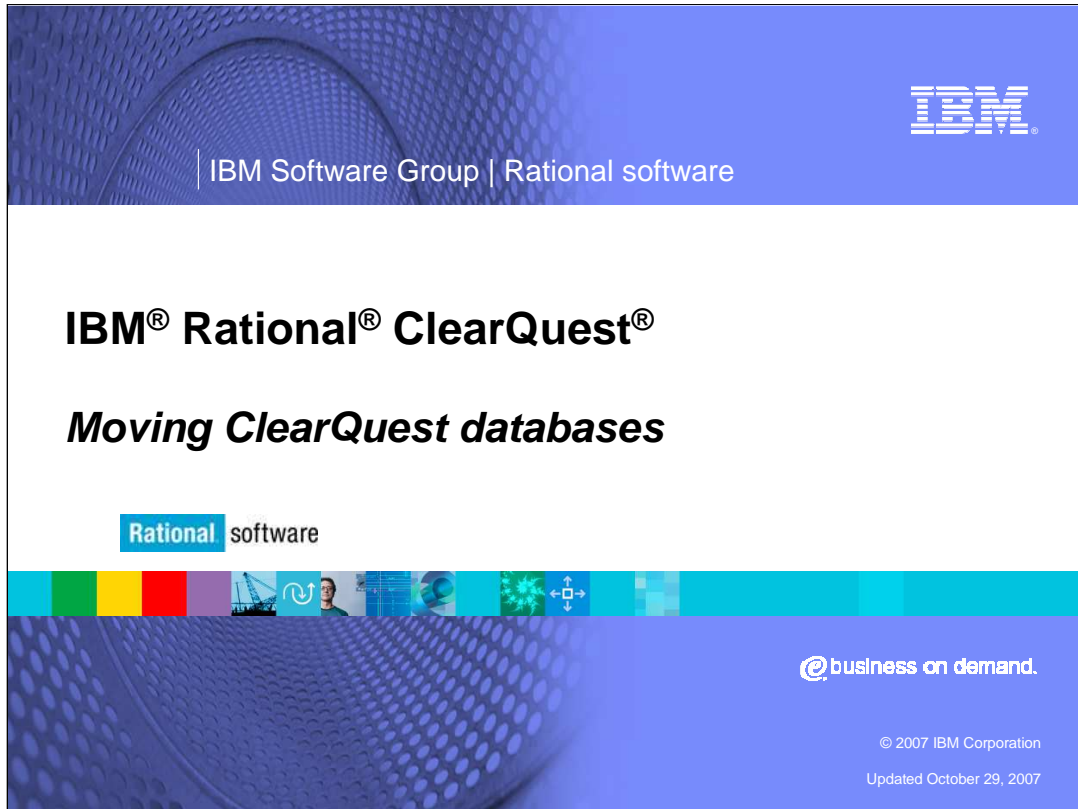


Speaker Notes



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IBM® Rational® ClearQuest®

Moving ClearQuest databases

Rational software

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The slide features a blue header with the IBM logo and 'IBM Software Group | Rational software'. The main content area is white with the title 'IBM® Rational® ClearQuest®' and subtitle 'Moving ClearQuest databases'. Below the title is the 'Rational software' logo and a horizontal bar with various icons. The footer is blue with '@business on demand.', copyright information, and the update date.

Working with databases in IBM Rational ClearQuest can sometimes be a long process. This module will provide step-by-step instructions on moving ClearQuest databases to a new location; whether they are databases from the same or from different vendors.

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Module objectives

This introduction helps the students put the material into context.

The following topics are covered in this section:

- ▶ Options for moving
- ▶ Considerations for choosing an option
 - ▶ Preparing to move a database
 - ▶ Step-by-step instructions for each option
- Upon completion of this section, you will be able to:
 - ▶ Move a ClearQuest database set (dbset), for example, a schema repository and one of its associated user databases


Moving ClearQuest databases

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In order to move a database, you need to either create a new empty ClearQuest database, according to the instructions for your vendor database, or backup and restore the database using vendor tools. This module assumes that you have experience with your vendor database administration and with creating empty ClearQuest databases. It also assumes you are familiar with the ClearQuest administrative clients, the maintenance tool and the designer. Finally, it assumes experience with running the ClearQuest command line utility **installutil**.

In ClearQuest, there are two types of databases, schema repositories and user databases. A schema repository can have one or more associated user databases. This module will focus on moving a database set consisting of a schema repository and one user database. However, the instructions can be easily adapted to move just a single database.


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ClearQuest - Move

There are two options to move a database:

1. Move tools provided in the maintenance tool and designer
2. Database vendor backup and restore utilities

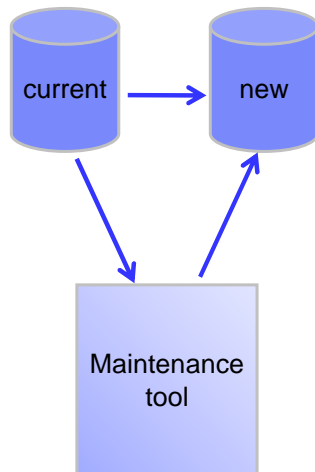
3  Moving ClearQuest databases © 2007 IBM Corporation 3

There are two options to move a database. The first option uses the ClearQuest Move Tools. These tools log in to the current (or source) database to pull out the schema, data, and indexes and then copy them over to the new (or target) database location. This option allows you to change database vendors.

