IBM ClearQuest migration from 32-bit to 64-bit technote

Contents

This technote provides the information that you need to migrate from IBM ClearQuest 32-bit to IBM ClearQuest v9.1 64-bit. The migration guide explains some of the differences that you might encounter between the two versions.

ClearQuest v9.1 can be installed on Windows and Linux platforms on x86_64 hardware. See the IBM ClearQuest Requirements site for a list of the operating systems supported and requirements.

Note: An update from CQ 9.0.1.10 32-bit to CQ 9.1 64-bit is not supported.

The only supported scenario is to uninstall ClearQuest v9.0.1.x and the WebSphere components for 32-bit, and then install ClearQuest v9.1.0 and all the WebSphere components for 64-bit.

Prerequisites
- IBM Installation Manager version 1.8.6 or later is installed.
- If you are installing ClearQuest on Linux and your database is on MS SQL server, you must first install the Microsoft ODBC driver for SQL server otherwise your database connection profiles

will not be preserved, and you will have to reestablish them. See
https://docs.microsoft.com/en-us/sql/connect/odbc/linux-mac/install-microsoft-odbc-driver-sql-server-macos?view=sql-server-ver15 for instructions on installing the driver (RCL v8.1.6).

Getting started with ClearQuest 64-bit

1. Refer to the IBM ClearQuest v9.1 requirement site.
2. Download your IBM ClearQuest v9.1 (64-bit) product and extract the image on your computer. You must provide to IBM Installation Manager the location of each extracted download.
3. Use IBM Installation Manager and the instructions in its help to install one or more IBM products. See the online help about using IBM Installation Manager to install the product.
4. Start ClearQuest v9.1.

Uninstall IBM ClearQuest

See the IBM ClearQuest v9.1 local help for instructions about how to uninstall the IBM ClearQuest product.

Install ClearQuest

See the IBM ClearQuest v9.1 local Help for instructions about how to install the IBM ClearQuest v9.1 product.

> **Note: During the ClearQuest 64-bit install, if you want to re-use your existing ClearQuest settings, such as your ClearQuest DB connections, select the "Use Preserved Settings" option from the Installation Manager.**

> **Note: It is not possible to upgrade from 32-bit ClearQuest to 64-bit. A full uninstall, followed with install of ClearQuest 64-bit is required.**

Post install instructions

> **Attention**: **To avoid odd or unexplained behaviors, we recommend clearing your browser cache before opening the ClearQuest Web for the first time.**

Incompatible behavior

The following changes exist in this release:

IBM ClearQuest v9.1 FTS support

Before uninstalling IBM ClearQuest, use the FTS command-line option of **prep_upgd_was_profiles** to create a backup of all your full-text search WebSphere Application Server profile data on the server, and delete the profiles. After installing ClearQuest v9.1, use the **restore_was_profiles** command to restore the profiles. Once you restore your FTS with ClearQuest v9.1, your FTS settings and functionality will continue to work as they used to work in ClearQuest.

For more details, see the "Upgrading or reinstalling ClearQuest in a full-text search deployment with multiple WebSphere profiles" topic in the IBM ClearQuest v9.1 Help.

BIRT ClearQuest Reports and BIRT Designer

Your ClearQuest BIRT reports and designs will continue to work after migrating from IBM ClearQuest to IBM ClearQuest v9.1. Follow the local Help steps for upgrading BIRT as documented in Help topics for BIRT reports.

Attention: If you have BIRT reports created using IBM Rational ClearQuest and you migrated to IBM ClearQuest v9.1, those BIRT reports will fail to appear and run under IBM ClearQuest v9.1. To fix those issues, see the Appendix technotes at the end of this document.

ClearQuest Web settings migration

The "Settings" option that you had under IBM ClearQuest Web "Site Administration" options are not going to be preserved when you migrate to IBM ClearQuest v9.1 Web. You need to record those settings and re-enter them after installing IBM ClearQuest v9.1.

The same also applies to the "Settings" option under "Preferences".

