QuantityWare

"Explain By Scenario" Program Usage Guide

QuantityCloud Phase 1

Version History

Version	Date	Description
00	2025-04-10	Initial Version
01	2025-08-21	Edited for Knowledge Base

Contents

1. Introduction

The "Explain by Scenario" program allows you to generate the XML required to be sent to QAPI to match the settings of a specific test scenario, for use by an external party developing a solution with QAPI.

1.1. QuantityWare Terminology

- BCS = Bulk Calculations Solution, by QuantityWare
- BCP = Bulk Calculations – Petroleum, by QuantityWare
- BCG = Bulk Calculations – Gas, by QuantityWare
- BTP = SAP Business Technology Platform

2. Prerequisites

2.1. Test Scenarios Created

You **must** have created test scenarios in the BCS Petroleum or Gas Measurement Cockpit within the SAP client.

It is required that at least five successful test scenarios are created for each of the conversion groups that will be used in calculations with QAPI (each of which should be within the correct temperature and pressure ranges).

2.2. Knowledge of BCP/BCG

You **must** have strong knowledge of QuantityWare BCP and/or BCG (ideally a QuantityWare certified consultant) is engaged and have contact with the external developer working on QAPI.

2.3. Authorizations

To use the program, you must have the authorizations on the required SAP client to:

- Use the BCS Petroleum or Gas Measurement Cockpit,
- Execute test scenarios, and
- Run ABAP programs

3. How it Works

In short, the Explain by Scenario program works by taking the configuration of one or more test scenarios and generating XML that would perform the same calculations as those test scenarios via QAPI.

This XML includes the following information for a calculation:

- Conversion group
- Transaction quantity value and UoM
- Quantities to convert to*
- Input parameter configuration
- Result parameter configuration*

* These include XML “comments” containing the expected values of each result/quantity, to aid testing for the external developer

When selecting more than one test scenario, the XML generated includes a single “batch” request containing each of the individual calculations.

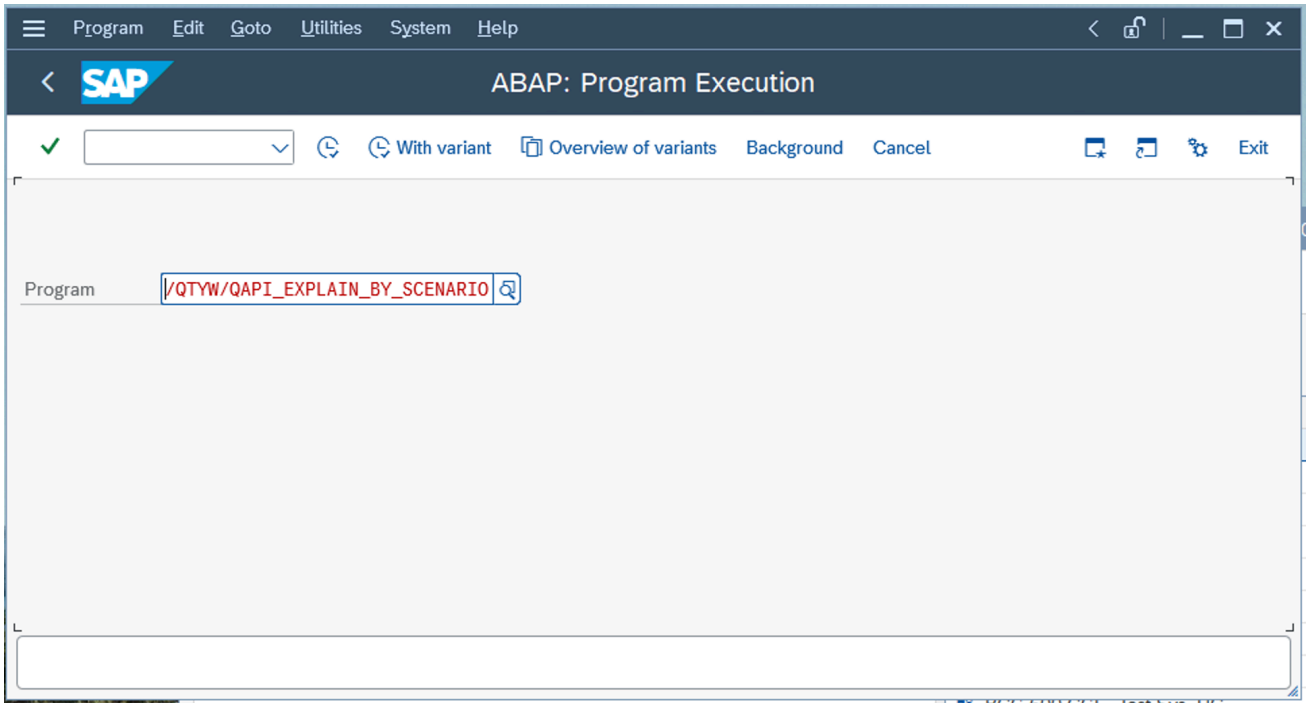
This may be requested by the external developer, e.g. for performance tests, as bulk calculation reduces the network response times of multiple single calculation requests to a minimum.

