Theo van Kaathoven

Theo has an IT education to bachelor level, and has obtained a master's degree in Business Administration.

He has worked for over 25 years on IT projects carrying out various roles from programmer to project manager.

In the last 15 years he has participated in various large SAP implementations. For the last 10 years he has been implementing SAP Solution Manager as a tool to support SAP Projects and SAP Application Management.

SAP Solution Manager is a tool to support IT processes, as part of Application Lifecycle Management.

In several ways, both the implementation and maintenance of IT applications can be supported. Also, SAP Solution Manager can be used to support testing processes. See figure 1 for an overview of SAP Solution Manager. In the red box the testing functionality is shown, covering Test Management and Test Execution.
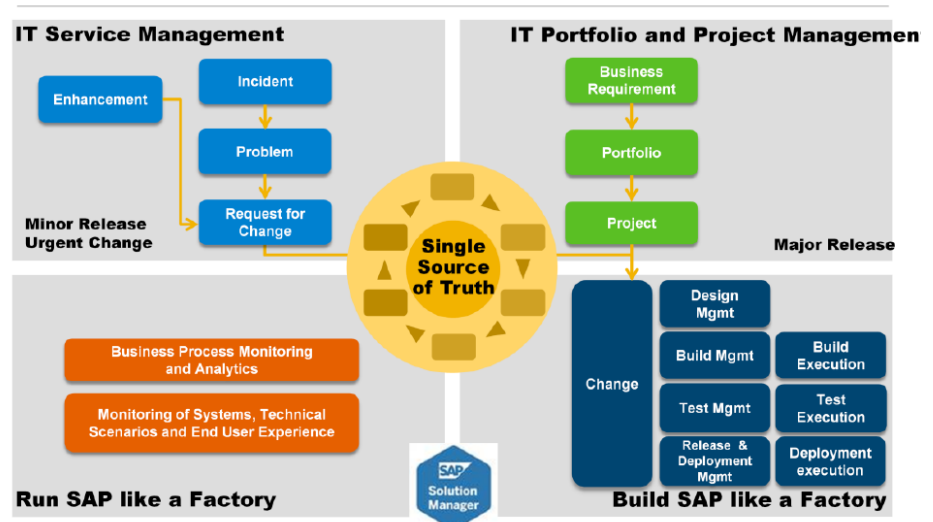

Figure 1

Usage of SAP Solution Manager as a Test Management tool can be improved by following a number of methods and standards. This paper covers 10 important Best Practices.

The Best Practices discussed in the paper are related to following areas:

1. Usage of Template Test Script files
2. Storage of Test Scripts to Business Processes
3. Importance of Keywords for Test Plan creation
4. Dealing with Test Process Variants
5. Test Sequencing
6. Test Case status management
7. Test Evidence storage
8. Test Defect status management
9. Test Defect management process
10. Test Reporting

1. Usage of Template Test Script files

For ease of use, and efficiency, it is important that Test Scripts look the same and have the same contents, parts and structure.

When setting up a Template Test Script to be used together with SAP Solution Manager as a test tool, obviously we also take into account the way the tool is used. In that way, we can maximize the usage of both the test tool and the Template Test Script.

Typically, data is included in the Template Test Script using SAP Solution Manager as test tool.

Header, containing general information such as:

- Identification of the Test Script
- Title
- Version history
- Description and objective
- Pre-requisites to execute the test (e.g. setup of Master Data)

Test Steps, containing information such as:

- Identification of the Test Step
- Description
- Expected Result
- Observed Result
- Pass/Fail indication

The above is just an example, and based on usage in several SAP projects. Obviously, depending on the preferences of a company and requirements, changes can be made where necessary.

2. Storage of Test Scripts to Business Processes

When using SAP Solution Manager as a test tool, it is recommended to set up a business process structure. This structure can then be used as a backbone, to store all documents and other objects like SAP transactions, development objects etc.

Also Test Scripts can be stored to this business process structure, next to other test objects to execute (e.g. automated tests).

When preparing a new test ('Test Plan') in SAP Solution Manager, this business process structure with related test objects can be used to select all test objects in scope for that test. The business process structure presents a useful overview of all test objects.

