

VectorCAST codeBeamer Integration

Version 1.0

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Application Note AN-ACT-1-005

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Restrictions	Public Document
Abstract	Information on the codeBeamer and VectorCAST Integration

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1 Overview

The VectorCAST Requirements Gateway (RGW 3.0) provides traceability between software requirements and test cases and allows the import and mapping of requirements to test cases.

Requirements Gateway 3.0 provides a way to:

- Import testing requirements from your Application Lifestyle Management (ALM) or Requirements tool to a VectorCAST RGW repository,
- Assign specific requirements to testcases in a unit test environment and then
- Export the resulting pass or fail status back to the ALM tool.

In RGW 3.0, the requirements database is implemented using JSON, allowing the user to commit the repository to Source Control Management (SCM).

In addition to CSV Files, VectorCAST RGW 3.0 will initially support the following Requirements Management Systems:

- codeBeamer
- Jama
- Polarion®

This Application Note will show how to use the RGW 3.0 codeBeamer Integration.

2 Use Cases

The following use cases will be shown:

- Create a Requirements Repository
- Authenticate with the Server
- Import Requirements
- Link Requirements to Test Cases
- Export Requirements
- Review Updates Requirements

2.1 Use Case: Create a Requirements Repository

To use the Requirements Gateway, a location must be specified for the Repository. If no location is specified, a prompt opens allowing the user to select the location. A standard Choose a Directory dialog opens, prompting the user to enter the path to the directory.

Set a location for the repository location by selecting **Tools => Requirements Gateway => Options...** from the Menu Bar shown in Figure 1.

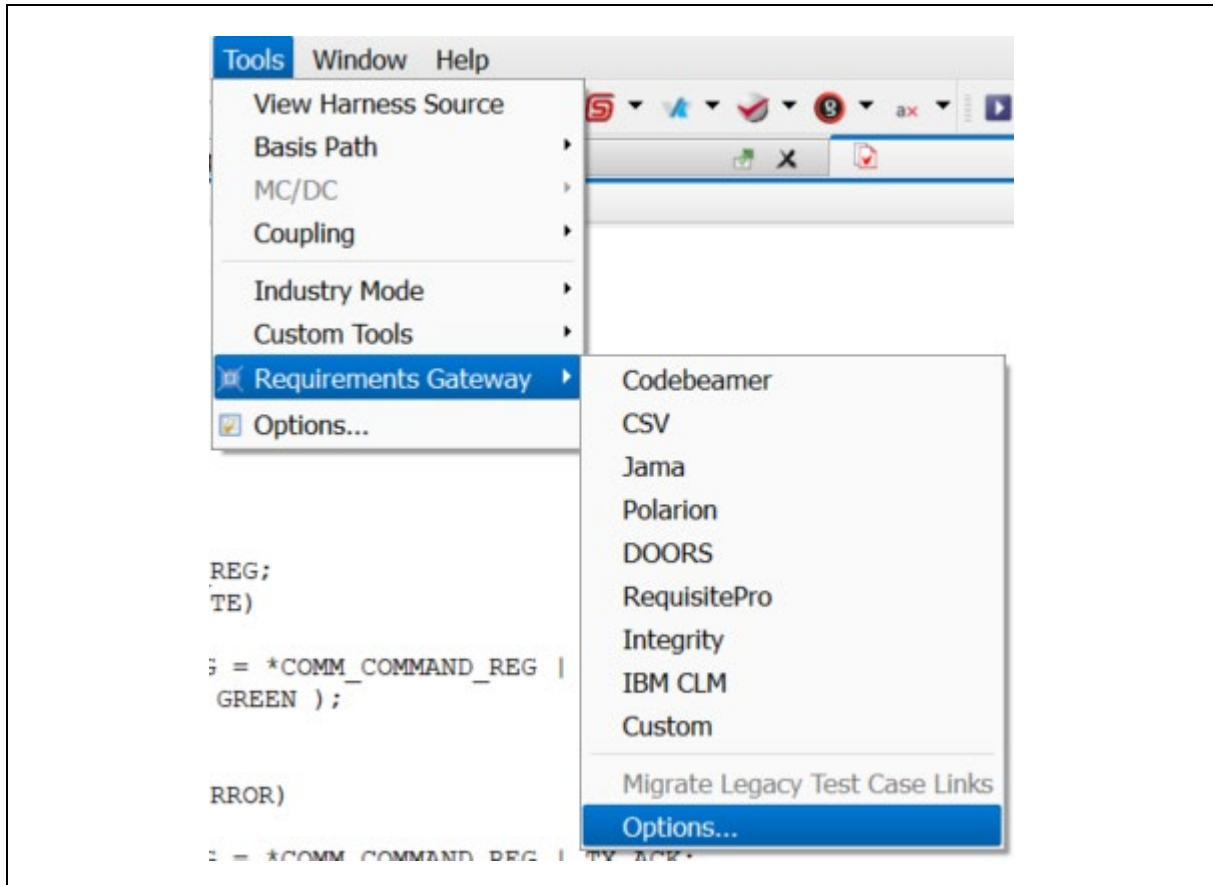


Figure 1-Select Requirements Gateway Options

The **Requirements Gateway Options** dialog will open as shown in Figure 2.

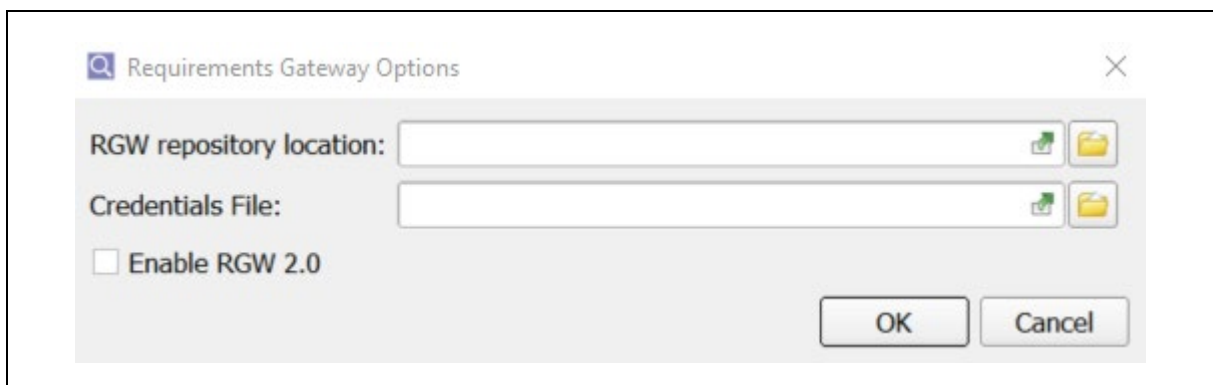


Figure 2-The Requirements Gateway Options Dialog

In the **RGW Repository Location** field, enter the path to the repository and select the **OK** button as shown in Figure 3.

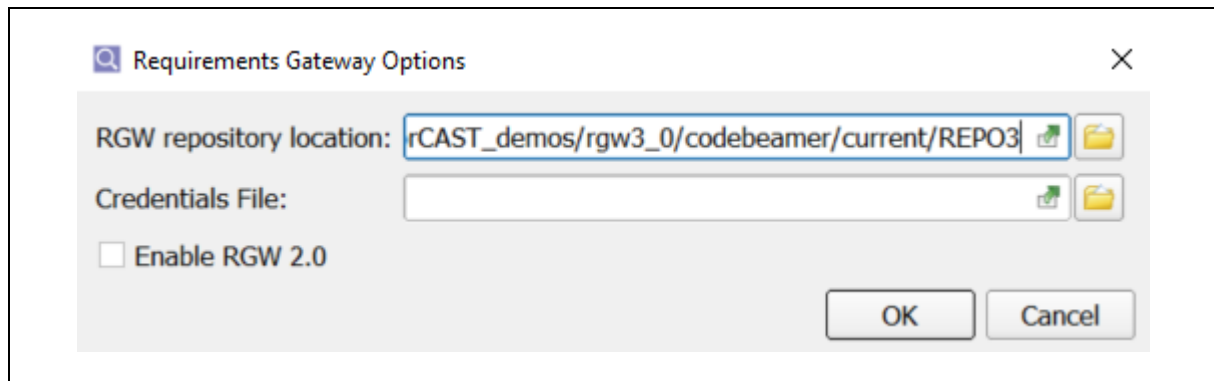


Figure 3-Set RGW Repository Location

The RGW repository location is now set, and the initial Requirements Repository is created in this location. VectorCAST creates a directory under the set location called `requirements_gateway`, that will hold the setting and log files used by RGW.