4. Usage

4.1. Running the Program

The program is accessed via transaction **SA38**.

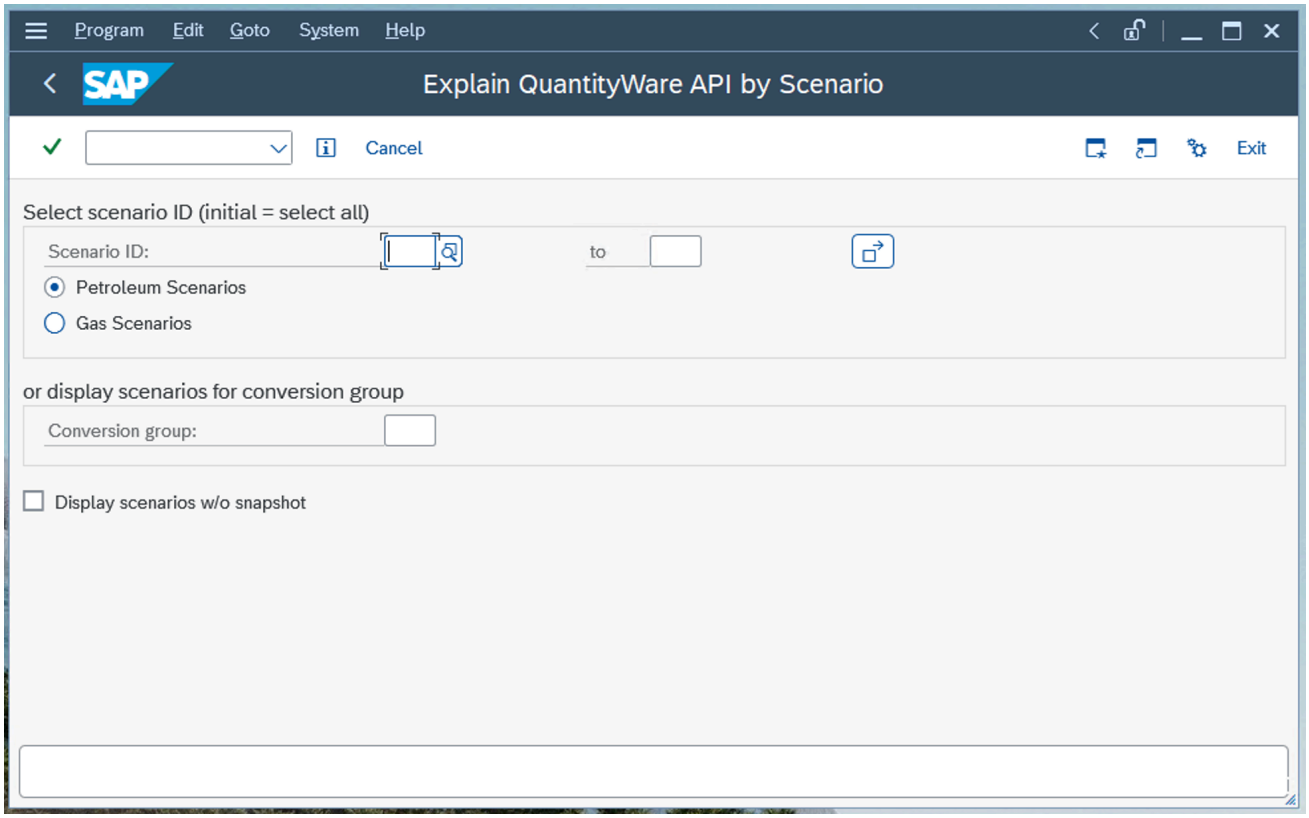
Enter the following program name: **/QTYW/QAPI_EXPLAIN_BY_SCENARIO**