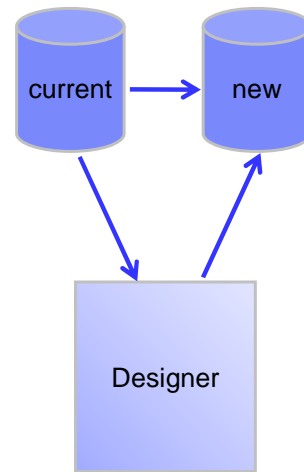
The second option is to use the backup and restore utilities supplied by the database vendor. You then make a connection to the new database using ClearQuest. Depending on the size of the database, this may be a more efficient option.

ClearQuest – Move tool option

Schema repository



user database

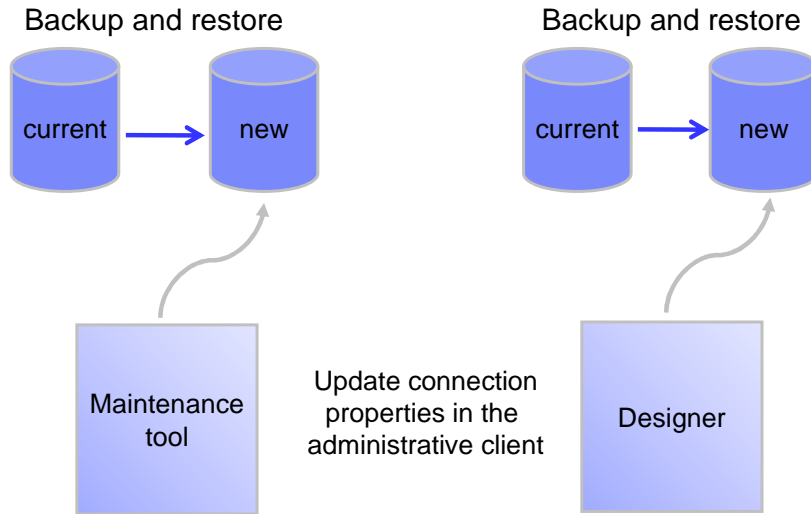


Shown here is how the first option in the move tool works:

The ClearQuest move tool logs in to the current database and copies the schema, data, and indexes to the new database location. Note that the database is locked while the move is taking place.

Since the maintenance tool handles administration of schema repositories and the designer handles administration of user databases, you will use the respective administrative client for the type of database you are moving.

ClearQuest – Move tool option



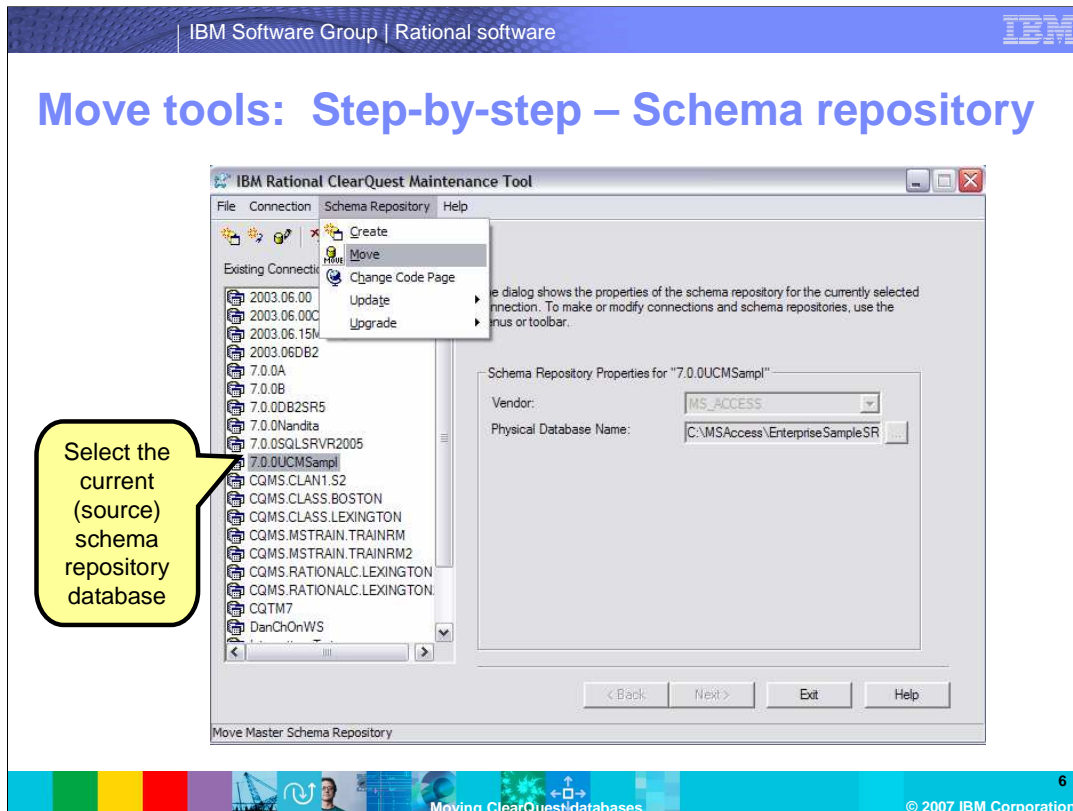
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Moving ClearQuest databases

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Shown here is how the second option works:

The current database is backed up and restored to its new location, then the connection properties are updated in the respective tool.



The following slides will walk through moving a dbset using the ClearQuest move tools. After which, you will see instructions for the second option. You may choose to skip some slides, depending on the option you have chosen.

Create two new empty databases according to the instructions for your vendor database. If you are only moving one database, you need only create one new database. These instructions assume that a dbset is being moved.