A new option starting in VectorCAST 2021SP5 is the ability to store server credentials in a Credentials File. The previous option of adding the credentials during the authentication step is still available. The Credentials File can be set in the Requirements Gateway Options GUI, shown in Figure 4, or set the environment variable `VCAST_CREDENTIALS_FILE` to the location of the file.

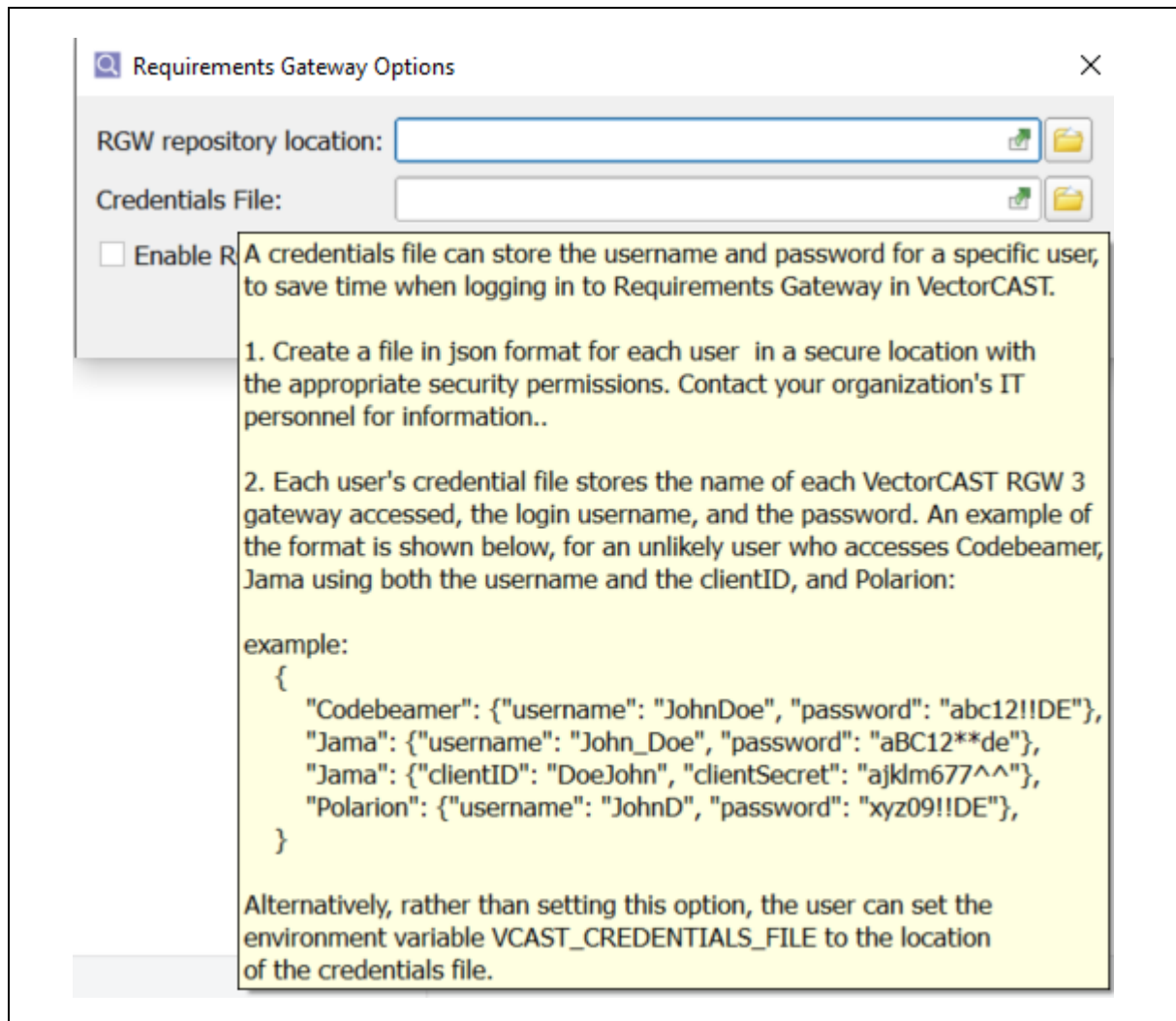


Figure 4-Credentials File

2.2 Use Case: Authenticate with the Server

To authenticate with the codeBeamer server, first Select **Tools => Requirements Gateway => Codebeamer** from the Menu Bar as shown in Figure 5.

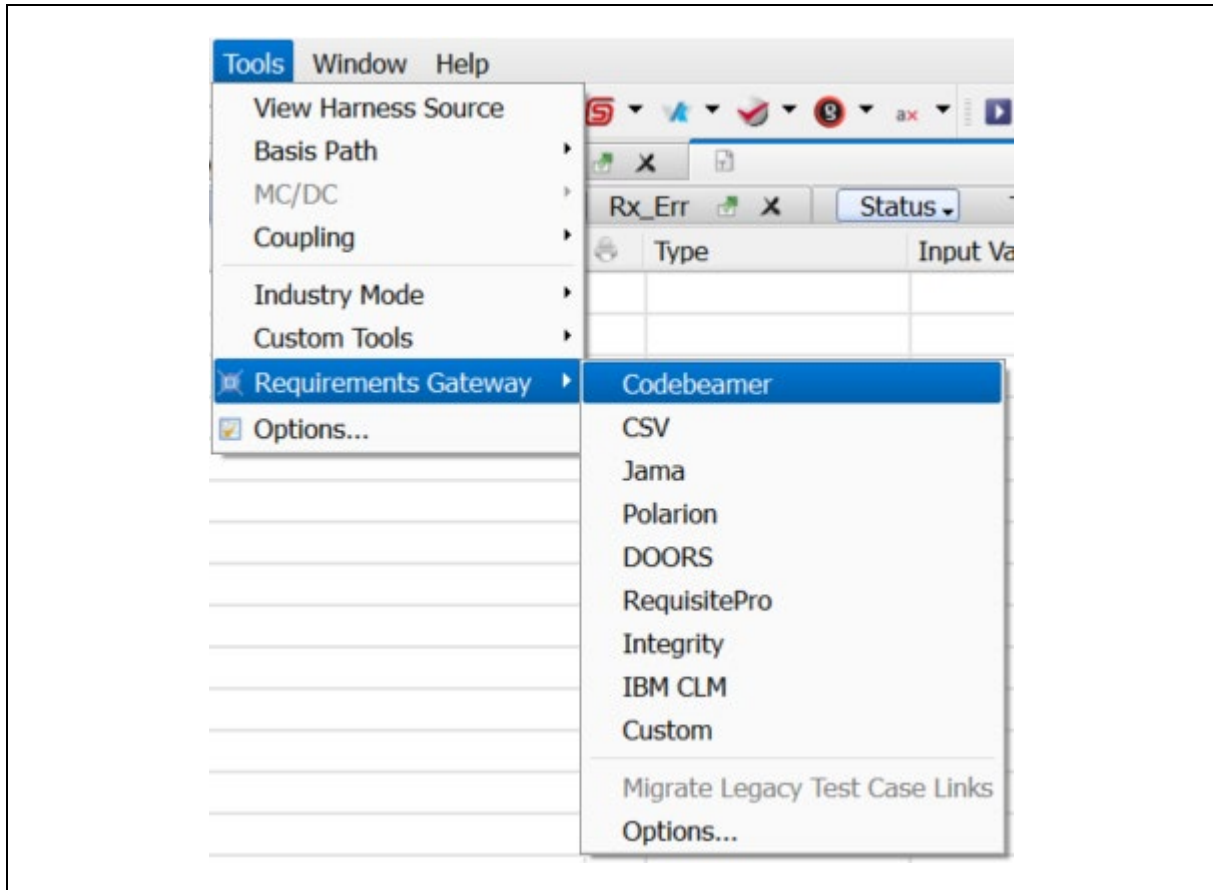


Figure 5-Select the Gateway

The **Requirements Gateway** dialog will open with codeBeamer as the selected **Gateway Profile** and the **Authentication** tab selected at the bottom as shown in Figure 6.