Select the execute icon or press F8 to run the program.

4.2. Selecting Test Scenarios

On loading, the Explain QuantityWare API by Scenario program will show the following form:



This is used to either select a single scenario, filter to a range of test scenarios for selection, or filter to test scenarios for a specific conversion group for selection.

NOTE: You can also select the icon to learn more about the program and obtain links for verifying and testing the generated XML (note: the latter requires knowledge of your QAPI end point URL).

4.2.1. Select an Individual Test Scenario

To directly select a single test scenario, enter the test scenario ID in the "Scenario ID" input field and select the enter icon or press return.

This will load the XML generator (see Obtaining the XML) for the test scenario.

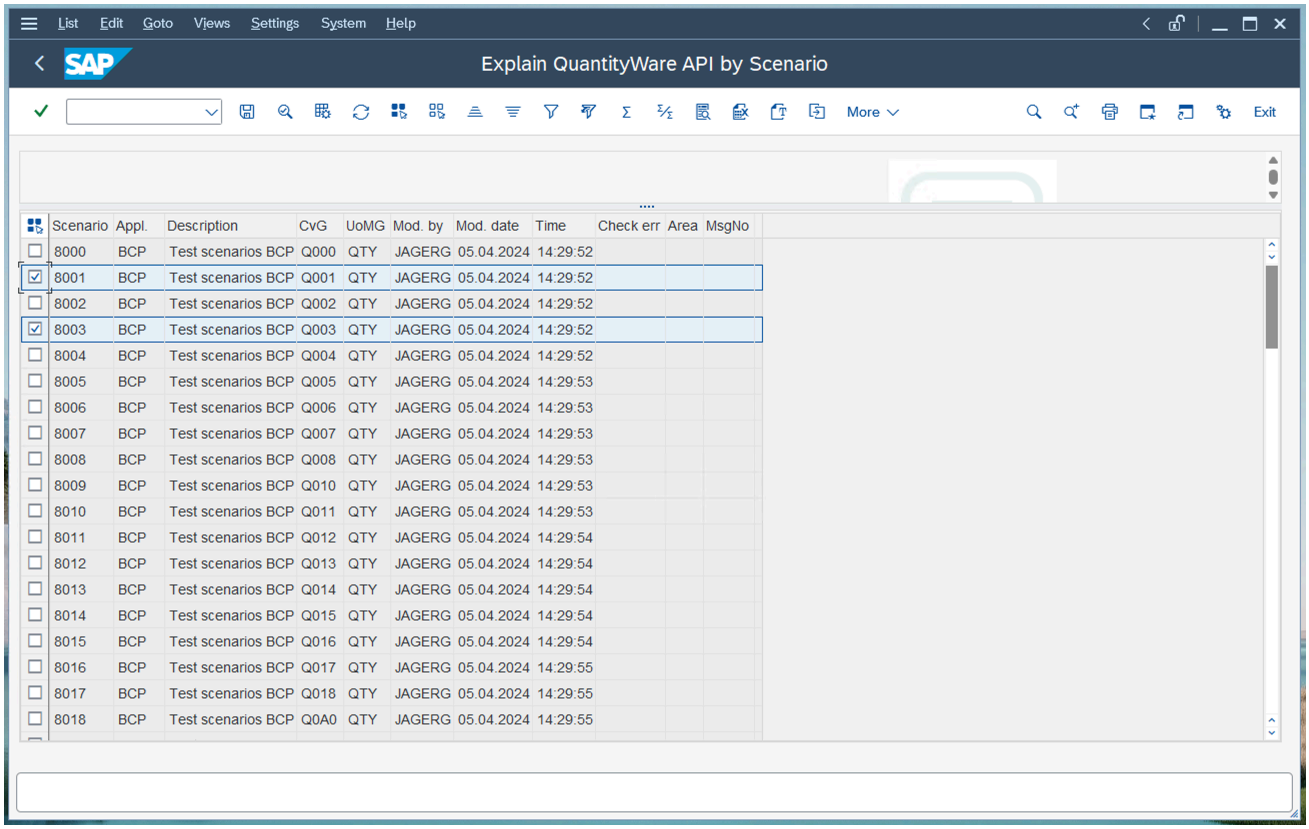
4.2.2. Filter to a Range of Test Scenarios & Select

