

ClearCase LT Release Notes

Version 2001A.04.00

WINDOWS

These release notes present information about the definition, delivery, and operation of Rational ClearCase LT configuration management software.

Product Definition

ClearCase LT software for Windows operating systems offers client/server solutions for configuration management software. ClearCase LT Server software must be installed on a host in the same network domain as the hosts on which you install ClearCase LT Client software. A client can access only one ClearCase LT server at a time. To ensure adequate performance for all ClearCase LT clients, we recommend that you install ClearCase LT Server on a dedicated host.

Before you install ClearCase LT software, read the *Rational Suite Release Notes* (distributed with your software) and *Supported Architectures* in this document.

What's New in ClearCase LT

This chapter summarizes significant new and changed features in Rational ClearCase LT.

New features are documented in the *ClearCase Product Family Documentation Supplement*, which is installed as a PDF file in `ccase-home-dir\bin\cpf_supplement.pdf`.

Summary of Changes in This Release

ClearCase LT Version 2001A.04.00 introduces the following significant new and changed features:

- Changes to UCM Integration with ClearQuest
- Supporting Users Who Are Members of More Than 32 Groups
- Integration with Sun Forte for Java

- Integration with VisualAge for Java
- Changes to ClearCase Commands

Changes to UCM Integration with ClearQuest

ClearCase LT Version 2001A.04.00 includes support for the new release of ClearQuest.

For information on planning and setting up the UCM-ClearQuest integration, see *Managing Software Projects with ClearCase*. For information about setting up the integration with ClearQuest and upgrading your ClearQuest schema to the latest UCM package, see the *ClearCase Product Family Documentation Supplement*.

New UCM Features

Following are features new in UCM:

- Obsolete Objects in UCM Listings
- Privileged Identity for PVOB Write Operations
- Component Tree Browser Enhancements

Obsolete Objects in UCM Listings

By default, UCM listing commands do not list obsolete objects. A new option, **-obsolete**, includes obsolete objects in the listing. See the reference pages for **lsactivity**, **lsbl**, **lscomp**, **lsproject**, and **lsstream** in *ClearCase Product Family Documentation Supplement*.

UCM Triggers

Version 2001A.04.00 adds support for triggers on the following UCM operations.

- **deliver**
- **mkactivity**
- **mkbl**
- **mkstream**
- **rebase**
- **setactivity**

Properties information for triggers used with UCM objects is now shown on the **Firing Conditions** tab of the property sheet for a trigger.

See the *ClearCase Product Family Documentation Supplement* for reference pages on the **mktrtype**, **mktrigger**, and **rmtrigger** commands, and a chapter that shows sample triggers.

Privileged Identity for PVOB Write Operations

Operations that write to the UCM project VOB now require a privileged identity. The following commands write to the project VOB:

- **chactivity**
- **chbl**
- **chproject**
- **chstream**
- **clearjoinproj**
- **deliver**
- **mkactivity**
- **mdbl**
- **mkcomp**
- **mkproject**
- **mkstream**
- **rebase**
- **rmactivity**
- **rdbl**
- **rmcomp**
- **rmproject**
- **rmstream**
- **setplevel**

See the corresponding reference pages in the *ClearCase Product Family Documentation Supplement* for details.

Component Tree Browser Enhancements

To reduce the amount of information that the Component Tree Browser displays for UCM streams and baselines, which makes the information easier to read, the **Filtering Options** dialog box was added. The filtering also reduces the amount of time necessary to load the component depicted on the tree. For streams, you can display no

development streams, your own development stream only, or all development streams in the component. For baselines, you can display only the baselines of a given promotion level or higher, only labeled baselines, or obsolete baselines.

Supporting Users Who Are Members of More Than 32 Groups

ClearCase LT Version 2001A.04.00 supports the use of a new environment variable on Windows NT and Windows 2000 platforms.

If the user environment variable CLEARCASE_GROUPS exists for any user, ClearCase considers the semicolon-separated list of groups specified in the value of this variable first when determining (or displaying) which groups a user belongs to. For example:

```
CLEARCASE_GROUPS=DOMAIN\ClearCase Users;DOMAIN\group1;DOMAIN\group5
```

The list can contain domain or local groups, and need not contain the group specified in CLEARCASE_PRIMARY_GROUP, which is already treated specially if it has been specified. If the user is a member of additional groups not specified in CLEARCASE_GROUPS, ClearCase considers those groups after it has considered the groups listed in CLEARCASE_GROUPS, up to a limit of 32 groups.

Any user who is a member of more than 32 groups (domain or local) should set CLEARCASE_GROUPS to specify which of these groups ClearCase should consider when checking the user's access rights. CLEARCASE_GROUPS is not supported on Windows 98 or Windows Me.

No Support for Windows 95

Beginning in Version 2001A.04.00, ClearCase LT does not run on Windows 95.

Integration with Sun Forte for Java

This release provides the integration of the SCC level of ClearCase functionality with Sun Microsystems's Forte for Java Release 2.0 toolkit on

- Windows NT, Windows 98, and Windows 2000
- Sun Solaris (Versions 2.6, 7, and 8)

Users of the Java IDE initiate ClearCase actions using the file-system shortcut menus and a set of command icons on the Forte for Java main window toolbar. The following functions are available:

- Check In
- Check Out
- Add to Source Control

- Undo Checkout
- Properties
- Compare to Predecessor
- Source Control History
- Version Tree Browser
- ClearCase Explorer

ClearCase integrated help appears as a book in the Forte for Java online help, which you can access from the IDE **Help** menu. Context-sensitive help, invoked by pressing F1, is also available for the ClearCase commands.

Integration with VisualAge for Java

This release provides integration of the SCC level of ClearCase functionality with the IBM VisualAge for Java Release 3.5 on Windows NT, Windows 98, and Windows 2000.

Users can develop projects in the VisualAge for Java IDE, while performing ClearCase version management using the file-system shortcut menus and a set of command icons on the VisualAge for Java main window toolbar.

The integration provides access to the following ClearCase functionality:

- Unified Change Management (UCM) Deliver and Rebase functions
- Version Tree Browser
- Unified Change Management (UCM) Join Project
- Merge Manager
- Create View
- Update View
- Find Checkouts
- Online Help about using this integration

Handling of Resource Files in VisualAge for Java

When you add a resource to a project that is in source control, the green arrow or yellow plus sign does not update after the resource has been added as an element to ClearCase.

Known Problem with Lengthy Error Messages

If you attempt to add projects with very long names, including long class names, to source control, an internal error message appears. The error routine cannot handle very long error messages that result from adding these types of projects to source control.

Setting Project Properties When a Project is Added to Version Control

After a project is added to External Version Control, users must set the project properties to tell VisualAge for Java (on a refresh project), to refresh the project from the external version control repository. To do this, select the **Project Tools >External Version Control >Properties** from the shortcut menu for the project. Select the SCCI tab, and then the Refresh project from working directory option. This property only needs to be set once for the project.

More Information on VisualAge for Java

For more information on VisualAge for Java, including new updates and limitations, read the IBM VisualAge for Java release notes.

Changes to ClearCase Commands

This section lists new commands and describes changes to ClearCase commands.

New Command

Table 1 lists a new command for this release.

Table 1 New ClearCase Commands

Command	Description
clearfsimport	A new utility that allows you to place source files under ClearCase version control. You can run it in a UCM or base ClearCase view.

New Options and Arguments

Table 2 lists new options and arguments.

Table 2 New ClearCase Command Options

Command	New option/argument	Use
diffbl	-predecessor [-activities] [-versions] <i>baseline-selector</i>	Nongraphically displays differences between the specified baseline and its predecessor baseline.
	-graphical <i>baseline-selector1</i> <i>baseline-selector2</i>	Displays differences between two baselines graphically.
	-graphical -predecessor <i>baseline-selector</i>	Displays differences between the specified baseline and its predecessor baseline graphically.
clearimport	-noload	Reduces the time needed to import versions from flat files or other version control systems into a VOB. To load new versions, the user must update the workspace manually. See the the reference page for full details on the behavior of the -noload and related -identical flag.
lsactivity lsbl lscomp lsfolder lsproject lsstream	-obsolete	Specifies that obsolete objects are to be included in the listing.
mktrigger	<i>ucm-object-selector</i>	Attaches a trigger to the specified UCM object.
mktrtype	-ucmobject	Creates a UCM trigger type that can be attached to individual UCM objects.
	-ucmobject -all	Creates a UCM trigger type that can be attached to all project VOB objects.
	-component <i>component-selector[,...]</i>	Specifies components for the restriction list.
	-project <i>project-selector[,...]</i>	Specifies projects for the restriction list.
	-stream <i>stream-selector[,...]</i>	Specifies streams for the restriction list.
rmtrigger	<i>ucm-object-selector</i>	Removes a trigger from the specified UCM object.

