Transforming Test Automation: Scriptless Testing Comes of Age

March 3, 2015
Today’s Speaker

Daniel Gannon
President/CEO
TurnKey Solutions
Housekeeping

• This “LIVE” session is being recorded
  Recordings are available to all Vivit members

• Session Q&A:
  Please type questions in the Questions Pane
Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions
Scriptless Test Automation For HP ALM

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March 3, 2015

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About TurnKey Solutions

- Founded 1992, HP/Mercury technology partner since 1995, HP OEM Partner since 2012
- Privately held, HQ in Denver, CO with offshore operations in Delhi, India
- Global presence – growing customer presence across all continents
- Our automated testing solutions are built exclusively on the industry leading HP ALM technology stack
- Scriptless automated testing enables broad use for hundreds of application types using a common set of tools, by business users, TCOE’s and QA experts
What do we mean by “Scriptless Testing?”

“Scriptless testing tools reduce or eliminate the amount of scripting involved in the creation of tests using model-, object, data- or keyword-driven approaches. The goal is to enable business user testing and to reduce maintenance costs. The majority of products are focused on functional automation, but performance testing products are also appearing.”

- Gartner
**TurnKey’s Definition of Scriptless Testing**

- TurnKey’s Scriptless Testing Software significantly reduces the time and cost of application testing, while eliminating the need for technical programming expertise. Our solutions leverage an intelligent, data-driven framework that helps to streamline test creation and maintenance, and substantially extend and deepen test coverage, resulting in minimized business risk. With TurnKey Scriptless Testing, there is no technical scripting or recording required; test automation content is auto-generated and auto-maintained. To create tests, users simply drag and drop test components to create full end-to-end automated test scenarios.
So...why adopt Scriptless Testing? What are the benefits?
Polling Question 1:

What are the top challenges you face in application delivery/testing?

- Keeping test cases up to date and maintained
- Understanding what to test
- Shortening test cycles to speed up releases
- Not enough resources (people and/or budget)
- Test tool application support
Common Automated Testing Challenges

Record and Playback Technology
Time consuming to run through every possible process flow to create scenarios, requires programming skills to create and maintain the scripts.

Minimal Automated Test Coverage
Business process complexity leads to many test scenarios resulting in low test coverage introducing significant business risk.

Keeping Automation Test Cases Up-To-Date
Faster development cycles and business changes require on-going maintenance and up-to-date test cases (family packs, enhancements, customizations, patches, etc.)

Staffing The Necessary Testing Resources
It takes someone with a technical skill set to properly build and maintain test automation with traditional tools and those resources are hard to find.
Automated Test Half-life

- Scripts recorded here
- Try to reuse scripts here, ...

Usable Automated Tests (%)

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<th>30</th>
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</table>
The Quality Trade-off
TurnKey Solutions “Automates the Automation”

- **Automatically** creates and maintains test automation content, in a consistent manner fully optimized for performance.
- Implements a **data-driven architecture** to enable users to create test flows covering all possible test scenarios.
- Automatically identifies the changes in your applications and provides rapid, intelligent test case updates.
- Fully leverages your current investment in HP automated testing platform. Existing test script libraries can continue to be used. Provides for a common set of tools to automate all applications.
- Significantly reduces the expense of the software quality process while expanding test coverage.
TurnKey Solutions Product Family

Scriptless Testing

An automated, programming free BPT Components generator that works with any application supported by QTP/UFT.

Accelerator Packages

- SAP Accelerator™
- Guidewire Accelerator™
- Oracle Accelerator™
- PeopleSoft Accelerator™
- T24 Accelerator™

A comprehensive library of prebuilt BPT components and test cases ready for fast and easy implementation.

Impact-based Analysis

TurnKey LiveCompare®

Dynamic Impact Analysis and Testing Leveraging HP ALM.
Comprehensive Test Management - Continuous, Agile Testing

- Continuous testing
- Fully integrated with HP ALM/QC

- Identification of high risk transactions
- Pinpoint available test assets & gaps

- Test Creation
  - Accelerators
  - Scriptless test automation

- Test Execution
  - Data-driven workflows
  - Test labs w/ guided manual testing

- Change Mgt

- Test Mgt

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Polling Question 2:

What percent of your test execution is conducted manually?

- Between 0%-10%
- Between 11%-25%
- Between 26% - 50%
- Between 51% - 80%
- Between 81% - 100%
cFactory™ - Auto-creates test components

Creating test automation components is as easy as clicking on your application screens

Create fully optimized BPT component in seconds!
cFactory™ - Non-technical test case creation

The automation components are strung together to create automated test cases

cFactory™ converts test case creation from scripting to drag-and-drop!
TestExecution/
Data Driven Architecture
Test more of your application with fewer test cases without writing code
cFactory™ - Data Driven Architecture

cFactory’s™ dataDriver™ automatically builds a formatted Excel workbook

[Diagram showing a sequence of steps for booking a flight]
Test Maintenance Application-Aware Auto Update
cFactory™ - Auto-updates Test Sets

Dramatically Reduced Test Case Maintenance Effort
cFactory™ - Auto-maintenance View

cFactory helps you see and understand the changes

<table>
<thead>
<tr>
<th>Step</th>
<th>Item</th>
<th>Operation</th>
<th>Value</th>
<th>Output</th>
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<td>Parameter[Supplier Name]</td>
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<td>Oracle Procurement</td>
<td>CaptureScreenDir &quot;Oracle Procurement&quot;</td>
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<td>Oracle Procurement</td>
<td>OldButton, TRS</td>
<td>Parameter[Oracle Procurement]</td>
<td>26</td>
</tr>
</tbody>
</table>

**Software Certified Integration**

**Software Certified Content**

**Software Global Business Partner**
cFactory™ - Auto Maintain The Data Driven Architecture

cFactory’s™ dataDriver™ *automatically* updates the formatted Excel workbook
Polling Question 3:

What percentage of your testing time is allocated to test maintenance?

