

IBM Rational Solution for Test Automation

IBM Technical Summit 2013

Démarquez-vous

17 octobre | IBM Client Center Paris

***Solutions Rational de tests
d'applications multi-canal***

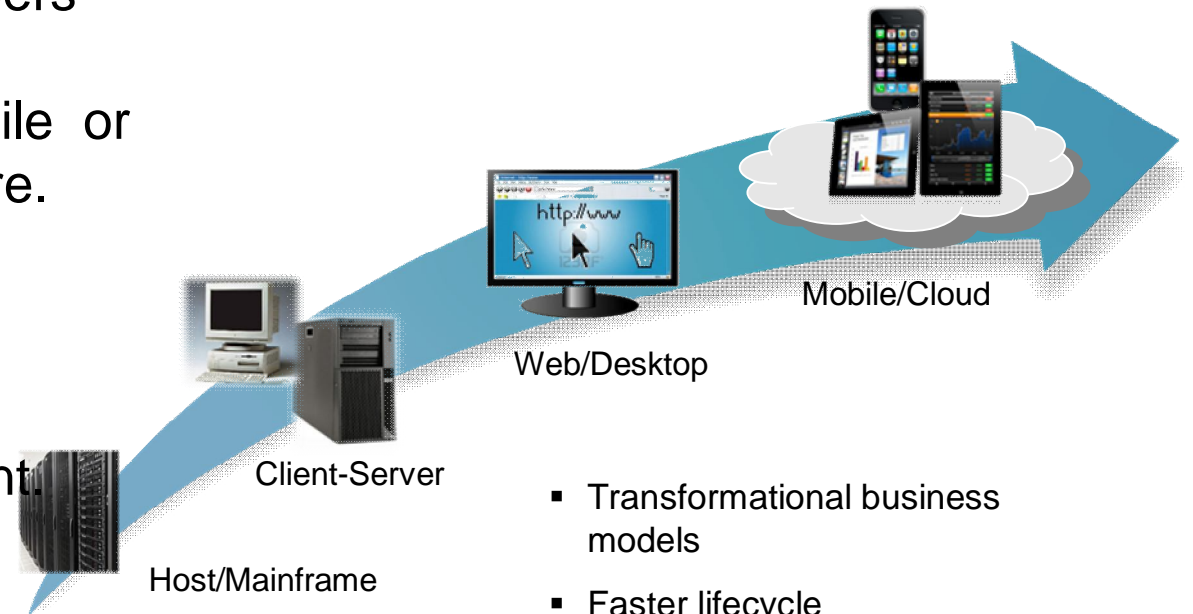
***Rational Test Workbench
Rational Quality Manager***

***Dominique Guilbaud
Yves Holvoet***



Mobile is the NEXT dominant phase of computing

- Nearly **90%** of developers are currently extending enterprise apps to mobile or plan to in the near future.
- In the next 12 months **77%** of developers will be focused on Hybrid application development.
- **25+** Almost all expect to deploy more than 25 mobility applications in the next two years



- Transformational business models
- Faster lifecycle
- More agile and incremental

Source: Evans Data Mobile Developer Survey Mobile Development Report 2012 Volume
Source: Business Insider (September 2012)

The Quality of mobile applications is critical

Mobile apps can increase customer interaction, improve productivity and offer access to new markets. But poor quality can have a real impact on business.



The number of mobile devices and platforms is continuously growing, and the pace of delivery and response to customer feedback is a growing challenge.

The mobile ecosystem extends back-end services and integrated platforms which complicates end-to-end application testing.



How can we ensure software quality in a cost effective way?

