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IBM Rational integrations

Configuring Test Manager DB2 backend for UCM source control

Rational software



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This module will cover how to configure IBM Rational TestManager with an IBM DB2® backend for UCM Source Control for versions 2003.06 and higher.

Module objectives

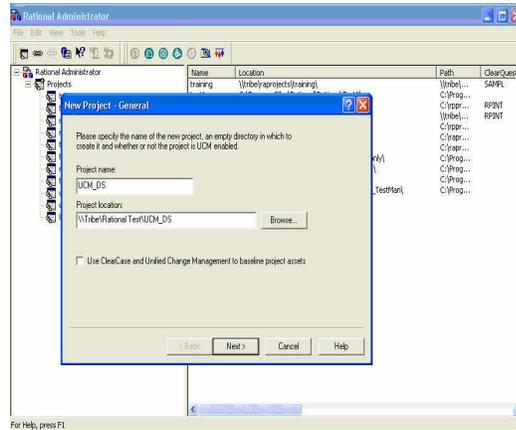
- These topics are covered in this module:
 - Creating a DB2 test data store
 - Creating a UCM single stream project
 - Step by step process to configure the integration
 - Necessary manual steps to complete the integration
 - Best practices



This module will cover the steps to completely configure the integration between IBM Rational Test Manager using a DB2 backend database and IBM Rational ClearCase® using UCM. You will walk through the process of creating a test data store using a DB2 backend database, creating a UCM single stream project, and then the process of configuring the integration between the two.

Topic one: Creation of test data store

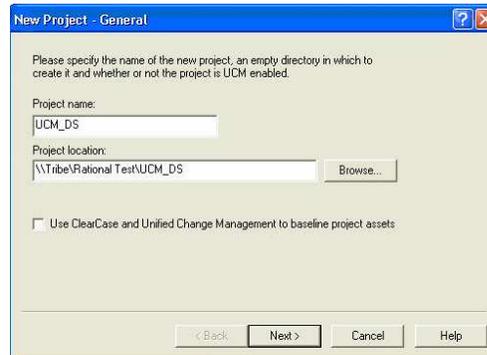
- Backend is DB2
- Use Rational administrator to create test data store
- Initial test data store is located outside of UCM source control.



The first step in this process involves creating the test data store that you will eventually add to UCM source control. In this example DB2 is used as the backend database. A Microsoft® Access® backend database can also be used. To create the test data store, you should already have Rational Administrator installed on your workstation.

Creating the rational administrator project

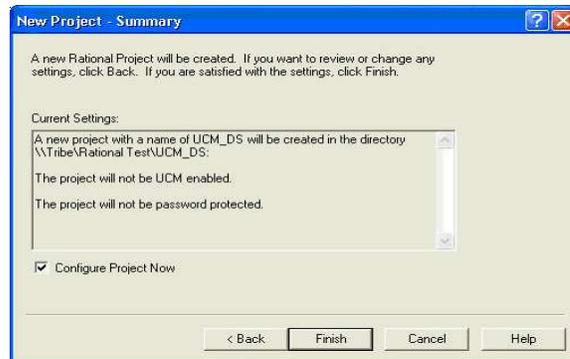
- Open Rational administrator and create a new project
- Create a unique project name
- Enter project location in UNC format
- Do not select “Use ClearCase...” tab, click “next”



Open Rational Administrator and select “file” then “new project” to create a new Rational Administrator project. Enter a new, unique project name and give that project a location. This location should be in UNC format and should be located on a share that is accessible by all users. Also note the box that says “Use ClearCase and Unified Change Management to baseline project assets.” Although this is what you will eventually be doing, do NOT check this box at this time. You are going to create the test data store outside of UCM first, then eventually move the data store to a location within a UCM VOB and place it under source control.