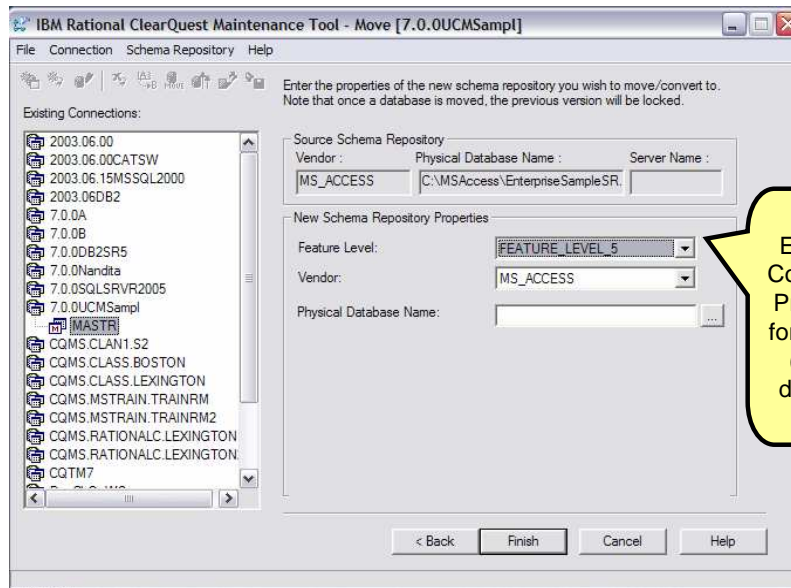
Backup the dbset (the schema repository and user database) following your usual procedures to ensure that all ClearQuest users are logged out and new logins are disabled.

Open the maintenance tool and select the connection for the current (or source) schema repository database.

Select the **Schema Repository > Move** command.

In the example shown here, the current dbset is identified by the connection "7.0.0UCMSampl".

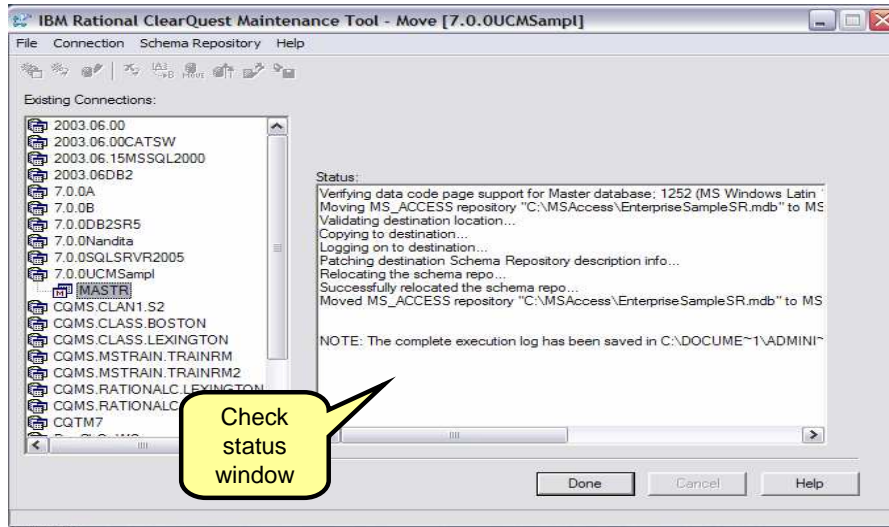
Enter connection properties for new location



Enter the connection properties for the new (target) database. These are the properties for the empty database you created in the first step designated as the location for the new schema repository.

Click **Finish**

ClearQuest logging status of Move



During the move process, ClearQuest starts the move and logs each milestone as it proceeds. It ends with a “successfully relocated the schema repository...” message and an indication of where the complete log file can be found.

Note that after you click **Done**, the selected connection now contains the connection properties for the new location.

Common Errors

- Inability for ClearQuest to login to the new database
- Database is locked after a failure

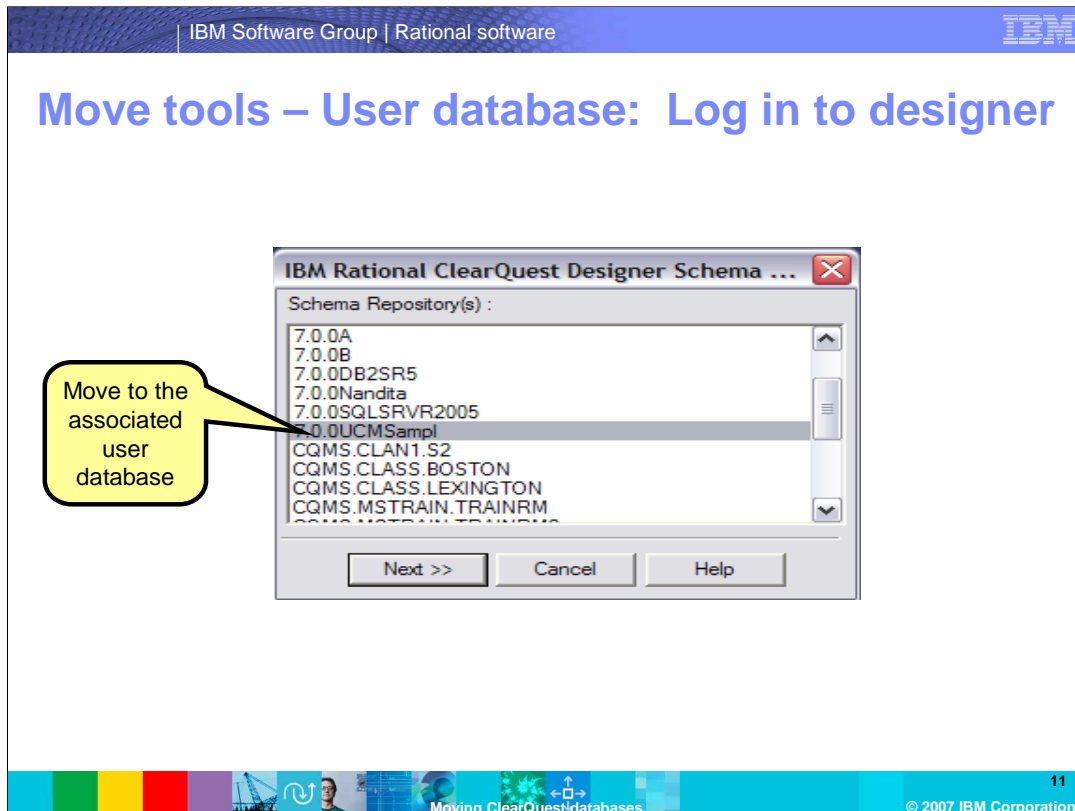
```
*****
SAMPLE LOG:
*****
Verifying data code page support for Master database; 1252 (MS Windows
Latin 1) character set.
Moving MS_ACCESS repository "C:\MSAccess\EnterpriseSampleSR.mdb"
to MS_ACCESS repository "C:\MSAccess\CQMasterUCMSampl.mdb"
Validating destination location...
Copying to destination...
Logging on to destination...
Patching destination Schema Repository description info...
Relocating the schema repo...
Successfully relocated the schema repo...
Moved MS_ACCESS repository "C:\MSAccess\EnterpriseSampleSR.mdb"
to MS_ACCESS repository "C:\MSAccess\CQMasterUCMSampl.mdb"

NOTE: The complete execution log has been saved in
C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\cqdbsetup_sta
```