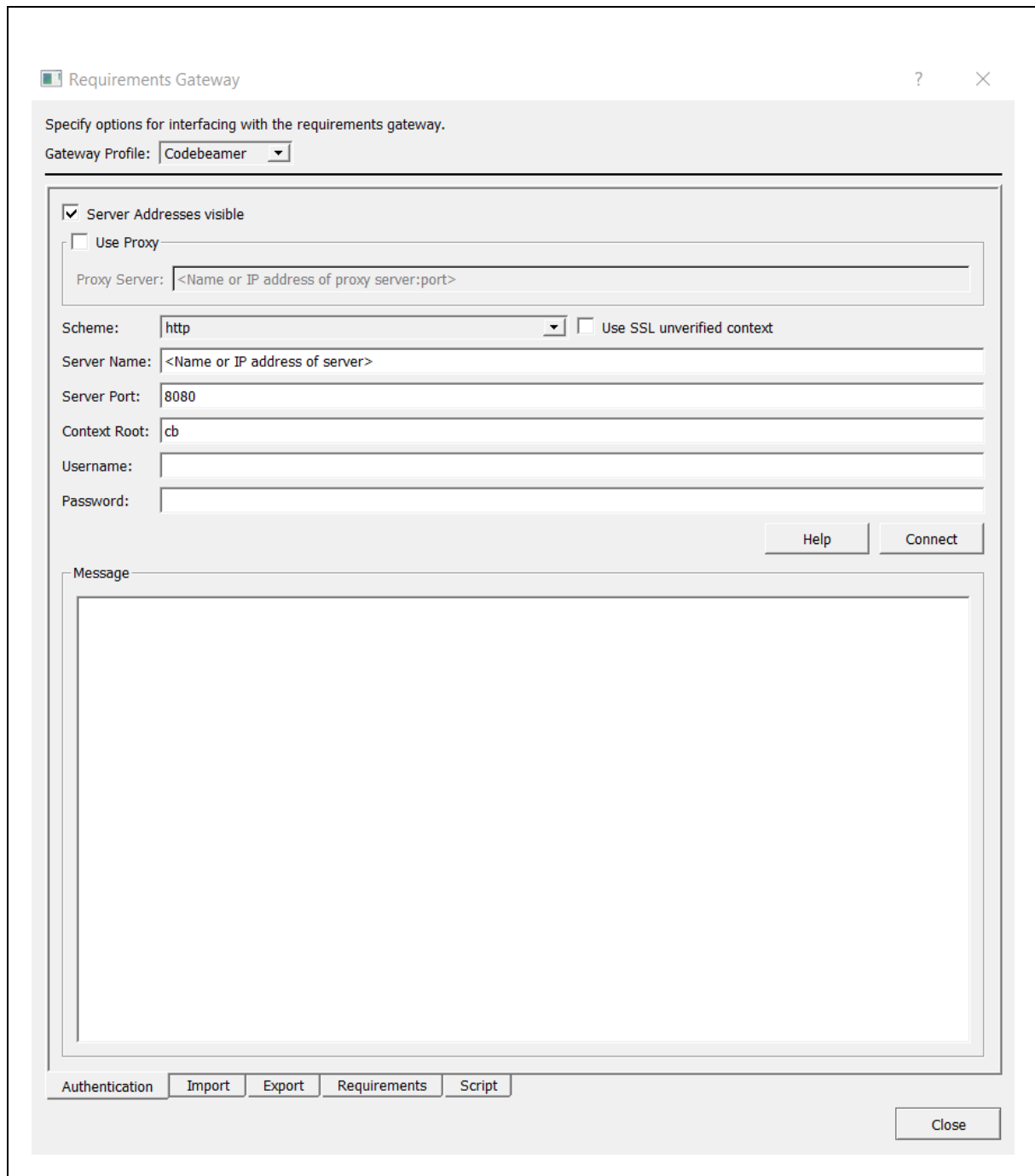


Figure 6-Authentication Tab

Enter the information needed to connect to the codeBeamer server. This should be the same information you would use normally to connect to the codeBeamer server via the web interface.

Once the information is entered, select the **Connect** button as shown in Figure 7.

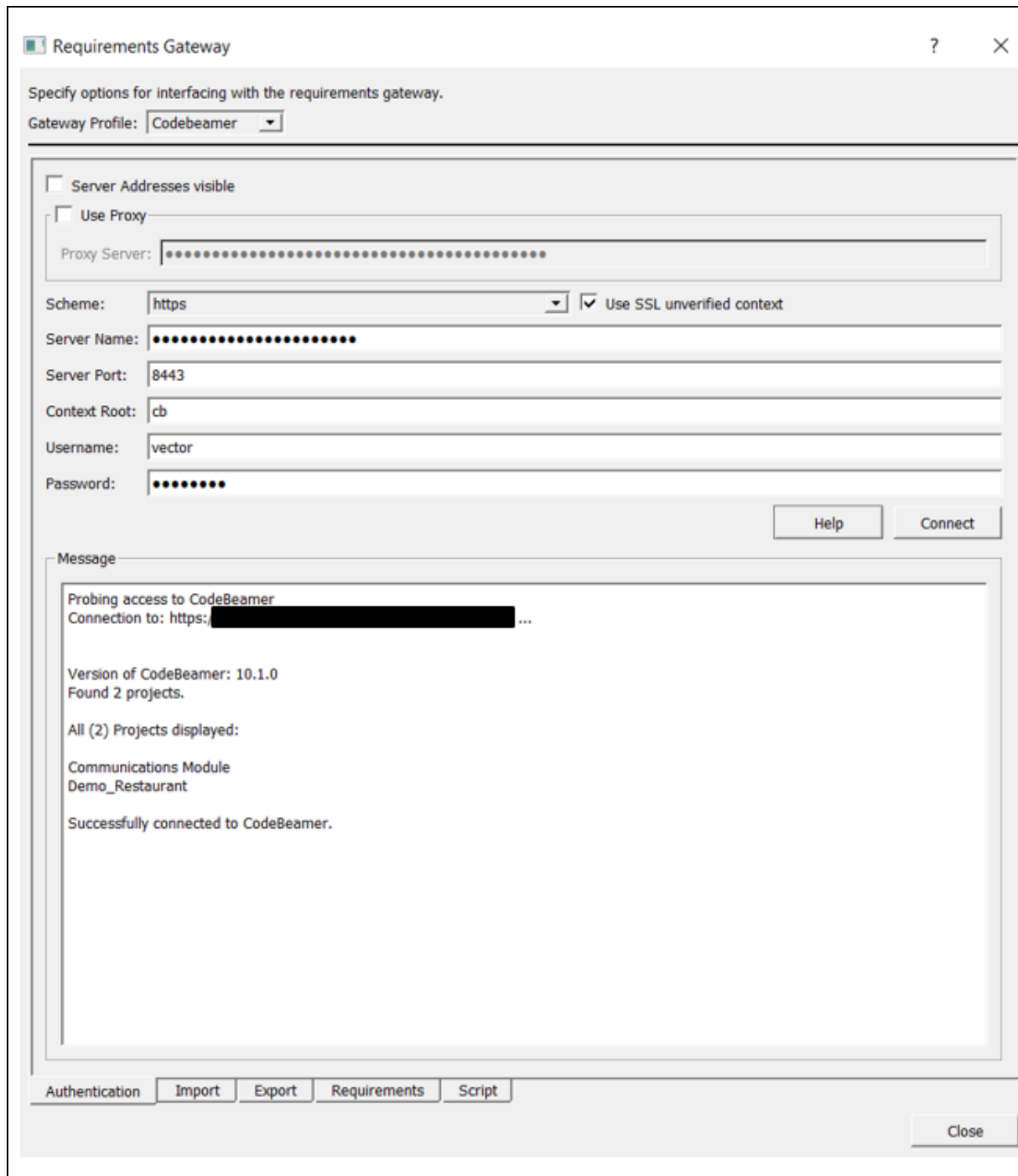


Figure 7-Authenticate with the Server

You will see a message indicating the status of the authentication. If the authentication fails, you will see the reason for failure in the **Message** window of the **Authentication** tab, as seen in Figure 8.