Obsolete Commands

No commands are obsolete in this release.

Supported Architectures

This section lists the basic platform and software requirements for running ClearCase LT software. There are no special hardware requirements on Windows systems.

Supported Platforms

ClearCase LT software runs on the platforms listed in Table 3.

Table 3 Supported Platforms for ClearCase LT Software

Hardware platform	Operating system
Intel x86	Windows 2000,, SP1 Windows NT 4.0, SP4, SP5, SP6a Windows Me (ClearCase LT Client only) Windows 98 all versions (ClearCase LT Client only) ¹

1. Rational ClearCase 4.2 clients support the latest Windows 2000, Windows Me and Windows 98 releases. Older releases of Windows 9x such as Windows 95 are no longer supported with this release. Customers who require support for Windows 95 should run an earlier version of ClearCase (4.1) or upgrade their Windows 95 clients to a newer release of Windows.

Windows/UNIX Interoperation

ClearCase LT clients access files in UNIX VOBs through the ClearCase File Server (CCFS) using standard TCP/IP based networking. Similarly, ClearCase LT UNIX clients can access files in Windows VOBs.

NOTE: ClearCase LT does not support dynamic views.

For more information about CCFS, see the *Administering ClearCase* manual.

Basic Software Requirements

ClearCase LT requires the following software on Windows NT, Windows Me, or Windows 2000:

- Windows Workstation or Windows Server
- TCP/IP (shipped with Windows NT 4.0, Windows Me, and Windows 2000)

- Internet Explorer 4.0.1 SP1 or later; note that this does not have to be the default browser, but is required for use of some ClearCase features, including the ClearCase Explorer, the HTML Diff Merge tool, the ClearCase Automation Library (CAL), and the ClearCase Administration Console.
- If acting as a ClearCase Web server: Web server software, either Apache (1.3.6 or later), Netscape Enterprise (3.5.1 or later), or Microsoft Internet Information Server (IIS 4.0 or 5.0).
- If acting as a server for the ClearCase integration with FrontPage 98, FrontPage 2000, or Visual InterDev: IIS Web server software and the FrontPage Server Extensions (FPSE).
- An Adobe Acrobat Reader, release 3 or later, to access the online manuals, which are in PDF format.
- On any system accessing ClearCase LT through the Web interface, a Web browser; either Netscape 4.6 or later, or Internet Explorer 4.0.1 (SP 1) or later. (Note that it is not necessary to install ClearCase LT on such a system.)

ClearCase LT software requires the following software on Windows 98 systems:

- Windows 98
- Client for Microsoft Networks (shipped with Windows 98)
- TCP/IP (shipped with Windows 98)
- Windows Sockets 2 (shipped with Windows 98)
- Internet Explorer 4.0.1 SP1 or later; note that this does not have to be the default browser, but is required for use of some ClearCase features, including the ClearCase Explorer, the HTML Diff Merge tool, and the ClearCase Automation Library (CAL).
- An Adobe Acrobat Reader, release 3 or later, to access the online manuals, which are in PDF format.
- On any system accessing ClearCase LT through the Web interface, a Web browser; either Netscape 4.6 or later, or Internet Explorer 4.0.1 (SP 1) or later. (Note that it is not necessary to install ClearCase LT on such a system.)

Disk Space Requirements for the Release Area

The following table shows the minimum disk space required on each type of network-wide release host.

File system	Disk space
Windows NT	128 MB
Windows 2000	128 MB

Disk Space Requirements for Individual Hosts

Table 4 shows the approximate disk space requirements for a new installation of ClearCase LT software. These figures are for ClearCase files only; include approximately 5 MB extra for temporary storage during the actual installation.

Table 4 Disk Space for ClearCase LT Files and Upgraded System Files

ClearCase LT software	Disk space required (MB)
ClearCase LT Client	60
ClearCase LT Server	90

If a host will have view directories, the system needs enough disk space to contain all files loaded into the views and all view-private files added to the views. The amount of space required depends on the number and sizes of the files in the views.

The ClearCase LT server must have enough disk space to contain the files and databases used for storage of VOB- or view-storage directories. The amount of space required depends on the characteristics and use of the VOBs and views.

Web Site of Operating System Vendor

You can find up-to-date information on Microsoft Windows operating system issues at the Microsoft Web site www.microsoft.com.

ClearCase Patches Incorporated in This Release

ClearCase LT Version 2001A.04.00 incorporates all ClearCase patches since the release of ClearCase Release 4.1. Table 5 shows the specific ClearCase patches.

Table 5 ClearCase Patches Incorporated in This Release

Patch stream	Last patch incorporated
ClearCase 4.1	clearcase_p4.1NT-15 and earlier

ClearQuest Compatibility with ClearCase LT

ClearCase LT supports the option of integration with Rational ClearQuest. You can integrate the software in two different ways:

- If you install ClearCase LT with the Unified Change Management (UCM) option, integration with the current version ClearQuest is supported.

Therefore, for this release of ClearCase LT, integration requires ClearQuest Version 2001A.04.00. If you have an older version of ClearQuest, you must upgrade to this version before configuring the integration.

- If you install ClearCase LT without the UCM option, you can integrate with ClearQuest Version 1.1 or later using the ClearCase-ClearQuest integration 1.0.

Using ClearCase LT and Windows NT Server Domains

ClearCase LT is a distributed client/server application; many operations initiated on client hosts are completed by server processes elsewhere in the network. Therefore, all ClearCase LT hosts running Windows NT must belong to a Windows NT Server domain, except as noted in *Administering ClearCase*. On all Windows 98 hosts, the Client for Microsoft Networks component in Network properties must be configured to log on to a Windows NT Server Domain.

To use ClearCase LT 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 NT Server Domains, see *Administering ClearCase*.

Getting Started

This section contains information to familiarize you with installing, setting up, and using ClearCase LT software.

Pointer to Installation Information

Refer to *Installing Rational Suite* for installation information. It provides instructions on installing ClearCase LT Server and ClearCase LT Client software, lists required products, and contains information about removing Rational software and troubleshooting.

Licensing

Refer to *Administering Licenses for Rational Software* for licensing information necessary for installation and initial operation of ClearCase software.

If you have a floating evaluation license for ClearCase LT or for ClearCase LT and a Rational Suite Studio product, you must install a FLEXlm server to activate your evaluation license. You can activate your floating evaluation license from the Rational License Key Administrator window by clicking **License>Enter a License**. For more information on installing a FLEXlm server, refer to *Administering Licenses for Rational Software*.

Installation Issues

This section discusses restrictions or defects that involve the installation of the ClearCase LT product. Take into account the information in this section before or during installation to be sure that ClearCase software or particular features are installed properly.

Installing Internet Explorer 4.0.1 SP1

If some features of ClearCase LT software are to perform properly, Internet Explorer 4.0.1 (Service Pack 1) or a later version of Internet Explorer must be installed on your system.

Note: It is not necessary to run Internet Explorer as a browser on the system; it simply needs to be installed.

The presence of Internet Explorer is required for the ClearCase Administrative Console (implemented as a set of snap-ins to the Microsoft Management Console), for use of the ClearCase Automation Library (CAL), and for use of the enhanced Diff Merge Tool with HTML files.

Installing Java VM with Internet Explorer

A Java virtual machine (VM) is required for the ClearCase LT Web interface. However, recent versions of Microsoft Internet Explorer no longer install the VM by default. For these versions, you must perform a custom installation of IE, selecting the **Microsoft virtual machine** component.

Setting Up the VisualAge for Java Integration

The ClearCase LT integration with Visual Age for Java enables you to use ClearCase LT 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 the VisualAge for Java for ClearCase LT integration, you must install both VisualAge for Java and ClearCase LT, in any order, and then run the VisualAge for Java Integration Configuration Wizard. This section describes all three procedures.

Installing 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 the **Custom** option. In the list of components to install, select the **External Version Control** option.

Note: If you already installed VisualAge for Java, make sure the IDE is closed. Then run the installation program again. Choose the Modify option, specify a custom install, and select the **External Version Control** option

- 3 Download and install the latest patch from www.ibm.com for the VisualAge for Java Version 3.5, Enterprise Edition.

Installing ClearCase LT

If ClearCase LT is already installed and running on your system, skip this procedure. If ClearCase LT is not installed, run the ClearCase LT installation program as you normally would, with the addition of the following steps.

