

IBM Software Group

Scaling the Business of Global Architecture, Design & Quality

Introducing ...

IBM Rational Software Delivery Platform Desktop products v7.0



ON DEMAND BUSINESS™

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Today's Agenda

- **IBM Rational Overview**
- **What's New in the Rational ASQ v7 desktop portfolio**
- **Scaling the business of global architecture, design & quality**
- **Summary and Q&A**



IBM Rational Software

A strategic partner in business innovation & transformation



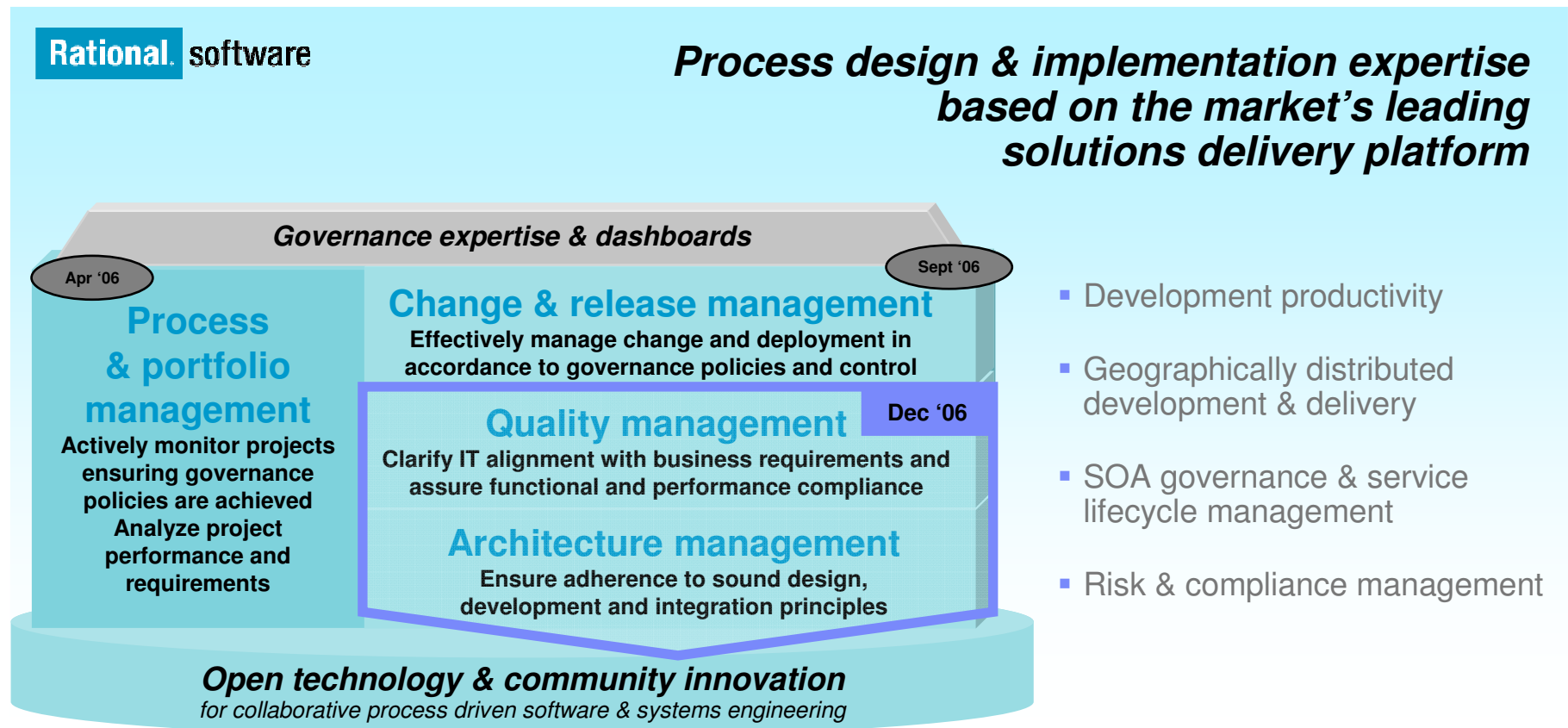
**Source : 2006 Global CEO Survey*



IBM Rational Software Delivery Platform V7

Governing the business process of software and systems delivery

Decades of proven process expertise & customer success



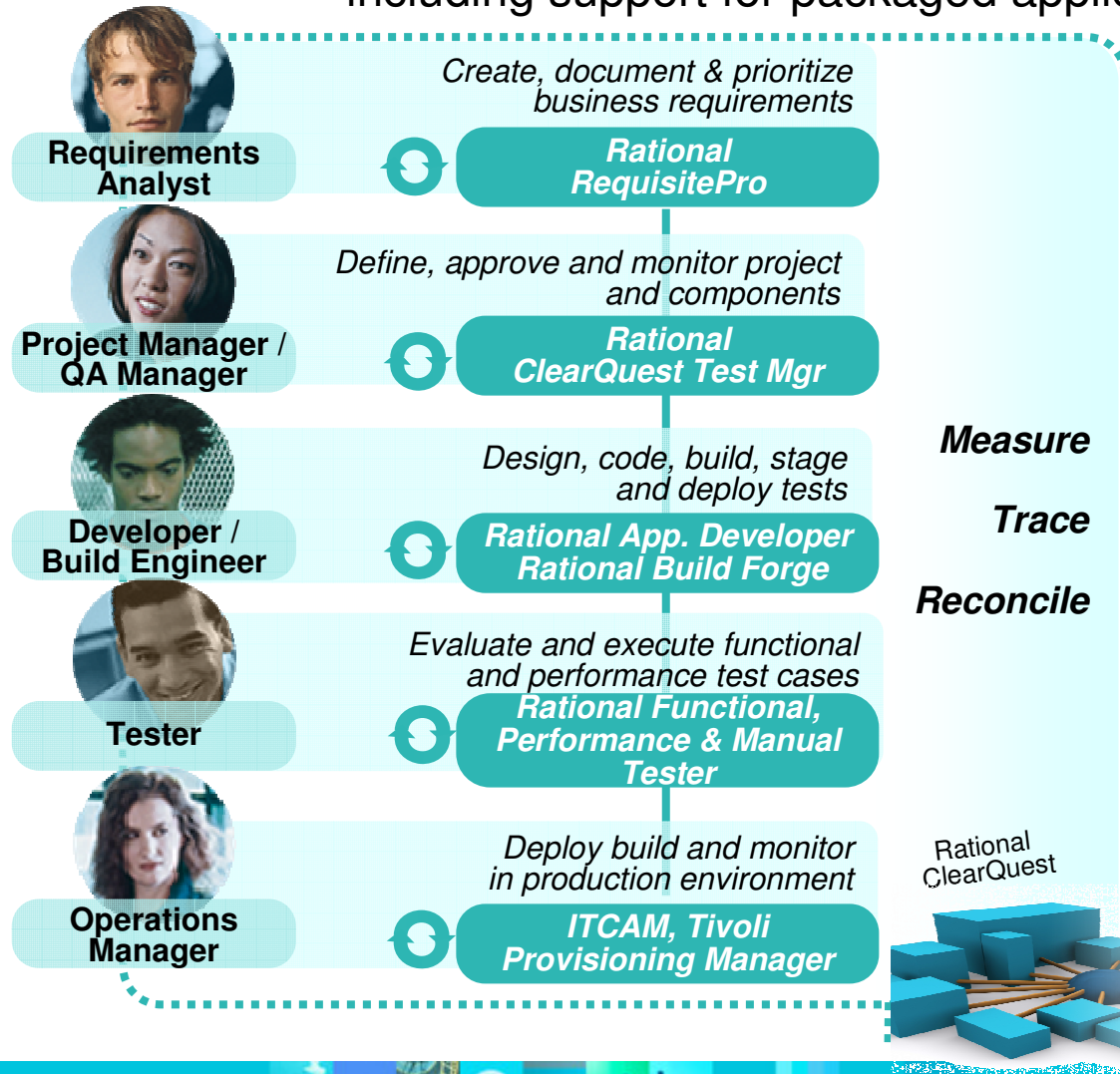
IBM Rational Quality Management

Ensure global architectural integrity and software quality including support for packaged applications



Govern quality across the delivery lifecycle

- ✓ Align quality processes with architectural integrity
- ✓ Proactive response to quality issues earlier in the lifecycle
- ✓ Collaborative process automation & enforcement (e.g., outsourced testing)
- ✓ Extensible framework



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 - **Headlines**
 - Feature and Benefit Analysis
 - Cross Product Solution Support
 - **Details**
 - Performance Tester
 - Functional Tester
 - Manual Tester
 - ClearQuest Test Manager
- **Scaling the business of global architecture, design & quality**
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Rational Manual Tester

