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Configuring and using a RequisitePro project for baselining under ClearCase UCM

Rational software



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This module will instruct you in configuring the integration between Rational® RequisitePro and Rational ClearCase® UCM for versions 7.0.0 and higher.

Module objectives

- These topics are covered in this module:
 - ▶ Creating a UCM single stream project
 - ▶ Creating/configuring a rational administrator project
 - ▶ Creating a new RequisitePro Project to be placed under UCM source control
 - ▶ Creating UCM baselines for RequisitePro project assets
 - ▶ Creating/restoring RequisitePro projects from existing UCM baselines



This module walks you through the steps of creating a single stream UCM project, rational administrator project and RequisitePro project, then instructs you in the process of integrating all three. The module also covers how to use the checkin-all functionality of rational administrator to version your RequisitePro project, how to baseline your RequisitePro project using UCM, and how to seed new projects with a UCM baseline.

Section one: Creating a UCM single stream project

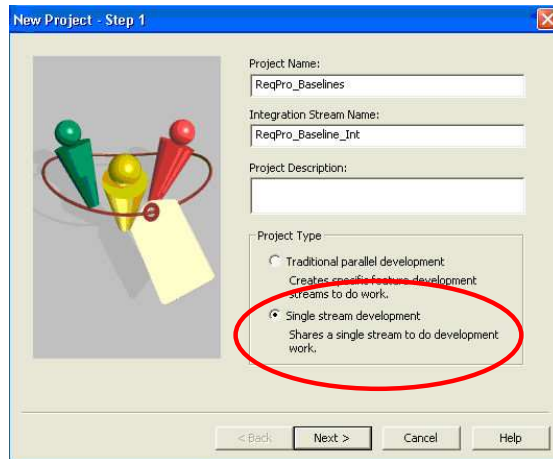
- Single stream project
- No parallel development support
- Shared UNC location



The first section of this module covers ClearCase UCM. For this example you are going to create a new single stream UCM project with one shared snapshot view. A dynamic view can also be used, but the key of this integration is a single shared view on a UNC share. 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 view for all users. There is no support for parallel development with this integration at this time.

Using the project explorer GUI for project creation

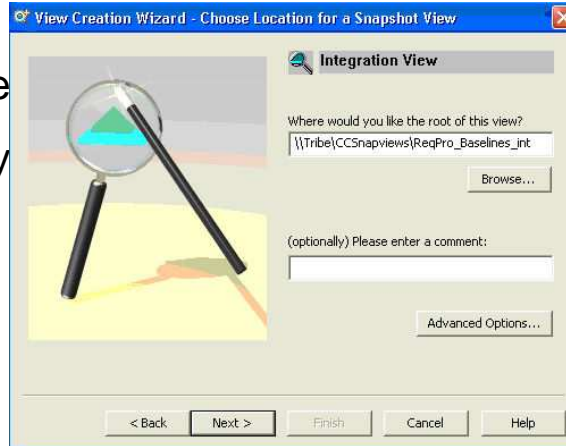
- Create the VOBs
- Componentize
- Create the UCM single stream project



For this example you will create a new PVOB and component VOB. This process already assumes that you 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 a UNC-style shared view

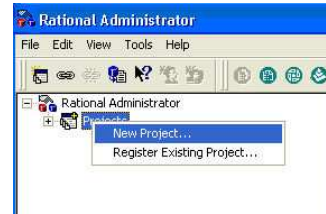
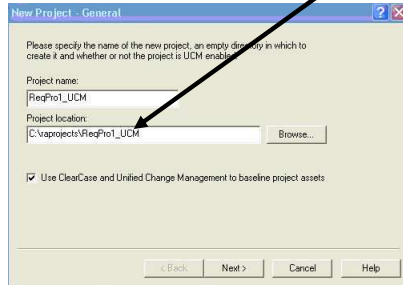
- Create the integration view
- Must be in UNC share
- Must be accessible by all users



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, this view for this integration **MUST** be a shared snapshot or dynamic 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.