Mobile Test Automation with IBM Rational Test Workbench

■ Mobile Test Automation

- Support for native, and hybrid applications running on Android and iOS
- Natural language test and visual test editing
- Simplified IDE and mobile device clients for test authoring, execution, and reporting
- High-fidelity capture and replay of multi-touch events

■ Eclipse Client integration

- Mobile Test Automation
- Support for Selenium web GUI test automation
- Multi-channel test scenarios
- Integration with Rational Quality Manager and the IBM Worklight mobile development platform

■ End-to-end mobile testing

- Testing of middle-tier and back end-services
- Virtualization of middle-tier and back-end systems
- Performance testing of your integration infrastructure



IBM Rational Test Workbench mobile test automation support

Platform Support

Android version 2.2 to 4.2 (*4.3 in 8.5.1*)
iOS version 6.x (*7.0 in 8.5.1*)

Application Support

Native Applications and Hybrid applications
using jQuery Mobile (*Dojo Mobile in 8.5.1*)

Runtime Target

Android on physical devices and emulators
iOS on iPhone/iPad emulator

Test representation

Natural language with visual editing using
application screen shots

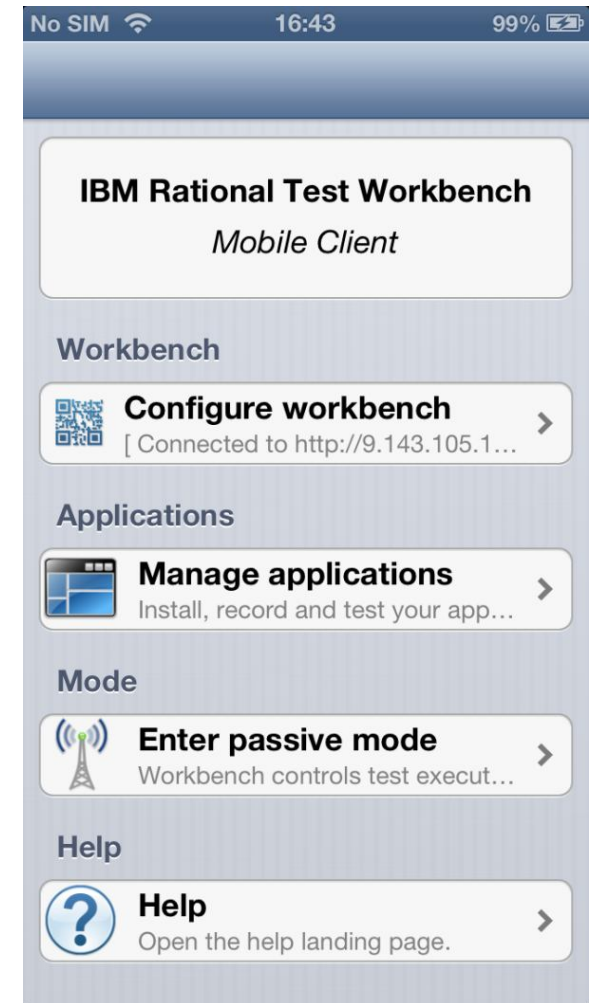
Advanced features

True object recognition with verification of
any object property
Support for localized strings
Simplified data-driven testing

