2 VOB | 2002.05.00 VOB | 2003.06.00 VOB |
|-----------------|---------|----------------|----------------|
| 4.2 view | yes | yes | yes |
| 2002.05.00 view | no | yes | yes |
| 2003.06.00 view | no | no | yes |

Table 10 Compatibility: Clients with Views

| | 4.2 view | 2002.05.00 view | 2003.06.00 view |
|-------------------|----------|-----------------|-----------------|
| 4.2 client | yes | yes | yes |
| 2002.05.00 client | no | yes | yes |
| 2003.06.00 client | no | no | yes |

Table 11 Compatibility: Clients with VOBs

| | 4.2 VOB | 2002.05.00 VOB | 2003.06.00 VOB |
|-------------------|---------|----------------|----------------|
| 4.2 client | yes | yes | yes |
| 2002.05.00 client | no | yes | yes |
| 2003.06.00 client | no | no | yes |

Specifically, these tables make these points:

- ClearCase 2003.06.00 clients can use only views and VOBs that reside on ClearCase 2003.06.00 hosts.
- ClearCase 2002.05.00 clients can use views and VOBs that reside on 2002.05.00 or 2003.06.00 hosts.

In general, older versions of clients can access servers that are at their same release levels or above, but current clients can access only servers that are at their same release level. A notable exception is that 2003.06.00 clients and servers can communicate with 4.2 **albd_servers** to support access to license servers, and other administrative functions.

A version 2003.06.00 client on UNIX can access a VOB on Windows by using a snapshot view. However, the snapshot view storage directory and the VOB storage directory must be on servers running version 2003.06.00 or later.

Planning for MultiSite Installation

You can install ClearCase MultiSite only on ClearCase server hosts.

MultiSite need not be installed on all ClearCase computers. In most cases, only the following computers require MultiSite installation:

- Computers on which one or more replicated VOBs reside.
- Computers that belong to users with ClearCase and MultiSite administration responsibilities.
- Computers on which the **shipping_server** utility is used, even if no replicated VOBs reside on that computer. Running **shipping_server** does not require a MultiSite license. For more information about this utility, see the *Administrator's Guide* for Rational ClearCase MultiSite.

You do not need to upgrade all servers used by a set of replicas of a particular VOB (a VOB family) at the same time.

Ensuring MultiSite Compatibility with ClearCase

ClearCase MultiSite is layered on ClearCase. To use MultiSite on a host running version 2003.06.00 of ClearCase, you must be running version 2003.06.00 of MultiSite. ClearCase MultiSite version 2003.06.00 is fully compatible with ClearCase version 2003.06.00 client and server hosts:

- A MultiSite version 2003.06.00 replicated VOB can reside on any ClearCase version 2003.06.00 server host.
- Any ClearCase version 2003.06.00 client program can access and modify any replicated VOB residing on a ClearCase version 2003.06.00 server host. Other client VOB access is the same as that documented in *Ensuring Feature Compatibility Across Versions of ClearCase* on page 14.

ClearCase, ClearQuest, and Rational Shipping Server Considerations

The Rational Shipping Server is required by both Rational ClearCase MultiSite and Rational ClearQuest MultiSite. It should be installed only on those hosts that are responsible for replicating data to other sites.

Rational recommends that you avoid configuring any one host to run the Shipping Server for both products, because de-installing either product from such a host 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 host, ensure you do the following:

- Install ClearCase first
- Uninstall both products if you ever uninstall either product

Note: Administrators should be sure that site configuration files for typical host systems do not specify installation of the Rational Shipping Server. Any attempt to

install ClearCase on a host where ClearQuest and the Shipping Server is already installed will fail.

Compatibility Issues Across MultiSite Versions

The following sections describe compatibility restrictions and issues when different sites are running different MultiSite versions.

Replica Creation

There are compatibility restrictions on creating replicas. You can replicate a VOB to a host running an earlier version of ClearCase MultiSite only if the feature level of the VOB is supported by the ClearCase release on the target host.

For example, if a host is running ClearCase version 2003.06.00 and has a VOB whose feature level is 2, you can replicate that VOB to a host running ClearCase 4.2. Similarly, if a host is running ClearCase version 2003.06.00 and has a VOB replica whose VOB family feature level is 3, you can export a replica-creation packet from that replica and import it on a host running ClearCase version 2002.05.00. However, you cannot import the packet on a host running ClearCase 4.2. ClearCase 4.2 does not support feature level 3.

Replica Synchronization

As long as VOB feature levels are compatible, existing replicas hosted on systems running ClearCase 2003.06.00 can synchronize with existing replicas on systems running either ClearCase version 4.x or 2002.05.00. For more information about feature levels, see the *Administrator's Guide* for Rational ClearCase MultiSite.

Upgrading to a New Schema Version

If you decide to update one or more replicas in a VOB family to use the schema version 54, you do not have to update all other replicas in the VOB family at the same time. However, you must update all other replicas in the family before any of the database files in the schema version 54 replicas grow larger than 2 GB, which is the largest database file size that can be accommodated by a schema version 53 VOB.

If you do not, synchronization imports fail at any replica that has not been updated.

Uninstalling ClearCase MultiSite or Rational Shipping Server

If you are using ClearCase MultiSite and the Rational Shipping Server on the same computer and you uninstall either product, one may be partially uninstalled and stop working. Uninstall both and reinstall the product that is needed.

Ensuring ClearQuest Compatibility with ClearCase

ClearCase and MultiSite version 2003.06.00 can be integrated with Rational ClearQuest in two different ways:

- If you are using ClearCase with the Unified Change Management (UCM) process, you can enable the UCM-ClearQuest integration and use it with ClearQuest version 2003.06.00.
- If you are using base ClearCase (that is, not using the UCM process), you can integrate with ClearQuest 2003.06.00 by using the ClearCase-ClearQuest integration 1.0 package.

Note: You must run at least version 2003.06.00 of ClearQuest on systems where ClearCase version 2003.06.00 is installed.

See also *ClearCase, ClearQuest, and Rational Shipping Server Considerations* on page 16.

Planning for ClearCase Installations on Dual-Boot Computers

On a computer that can boot multiple Windows installations, do not install ClearCase in the same directory for any two installations.

If you install to the same directory, various identical ClearCase components are shared. Removing ClearCase from that directory disables ClearCase for every version of Windows that uses the common directory. Furthermore, when a common directory is used, it is not possible to install different ClearCase releases for each version of Windows.

To avoid these problems, install ClearCase in separate directories for each version of the operating system.

Enabling Remote Administration

If you enable ClearCase Remote Administration, any user who is both logged on to another host and a member of the ClearCase administrators group can use the ClearCase Administration Console to change ClearCase properties for clients and servers.

Remote administration capability is useful if, for example, you move your license server to a new host. You can then change the settings for all clients from a single computer.

These ClearCase properties can be changed:

- Registry region
- License server
- Registry and backup registry servers

- MVFS cache sizes

If you do not enable Remote Administration, only the local user can change that computer's ClearCase properties.

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

Ensuring Compatible Character-Encoding Systems

Because the interpretation of multibyte characters is controlled by a host's locale setting (established by using the Regional Options tool in Control Panel), all tags in a region must use the same character set, and all hosts in a region must use the same locale setting.

Allocating Licenses

This section provides an overview of license allocation. For more information about license servers, see the *Administrator's Guide*.

The set of licenses is maintained on the license server. The network can have one or more license servers. Each license server runs a ClearCase server process, and so must have ClearCase installed. You set up your license servers during the installation.

After you determine your initial license allocation (see *Allocating ClearCase Licenses* on page 19) fill in the appropriate number of License Registration Forms and submit them according to the instructions on the form. A copy of the License Registration Form is included at the end of this manual. You receive your license keys by return fax or e-mail.

Rational ClearCase and Rational ClearCase MultiSite implement an active-user floating license scheme. Details of how this scheme controls a user's access to ClearCase and MultiSite are available in the **clearlicense** reference page and in the *Administrator's Guide* for Rational ClearCase.

ClearCase and MultiSite use the same license server.

Allocating ClearCase Licenses

Suppose that your organization has purchased 25 ClearCase licenses. You must decide how many license servers to use and how to allocate licenses to them. Here are two examples.

- **Use a single license server.** In this case, request a single license authorization code for 25 licenses. Create a single license database incorporating this code.

A drawback of this strategy is its single point of failure. If your network's lone license server fails, no one is able to use ClearCase. If you use this strategy, select a

reliable server and take this scenario into account when constructing a disaster recovery plan.

- **Use multiple license servers.** In this case, request two license authorization codes, perhaps one for 15 licenses and another for 10 licenses. Create two license databases incorporating these codes, on two different servers.

This strategy provides for more robustness. If the 15-license server fails, developers can still use ClearCase.

Allocating MultiSite Licenses

Each user of a replicated VOB must acquire both a ClearCase license and a MultiSite license; moreover, the two licenses must be acquired from the same license server host. Therefore, plan your MultiSite licenses by analyzing each current ClearCase license server.

- If some or all users of a particular license server access replicated VOBs, you must install MultiSite licenses on that license server.
- If all users access replicated VOBs, you must install the same number of MultiSite licenses as ClearCase licenses.
- If some users access unreplicated VOBs only, you do not need MultiSite licenses for these users.

