Integrated Testing Solution Using SAP Solution Manager, HP-QC/QTP and SAP TAO



Applies to:

SAP Test Acceleration and Optimization, HP Quality Center, HP Quick Test Professional, SAP Solution Manager.

For more information, visit the Application Management homepage.

Summary

This document proposes an approach towards an Integrated Testing Solution using SAP Solution Manager, HP –Quality Center, QTP and SAP Test Acceleration and Optimization

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Author Bio



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Introduction

Business process testing and application testing is an integral part of SAP change management. Keeping in mind the critical nature SAP ERP software, it is highly essential to thoroughly test all changes that move to the production system. This document proposes an approach towards an Integrated Testing Solution using SAP Solution Manager, HP –Quality Center and SAP Test Acceleration and Optimization

SAP Test Acceleration and Optimization

The SAP Test Acceleration and Optimization (SAP TAO) software streamlines the creation and maintenance of ERP business process testing. SAP TAO helps QA specialists to break down applications into components, which can then be assembled into test cases through a simple interface using drag and drop, parameterized for flexible reuse, such as reusing a test that has updated data inputs, maintained easily and inexpensively, even when screens, flows, or service packs change.

Solution Manager Adapter

SAP Solution Manager Adapter for SAP Quality Center by HP integrates application lifecycle management capabilities of SAP Solution Manager with test planning and test execution capabilities of SAP Quality Center by HP.

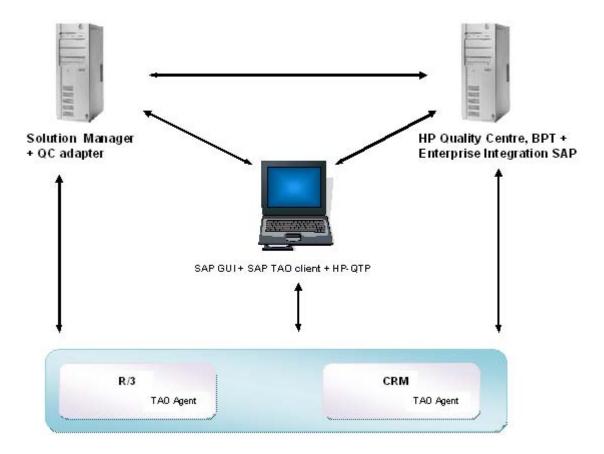
HP Quality Center

HP Quality Center is a complete Test Management Tool for Automated and manual testing. It enables both non-professionals and QA experts to streamline testing SAP applications and business processes. It reduces test maintenance and simplifies test creation with drag and drop functionality.

HP Quick-Test Professional

HP Quick-Test Professional (QTP) is an automated test solution for functional and business process applications. It captures, verifies, and replays user interactions automatically. QTP is also required to execute testing scripts.

Landscape Components



The following are the important components used in the test landscape

- HP Quality Center
- HP Quick Test Professional QTP
- SAP Solution Manager
- Quality Center Adapter for Solution Manager
- HP Enterprise Integration for SAP
- Database software for Quality Center
- Web Server Software for Quality Center
- SAPGUI, QTP and TAO client.
- TAO agents to be installed on SAP systems

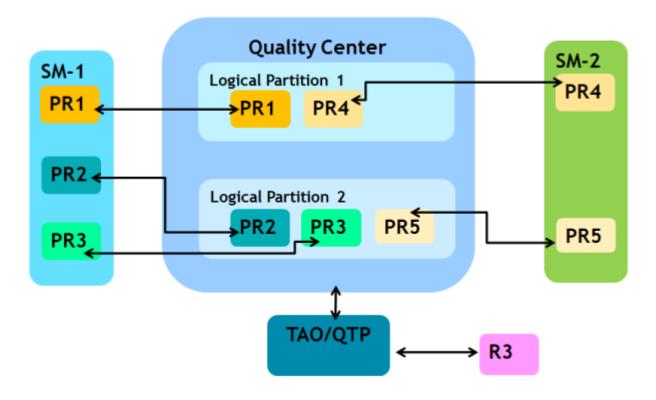
The latest version of the software and their support pack levels should be checked from the SAP marketplace.