Creating the RatAdmin project (continued)

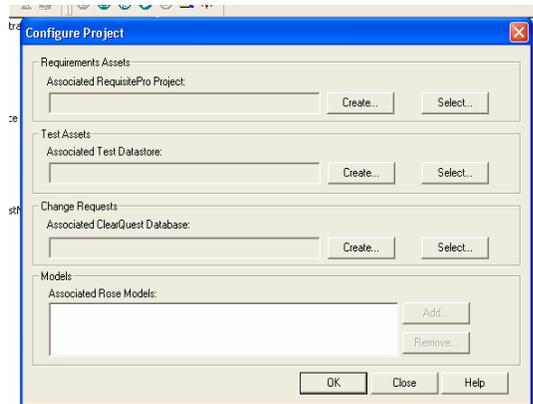
- Leave “password” and “confirm” boxes empty, click “next”
- Check “Configure Project Now”, click “finish”



After clicking “next” you are brought to the “Password and Confirm” page. For the example here, you will leave these entries blank. If your environment makes it necessary to fill in these entries then you will need to enter those values here. Click next and you are brought to the summary page. It shows you the new project name in addition to the UNC location. You should also note that this project is not UCM enabled at this time. The selection to password protect the project should also be shown here. At this point, you want to select “Configure Project Now” and then select “finish.”

Setup the test data store outside of UCM

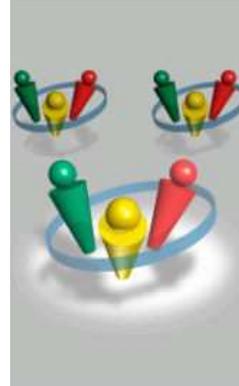
- Click the “create” button next to Test Datastore field
- Select DB2 data store type
- Use default path, enter alias, username, password
- Click finish



Since you have selected “configure project now” from the last step, this displays the Rational Administrator’s “configure project” wizard which is shown on this slide. The “test assets” section is the one you are interested in working with here. Note the “create” button next to the “Associated Test Datastore” field. Click this button which will display the wizard and prompt you for the type of backend database that you want to create. You will create an IBM DB2 data store for this example. Click “next.” You now need to enter a new data store path. Leave the default path in place. This should be the same path that you entered from the last slide, and it is not yet in a location that places it under UCM source control. Click “next” to continue. For initialization options, leave the fields blank and click Finish. The tool should now create and configure your test data store outside of UCM.

Topic two – Create a single stream UCM project

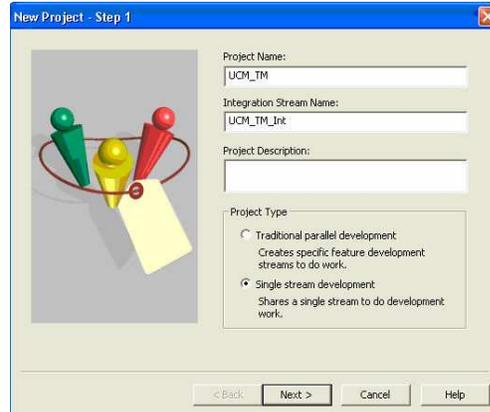
- Must be a single stream project
- No support for parallel stream development for this integration
- Shared snapshot view only



The second topic covers the second half of this Integration which is ClearCase UCM. For this example you are going to create a new single stream UCM project with one shared snapshot view. You can use an existing UCM project if you have one, but keep in mind that this integration only supports single stream projects and a single shared snapshot view for all users. There is no support for parallel development with this integration at this time.

Creating the project

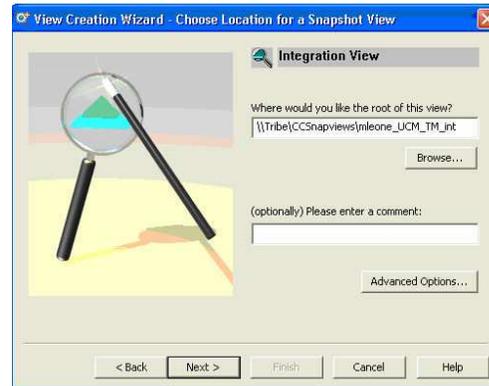
- Create or reuse an existing PVOB
- Create or reuse an existing component VOB – can either be a VOB level component or subvob component
- Create a single-stream UCM project



For this example you will create a new PVOB and component VOB. This process assumes that you already know how to create two new VOBs. Once you have the VOBs created, make sure you componentize the component VOB (or subvob directory – the choice is yours) under the new UCM PVOB. Using the project explorer new project wizard, create your new single stream UCM project, selecting your new component as the modifiable component within this new project. Again, the component can either be a VOB-level component or a subvob component depending on the required configuration of your environment.