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

| Site | ClearCase licenses | MultiSite licenses |
|------|--------------------|--------------------|
| A | 20 | 15 |
| B | 5 | 5 |

Note: This example assumes that you purchase a ClearCase license for each developer. If you have fewer ClearCase licenses than developers, you can purchase a proportionate number of MultiSite licenses. For example, if site B purchased three ClearCase licenses, it would also purchase three MultiSite licenses.

Environment-Specific Tasks

Depending on your installation environment, there may be other tasks you must perform or information you must be aware of, before installing ClearCase. To determine whether you need to perform any of these tasks, see Table 12. Some tasks require you to follow the procedures in Appendix C, *Environment-Specific Tasks During Preinstallation*.

Table 12 Environment Specific Tasks

| Product installed | Task | Information |
|--|--|---|
| ClearCase integration with IBM Visual Age for Java | Install IBM VisualAge for Java and ClearCase in any order, and then run the IBM VisualAge for Java Integration Configuration Wizard. | <i>Installing VisualAge for Java</i> on page 53 |
| ClearCase UCM Integration with Rational ClearQuest | Before implementing the UCM integration with ClearQuest, ensure compatibility of product features. | <i>Installation of the UCM Integration with Rational ClearQuest</i> on page 54 |
| ClearCase Integration with VS.NET | Install VS.NET Version 7.0 or 7.1. Close VS.NET before installing ClearCase. | ClearCase installation detects VS.NET and installs the Integration automatically. ClearCase functions are added to your VS.NET IDE. Installation of the Rational ClearCase VS.NET Integration feature can be subsequently omitted or modified by running the Rational Setup Wizard. |
| Expat XML Parser | This product incorporates the Expat XML parser 1.0 under the Mozilla 1.1 license. | The license is available for browsing at www.mozilla.org/MPL/MPL-1.1.txt . The source code version of the expat XML parser is available at www.jclark.com/xml/expat.html . |

Initial Installation Tasks

Before you begin the installation, perform the following tasks:

- 1 Learn about the installation process.
- 2 Plan where you will install ClearCase.
- 3 Make an installation or upgrade plan.
- 4 Log in with appropriate privileges.
- 5 Define domain accounts.
- 6 Select and share a release area location.
- 7 Install Internet Explorer.

Understanding the Installation Process

Before planning your installation process, review the following summary of the installation process.

You install ClearCase by first creating a networkwide release area, and then installing servers and clients from that release area, using specific sets of site defaults. You set up your first release area by running **setup.exe** from the ClearCase CD.

- 1 You select a location for the release area, a shared directory on your network. A release area contains at least one site default file and can contain multiple site default files.
- 2 You run **setup.exe** from the ClearCase CD and select the **Enterprise deployment** option. The Rational Setup Wizard starts.
- 3 You then configure ClearCase for your installation by setting *site defaults* with the Site Preparation Tool. The site defaults that you select determine the specific aspects of your ClearCase configuration, including MVFS performance settings, account information, shortcuts, and so forth.
- 4 After you specify your site defaults, you are prompted to save your site defaults file with a unique name, and also to add a meaningful description for later reference. A shortcut icon will be created in your release area with the name you chose for the site defaults file, excluding the filename suffix. The shortcut provides you with a convenient method of starting the installation using the saved site defaults, at a future time. You also have the option of starting the installation following creation of the release area, by selecting the **Launch Installation** check box in the **Completion** section of the Site Preparation Tool.
- 5 The wizard creates your release area.

- 6 If you chose to start your installation automatically, the wizard installs the product with the site defaults you created in Step 3. If not, the wizard finishes, and you can start your installation later by executing the shortcut.
- 7 After you install the product using one of the methods in Step 6, you may be prompted to restart your computer.
- 8 After restart, the ClearCase Doctor and Server Storage Wizard run automatically. The Server Storage Wizard does not run following a client installation.

The ClearCase Doctor detects any problems with your installation and provides possible solutions. The Server Storage Wizard or the Getting Started Wizard assists you in setting up storage directories for VOB and view storage.
- 9 You must perform postinstallation tasks before you can begin using the product in a production environment. See *Postinstallation Procedures* on page 38 for details.
- 10 You can create additional site default files by running **setup.exe** again or by running **siteprep.exe**. See Chapter 3, *Creating a Release Area* for details.
- 11 You install ClearCase on additional servers and clients, by executing the appropriate shortcut created in Step 4.

Planning Your Installation Location

It is important that you take the following issues into account when planning where to install ClearCase:

- All Rational products must reside in the same directory tree. For example, if you have Rational ClearQuest installed in C:\Program Files\Rational, you must install ClearCase in C:\Program Files\Rational, as well.
- In previous releases, the name of the installation destination directory that you specified included the name of the product, ClearCase. In this release, specify only the name of the directory where you want the ClearCase directory to be created. The standard location for this directory is *drive:\Program Files\Rational*. If you specify ClearCase in this path (for example, C:\Program Files\Rational\ClearCase), the product is installed in C:\Program Files\Rational\ClearCase\ClearCase.

Ensure Installation Directory Permissions

The directory in which you install ClearCase must grant MODIFY permission to the built-in SYSTEM user. If this is not the case, modify your permissions accordingly.

Planning the Installation or Upgrade Process

Because you must follow specific procedures, in a designated order, to install and uninstall ClearCase in your environment, create an installation or upgrade plan before you begin the installation process. Creating a plan now will save you valuable time later.

You plan the installation of your ClearCase hosts based on whether you are installing ClearCase for the first time or are upgrading existing ClearCase hosts.

Important: Because all Rational products are using a new installation technology, you must completely uninstall all previous versions of ClearCase and all other Rational products for each host that you plan to install or upgrade to ClearCase version 2003.06.00.

Installing for the First Time

Install ClearCase on these hosts in the following order:

- License server host
- Registry server host
- Server hosts
- Client computers

As you install, be aware of the following:

Special Consideration for Registry Server Hosts

When creating your registry server, you must set your registry password. See the *Administrator's Guide* for details about setting the registry password.

Setting Up the Registry and License Server Hosts for the First Time

If you are setting up your ClearCase environment for the first time, you must designate and install ClearCase on a registry server host and a license server host. You can set up one computer to perform both registry and license server host roles or you can use different computers. To set up these hosts, create a release area and modify your site defaults as needed using the procedures in Chapter 3, *Creating a Release Area*.

As you select your site defaults, use the Administrative Information page to designate the current computer as the registry server. When configuring a license server, use the License Server Type page to enter the license keys that you received from Rational.

After you set up the registry and license server hosts, set up your server hosts in a similar manner. You can use the same site defaults file and release area you created

when you set up the registry and license server hosts; you can also create site defaults if you need to modify the parameters for additional server hosts.

Upgrading ClearCase Hosts

It is important to read and understand all the material in this manual before uninstalling or upgrading your product.

For more information about uninstalling ClearCase software and the order in which you must upgrade ClearCase hosts, see *Planning the Installation or Upgrade Process* on page 24.

Removing Previous Versions of ClearCase

To uninstall previous versions of ClearCase, run **Add/Remove Programs** from the Windows Control Panel.

Caution: If you have moved or removed the release area that you set up when you installed your previous version of ClearCase, you must run **uninstal.exe** from the product CD. In this case, you cannot run **Add/Remove Programs**.

General Information About Upgrading

If you are upgrading from a previous version of ClearCase to version 2003.06.00, here is some general information to keep in mind:

- **Important:** If possible, install the new release of ClearCase in the same directory path as the currently installed release. If that is not possible, see *If You Are Reinstalling Using a New Directory Path* on page 26.
- Install the new release on server hosts (such as registry servers, VOB and view servers) before you install on client hosts; version 2003.06.00 clients cannot access servers that are running an earlier version of ClearCase.

Planning the Order of Your Upgrade

When upgrading ClearCase hosts, uninstall and reinstall the product on these hosts, in this order:

- License server host
- Registry server host
- Server hosts
- Client computers

The section explains issues and considerations to be aware of when upgrading your ClearCase hosts.

Special Consideration for Registry Server Hosts

When upgrading your registry server, you must set your registry password. See the *Administrator's Guide* for details about setting the registry password.

General Considerations for Upgrading All Server Hosts

- Make sure that all views and VOBs are fully backed up. For information about backing up views and VOBs, see the *Administrator's Guide*.
- If you have modified any files in *ccase-home-dir* (by default, C:\Program Files\Rational\ClearCase), you must save them before installing ClearCase.
- During the uninstall process, you will be asked if you want to preserve the var directory. Click **Yes**.
- During the uninstall process, you will be asked if you want to delete the **Start** menu folders. Click **Yes**.
- Before upgrading your license server, copy your license key string to another location, such as a text file. When you install your new license server, you can then copy the string from the text file, for convenience.

If You Are Reinstalling Using a New Directory Path

When upgrading, if you cannot install ClearCase in the same directory tree as the previous release, it is important that you preserve the var directory as described in *General Considerations for Upgrading All Server Hosts* on page 26. You also must copy any changed elements from the \var directory in the old ClearCase installation to the \var directory in the new installation.

These elements include:

- ClearCase registry database, if the server is a ClearCase registry server, (found in \var\rgy).
- Registry client list (\var\client_list.db).
- Job scheduler database (\var\scheduler).
- Standard job scripts that may have changed (\var\scheduler).
- Data in shipping bays, if using MultiSite (\var\shipping).
- Any custom job scripts.