New in v7

- Shell integration with CQTM
- Defect submission directly from RMT
- Adopt TPTP 4.2 Log viewer
- New Authoring Editor
 - ▶ Undo/Redo capabilities
 - ▶ Support for Import/Paste of Tables
 - ▶ Better usability
- Adoption of Process Advisor
- Execution within a Citrix environment

Benefits

- Increased speed and efficiency of manual testing process through simplified model for test management, development, execution and defect reporting
- Increased productivity through a more intuitive, simple to use tool
- Provide guidance and expertise to enhance tool experience
- Enable remotely distributed resources to participate in manual testing process



Rational Functional Tester

New in v7

- New Environment Support
 - ▶ Firefox / Mozilla
 - ▶ .net v2.0 controls
incl. DataGridView, MaskedTextBox, and "Whidbey" controls
 - ▶ Adoption TPTP 4.2 Log Viewer
- Packaged Application Support
 - ▶ SAP GUI v6.2 & 6.4
 - ▶ Siebel v7.8
- Adoption of Process Advisor
- Execution within a Citrix environment

Benefits

- Expands the breadth of environments in which Functional Tester can be used
- Conformity to TPTP standard
- Further expands breadth of environments
- Compliments existing Performance Tester packaged application support
- Provide guidance and expertise to enhance tool experience
- Enable remotely distributed resources to participate in functional testing process



Rational Performance Tester

New in v7

- Root Cause Analysis
 - ▶ Integrated IPOT Functionality
 - ▶ Agentless remote monitoring
 - ▶ Enhanced reporting
 - ▶ Resource Overlay
- New Environment Support
 - ▶ Firefox / Mozilla
 - ▶ mySAP (SAP HTTP Interface), Visual Design Support
 - ▶ Client Side Digital Certificates
- Adoption of Process Advisor
- Execution within a Citrix environment

Benefits

- Simplifies process for problem diagnosis by easily identifying performance bottlenecks in underlying application code
- Simplify reports for faster interpretation and analysis
- Expands the breadth of environments in which Performance Tester can be used
- Provide guidance and expertise to enhance tool experience
- Enable remotely distributed resources to participate in functional testing process



Rational Performance Tester

New in v7

- Various enhancements
 - ▶ Time based reporting
 - ▶ Schedule cut/copy/paste
 - ▶ Added Test Save As...
 - ▶ Simplified IP Aliasing, Std Deviation, Test Stop
 - ▶ Startup and Scalability enhancements

Benefits

- Remove various objections and barriers to adoption for new users
- Collectively improve overall tool experience for both new and experienced users



Rational ClearQuest Test Manager Functionality

New in v7

- CQTM execution of Robot Scripts
- CQTM remote execution of all supported scripts

- Shell update to
 - ▶ Eclipse 3.2
 - ▶ TPTP 4.2

- Execution within a Citrix environment

Benefits

- Removes the two most significant adoption barriers for current TestManager users
- Brings ClearQuest onto the latest, most robust versions of underlying architecture
- Enables CQTM and RMT to share same shell
- Enable remotely distributed resources to participate in functional testing process



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Solution: *packaged application support*

Accelerate testing and provide test automation support for mission critical enterprise resource planning applications & services

New and Enhanced!

✓ Rational **Performance** Tester and Rational **Functional** Tester extensions for **SAP Solutions**

- Emulate and test the performance, functionality and scalability of applications deployed through the SAP GUI
- Improve application performance, perform better capacity
- Plan and develop more scalable applications
- Test HTTP based NetWeaver applications including portals



