

Upgrading the DOORS and Change integration data to the OSLC-CM integration

Krishnakanth Naik
Priyadarshini Rautray
Yuvaraj Patil

June 13, 2012

INTRODUCTION.....3

BENEFITS OF THE OSLC-CM INTEGRATION.....5

REQUIREMENTS FOR THE OSLC-CM INTEGRATION.....6

 SYSTEM REQUIREMENTS:.....6

 PREREQUISITES.....6

UPGRADING TO THE OSLC-CM INTEGRATION.....8

 SETTING UP THE RATIONAL DOORS DATABASE SERVER.....8

 CONFIGURING THE REDIRECTOR SERVICE.....8

 RATIONAL DOORS CHANGE MANAGEMENT UPGRADE UTILITY.....9

NOTES.....28

REFERENCES.....29

Introduction

The content of this white paper helps you understand the administrative tasks of migrating the traditional integration of IBM Rational DOORS and IBM Rational Change to the new OSLC based integration. Rational DOORS and Rational Change administrators can use this information to upgrade the mode of integration and migrate all the pending tasks.

Traditionally, installing the integration plug-in for Rational DOORS is a generic process you complete to integrate it with any Change Management (CM) application. The DOORS-Change integration is one such example wherein you must follow a few sequential steps to integrate Rational DOORS and Rational Change. The integration is not provided as-is or pre-configured.

A complication that can occur with the migration procedure is that some data is not yet committed. The approval of certain change requests are still pending. In a production system, the number of these requests can be numerous. This can raise concern regarding the success of the upgrade and whether the integration behaves in the same manner as before the upgrade.

Mentioned below are some of the key issues that used to limit, integrating DOORS with other products:

- Multiple vendors, open source projects, and in-house tools
- Private vocabularies, formats and stores
- Entanglement of tools with their data

Starting with Rational DOORS V9.3.0.2, there is no requirement to install external components to configure the integration. Rational DOORS includes a built-in Change Management plug-in and is compliant with the Open Services for Lifecycle Collaboration (OSLC) framework. The OSLC framework enables Rational DOORS to integrate with other applications that are OSLC compliant.

The new integration showcases a boost in the performance with associated data. The data maintained in the Change Management utility with the older version now resides in Rational DOORS. You now use the Rational DOORS Web Access (DWA) interface for reviewing requirement changes. In older versions, that action is possible only from Rational Change.

To take advantage of these features, administrators must complete the tasks for setting up the new integration.

This white paper walks you through the migration procedure from old integration templates to the new OSLC integration based template using the plug-in in Rational DOORS. This document also covers the setup procedure of the Rational DOORS database server and Redirector Service.

Upon completion of the upgrade, the existing requirement changes from the Rational Synergy database migrate to the Rational DOORS server database. The key feature of this migration is to take care of restoring the existing links appropriately. The migration updates all DOORS views created by the integration for use with the new OSLC-CM integration.

You can still submit requirement change requests (RCR) using Rational DOORS and Rational Change with the OSLC-CM integration. However, you use DWA to store the integration data in Rational DOORS and links are stored in Rational Synergy database.

An advantage of this migration is that users do not require re-training for the post migration workflow.

Benefits of the OSLC-CM integration

Now change management is available as a part of DOORS, which is configurable with any change management tools.

Read this link for more information on change management:

http://publib.boulder.ibm.com/infocenter/doorshlp/v9/topic/com.ibm.doors.install.doc/topics/doors_int_admin_user.pdf

- Installing the integration on all the clients locally is not required.
- The database manager is only setup once by the database manager. The clients can continue to use the DOORS Client.
- The new integration enables use of DWA to access the data associated to change management. Hence there is no client installation requirement.
- All the data resides in DOORS instead of in Change, resulting in improved performance.

Requirements for the OSLC-CM integration

System Requirements:

- **IBM Rational DOORS 9.3.0.3**
Setup DOORS Web Access (DWA 1.4.0.3) and DOORS Redirector Service
- **IBM Rational Change 5.2.0.4**
Install doors_oslc_process_10 lifecycle
- **IBM Rational Synergy 7.1.0.2**
- **Rational Change for DOORS Interface 5.7 patch 04**
- **IBM Rational Directory Server 5.2 (Tivoli)**

Here is the link to the DOORS Change Management upgrade utility readme:

<ftp://public.dhe.ibm.com/software/rational/change/5.2/integrations/DOORS/DCM9.3/README.htm>

Prerequisites

User roles and permissions

- The user performing the upgrade process must:
 - Have administrator privilege to the Change Server
 - Have Read, Modify, Create, Delete, and Admin (RMCDA) access to the DOORS database modules
 - Preferably have Project Manager or Database Manager roles
- You must have DOORS administrator credentials to migrate the DOORS database with the legacy Change integration to the latest version of DOORS with new the new Change Management integration.
- You are only required to perform the upgrade process one DOORS client machine.

Rational Change login credentials

- User is asked to enter Change Server database path and login information through out the upgrade process.

Rational DOORS Redirector services needs to be installed

- You will have to Configure DOORS Web Access with Redirector Services before you start Change Integration Migration. See these instructions in the Link:

http://publib.boulder.ibm.com/infocenter/doorshlp/v9/topic/com.ibm.rational.dwa.install.doc/topics/c_introredirector.html

Upgrading to the OSLC-CM integration

Setting up the Rational DOORS database server

You must setup the Rational DOORS database server to communicate with the interface services broker. You must add Data Change Notification (DCN) parameters to the command line to set up communication. DCNs are messages that contain information about changes made to Rational DOORS data.

About this task

To set up the Rational DOORS database server, you must run the **dbadmin** command. You can find this command in the "\\IBM\Rational\DOORS\9.3\bin" directory of the Rational DOORS client machine.

Procedure

Run **dbadmin** in this format:

```
dbadmin -data 36677@myserver -dcnEnable -dcnBrokerUri  
"tcp://myBroker:61616" -dcnChannelName "dcn"
```

Configuring the Redirector Service

You must configure the Rational DOORS Redirector Service, the interface services server, and the Rational DOORS database server.

Procedure

Navigate to the directory where you extracted **festival-win32.zip**.

Open "server\festival\config\doorsRedirector.properties" in a text editor.

Set the **doors.url.prefix** value to match the database server that is serving the interface services. Use this form:

```
doors://host:port/
```

In this form, host is the name of the Rational DOORS database server and port is the port number. The port is typically 36677.

Set the **dwa.url.prefix** value to match the interface services server. Use this form:

http://host:port/dwa/

In this form, host is the name of the interface services server and port is the port number. The port is typically 8080.

Optionally:

- ▶ Disable forwarding from the redirector service to the interface services by setting **<entry key="dwa.enable">false</entry>**
- ▶ Disable forwarding from the redirector service to Rational DOORS by setting **<entry key="doors.enable">false</entry>**

Once you complete these changes, save and close the file.

Next, open "server\festival\config\festival.xml" in a text editor. Find the line beginning with **<f:property name="published.url.prefix">**.

Change **MYHOSTNAME** to the name of the machine with the Redirector Service installation. Save and close the file.

Next, start DOORS. Configure the Rational DOORS database server so that generated URLs reference the Redirector Service. In the **bin** directory of the database server installation, run this command:

**dbadmin -data port@host -urlPrefix
http://yourdwaserver:port/doors/redirector**

With this command, "dwaserver" is the name of the interface services server and port is the port number. The port is typically 8080.

After making these changes, restart the interface services components.

Rational DOORS Change Management Upgrade Utility

See this link for upgrading any Rational DOORS and Rational Change integrations to Change Management for DOORS 9.3.0.3

http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.change.doc/pdf52/upgrd_chng_doors_93_oslc_cm.pdf

Once you meet the system requirements, you can begin this procedure to upgrade:

1. Log into Rational DOORS 9.3

2. Upgrade the configuration templates:
 - c. Create a new configuration template for Change Server 5.2.0.4.
 - d. Delete the old configuration template.
 - e. Note that this step allows you to reassign modules to the new configuration template

These screen captures depict the new Configuration details used by the OSLC integration.