- Less than 10%
- 11% - 30%
- 31% - 50%
- 51% - 70%
- More than 70%
Scriptless Testing For Enterprise Applications
Enterprise Application Quality Management Challenges

**Change is Constant**
Enterprise/ERP applications are in a constant state of change (upgrades, family packs, transports, enhancements, customizations, patches, etc.).

**Metadata Based**
A single change in the application or the metadata can unexpectedly affect multiple different parts of the application.

**Mission Critical - Business Process Complexity**
Validating a single business process requires testing numerous data scenarios (approvals, routing, authorizations, contracts, currency, etc.).

**Highly Customized Heterogeneous Environments**
End-to-end business processes typically span multiple technologies that can include packaged, legacy and custom applications.
Enterprise Application Support*

**Accelerator Packages**

- SAP Accelerator™
- Guidewire Accelerator™
- Oracle Accelerator™
- PeopleSoft Accelerator™
- T24 Accelerator™

A comprehensive library of prebuilt BPT components and test cases ready for fast and easy customization.

Test cases that cover a vast array of business processes that are *tailored to the customer’s unique environment*, including all customizations.
Accelerators for Oracle, SAP, PeopleSoft, Temenos T24 & Guidewire
Component Based Data-Driven Framework

The Accelerators consist of pre-built automated component libraries and pre-built component based test cases. Built using our cFactory™ technology enables these libraries to be easily and quickly configured to match your configured environment, providing a faster path to automation and ROI.

- The *pre-built components* dramatically simplify and speed test creation
- The *pre-built test libraries* enable rapid implementation and rapid return on investment
- cFactory™ architecture means your unique configurations and customizations are easily integrated - *without scripting*
- *100% QTP/QC compatibility* – continue to leverage your existing test assets and get the most value from your HP investment
TurnKey Accelerators

The Accelerator Packages consist of pre-built, cFactory-based BPT components and critical business process test cases.
TurnKey Accelerators

Dramatically accelerates time to automation and ROI

Traditional Test Automation
Time to Value

Accelerator
Time to Value

Guidewire
ORACLE
PeopleSoft
SAP
TEMENOS

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Scriptless Testing For Mobile
cFactory, Mobile Labs, and HP: Delivering Powerful End-to-End Test Management
Mobile Test Application Management

HP ALM

Automation  Virtualization  Collaboration  Insight

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cFactory™ - Auto-create Components

Creating test automation components is as easy as clicking on your mobile screens

Code-free component generation!
cFactory™ - Auto-create Mobile Components

Data then drives the flow of tests
Summary/ROI
"The cloud’s new service delivery models, the increase in business process automation, the proliferation of information channels and the expanding universe of digital technologies are all driving business and technology change. A new and lighter IT organization is emerging as IT service delivery becomes increasingly commoditized; yet demand for skills in the design and building of new, innovative and technology-enabled business solutions is rising. The skill profiles for the new IT will, in many cases, be a hybrid of business and IT skills."

- TurnKey solutions are positioned to support future state CIO direction with increased emphasis on Design & Build / Business Process Modeling automation.

Reference: Gartner
Scriptless Testing Supports Agile Methodologies

Compounding Value of TurnKey BPM Automation
- Shorten Testing Cycles
- Reduce Manual Testing Effort
- Mature Regression Bed
- High Levels of Test Coverage
- Increased ROI within Projects

Code Drop A
- TurnKey BPM Automation A
- Regression A

Code Drop B
- TurnKey BPM Automation B
- Regression A

Code Drop C
- Regression B
- TurnKey BPM Automation C

Final Defect Fixes
- Regression A
- Regression B
- Regression C
TurnKey Delivers Exceptional Business Value

Faster (Time)
- Enhances business agility with faster responsiveness to change
- Provides a faster time to value...our automated test platform can often be implemented within 8 - 16 weeks

Better (Quality)
- Expands your automated test coverage...100%-500% greater test coverage
- Deeper and broader application coverage
- Reduces errors from manual testing and programming

Cheaper (Cost)
- Reverse the growing “bite” that testing takes out of your IT budget
- Reduce IT resource requirements...e.g. one customer has 11,000 automated tests managed by 1 SQA tester
- Significantly reduces test maintenance which can represent up to 80% of project time
## TurnKey Reduces Test Process by 94%

<table>
<thead>
<tr>
<th>POC – 2 Application Modules</th>
<th>Current State - QTP</th>
<th>TurnKey</th>
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</thead>
<tbody>
<tr>
<td>Prep</td>
<td>Framework</td>
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<tr>
<td></td>
<td>• Libraries</td>
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<td>• Re-useable Actions</td>
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<td>• Object Repository</td>
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<td></td>
<td>14 Hrs per Function</td>
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<td>28 Hrs</td>
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<tr>
<td>Creation</td>
<td>70 QTP Scripts</td>
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<td>3 Hrs per Script</td>
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<td>210 Hrs</td>
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<td>Maintenance</td>
<td>~30% of Total Scripts</td>
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<td>~21 Scripts</td>
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<td>3 Hrs per Script</td>
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<td>Totals: 2 Modules</td>
<td>313 Hrs</td>
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<td>2 Full Applications</td>
<td>1,886 Hrs</td>
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<td>88 Hrs</td>
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Thank You

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