Test Strategy for On-Premise Centric Customers

Wolfgang Platz Tricentis, Nicolas Alech SAP
Disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. Except for your obligation to protect confidential information, this presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or any related document, or to develop or release any functionality mentioned therein.

This presentation, or any related document and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this presentation is not a commitment, promise or legal obligation to deliver any material, code or functionality. This presentation is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This presentation is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this presentation, except if such damages were caused by SAP’s intentional or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.
Agenda

SAP ALM Solutions for on-premise centric customers

Testing Strategy
ALM Solutions for on-premise
SAP Solution Manager - Test Suite
Capabilities of SAP Solution Manager Test Suite and Focused Build

Add-On Functionality of Focused Build for SAP Solution Manager

- Requirements / Work Package based Test Plan Generation
- Test Steps Designer
- Test Execution: My Test Executions
- Test Suite Dashboard

SAP Solution Manager – Test Suite

- Manual Test Cases
- Automated Test Cases
- Test Automation Framework with 3rd party test tool integration
- Test Composition Environment to manage SAP and partner tools
- Test Data Management
- Change Impact Analysis
- Test Plan and Test Package Management
- Test Execution of manual and automated tests
- Gap and Completeness Analytics
- Test Execution Analytics
Focused Build for Application / Software

**PMO**
- Create project plan
  - Track project readiness, issues and risks
  - Manage scope change
- Manage q-gate deliverables, sign-off
- Hand-over release to customer
- Project plan
  - Release, waves, and sprints

**Explore Team (Business)**
- Fit-Gap WS for Requirements

**Build Team (Plan)**
- Create Work Package
- Assign Work Items & build teams
- Manage show & tell
- Develop, configure, unit test
- Document Work Item & progress
- Release Work Item
- Defect Correction
- Plan & execute Wave tests (SFT & AT)
- Manage Defects
- Execute Release Tests (FIT & RT)
- Build, test and validate release

**Build Team (Development)**
- Manage q-gate deliverables, sign-off
- Process model
  - Application landscape
  - Requirements & gaps
- Functional specification
  - Config, guide, test cases
  - System landscape
- Tech. design
  - Dev. Objects in transports
- Test Management
- Test Management
  - Test Steps Designer
  - Test plan
  - My Test Executions
- Release
- Release Management
Example of Project Structure
Build Project for Waterfall Approach

Project structure sample with 1 wave and 1 sprint

Project Phases:
- Prepare
- Explore
- Realize
- Deploy
- Run

Phases of Release Cycle:
- Prepare
- Build
- Test
- Deploy
- Hypercare

Wave 1:
- Functional Specification Released
- Single Func. Test Completed
- Acceptance Test
- Functional Int. Test (Final)
- Regression Test
- Single Functional Test

Sprint 1:
- Technical Design Released
- Unit Test Completed
- (Work Package) Build Finished
- (Work Item) Build Started
- (Work Item) Build Completed

Handover to Release:
(Note. Point of NO RETURN for the Transports in these WP)
Example of Project Structure
Build Project for Agile development of a single release

**Project structure sample with 1 waves, of 3 sprints**

**Wave 1**
- W1 Scope defined
- Functional Spec released/available
- Single Functional Test (SFT) completed
- Work Package (WP) Build completed
- Acceptance Test

**Sprints**
- **Sprint 1**
  - Unit Test
- **Sprint 2**
  - Unit Test
- **Sprint 3**
  - Unit Test

**Milestones**

**Phases of Release Cycle**
- Prepare
- Explore
- Realize
- Build
- Test
- Deploy
- Hypercare

**Example Milestones**
- Tech. Design Released
- Build Started
- Build Completed
- Unit Test Completed

**Regression Test**
(Note. Point of NO RETURN for the Transports in these WP)

© 2020 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC
Example of Project Structure for **Continuous Delivery**
Build Project for Agile development of a single release

**Project structure sample with delivery per Sprint**

**Sprints**
- **Sprint 1**
  - Tech. Design Released
  - Build Started
  - Build Completed
  - Unit Test Completed

- **Sprint 2**
  - Tech. Design Released
  - Build Started
  - Build Completed
  - Unit Test Completed

**Phases of Release Cycle**
- Prepare
- Explore
- Realize
- Deploy
- Run

**Single Functional Test**
- SFT

**Milestones**
- Unit Test Completed

**Not Sustainable without Automation embedded into a Strong Test Strategy**
Quality & Speed
Test Strategy
Partnership Scope with Tricentis

Application Lifecycle Management

- Build
- Test
- Deploy
- Automate
- Detect
- Correct
- Analyze

Application Testing Solutions by Tricentis

- Does it work?
- Does it scale?
- What to test?
- Continuous Test Automation
- Change Impact Analysis
- Design & Build
- Deploy
> 90% of SAP testing is done manual and intuitive.
How they **tackle the challenge**

When customers want to improve **testing**, they usually think of **automation**.

When testing, they usually think of **automation**.