- 1 Step through the installation to the Standard or Custom Client Configuration window. Click **I will create my own custom client configuration**, and click **Next** and continue with the installation.
- 2 In the Site Defaults window, click **No, I will customize this ClearCase LT installation**. Click **Next** and continue with the installation.

- 3 In the **Start Menu Entries** window, locate the list of ClearCase LT Administration Start Menu entries. Click **VisualAge for Java Integration Configuration**. Click **Next** and finish the ClearCase LT installation.

Running the Configuration Wizard

After both VisualAge for Java and ClearCase LT are installed, you must run the VisualAge for Java Integration Configuration Wizard. Select one of the methods listed here:

If you installed ClearCase LT using the procedure titled *Installing ClearCase LT* in this section:

In your Windows taskbar, click **Start >Programs >Rational ClearCase Administration >Integrations >VisualAge for Java Integration Configuration**.

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

- 1 In your Windows Taskbar, click **Start >Run**.
- 2 In the **Run** window, enter the path to the file, **vaj_config.exe**, in the **bin** folder of your ClearCase LT installation. For example, a typical path is **C:\Program Files\Rational\Clearcase\bin\vaj_config.exe**.
- 3 Click **OK**.

Set CLEARCASE_PRIMARY_GROUP on Windows Systems

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

To work around this bug, we recommend that you set the user environment variable CLEARCASE_PRIMARY_GROUP to refer to the correct primary group. The value of this variable must be the name of an existing domain group that meets all of the following requirements:

- It includes the user as a member.
- It appears on the users group list.

This environment variable must be set on every ClearCase LT host. On Windows NT systems, you set the value of CLEARCASE_PRIMARY_GROUP using the System program in Control Panel. On Windows 98 or Windows Me systems, you must set value of CLEARCASE_PRIMARY_GROUP in the **autoexec.bat** file on each system running ClearCase LT.

For more information on CLEARCASE_PRIMARY_GROUP and ClearCase access controls, see *Administering ClearCase*.

Slashes in Installation Directory Not Supported

The ClearCase Installation Directory text box in the ClearCase Installation Wizard does not support slashes (/).

Deinstalling ClearCase May Remove Web Interface Views

By default, views for Web interface users are created under the host data directory for ClearCase (*ccase-home-dir/var*). If ClearCase is deinstalled, the view directories are deleted, but the views remain registered. To avoid leaving entries for nonexistent views in the ClearCase registry, do one of the following:

- Remove any views created by Web interface users before removing ClearCase from a Web server used to provide access to the ClearCase Web interface.
- Use the `-view_storage` option in the `ccweb.conf` file to designate some other location for Web interface views.

The `var` directory is not removed by the deinstall process. You must explicitly choose to remove the directory.

Invalid Install Option

A network installation of Rational Suite installs both ClearCase LT Client and the optional Rational Shipping Server feature. Because this is an invalid combination, the Shipping Server installation is disabled after installation. Only ClearCase LT Client can be run.

Similarly, a user can explicitly install this invalid combination, with the same result: the Shipping Server installation is disabled and only ClearCase LT Client can be run.

Network Installation Not Supported

The Rational installation program has an option for a network installation on the **Setup Configuration** dialog box (see *Rational Suite Release Notes*). This option is not recommended when installing ClearCase LT Client or ClearCase LT Server and it is not supported. We recommend performing a typical installation of ClearCase LT software.

Dual-Boot Installation Failure

When installing ClearCase in Windows NT on a dual-boot computer (Windows NT or Windows 98), the installation encounters an assertion failure.

At the beginning of the installation, an error message appears stating something like this:

```
Assertion failed!  
Program: path-name  
File: file-name  
Line: line-number  
Expression: "Function not implemented: " ...  
For information on how your program can cause an assertion failure, see  
the Visual C++ documentation on asserts.  
(Press Retry to debug the application - JIT must be enabled.)
```

The message box contains three buttons: **Abort**, **Retry**, and **Ignore**.

Workaround: Follow this procedure to complete the installation:

- 1 Abort the installation (click **Abort** in the message box).
- 2 In the Windows NT registry, set the following registry key to 0:

```
HKEY_CURRENT_USER\SOFTWARE\Microsoft\Windows NT\CurrentVersion\  
WinLogon\ParseAutoexec
```
- 3 Reinstall ClearCase LT.

Installation of UCM Integration with Rational ClearQuest

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

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

Consider the following points:

- The feature level of the metaschema for ClearQuest 2001.03.00 database is 3. The feature level for ClearQuest 2001A.04.00 database is 5.
- A ClearCase LT Version 2001A.04.00 client requires a ClearQuest 2001A.04.00 client, because the integration of UCM with ClearQuest uses new ClearQuest API calls.

Table 6 shows the compatibility of different releases of ClearCase LT and ClearQuest, UCM Package Revision Number, and the ClearQuest database feature level.

Table 6 Integration of UCM with Rational ClearQuest

ClearCase LT release	UCM package revision number	ClearQuest database feature level	UCM/CQ integration supported?
4.1	2.0	3	Yes
4.1	2.0	5	No
4.1	3.0	3	No
4.1	3.0	5	No
2001A.04.00	2.0	3	Yes
2001A.04.00	2.0	5	Yes
2001A.04.00	3.0	3	Yes
2001A.04.00	3.0	5	Yes

To upgrade to Version 2001A.04.00 from 4.1 and continue to use your integration of UCM with ClearQuest, you must perform the first two steps. The last two steps are optional.

- 1 Install ClearQuest.
- 2 Install the ClearCase LT client (or both ClearQuest and ClearCase LT simultaneously).
- 3 Upgrade your UCM-enabled ClearQuest schema with the new version of the UnifiedChangeManagement package.
- 4 Upgrade your ClearQuest user database to the new version of the schema.

ClearCase Clients Need Compatible Language Settings

All ClearCase client computers that access a common set of VOBs and views must use a single common character encoding system. If all computers are not configured this way, ClearCase operations may fail or produce confusing or unreadable output.

For example, the Japanese SJIS and Japanese EUC encoding systems are available. They both represent Japanese characters but are incompatible. For this reason, you cannot mix SJIS and EUC in ClearCase clients.

Intermittent Problem with ALBD Server During Installation

The ClearCase LT installation may occasionally display the following error message:

Error 1069: ClearCase ALBD could not log in due to wrong password.

(Note that you may have to check the Event Viewer in order to see this error.)

If you see this error message, follow the steps below to correct the problem:

- 1 Start **Control Panel >Services**. (On Windows 2000, click **Control Panel >Administrative Tools >Services**).
- 2 Select **Atria Location Broker**.
- 3 Click **Startup**. (On Windows 2000, click **Action >Start**).
- 4 Type a new password in the **Password** box, and confirm it in the **Confirm Password** box.
- 5 Click **OK**.
- 6 Click **Start**.

Product Documentation

The ClearCase LT documentation available with this release comes in print and online formats. The books included with each license are *Installing Rational ClearCase LT*, *Administering Licenses for Rational Software*, and *Introducing Rational ClearCase LT*.

Note: The only manuals updated for this release are the *ClearCase LT Release Notes* (this document), *Installing Rational ClearCase LT*, and the *ClearCase Product Family Documentation Supplement*.

Other books can be purchased separately from the Rational Press Shop at www.rational.com/shop, including *Introducing Rational ClearCase LT*, *Administering ClearCase LT*, *Managing Software Projects with ClearCase*, and the *ClearCase Reference Manual*.

All ClearCase LT documentation is provided on line, including this document, *ClearCase LT Release Notes* (cc_relnotes.pdf). For more information about online documentation, click the **Contents** tab in ClearCase Help and refer to the **Online Manuals** entry.

Restrictions and Guidelines for ClearCase LT

This section presents restrictions, limitations on, or guidelines for the use of ClearCase LT software that are considered noteworthy. These are not considered defects because the behavior reported is not expected to change in a future release of the product.

Guidelines for Using UCM

This section describes guidelines for and restrictions on using Unified Change Management (UCM) in ClearCase LT.

When Setting Up a Project, Make Components Read-Only Initially

You cannot change an integration stream's configuration to use an earlier baseline of any components that are marked as modifiable by the stream's project.

This may be a problem when creating a new project if the precise set of foundation baselines is not known in advance. After a modifiable baseline has been added to a project, it is not possible to roll back to an earlier baseline later on if building or testing indicates this is necessary.

To work around this limitation, initially specify your components to be nonmodifiable when creating a new project. After verifying that the project builds and tests correctly, update the project policies to allow modifications to any/all components.