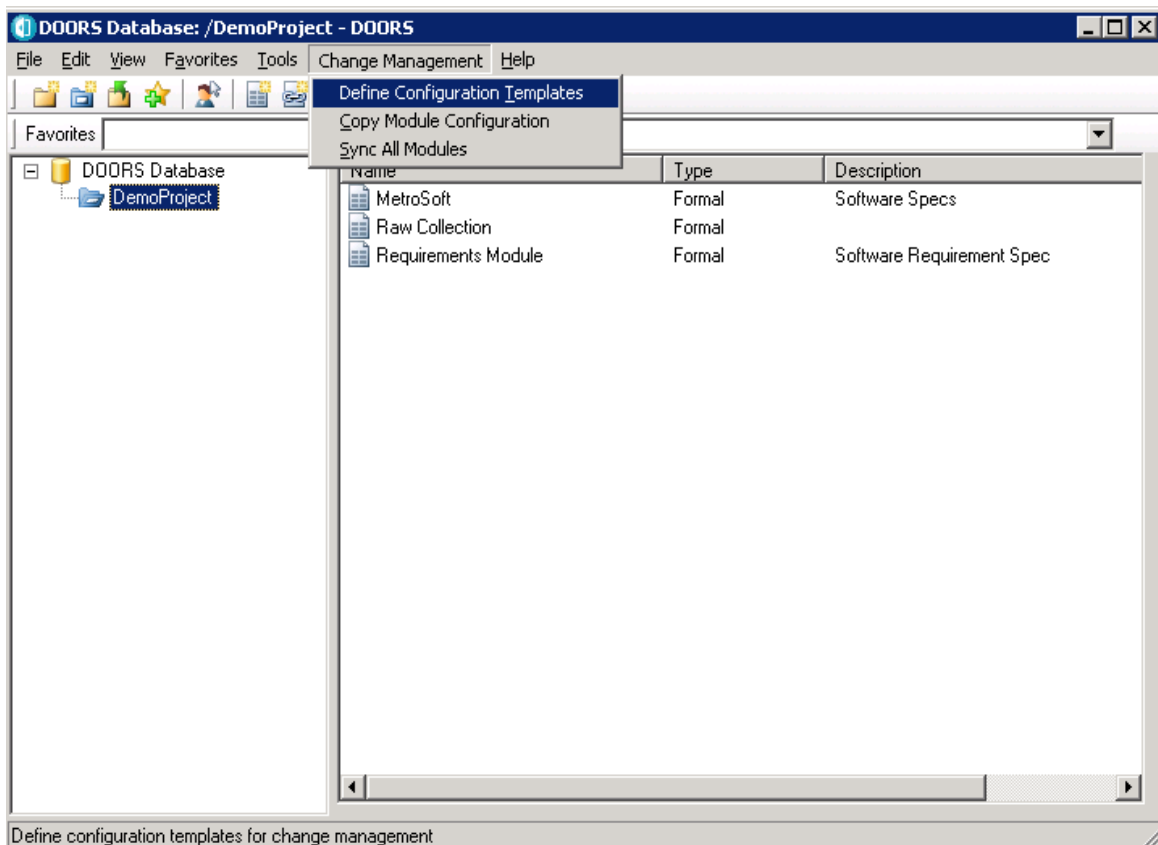


Figure 10.1: Creating the new Configuration Template.

You will still see the older configuration templates. Click the **New Template** button to proceed with the new template creation.

The screenshot shows a dialog box titled "Configuration Template - DOORS" with three tabs: "Step.1 Configure Rational Change Management Server", "Step.2 Requirements Change Management", and "Step.3 Requirements Implem". The "Step.1" tab is active. The dialog contains the following fields and controls:

- Template Name:
- Authentication: Basic Auth OAuth
- Rational Change Management Server Configuration (collapsible section):
 - Example: `http://myserver:8080/Change/oslc`
 - URL for Change Management server:
 - Choose a Rational Change Database:
 - Choose a Login Role:

At the bottom right, there are three buttons: "Next", "Finish", and "Cancel".

Figure 10.2: Using OSLC context to configure the new integration.

Configuration Template - DOORS

Step.1 Configure Rational Change Management Server | Step.2 Requirements Change Management | Step.3 Requirements Implemen

Values

Assigned State:

Review State:

Approved State:

Applied State:

For ClearQuest

Apply Action Attribute: Review Action Attribute:

For Rational Team Concert

Apply Action Attribute: Review Action Attribute:

State Attribute:

RCR Submit Form:

Show RCR Recording Report

Conflicting Proposal Behavior:

- Take no action
- Warn user of conflict
- Prevent modification

Back Next Finish Cancel

Figure 10.3: Updating the apt states and RCR configurations.

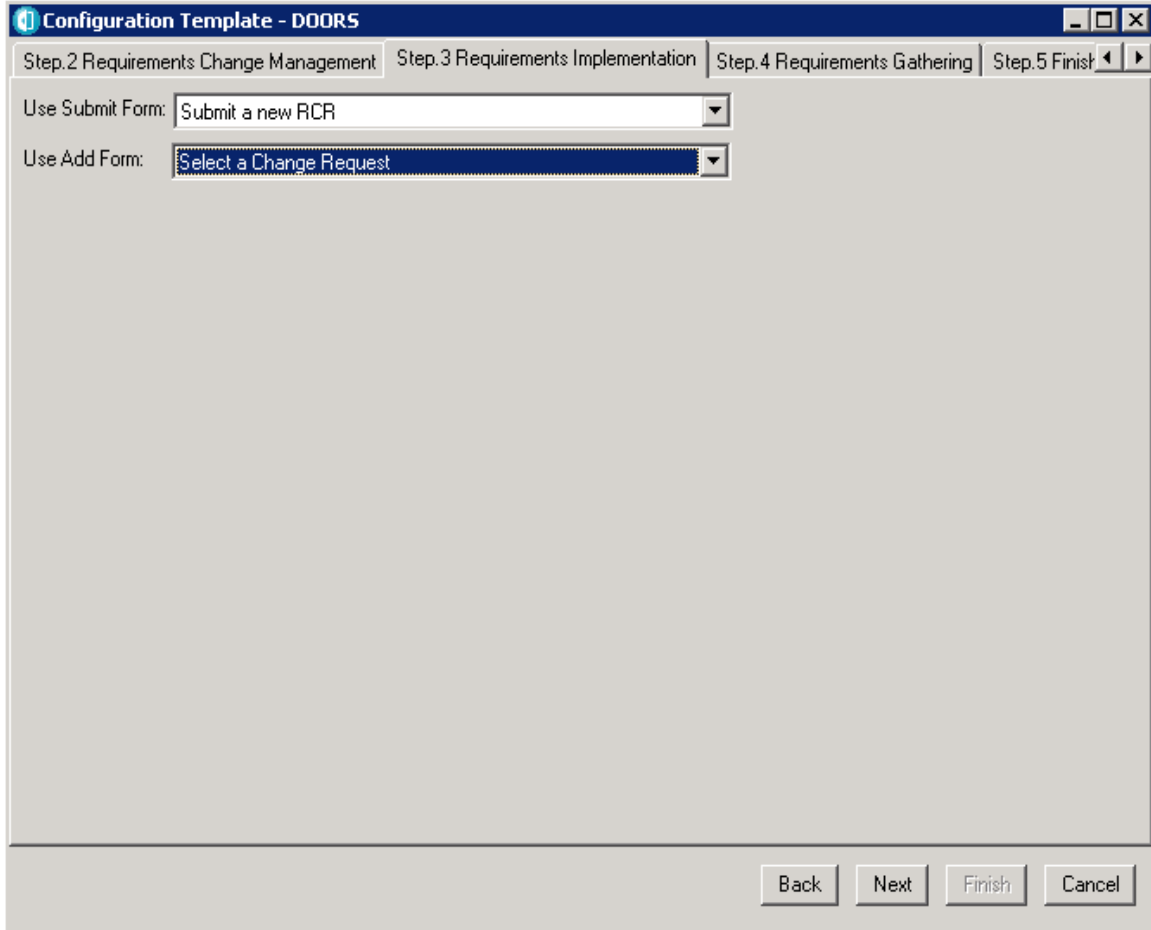


Figure 10.4: Selecting default submit forms.

