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SAP Automating Testing with HP's Business Process Testing (BPT)



Agenda

- Challenges
- Organization Readiness
- Foundation
- Planning, Planning, Planning
- Business Process Testing Intro
- High Cost of Maintenance
- Best Practices
- Data-Driven
- Test Data Management
- Business Process Testing Demos

- Typical SAP tests are usually module specific and not end-to end
- SAP knowledge is captured in silos (module), very few resources knows the entire end-to-end process
- Substantial amount of SAP upgrades, hot-packs and updates
- Lack or poor Quality Assurance processes within the organization
- Unclear, vague, poor and/or non-testable requirements
- Poorly documented or non-existent test cases

- Lack of Data Management
- High maintenance cost due to poor or non-existent test automation design
- Inexperienced resources without
 - Automation Testing
 - Tool knowledge
 - Scripting knowledge
 - Technical knowledge

- Is your organization ready to automate?
- Do you have mature manual testing processes?
- Do you have the test automation knowledge to avoid growing pains?
- Do you have the skills to properly plan and automate your test cases?
- Do you know the automation tool well?
(Undocumented and Advance Features)
- Do you have a test data baseline process?

- Well-organized Manual Test Processes
 - Test Cases well documented
 - Valid Test Data
- Test Automation Strategy
- Test Automation Architecture and Design
- Resources with Test Automation Knowledge
- Resources with Advance Tool Knowledge
- Accessible Application Specialist (Business Knowledge)
- Test Data Management
- Dedicated team of Test Automation Specialists

Test Automation is a software development project, it is necessary to;

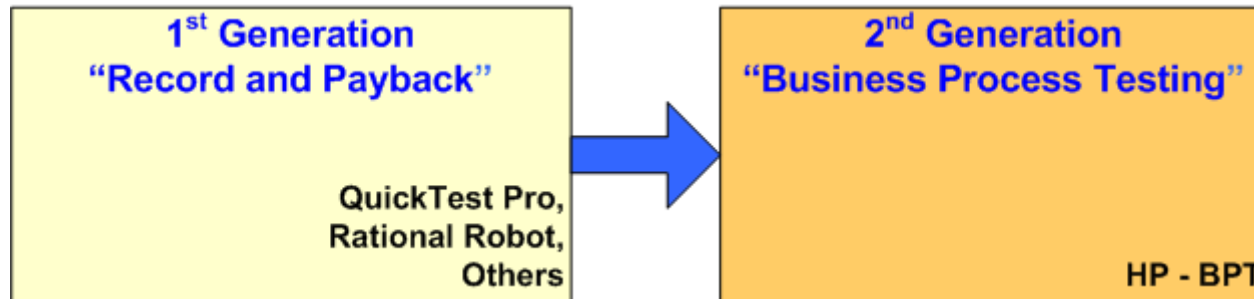
- Prepare an Architecture solution
- Plan the best approach for the application under test
- Prepare a road map
- Identify technical challenges if any
- Train resources

- Test Automation Strategy
 - Test data management
 - Test design patterns
 - Standards and naming conventions
 - Error handling and reporting
- Test prioritization with Business Process Experts
- Test Automation Plan
 - Development cycle process
 - Resources & schedule
- Automate prioritized test suite