Common errors during the move include the inability for ClearQuest to login to the new database location or a locked database.

If for any reason the move fails, ClearQuest unlocks the current database. If you find the database is still locked after a failure, you can use the ClearQuest command line utility **installutil** and the function **unlockschemarepo** to unlock the database.



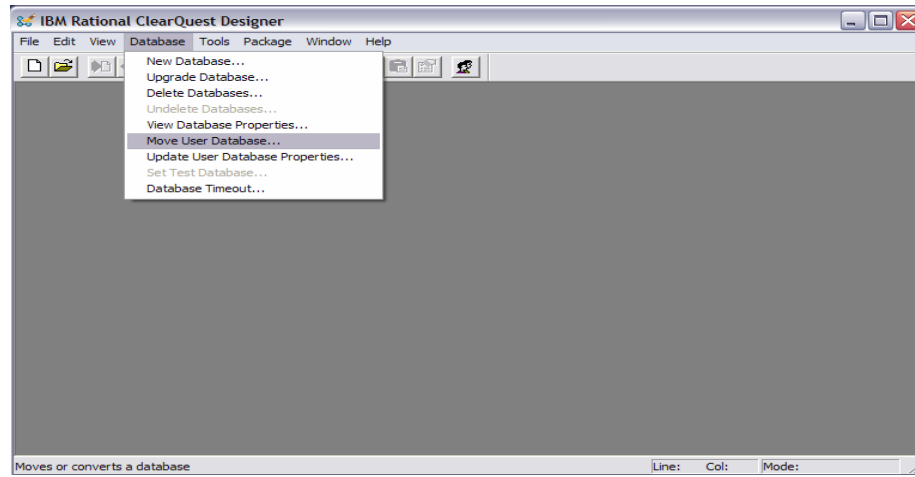
Now to move the associated user database.

Using the same connection string, log in to Designer. As is typical for logging in to the designer, you will be prompted for a ClearQuest administrator username and password.

Click **Next**

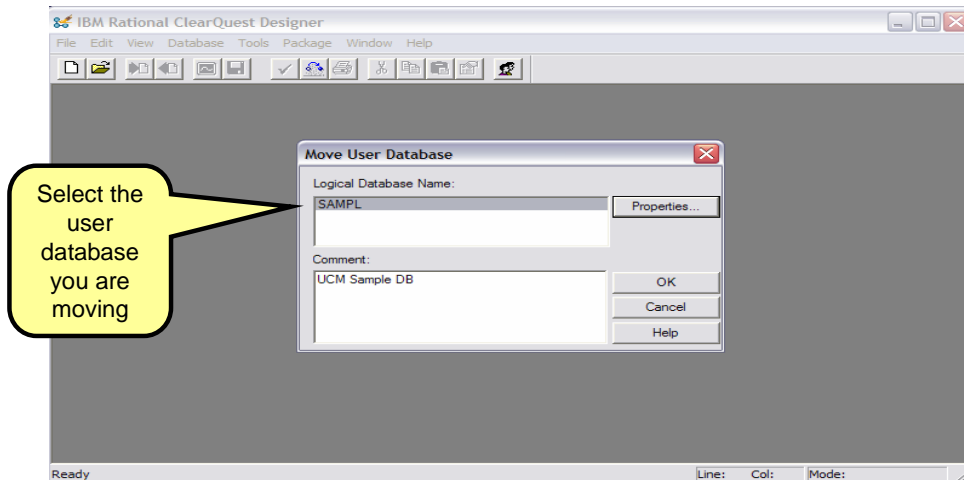
Note: click **Cancel** to cancel out of the “open schema” dialog box if that appears