To get a range of test scenarios to select, first either:

- Specify a range to select from (enter the first test scenario ID in the “Scenario ID” input field, and the last test scenario ID in the “to” input field)
- Get all test scenarios (leave both the “Scenario ID” and “to” input fields blank)

Then select the enter icon ☑ or press return.

This will display all test scenarios in the specified range:



Scenario	Appl.	Description	CvG	UoMG	Mod. by	Mod. date	Time	Check err	Area	MsgNo
8000	BCP	Test scenarios BCP	Q000	QTY	JAGERG	05.04.2024	14:29:52			
8001	BCP	Test scenarios BCP	Q001	QTY	JAGERG	05.04.2024	14:29:52			
8002	BCP	Test scenarios BCP	Q002	QTY	JAGERG	05.04.2024	14:29:52			
8003	BCP	Test scenarios BCP	Q003	QTY	JAGERG	05.04.2024	14:29:52			
8004	BCP	Test scenarios BCP	Q004	QTY	JAGERG	05.04.2024	14:29:52			
8005	BCP	Test scenarios BCP	Q005	QTY	JAGERG	05.04.2024	14:29:53			
8006	BCP	Test scenarios BCP	Q006	QTY	JAGERG	05.04.2024	14:29:53			
8007	BCP	Test scenarios BCP	Q007	QTY	JAGERG	05.04.2024	14:29:53			
8008	BCP	Test scenarios BCP	Q008	QTY	JAGERG	05.04.2024	14:29:53			
8009	BCP	Test scenarios BCP	Q010	QTY	JAGERG	05.04.2024	14:29:53			
8010	BCP	Test scenarios BCP	Q011	QTY	JAGERG	05.04.2024	14:29:53			
8011	BCP	Test scenarios BCP	Q012	QTY	JAGERG	05.04.2024	14:29:54			
8012	BCP	Test scenarios BCP	Q013	QTY	JAGERG	05.04.2024	14:29:54			
8013	BCP	Test scenarios BCP	Q014	QTY	JAGERG	05.04.2024	14:29:54			
8014	BCP	Test scenarios BCP	Q015	QTY	JAGERG	05.04.2024	14:29:54			
8015	BCP	Test scenarios BCP	Q016	QTY	JAGERG	05.04.2024	14:29:54			
8016	BCP	Test scenarios BCP	Q017	QTY	JAGERG	05.04.2024	14:29:55			
8017	BCP	Test scenarios BCP	Q018	QTY	JAGERG	05.04.2024	14:29:55			
8018	BCP	Test scenarios BCP	Q0A0	QTY	JAGERG	05.04.2024	14:29:55			

Select one or more test scenarios, then select ☑ or press return.