Checkin to Non-UCM VOB from UCM View if ClearQuest Enabled

If, in a UCM view, you check out or check in an element that is not a UCM component, you should not have to select an activity, because that operation is not captured in a change set.

However, in a view that is in a ClearQuest-enabled project, both the **Check Out** dialog box and the **Check In** dialog box force you to select an activity even though one is not really required.

Workaround: Select the activity; it will be ignored.

Notes on Using the UCM-ClearQuest Integration

The UCM process in a ClearCase LT system is enhanced for users who have installed the Rational ClearQuest product by a very tight integration between UCM activities and the change request management provided by ClearQuest software. Use the following guidelines with the UCM/ClearQuest integration.

Transitioning a ClearQuest-Enabled Project After Delivery

If the **Do ClearQuest action after delivery** policy is enabled on a UCM project, delivery of a ClearQuest-enabled UCM activity may result in an attempt to transition the activity to a **Complete** state type.

If the activity record has a field that must be filled in before it can transition to the **Complete** state, the program displays an error. An example is the Defect record type in the default UnifiedChangeManagement schema, whose **Resolution** field must be non-empty before it can be resolved.

Workaround: Modify the `UCU_CQActAfterDeliver` global script to include code similar to that below. This automatically fills in the **Resolution** field when the activity is delivered.

```
REM Add complete resolution code
REM Defect record type requires Resolution field to be non-empty

'Get hook's session context
Set Session = GetSession()

'Get the entity
Set entity = Session.GetEntity(entity_type,entity_id)

REM If record type is "Defect" ...
    If(entity.GetEntityDefName = "Defect") Then
REM If Resolution field is empty...
    If(entity.GetFieldValue("Resolution").GetValue = "") Then
REM Fill in required field
        session.EditEntity entity, "modify"
        Call entity.SetFieldValue("Resolution", "Fixed")
        msg = entity.Validate
REM Remember to do some action if validate fails
        entity.Commit
    End If
End If
```

See the ClearQuest API documentation for information on editing entities.

Schema Requires Submitted State

If you are applying the UCM package to a custom ClearQuest schema (as opposed to using the out-of-the-box Unified Change Management schema), be aware that this package depends on the existence of a state with the name **Submitted**. If your custom schema does not include a state with this name, you can apply the package to your schema by using one of the following methods:

- Before applying the package, temporarily rename the state that is the target of the **Submit** action to **Submitted**. Apply the UCM package and rename the state to its original name.
- Create a dummy state called **Submitted**, and assign its state type to **Complete**. If you do this, you must also create a dummy action whose target is the **Submitted** state. After applying the UCM package, you can delete the dummy state and action.

ClearQuest Script Error Text not Reported

Using the UCM-ClearQuest integration, you can customize the **Check Before Deliver** ClearQuest Visual Basic policy script. However, if the script as customized contains an error that causes the Visual Basic interpreter to display an error exception, the Deliver dialog box reports this error like this:

```
An error occurred during the deliver.  
Unexpected error in deliver.
```

It does not report the actual error exception text which would enable the user to diagnose the problem script.

Workaround: To see the error exception text, use the `cleartool deliver` command.

Must Kill ClearQuest Server to See Schema Upgrade

Using the UCM/ClearQuest integration, if you upgrade a ClearQuest user database to a new schema revision, in order to see the change on a client machine which was connected to that user database, you must do the following on the client machine:

On Windows NT or Windows 2000

- 1 Start the Task Manager and go to the **Processes** tab page
- 2 From the list, select **CQINTS~2.EXE** or **CQINTSVR11.EXE**.
- 3 Click **End Process**.

On Windows 98 and Windows Me

- 1 Press CTRL+ALT+DELETE.

- 2 From the list, select **CQINTSVR11**.
- 3 Click **End Task**.

Changes to UCM CustomQuery1 Do Not Appear in Dialog Box

When using the UCM-ClearQuest integration, the list of records displayed in the list on the **Add To Source**, **Check Out** and **Check In** dialog boxes is generated by running the **UCMCustomQuery1** query, which can be customized. (Note that in order to see the effect of your changes, you must use the **File >Save** menu item to save the query edits.)

However, if you copied the **Public Queries UCMCustomQuery1** query into your **Personal Queries** folder and edited it there, the changes are not immediately seen. To see your changes, you must stop the integration server process:

On Windows NT or Windows 2000

- 1 Start the Task Manager and go to the **Processes** tab page
- 2 From the list, select **CQINTS~2.EXE** or **CQINTSVR11.EXE**
- 3 Click **End Process**.

On Windows 98 and Windows Me

- 1 Press CTRL+ALT+DELETE
- 2 From the list, select **CQINTSVR11**
- 3 Click **End Task**.

After stopping the process on your computer, open the dialog box again. Further edits to **/PersonalQueries/UCMCustomQuery1** show up without your having to shut down the process again.

ClearCase LT Client Loops on Windows 98 Systems with ClearQuest

If ClearQuest software is incorrectly configured (for example, connected to the wrong database), ClearCase operations such as checking an element out will fail, because the ClearQuest record corresponding to the UCM activity cannot be located. On Windows 98 systems, this failure can cause the dialog box to be “stuck” so that clicking **Cancel** does not remove it. To work around the failure, do **one** of the following:

- Click another window before clicking **Cancel**.
- Press CTRL+ALT+DEL to start the Task Manager; in the Task Manager, kill the program that is displaying the dialog box.

Cannot Import UCM-Enabled Records from a ClearQuest Database

In general, you cannot import UCM-enabled records from a ClearQuest database; ClearCase LT software cannot guarantee that UCM information referencing an arbitrary ClearQuest database is correct. However, this restriction does not prevent data recovery in the event of a data loss. You may successfully import records into a ClearQuest database if all the following conditions are true:

- The records have been backed up from that database.
- The name of the database has not changed.
- The ClearCase LT UCM information in the record is still valid.

Cannot Delete a Project Record in ClearQuest

If you are working with a UCM project that is linked to a ClearQuest user database and attempt to delete the project record, you get a run-time error. You cannot delete the record or undo the CommitAction hook. The workaround is to use the `squid_patch` utility to force the `ucm_vob_object` field of the orphaned project to 0.

Changing Name of ClearQuest Record Type Causes Error

In the UCM-ClearQuest integration, if you change the name of the ClearQuest record type after activities have been linked to ClearQuest records of that record type, the integration displays an error message when you try to set one of those activities in a view. To change the name of a record type, do so before any activities are linked to records of that record type.

Opening Multiple Nested ClearQuest Forms May Cause Crash

The ClearQuest integration for UCM does not prevent you from opening a ClearQuest form, then going to the form's UnifiedChangeManagement page, then using the context menu in the change set to open a **ClearCase** dialog box, and then selecting **Activity Properties**, which opens a second ClearQuest form.

However, if you follow the above steps, the second ClearQuest form does not function correctly. In particular:

- The **Apply**, **Revert**, and **Cancel** buttons on the form have no text.
- If you attempt to go to the form's UnifiedChangeManagement page, then dismiss the form, you get the error:

```
Unable to load message ID 14090 from resources
```

ClearCase then crashes.

Therefore, we recommend that you not use the above procedure to open a second ClearQuest form.

Notes on Using the Base ClearCase-ClearQuest Integration

This section provides guidelines for using base ClearCase (non-UCM) and ClearQuest together.

Using ClearQuest with Long Version-Extended Pathnames

The base ClearCase-ClearQuest integration creates a **ClearCase** tab on your ClearQuest screen. On this tab, if you right-click **CC Change Set Objects** and then select **View Details**, the program displays data about a VOB element. If the version-extended pathname is too long to fit in the dialog box, it cannot be viewed in its entirety, because the form does not support horizontal scrolling by default. You may want to modify the form using the following procedure:

- 1 In ClearQuest Designer, check out the ClearQuest schema you are using.
- 2 Click **Record Types-Stateless > cc_vob_object >Forms >cc_vob_object**.
- 3 Select each text box and double its height.
- 4 Right-click a text box and click **Properties**.
- 5 Select the **Extended** tab.
- 6 Select the **Horizontal Scroll Bar** check box.
- 7 Repeat Step #4 through Step #6 with the other text box fields.
- 8 Check in the schema.
- 9 Click **Database >Upgrade Database** to finish the changes.

If you wanted only the horizontal scrollbar on the name, do the following instead:

- In Step #3, select the name text box and double its height.
- In Step #4, right-click the name box and click **Properties**.
- Ignore Step #7 which asks you to repeat the instructions.