Section two: Creating/configuring a Rational project

- Create new Rational project
- Must be in shared directory

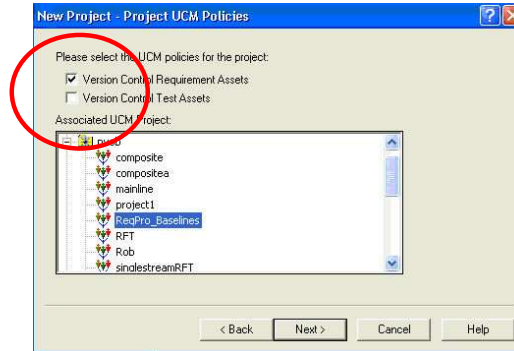


After a Rational ClearCase UCM Project and integration view have been created, perform these steps to create a new rational administrator project and associate it with the ClearCase UCM project:

First, launch rational administrator. Next, select the “New Project” command from the File menu or toolbar. The first page of the New Project wizard opens. Enter the rational administrator project name, location and indicate if the project is to be UCM enabled. The location of this file does not have to be in the UCM view. This is purely a configuration file that is not versioned. You will see a warning window which instructs you to ensure your Rational project file is located in an open, shared directory on your network accessible through the UNC path. Verify that the location is open and available, then click “okay.”

Section two: Creating/configuring a Rational project (continued)

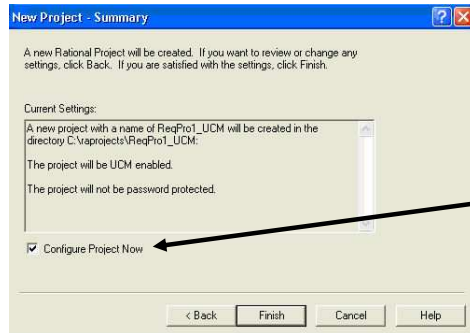
- Select UCM project for integration
- Check “Version Control Requirement Assets”



Now select the Next button. You will see the UCM Policies window. If the “UCM enabled” option is selected, the “Policies” wizard page opens. Select to “Version Control Requirement Assets” and then select the UCM project to associate with the rational administrator project.

Section two: Creating/configuring a Rational project (continued)

- Optional security page
- Summary and finish

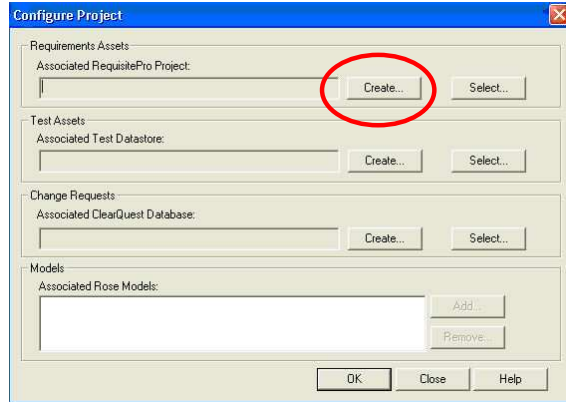


- Be sure to check this

Select the Next button. The security page opens allowing you to optionally enter a password and select the Next button. This security is used only for access to configuration information for the Rational project and not for security on the Rational RequisitePro project. In this example you will leave this page blank. The summary page will now appear. Select to configure the project immediately after it is created then select the Finish button. Once the Finish button is selected and all information is validated, the Rational Project is created and the association between the Rational project and the UCM project is established. A file is created in the specified location identifying the project. The file will have the name of the project plus a ".rsp" extension. The ".rsp" file is not versioned.

Section three a: Creating a new RequisitePro project

- Configure project
- Create new RequisitePro project
- Click “OK”



The configuration dialog, where you can create a new Rational RequisitePro project, will now appear. Perform these steps to create a new versioned Rational RequisitePro project. First, from the Rational project configuration dialog, choose the create button under the “Requirement Assets” section. This will bring up the template GUI shown on the next slide.

Selecting the template and location in UCM

- Select template for RequisitePro project
- Enter database name, location, description and type
- Location must be inside shared view/component



Using the template GUI, select a Rational RequisitePro project template from which to create your new RequisitePro project. The Rational RequisitePro project properties dialog is presented. Enter the database name, location, description, and database type. Note that the location for the RequisitePro project **MUST** be the shared UCM integration view created in Rational ClearCase setup. The system will verify that the database location specified is within an integration view associated to the integration stream of the UCM project. If not, you receive an error and you are not allowed to continue.

Adding to source control

- Steps that RequisitePro takes to add to source control



Now your project is added to UCM source control. Here are the steps that are automatically taken by the Rational RequisitePro application to create the new RequisitePro project and add it to version control. Once these steps have completed successfully, your RequisitePro project will reside under UCM version control within the ClearCase VOB:

1. First RequisitePro creates a RequisitePro database file (.rqs) in the location specified (integration view).
2. RequisitePro copies the project structure XML file (based upon template) to the location specified. Note: RequisitePro persists the requirements information in Rational ClearCase through files in XML format. This is an internal implementation detail and will not affect how the user uses RequisitePro.
3. RequisitePro creates a new activity in ClearCase for adding the .rqs and XML file to version control.
4. RequisitePro places the .rqs and XML files under version control and checks in the files.
5. RequisitePro uploads the project structure from the XML files to the database.
6. RequisitePro adds a reference to the Rational project in the database.
7. RequisitePro returns the path and file name of the .rqs file to the rational administrator.