Logging In with Appropriate Privileges

To install ClearCase, you must log on with appropriate privileges. You must be logged on to a Windows domain account that is a member of the local host's Administrators group.

Defining Domain Accounts

It is necessary to define a ClearCase users group. All users who perform routine ClearCase operations using a common set of VOBs and views must belong to this group. It can be an existing domain global group or one created specifically for this purpose.

The ClearCase users group must have the following characteristics:

- It must be a domain global group or an Active Directory universal group. Rational recommends that you use a domain global group unless you are using Active Directory and the group needs to include other groups.
- If members of the group must access VOBs or views on a UNIX host, the group name must be the same as the name of the ClearCase users group on UNIX. For more information, see the *Administrator's Guide*.

A ClearCase community requires two additional domain accounts:

- A ClearCase server process user. The **albd_server** program runs with this identity. In examples throughout this document, the ClearCase server process user is **clearcase_albd**. The ClearCase server process user must be a member of the ClearCase administrators group.
- A ClearCase administrators group. Members of this group can perform all ClearCase operations, including those that permanently destroy data. Membership in this group must be restricted to the ClearCase server process user and a few ClearCase administrators.

If you have domain administrator privileges, the ClearCase server process user and ClearCase administrators group will be created for you during the site preparation process.

Note: If you do not have domain administrator privileges, you must create the accounts manually before you create a release area. For more information, see *Defining Required Domain Accounts Manually* on page 27.

Defining Required Domain Accounts Manually

If the user who configures ClearCase site defaults does not have domain administrator privileges, the wizard cannot create these accounts. A domain administrator must create them as follows:

- 1 Log on as a user with domain administrator privileges.
- 2 Using the appropriate domain user and group account management tool, create a new **global** group called **clearcase** (or another group name the community has chosen). In the **Description** box, type the following text:
Used exclusively by ClearCase server processes and administrators.
- 3 Create a new user, **clearcase_albd** (or another user name the community has chosen), and put the group name defined in Step 2 in the new user's group list.
 - Select the **Password never expires** check box.
 - In the **Description** box, type the following text:
Used exclusively by ClearCase servers
 - On each ClearCase host that is configured to support local VOBs and views, give the **clearcase_albd** user the right to log on as a service.

Nondomain Installations

Except when evaluating ClearCase, we do not recommend installing it on nondomain systems. For more information about using ClearCase on nondomain systems, see the *Administrator's Guide* for Rational ClearCase.

Select and Share a Release Area Location

Determine a location for the release area from which you will install ClearCase. Make the release area directory shareable across your network. Even if the drive containing that directory is already shareable, making the directory itself shareable makes it easier to find the ClearCase release area. Restrict write permission to the directory to the administrator.

- 1 In Windows Explorer, right-click the network release area to display the directory shortcut menu.
- 2 Click **Sharing**. The Properties dialog box opens.
- 3 On the **Sharing** tab, click **Shared As** and supply a meaningful share name, such as **CC60 Release Area**.

You will specify the release area location when you run the Rational Setup Wizard to install the product.

Installing Internet Explorer

To function correctly, the ClearCase Explorer, the ClearCase HTML Diff Merge tool, the ClearCase Automation Library (CAL) documentation, and the ClearCase

Administration Console, including its Help, require Internet Explorer Version 5.5 Service Pack 2 (SP2) or later. Moreover, the Microsoft Management Console (which is used by the ClearCase Administration Console) may not install correctly without Internet Explorer Version 5.5 SP2 or later.

You can download and install Internet Explorer from the Microsoft Web site:

www.microsoft.com/windows/IE

For more information, see *Enabling Remote Administration* on page 18.

Creating a Release Area

3

When you install Rational ClearCase, you first create a networkwide release area. You then install the product on servers and clients, from the release area you have created.

This chapter explains how to set up a release area and create site default files by using the **Enterprise deployment** option.

Note: If you are upgrading from Rational ClearCase LT, follow the procedures in Appendix D, *Upgrading from ClearCase LT*. You will be directed to follow the procedures in the rest of the book from Appendix D, as required.

Before You Begin

Table 13 lists the tasks and information you need before you run **setup.exe** for the first time.

Table 13 PreInstallation Checklist for Enterprise Deployment of ClearCase

| Done | Task | Information |
|------|--|--|
| | Review release notes. | <i>Reviewing the Release Notes</i> on page 7 |
| | Review and complete all preinstallation requirements. | Chapter 2, <i>Before You Install ClearCase</i> |
| | Obtain your license keys in preparation for configuring the ClearCase License Server. Remember to obtain keys for all ClearCase LT users or hosts you plan to upgrade. | <i>Allocating Licenses</i> on page 19 |
| | Ensure that you are logged on with appropriate privileges. You must be logged on to a Windows domain account that is also a member of the local host's Administrators group. | For more information about setting up the appropriate domain accounts and the Administrators group, see <i>Defining Domain Accounts</i> on page 27 |

Running the Rational Setup Wizard

Use the Rational Setup Wizard to create your release area.

You must run the Rational Setup Wizard from the CD. After you have set up your release area, you can execute the shortcut (created in Step 4 in *Understanding the Installation Process* on page 22) to install additional servers and clients.

Run the Rational Setup Wizard from the CD:

- 1 Insert the ClearCase CD into the CD drive. The setup program starts and the Welcome to the Setup Wizard page opens. Click **Next**.
- 2 On the Deployment Type page, select **Enterprise deployment**. Click **Next**.
- 3 Specify your site defaults.

The left pane of the Site Preparation Tool contains a tree structure you can use to navigate between the various site default selection pages. The page names in the left pane marked with a red dot contain required fields that must be completed before the **Done** button is available.

After you specify your site defaults, you must also complete the following pages in the **Completion** section:

- **Description** - Enter a short description of your configuration on this page. This is helpful documentation for others who may need to later use or modify your site defaults.
- **Create Release Area** - Specify the pathname of your release area, as indicated, and the name of your site defaults file. The site defaults file is stored in the release area.

Note: Your release area must be shared. For more information, see *Select and Share a Release Area Location* on page 28. The release area must be accessible by all of your users.

Choose a meaningful name for your site defaults file (for example, `QE_Server.dat` or `client.dat`); a shortcut with the same name will be created in the release area, excluding the filename suffix. You can then use the shortcut to install the product from the release area with these site defaults.

- **Launch Installation** - Select the check box on this page to start the ClearCase installation with the site defaults you have specified.

Note: If you do not select the check box, you can install the product at a later time, using the shortcut.

You can advance the pages in the Site Preparation Tool by clicking **Next**, or by clicking the name of the desired page using the left, navigational pane of the tool. When you complete all pages, click **Done**.

Detailed information about completing the pages in the Site Preparation Tool is available in the Help.

- 4 On the Configure and Setup Release Area page, click **Next**.

The Create a Release Area page appears and indicates progress as your release area is created.

- 5 The Setup Complete page appears. Click **Finish** to proceed.

Your release area has now been created.

For instructions about installing from your release area and completing your installation, see *Installing Servers and Clients from a Release Area* on page 35.

Creating Additional Site Defaults for a Release Area

You can construct several different site defaults files for your installation. You must create one site defaults file to be used for server installations, and another for client installations.

Optionally, some sites will require multiple server site defaults to be set up, based on the different needs of various user groups. For example, a development group and a quality engineering group may use different **Start** menu commands or different registry servers, requiring separate site default files for each group.

Create multiple site defaults for a release area by doing the following:

- 1 Create the site default files.
- 2 Save the site default files with unique names.
- 3 Execute the shortcut for the site defaults you want to install with.

Creating the Site Default File

Create multiple site defaults for a release area:

- 1 Create your initial release area by installing the product using the procedure in *Running the Rational Setup Wizard* on page 32.
- 2 Run the ClearCase Site Preparation Tool by executing **siteprep.exe** in your release area or by running **siteprep.exe** on the command line.

- 3 After you complete all required fields in the Site Preparation Tool, click **Finish**. The Save As dialog box opens.

Saving the Site Defaults File

After you run Site Preparation by running **siteprep.exe** you must save your site defaults file for future use.

- 1 In the Save As dialog box, enter the location of the release area and enter a unique name for the new site defaults file in the **File name** box. A shortcut will be created with the same name in the release area, excluding the filename suffix. You can then execute the shortcut to install the product from the release area with your selected site defaults.
- 2 Click **Save**.

Installing Using the Site Defaults File

To install a server or client using the newly created site defaults file, see *Starting the Installation from the Command Line* on page 37.

Installing from a Release Area

4

This chapter explains how to complete the installation process by installing servers and clients from the release area you created in Chapter 3.

Installing Servers and Clients from a Release Area

Install servers and clients in one of the following ways:

- Execute the shortcut that is associated with your chosen set of site defaults. This shortcut is in your release area.
- Start the installation automatically when running the Rational Setup Wizard.
- Run **setup.exe** from the command line.

Starting the Installation by Using a Shortcut

If you have set up a release area and want to install a ClearCase server or client host using previously defined site defaults, execute the appropriate shortcut in the release area. The shortcut name will be the same as the site default file name you selected in Step 3 of *Running the Rational Setup Wizard* on page 32

Double-click the shortcut and follow the instructions in *Starting the Installation from the Rational Setup Wizard* on page 35.

Starting the Installation from the Rational Setup Wizard

If you chose to start the installation after creating your site defaults, as described in Step 3 of *Running the Rational Setup Wizard* on page 32, and you are currently running the Rational Setup Wizard, follow these steps to complete the installation process.