Single Sign-On

If you have configured Single Sign-On with ClearQuest, you will need to reconfigure it for ClearQuest v9.1. You can use the same configuration files and script as used to set up SSO with ClearQuest. Some modifications to the configuration files may be needed to account for your new installation directories. If you require a new version of the configuration script, or additional guidance to reconfigure Single Sign-On, contact IBM Support.

cq_setup.csh and cq_setup.sh

Migrating from IBM ClearQuest to IBM ClearQuest v9.1 does not preserve the cq_setup.csh and cq_setup.sh scripts. The scripts will be regenerated during install. Any customized scripts from a previous version will still be available in the Rational.preserve directory and you need to update the scripts, so they point to the correct binaries for ClearQuest v9.1.

Perl 5.26

1. ClearQuest v9.1 uses Perl 5.26. ClearCase and ClearQuest v9.0.x used Perl 5.16. Perl scripts from those products may need to be modified to be compatible as they may rely on Perl 5.16 behavior which has changed. Perl variables no longer can contain non-graphical ASCII control

characters. For example, a Perl script may contain the literal character 0XF to denote the $OSNAME. That would now yield a syntactical error of the form:
"Unrecognized character \x0F; marked by <-- HERE after registry if $<-- HERE near column 32 at...."
To fix the issue, you need to use the Perl variable $^O.

For the list of special Perl variables and full description, see
https://perldoc.perl.org/perl5240delta.html#ASCII-characters-in-variable-names-must-now-be-all-visible and https://perldoc.perl.org/perlvar.html.

2. Perl @INC no longer contains '.' Perl's @INC is the array of directories that Perl uses to locate and load modules. A Perl script that needs to load a module from the current directory must now be modified to account for this. For example, you can add to your script:

use FindBin 1.51 qw($RealBin);
use lib $RealBin;

3. "\C no longer supported in regex; marked by <-- HERE in m/%s/" Using \C in a Perl regular expression will yield this error. For more details, see https://perldoc.perl.org/perldiag.html.

 4. "Unescaped left brace in regex is illegal here in regex; marked by <-- HERE in ...." This is an example of Perl's stricter checking of good syntax. The following example shows how the example can be fixed:

} elsif(m!\s*//{{NO_DEPENDENCIES}}!) {

change to:

} elsif(m!\s*//\Q{{NO_DEPENDENCIES}}\E!) {

5. Carp.pm is no longer part of the CGI module and "fatalsToBrowser" is no longer defined. Scripts using or requiring Carp.pm must no longer include it from CGI. For example:

use CGI::Carp qw(fatalsToBrowser);
or
use CGI::Carp;

changes to:
use Carp;

Note: Use of the embedded_jni mode for the Perl Module Inline-Java is not supported with this release.

Recreate your MultiSite shipping server settings

If you are using IBM Rational ClearQuest MultiSite, you must process all packets in your shipping bays before migrating to IBM ClearQuest v9.1. During this processing, other replica sites must

pause sending new packets to the host being migrated. The uninstallation handles custom storage classes differently on Windows and Linux, see the following discussion of each platform. Note the following:

- You must select the **Use preserved settings** option when installing ClearQuest v9.1.
- In addition, after you install ClearQuest v9.1, you must recreate your customized MultiSite shipping server settings (for instance, the path to the receipt-handler, if you are using one).

On **Windows**, the default shipping bays and custom shipping are copied to the Rational.preserve folder during uninstallation. The installation will modify the value of the `HKEY_LOCAL_MACHINE\ SOFTWARE\WOW6432Node\Atria\ClearCase\CurrentVersion\MultiSite\StorageClass\- default` Windows registry keys `ReturnBay` and `StorageBay` with the correct paths to those bays in the ClearQuest v9.1 installation directory.

However, it will not update the Windows registry keys for custom storage classes. It will recreate any custom shipping bays you might have had and will move the contents from Rational.preserve to the new default and custom bays. When you are migrating from IBM Rational ClearQuest to IBM ClearQuest v9.1, you must discard these old packets and shipping orders and regenerate them. Use the MultiSite control panel applet to update the shipping bay paths for custom storage classes.