SAP COMMUNITY NETWORK

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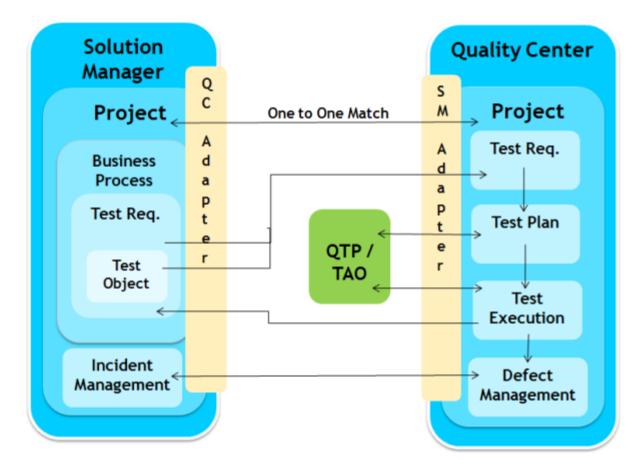
SDN - sdn.sap.com | **BPX -** bpx.sap.com | **BOC -** boc.sap.com

Architecture



The above figure depicts two solution managers (SM1 and SM2) connected to Quality Center. For organizations using more than one solution manager, it is possible to connect them to a single quality center

- The quality center can contain multiple domains (Logical partition).
- Each domains can contain one or more projects
- The domains/Projects will have their own Access control
- There is a one to one link between a solution manager project and a QC project
- The names of the projects on solution manager and quality center need not be same
- TAO and QTP interact with QC and one or multiple SAP systems

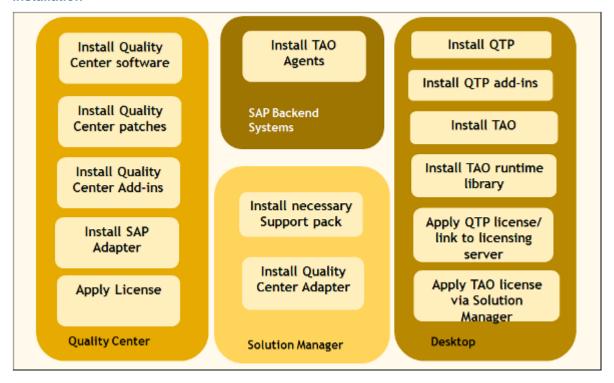


The above diagram represents a typical data flow between Solution Manager and Quality Center

- There will be a one to one link between SM Project and QC Project
- SM and QC will interact through their respective adapters
- The Test Requirement and Test Object from SM will flow to QC as Test Requirement
- This will have to be than converted in test plan in QC
- Automated test scripts will be created and attached to the test plan on Quality Center
- The tests will then be executed in Test labs from Quality Center
- The results will be stored on Quality Center and then transferred to Solution Manager
- The results can be viewed from Solution Manager as well as Quality Center.
- Quality Center offers a very detailed view of the log
- Optionally Defect Management in QC can be used to track defect. This can also be integrated with Incident Management in Solution Manager

Process Flow

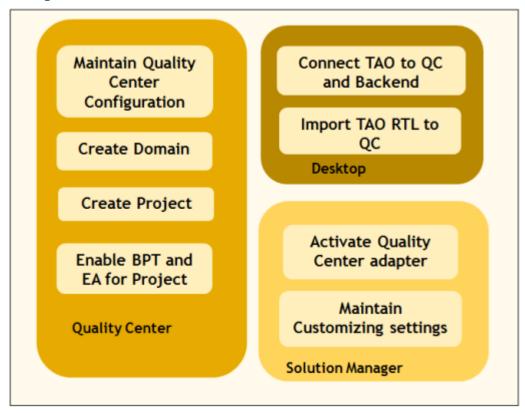
Installation



The above diagram depicts a high level installation process consisting of four areas