Creating the view

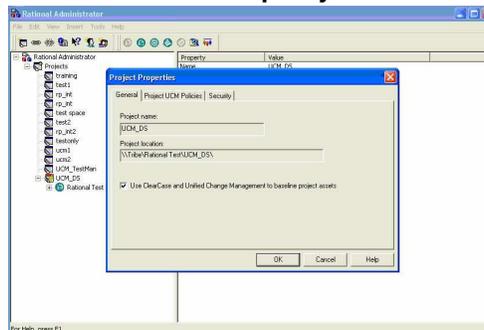
- Create a view for integration stream
- View must be snapshot
- Must be located in a unc-style shared directory



Once the new single stream project is created and configured properly with your new component selected to be modifiable, right click your integration stream within project explorer and select “create view” to start the view creation wizard. This step is important. As discussed earlier, the view for this integration **MUST** be a shared snapshot view located on a UNC style share that is accessible with full permissions to all users who are developing within this integration. Once you have the correct UNC path for the new view, you can continue with view creation.

Topic three: Adding a test data store to UCM

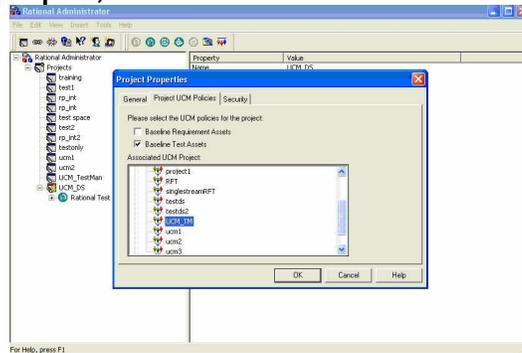
- Open rational administrator and connect to new project
- Open the project's properties window
- Select “Use ClearCase and Unified Change Management to baseline project assets”



The third topic in this module will cover the actual integration of Test Manager and ClearCase by placing the test data store under UCM source control. You will start by opening rational administrator and connecting to your new project. To connect, right click the project within the left pane and select “connect.” Once connected, right click the same project and select “properties.” This will call up the project’s properties window with three tabs. On the general tab, check “use ClearCase and Unified Change Management to baseline project assets” then select the “Project UCM Policies” tab.

Selecting policies

- Select Policies tab
- Check the 'Baseline Test Assets' check box
- Select the UCM project that was created in the previous topic, then click “OK”

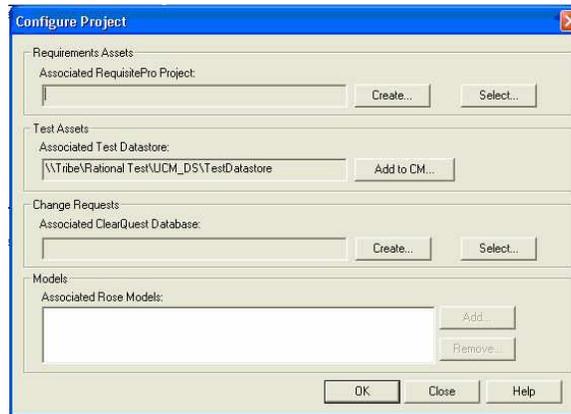


For Help, press F1

Under the “Project UCM Policies” tab, make sure that “Baseline Test Assets” is checked since one of the points of this integration is to be able to baseline new iterations of assets as they are checked in. Once you check that box you will need to select the UCM Project that was created in topic two of this module. Click “OK.”