Restrictions on ClearCase LT Web Interface

The following restrictions apply to using the ClearCase LT Web Interface.

Restrictions on the Web Interface in a UCM Environment

If you are using the Web interface in a UCM environment, the following restrictions apply:

- You can work only on existing activities that you own; you cannot create new UCM activities using the Web interface.
- You cannot deliver changes to an integration view.
- You cannot rebase your development stream.
- You cannot use the Web interface to view ClearQuest-enabled projects.

Interactive Triggers Fail When Accessed Through Web Interface

The ClearCase Web interface supports noninteractive triggers. Interactive triggers, such as those that attempt to read input or create a window, will fail.

If a trigger attempts to read input using **clearprompt**, the ClearCase Web interface displays this error:

```
clearprompt is not supported in the Web interface
```

If a trigger attempts to read directly from standard input, it fails because standard input does not specify a valid file descriptor.

In addition, any trigger failure in the Web interface context displays this error message:

```
Interactive triggers are not supported in the Web interface.  
If the trigger was interactive, it may have failed for that reason.
```

Trigger script writers can detect whether a trigger is running in the Web interface context by checking for the environment variable `ATRIA_WEB_GUI`. It is set to `1` if you are running in the Web interface context.

Changes to Files Not Checked Out May Be Silently Overwritten

If you use the Web interface to download (rather than check out) a file to your Web view and then modify the file, your changes to the file are silently overwritten if you download the file again from within the same view. The program assumes that only changes made to checked-out files are meant to be saved.

Restrictions on Comparison of New Element Types

The Web interface does not support graphical (tree view) comparison of XML file elements; the Web Compare tool displays a text-based comparison for elements of type `.xml`. When comparing HTML files, the program displays the differences in the Compare screen as text, but includes hyperlinks to display the individual files appropriately formatted using your default browser.

In addition, because the Compare tool in the Web interface handles only text files, it does not support comparison of Rational Rose or Microsoft Word files.

Error When Checking in Large File from Windows NT Web Client

Windows NT 4.0 sends very large amounts of information to a Web server. This behavior causes the ClearCase Web interface to fail when attempting to check in very large files (on the order of several megabytes). This problem appears to be fixed in Windows 2000.

Host Name Resolution Must Be Enabled on Web Interface Clients

The Java program used in the Web interface attempts to connect to the Web server to transfer files. Web browsers only allow Java programs to open connections to the server from which the programs were downloaded.

To enforce this rule, the Web browser on the Web interface client must be able to resolve the Web server's host name to an IP address. If you use a host name in a URL that cannot be resolved by the client host, the Java program cannot connect to the server. In this case, Web-interface file-transfer operations such as checkout, checkin, and download fail.

If the Web server is being accessed through a firewall by a proxy server, the proxy server being used must support DNS lookup outside the firewall.

ClearCase Web Interface Problem in Overriding Primary Group

When the ClearCase Web server running on Windows logs in a client, it sets the primary group to the designated primary group in the client user's domain account. As a result, sites that use domain mapping to allow user accounts in multiple domains to share VOBs cannot access those VOBs through the ClearCase Web Interface.

Workaround: Specify a configuration variable in the `ccweb.conf` file, and add a value to the registry that overrides the group setting and enables domain mapping.

Adding the Variable to the ccweb.conf file

To enable a single Web server to support one primary group override, add the `-primary_group` variable with a *groupname* value to the `ccweb.conf` file. The allowable values for *groupname* are the same as for the `CLEARCASE_PRIMARY_GROUP` environment variable. The `ccweb.conf` file must be located in `.ccase-home-dir\var\config`. If you need more than one primary group override, configure additional Web servers.

Setting the Registry

Typically, when domain mapping is used to allow users from multiple domains to access the same VOB, each user must create the **DomainMappingEnabled** value (set to 1) in the `HKEY_CURRENT_USER\Software\Atria\ClearCase\CurrentVersion` registry key.

To enable domain mapping for a Web server, create the **DomainMappingEnabled** value in the `HKEY_LOCAL_MACHINES\Software\Atria\ClearCase\CurrentVersion` key on the Web server machine. The value must be of type `DWORD` and set to 1.

If you log in directly to the machine instead of logging in through the Web interface, user values for **DomainMappingEnabled** override the machine value.

Conflict Between Netscape and Earlier Versions of Exceed X Server Windows

If you access the ClearCase Web interface using a Netscape browser on a Windows system and also use a version of the Exceed X Windows Server earlier than 6.0, do not let the Netscape window lose its focus to an Exceed window. Doing so causes the Netscape window to restart any Java applets it is currently running, which interferes with file transfer operations, for example, download, checkout, or checkin.

Neither Internet Explorer nor Version 6.0 of the Exceed X Server has this problem.

Using Internet Information Server to Serve Web Pages from a VOB

If you intend to use Internet Information Server (IIS) to serve Web pages within a view and VOB, you must configure IIS to log on as a Windows NT domain user that has access to that view and VOB data. Use this procedure:

- 1 Make sure that the views and VOBs serving the Web pages use NTFS, not FAT, for storage.
- 2 Start the Services Control Panel program.
- 3 Double-click **World Wide Web Publishing Service**; a **Service** dialog box appears.
- 4 Click **Manual** startup type, and then click **OK**.

- 5 Create a domain user who is a member of the same primary group as ClearCase users.
- 6 Make the user the **Anonymous Login** user for IIS:
 - a Click the Windows **Start** button, then click **Programs >Microsoft Peer Web Services >Internet Service Manager**.
 - b Start the WWW service, if necessary.
 - c Double-click **Service** to display its property sheet.
 - d Enter the username in the format *domain\user*, for example, **atria\webclient**.
- 7 Start the view or views from which you want to publish and mount the VOBs you need.
- 8 Start the IIS service.
- 9 On the **Directories** tab, set aliases to directories in the VOB or VOBs.

IIS and ClearCase should now work together on the same computer.

Note: Make sure that whenever you restart your computer, you always start views and mount VOBs *before* you start the IIS service.

Third-Party Integration Guidelines for Version 2001A.04.00

ClearCase LT contains support for Visual Studio 97 and Visual Studio 6.0 (including Visual InterDev), tools that use the Microsoft Common Source Code Control Interface (SCC) integration. It also contains support for Microsoft Word, Microsoft FrontPage, Microsoft Office 2000, and Sybase PowerBuilder. This section contains guidelines on using ClearCase with integrated products.

Using ClearCase LT with Microsoft Web Tools

ClearCase LT is integrated to work with FrontPage 98, FrontPage 2000, Visual InterDev, Microsoft's Save to Web Office 2000 functionality (Word, Excel, PowerPoint), and Microsoft Internet Explorer 5 (IE5) Web Folders.

When using ClearCase LT with these programs and tools, follow the guidelines below:

- Users/Groups that are granted Front Page Server Extensions (FPSE) **Author** rights must match the identities of the Users/Groups with **write** access to the Web content VOB. In particular, granting **Author** rights to **Everyone** or to the IIS **Anonymous** user is not supported.

- The ClearCase/FrontPage Web server maintains a cache of source control information, including checkout status, user, time, and version. This cache is not updated when source control operations are performed using ClearCase tools such as the Version Tree Browser, or **cleartool**, rather than from within a Microsoft Web program like FrontPage. For this reason, it is recommended that all source control operations be performed from within the appropriate Microsoft Web tool. In the integration with FrontPage 2000, the ClearCase commands **Update View** and **Refresh Source Control Status** and the `iisfix.bat` script can be used to resynchronize the cached source control information.
- Use of FrontPage borders and themes can cause many extra source control operations to be performed, slowing integration performance.
- As described in the online help for the integration, users access files using a shared snapshot view created for the ClearCase/Web tools integration on the ClearCase Web server; the view tag of this view is `fp_hostname_default-web-alias-path`. If a Web uses the IIS Challenge/Response authentication method, this view must be located on the IIS Web server, and the VOB must either be on the same IIS Web server or on a UNIX VOB server configured to use CCFS.
- If you are attempting to import an existing Web with FrontPage Server Extensions installed into a VOB, you must remove all `vti*` directories from the Web before using `clearexport_ffile/clearimport`.

Using ClearCase LT with Visual InterDev

The integration between ClearCase LT and Visual InterDev may cause corruption and data loss. The problem occurs when user A checks out a file and then user B checks out the same file; user B is permitted to check in before user A. When user A attempts to check in the file, user A receives an error message and the file is corrupted.