IBM Rational Test Workbench Mobile Client

Manage test recording and playback on mobile devices and emulators

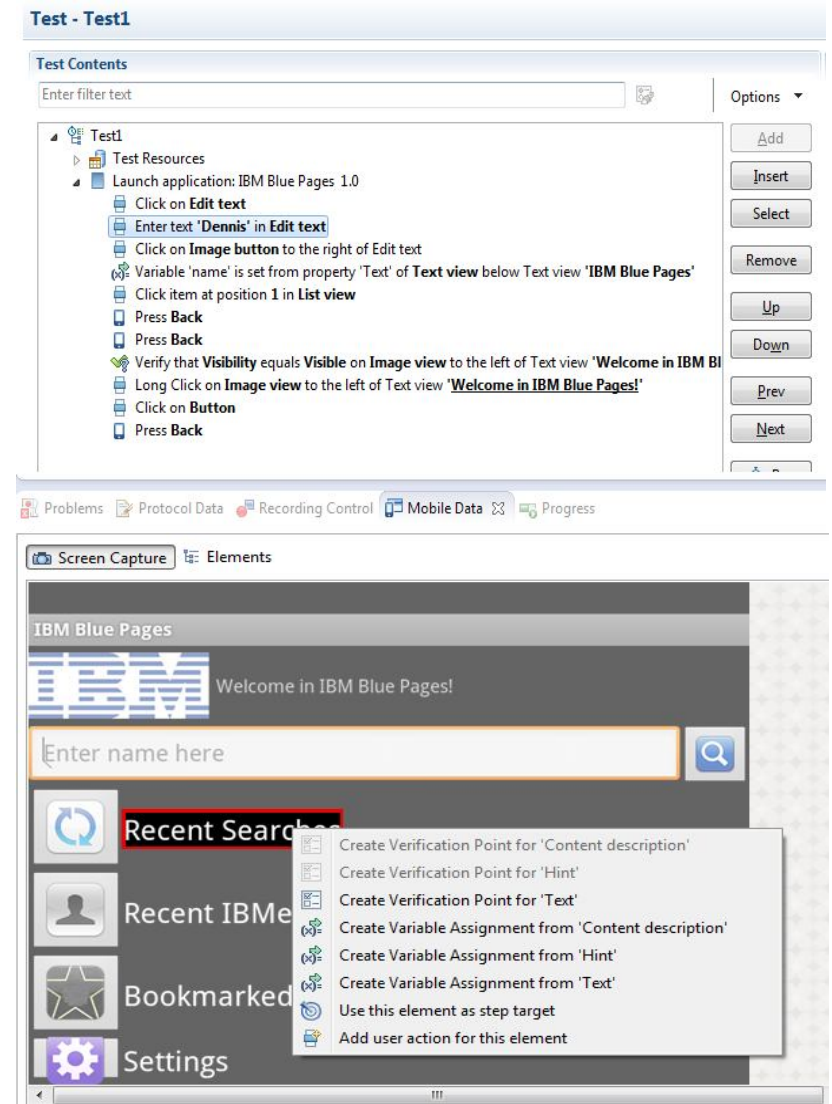
- Upload apps from the Rational Test Workbench for recording or playback
- High fidelity recording of UI gestures and device events
- Playback of automated tests directly from the device/emulator or through the Rational Test Workbench
- Generates detailed playback reports
- Sends playback reports back to the workbench when test run is completed



Rational Test Workbench Test Editor

Simplified authoring of data driven mobile test scenarios

- Natural language test narrative supports localized strings and data driven actions
- Screen capture is object sensitive and provides shortcuts for adding steps/commands
- Verification points and test variables can be created from any object property
- True object recognition enables re-use across device form factors
- Supports device hardware actions



Mobile test reports

Visualize the test flow and report on test failures


- Available on the Mobile Client and the Test Workbench with same style and format
- Device status and information displayed in the report
- Each test step shown with its execution status, device screen shots, and expected/received results
- Test execution and reports can also be driven through IBM Rational Quality Manager

Report Details

IBM Rational Test Workbench

Mobile Report: Authored-Test [4/19/13 4:59 PM]

Test:	Authored-Test (located in: /VP_stop; last modified on 4/19/13 4:44 PM)
Execution Status:	Fatal Click to go
Application:	UICatalog (version 2.10; created on 4/19/13 11:51 AM; imported on 4/19/13 2:40 PM)
Device:	iPhone Simulator (iOS; API level 60000)
Duration:	8 seconds

iPhone Simulator	
1	Start UICatalog Time after start: 0 seconds
2	Think 5671 ms Time after start: 0 seconds
3	Click item at position 3 in Table view  Time after start: 5 seconds
4	Think 2496 ms This run has stopped before expected and may have missed some Mobile actions or results Time after start: 8 seconds

End-to-end Mobile Application Testing

Test and Virtualize mid-tier and back end applications and services

- Examine integration protocols and messages to verify end-to-end communication
- Reuse integration tests to verify the scalability of your integration middleware and services infrastructure
- Virtualize application services to enable continuous integration, accelerate testing, and reduce application integration risk
- Leverage Rational Test Workbench extensive testing features to address non-mobile components of your environment