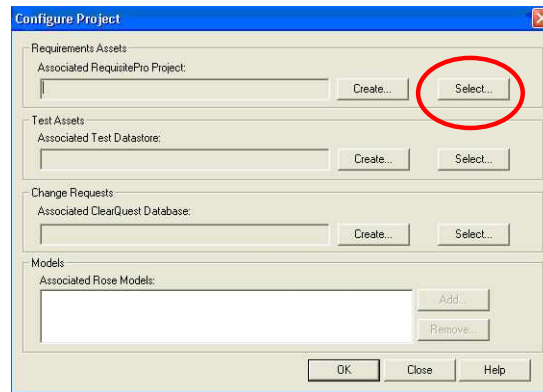
Some additional hints...



Note: You might want to set the new project's properties to not save documents in the Rational RequisitePro format. If documents are saved as Word documents, you will have better flexibility in working with Rational ClearCase. This means you can use ClearCase's diff tool to compare word documents if you save the documents with a .doc extension instead of the extensions that RequisitePro creates (.ucs, .vis, and so on.). However, if you do choose not to save in RequisitePro format it is more likely that someone can try to open and modify a RequisitePro document directly from Word (which is not a good idea).

Section three b: Adding an existing RequisitePro project to UCM

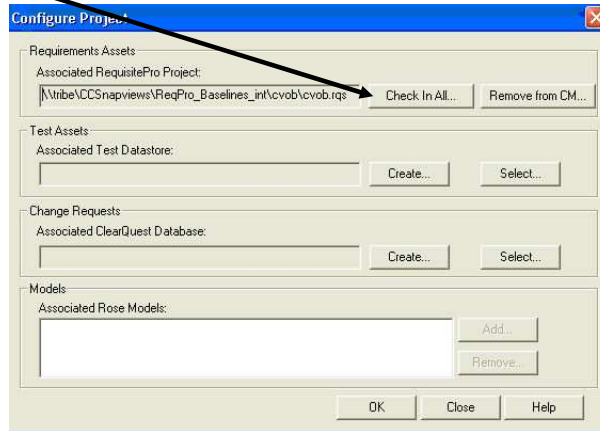
- Choose “select”
- Use existing project using .rqc file from current location
- .rqc must NOT already be under version control



As an alternative to creating a new Rational RequisitePro project, you can add an existing RequisitePro project to version control. This process is as described in Section three a of this module, however, choose “select” instead of “create” in the configure project dialog and pick the existing RequisitePro project (.RQS) file from its current location. Note: the .RQS file must not already be under version control or this will fail.

Section four: “Check in all” and UCM baselines

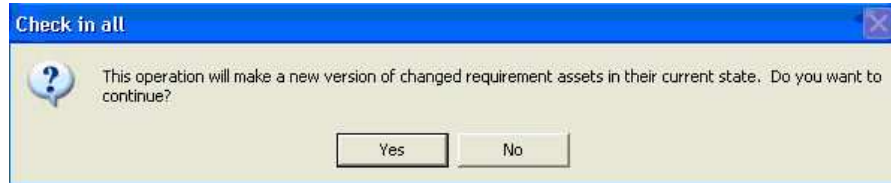
- Click “Check In All” from project configure page
- Process can take several minutes
- Use to make new baseline



Once a Rational RequisitePro project has been placed under version control, you can start a “Check-in all” command from the Rational project’s configuration dialog. This operation will create a new version of all the requirement assets in the RequisitePro project. This process involves writing the contents of the RequisitePro database to XML. For those XML files that might already exist, a new Rational ClearCase version is created. If new requirement types or documents have been added to the project since the last check-in-all, then a new ClearCase element is created and added to version control. The check-in all operation is how you version your RequisitePro project (including the information in the database and Word documents). This is a necessary step before making a UCM baseline of those requirement assets from ClearCase. To start this process, select to configure your Rational project from rational administrator window and then select the Requirements Assets “Check-In All” button in the “Configure Project” dialog.

Performing “Check in all” function

- Click “yes” in the confirmation box...