- **Does it work?**
- **Does it scale?**
- **What to test?**

**Continuous Test Automation**

**Test**

**Load Testing**

**Change Impact Analysis**

**Design & Build**

**Deploy**
If you **start** with **test automation**, you may **start** with TTA

When customers want to improve **testing**, they usually think of **automation**.
The three **nightmares** of test automation
Test Portfolio Maintenance
Escape it also for E2E systems & APIs

Test Data Management
Needs to be stateful & fully integrated

Test System Provisioning
Requires service virtualization
False Positives

72% * failures of automated tests occur when the software is even functioning properly

33% Automation issues
   Maintenance

23% Test Data issues

16% Test Environment issues

28% “Real” Errors

* Source: How to Reduce False Positives in Software Testing, Tricentis
Complex (test) processes require test data in certain, well defined states.

Test data may expire (e.g.: persons/contracts grow old).

Test data is altered through the test itself (consumption of test data).
Dynamic Object References – SAP IS-U

(Operational) Master Data

1. Business Partner 1002061528 has been created.
2. Contract 500028629928 has been created.
3. Contract account 002022606814 has been created.
3. Device 7001135332 has been created.
4. Device Location 4002774171 has been created.
4. Connection 40120675311 has been created.
3. Connection Object 8000426437 has been created.
4. Point of Delivery 00724800000924 has been created.
Sustainable Test Automation

Does it **work?**

SAP Enterprise Continuous Testing by Tricentis

- Automation for non-SAP (including MS Office support and 160+ other technologies)
- Test Case Portfolio Optimization
- Service Virtualization
- Test Data Provisioning (creation of synthetic data)
- Distributed Execution Engine

Does it **scale?**

Test Management

- SAP Solution Manager
- SAP Cloud APM

What to **test?**

- Lead Testing
- Change Impact Analysis
- Design & Build
- Deploy
Use-Case: Keep track with SAP Updates/Upgrades

Test Scope Reduction

Traditional Impact Analysis narrows the test scope down to impacted objects.

-85% reduces the test scope down to most-at-risk objects.

Most-at-risk objects (AI powered assessment)
Positioning of BPCA and SAP Change Impact Analysis by Tricentis

SAP Change Impact Analysis by Tricentis
- Speed
  - Time to results is shorter
  - Results are object oriented
  - Based on static code analysis

Business Process Change Analyzer
- Precision
  - Results are more precise for process variants and dynamic calls
  - Results are process oriented
  - Based on generated TBOMs in process structure, resulting in higher continuous efforts

Both tools complement each other
Make sure you know **what to test**

Does it **work?**

- SAP Enterprise Continuous Testing by Tricentis
- Tricentis Test Automation for SAP
- Test Management

Does it **scale?**

- Load Testing
- Change Impact Analysis

What to **test?**

- SAP Change Impact Analysis by Tricentis
A comprehensive answer to the three questions

**Does it work?**
- SAP Enterprise Continuous Testing by Tricentis

**Does it scale?**
- SAP Load Testing by Tricentis
  - Load testing both on ...
    - Protocol level
    - Browser level

**What to test?**
- SAP Change Impact Analysis by Tricentis

---

**Change Impact Analysis**

**Deploy**

**Design & Build**

Continuous Test Automation

**Test Management**

Load Testing

- Protocol level
- Browser level
Positioning of CBTA and Tricentis Test Automation

Both use module/component based approach and not scripting. Both are suitable for non developers and reduce maintenance efforts for test automation when UIs change

CBTA
- Fully supports Fiori based SAP Applications, SAPUI5, SAP GUI and others (see CBTA roadmap)
- SAP does not plan to support more UI technologies
- CBTA will be supported as long as SAP Solution Manager is supported on its current scope

Tricentis Test Automation for SAP
- Supports all SAP Applications without restrictions
- Provides API Testing
- Is licensed to customers until end of 2024 with yearly autorenewal
- SAP and Tricentis plan to allow a seamless transition to SAP Cloud ALM
- Via the reseller customers can extend the same automation towards non-SAP solutions
What can SAP Solution Manager customers do NOW and as of 2022?

- Evaluate to add Focused Solutions
- Evaluate to switch to SAP Cloud ALM

SAP Solution Manager 7.2

NOW

~ 2022
Open Architecture for our ALM platforms

While we have the OEM and Partnership with Tricentis, our ALM platforms remain open to all other partners

Integration to SAP Solution Manager

- We offer an open certification program
- Certified partners:
  - Tricentis
  - WorkSoft
  - UiPath
  - Micro Focus UFT
- Under certification process:
  - Suxxesso
- Partners that have shown interest:
  - Eggplant.io
  - SLK Group
A Complete Offering for the SAP Enterprise Support Customers:

- Manage ALM with SAP Solution Manager
- Manage your Test Strategy with Solution Manager and Tricentis
- Manage Test Automation with Tricentis Test Automation for SAP
- Perform Change Impact Analysis with BPCA and SAP Change Impact Analysis by Tricentis
- Automate beyond SAP and more with SAP Enterprise Continuous Testing by Tricentis
- Perform load and volume testing with SAP Load Testing by Tricentis
Thank you.

Contact information:

Wolfgang Platz  
Founder and Chief Strategy Officer  
Tricentis

Nicolas Alech  
Senior Product Manager  
SAP