- Quality Center This will host Quality Center software, patches, add-ins and SAP Adapter
- SAP Backend systems This will host the SAP TAO agent.
- Solution Manager Quality Center Adapter has to be installed on solution manager. The prerequisites solution manager support pack levels also have to be met
- Desktop -The desktop should have SAP GUI, QTP, and TAO installed on it

Configuration



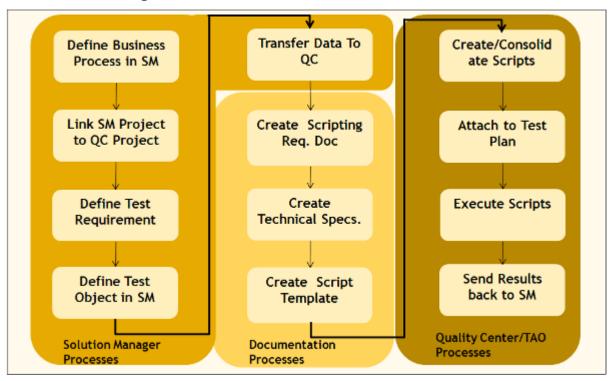
Post Installation configuration needs to be carried out on the various components as depicted in the above diagram.

Quality Center configuration consists of a couple of settings, domain creation, project creation and enabling BPT and EA for the project to be linked to solution manager

TAO needs to be connected to the SAP backend system as well as Quality Center. The TAO runtime library also has to be imported to Quality Center

The Solution Manager adapter has to be activated for use. This has to be followed by configuration setting to enable communication between Solution Manager and Quality Center

Execution and Testing



The above diagram suggests a typical process flows for a complete test cycle. The processes are segregated into three namely

- Solution Manger Process These are to be carried out in Solution Manager.
- Documentation Process These processes are not mandatory, but as a good practice it is essential to document the function and technical specification of the scripts that are being created.
- Quality Center Processes: The process are carried out in Quality Center and on the Desktop using TAO and QTP

High Level Implementation Plan

The attached table proposes a high level implementation plan which can be used during the implementation of this solution

Phase	Tasks	Deliverables
Pre-Implementation	 Acquire Hardware for Servers Acquire Software and license Acquire Desktops Identify System/Project for Initial implementation Identify Business Processes to be automated Effort Estimation & Schedule Acquire resources 	Hardware/Software and Resources
Project Kick-off	 Define project goals etc QC/QTP Install and configure Solution Manager Install and Configure – if already not existing TAO install and Configure Install and configure required adapters Create Domain and project in QC Create project in SM if necessary Link SM project to QC project Give proper Access to team members 	Software & environment installed and running
Training	 Train Project members on QC Usage, BPT, TAO, Solution Manager, System Administrator Create documentation and cook Books Designate key users and Administrators etc 	Users/ Administrators Trained Documentation prepared
Blueprinting	 Review & Validate Business Processes in Solution Manager Review and validate testing processes Define test requirements and test object in Solution Manager Transfer data from SM to QC Develop Best Practices for Test Case & Test Data Design Create script requirement doc 	Validated High-Level Business Processes Best Practices Templates for Test and Data Creation Script requirement Document
Test Case Design	Create scripting technical specifications documents Create Detailed Test Component Groupings Formalize Test Organization and Schedules Define Test Sequence Design Defect Mgmt Process	 Detailed Test Design Defined test Requirements Test Script Design Documentation Test Script Scenarios

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Related Content

Installation of SAP Quality Center Adapter Note1285941
Installation of SAP Test Acceleration and Optimization Note1341244
Information and Guides for SAP TAO SAPTAO-2
For more information, visit the Application Management homepage.

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