How the Rise of Mobile Apps in SAP Ecosystems is Driving Highly Automated Testing

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Mobilizing the Enterprise

“Mobility is transforming the enterprise. IT can lead, follow or get out of the way. Enterprises must consider bring your own device (BYOD) policies, mobile device management (MDM), identity and security systems, application development and usage, and wireless networks in their 2013 plan.”

-- Gartner, Inc.
Enterprise Mobility in the SAP Ecosystem

Drivers

- Access to critical business applications
  - Employee demand
  - Accelerate employee productivity
  - Real-time decision making, document access, analytics

- SAP strategy to become the world's leading vendor of enterprise mobile application platforms
  - Goal: 1 Billion mobile app users by 2015
  - ‘Apple of enterprise mobility’
  - SAP mobile acquisitions – Sybase and Syclo
  - HTML5

- Beyond SAP - Non-SAP mobile applications
Enterprise Mobility in the SAP Ecosystem

Typical Use Cases

- BYOD Programs
- Field Sales Applications
- Field Services Applications
- Consumer Facing Enterprise Applications
  - Retail, Banking, Insurance, Healthcare, etc.
2013 Worksoft Research Report

- Survey performed by an independent third party on behalf of Worksoft
- November/December 2012
- 699 Responses
- 504 Companies
- www.worksoft.com/publications
Do you expect to see your business use more mobile technology in the next 12 months?
Do you expect to see your business use more mobile technology in the next 12 months?

- **Yes**: 69.4%
- **No**: 12.4%
- **Don’t know**: 18.2%
The Mobile Testing Challenge

- Widespread proliferation of mobile devices; device diversity
- Tedious, costly inventory management of physical devices being used across teams driven by mobile fragmentation:
  - Various platforms (IOS, Android, BB, WM, Symbian)
  - Several device form factors (flip phones, full keyboards, candy bars, etc.), which determine screen sizes and resolution
  - BYOD means users constantly pushing envelope
- Need for a reliable automation solution, mainly for regression testing
The Mobile Testing Challenge

- Mobile testing typically disjointed from the rest of the application landscape/business process
- Manual testing not efficient due to high number of test permutations based on supported device types/platforms
- Lack of a standard, straight-forward way for distributed development/QA teams to collaborate through the application development & testing lifecycle
- Need to test using real devices before releasing a mobile application/content
Quality Assurance and Testing
The Dimensions of the Enterprise Problem

Project Drivers
- New Installations
- Upgrades
- Mergers & Spinoffs
- Reorganizations
- Consolidations

Test Types
- Functional Testing
- Role-based Testing
- Performance Testing

Business Process Variations
- Countries
- Regions
- Business Units
- Site Differences
- Product Lines
- Packaging
- Compliance
- Legal Variations

Business Processes
- Order to Cash
- Plan to Produce
- Hire to Retire
- Financial Closing
- Business Analytics

Applications & Technology
- Packaged Enterprise Apps
- Custom Applications
- Interfaces
- Mobile Apps
- Web & Portal
- JAVA, HTML, .NET
- On Premise
- Cloud-based

Devices & Platforms
- iPhones
- Droids
- Tablets
- Scanners
- PC & Laptops
- Mainframe
Highly Automated Testing Across a Mobile Ecosystem

Achieve Quality Business Execution:

- Development
- Deployment
- User Experience
- Device Management
- Data Requirements/Storage/Management
- Security Controls/Privacy/Permissions
- Performance
What benefits of test automation software are most important to your company?

The Top Five

64% Greater staff efficiency in our testing – it saves time

49% Early identification of defects – before business users are impacted

47% Higher quality in our business processes and software

41% Greater accuracy in catching more defects – before users are impacted

39% Faster deployment of innovation & new features for business users
Worksoft Solution Suite

Integrate Seamlessly with Popular ALM Platforms

Reuse Functional Tests for Performance Testing

Certify Performance Test™

SAP Solution Manager

HP QualityCenter

IBM Rational Quality Manager

Certify Business Process Procedure™

Certify Execution Manager™

Certify Data™

Test Data Management

Test Data Extraction

Dev/QA Systems

Select Business Information

Production Systems

Test Identification and Execution

Functional Testing

Impact Analysis

Impact Analysis

Lights-out Testing

Document & Signoff

Test Identification and Execution

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- **Strategic Partnership**
  - Ready for Rational certified integration with IBM RQM
  - Worksoft solutions available on IBM Rational price list

- **Comprehensive IBM RQM Integration**
  - Associate Worksoft Certify® tests with RQM test scripts
  - Create test cases and test plans with Worksoft Certify tests
  - Execute Worksoft Certify Tests from RQM
  - Review detailed Worksoft Certify Tests results in RQM
  - Create defects associated with test failures in RQM
Certify Mobile Interface Extension

- Integrated with Keynote DeviceAnywhere
- Solution supports all mobile platforms including IOS, Android, Blackberry & Windows Mobile as well as specialized devices
- Mix and match mobile, web and back-end application test steps in a single test
- Keynote solution can be deployed on-premise or in the cloud (private)
Certify Mobile Testing Architecture

- **Application Maps**: Create Maps
- **Learn Applications**: Mobile Learn, HTML Learn, ...
- **Import Maps**: Launched as required
- **Certify Core Application**: Store/Update Test Artifacts
- **IP Network**: Keynote Mobile Device Bank (on-premise or cloud)

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Certify Mobile Internal Architecture

- **Certify Core Application**
- **Mobile Learn**
- **Virtual Mobile Device**
- **User**
- **Keynote Mobile Device Bank (on-premise or cloud)**
- **Mobile Device 1**
- **Mobile Device 2**
- **Mobile Device n**
- **Worksoft Mobile Execution Engine**

Connect, Touch, Type, Swipe etc. using DA API
Solution Benefits

- Combines leading enterprise test automation solution (Worksoft Certify) with leading mobile testing platform (Keynote DeviceAnywhere) & leading test management solution (Rational Quality Manager) from IBM
- Offers end-to-end automated testing for mobile and enterprise applications from a single consistent user interface
- Easy to use, field-proven solution, deployed at global fortune 1000 companies
- Enables effective collaboration among distributed teams
- Covers testing on all mobile platforms (OS) and devices
- No need to jailbreak or root devices
- No need to install software on mobile devices
Questions

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