Adding to change management

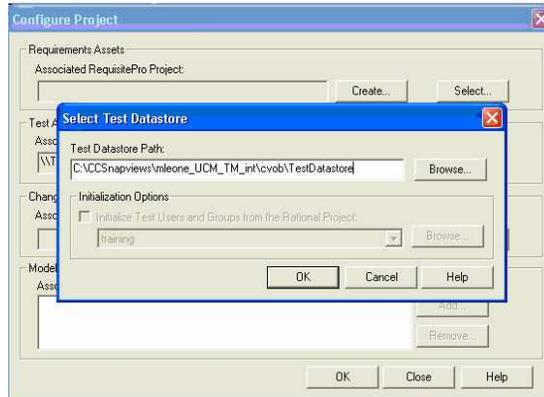
- Right-click the rational administrator project
- Select configure
- Click 'Add to CM' button next to the test data store



Now you are back in the rational administrator GUI. From here, right click again your new rational administrator project and select “configure.” This will bring up the configuration wizard for this project again. You should now see an “add to CM” button next to the “Associated Test Datastore” field. At this time, go ahead and click this button.

Setting the path under change management

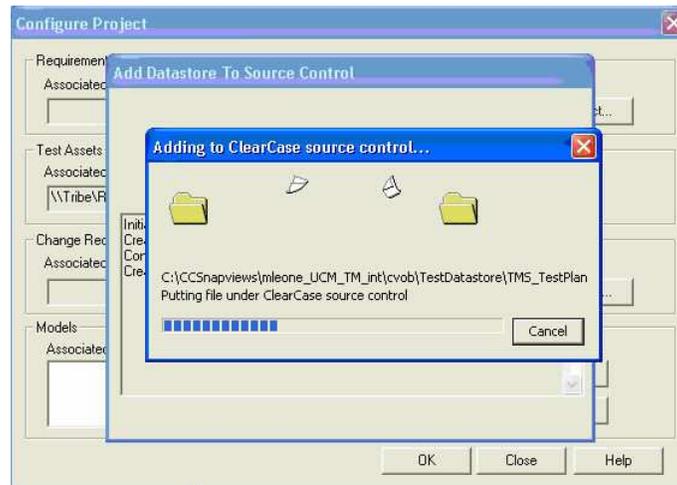
- Path for test data store is UNC style
- Format is \\server\share\view\vob\TestDatastore
- TestDatastore folder can also be located in subfolder of the VOB



Once you click “add to CM” it will bring up the selection window. The new test data store path that you want to enter is the path through the single stream snapshot view, component VOB, and optional subvob folder (of componentized). The new directory you will be creating is called “TestDatastore.” Once you have the correct path you can click “okay.” This will begin the process of adding the test data store to UCM and will checkout everything within that directory.

Adding to change management (continued)

- Clicking okay will begin process of adding to source control



You will note that the process takes at least several minutes while all files within the TestDatastore folder are put under UCM source control. Do not interrupt this process while it is taking place. It is very possible that you can receive an error due to a known issue with DB2 backends and UCM. The manual steps needed to solve this problem and finish the integration is covered in the next section. Until you see a "success" or "error" message, do not do anything.

Success or failure???

- Normal completed process will show...

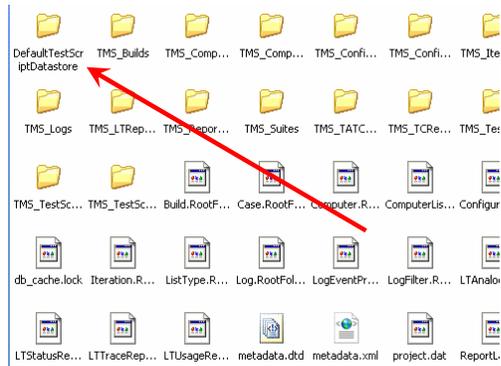


- Possible DB2 issues might show error such as "Unable to add Test Data store to Source Control."

Once the test data store and all of its contents are added to UCM source control, you will see a message stating that the data store has been successfully added to CM. At this point you can click "ok." If you see an error message, this is due to a known issue with DB2 backend test data store and some manual steps must be performed.

Manually completing the DB2 process, step one

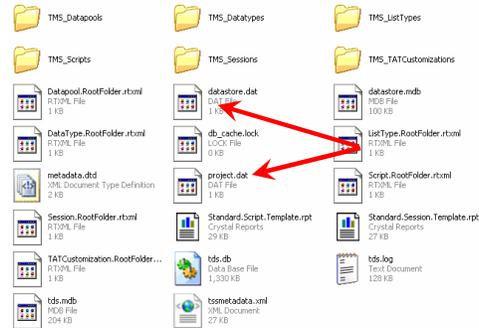
- Any message other than a success message will require the manual steps on these pages to be performed to complete the process.
- Step 1: Copy the DefaultTestscriptDatastore folder with the contents from the local data store location to the location within the source control VOB.