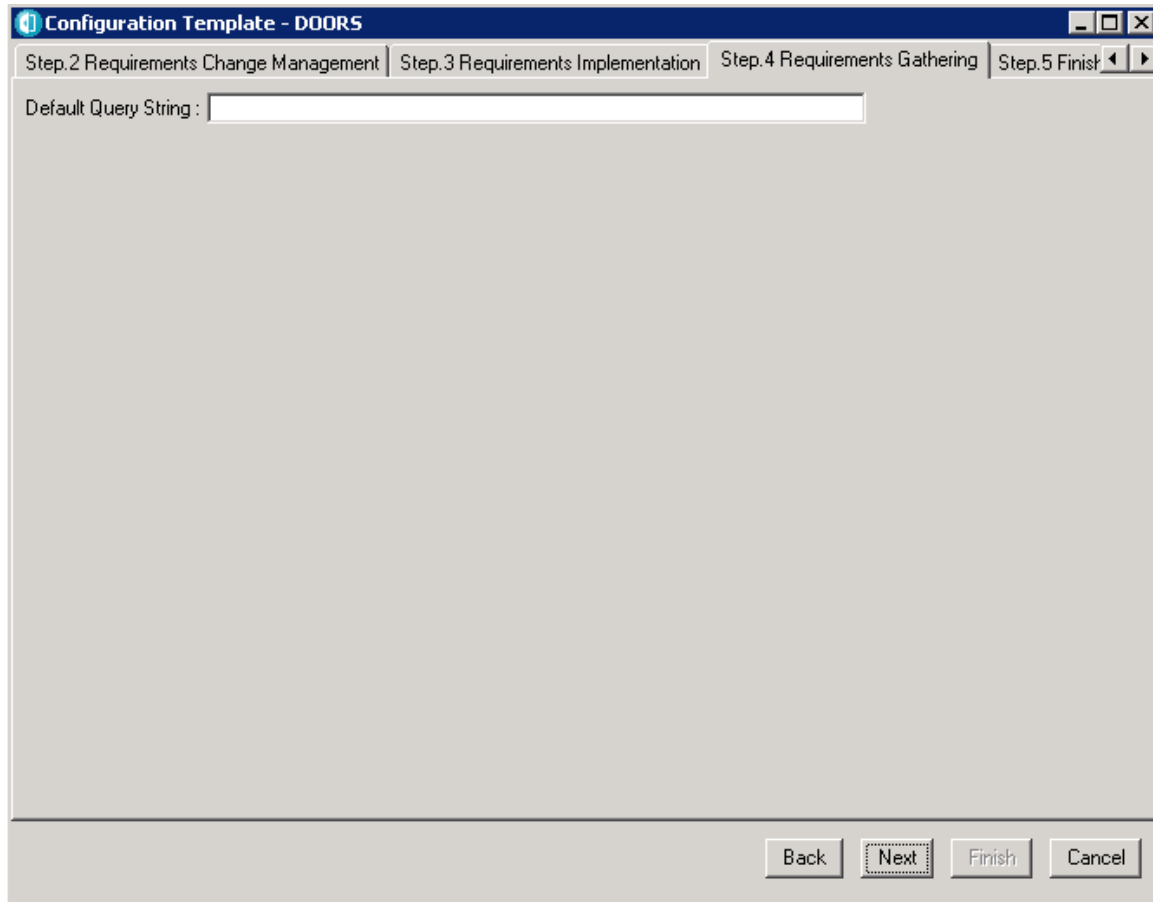


Figure 10.5: Specifying the default query string for gathering requirements.

Note: You cannot use the old Rational Change query format in this page. You can maintain this configuration without any query, as your current task is to work with migrating data stored in Rational Change into Rational DOORS.

The requirements gathering process does not affect the data migrated from Rational Change to Rational DOORS. Additionally, you see this query window every time you require data from Rational Change.

Here is an example format for retrieving Rational Change records using a sample query that fetches all the records in the Submitted state:

`oslc_cm:status="Submitted"`

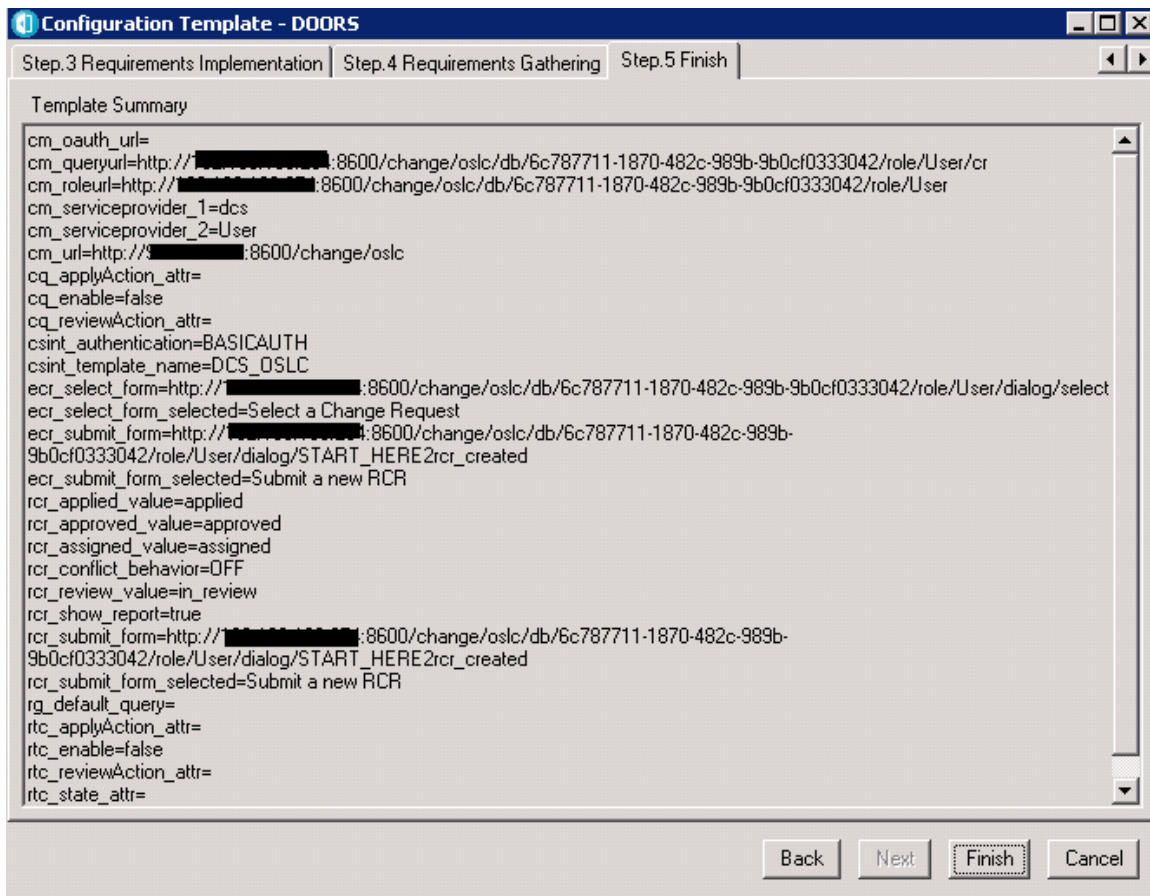


Figure 10.6: Verifying the template configuration.