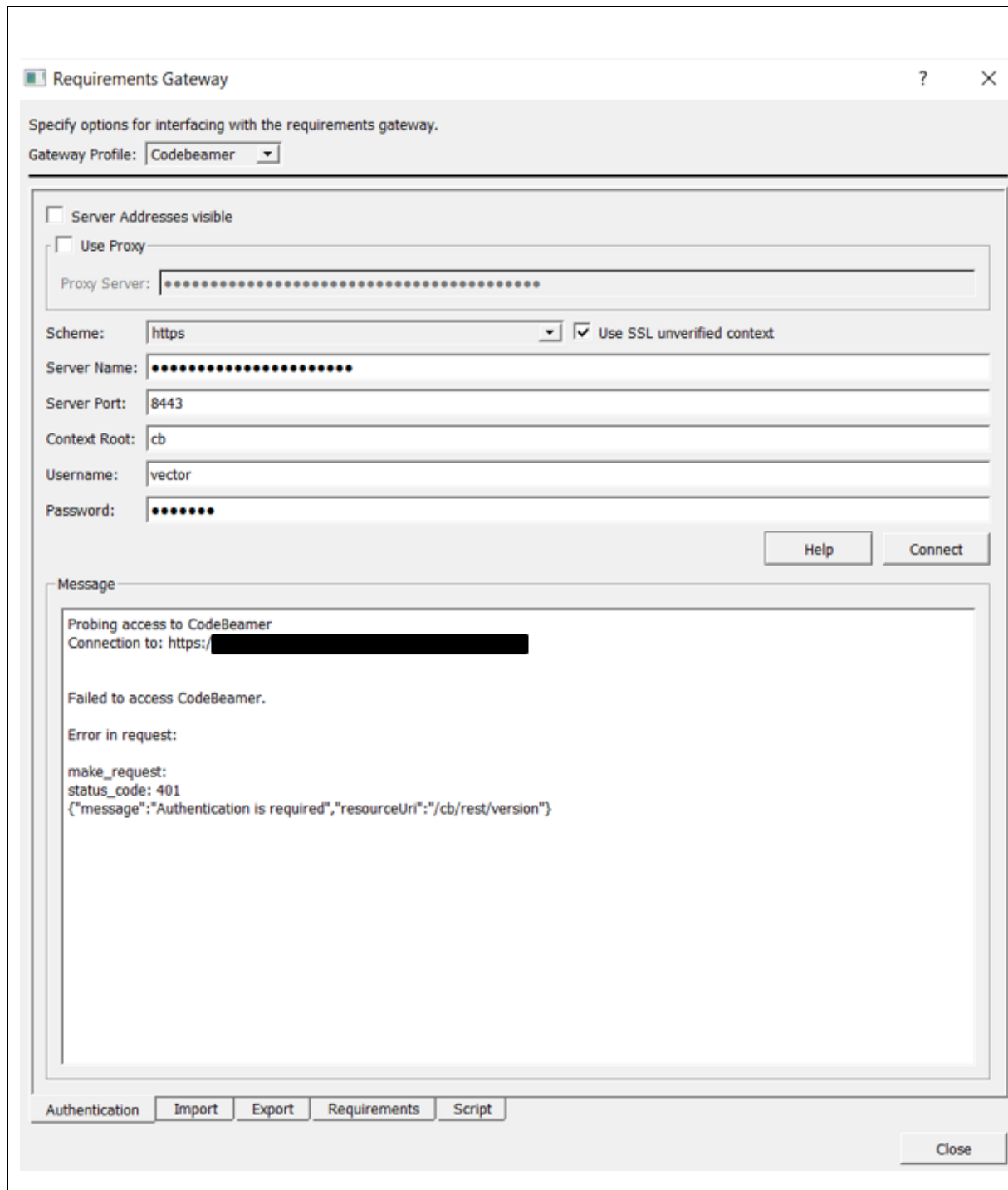


Figure 8-Authentication failure

2.3 Use Case: Import Requirements

To import requirements from codeBeamer, you will need to open the Requirements Gateway dialog as shown in Figure 5. Once the dialog is open, select the import tab at the bottom and select the Project and fill in the Tracker details as seen in Figure 9 and then select **Preview** to look at the items available

for import. Once satisfied with the items, click on the **Import** button. The message window will show “Requirements successfully imported”.

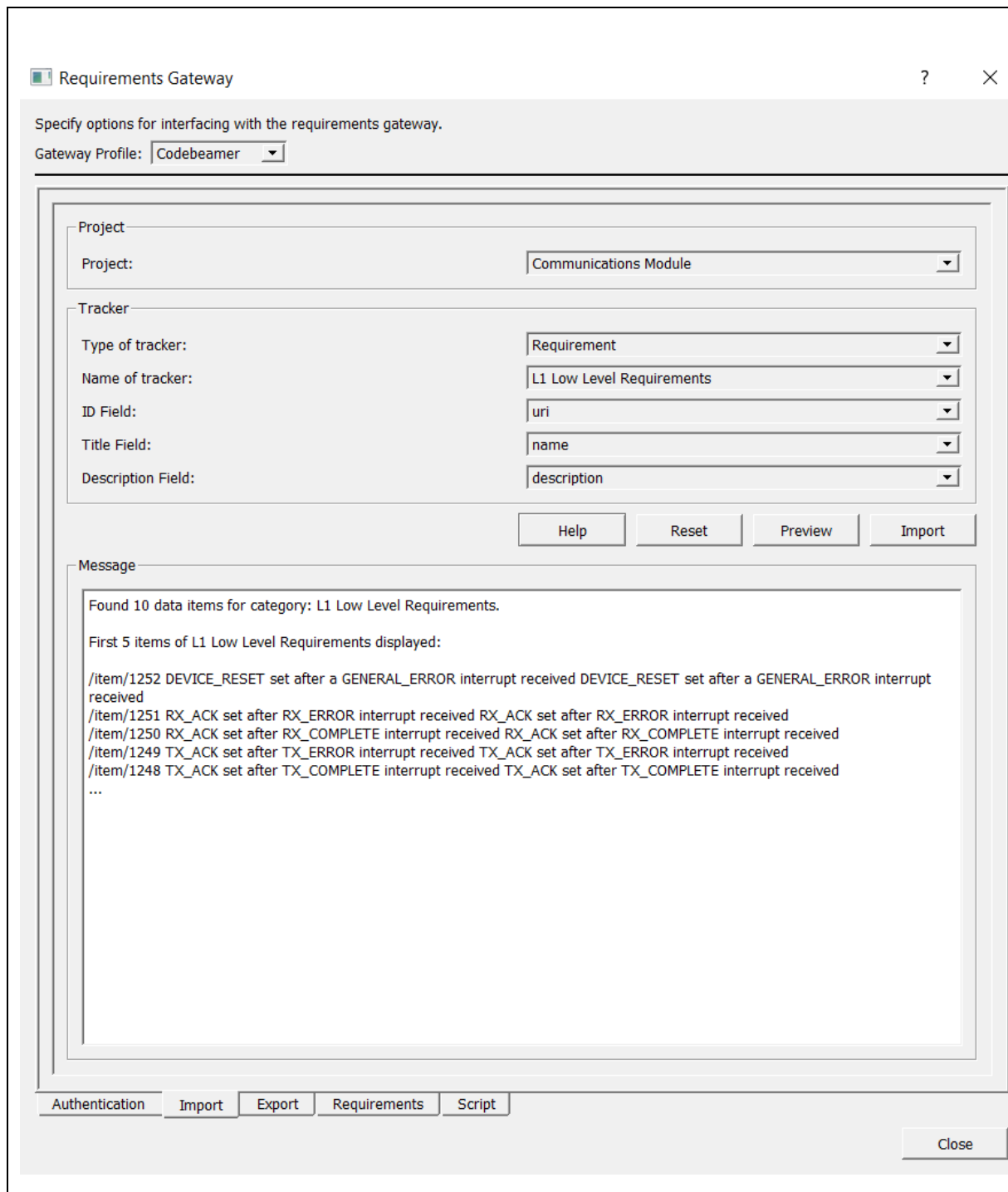


Figure 9-Select Project and Tracker to Import from the Server

VectorCAST will now fetch the requirements selected from the codeBeamer server and import them into VectorCAST. A listing of the requirements will be shown after clicking on the **Requirements** tab as seen in Figure 10.