- 1 When the installation starts, The Welcome to the Setup Wizard for Rational ClearCase page appears, indicating that you are ready to begin installing the product from the release area. Click **Next**.
- 2 If the Product Warning page appears, you must correct the problems it lists on this computer before proceeding. Click **Next** to proceed, or click **Cancel** to correct problems.

- 3 On the License Agreement page, read the license agreement. If you accept the terms, select **I accept the terms in the license agreement**. To view any third-party product terms, click **View**. Click **Next** when you are ready to proceed.
- 4 On the Destination Folder page, specify the directory in which to install ClearCase. Files are copied to the default location in the ClearCase folder. For example, if the default location is *drive:\Program Files\Rational*, the files are copied to *drive:\Program Files\Rational\ClearCase*.

Click **Change** to install to another location.

Note: If the **Change** button is unavailable, other Rational products are installed on your system. In this case, you must use the default pathname listed.

For more information about recommended product location, see *Planning Your Installation Location* on page 23.

- 5 The Site Default Configuration page appears with the description you entered earlier when you created your release area.

Select one of the following options:

Use the standard configuration - Use this option to install the product with the site defaults you specified when you created the release area. If you select this option, go to Step 7.

I will create my own custom configuration - Use this option to override site defaults and specify how product features are installed. Verify any plans to customize your configuration with your system administrator before proceeding to do so. For information about using the Custom Setup page, see Step 6.

- 6 On the Custom Setup page, specify how to install and configure the product features:
 - a Select the option from the product tree on the left. You can expand or collapse the tree to show or hide product features.
 - b Click the disk drive icon to the left of the product feature name. Choose one of three installation options

This feature will be installed on local hard drive - Selecting this option installs the selected product feature on your computer's disk drive.

This feature, and all subfeatures, will be installed on local hard drive - Selecting this option installs the selected product feature, as well as all features and subfeatures in the product tree below the selection, on your computer's disk drive.

This feature will not be available - Selecting this option does not install the product feature on your computer's disk drive.

- c Click **Next**. Based on your customization, you may choose to modify your site defaults again. To do this, use the configuration tool and either save these defaults using a new filename or continue to install using these defaults. When finished, click **Done**.
- 7 The Ready to Install the Program page appears. Click **Install** to begin copying the product installation files. The Installing Rational ClearCase page indicates installation progress.
- 8 The Setup Complete page appears when all installation files are copied. Optionally, select the appropriate check box to view the release notes or to go to the Rational Developer Network.

Click **Finish**.
- 9 After you restart the system as prompted, and log on, the installation completes and the ClearCase Doctor and Server Storage Wizard appear.

Starting the Installation from the Command Line

You can also run **setup.exe** from the command line. To do so, enter:

```
path\setup.exe path\sitedefs.dat
```

Note: You must specify the absolute or relative location of **setup.exe** and your site defaults file, unless you run **setup.exe** from the release area.

Follow the instructions in *Starting the Installation from the Rational Setup Wizard* on page 35.

Configuring Storage with the Server Storage Wizard

If you specified that your computer is to be a ClearCase server, the ClearCase Server Storage Configuration Wizard runs when you first log on after the installation restart.

This wizard allows you to specify locations on the server that are available to ClearCase clients for VOB and view storage directories.

You must log on with the same user ID that you used to run the installation.

You can configure the locations by using the wizard now or wait until the next logon. On the next logon, you can configure the locations from the ClearCase Registry snap-in of the ClearCase Administration Console. You can also run `ccase-home-dir\etc\SvrStor.exe` or the `mkstgloc` command from the `cleartool` command line.

The Help for the wizard provides configuration details. For more information about storage configuration, see the *Administrator's Guide*.

Note: If you are setting up a new environment for use by a small development team, you may want to use the Getting Started Wizard, instead of the Server Storage Wizard. See *Using the Getting Started Wizard* on page 40 for more information.

Postinstallation Procedures

After the installation is complete, you may perform several postinstallation procedures.

Table 14 lists the possible scenarios where additional tasks may need to be performed, and information about those tasks.

Table 14 Additional Enterprise Deployment Postinstallation Tasks

| Scenario | Information about task |
|--|---|
| You support ClearCase users who are members of multiple domain groups. | <i>Setting the ClearCase Primary Group</i> on page 39 |
| You use the FrontPage Web Authoring integration. | <i>Reinstalling the FrontPage Web Authoring Integration</i> on page 39 |
| Your VOB, view, registry, or license server hosts will be accessed by UNIX clients. | <i>Specifying Windows Domain for Credential Mapping of UNIX Users</i> on page 40 |
| You are upgrading a server that hosts schema version 53 VOBs, and you chose schema version 54 during installation. | <i>Reformatting for VOB Database Schema Version 54</i> on page 40 |
| You need to raise the feature level. | <i>The Administrator's Guide</i> and the <i>Release Notes</i> . |
| You use other product integrations not mentioned specifically in this chapter. | See the Help for your specific product Integration tool for more information about enabling your integration following installation of ClearCase. |
| You are a new ClearQuest user, and want to set up ClearQuest (and optionally the UCM integration with ClearQuest) for a small team | <i>Using the Getting Started Wizard</i> on page 40 |

Setting the ClearCase Primary Group

Although you can designate a user's primary group by using various Windows domain account maintenance tools, that group name is not always returned when an application requests the name of a user's primary group (unless the user is a member of only one domain group).

ClearCase users who are members of multiple domain groups must set the user environment variable `CLEARCASE_PRIMARY_GROUP` to the domain-qualified name of the ClearCase users group (for example, `NT_WEST\clearusers`). This guarantees an unambiguous definition of the group that ClearCase considers the user's primary group. ClearCase users who are members of a single domain group do not have to take this step.

Note: `CLEARCASE_PRIMARY_GROUP` must be a user environment variable. It cannot be a system environment variable.

To verify that `CLEARCASE_PRIMARY_GROUP` has been properly set:

- 1 Click **Start > Programs > Rational Software > ClearCase > Administration > ClearCase Doctor**.
- 2 Click **Start Analysis**.
- 3 When the analysis is finished, click the **Topics** tab and open the **User Login Account** folder.
- 4 Double-click **Primary Group**, read the user's primary group, and verify that it is correct.

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

Reinstalling the FrontPage Web Authoring Integration

If you use the FrontPage Web Authoring integration, you need to reinstall it after installing ClearCase version 2003.06.00.

To reinstall the integration:

- 1 Click **Start > Programs > Rational Software > Rational ClearCase > Administration > Integrations > Web Authoring Integration Configuration**. The Web Authoring Integration Wizard starts.
- 2 Select **Enable source control integration for Web projects**. Click **Next**.
- 3 Select **Local Mode Configuration**. Click **Next**.

- 4 Choose to either replace SourceSafe with ClearCase or use SourceSafe as your source control provider. Then, on the Replace SourceSafe page, select the appropriate option. Click **Next**.
- 5 Click **Finish** to close the wizard.

The FrontPage Web Authoring integration has now been reinstalled.

Specifying Windows Domain for Credential Mapping of UNIX Users

If your VOB, view, registry, or license server hosts will be accessed by UNIX clients, you must specify the Windows domain that will be used to map the credentials of UNIX users.

Specify the Windows domain for credential mapping:

- 1 Click **Start > Settings > Control Panel**.
- 2 Double-click **ClearCase** and click the **Options** tab.
- 3 In the **Use this domain to map UNIX user and group names** area, select a Windows domain in which user and group identities have been defined for all UNIX users who access these services on this server.

Reformatting for VOB Database Schema Version 54

If you have installed ClearCase version 2003.06.00 on a host that supports VOBs formatted with schema version 53, and you selected schema version 54 during installation, you must reformat your VOBs to be using the newer format. Until you do, you cannot access your VOB data.

For more information about formatting your VOBs, see the *Administrator's Guide* and the **reformatvob** command in the *Command Reference* for Rational ClearCase.

Using the Getting Started Wizard

The Getting Started Wizard is intended for new customers who want to configure ClearQuest, set up storage for VOBs and views in ClearCase, or enable the UCM integration for use by a small development team.

For best performance, Rational recommends that you keep **view_server** processes (especially those that support dynamic views) off of server hosts, so you may want to limit the number of additional dynamic views you create on the server after the Getting Started Wizard has run.

To run the Wizard, click **Start > Programs > Rational Software > Rational ClearCase > Administration > Getting Started Wizard**.

If you use the Getting Started Wizard, you do not have to configure storage using the Server Storage Wizard (see *Configuring Storage with the Server Storage Wizard* on page 37).

For help with using the Getting Started Wizard, see the browser-based Help in the left pane of the Wizard.

Enabling MultiSite Synchronization

You enable ClearCase MultiSite by selecting the option on the Features page in the Site Preparation Tool.

For information about replicating VOBs and automating synchronization among replicas, see the *Administrator's Guide* for Rational ClearCase MultiSite.

If Your Installation Was Not Successful

If your installation did not finish with the desired result:

- View the log output for error messages and more information.
- Diagnose probable causes of errors with ClearCase Doctor, if installed.
- Run **setup.exe** to modify, repair, or remove the installation.

Viewing the ClearCase Log

The ClearCase installation process automatically generates a log file that includes basic information about the details of the installation and any errors generated from the process.