Select move command



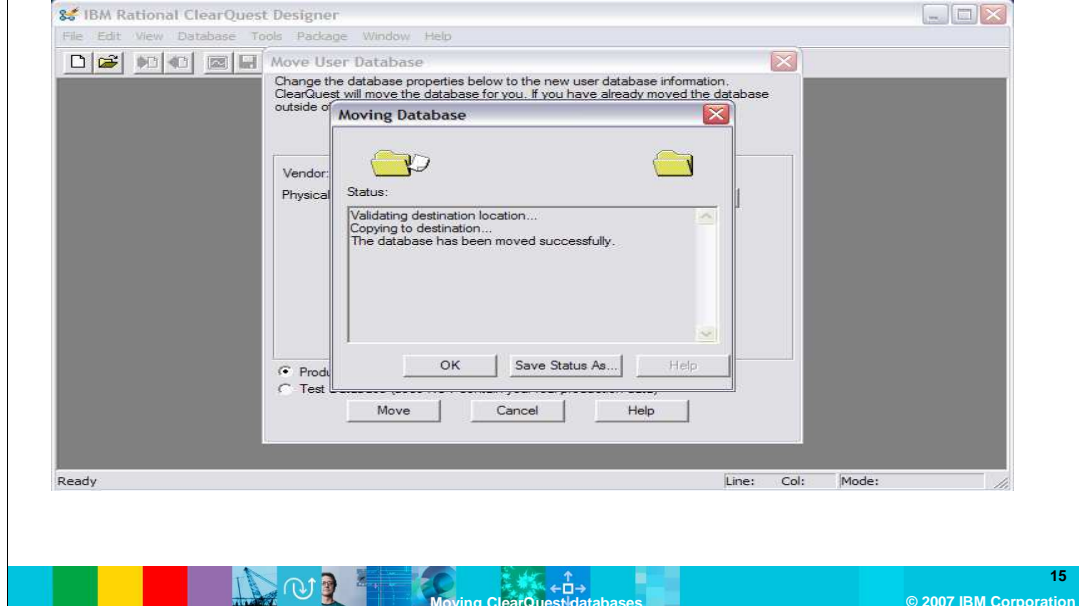
Select **Database > Move User Database** from the menu

Select the user database you are moving



Select the user database you are moving. In this example, there is only one user database associated with the schema repository. If you have multiple user databases to move, you will need to repeat the steps for moving a user database for each one. You will have the opportunity to select others after the completion of each move. Then select the **Properties** button.

ClearQuest logging status of move

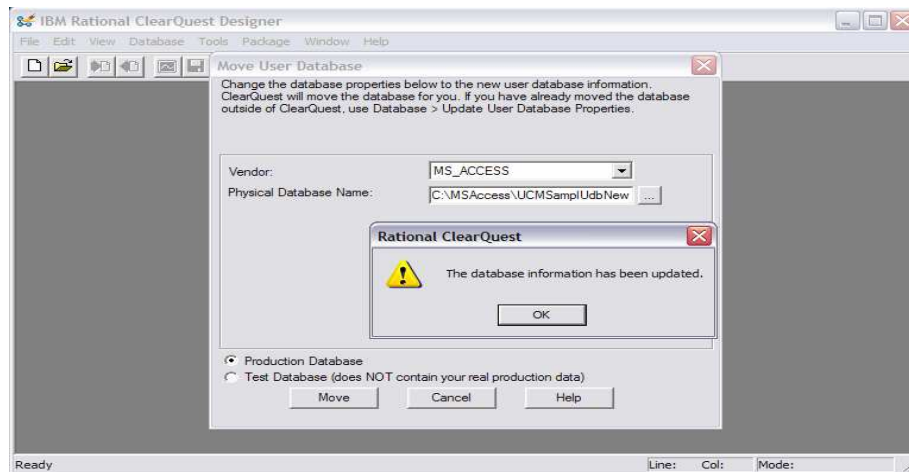


ClearQuest starts the move and logs each milestone as it proceeds. It ends with a “The database has been moved successfully...” and an option to save the status of the log file.

As with the schema repository, the database is locked during the Move. If for any reason the move fails, ClearQuest unlocks the current database. If you find the database is still locked after a failure, you can use the ClearQuest command line utility **installutil** and the function **unlockuserdb** to unlock the database.

Also, if there are any errors, it is important to keep a copy of the log to assist in further troubleshooting.

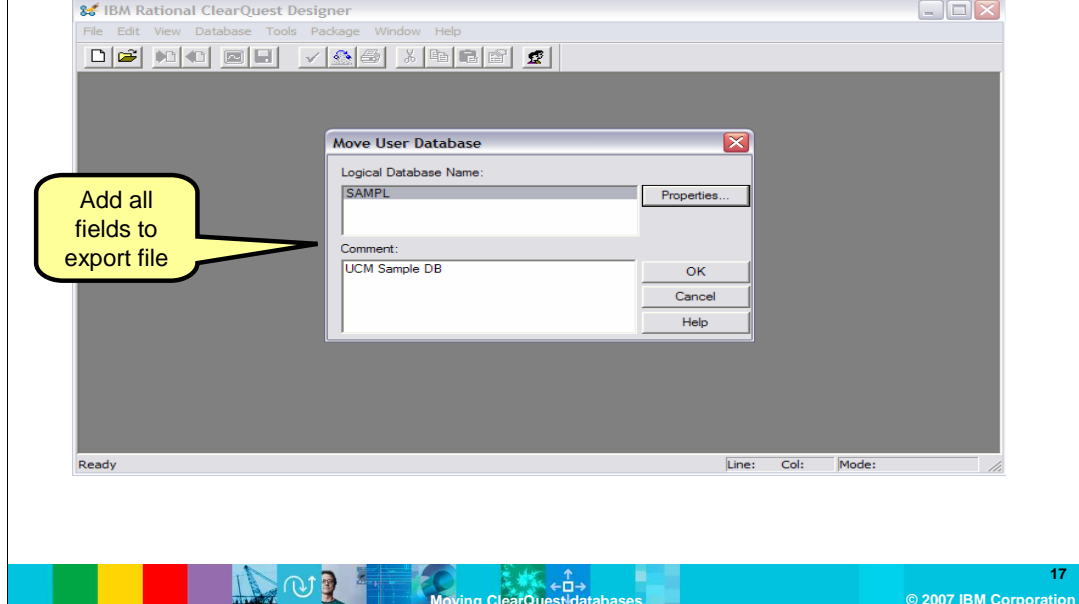
Database connection properties updated



You will then be notified by ClearQuest that the connection information has been updated.