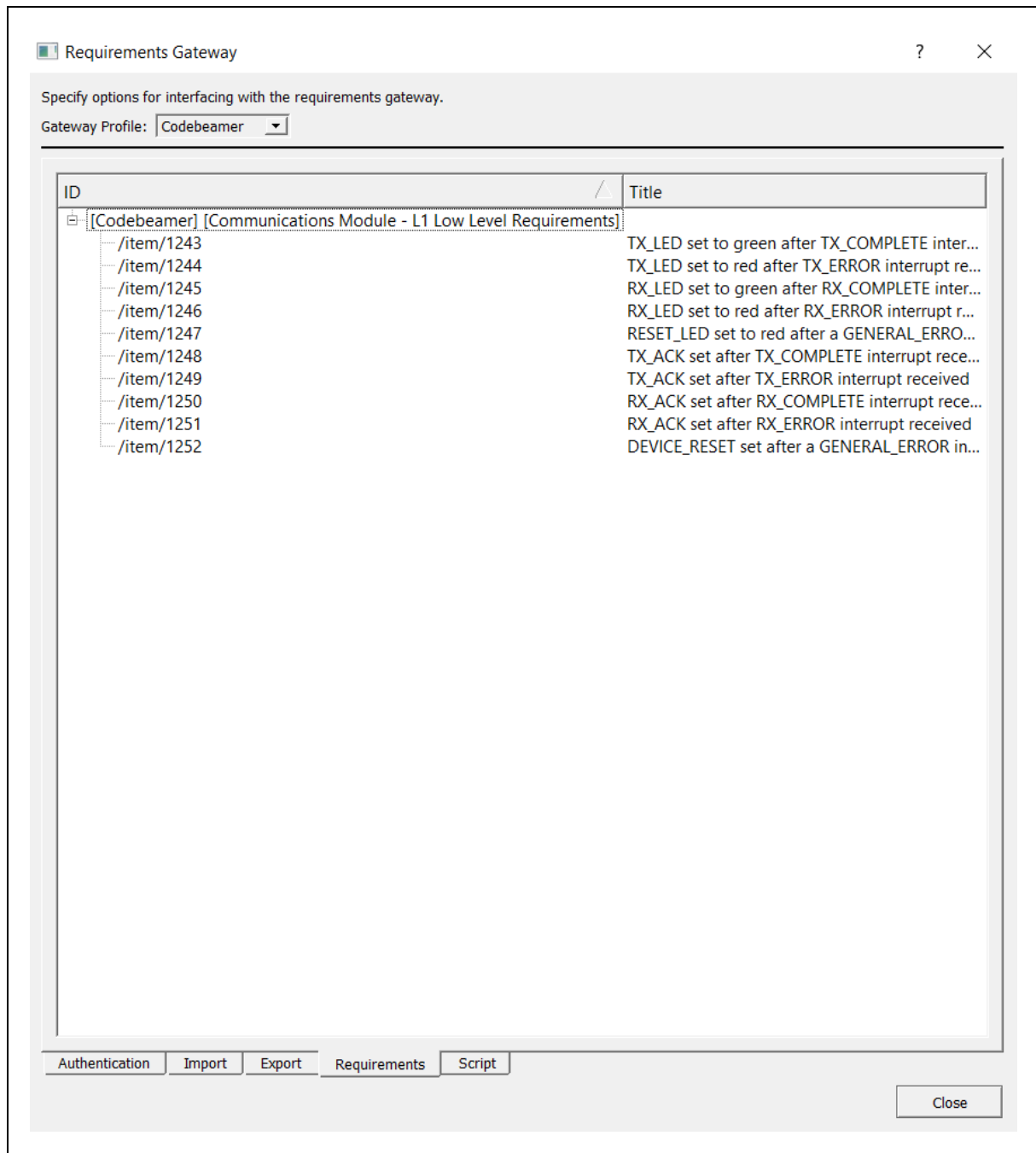


Figure 10-Import Requirements from the Server

2.4 Use Case: Link Requirements to Test Cases

To link requirements to a test case, first open a unit test environment and select a test case. Select the **Requirements** button as shown in Figure 11.

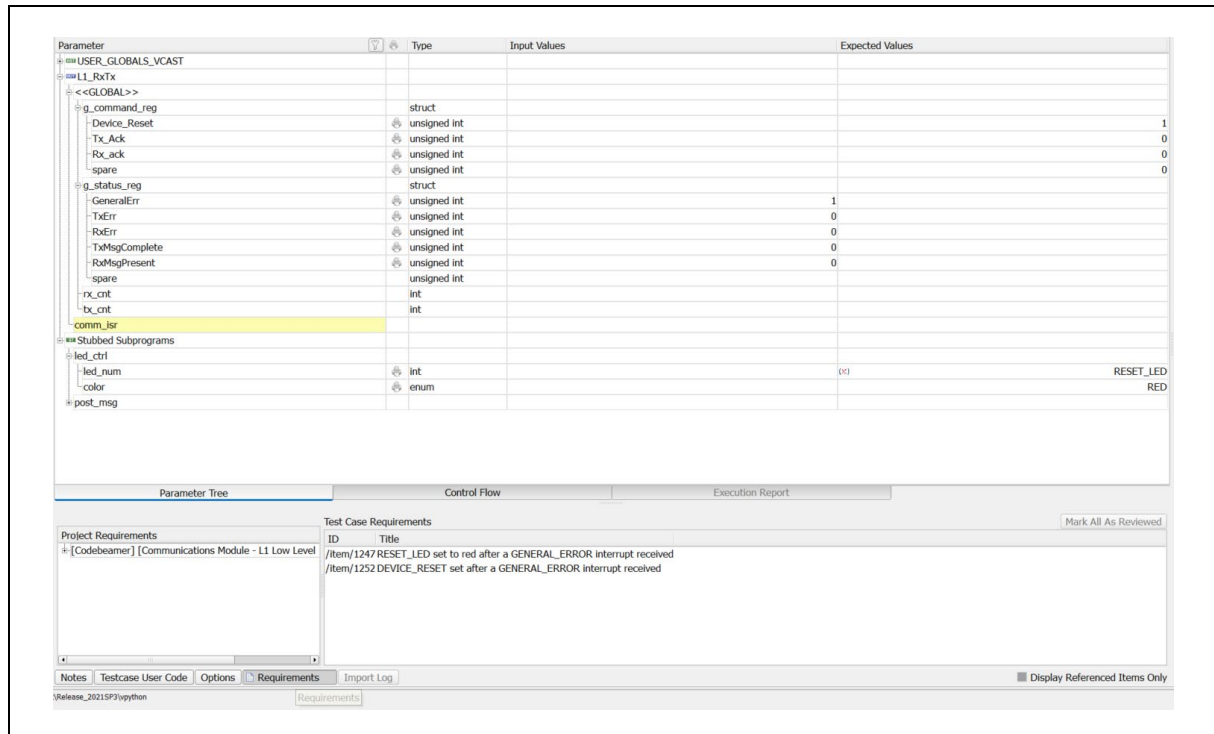


Figure 11-Select Requirements in the Unit Test Environment

In the Project Requirements window, you will see the list of imported requirements. To link a requirement to the test case, double click on the requirement. This will add the requirement to the **Test Case Requirements** as seen in Figure 12.