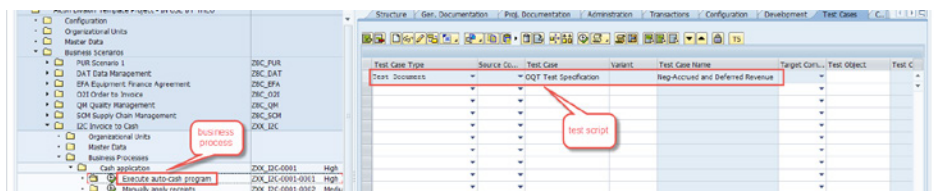Figure 2 is an example from SAP Solution Manager, showing a business process and related Test Script.

Figure 2

3. Importance of Keywords for Test Plan creation

SAP Solution Manager provides the possibility to label both business process elements and test scripts, using so-called Keywords. When this functionality is used, these Keywords can be used to filter out all test scripts having a specific Keyword assigned. In this way, a test can be quickly set up filtering out all business processes (or test scripts) which have a specific Keyword assigned.

Examples of Keywords:

- Type of Test (Unit Test, Integration Test, Performance Test etc.)
- Applicable Region or Country

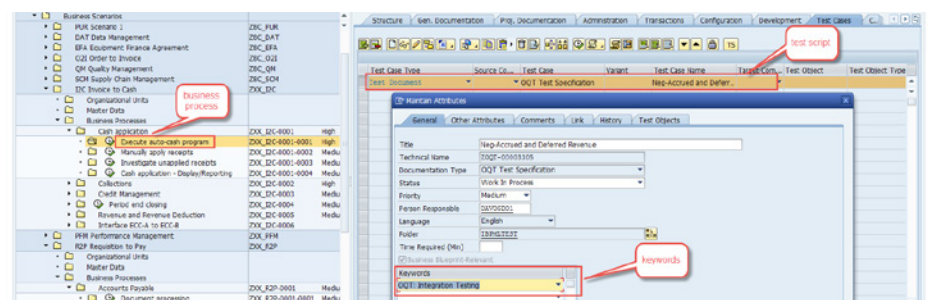Figure 3 is an example from SAP Solution Manager, showing the Keyword assigned to a test script.

Figure 3

4. Dealing with Test Process Variants

In certain situations it may be important to use the same Test Script to test different business situations. In such cases, exactly the same Test Script is used, but by using other master data (country, region, currency, department, etc.) a different business situation can be tested.

Here we call such a business situation a 'Test Process Variant'; the same test script can be used to perform different test situations.

When preparing a new test in SAP Solution Manager, the following next steps need to be executed:

1. Create a 'Test Plan' and Select all test scripts in scope from the business process structure

2. Create one or more 'Test package(s)', and assign test scripts in scope from 'Test Plan'

3. Assign Tester(s) to every 'Test Package'

In SAP Solution Manager a restriction applies: every test script assigned to a certain business process element can only be used once in the same 'Test Package'.

To be able to test the same test script more than once, two different solutions can be implemented:

1. Add separate business process element, and assign same test script to different processes; in this way, the same test script can be selected for both processes

2. Create a separate 'Test Package' (or even 'Test Plan)
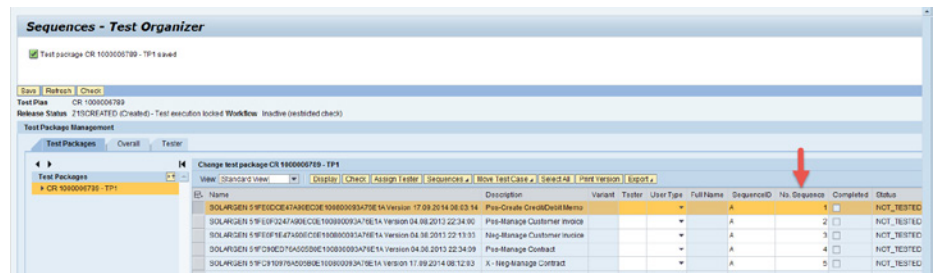
To prevent the creation of too many separate business process elements, I recommend using the second option presented.