ClearCase stores the log file in the temporary directory specified by the TEMP environment variable (EV). To locate and view the log file:

- 1 Open a command window.
- 2 Enter this command: **echo %temp%**. The command returns the temp directory specified by the TEMP EV.
- 3 Navigate to the temporary directory specified by the TEMP EV with Windows Explorer. The `rational_install.log` file is written in UTF-8 format and can be read by using Windows Notepad.

Note: To view the log (rational_install.log), you must ensure that you are displaying hidden system files if you are using Windows Explorer.

Diagnosing Errors with ClearCase Doctor

ClearCase Doctor can analyze your ClearCase servers and clients for existing and potential problems.

ClearCase Doctor is run by the Rational Setup Wizard before installing a new version of ClearCase; it also runs on a new installation after you log on. Thereafter, you can set ClearCase Doctor to run each time you log on (the default), turn it off entirely, or run it in the background. At a minimum, Rational recommends that you run ClearCase Doctor in the background so that it can detect changes in your ClearCase environment that may affect operations.

ClearCase Doctor checks basic configuration information for a site or an individual computer. If it finds a problem, it suggests a solution and often offers to fix the problem for you.

In addition to checking configuration information, ClearCase Doctor displays configuration information. To display all configuration information messages, click **Options > Verbose** in ClearCase Doctor.

You can run ClearCase Doctor at any time. Click **Start > Programs > Rational Software > Rational ClearCase > Administration > ClearCase Doctor**.

Modifying, Repairing, or Removing ClearCase

To modify, repair, or remove ClearCase:

- 1 Click **Start > Settings > Control Panel**.
- 2 Double-click **Add/Remove Programs**.
- 3 Select **Rational ClearCase** from the list of programs and click **OK**.
- 4 Choose one of the following options, click **OK**, and follow the instructions:
 - **Modify the Existing Installation** - Allows you to change which products and product features are installed.
 - **Repair the Existing Installation** - Attempts to repair any installation that may be damaged or corrupted.
 - **Remove the Existing Installation** - Removes all files that you previously installed for this product.

Applying Service Releases

5

This chapter explains how to apply service releases using the Rational Download Manager.

Installing and Using the Rational Download Manager

To apply a Rational service release:

- 1 Install the Rational Download Manager client software by doing one of the following:
 - Download it from the Rational ClearCase CD. The install executable is in the extras folder on the CD. See the `Readme.html` for installation instructions.
 - Download the service release from the Rational Download Center at www.rational.com/support/downloadcenter/about_dlm.jsp. You must either log in or register as a member before you can download the software.
- 2 Install the Rational service release.
 - Service release documentation is available at http://www.rational.com/docs/v2003/readme_v2003.html. The documentation provides service release features, restrictions, and instructions.

Evaluating ClearCase On a Local Computer



To install Rational ClearCase for evaluation, you select the **Desktop install from CD image** option.

Selecting the Desktop Installation Option

The **Desktop installation from CD image** option does not create a release area. It enables you to install the product for evaluation on a single computer, for nonproduction use.

Preparing for the Evaluation Installation

Before beginning the installation, obtain a temporary license key from Rational.

Before you perform the evaluation installation, you must have domain administrator privileges to create a ClearCase server process user (**clearcase_albd**) and a ClearCase administrators group, both local to the evaluation computer.

For more information, see *Logging In with Appropriate Privileges* on page 27.

Performing the Evaluation Installation

This section explains how to install the ClearCase Server for evaluation and start the ClearCase tutorial.

Evaluating the Server and Client

To perform a server evaluation installation of ClearCase:

- 1 Log on with administrator privileges.
- 2 Insert the CD into an available drive on the host where you plan to evaluate ClearCase.
- 3 The Welcome to the Setup Wizard page appears. Click **Next** to start the installation, and to advance through the following pages.

- 4 On the Installation Type page, select **Desktop installation from CD image**.
- 5 On the Client/Server page, select **Install server and client software**. This option allows you to evaluate both server and client on one computer.
- 6 The Welcome to the Rational Wizard for Rational ClearCase opens. Click **Next**.
- 7 On the License Agreement page, read the license agreement. If you accept the terms, select **I accept the terms in the license agreement**. To view any third-party product terms, click **View**.
- 8 On the Destination Folder page, specify the directory in which to install ClearCase. Click **Change** if you want to install to another location.

Note: If the **Change** button is unavailable, you have other Rational products installed on your system. In this case, you must use the default pathname listed.

For more information about recommended product location, see *Planning Your Installation Location* on page 23.

- 9 On the Custom Setup page, specify how the product features are installed and configured:
 - a Select the option from the product tree on the left. You can expand or collapse the tree to show or hide product features.
 - b Click the disk drive icon to the left of the product feature name. Choose one of three installation options:
 - This feature will be installed on local hard drive** - Selecting this option installs the selected product feature on your computer's disk drive.
 - This feature, and all subfeatures, will be installed on local hard drive** - Selecting this option installs the selected product feature, as well as all features and subfeatures in the product tree below the selection, on your computer's disk drive.
 - This feature will not be available** - Selecting this option does not install the product feature on your computer's disk drive.

For more information about the product features, see the Help.

- 10 Specify your configuration settings.

The left pane of the configuration tool contains a tree structure in which to navigate between the various site default selection pages. Page names in the left pane that are marked with a red dot contain required fields that must be completed before the **Done** button is available.

Note: Enter your temporary license key. Enter your local computer name as both registry and license server, when prompted.

Advance through the pages by clicking **Next**. When you complete all required pages, click **Done**.

Detailed information about configuring your site defaults is available in the Help.

- 11 The Ready to Install the Program page appears. Click **Install** to begin installing the product.
- 12 After the files have finished copying, the Installation Complete page appears. Click **Finish**. Optionally, select the appropriate check box to view the release notes or to go to the Rational Developer Network.
- 13 Restart your computer, when prompted.
- 14 After you reboot and log in, the ClearCase Server Storage Wizard appears. Do one of the following:
 - Use this wizard to configure storage for your evaluation copy of ClearCase. The Server Storage Wizard allows you to customize your storage configuration. For more information about the Server Storage Wizard, see *Configuring Storage with the Server Storage Wizard* on page 37.
 - Cancel running the Server Storage Wizard and use the Getting Started Wizard, instead. The Getting Started Wizard automatically configures storage for your ClearCase installation using predetermined settings. For more information about the Getting Started Wizard, see *Using the Getting Started Wizard* on page 40.

The evaluation computer is now configured as a stand-alone ClearCase host. All accounts and services created are local to the evaluation computer.

Starting the ClearCase Tutorial

To start the ClearCase tutorial, click **Start > Programs > Rational Software > Rational ClearCase > TutorialHelp > ClearCase Tutorial**.

Completing the Evaluation

After evaluating ClearCase, if you choose to upgrade your evaluation installation to a licensed installation, you must request a production license, using the form at the back of this manual. Follow the instructions on the form and see *Allocating Licenses* on page 19.

If you choose to remove ClearCase, see *Modifying, Repairing, or Removing ClearCase* on page 42 for more information.

Using Silent Install

B

Silent install is a method of installing Rational products on computers without intervention from users. It greatly reduces the work of an administrator during a rollout of Rational ClearCase. It also ensures that a consistent software configuration is installed on each target system.

To use the silent install feature, you must have the following:

- A site defaults file (such as `sitedefs.dat`) that exists in a networkwide release area.
- Target client computers on which you plan to install ClearCase.

To perform the silent install:

- 1 After you evaluate which Site Preparation options are necessary for the target ClearCase client computers, you may edit the site defaults file (or create more) by using the Site Preparation Tool.
- 2 Execute the silent install on a test target computer, monitoring the installation log for any unexpected results.
- 3 After you are confident the silent install works as you expect, prepare the target client computers on which to execute the silent install.

Editing the Site Defaults File with the Site Preparation Tool

You created a site defaults file when you created your initial networkwide release area. Before you create the site defaults file for silent install, you can run **siteprep.exe** from your initial release area to review the site defaults you have chosen or to make any modifications needed for rollout to your target client computers.

To do this:

- 1 Navigate to your networkwide release area and execute **siteprep.exe**.
- 2 In the Site Preparation Tool, click **File > Open** and navigate to the site defaults file that you want to review.

- 3 Use the Site Preparation Tool to customize site default values for your target computers.
- 4 After you finish running the Site Preparation Tool, you are prompted to save the site defaults file you created with a unique name (preferably with the .dat extension).

If you want to create additional versions of the site defaults file for different target groups of computers, you can name each version to reflect the target group name or function (for example, *qasitedefs.dat* for the Quality Assurance group). You need to provide the name of each site defaults file when invoking each silent install.

Executing and Monitoring the Silent Install

Now that you have customized and saved the site defaults file, you must execute **setup.exe** with a parameter that indicates you have selected the silent install feature.

Executing the Silent Install

To ensure proper results, it is very important to test every version of the site defaults file that you plan to use with the silent install feature before executing it on any target workstations.

On a test computer, in a command window, execute the silent install:

```
path\setup.exe /g path\sitedefs.dat
```

Note: You must specify the absolute or relative location of **setup.exe** and your site defaults file, unless you run **setup.exe** from the release area.

Monitoring the Silent Install

The silent install is designed to be transparent to users. Therefore, it is not possible to monitor the process by observing dialog boxes, completion bars, or other interface elements that appear during a conventional installation.