✓ **Siebel** extended support for Version 7.8

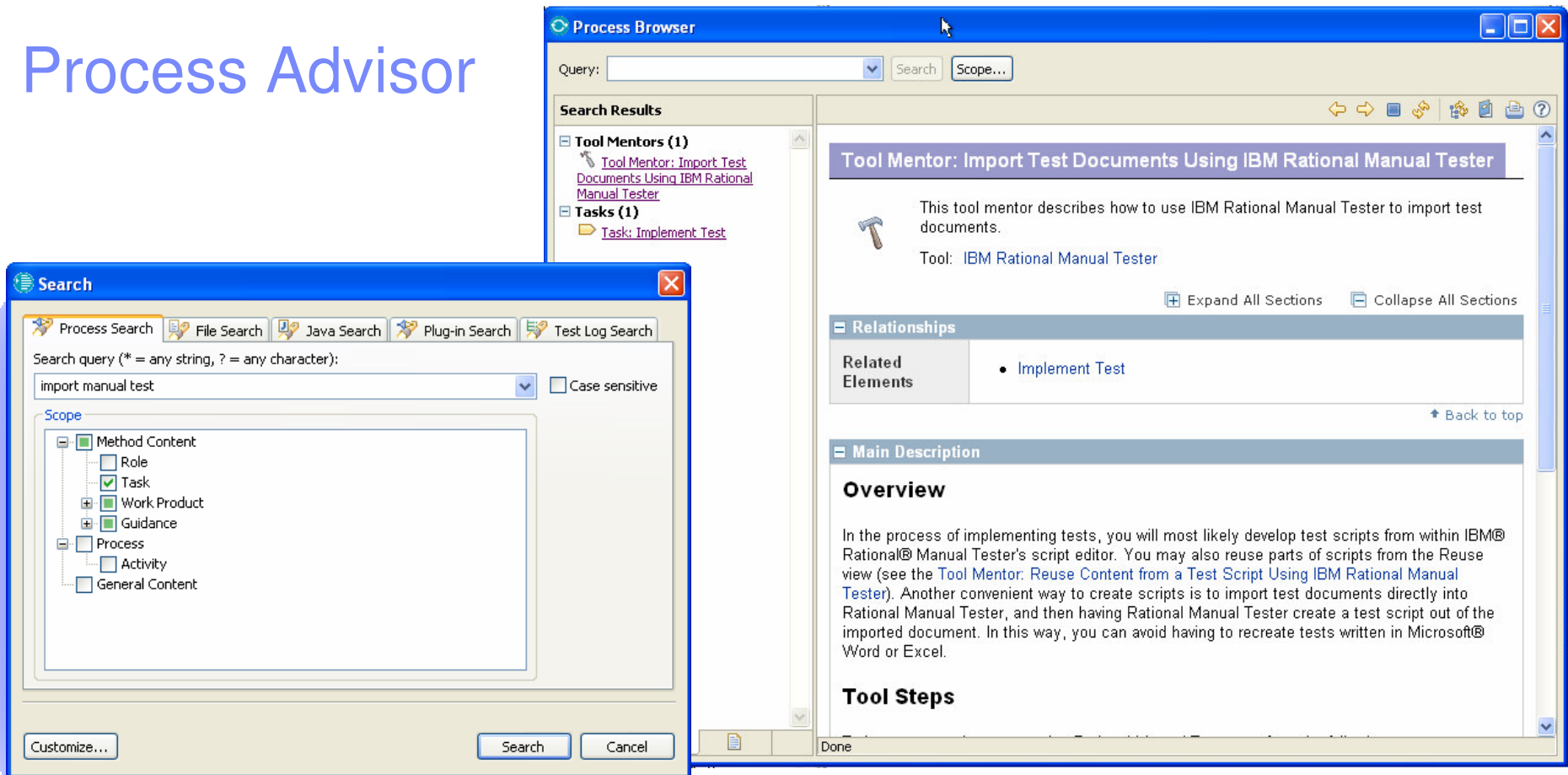
✓ **Oracle** Applications Extension for Rational Performance Tester available from BSD Group

✓ **PeopleSoft** support implicit with RFT and RPT support for HTML/HTTP environments

✓ Enhances support for **SOA service** enablement



Process Advisor



The screenshot displays the Process Advisor interface. On the left, a 'Search' dialog box is open, showing a search query 'import manual test' and a tree view of search scope options including Method Content, Role, Task, Work Product, Guidance, Process, Activity, and General Content. The 'Task' option is selected. The main window, 'Process Browser', shows search results for 'Tool Mentors (1)' and 'Tasks (1)'. The selected tool mentor is 'Tool Mentor: Import Test Documents Using IBM Rational Manual Tester'. The main content area displays the tool mentor's description, relationships (including 'Implement Test'), and a main description overview.