Rational RequisitePro places an exclusive lock on the RequisitePro project. If the project can be locked exclusively, then RequisitePro displays a confirmation Yes-No message box with the text "The operation will check-in-all requirement assets in their current state. By performing this operation you can create a baseline of these requirement assets using Rational ClearCase. Do you want to continue?" Select "Yes" in the confirmation dialog.

Selecting the UCM activity for “Check in all”

- Create new UCM activity headline
- Select OK to begin the process



RequisitePro then displays a "Check-in-all" dialog, which prompts you for a UCM activity "headline" text to describe the requirements assets being checked in. Enter a headline and select OK on the "Check-in-all" dialog which will begin the process.

Process steps for “Check in all” function

- Automated process
- Accomplishes seven steps



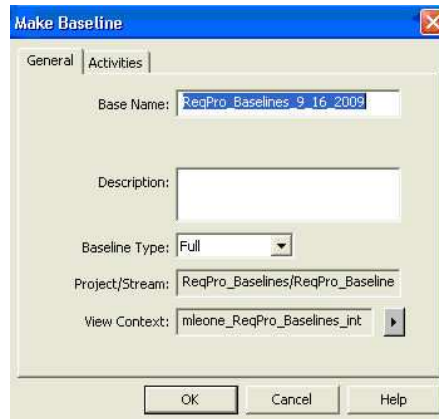
Here are the steps the RequisitePro application performs during check-in-all:

1. RequisitePro adds any new files to version control.
2. RequisitePro checks out any known files that are currently checked in.
3. RequisitePro updates all (XML) files from database.
4. RequisitePro deletes and removes any obsolete files from version control.
5. RequisitePro checks in all files using the associated UCM activity with the user specified headline.
6. RequisitePro checks out all files to the view, using a well-known activity that is unique to the RequisitePro project. This check out occurs because all requirements assets must be writable for RequisitePro to work correctly.
7. Finally, the check-in-all completes and the RequisitePro project has been versioned.

If any problems occur during the check-in-all operation, the check-in-all dialog will inform the user and display the details of the errors. Many times these errors are related to Rational ClearCase errors during check in or check out of the project files. If you receive any errors, try this: First, Re-run the check-in-all operation. This will typically fix the problem. Next, identify what file the error occurred on and confirm that it is in the view and in a checked-out state. Then re-run the check-in-all operation until it completes successfully.

Making a UCM baseline of assets

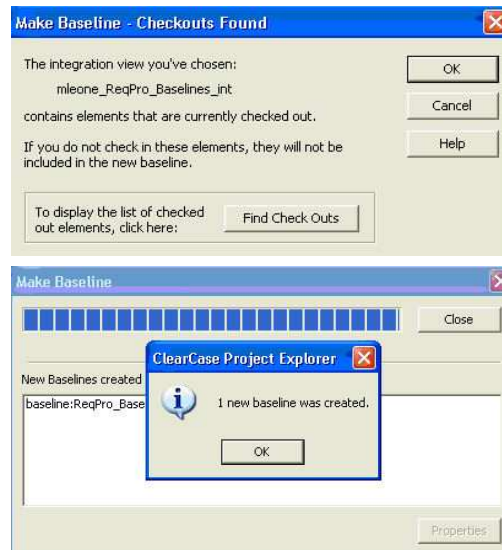
- Open project explorer
- Right click integration stream
- Make baseline
- Must be full baseline



After completing the check-in-all operation, you might decide to create a UCM baseline of your requirement assets. A baseline is a Rational ClearCase UCM object that typically represents a stable configuration for one or more components. A baseline identifies activities and one version of every element visible in one or more components. To proceed, open Rational ClearCase project explorer, select and expand the UCM project, then select the integration stream that is being used by all Rational RequisitePro users for this project. Right-click that stream and select “Make Baseline”. This will bring up the “Make Baseline” GUI. Enter a baseline title, select “Full” for baseline type and then click “OK” to make the baseline.

Expected behavior...

- Click “OK” box for “checkouts found” warning
- Baseline creation completes



You are presented with a dialog saying that checkouts were found. This is expected behavior. Click OK to continue. All files in the view are left in a checked out state in order to support editing of the Word documents and requirements by RequisitePro. Once the baseline has been created, close the “Make Baseline” dialog