Once you complete these steps, continue with the Change Management Upgrade Utility steps:

3. Exit from DOORS.
4. Install IBM Rational Change for DOORS Interface 5.7.
5. Login to DOORS 9.3.
6. Go to the menu option **Tools > Edit DXL**.
7. The DXL Interaction opens.

8. In the DXL input window, enter an **#include** statement for the location of the upgrade utility. For example:

#include "c:\\temp\\upgradeUtil.dxl"

9. Download the utility from this URL and extract it into a temporary location:

ftp://public.dhe.ibm.com/software/rational/change/5.2/integrations/DOORS/DCM9.3/doors_oslc_upgrade.zip

10. Open the utility and click **Run**.

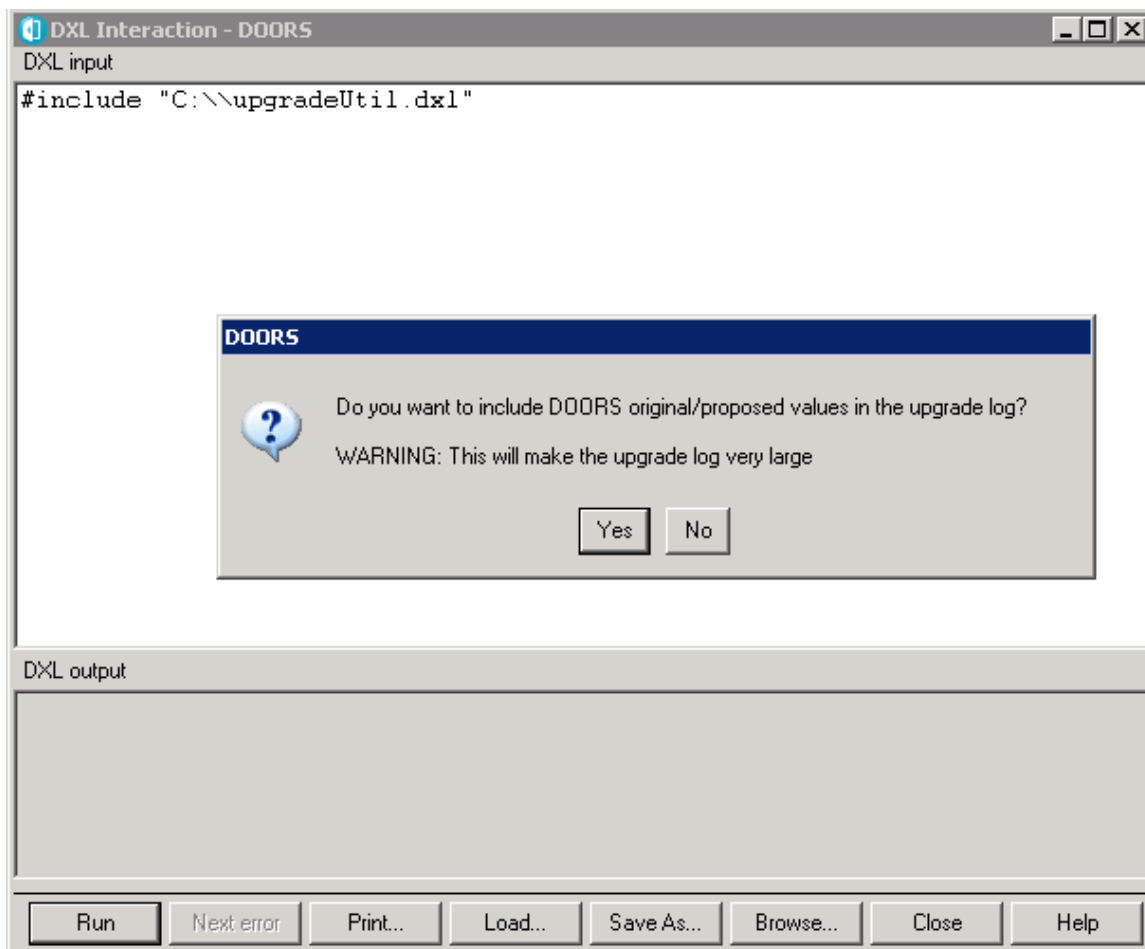


Figure 10.7: Running the DXL statement.

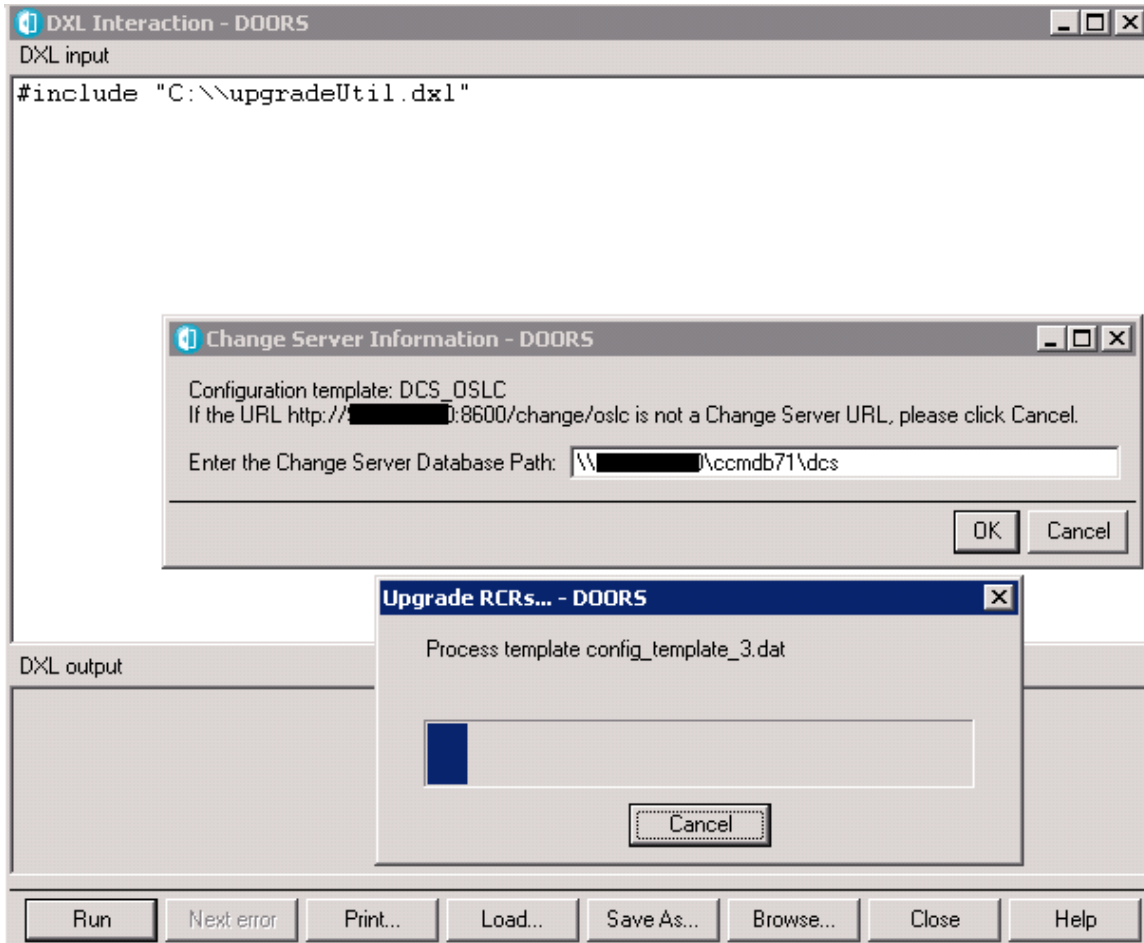


Figure 10.8 : Progress indicator for the link conversion.