Feature:

- ▶ Process Advisor and Process Browser in all Eclipse-based tools
- ▶ Unique process guidance and tool mentors for RMT, RFT, and RPT

Benefit:

- ▶ Establish Software Quality Process Leadership
- ▶ Incremental value to Eclipse Process Framework
- ▶ Pull-through for Rational Method Composer



Geographically Distributed Development **New!**

▪ **Challenge:**

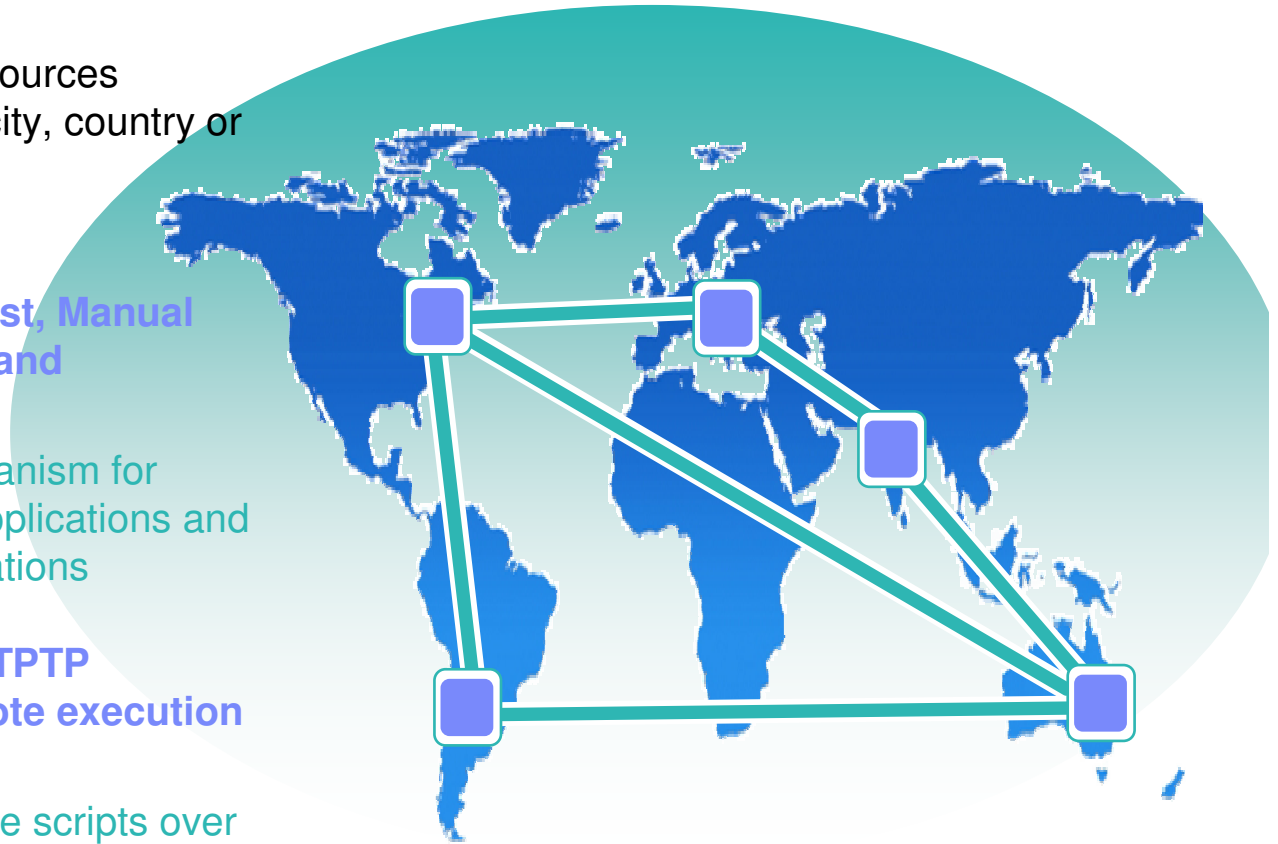
- ▶ Leveraging and unifying resources distributed across the hall, city, country or globe

▪ **New in this release:**

- ▶ Citrix support for **ClearQuest, Manual Tester, Functional Tester and Performance Tester**
- ▶ Provides a supported mechanism for remote users to leverage applications and data installed in remote locations
- ▶ CQTM now leverages new **TPTP** infrastructure enabling **remote execution of script**
- ▶ Provides a means to execute scripts over a distributed architecture

▪ **Existing foundation**

- ▶ ClearQuest Web Access and Multisite provide distributed access to central test management data