Instead, you must monitor the silent install by observing the installation log output. Locate the installation log in your TEMP directory. To find the location, open a command Window and type **echo %TEMP%**. The location of the directory depends on the system environment variable TEMP you have set on your computer.

Note: To view the log (*rational_install.log*), you must ensure that you are displaying hidden system files, if you are using Windows Explorer.

Preparing the Target Computers

After you have tested the silent install and checked for any errors that may have occurred, prepare the target computers as follows:

- 1 Run ClearCase Doctor to verify that the proper ClearCase environment exists.
- 2 Execute the silent install on your target computers.

Running ClearCase Doctor to Analyze Target Computers

ClearCase Doctor tests a computer's readiness to run ClearCase. It can identify configuration problems that prevent ClearCase from installing or running properly. You can use ClearCase Doctor to analyze your target computers before executing a silent install or view the results of the ClearCase Doctor analysis following silent installation.

Run ClearCase Doctor by executing **ccdoctor.exe** from your networkwide release area. **ccdoctor.exe** resides in `\release_area\Setup\program files\Rational\ClearCase\bin` where *release_area* is the location of your networkwide release area.

To perform analysis on another computer on your network, from your own computer:

- 1 Run ClearCase Doctor.
- 2 Click **Analysis > Select Computer**.
- 3 Find and select the computer you want to analyze.
- 4 Click **OK**.

Executing Silent Install on Target Computers

Execute the silent install by entering the following command on the target computer:

```
path\setup.exe /g path\sitedefs.dat
```

Note: You must specify the absolute or relative location of **setup.exe** and your site defaults file, unless you run **setup.exe** from the release area.

Warning: It is very important that you provide the correct site defaults to the correct user groups. Failure to do so may result in a lengthy recovery process, such as a reinstallation of ClearCase.

Performing a Silent Uninstall

You can also silently uninstall ClearCase from target computers, providing you have version 2003.06.00 installed.

To do this, execute this command:

```
msiexec.exe /X path/clearcase.msi /qn
```

path is the path to a file (clearcase.msi), found in your networkwide release area in the Setup directory, used by ClearCase during installation. /X indicates that an uninstall operation is executed. /qn indicates that no user interface is displayed during the uninstall operation.

Note: You must specify the pathname for clearcase.msi when executing this command.

To silently uninstall a previous version of ClearCase, see the documentation associated with that version.

For more information about **msiexec.exe** 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>.

Environment-Specific Tasks During Preinstallation



Depending on what products you are planning to use in your environment, you may need to perform other tasks before installing a new release of Rational ClearCase.

Before performing any of the tasks in this section, see Table 12 to determine whether any apply to your environment.

Setting Up the IBM VisualAge for Java Integration

The ClearCase integration with IBM Visual Age for Java enables you to use ClearCase source control functions, such as checking out, modifying, and checking in your files, without leaving the Visual Age for Java IDE or starting another application.

Before you can configure this integration with ClearCase, you must install both VisualAge for Java and ClearCase, in any order, and then run the VisualAge for Java Integration Configuration Wizard. This section describes these procedures.

Installing VisualAge for Java

To install VisualAge for Java:

- 1 Run the installation program for IBM VisualAge for Java Version 3.5, Enterprise Edition. Follow the installation instructions and prompts.
- 2 During the installation, select **Custom**. In the list of components to install, select **External Version Control**.
- 3 Download and install the patch for the VisualAge for Java Version 3.5, Enterprise Edition from <http://www.ibm.com>.

Running the Configuration Wizard

After both VisualAge for Java and ClearCase are installed, you must run the VisualAge for Java Integration Configuration Wizard. Click **Start > Programs > Rational Software > Rational ClearCase Administration > Integrations > VisualAge for Java Integration Configuration**.

If ClearCase was previously installed or if the **VisualAge for Java Integration Configuration** shortcut menu does not appear in the **Integrations** menu:

- a Click **Start > Run**.
- b In the Run window, enter the path to the file, `vaj_config.exe`, in the bin folder of your ClearCase installation. For example, a typical path is `C:\Program Files\Rational\ClearCase\bin\vaj_config.exe`.
- c Click **OK**.

Installation of the UCM Integration with Rational ClearQuest

To use the UCM integration with Rational ClearQuest, take into account the following issues with regard to compatibility and version support of the following elements:

- ClearCase version (client and server)
- ClearQuest version
- UCM schema package
- ClearQuest metaschema feature level

Table 15 shows the compatibility of different versions of ClearCase and ClearQuest, the UCM package revision number, and the ClearQuest database feature level.

Table 15 Integration of UCM with Rational ClearQuest (Part 1 of 2)

| ClearCase version | ClearQuest version | UCM package revision number | ClearQuest database feature level |
|--------------------------------|--|-----------------------------|-----------------------------------|
| 4.2 | 2001A.04.00 2001A.04.20 2002.05.00 | 2.0, 3.0, 4.0 | 3, 5 |
| 4.2 (ClearCase only, not CCLT) | 2003.06.00 | 2.0, 3.0, 4.0 | 3, 5 |
| 2002.05.00 | 2001A.04.00 2001A.04.20 2002.05.00 | 2.0, 3.0, 4.0 | 3, 5 |

Table 15 Integration of UCM with Rational ClearQuest (Part 2 of 2)

| ClearCase version | ClearQuest version | UCM package revision number | ClearQuest database feature level |
|--|--------------------|-----------------------------|-----------------------------------|
| 2002.05.00 (ClearCase only, not CCLT) | 2003.06.00 | 2.0, 3.0, 4.0 | 3, 5 |
| 2003.06.00 | 2003.06.00 | 2.0, 3.0, 4.0, 5.0 | 3, 5 |

To upgrade to ClearCase version 2003.06.00 from an earlier version, and continue to use your integration of UCM with ClearQuest:

- 1 Upgrade ClearQuest, or upgrade both ClearQuest and the ClearCase client, simultaneously.

Note: The ClearCase client upgrade is dependent on the ClearCase server upgrade.

- 2 Upgrade your UCM-enabled ClearQuest schema with the new version of the UnifiedChangeManagement Package.

Note: To use UnifiedChangeManagement Package Revision 5.0, make sure you are running version 2003.06.00 of ClearCase. The UnifiedChangeManagement Package Revision 5.0 is dependent on AMStateTypes 1.0 and UCMPolicyScripts 3.0 packages.

- 3 Upgrade your ClearQuest user databases to use the new schema version.

Upgrading from ClearCase LT

D

Rational ClearCase LT can be easily upgraded to Rational ClearCase. ClearCase includes a tool that helps you automate the upgrade process, though a few manual steps may be required for certain configurations. This section explains the upgrade process and two common upgrade scenarios.

Upgrade Checklist

Table 16 lists the steps required to upgrade ClearCase LT to ClearCase.

Table 16 Checklist for Upgrading ClearCase LT to ClearCase

| Done | Task | Information |
|------|--|---|
| | Understand changes in ClearCase functionality as a result of upgrading. | <i>What Happens When You Upgrade?</i> on page 58 |
| | Ensure that you have acquired upgraded ClearCase LT licenses for users and/or hosts. | <i>Preparing to Upgrade</i> on page 61 |
| | Establish your ClearCase release area. | <i>Establishing Your ClearCase Release Area</i> on page 61 |
| | Check in all checked-out files or directories and remove all ClearCase LT views. | <i>Remove All ClearCase LT Views</i> on page 62 |
| | Perform either the simple upgrade procedure or the upgrade-and-merge procedure. | <i>The Simple Upgrade Procedure</i> on page 62 or <i>The Upgrade-and-Merge Procedure</i> on page 64 |

What Happens When You Upgrade?

When you upgrade to ClearCase, you add many new capabilities to your ClearCase LT environment. Your upgraded ClearCase LT server and client hosts need little to no configuration. The upgrade preserves your VOB data.

Upgrade Options

When you upgrade, choose one of two options:

- Simple upgrade
- Upgrade and merge

Simple Upgrade Option

In the simple upgrade procedure, you upgrade a single ClearCase LT community (one server and some or all of its clients) to ClearCase. Use this procedure if any of the following are true:

- You are not running ClearCase at your site.
- You are running ClearCase at your site, but do not want to add the upgraded ClearCase LT hosts to an existing ClearCase community.
- You cannot upgrade all ClearCase LT client hosts at once and must preserve VOB access for both ClearCase LT clients and upgraded clients.

The ClearCase LT server becomes a ClearCase server and also registry host for upgraded clients, and continues to host all the VOBs it hosted as a ClearCase LT server. The ClearCase LT clients become ClearCase clients.

You can upgrade your ClearCase LT server and its clients in a single operation or upgrade the server first and upgrade the clients later. A ClearCase LT client can access an upgraded ClearCase LT server as long as it can acquire a ClearCase license from that server; but the client cannot use ClearCase features until it has been upgraded.

Upgrade-and-Merge Option

In the upgrade-and-merge procedure, you upgrade the ClearCase LT server and its clients at the same time and then make the server and clients part of an existing ClearCase community. Use this procedure if all of the following are true:

- You are running ClearCase at your site.
- You want the upgraded ClearCase LT server and clients to use the existing ClearCase registry.

- You can upgrade all ClearCase LT client hosts when you upgrade the server.

The VOBs can remain on the upgraded ClearCase LT server or can be moved to another ClearCase server.