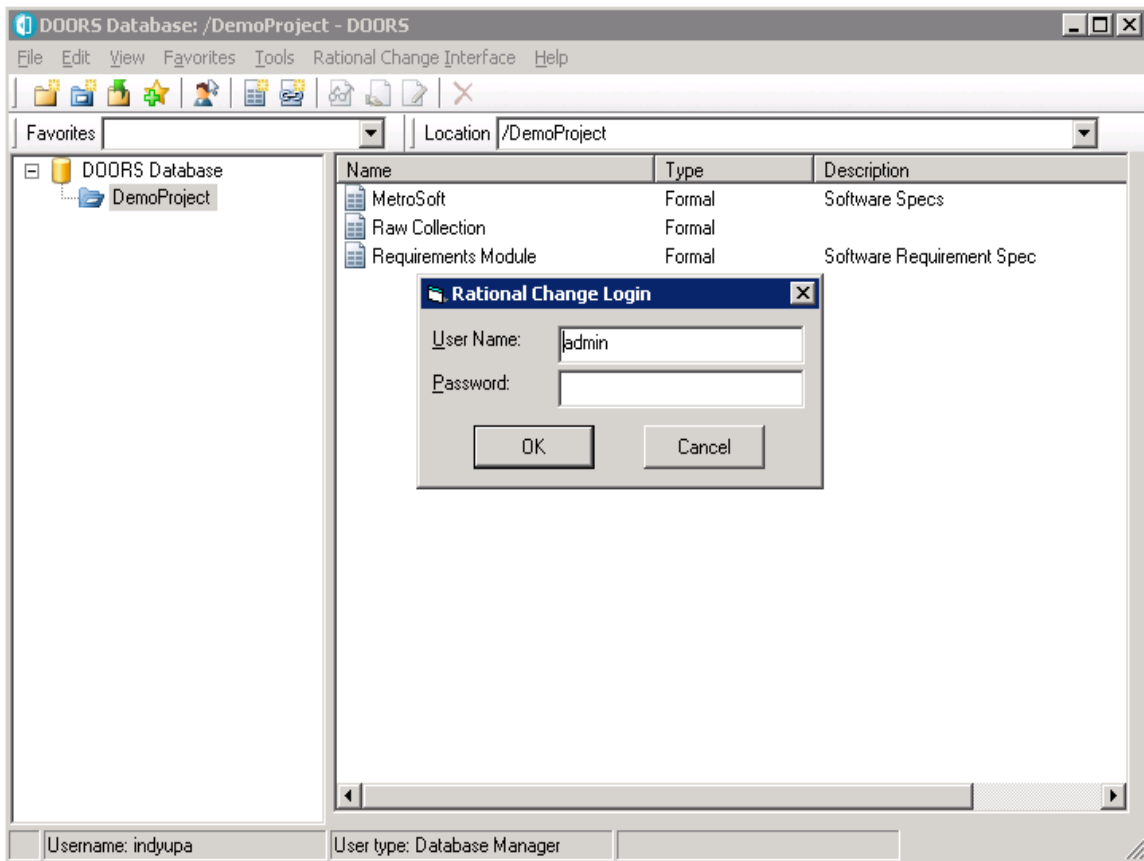


Figure 10.9: Login request for gathering all the current link details.

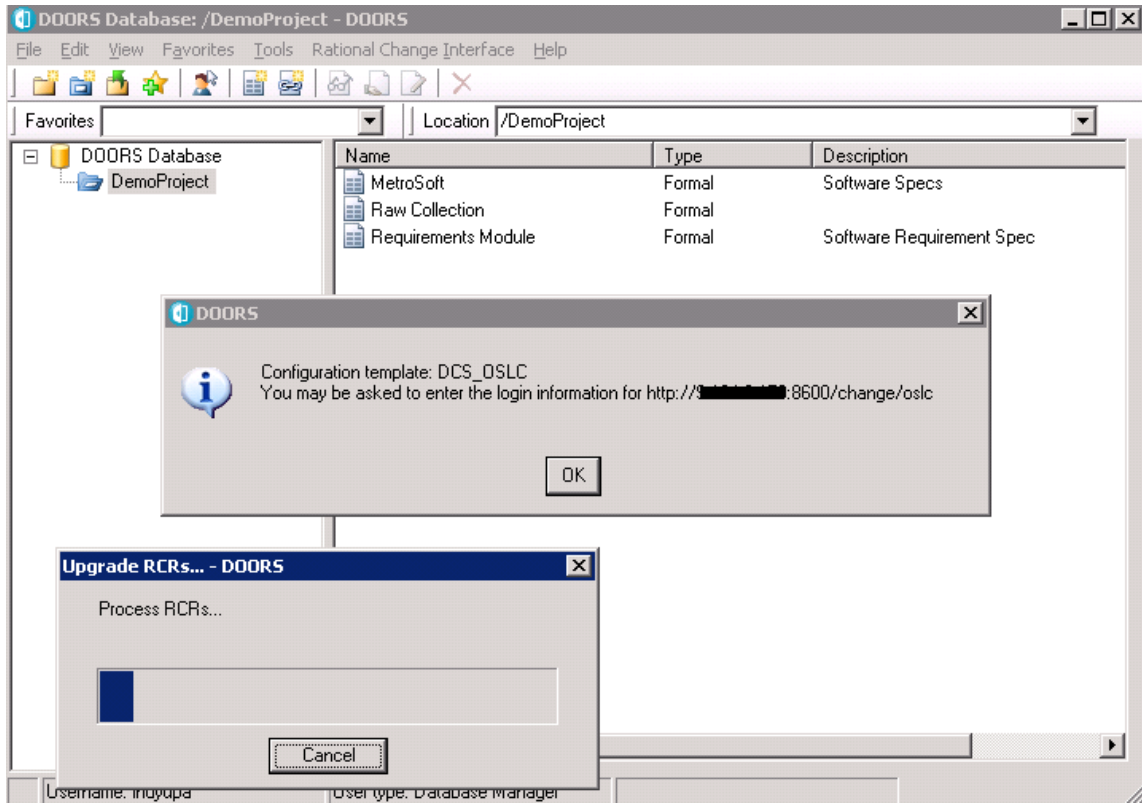


Figure 10.10: Progress indicator.

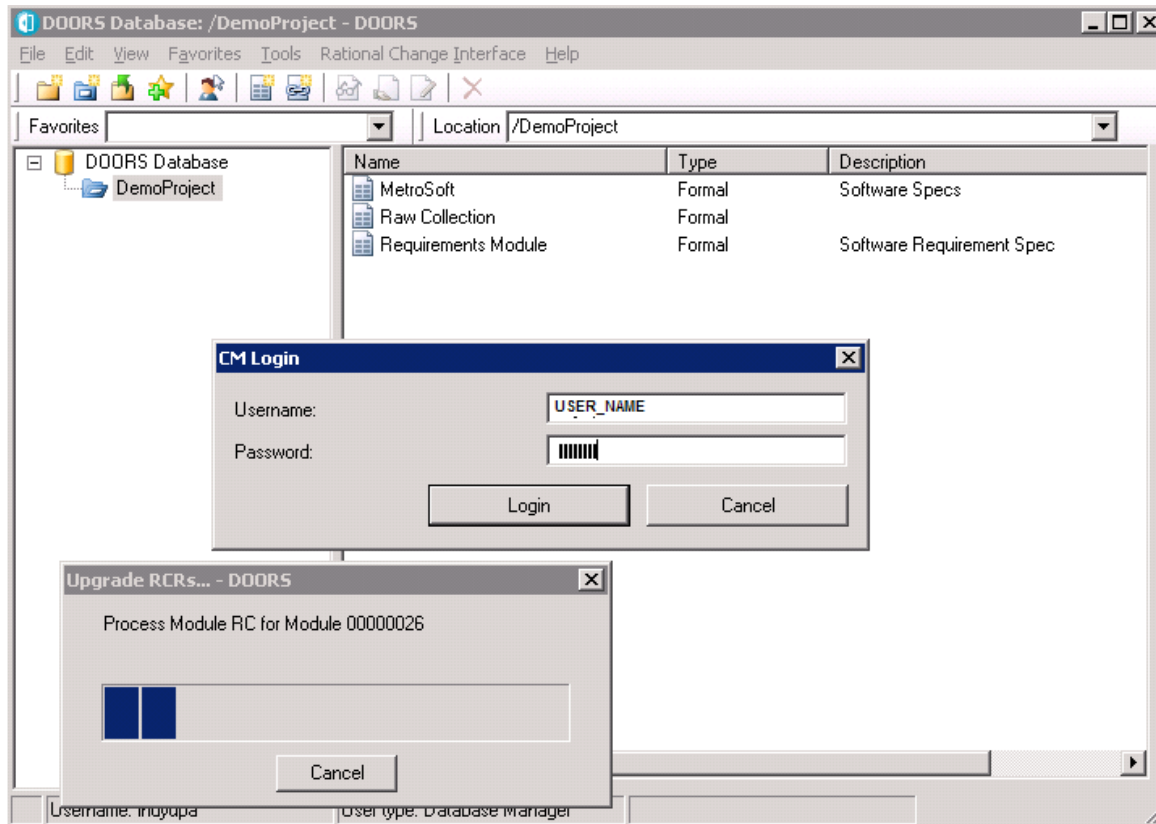


Figure 10.11: User credential confirmation.