5. Test Sequencing

In SAP Solution Manager, by default the sequence of test scripts assigned in the business process structure is shown on test execution screen (per Test Package). In case this sequence needs to be different, and it is possible to change this using 'Sequencing' functionality In SAP Solution Manager.

However, test scripts can still be executed in random order although shown in a specific sequence. When using 'Sequencing' functionality it is also possible to set a mandatory sequence; a specific test script can only be used, when the previous one has been completed.

Figure 4 is an example from SAP Solution Manager, showing the mandatory test scripts sequence for a specific Test Package.

Figure 4

6. Test Case status management

Before using SAP Solution Manager as a test tool, it is wise to decide upfront on the Test Case status values to be used ('Test Case' can be read here as a synonym for 'Test Script', however SAP Solution Manager tool uses the name 'Test Case').

The following list provides a typical example of Test Case status values:

- **'Not started':** test is not started.

- **'In Progress':** test is being executed.

- **'To Be Retested':** test is executed, but one or more defects have been found and retest is required.

- **'Test Completed':** test is completed, without any defects.

- **'Test Completed (with Defects)':** test is completed, with one or more defects.

These Test Case status values can be used to satisfy needs on test management progress reporting. Testers also can see what is still to be executed by them.

7. Test Evidence storage

Depending on the company, and company type, the requirements for test evidence provision might be different / more or less demanding.

In SAP Solution Manager, the Test Case can be used during test execution and enriched with test findings, screenshots etc. (using so-called 'Test Note'). This test results file can be stored in the test execution area.

Before using SAP Solution Manager as a test tool, it is wise to decide upfront if this way of working would be acceptable for you.

8. Test Defect status management

Before using SAP Solution Manager as a test tool, it is wise to decide upfront on the Test Defect status values to be used (defects are also called 'Messages' in SAP Solution Manager).

The following list provides a typical example of Test Defects status values:

- **'New':** defect has been newly created.

- **'In Progress':** resolution of the defect is being looked into.

- **'To Be Retested':** defect is resolved, and retest can take place.

- **'Confirmed':** defect has been resolved, and retest was found successful.

- **'Closed':** Test Manager agrees that defect can be closed. No more changes are possible in the defect.

These Test Defect status values can be used to satisfy needs on test management defects progress reporting. Experts can also see what defects still need to be resolved, and which ones are assigned to them.

Figure 5 is an example from SAP Solution Manager, where a Test Defect is shown. The arrow shows where a new status value that can be set.

Figure 5

9. Test Defect management process

This Best Practice is closely related to the previous, Test Defect status management. The way Test Defects need to be dealt with results in the definition of Test Defect status values.

Other important questions to be addressed as part of Test Defect management process include:

- Which (type of) persons are allowed to set specific defect status values?

- What process flows of defect resolution needs to be covered?

- What reporting requirements are there, and from which user groups?

- What happens with defects which are still unresolved, when test execution has finished?

Before using SAP Solution Manager as a test tool, it is wise to decide upfront what way of working would be acceptable for both you, and for the separate stakeholders.

10. Test Reporting

Testing activities are always under time pressure, as the go-live of software is required quickly every time. A good reporting tool is essential in having an immediate overview of test situations.

As part of test reporting, the following reports are the most important, bare minimum that should be covered:

- Test execution progress reporting: how many tests still need to be done? Are we on progress? What is the priority of outstanding tests, and time needed?

- Test defects resolution progress reporting: how many defects still need to be resolved? How many defects that still need to be resolved that have at least a high priority?

Conclusions

SAP Solution Manager is a tool to support IT processes, as part of Application Lifecycle Management. In several ways, both the implementation and maintenance of IT applications can be supported. SAP Solution Manager can also be used to support testing processes.

Usage of SAP Solution Manager as a Test Management tool can be improved by following a number of methods and standards. This paper shows 10 important Best Practices.

When using such standards the SAP Solution Manager tool can certainly be used much more efficiently.

It has the potential to contribute to making better decisions, which is vital in many situations where test efforts are under constant pressure to finish quickly, and with high quality, to prevent business risks.

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