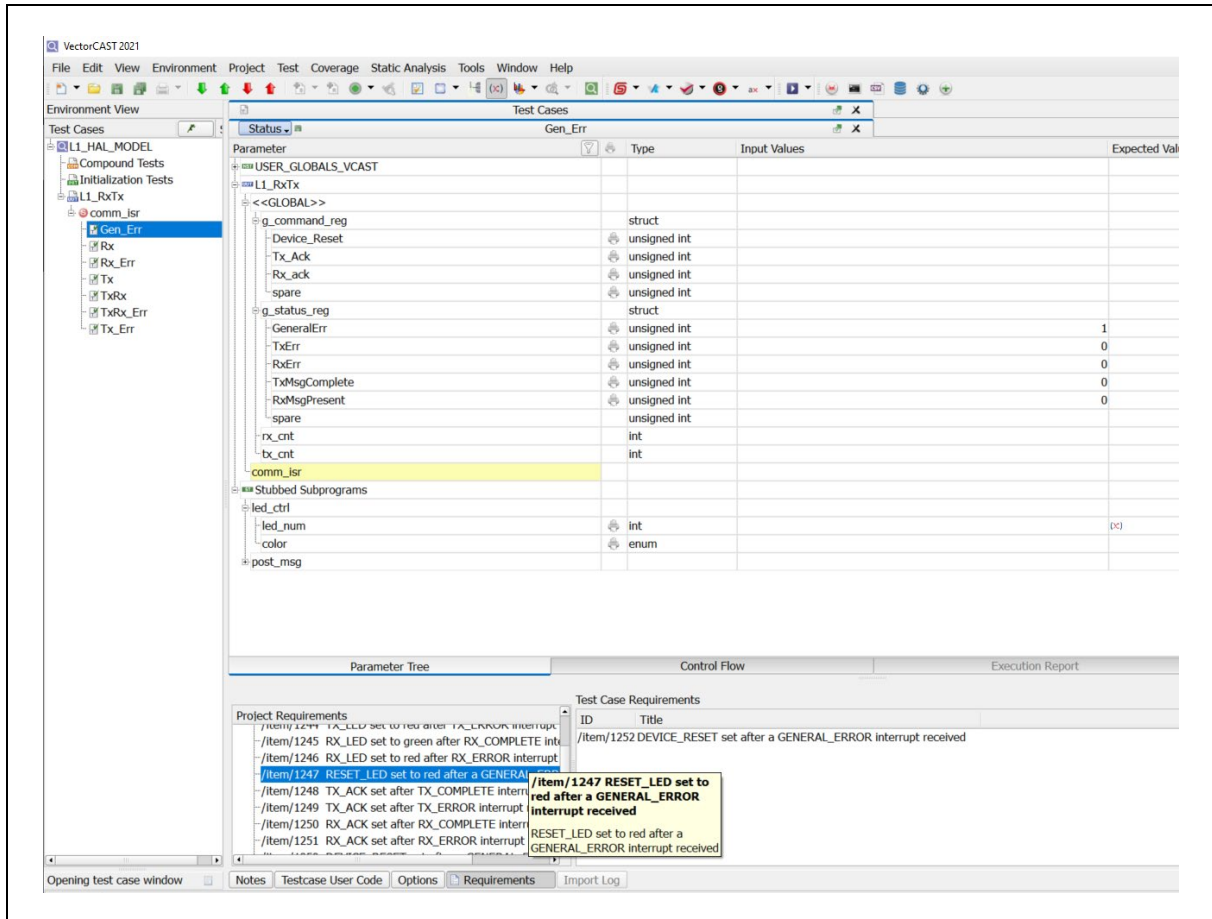


Figure 12-Link a Requirement to a Unit Test Case

At this point, execute the test case to prepare for exporting the requirements as shown in Figure 13.

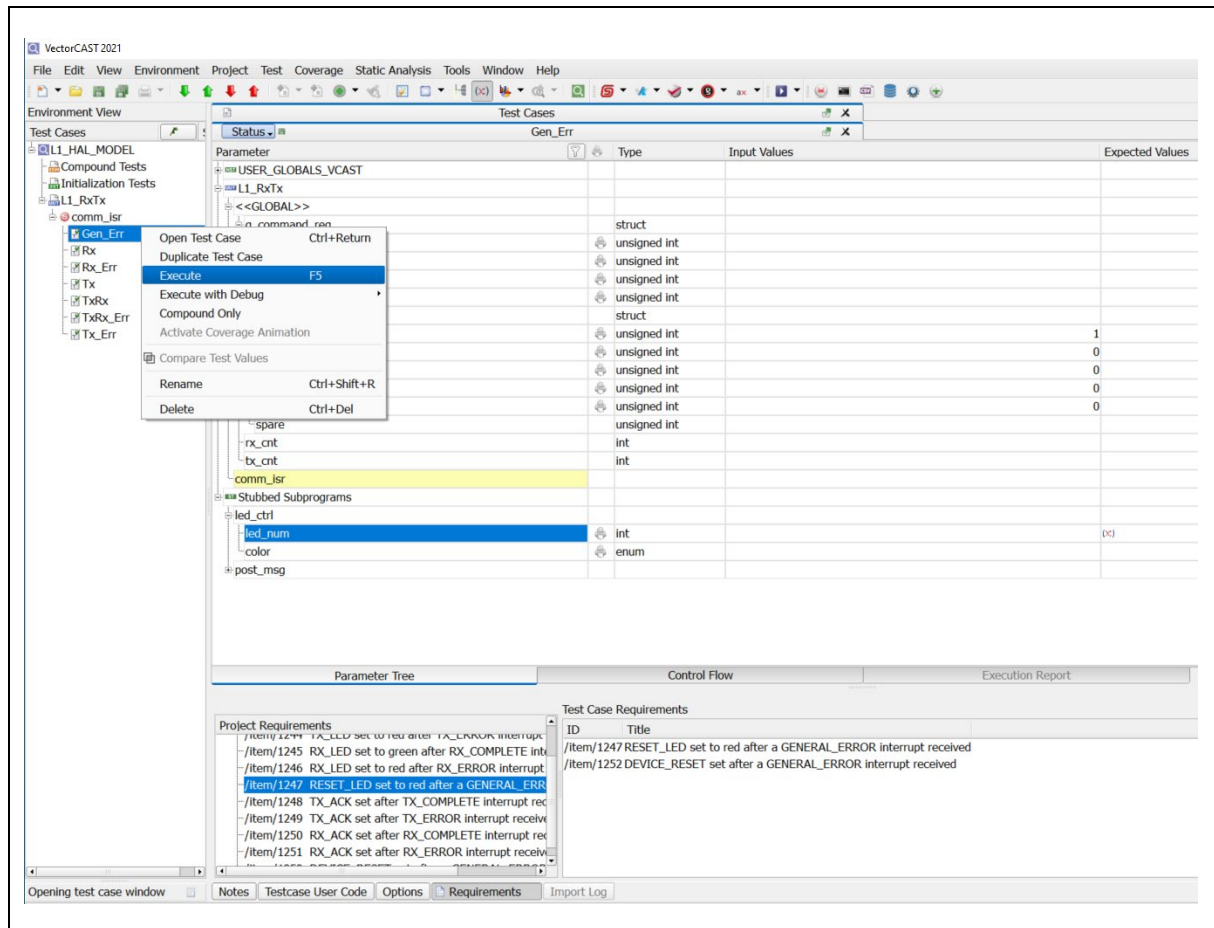


Figure 13-Execute the Unit Test Case

Once the test case is executed (see Figure 14), you are ready to perform the export.