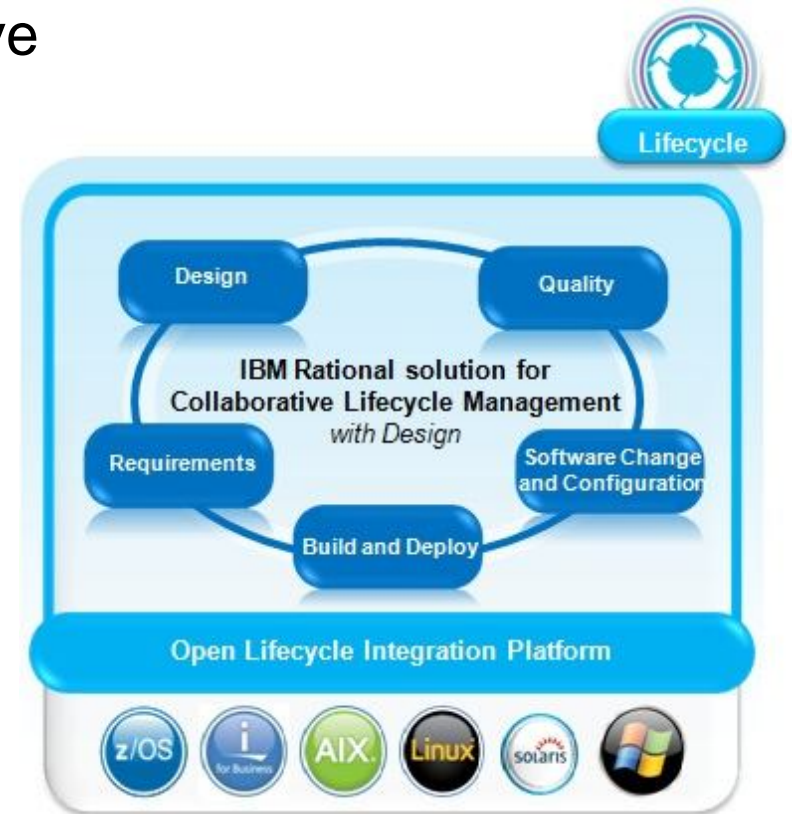


For more information visit: <http://www-03.ibm.com/software/products/us/en/rtvs/>

Rational Test Workbench and Collaborative Lifecycle Management

Rational Test Workbench integrates with the IBM Rational Solution for Collaborative Lifecycle Management

- Real-time planning
- In-context collaboration
- Lifecycle traceability
- Comprehensive test plans
- Requirements-driven testing



For more information visit: <https://jazz.net/products/clm/>

Rational Test Workbench is part of the IBM MobileFirst Platform

Save time and cost using a collaborative development environment supporting a process of continuous delivery.

- Integrates with IBM Worklight mobile application development platform
- Seamlessly switch between code construction and testing within the Eclipse IDE
- Upload applications under test from the Worklight Application Center

IBM **MobileFirst**



1 The Broadest Portfolio of Mobile Solutions	2 The Deepest Set of Services Expertise	3 New Industry Partnerships and Resources for Developers
---	---	---

<http://www.ibm.com/mobilefirst>



QUESTIONS

www.ibm.com/software/rational



Summary

- **RQM – Rational Quality Manager**

- *Test Case* – executable entity in RQM
- *Test Suite* - collection of test cases
- *Test Script* – detailed manual steps or pointer to an automation tool
- *Test Environment* – definition of the test setup

- **RTW – Rational Test Workbench**

- *Functional Test* – automated script to test at the GUI level
- *Mobile Test* – automated script to test a mobile application
- *Integration Test* – automated script to test at component level
- *Performance Test* – multi protocol performance testing
- *Virtualisation* – automated creation of stub to virtualise some components
- *Compound Test* – a sequence/combination of multiple types of tests



www.ibm.com/software/rational

© Copyright IBM Corporation 2012. All rights reserved. The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.