11. When the process completes, you see an upgrade process complete message.
12. Exit from DOORS.
13. Uninstall Rational Change for DOORS Interface 5.7.
14. Log into DOORS 9.3.
15. Go to the menu option **Change Management > Define Configuration Templates**.
16. Select the old templates for deletion. Before deleting, assign the data associated with the older template to the newer template.
17. Select the new template. Click the **Upgrade** button.

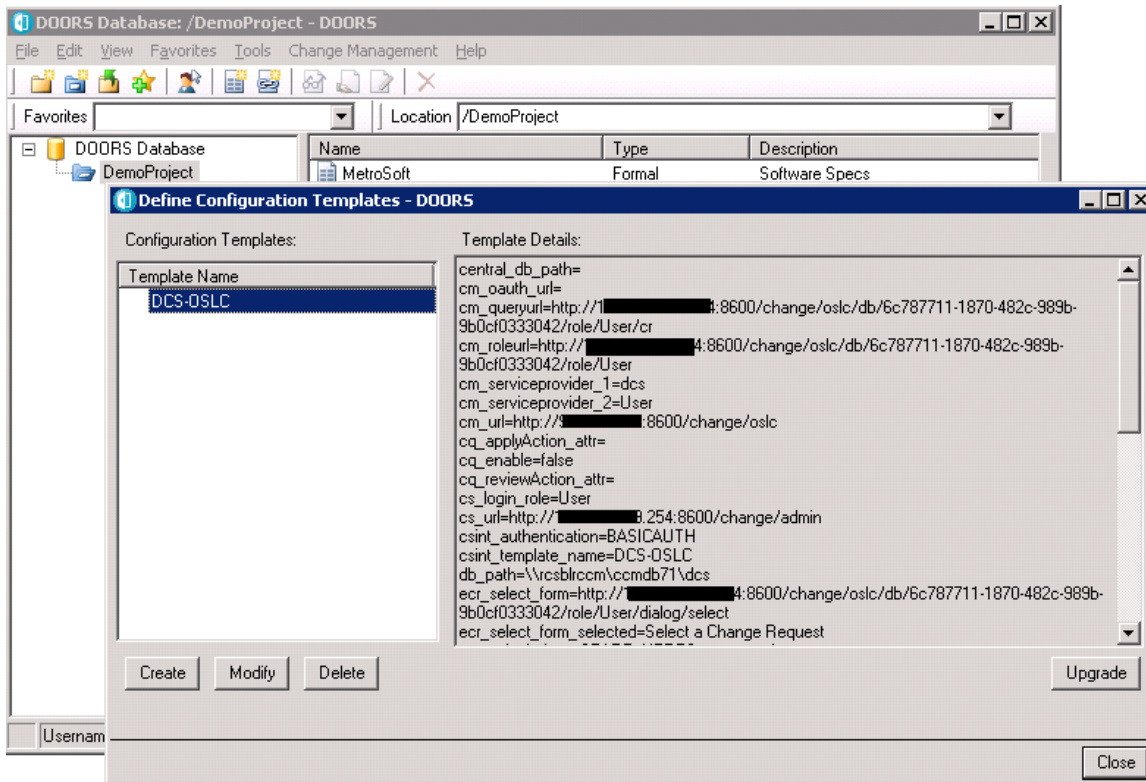


Figure 10.12: New template details.

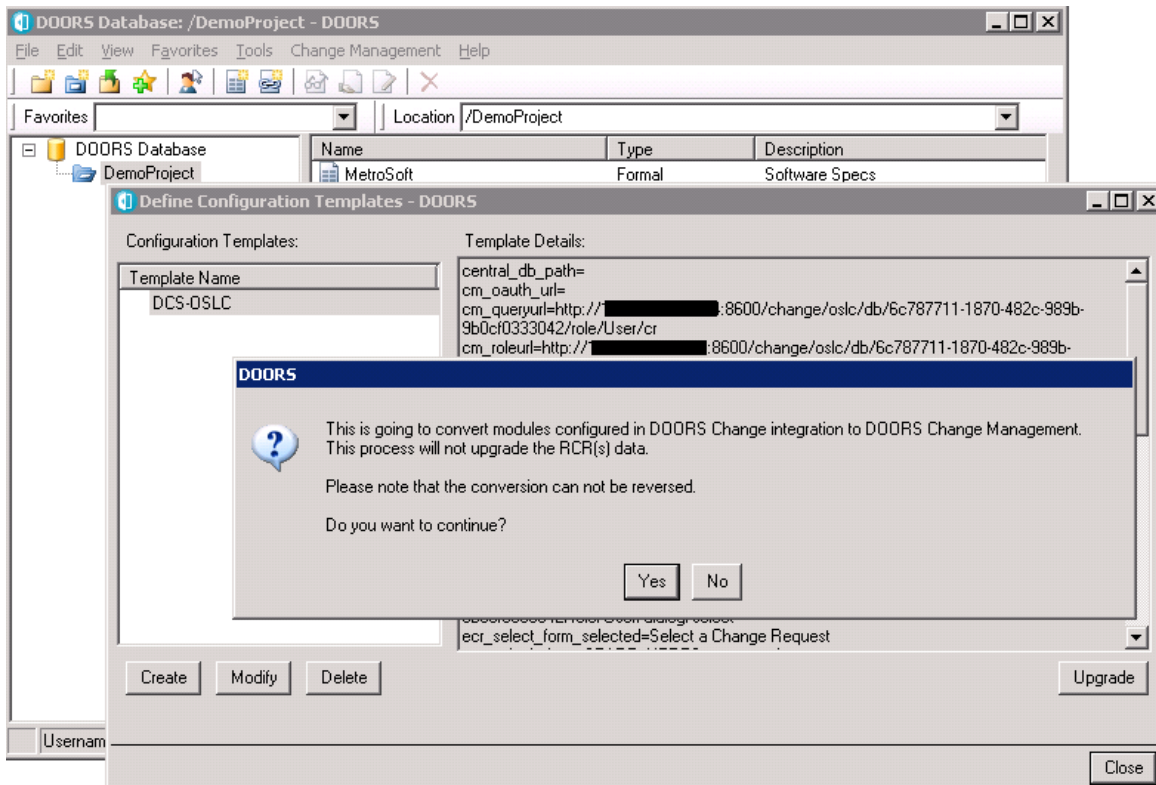


Figure 10.13: Upgrade window.

18. The upgrade process for the template is complete.
19. Perform sync on all modules to update the "IR Attrs" view and "RCR Attrs" view.