Caution: Do not use the upgrade-and-merge procedure unless you can upgrade all ClearCase LT clients at the same time. This procedure requires you to make the upgraded ClearCase LT server use an existing ClearCase registry. When you do this, the upgraded server cannot continue as the registry server for any remaining ClearCase LT clients, and these clients cannot access VOBs on the upgraded server.

Upgrade Considerations

This section explains the differences in functionality when you upgrade from ClearCase LT to ClearCase.

ClearCase License Server and Registry Server Hosts

ClearCase requires a license server host and a registry server host. These logical servers may be on separate physical computers or the same computer. If you choose the simple upgrade, the upgraded ClearCase LT server performs both functions. If you choose the upgrade-and-merge option, existing ClearCase license and registry server hosts perform these functions.

If you choose the simple upgrade and designate your ClearCase LT server as the ClearCase license server and registry server host, all ClearCase LT clients, whether or not they have been upgraded, can access VOBs and views on the upgraded ClearCase LT server with minimum reconfiguration.

If you are upgrading and merging with an existing ClearCase site, you install ClearCase from that site's networkwide release area and can use that release area's site defaults for the license and registry server hosts. More ClearCase licenses may be needed after the upgrade, and you may have to add them to the license database of the existing license server host.

Registry Regions

ClearCase LT clients are members of a single region in a ClearCase registry that is maintained on the ClearCase LT server. The VOB tags and view tags in this registry region are unsuitable for use by ClearCase hosts.

During a simple upgrade, the VOBs stored on the upgraded ClearCase LT server host are registered and tags are created for them in the server's default ClearCase registry region (the region to which the server is assigned).

If you need to access these VOBs from client hosts that are not of the same platform type (UNIX or Windows) as the ClearCase LT server, you must create an additional registry region for use by these clients, and then create tags appropriate for the hosts that use this region. Step 5 of *Performing the Upgrade* on page 63 describes this process.

If you use the upgrade-and-merge option, you can take advantage of existing registry regions.

VOB Access Between Windows and UNIX

If you plan to use ClearCase with both Windows and UNIX, be aware of an interoperability restriction.

ClearCase hosts running UNIX cannot use dynamic views to access VOBs hosted on Windows. If your ClearCase LT server runs Windows and you need to access VOBs on UNIX using dynamic views, you must move the VOBs to a UNIX server.

See the *Administrator's Guide* for information about moving a VOB from Windows to UNIX.

Issues with Interoperability and Dynamic Views

ClearCase supports three kinds of views: snapshot views, dynamic views, and Web views.

- **Snapshot views.** In a snapshot view, you load file and directory versions from a VOB into the platform's native file system. Snapshot view users cannot see changes made by other users until they update their views. Snapshot views are supported by ClearCase LT.
- **Dynamic views.** The ClearCase multiversion file system (MVFS) permits users of dynamic views to see changes made by other users as soon as the files or directories are checked in. ClearCase supports dynamic views on UNIX and Windows computers. Dynamic views are not supported by ClearCase LT.
- **Web views.** Web views operate in a manner similar to snapshot views and can be accessed through any supported browser.

When you use dynamic views in a homogeneous environment (views on UNIX hosts that access VOBs on UNIX servers or views on Windows hosts that access VOBs on Windows servers), the MVFS works with the native network file system (NFS on UNIX, LAN Manager on Windows) and needs no additional support. If your upgraded Windows clients use dynamic views to access VOBs or views on UNIX servers, you must install and configure a third-party software package to support heterogeneous file-system access. Two types of software provide support for this type of access.

To receive this support, install one of the following packages:

- An NFS client package enables a Windows client to access a UNIX file system using the NFS protocol. You install NFS client software on each upgraded ClearCase LT client that uses dynamic views to access any VOB on a UNIX server.
- An SMB server package enables a UNIX server to support the LAN Manager SMB protocol, which is native to all Windows computers. You install SMB server software on the upgraded ClearCase LT server.

If you plan to install such a package, install it after the upgrade is complete. For more information, see the *Administrator's Guide* for Rational ClearCase.

Preparing to Upgrade

Before you upgrade, complete the following tasks:

- Acquire your ClearCase licenses.
- Establish your ClearCase release area.
- Remove your ClearCase LT views.

Acquiring ClearCase Licenses

Before upgrading, verify that you have acquired ClearCase (and ClearCase MultiSite) licenses for all users. Node-locked licenses are not supported with ClearCase.

For more information, see *Allocating Licenses* on page 19.

Note: ClearCase and ClearCase LT use different procedures for requesting and installing licenses. The Rational License Key Administrator and Rational AccountLink Web site cannot be used to acquire ClearCase licenses.

Establishing Your ClearCase Release Area

Before you begin, verify that you have adequate disk space on an appropriate host platform for a ClearCase networkwide release area. For more information, see *Disk Space Requirements for the Release Area* on page 10.

You must create a new networkwide release area with each release, except when using the upgrade-and-merge procedure (because you use one that already exists).

Remove All ClearCase LT Views

All ClearCase LT views must be removed before you upgrade and re-created after the upgrade. Views created with ClearCase LT do not work in a ClearCase environment. UCM components, projects, and streams are available for use when the upgrade is complete, although the associated views need to be re-created.

Note: If your ClearCase LT server is running UNIX and you plan to use the simple upgrade procedure to upgrade the server and some, but not all, ClearCase LT clients, you can leave your ClearCase LT views in place until all the clients have been upgraded.

To remove your ClearCase LT views:

- 1 If you are using UCM, complete any deliveries that are in progress.
- 2 Verify that there are no remaining checkouts; use the ClearCase Explorer or the **cleartool lscheckout** command.
- 3 Remove all views. To do so, use the ClearCase Explorer on any Windows platform or use the **cleartool rmview** command on either Windows or UNIX.

The Simple Upgrade Procedure

In this procedure, you must upgrade the server first, and then upgrade some or all of the clients. Many steps in this procedure are also required in the upgrade and merge procedure.

If You Cannot Upgrade All Your Clients at the Same Time

If you have chosen to do a simple upgrade, you can defer upgrading some of your ClearCase LT client hosts for a few days or weeks to accommodate development schedules or other organizational requirements. ClearCase LT client hosts can access VOBs on the upgraded ClearCase LT server as long as the server is configured as a ClearCase license server host.

The remaining ClearCase LT client hosts must acquire ClearCase licenses to access VOBs on the upgraded server, which is possible only if the server itself has been configured as a ClearCase license server host. These clients cannot be configured to acquire ClearCase licenses from another ClearCase license server host, even if one is present in your environment. ClearCase LT clients that operate in this transitional mode are still limited to using the ClearCase LT feature set even though they require a ClearCase license.

Performing the Upgrade

To perform a simple upgrade:

- 1 Prepare.** Complete the applicable upgrade prerequisites described in *Preparing to Upgrade* on page 61.
- 2 If you are running ClearCase LT version 2002.05.20 and earlier, remove ClearCase LT software from the ClearCase LT server.** Follow the instructions in the *Installation Guide* for Rational Server Products. Do not remove ClearCase LT data unless you are sure you do not need it after the upgrade. The upgrade procedure preserves all ClearCase LT data and makes it available to ClearCase after the upgrade is complete.
- 3 Install ClearCase on the ClearCase LT server.** Follow all instructions in Chapter 3, *Creating a Release Area*.

When you configure your site defaults, you are prompted to create server storage locations for VOBs and views. The remainder of the upgrade process converts existing VOB server storage locations on the upgraded ClearCase LT server, so you only need to create view storage locations at this time. You may also create additional VOB storage locations.

Install ClearCase in the same directory where ClearCase LT is installed. If necessary, change the default installation directory.

For information about view and VOB storage locations, see the *Administrator's Guide*.

- 4 Run the upgrade tool.** You must next run the `cclt2cc` upgrade tool. The upgrade tool performs these tasks:
 - Registers VOB storage locations on the upgraded ClearCase LT server in the server's default registry region.
 - Creates VOB tags for VOBs on the upgraded ClearCase LT server in the server's default registry region.
 - Changes file system protection information about all VOB storage directories so that it is appropriate for ClearCase.

Note: If the installation process detects that a ClearCase LT server resides on the system, you must uninstall ClearCase LT and start the installation again.

`cclt2cc` is located in the `ccase-home-dir\etc\utils` directory. To run `cclt2cc`:

- a** Log in as a user with local administrator privilege to the upgraded ClearCase LT server.
- b** Set the registry password. For instructions, see the *Administrator's Guide*.

- c Run the command at the Windows command prompt. The example below upgrades all the VOBs on the ClearCase LT server and creates tags for them in the server's default region

```
ccase-home-dir\etc\utils\cclt2cc -w registry-password
```

For more information about the `cclt2cc` tool and associated command-line options, see *cclt2cc Command Line Options* on page 67.

- 5 **Create an additional ClearCase registry region if needed.** If you require interoperability between Windows and UNIX hosts:

- a Create a new region for UNIX hosts.
- b On Windows hosts, specify this region as a peer region.

For information about creating peer regions and other associated tasks, see the *Administrator's Guide*.

- 6 **Install ClearCase on ClearCase LT clients.** Follow the instructions in Chapter 4, *Installing from a Release Area*. Accept the default choices for registry region and license server host
- 7 **Create new snapshot and/or dynamic views.** Use the ClearCase Explorer or the `mkview` command. For information about reusing UCM streams, see *Creating New UCM Views That Use Existing Streams* on page 66.