Click **OK**

Option to move more user databases or cancel



If you have multiple user databases and you have already created new empty databases for each one, you can continue moving them by selecting another database and updating the connection properties. If you have not yet created them, you can cancel out of this and re-login to the Designer once you have finished.

At this point, click **cancel**. You can now login to ClearQuest with either client.

Backup and restore: step-by-step

- Ensure that all ClearQuest users are logged out and new logins are disabled
- Backup the current (source) database
- Restore to new (target) location
- Vendor DBs
 - ▶ DB2®
 - ▶ Oracle
 - ▶ SQL Server™

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Moving ClearQuest databases

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These next few slides review how to use the second option. These instructions assume that you are knowledgeable about restoring a database with vendor-provided tools. If you have any questions about the steps below, see your DBA to adjust the details of the restore procedures accordingly.

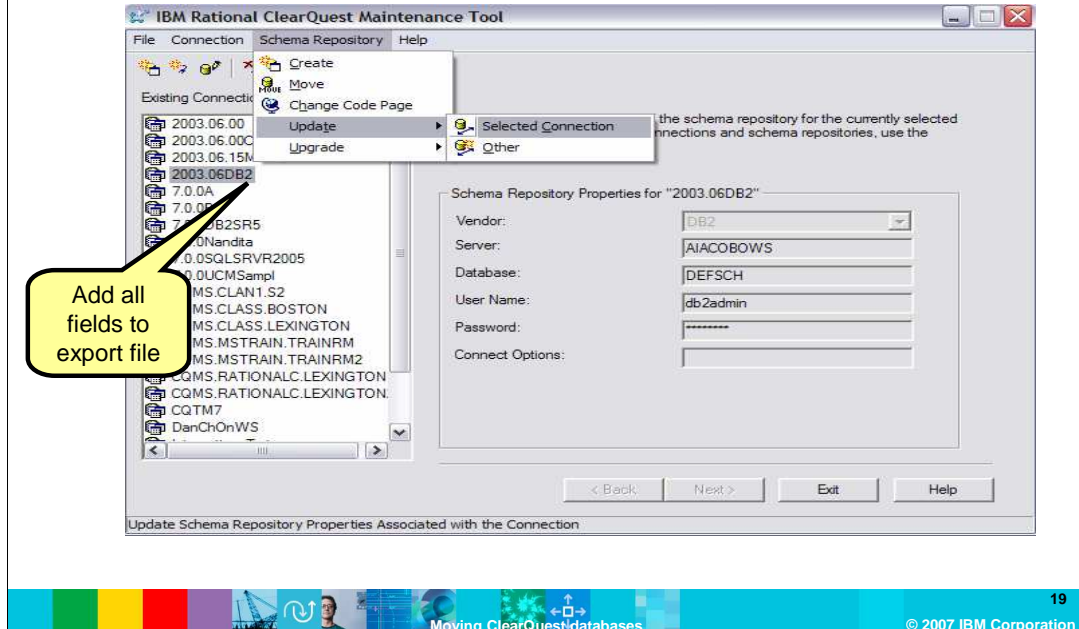
For DB2, ensure that the ClearQuest database username has been created on the new operating system since DB2 assumes authentication at the operating system level. After restoring, make sure the connection properties and authorities for the user have been set as for other ClearQuest databases.

For Oracle, after importing, make sure the ClearQuest database username has the same roles as for other ClearQuest databases.

For SQL Server, after creating the new username for the restore, you must update the ClearQuest schema name to this new username using SQL commands. If you are using the same instance, you do not have to change the name.

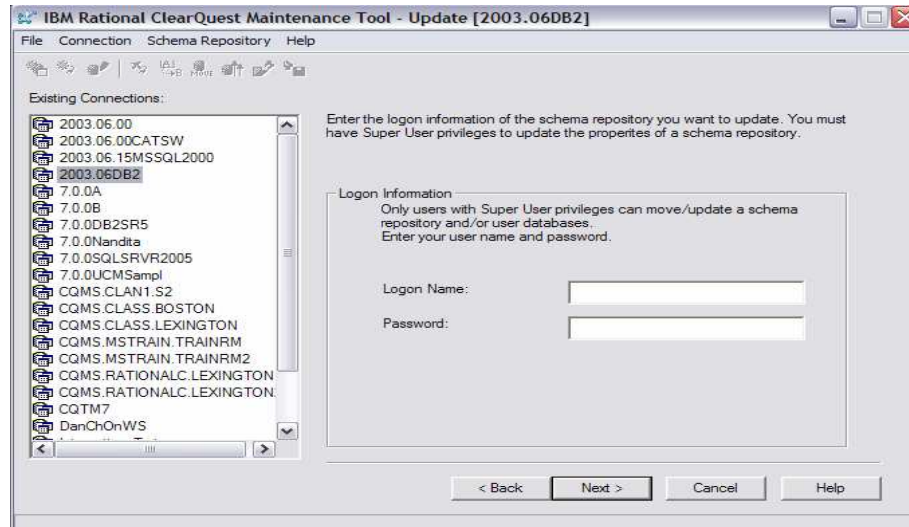
Next, you will update the connection properties in ClearQuest.