After enabling UCM on a rational administrator project with a backend test data store in DB2, the integration can fail with an error "Unable to add Test Datastore to Source Control". While most of the data store is added successfully, you must perform these steps to complete the process. The first step is to copy the DefaultTestscriptDatastore folder with the contents from the local data store location to the location within the source control VOB.

Manually completing the DB2 process, step two

- Open the Default Testscript Datastore you just copied into the VOB. Find the `datastore.dat` file and the `project.dat` file and update the datastore path in each to point to the source control location.



The second step is to open the DefaultTestscriptDatastore you just copied into the VOB. Find the `datastore.dat` file and the `project.dat` file and update the datastore path in each to point to the source control location. If the `.rsp` file is not located in the VOB, then the `project.dat` file does not need to be edited. For exact path details, refer to the `datastore.dat` file and the `project.dat` files available in the `TestDatastore` folder or `TestUsersAndGroups` folders that are already in the source control VOB. Those will not have to be changed.

Manually completing the DB2 process, step three

- Location of rxml files:

```
<project-name>\TestDatastore\TMS_TestInputSources\<<InputName>\.TestInputSource.rxml
```

```
<project-  
name>\TestDatastore\TMS_TestScriptSources\<<ScriptSource>\.TestScriptSource.rxml
```

- These files might or might not exist

Step three involves correcting the Input and Script source rxml files. Change the path to point to the correct path within the VOB in any input source and script source path files. If these files exist, they are located in the paths shown here. If they do not exist, this step can be safely skipped.

Manually completing the DB2 process, step four

- Open datastore.dat file in Wordpad
- Compare password in datastore.dat under source control with local datastore.dat
- If different, copy password from local datastore.dat file into datastore.dat file under source control.
- Set the DatastoreCMLevel=5 in all datastore.dat files found under source control.



Next, compare the datastore.dat file in the test data store under source control with the local copy of the test data store. If the DB2 login password is different, copy and paste the password from the local file to the file under source control. Once that is complete, set the DatastoreCMLevel to a value of 5 for this datastore.dat file and all other datastore.dat files you find in the data store folders. This tells the datastore.dat file that it is under UCM source control.

Manually completing the DB2 process, final step

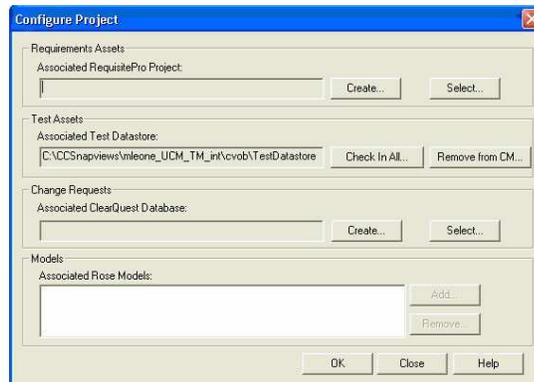
- Open project's RSP file
- Set the entries:
 - TestDatastorePath= <path to TestDatastore folder under source control>
 - TestAssetsCMEnabled=1
 - TestAssetsCMManaged=1



Finally, open the .rsp file associated with this integration and ensure that the three entries on this slide exist and are configured as shown here.

Ready for development

- Right click project, select configure
- Project now under UCM source control
- Ability to checkin all, create baselines



Development of test assets can now take place under UCM source control using your shared snapshot view. When you right click your new project in rational administrator and select “configure” you should now see a button next to the “Associated Test Datastore” which reads “checkin-all.” You will use this function when it is time to add new assets to source control and create UCM baselines.

Module summary

- How to create a test data store
- How to create a single stream UCM project
- How to add a test data store to UCM
- How to baseline test assets.

In this module, you have learned how to create an IBM Rational Test Data store with DB2 backend, a UCM single Stream Project, and how to integrate the two together to allow your project's test assets to be baselined under UCM source control. At this stage, you are able to configure and implement this type of integration into your environment.

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