HP – Business Process Testing

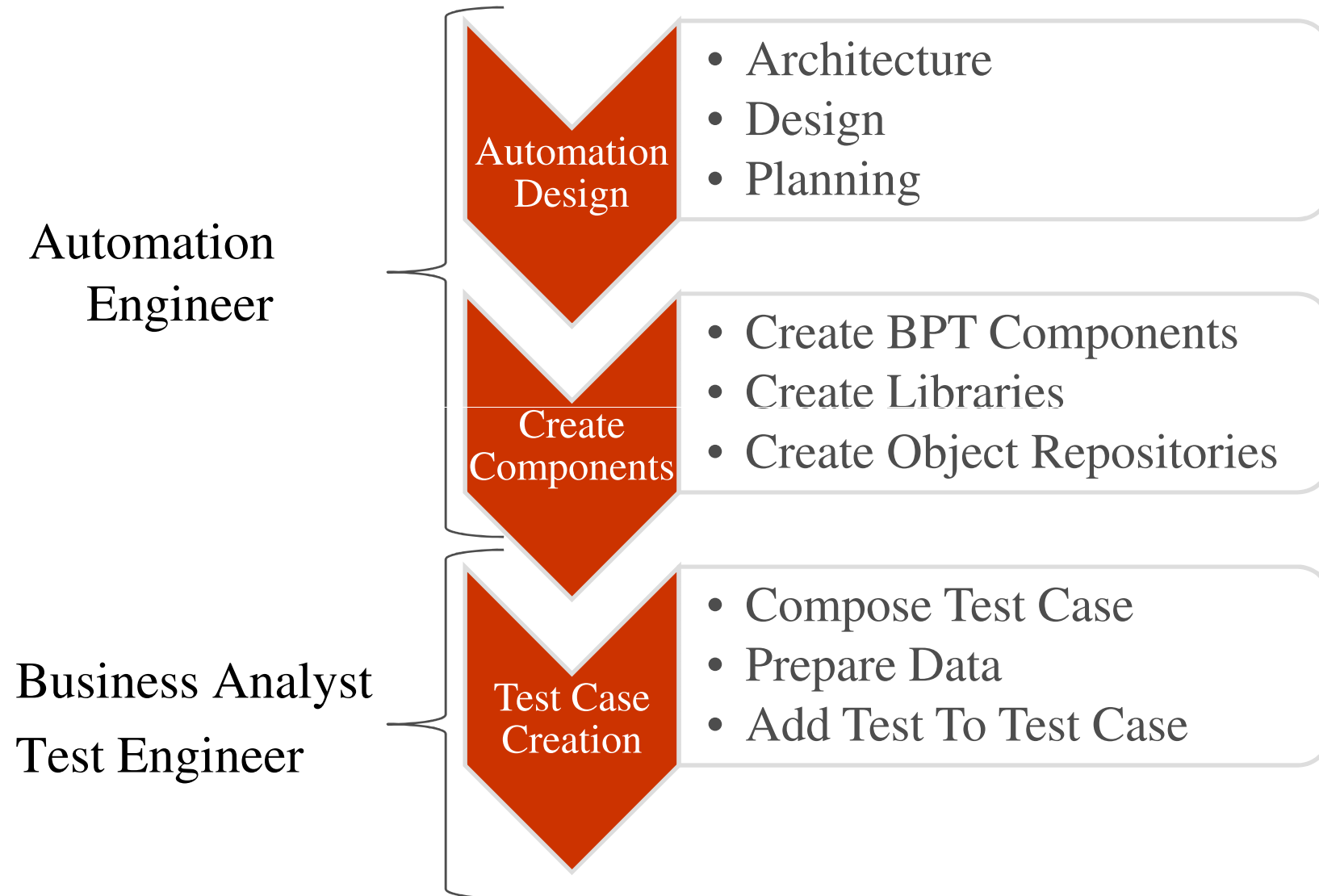
- Proven Technology
- Reduces maintenance compared to traditional automation
- Component level traceability
- High level of flexibility to deal with custom controls
- Runtime parameterization
- Requires some level of recording
- No automatic change detection

- Test Automated testing tools available to test SAP environments provide several approaches;
 - Traditional Record and Playback (1st Generation)
 - Business Process Testing (2nd Generation)



- Business Process Testing Requires
 - HP - Quality Center
 - HP - QuickTest Professional
- Gives the possibility within Quality Center to
 - Separate the scripting task from the test case preparation task
 - Easily create test scripts using reusable test components
 - Manage the test data
 - Manage the test flow
 - Maintain either manual or automated components

Business Process Testing - Approach



- Minimize maintenance cost
 - High reusability with data-driven test components
 - Minimize scripting logic with efficient test component design
 - Self-contained test cases for easier test management
 - Function / Methods Library development for high reusability
- Reduce needed skills with task segregation
 - Business Process Experts – Test Case Level
 - Test Component Developers – Test Component Level

- Reusable Components – Encapsulated steps that can be reused
- Component Granularity – The right size of the component. Should it be a screen, form, header, tab, etc?
- Data-Driven Component – Components that can accept different input data
- Function Libraries – Visual Basic Libraries containing reusable functions and methods
- Business Component – A keyword driven component
- Scripted Component – A event driven component with the flexibility write coded and logic

- Business Flows – A collection of several components that represent a specific flow of events
- Test Data Management - A process to manage test data
- Data Baseline – A data starting point . A specific state that data has to be set at
- Naming Convention Standards – Standards for coding, parameters, messages and error handling
- Advance Error Handling – The ability to handle known and unknown errors to provide real unattended execution
- Automation Team- Dedicated team for automation

An Automated Test Script should process a transaction flow based on the input test data

- Reduce maintenance by separating the test from the data
- Execute several transaction flow scenarios by feeding data to the same test case
- One Test Case satisfies multiple transaction flows

A successful Test Automation needs a well-organized test data management process

- An Efficient Test Data Management process benefits manual and automated testing
- Test Data needs to be included in the test automation design and architecture (Data Baselineing)
- Invalid Test Data accounts for more than 70% failures in automated testing runs (GIGO effect)
- Obtaining and/or creating test data can take between 20% to 50% of the testing effort

- Business Process Testing
 - Substantially reduces maintenance
 - Provides modularity and reusability
 - Captures business knowledge
 - Provides data-driven testing
 - Technology is been around since 2004
 - Accelerates Test Creation when components are available
 - Can be used by Business Analyst or Functional Analyst to compose tests
 - Is embedded in a test management solution, Quality Center

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Question and Answers