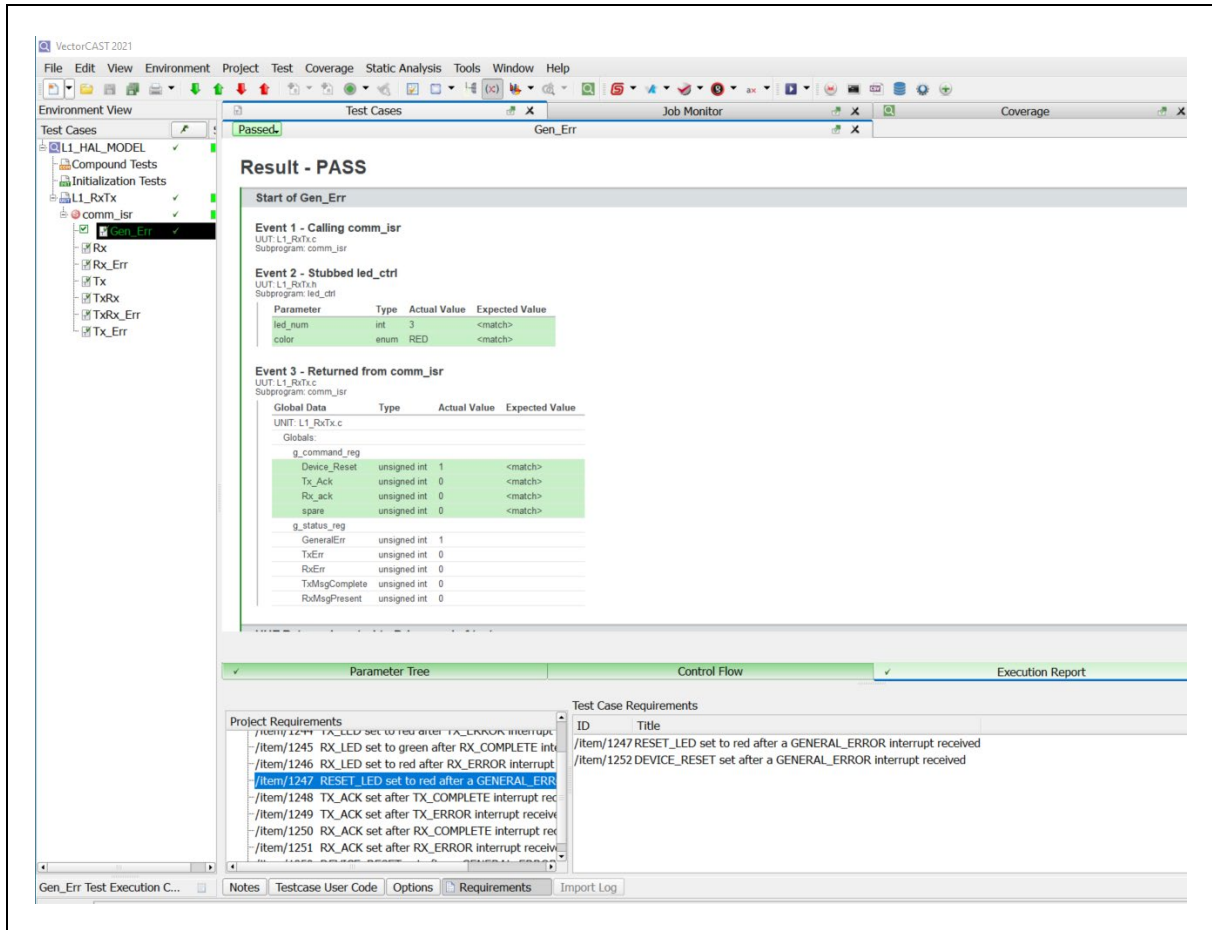


Figure 14-Unit Test Case After Execution

2.5 Use Case: Export Requirements

To export the requirements, first Select **Tools => Requirements Gateway => Codebeamer** from the Menu Bar as shown in Figure 5. The **Requirements Gateway** dialog will open with codeBeamer as the selected **Gateway Profile**. Select the **Export** tab at the bottom as shown in Figure 15. Select and fill in the requested information.

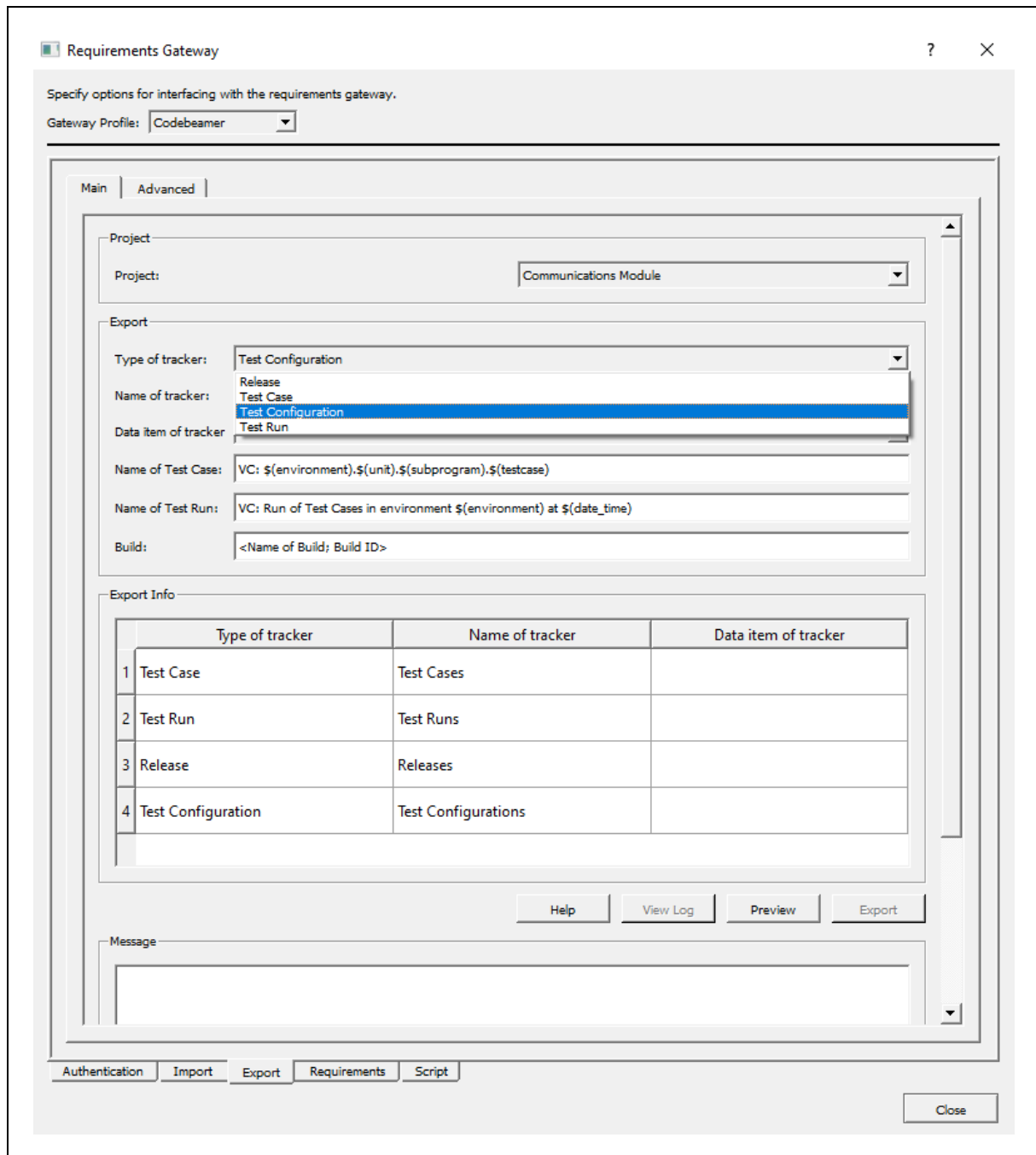


Figure 15-Select the Export Tab

Click on the Preview button to see which results will be exported, seen in Figure 16.