There are three ways to deal with multiple-checkout problems in Visual InterDev:

- 1 Add all users who may potentially check out the same files at the same time to the ClearCase domain group. This gives users permission to check in files checked out by another user.
- 2 Enable simulated checkouts for all files in the Web content VOB. This will mean that an actual check out does not occur at check out time; rather, it is deferred until check in time. This allows multiple users to successfully check out the same file at the same time. However, these checkouts will only appear in the Visual InterDev GUI and not in ClearCase applets. To enable simulated checkouts, change the value of the registry key:

Change the registry key

HKEY_LOCAL_MACHINE\Software\Atria\ClearCase\CurrentVersion\SSAPI\Performance\SystemFiles from the default value to the string value *.

- 3 Disable the multiple-checkout functionality. To disable the multiple checkout functionality, you must turn on a new registry key. Once this new registry key is set, the multiple checkout support is disabled, and Visual InterDev enforces a single checkout model. To disable multiple checkout functionality, add the new registry key as a DWORD value:

HKEY_LOCAL_MACHINE\Software\Atria\ClearCase\CurrentVersion\SSAPI\FailCOIfAlreadyCO

If the value is set to 1, a checkout fails if the object is already checked out.

Using ClearCase LT with Microsoft Visual Studio

To use the ClearCase integration with Visual Studio, users must do one of the following:

- Install ClearCase after installing Visual Studio.
- When installing Visual Studio, choose the option to do a custom install. Then choose to *not* do either of the following:
 - Install Visual Source Safe
 - Make Visual Source Safe the source code control program

Using ClearCase LT with Microsoft Visual C++

ClearCase uses the Microsoft Common Source Code Control (SCC) interface to integrate with the Microsoft Visual C++ available through Microsoft Visual Studio. ClearCase has support for Visual C++ versions 5.0 and 6.0. However, you cannot enable the ClearCase SCC support for both versions at the same time. You can switch between SCC-support versions 5.0 and 6.0, but only one version is enabled at a time.

By default, the ClearCase SCC interface support for Visual C++ 6.0 is enabled, unless you have previously installed ClearCase support for Visual C++ 5.0. The ClearCase SCC interface for Visual C++ 6.0 also supports Visual Basic 6.0, Visual J++ 1.1, and Visual InterDev 6.0.

Using ClearCase with Visual Studio components requires no special configuration on the part of the user. For more information, see *Developing Software with ClearCase*.

Issues with Visual C++ on Windows 2000

If you install Windows 2000 on a machine that currently runs Windows NT with the ClearCase integration for Visual Studio, and you reinstall ClearCase LT, the Visual C++ 6.0 Addin toolbar for the ClearCase integration contains five **Version Tree** buttons. All five buttons start the Version Tree Browser. To correct the problem, remove the ClearCase toolbar and then re-add it, as follows:

- 1 Click **Tools >Customize** and click the **Add-Ins** tab.
- 2 Clear the **ClearCase** check box on the list and close the dialog box.
- 3 Click **Tools >Customize** and click the **Add-Ins** tab.
- 4 Select the ClearCase check box and close the dialog box.

Using ClearCase LT with Microsoft Visual Basic

Disabling the IDE During Project Debugging

The Visual Basic IDE by design disables or unloads all add-ins while debugging a project. Therefore, the ClearCase toolbar, which is an add-in, is disabled; no ClearCase operations can be performed from the Visual Basic IDE while the debugger is running. ClearCase operations can be performed while debugging outside the Visual Basic IDE by using the ClearCase Explorer.

ClearCase Tools Add-In Does Not Initialize with Visual Basic 5.0

In ClearCase LT Version 2001A.04.00, a new add-in was created for Visual Basic 5.0. The add-in does not work with versions earlier than Visual Basic 5.0. If you use an earlier version, the following message window appears:

```
ClearCase tools could not be loaded
Remove it from the list of available addins?
```

Because the purpose of this add-in is to provide Visual Basic users quick toolbar access to advanced ClearCase features, you can remove it from the add-ins list without affecting basic ClearCase functions such as checkin and checkout.

Problem Checking in Identical .frm Files in Visual Basic 6.0

By default, ClearCase does not create a new version of a file that is identical to its immediate predecessor. When you attempt to check in a .frm file that is identical to the checked-in version, the integration does not check it in. However, if the .frm file has an associated .frx file, the integration checks in the .frx file as a read-only file. To avoid this problem, set the option to allow identical checkins.

Pre-Checkin Trigger Causes Problem in Visual Basic Projects

In Visual Basic when you attempt to add a project to ClearCase LT by clicking **Tools >ClearCase >Add Files to ClearCase**, the operation fails if the VOB in which the Visual Basic project resides has a trigger that requires users to enter a comment when checking in files. The Visual Basic IDE does not supply the comment that you enter in the **Add to Source Control** dialog box to the trigger.

To work around this problem, use ClearCase Explorer to add the project to source control. After you add the project to source control, checkin and checkout operations complete successfully from within the Visual Basic IDE.

FRX File Not Checked Out When Part of Visual Basic Group

In a Visual Basic version 6.0 project that is part of a Visual Basic Group, when you check out a .frm file (with a .frx file), ClearCase does not check out the associated .frx file automatically. This behavior may cause synchronization problems. When working with a Visual Basic 6.0 project that is part of a Visual Basic Group, be sure to check out both the .frm and .frx files.

Error Message When Opening Visual Basic 6.0 Project

When you open a Visual Basic 6.0 project that is checked in, the integration displays the following error message:

```
Failed to update project location information in the host application
```

The integration displays this message because the Visual Basic project file is not checked out and the project location information cannot be updated. To avoid this message, check out the project file and then open the project.

Reopening Visual Basic 6.0 Project Fails to Update Project Information

When using Visual Basic 6.0, a problem can occur if a project's source files reside in a dynamic view that is mapped to drive M. Visual Basic cannot reopen the project from the list of recent projects at the bottom of the **File** menu.

To work around this problem, you can delete the file, MSSCCPRJ.SCC, then add the project back to source control.

Using ClearCase with Microsoft Word

ClearCase LT Version 2001A.04.00 includes integrations with Word 97 and Word 2000. To use either of these integrations, do the following:

- 1 Remove any existing user-defined ClearCase/Word integration packages from the system. If this is not done, the ClearCase LT Version 2001A.04.00 Word integration may not install properly.
- 2 Run the ClearCase Word Integration configuration program by clicking **Start >Programs >Rational ClearCase Administration >Integrations >Microsoft Word Integration Configuration**. Note that Word 97 or Word 2000 must be installed before you run the configuration program for it to take effect.

Removing a User-Defined ClearCase/Word Integration

A user-defined ClearCase/Word integration is encoded in a VisualBasic script file with the extension .dot, located in the Word startup directory. To determine the Word startup folder, follow these steps:

- 1 In Word, click **Tools >Options**.
- 2 In the **Options** dialog box, click the **File Locations** tab.
- 3 On the list, double-click **Startup** to open the **Modify Location** dialog box.
- 4 Right-click the large list box in the center of the dialog box (the list box may be empty) to display the shortcut menu; click **Explore** to start Windows Explorer. In Word 2000, the startup folder is displayed in the **Folder name** box in the dialog box. The Explorer view is rooted in the Word startup folder.

To remove a previous integration, remove its associated .dot file from the Word startup directory, or rename the file using a different extension.

Using the Tracing Mechanism

The Microsoft Word integration supports a tracing mechanism that can be used to help diagnose certain problems. Enable it by creating the DWORD registry key.

HKEY_CURRENT_USER\Software\Atria\ClearCase\CurrentVersion\Word\Tracing Enabled

Then set the key value to 1.

Note: To leave the key in the registry when not in use, set the value to 0.

The tracing is in the form of pop-up message boxes that open immediately before commands like **Check Out** or **Check In** are issued. This can be useful in determining the pathname of the document or the name of the command that is about to be issued.

Note that the registry key is checked when Word starts, so changing it during a Word session has no effect unless you stop Word and restart it.

Deleting the ClearCase Menu Bar

If the **ClearCase** menu is somehow deleted and the attached template is then saved, that document, and any document subsequently opened using that template, loses access to the **ClearCase** menu. This happens because menus and toolbars are modified in documents in Microsoft Word, not in the application. The ClearCase integration adds the **ClearCase** menu to the ClearCase Word template file.

If you delete the **ClearCase** menu, you can restore it by using the following procedure:

- 1 Open the document or affected template.
- 2 Click **Tools >Customize**, then select the **Menu Bar** in the list. That is, select the line by that name in the list control; do not simply select or clear the check box.
- 3 Click **Reset**.
- 4 Select the affected template file and click **OK**. Then close the **Customize** dialog box.