This will load the XML generator (see Obtaining the XML) for the selected test scenarios.

4.2.3. Filter to scenarios for a Conversion Group & Select

To get a list of test scenarios to select that are for a specific conversion group, enter the conversion group name in the “Conversion group” input field and select ☑ or press return.

This will display all test scenarios for the conversion group.

Select one or more test scenarios, then select the enter icon ☑ or press return.

This will load the XML generator (see Obtaining the XML) for the selected test scenarios.

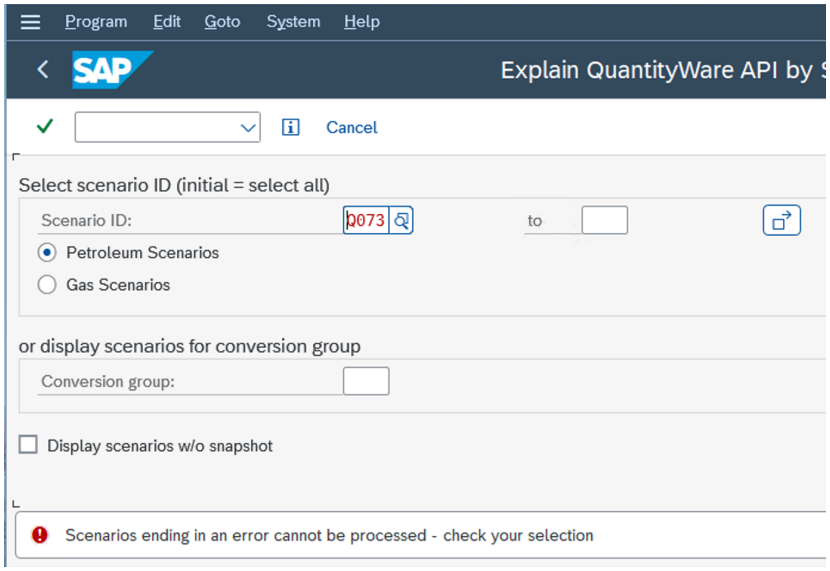
4.3. Unavailable Scenarios

Certain test scenarios are not available via this program:

- Any test scenarios that are “run green on error”
- Any test scenarios with no transaction quantities specified