Update the connection properties



In the Maintenance Tool, select the connection to the current database
Then select **Schema Repository > Update Selected Connection**

Administrator authentication



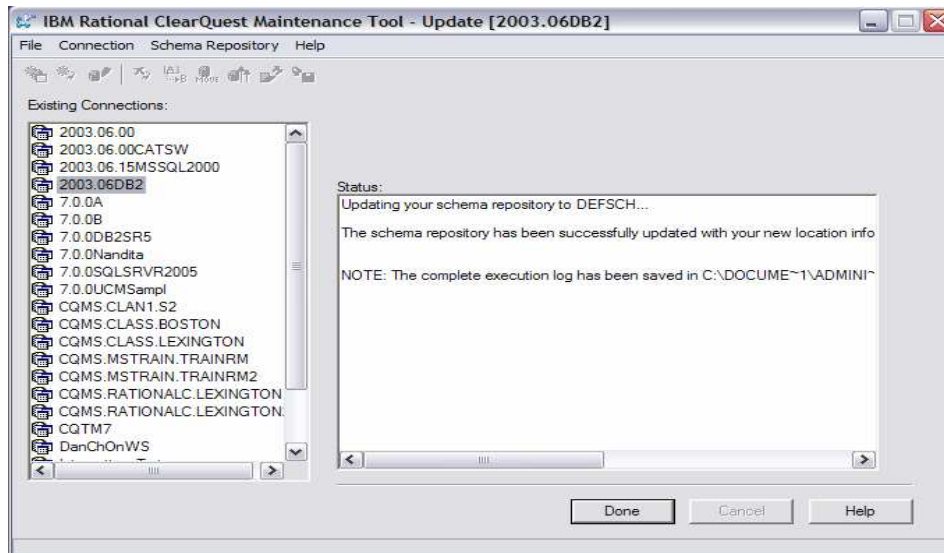
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Moving ClearQuest databases

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You will be prompted for a ClearQuest administrator (super-user) username and password.
Click **Next**.

Connection properties have been updated.



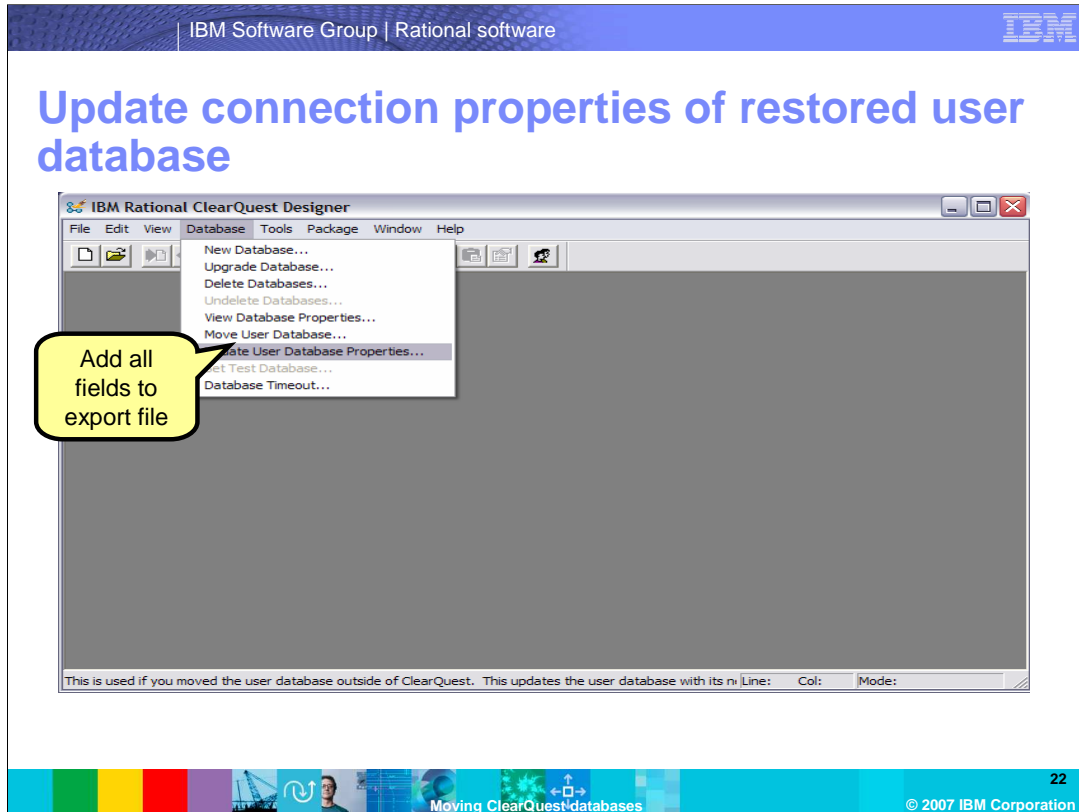
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Moving ClearQuest databases

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ClearQuest logs the results of the connection update and ends with “The schema repository has been successfully updated with your new connection information...”.

Clicking **Done** brings you back to main menu of the tool.