Add to Source Control Menu Shortcut Terminates Microsoft Word

We recommend that you not initiate an **Add to Source Control** operation from the **ClearCase** menu that appears when you right-click in the **SaveAs** dialog box in Microsoft Word. This may cause your Word application to terminate abruptly and could possibly cause data loss.

Using ClearCase LT with Sybase PowerBuilder

Using the ClearCase integration with PowerBuilder requires some configuration steps. In addition, there are some differences between the integration with PowerBuilder 6.x and PowerBuilder 7.x.

Applying Patches to PowerBuilder 7.x

Before using the ClearCase integration with PowerBuilder 7.0 to 7.02, apply the latest PowerBuilder patch available for the file PBSCC70.DLL. You can download this patch from the Sybase FTP site at <ftp://psafpt.sybase.com/pub/private/pbpatch/pb701.weekly/202861.zip>. This patch is not needed for PowerBuilder versions later than 7.02.

Enhancing the ClearCase/PowerBuilder Integration

Use the following procedure to add a **Help** button to the ClearCase PowerBuilder integration. After the integration is configured, PowerBuilder displays an icon for ClearCase Help on its toolbar.

- 1 Start PowerBuilder

- 2 Right-click the **Powerbar** (where the icons are located); click **Customize**.
- 3 Click the **Custom** option.
- 4 Drag your icon to the **Powerbar** and position it on the bar.
- 5 To separate the ClearCase **Help** button from others on the **Powerbar**, use one or more separator icons (located in the upper left corner of the group of available icons).
- 6 A dialog box prompts you to enter the command line that will be associated with the icon, as well as text to represent the icon in the microhelp and when the cursor is positioned over the icon. Set the command line to the value **winhlp32.exe ccase-home-dir\bin\ph_int.hlp**. Set the values of the **Item Text** and **Item Microhelp** boxes to **ClearCase Help**.
- 7 Click **OK** to finish the configuration.

Error5 Message When Using PowerBuilder Integration

If you select an object from the public directory and click **Source >Register**, the integration opens a dialog box where you enter the name of the .PBL library. If the library you specify does not exist in the archive directory, the integration creates a new one and adds it to source control in the archive directory. If you attempt to check out the same object from the public directory by clicking **Source >Check Out** specifying a different name, the integration fails with an “error5” message. To work around this problem, be sure to enter the exact name of the target .PBL when you check out an object.

ClearCase Integration Differences: Version 6.x and 7.x

The current ClearCase integration with PowerBuilder reflects the following enhancements in PowerBuilder Version 7.x over Version 6.x:

- The **Source** menu includes the command **Add Objects**.
- There is no **Source >Create New Release** command; that functionality is provided by **Library >Create**.
- If your VOB is set up for UCM development, ClearCase displays an **Activity** option when you open the **Configuration** dialog box by clicking **Source >Configuration >Advanced**

Diff Merge Issues

This section describes issues with the Diff Merge tool.

Diff Merge Tool Does Not Display Multibyte Characters Correctly

The Diff Merge tool may not display multibyte characters correctly.

Workaround:

- 1 On the **Tools** menu in Diff Merge, open the **Options** dialog box .
- 2 Click **Change**.
- 3 Change the font to one that displays multibyte characters correctly on your computer.

Number of Lines in Compared or Merged Files

Files that are compared or merged with the ClearCase Diff Merge tool on Windows 2000 cannot contain more than approximately 3,000 lines. Some font sizes may increase that limit to approximately 4,000.

Some Diff Merge Customizations May Be Lost

The marker for unaltered text in a Diff or Merge contributor pane has been changed. It was previously labeled **No Change** in the **Options** dialog box. It is now labeled **Unchanged**. Because the text shown in the list box is the actual registry key under which the font characteristics (for example, color, bolding, italic) are stored, the registry has also changed slightly.

As a result, any lines marked **Unchanged** revert to the application's default for that type of marker. Any modifications that the user may have made (for this marker only), revert to the default. Modifications for all other marker definitions are retained.

Useful Registry Settings for Diff Merge Tool

There are useful registry settings in HKEY_CURRENT_USER\Software\Atria\ClearCase\CurrentVersion\Diff Merge that cannot be set through the GUI. To change these settings, exit all Diff Merge sessions before changing the registry. If you do not, the values entered manually are overwritten when Diff Merge exits.

Tab size is a numeric value that determines the number of characters a tab character occupies. The default value for this key is 8. If you set **Tab size** to 0 or less, it is overridden with 8 and is saved on exit.

Colorbar scaling factor sets the width of the color density bar in the Diff Merge tool as a percentage of the width of the vertical scroll bar. For example, if this value is 100, the two bars are the same width. If the value is 50, the color bar is half the width of the scroll bar. The default value for this key is 75. If you set **Colorbar scaling factor** to a negative value, a value of 0 is used. A **Colorbar scaling factor** of 0 hides the colorbar.

Guidelines on Using the XML Diff Merge Tool

This section notes restrictions and special issues involved in using the XML Diff Merge Tool.

XML Diff Merge Restrictions

Use of the XML Diff Merge tool is subject to the following restrictions as a result of its use of Version 1.0 of the XML `expat` parser:

- All entity declarations for entity references must be within the document; in other words, the constructs specified by the `standalone="no"` document declaration are not supported. For more information, see the *Standalone Document Declaration* and *Entityref* sections (especially the *Well-Formedness Constraint: Entity Declared* subsection) in the the *XML 1.0 Recommendation*.
- If an entity (other than the predefined entities) is not declared, a parser error message appears on input. In this case, input processing of the document stops, but the application proceeds.
- External files entities defined using the SYSTEM declaration are read to find externally defined entities, but XML document content defined in these files is not interpolated into the document.
- There is no validation of XML documents, because the parser we use is not a validating parser. On the other hand, the tool tests for well-formedness; it issues an error message and exits upon traversal of a document that is not well-formed.
- Because the parser only parses the internal DTD subset, rather than parsing an external DTD associated with an XML file, it does not handle documents that depend on the resolution of parameter entity references.
- There is no support for Unicode (UTF-16); the parser converts all the input encoding (for example, ISO-8859-1) to UTF-8 output.

In addition, the following restrictions also apply:

- There is no support for editing element attributes or PCDATA; users must make a choice between contributors to resolve conflicts, rather than modifying the result.

- There is no support for attribute-granularity merges. Users must choose an element with all its associated attributes from a single contributor. They cannot select some attributes from one contributor and other attributes from another.
- The choices you make in merging different versions of an XML document are inherited hierarchically. That is, when you select an element to be included in a merged file, all children of that element are selected as well. You cannot select an element from one contributor and replace a child of that element with the content of that child in a different contributor.
- Users cannot change or undo any choices made during the course of a merge; that is, you cannot alter an insertion, change, or deletion after you have selected it.
- Color customizations for the XML Diff Merge tool are controlled by the settings for the ClearCase text mode Diff Merge. You cannot customize the colors directly from the XML Diff Merge GUI; you can, however affect colors in this GUI by modifying the colors used for text mode Diff Merge.
- The tool does not support the **merge -query** and **merge -qall** options. See the **merge** reference page for a description of these options.
- In the output file generated by the tool, nonterminal white space formatting is lost. However, PCDATA white space is preserved.
- The tool does not yet support the empty element tag syntax for output. Files that contain `<tag/>` constructs are parsed correctly, but the output is of the equivalent form `<tag></tag>`.

Ordering of Files in GUI May Need Adjustment

If two or more contributors insert elements and these insertions are adjacent, the desired ordering in the merge output can be ambiguous. For example, it may not be possible for the tool to determine whether an insertion from contributor A should appear before a corresponding insertion from contributor B.

If the element ordering is ambiguous at a given merge point, the one chosen by the tool may not be the one desired. Review all changes in the merge output to confirm desired ordering.

Checking Your Results

In some cases, the XML Diff Merge tool cannot evaluate a changed element correctly, and instead reports changes to a single element as the deletion of one element and the addition of an identically named element. Because of this limitation, we strongly

recommend that you verify comparisons and merges done using the XML tool with the text version of the Diff Merge tool. A button in the XML Diff Merge toolbar enables you to quickly perform a textual Diff Merge.

XML Diff Merge Functionality Note

When merging two XML files, when you select one of two alternative elements from the contributor panes, you effectively delete the unselected element. As a result, all children of the deleted element are deleted as well, and cannot be selected on succeeding merges.

Creating Elements of Type xml and Creating New Versions of XML Elements

The xml element type is based on the text_file_delta type manager. It expects xml elements to be text files. A text file is assumed to have lines no longer than 8,000 characters each, and no character may be a binary \000 (null) character.