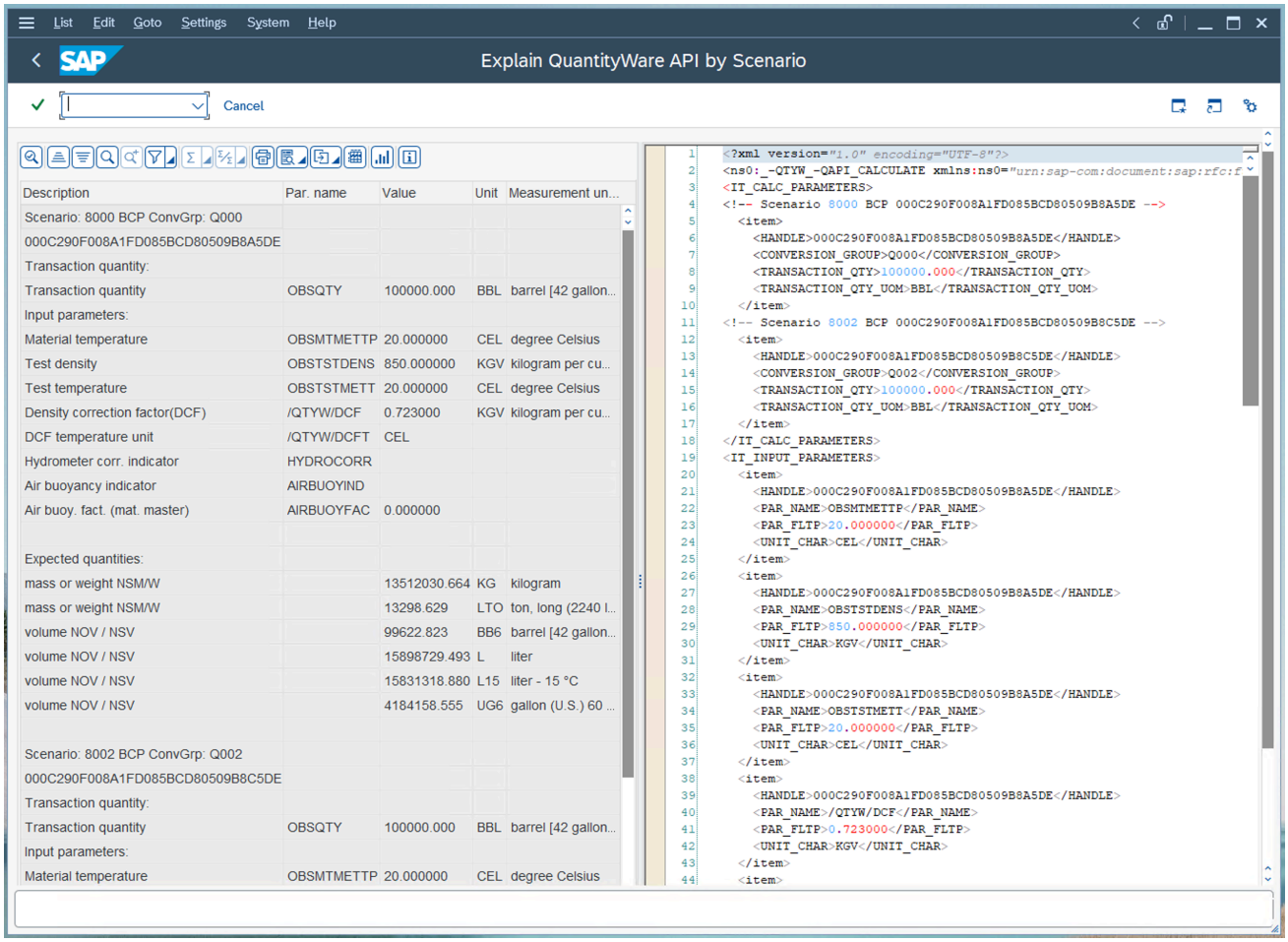
This is because neither of the scenarios return converted values, and so a comparison between a QAPI calculation request and the BCS test scenario would not be possible. This tool is designed to return examples of **working** XML.

Such test scenarios will be hidden on any test scenario lists, and attempting to enter the name of an unavailable scenario will result in an error, for example:



4.4. Obtaining the XML

Once you have chosen the test scenarios to generate XML for, the following screen will load:



On the left is a summary of each test scenario:

- Conversion group specification
- Transaction and parameter configuration
- Expected quantities (UoMs and values)
- 32-character GUID (auto-generated via function module GUID_CREATE), is used as a “batch handle” in the generated calculation request XML, allowing for multiple calculation requests to be placed within a single XML document

On the right is the generated XML that would perform the calculation via QAPI for the selected test scenarios:

- Transaction quantity per calculation
- Input parameters
- Result parameters*
- Quantities to convert to*
- An XML “comment” referencing the test scenario each of the batch calculations is for is added for reference if later discussing calculation results with the external developer.

* These include XML “comments” containing the expected values of each result/quantity, to aid testing for the external developer.

To obtain the XML, simply select all (Ctrl + A) text in the editor, then copy (Ctrl + C) to your clipboard.

This can now be saved to a file and shared with the external developer to use via QAPI.

NOTE: To search within the XML, you need to have the editor selected and use Ctrl + F to open the search box. You may use the GUID of the handle to search a single transaction in the scenario and xml (e.g. to align the list pages for verification).

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