On **Linux**, only the default bay is copied to the Rational.preserve folder during uninstallation. Any non-empty directory trees for custom storage classes under `/opt/ibm/RationalSDLC/clearcase` will remain in the partial directory tree of the previous installation, as will the shipping.conf file. If the custom shipping bays are empty, the uninstallation process will remove them.

On the installation of ClearQuest v9.1, the preserved contents of the default shipping bays are copied to the new bays. When you are migrating from IBM Rational ClearQuest to IBM ClearQuest v9.1, you must discard these old packets and shipping_orders and regenerate them. You will need to recreate the shipping bay directory structure and update the shipping.conf file for custom storage classes.

Compatible behavior

The following areas did not change in IBM ClearQuest v9.1:

VB scripts using the CQClearQuest or CLEARQUEST object

Any VB scripts that use the top-level object CQClearQuest and CLEARQUEST will continue to work as-is.

OSLC

OSLC connections and settings did not change in IBM ClearQuest v9.1. You can use the same OSLC connections with IBM ClearQuest v9.1.

Custom packages

Existing schemas and modifying existing schemas and packages will continue to work as-is after migrating to IBM ClearQuest v9.1.

MultiSite

If you are using ClearQuest in a MultiSite setup, your existing setup will continue to work. You can migrate one site at a time to complete your migration from ClearQuest to ClearQuest v9.1.

IBM ClearQuest v9.1 documentation

o   The ClearQuest v9.1 Help is published on https://www.ibm.com/support/knowledgecenter/SSSH5A_9.1/com.ibm.rational.clearquest.help.ic.doc/helpindex_clearquest.htm or you can access the IBM ClearQuest v9.1 Help installed with the product.

Support

For technical support, contact IBM Customer Support at https://www.ibm.com/products/software and in addition to providing details for your issue, also provide the following information:

- Your name, company name, telephone number, and email address
- Your operating system, version number, and any applied service packs or patches
- Product name and release number
- Your Support Ticket Number (if you are following up on a previously reported problem)

For blogs, forums, and more for ClearQuest v9.1, go to the IBM Software website at https://www.ibm.com/products/software.

References

- The following table shows a list of the equivalent file paths for IBM ClearQuest v9.1.

IBM ClearQuest Path	IBM ClearQuest v9.1 equivalent
C:\Program Files (x86)\IBM\RationalSDLC	C:\Program Files\IBM\ RationalSDLC
C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest	C:\Program Files\IBM\ RationalSDLC \ClearQuest

- The following table shows a list of IBM ClearQuest Paths which are being preserved in IBM ClearQuest v9.1:

C:\ProgramData\IBM\Rational.preserve\common	
C:\ProgramData\IBM\Rational.preserve	

- The following table shows examples of environment variables for IBM ClearQuest v9.1.