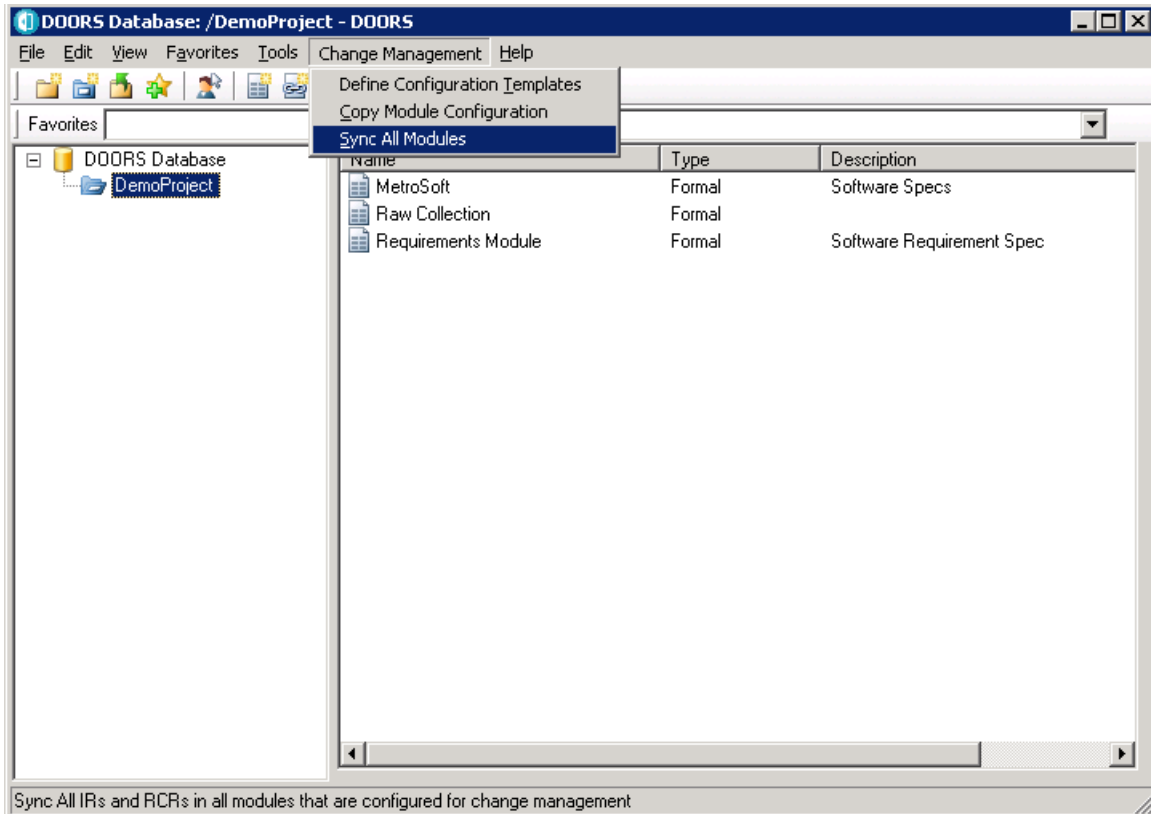


Figure 10.14: Sync All Modules.

20. When prompted, enter login credentials for the CM server URL.

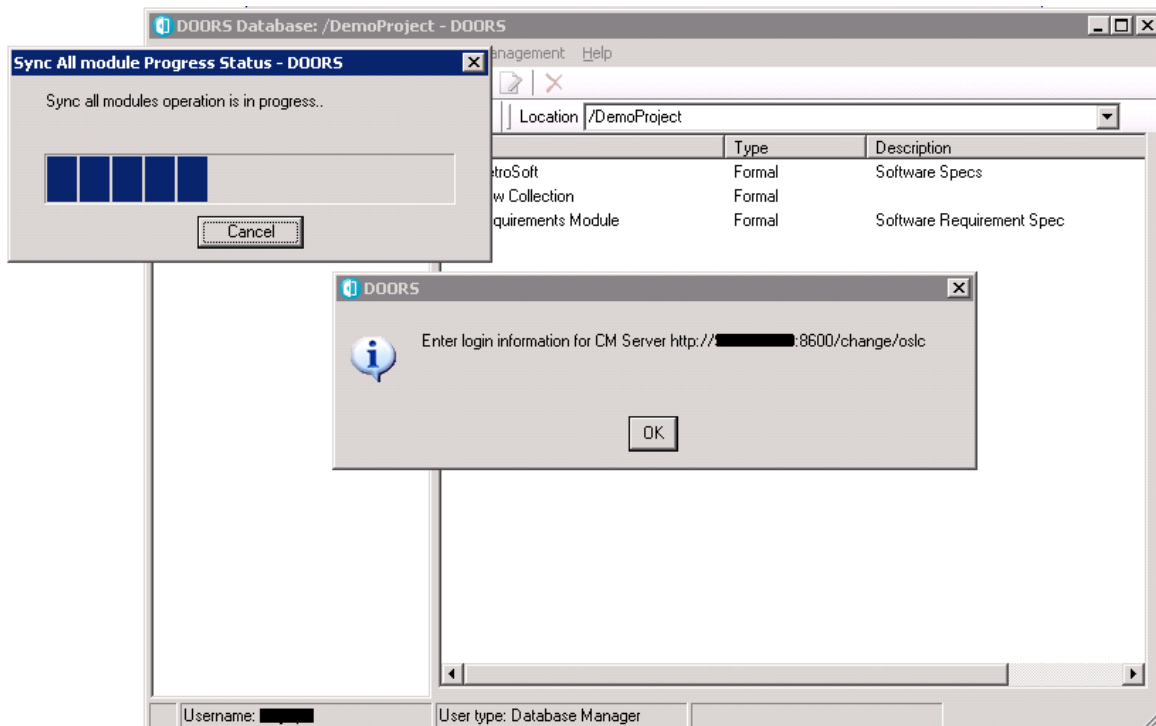


Figure 10.15: The sync process.

21. Enter the login credentials.

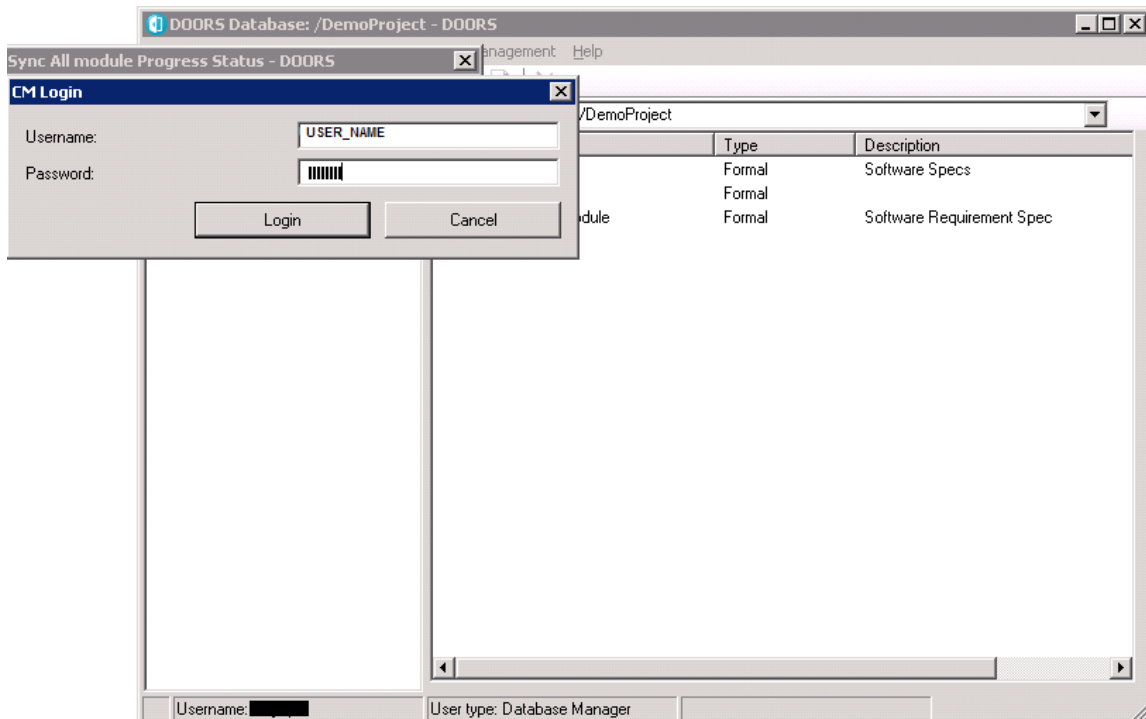


Figure 10.16: Prompt for Login credentials.