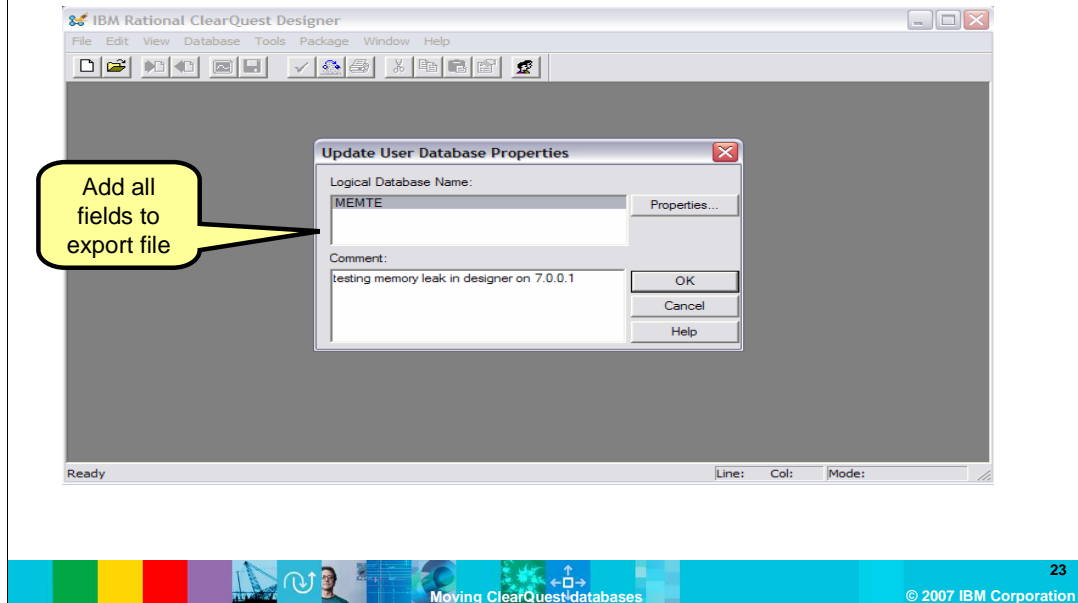
Next, you need to update the user database connection.

Open the Designer with same connection string

Then select **Database > Update User Database Properties**

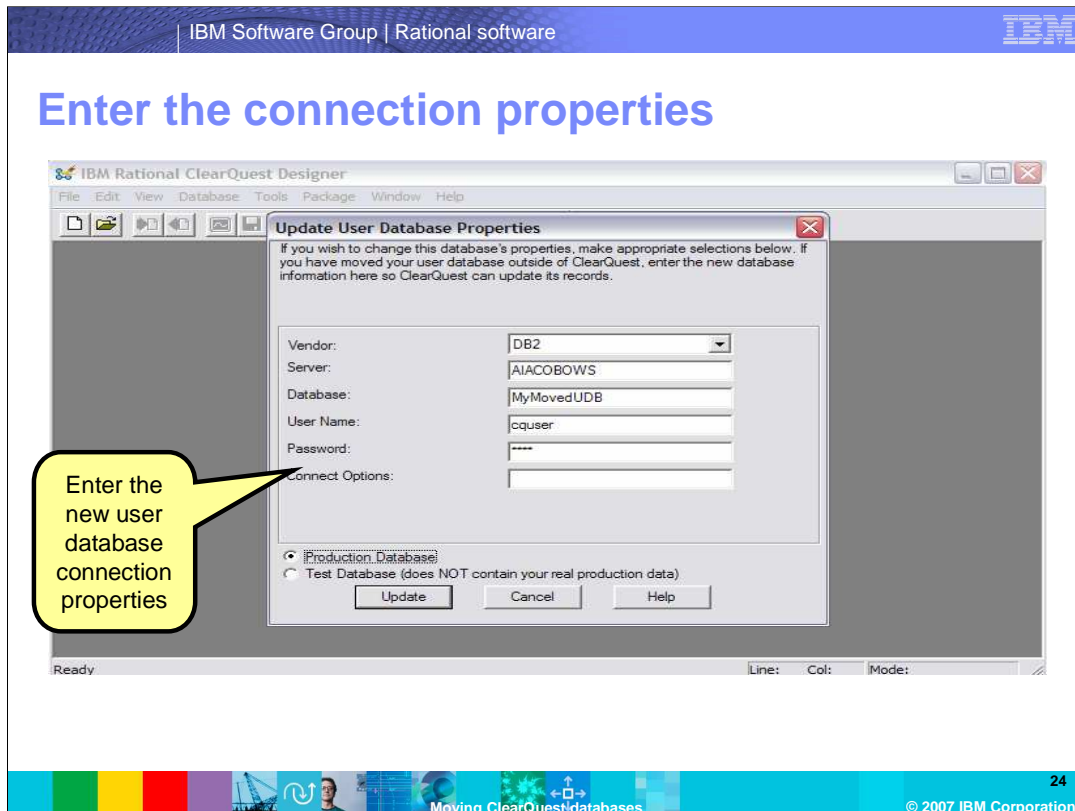
Note: this is the most frequently forgotten step. Keep in mind that the schema repository still contains the current user database connection properties not the new one. If you neglect this step, clients connecting are still connecting to the current user database. This is especially significant if you are using these copies to create a separate test environment.

Select the user database you restored



Select the database you restored. In this example, there is only one user database associated with the schema repository.

Then select **Properties**



Enter the new user database connection properties and click **Update**
You will receive the message "The database properties have been updated."

Summary

- There are two options for moving databases in ClearQuest:
 - ▶ ClearQuest move tools
 - Supported and preferred method
 - Advantage of allowing you to change database vendors
 - ▶ Using vendor backup and restore utilities
 - May be more efficient and requires detailed
 - Requires database-specific DBA knowledge and skills



In summary, there are two options for moving databases in ClearQuest: ClearQuest move tools or the vendor backup and restore utilities. The ClearQuest move tools are the supported and preferred method and has the advantage of allowing you to change database vendors. Note: You must have empty ClearQuest databases created in advance. Using vendor backup and restore utilities may be more efficient and requires detailed, specific DBA knowledge and skills.

In either case, you must be able to successfully connect to the new database location. Most problems occur because either the database was not restored correctly or the connection properties are not accurate. To resolve these problems, check with the DBA who created the new databases or restored them.

For more information on ClearQuest, visit www.ibm.com/software/rational.

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