IBM ClearQuest Environment Variables	IBM ClearQuest v9.1 equivalent
CLEARQUEST_HOME=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest	CLEARQUEST _HOME=C:\Program Files\IBM\ RationalSDLC \ClearQuest
RATIONAL_COMMON=C:\Program Files (x86)\IBM\RationalSDLC\Common	RATIONAL_COMMON=C:\Program Files\IBM\ RationalSDLC \Common
RATIONAL_COMMON_LIB=C:\Program Files (x86)\IBM\RationalSDLC\Common\lib	RATIONAL_COMMON_LIB=C:\Program Files\IBM\ RationalSDLC \Common\lib
RATIONAL_HOME=C:\Program Files (x86)\IBM\RationalSDLC	RATIONAL_HOME =C:\Program Files\IBM\ RationalSDLC
CQCLI_BIN_DIR=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\bin	
CQCLI_CLASSPATH=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\config;C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\lib\cqcli.jar;C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqjni.jar;C:\Program Files (x86)\IBM\RationalSDLC\common\stpcmmn.jar;C:\Program Files (x86)\IBM\RationalSDLC\common\stpwvcm.jar;C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\stpcq.jar;C:\Program Files (x86)\IBM\RationalSDLC\common\java\icu\icu4j-4_8.jar	
CQCLI_CONFIG_DIR=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\config	
CQCLI_DOC_DIR=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\doc	
CQCLI_HOME=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli	
CQCLI_LIB_DIR=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\lib	
CQCLI_MAN_DIR=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\doc\man	
CQCLI_PATH=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest;C:\Program Files (x86)\IBM\RationalSDLC\Common;C:\Program Files (x86)\IBM\RationalSDLC\Common\JAVA\jre\bin;C:\Program Files (x86)\IBM\RationalSDLC\Common\JAVA\jre\bin\classic;C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqcli\bin	
JRE_HOME=C:\Program Files (x86)\IBM\RationalSDLC\Common\JAVA\jre	
CLASSPATH=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest\cqjni.jar	CLASSPATH=C:\Program Files\IBM\ RationalSDLC \ ClearQuest \cqjni.jar
IBMLDAP_ALTHOME=C:\Program Files (x86)\IBM\RationalSDLC\common\codeset	IBMLDAP_ALTHOME=C:\Program Files\IBM\ RationalSDLC \common\codeset
RATIONAL_ICU4J_DIR=C:\Program Files (x86)\IBM\RationalSDLC\common\java\icu	RATIONAL_ICU4J_DIR=C:\Program Files\IBM\ RationalSDLC \common\java\icu

Note #1: CQCLI is no longer supported and as such its environment variables are not created.

Note #2: JRE_HOME is no longer needed and as such it is no longer set.

- The following table shows the list of the IBM ClearQuest environment variables preserved for IBM ClearQuest v9.1.

IBM ClearQuest Environment Variables	IBM ClearQuest v9.1 equivalent
CLEARQUEST_HOME=C:\Program Files (x86)\IBM\RationalSDLC\ClearQuest	CLEARQUEST_HOME=C:\Program Files\IBM\ RationalSDLC \ClearQuest
RATIONAL_HOME=C:\Program Files (x86)\IBM\RationalSDLC	RATIONAL_HOME=C:\Program Files\IBM\ RationalSDLC
RATIONAL_COMMON=C:\Program Files (x86)\IBM\RationalSDLC\Common	RATIONAL_COMMON=C:\Program Files\IBM\ RationalSDLC \Common
RATIONAL_COMMON_LIB=C:\Program Files (x86)\IBM\RationalSDLC\Common\lib	RATIONAL_COMMON_LIB=C:\Program Files\IBM\ RationalSDLC \Common\lib

Note: The IBM ClearQuest environment variables are preserved by name only. Their value now points to the location of where IBM ClearQuest v9.1 is installed. This allows you to continue using scripts and code that depends on IBM's environment variables and continue to work without needing to make any changes.

- The following table shows the Windows registry keys examples for IBM ClearQuest v9.1.

IBM ClearQuest Windows Registry Keys	IBM ClearQuest v9.1 equivalent
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Rational Software	HKEY_LOCAL_MACHINE\SOFTWARE\ \Rational Software
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Rational Software\Common	HKEY_LOCAL_MACHINE\SOFTWARE\ \Rational Software\Common
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Rational Software\ClearQuest	HKEY_LOCAL_MACHINE\SOFTWARE\ \Rational Software\ClearQuest
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Rational Software\ClearQuest\9.0.0\Core\Databases	HKEY_LOCAL_MACHINE\SOFTWARE\ \Rational Software\ClearQuest \9.0.0\Core\Databases
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Rational Software\ClearQuest Packages	HKEY_LOCAL_MACHINE\SOFTWARE\ \Rational Software\ClearQuest Packages

Appendix: Troubleshooting known issues

1) If you are using Email 7.2 package or earlier, you must apply and upgrade to Email 8.1 or later.
2) If you are using EmailPlus 2.2 package or earlier, you must apply and upgrade to EmailPlus 2.3 or later.
3) Crystal Reports are not supported.