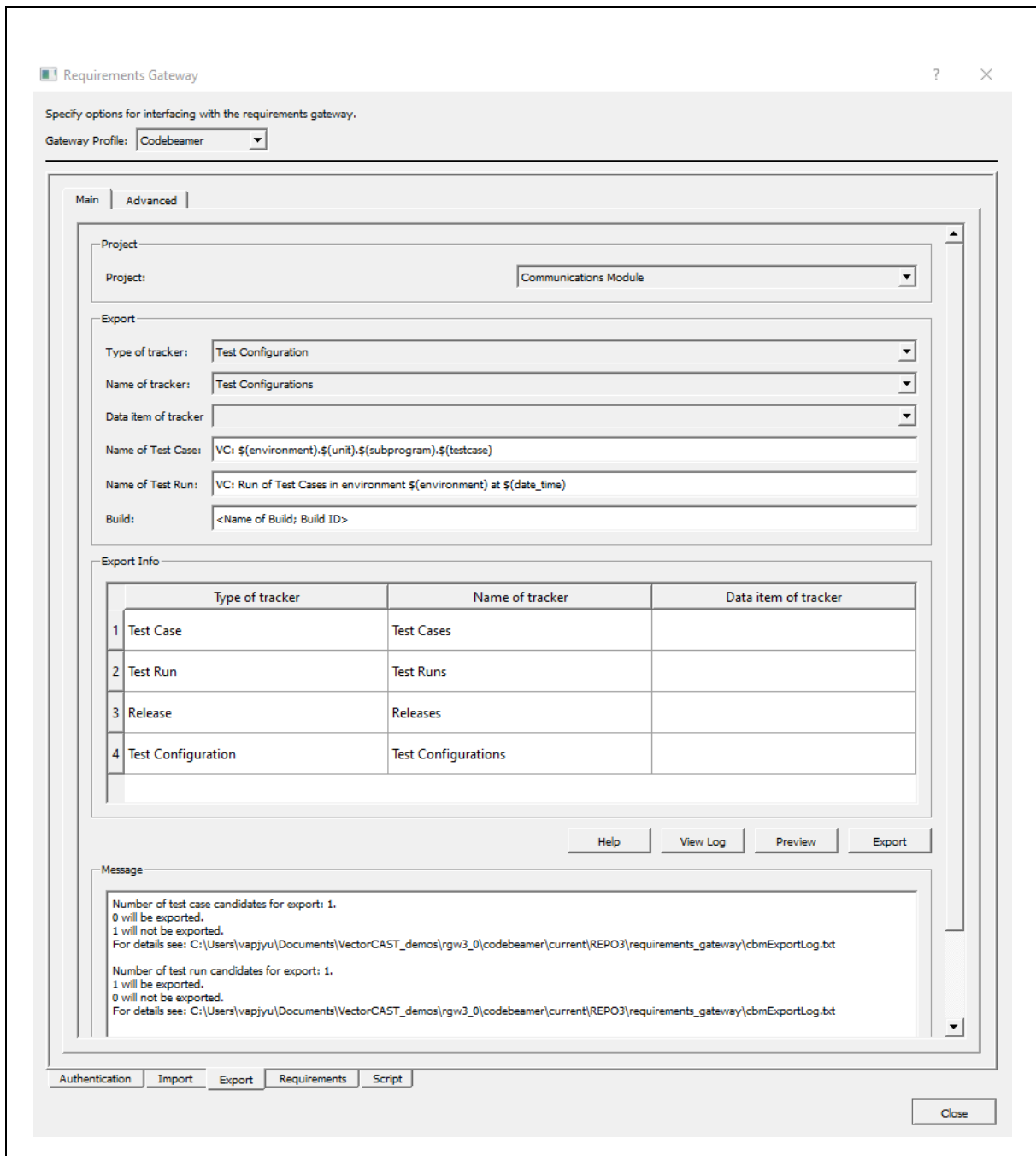


Figure 16-Preview Export

Click on the Export button to send the previewed test case candidates to codeBeamer, see Figure 16.

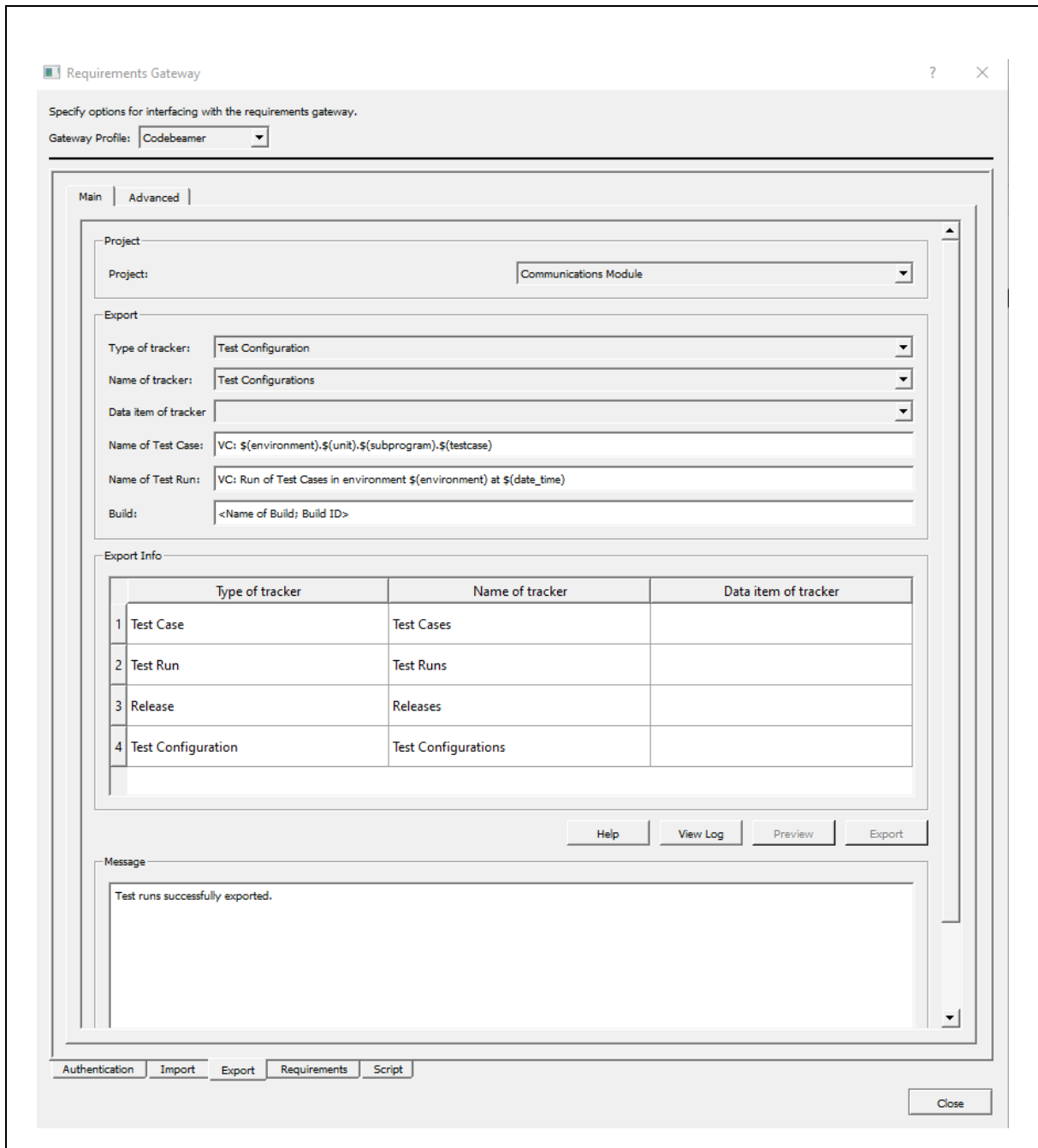


Figure 17-Export Results

2.6 Use Case: Review Updated Requirements

Communications Module » Trackers » Test Runs

VC: Run of Test Cases in environment L1_HAL_MODEL at 2021-09-13_14:11:50 #1369 HEAD / v2

Upstream References: TESTCASE-1329 Level 1 L1_LL_REQ-1247 L1_LL_REQ-1252

Restart

Tags: not added yet

Tracker: Test Runs

Parent: --

Test Set: --

Priority: --

Status: **FINISHED**

Result: **PASSED**

Completed at: Today 19:11

Release: --

Test Configuration: --

Build: <Name of Build; Build ID>

Submitted by: [vector](#) Today 19:11

Modified by: [vector](#) Today 19:11

Assigned to: --

Running Time: --

Reported bug(s): --

Traceability

Description

VectorCAST

Details

Test Results

Executed Test Cases: 1

Remaining Test Cases: 0

Passed Test Cases: 1

Failed Test Cases: 0

Blocked Test Cases: 0



Tests below were/will be executed:

Test Case	Test Result ?	Finished at	Finished by
[v] [TESTCASE-1329] VC: L1_HAL_MODEL.L1_RxTx.comm_isr.Gen_Err v2	PASSED	Today	vector

Conclusion: VectorCAST:
Environment: L1_HAL_MODEL
Unit: L1_RxTx
Subprogram: comm_isr
Test Case: Gen_Err

Details of Test Results

[v] [TESTCASE-1329] VC: L1_HAL_MODEL.L1_RxTx.comm_isr.Gen_Err v2 **PASSED**

Reported bug(s): [Add Bug...](#)

--

This Test Case has NO steps

Conclusion: VectorCAST:
Environment: L1_HAL_MODEL

3 Additional Resources

[Intland Software codeBeamer](#)

4 Trademarks

All mentioned names are either registered or unregistered trademarks of their respective owners.

5 Contacts

For a full list with all Vector locations and addresses worldwide, please visit <http://vector.com/contact/>.