Section five: Seeding new RequisitePro projects from UCM baselines

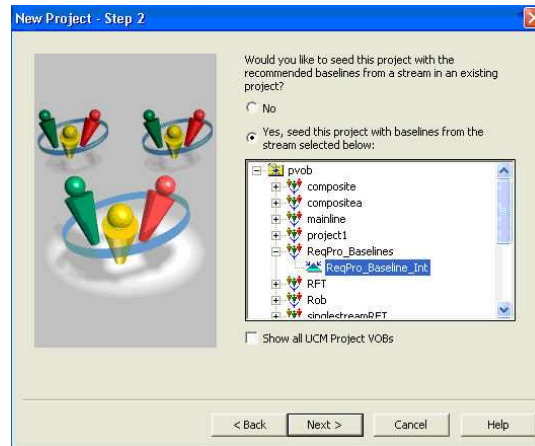
- Use existing UCM baseline
- Seed new single stream UCM Project
- Integrate with RequisitePro and Rational project



One of the key benefits of the new baseline capabilities of Rational RequisitePro is the ability to create a new RequisitePro project from an existing UCM baseline. Creating a new RequisitePro project from a UCM Baseline is very similar to the steps described above to create a versioned RequisitePro project. However, there are a few key differences. When creating a new UCM Project, make sure to include the existing requirements component at the baseline from which you want to create your new RequisitePro project. Furthermore, you want to “Select” the existing RequisitePro project file (.RQS) file in the view of your UCM project as opposed to creating a new RequisitePro project. One other thing to consider is that the original Rational RequisitePro project had links to Rational Rose®, Rational ClearQuest® or to other RequisitePro projects those links are not restored when creating and new project from a baseline. Also note that the history of individual requirements and documents is not restored when creating a new RequisitePro project from a baseline. To start the seeding process, let’s open ClearCase Project Explorer.

Create the UCM project with project explorer

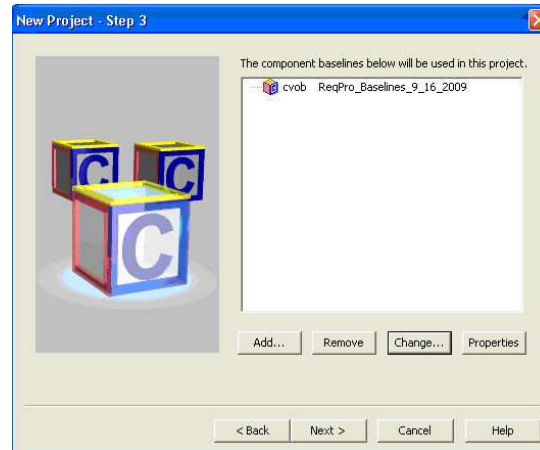
- Open project explorer
- New single stream project
- Seed from existing project integration stream baseline



Create a new UCM project using the Rational ClearCase project explorer and select to seed the project with a baseline from an existing UCM project.

Confirm your selections, create the view

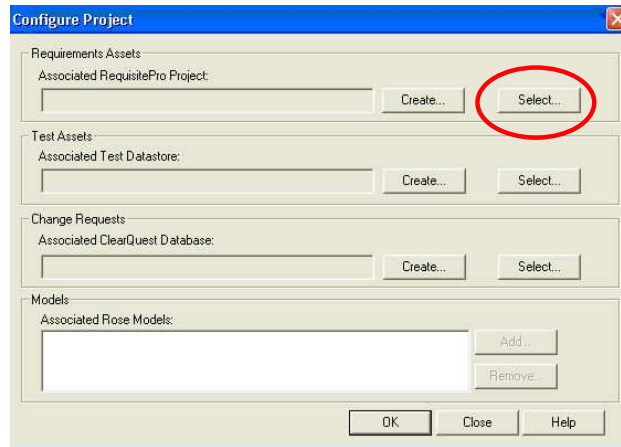
- Select modifiable components
- Select proper baseline
- After project creation, create new shared view for stream



Confirm that the proper component and baseline are selected and then complete the creation of a UCM Project. Next, create a new UCM integration view which is shared by all Rational RequisitePro users accessing the new UCM project.

Create the new Rational project

- Open rational administrator
- New Rational project
- Configure new project using “select” button



Next, create a new rational administrator project in the same manner as you did in section two of this module. Once the rational administrator project has been created, the Rational project configuration dialog should automatically appear. Choose the “Select” button under the “Requirement Assets” section.

Complete the operation

- Browse to new location and select .rqs file
- RequisitePro associated project with new Rational project
- Ready to go...



Browse to your new shared integration view and select the Rational RequisitePro project (.RQS) file. The system will determine that the project location specified is within an integration view associated to the integration stream of the UCM project. If not, you receive an error and you are not allowed to continue. RequisitePro will associate the RequisitePro project with the Rational project. Make sure you change the name of this new project through the RequisitePro project properties dialog. As this project, by default, has the same name as the original. The new project is now ready to use.

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