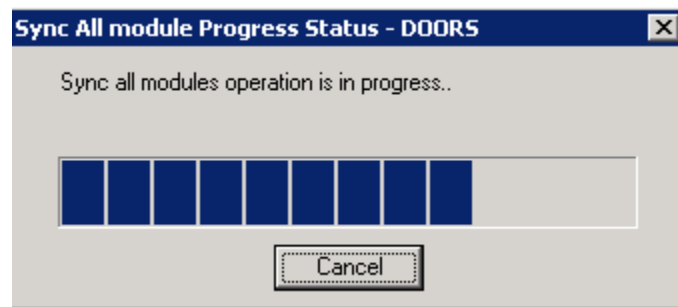


Figure 10.17: Sync progress information window.

22. Run the **upgradeUtil.dxl** script as shown in this screen capture:

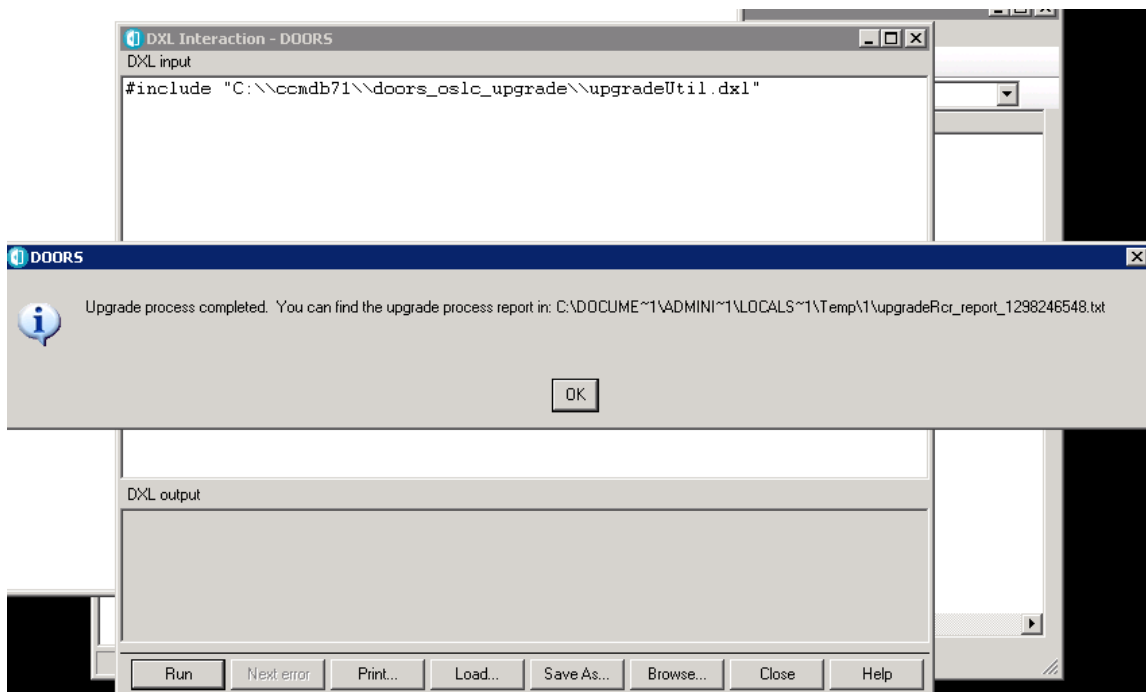


Figure 10.18: Running the upgradeUtil.dxl script.

Change Request Information Save

Assigned

Transitioner: [Send to Review](#) | [Admin Transition](#)

CR ID: 7

Synopsis:

Description: Fit to Text

Product Name:

Project:

Assignee:

Reviewer Information

Associated Requirements Change(s): [Links](#)

Associated Implementation Request(s): [Submit Implementation Request](#) | [Add](#)

Associated SCR(s): [Add](#)

Attachment(s): [Attach Files](#)

Transition Log: Show Transitions Show Modifications Show Notes

Figure 10.19: The DWA updated links in the change requests.

23. You see this window when clicking the Associated Requirements Changes link:

Rational DOORS Web Access

Requirements Change Details

Requirements Changes for module req00000021 2	Change Management Details					
	DOORS ID	/DemoProject/Requirements Module/2	DOORS URL	http://[redacted]:8080/doors/redirector/		
	Last Modified By	indprau	Applied to DOORS	FALSE		
	Last Modified Time	02/21/11 07:20:30	Change Type	Edit this object		
DOORS Attribute Values <small>Use arrow and paging keys to navigate the contents of table cells</small> Reject						
Attribute	Original Value	New Value				
Object Heading	Identification	Modifying it now				
Actions Performed on this Object						
Action	First Performed By	First Time Performed	Last Performed By	Last Time Performed	Added Below Object	Added After Object
Modify	[redacted]	02/21/11 07:20:30	[redacted]	02/21/11 07:20:30		

Figure 10.20: Requirements change details in Rational DOORS Web Access.

ID	Software Requirement Spec	csint_rcr_dctems:de	csint_rcr_dctems:tit	csint_rcr_oslc:shortTi	csint_rcr_oslc:
1	1 Scope				
2	1.1 Identification	This is a test	This is a test	7	rcr_assigned
3	1.2 System overview				
4	1.3 Document overview				
5	2 Referenced documents				
6	3 Requirements				
36	3.1 Underground				
7	3.2 Over Ground				
37	3.3 Floating				

Figure 10.19: Requirement module.

Notes

Open Services for Lifecycle Collaboration is an initiative aimed at simplifying tool integration across the software delivery lifecycle. OSLC is an industry initiative, initially proposed by IBM in June 2008, aimed at simplifying collaboration across the software delivery lifecycle.

OSLC represents

- A new thought process on how software development tool capabilities are provided to development teams.
- A set of standards for how software development tools provide their services and data to the outside world.

By providing a standard interface for various different tools, OSLC provides a way for various different tools to interface and integrate their data without worrying about vendor specific implementations.

Some advantages of using OSLC:

- Removes complexity of multiple tool integrations.
- Frees data to be used by ALL tools without having to replicate data.
- Related data is linked to and lives in only one place.

A well defined standard will allow vendors and customers to focus on the capabilities of the tools. Not so much on the how the tools will communicate and integrate with each other.

References

1. More information on OSLC:

https://jazz.net/library/content/articles/rtc/2.0.0.2/oslc-extensions-workshop/Innovate2010_OSLC_workbook_v4.pdf

2. Setting up DOORS Database Server:

http://publib.boulder.ibm.com/infocenter/doorshlp/v9/topic/com.ibm.doors.inSTALL.doc/topics/c_installingsoftware.html

3. DOORS Web Access setup information:

http://publib.boulder.ibm.com/infocenter/doorshlp/v9/nav/4_9

4. Configuring Redirector Service in DOORS:

http://publib.boulder.ibm.com/infocenter/doorshlp/v9/topic/com.ibm.rational.dwa.install.doc/topics/c_introredirector.html

5. Setting up Rational Change for DOORS for use of DOORS-OSLC integration:

http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.dowload.change.doc/pdf52/Custom_Change_DOORS93.pdf

6. DOORS Change Management upgrade utility instructions:

http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.dowload.change.doc/pdf52/upgrd_chng_doors_93_oslc_cm.pdf

Copyrights, trademarks, and disclaimers

IBM, the IBM logo, ibm.com, and Rational are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS DOCUMENT, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS DOCUMENT OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS DOCUMENT IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REDOCUMENTS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2012. All rights reserved.