The Upgrade-and-Merge Procedure

Using the Upgrade-and-Merge option, you upgrade ClearCase LT server and its clients to ClearCase, and then incorporate the ClearCase LT VOBs and upgraded hosts into an existing ClearCase community.

Caution: Do not use the upgrade-and-merge procedure unless you can upgrade all ClearCase LT clients at the same time. Upgrade and merge requires you to make the upgraded ClearCase LT server use an existing ClearCase registry. When you do this, the upgraded server cannot continue as the registry server for any remaining ClearCase LT clients, and these clients cannot access VOBs on the upgraded server.

Performing the Upgrade and Merge

To upgrade and merge your ClearCase LT community:

- 1 **Prepare.** Complete the applicable upgrade prerequisites, as described in *Preparing to Upgrade* on page 61. Verify that all ClearCase LT clients are ready to be upgraded. After you complete Step 2 in this procedure, no ClearCase LT client can access VOBs or views on the ClearCase LT server.

- 2 If you are running ClearCase LT version 2002.05.20 or earlier, remove ClearCase LT software from the ClearCase LT server.** Follow the instructions in the *Installation Guide* for Rational Server Products. Do not remove ClearCase LT data unless you are certain that you do not need it after the upgrade. The upgrade procedure preserves all ClearCase LT data and makes it available to ClearCase after the upgrade is complete.
- 3 Install additional ClearCase licenses on the license server host if needed.** Users who run ClearCase commands on upgraded ClearCase LT hosts can use licenses from the existing license pool. If you already have an adequate number of these licenses, you do not need to install additional licenses.
- 4 Install ClearCase on the ClearCase LT server.** Follow all instructions in Chapter 3, *Creating a Release Area*. Accept the predefined site default values.

Note: When you upgrade the ClearCase LT server, you must install ClearCase in the directory where ClearCase LT was installed (normally C:\Program Files\Rational\ClearCase). Otherwise, the upgrade procedure cannot complete successfully. This restriction does not apply when upgrading ClearCase LT clients.

- 5 Run the upgrade tool.** You must next run the **cclt2cc** upgrade tool. The upgrade tool performs these tasks:
 - Registers VOB storage locations on the upgraded ClearCase LT server in the server's default registry region.
 - Creates VOB tags for VOBs on the upgraded ClearCase LT server in the server's default registry region.
 - Changes file system protection information about all VOB storage directories so that it is appropriate for ClearCase.

Note: If the installation process detects that a ClearCase LT server resides on the system, you must uninstall ClearCase LT and start the installation again.

cclt2cc is located in the *ccase-home-dir\etc\utils* directory. To run **cclt2cc**:

- a** Log in as a user with local administrator privilege to the upgraded ClearCase LT server.
- b** Run the command at the Windows command prompt. The example below upgrades all the VOBs on the ClearCase LT server and creates tags for them in the server's default region

```
ccase-home-dir\etc\utils\cclt2cc -w registry-password
```

For more information about the **cclt2cc** tool and associated command-line options, see *cclt2cc Command Line Options* on page 67.

- 6 Get information about storage locations and VOBs on the upgraded server.** Log on to the upgraded ClearCase LT server. Run the **cleartool lsstgloc -l** and **lsvob -l** commands to get information about server storage locations and VOBs on the upgraded server. You need this information in Step 7 and Step 8 of this procedure.
- 7 Register the upgraded server's storage locations in the existing registry.** On another ClearCase host—one that has network access to the file system of the upgraded ClearCase LT server and is a member of the registry in which you want VOBs on the upgraded ClearCase LT server to have tags—run the **cleartool mkstgloc** command to register storage locations on the upgraded ClearCase LT server.
- 8 Register and create tags for the upgraded server's VOBs in the existing registry.** On the same ClearCase host that you used in Step 7, run the **cleartool register** and **mktag** commands to register and check tags for the VOBs on the upgraded ClearCase LT server.
- 9 Verify that the VOBs are accessible.** Verify that all ClearCase hosts in the region can access the VOBs on the upgraded ClearCase LT server.
- 10 Make the upgraded server a member of the existing registry.** Reconfigure the upgraded ClearCase LT server so that it is no longer a registry server and is instead a member of the existing registry region.
- 11 Create an additional ClearCase registry region if needed.** If you require interoperability between Windows and UNIX hosts:
 - a** Create a new region for UNIX hosts.
 - b** On Windows hosts, specify this region as a peer region.For more information about these tasks, see the *Administrator's Guide*.
- 12 Install ClearCase on ClearCase LT clients.** Follow the instructions in Chapter 4, *Installing from a Release Area*. Accept the default choices for registry region and license server host.
- 13 Create new snapshot and/or dynamic views as needed for the upgraded clients.** Use the ClearCase Explorer or the **mkview** command. For information about reusing UCM streams, see *Creating New UCM Views That Use Existing Streams* on page 66.

Creating New UCM Views That Use Existing Streams

The upgrade process preserves all of a UCM project's streams. If your upgrade takes place while a project is active, you may want to create new views using the project's existing streams. You can use either the Project Explorer or the Join Project Wizard to do so:

In the Project Explorer:

- 1 Select the stream you want to use.
- 2 Click **File > New > View**.

In the Join Project Wizard:

- 1 Select the project you want to join.
- 2 In Step 2 (**Create a Development Stream**), click **Advanced Options**.

On the **Stream** tab, click **Reuse an existing development stream**, and then select the stream you want to reuse.

cclt2cc Command Line Options

This section summarizes the command line options for the **cclt2cc** upgrade tool.

SYNOPSIS

```
cclt2cc -w tag-registry-password [-v vob-tag-list] [-d destination-region]
[-p vob-tag-prefix]
```

OPTIONS AND ARGUMENTS

Tag Registry Password

Default

None.

-w *tag-registry-password*

The registry password for the tag registry in which new VOB tags will be created.

VOBs to Upgrade

Default

Upgrade all VOBs.

-v *vob-tag-list*

Upgrade only the VOBs in *vob-tag-list*, a comma-separated list of VOB tags.

Destination Region

Default

The server's default region.

-d *destination-region*

Create VOB tags in *destination-region* instead of the default.

VOB Tag Prefix

Default

vobs

-p *vob-tag-prefix*

Create UNIX VOB tags with a prefix of *vob-tag-prefix* instead of the default.
This option is ignored if specified on Windows NT.

***Licensing Forms
for the
ClearCase Product Family***

ClearCase Product Family License Registration Form

The ClearCase family of products includes a license enforcement mechanism. As described in the product's installation documentation, you must obtain a *license authorization code*, an encoded line of text to be inserted into a special *license database file*. Please fill in the following form completely. Upon completing the form, FAX it to Rational Software Corporation at (781) 676-2460. You will receive your authorization code via return FAX as soon as possible.

Product to License (check one):

_____ ClearCase _____ MultiSite

Your Company

1. Company name _____
2. Address _____
3. City/State/Country/Postal Code _____
4. Contact Person _____
5. Phone number (with area code): _____
6. FAX number (with area code): _____
7. Electronic mail address of contact person: _____

Licensing Information

8. Purchase Order Number (For new licenses purchased): _____
9. License server host ID: _____

If ClearCase is installed, enter **clearlicense -hostid** on the license server. If not:

| | |
|-----------------|--|
| <i>Solaris:</i> | run /usr/sbin/sysdef -h to determine 8-digit hex number |
| <i>HP-UX:</i> | run /bin/uname -i to determine number (usually, 10 or 12 digits) |
| <i>AIX:</i> | run /bin/uname -m to determine 12-digit number |
| <i>Linux:</i> | run hostid |
| <i>Windows:</i> | on the command line, cd to the directory SETUP\program files\Rational\SETUP\hostid on the ClearCase CD-ROM and run hostid.exe |

10. New licenses requested or additional licenses required:
Number of licenses: _____

(Do not include licenses already installed. For additional licenses, add new License Authorization Code to the .db file.)

Please FAX — do not phone and do not use electronic mail

Request to MOVE ClearCase Product Family Licenses

Please complete and sign the following form. Upon completion, FAX to Rational Software Corporation at (781) 676-2460.

I certify that Rational's ClearCase software, under the terms of the signed Software License Agreement, will be deleted in its entirety from the *old* host referenced below, and will be installed on one or more *new* hosts.

Authorized Signature: _____

Move Licenses (check one):

_____ ClearCase _____ MultiSite

Your Company

1. Company name _____
2. Address _____
3. City/State/Country/Postal Code _____
4. Contact Person _____
5. Phone number (with area code): _____
6. FAX number (with area code): _____
7. Electronic mail address of contact person: _____

Licensing Information

8. Host ID of *old* license server: _____ # of licenses _____
Host ID of *new* license server #1: _____ # of licenses _____
Host ID of *new* license server #2: _____ # of licenses _____

If ClearCase is installed, enter **clearlicense -hostid** on the license server. If not:

Solaris: run **/usr/sbin/sysdef -h** to determine 8-digit hex number
HP-UX: run **/bin/uname -i** to determine number (usually, 10 or 12 digits)
AIX: run **/bin/uname -m** to determine 12-digit number
Linux: run **hostid**
Windows: on the command line, **cd** to the directory **SETUP\program files\Rational\SETUP\hostid** on the ClearCase CD-ROM and run **hostid.exe**

Please FAX — do not phone and do not use electronic mail