ClearCase reports an error while creating an xml element or while checking in a new version of an existing element if the xml data does not look like a text file. If your xml data has more than 8,000 characters between line-terminating characters, its lines are too long for the text_file_delta type manager. If your xml data is encoded with multibyte characters it appears to have binary \000 characters when viewed as a stream of bytes.

To overcome these restrictions, use the file element type to store such xml data. The file element type can store any type of file and does not have the same restrictions as the xml element type. To compare and merge xml data that is stored as file element types, you need to invoke the XML Diff Merge tool directly. See *Invoking XML Diff Merge Directly*.

If you cannot create a new version of an element of type xml, perform the following steps:

- 1 Cancel the checkout and save your checked-out data in a .keep file. For example:

```
cleartool unco -keep file.xml
```
- 2 Change the element type from xml to file by using the `cleartool chtype` command.
- 3 Check out the file.
- 4 Copy the .keep file to the checked-out file.
- 5 Check in the file.

Invoking XML Diff Merge Directly

To run XML Diff Merge directly:

- 1 Make sure the *ccase-home-dir\bin* directory is in your path..
- 2 Issue the `xmldiffmrg` command. For example:

To compare two versions:

```
xmldiffmrg -xcompare file1.xml file2.xml
```

To merge two or more versions using a common ancestor:

```
xmldiffmrg -xmerge -out file.xml.merge -base file.xml file1.xml file2.xml
```

The file names may be version-extended pathnames. You must use the `-xcompare` and `-xmerge` options instead of `-compare` and `-merge`, respectively.

Guidelines on Using the Administration Console

Use the following guidelines when using the Administration Console.

Console Access to the Customer Web Site

To access the ClearCase LT Customer Web site from the Administration Console, you must first set up your Microsoft Internet Options. You can do this either when you first install and configure Microsoft Internet Explorer or manually using **Control Panel > Internet Options**. If these options (for example, firewall and proxy server settings) are not set up, the following message is displayed when you try to connect to the ClearCase LT Web site:

```
Internet Explorer cannot open the Internet site  
http://clearcase.rational.com. A connection with the server could  
not be established.
```

Refresh Toolbar Button May Vanish Resizing a View Private File's Column Headers

When you display a view private file in the ClearCase Administrator or Host Console, resizing its column headers or displaying the context menu causes the **Refresh** toolbar button to be hidden. If this happens, you can access the Refresh function by using the **Action** menu pull-down, or from the shortcut menu of the view private file's display.

Problems When Administrative VOBs Are Unavailable

The administrative VOB is used by one or more other VOBs as a central repository of global type objects. See the `type_object` reference page for a description of this feature.

ClearCase LT users may see errors when the administrative VOB is unavailable. Following are examples of situations when this may happen:

- A user attempts to attach a version label, using a label type that was previously created automatically, as a local copy of a global label type. The ClearCase **mklabel** command tries to contact the administrative VOB containing the global label type. If that administrative VOB is unavailable, the **mklabel** command fails.
- A VOB backup script attempts to lock the entire VOB object of /vobs/proj\proj before copying data to tape. For each administrative VOB used by /vobs/proj\proj, the ClearCase **lock** command tries to contact the administrative VOB. If any administrative VOB is unavailable, the **lock** command fails, which causes the backup script to fail.

To disable the above checking for a particular ClearCase command (for example, to keep working while an administrative VOB is offline):

- 1 Log on as administrator.
- 2 Set the environment variable CG_PROCFLAGS to the value **no_process**.
 - a Open the System Control Panel.
 - b Click the Environment tab.
 - c Set the user variable CG_PROCFLAGS to the value **no_process**.
- 3 Execute the command.

History Browser Produces Extremely Small Text on Japanese System

The font used for text and captions in the History Browser is 6 point type by default. This point size produces difficult-to-read output in the History Browser on a Japanese language system.

Workaround: To enlarge the font, click **View >Options >Display >Fonts** and select a larger font.

Keep checked out Option Changed in Add To Source Control Dialog Box

The behavior of the **Keep checked out** check box in the **Add To Source Control** dialog box has changed. If you selected this check box in previous releases, the view-private file that you added to source control remained checked out. This behavior is consistent with the **cleartool mkelem** command. As a result, you could lose the contents of this file before it was truly part of the VOB. This was most likely to happen if you canceled the checkout.

Now, the file is checked in and checked out. You can continue working on the file, but its contents at element creation time are preserved, even if you cancel the checkout.

Do Not Change VOB/View Storage Directory ACLs on NTFS File Systems

On NTFS partitions, each ClearCase VOB or view storage directory has an access control list (ACL). Modifying the ACL in any way can render the VOB or view unusable.

Because the standard Windows NT file-copying tools (and some backup utilities) do not preserve file and directory ACLs, use the procedures in *Administering ClearCase* to copy, move, or restore a VOB or view storage directory.

Misleading Licensing Error Message

If you do not assign a ClearCase LT server for your client and you try to run any ClearCase LT tool that contacts the server, the error message you get is the same as if you had no license. If you get an error that tells you that you do not have a license for the product, but you are certain that you have a valid license, make sure you have a server name entered for the client. Click **Start>Settings>Control Panel** and click the ClearCase icon. Verify that a valid ClearCase LT server host name is in the edit field.

Restart After Changing ClearCase LT Registry Server

Some ClearCase LT operations may not work correctly after you change your default registry server. Some symptoms include ClearCase LT shortcut menus that do not appear correctly or source control operations that fail in Microsoft Visual Studio. We recommend that you shut down and restart your computer after changing the registry server.

Defects/Change Requests

Noteworthy problems found in ClearCase LT software are listed in the file `cc-issues.htm`. You can find this file in the folder `ccase-home-dll\install` after you install the product.

Note that any problems relating to installation or setup of ClearCase LT software are noted in *Installation Issues*.

Documentation Issues

This section presents late changes to documentation and describes errors or information missing from the documentation delivered with ClearCase LT software.

Problems with Reference Pages

The following problems, relevant to ClearCase LT, exist in the *ClearCase Reference Manual* for ClearCase Release 4.2.

Object-Creation Commands

The reference pages for object-creation commands (**chpool**, **cptype**, **mkatype**, **mkbrtype**, **mkeltype**, **mkhltype**, **mklbtype**, **mkpool**, and **mktrtype**) do not mention explicitly that the name specified for an object must not be a valid integer or real number. Be careful with object names that begin with `0x`, `0X`, or `0`, the standard prefixes for hexadecimal and octal integers.

clearexport_ffile

`-l` is an undocumented option for the **clearexport_ffile** command, which labels the imported version with the specified label. Existing instances of the specified label are replaced.

clearexport_ssaf

The documentation for **clearexport_ssaf** does not mention that labels on directories in SourceSafe are not exported.

Problems with Online Help

The following issues exist with online help:

Topic Not Found

If you start help by pressing F1 in an application window (context-sensitive help) and begin a series of jumps into the online documentation, you may see the error `help topic not found`, when in fact the topic exists. If you click **OK** in the error message box, the topic then appears.

Help Window is Blank

Occasionally, a ClearCase help topic fails to appear: the title appears, but the body of the window is blank. When this happens, you can correct the problem as follows:

- 1 In the Help window menu bar, click **Options >Font >Normal**. The Help window is refreshed.
- 2 If the wrong help topic is displayed when the help window is refreshed, click the **Back** button to get back the original topic.

Issues with Tutorials

This section describes problems with running tutorials.

Tutorials in Windows Environment

Before users run the tutorials, the administrator must set the correct view and VOB storage needed to run the Windows NT tutorials. Users can verify that this was done by entering the following **cleartool lsstorage** commands and checking the output:

```
cleartool lsstorage -view
```

```
cleartool lsstorage -vob
```

If each command does not display a list of views or VOB storage locations, the tutorial will not run.

Start Menu Differences

In the ClearCase LT printed and online documentation, the names of programs differ from the names that you see on the **Start** menu. For example, the ClearCase LT Doctor help file says:

To start ClearCase Doctor, click **Start >Programs>Rational ClearCase LT >ClearCase Doctor**. Note: if ClearCase LT was installed as part of a Rational Suite, the **Rational ClearCase LT** entry appears below the name of the suite.

The text should show the proper name of the program as **Rational ClearCase LT Doctor**.

Contacting Rational Technical Support

If you have any problems with the software or documentation, please contact Rational Technical Support by telephone, fax, or electronic mail as described below.

For information regarding support hours, languages spoken, or other support information, click the **Technical 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