Challenge: Leveraging Open Source Innovation for Enterprise software development

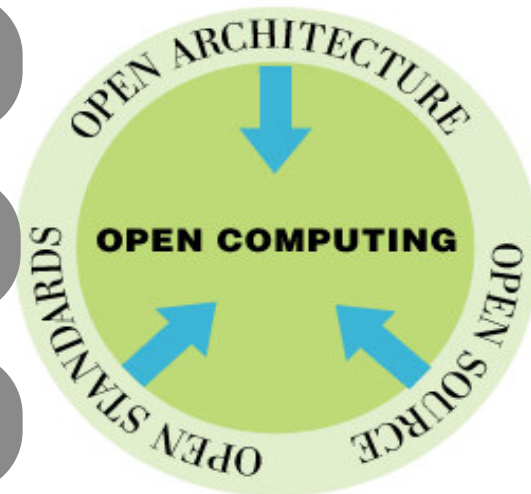
Scenario: *Software Developer needs flexibility to choose development environments for multiple projects.*

Customer needs to manage and maintain a heterogeneous development environment while taking advantage of the innovation provided by open source to remain at the forefront of their industry

⊗ “How do I provide only the tools that my developers need?”

⊗ “How do I ensure quality support for my open source environment?”

⊗ “How can I leverage the open source tools I already have?”



Solution: Flexibility & consumability leveraging Eclipse open source



Community innovation

- 150+ member companies
- Over 2.3 million users
- Basis of 1,300+ products
- 507,000 Callisto downloads

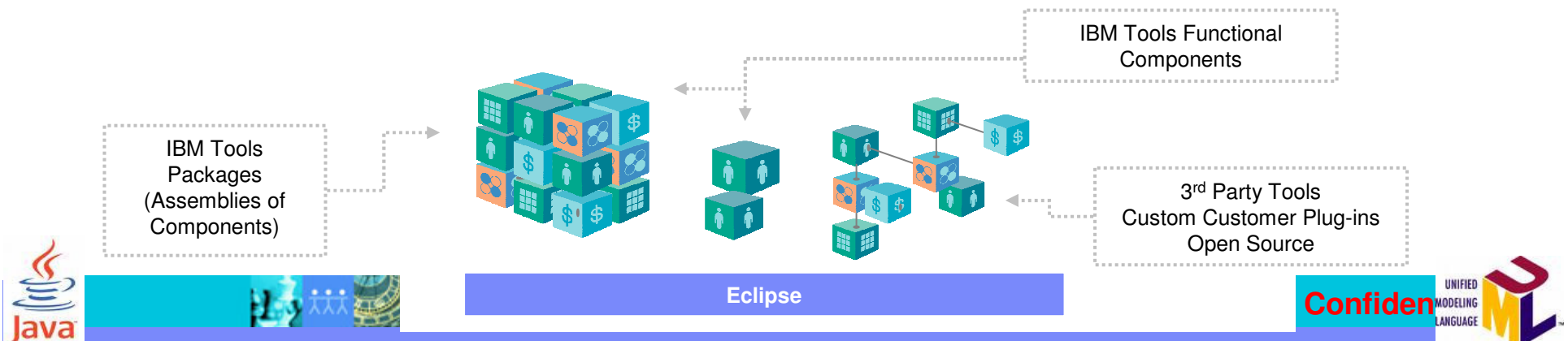
Modularity
Empowerment
Consumability

Scalable enterprise support

Rational software

IBM Rational Software
Delivery Platform

- ✓ Rational Elite Technical Support for Eclipse – serves broader mix of practitioners -- from expert community leaders to enterprise architects
- ✓ Install Rational desktop v7 offerings directly into existing Eclipse 3.2 environments & Callisto (WAS V6.1 & WPS V6)
- ✓ JDK 5 support & UML 2.1 support New product installer technology offering greater choice on which features to install



Ready for IBM Rational software partner ecosystem

New and Enhanced!

WIND RIVER

GALORATH
Embedded
plus
Klocwork
 Systems delivery & embedded development extension

exaltec software
 Legacy to SOA Modernization

GORILLA LOGIC draw it. run it.™
 Business Requirements Simulation for SOA



Quality Management for Packaged Applications

Business Objects
 Global Reports Management

Agitar® | Develop Software With Confidence
 Quality Process Integration

SPI DYNAMICS
 Start Secure. Stay Secure.



Automated Security Governance

blackduck
 Open Source Software Reuse

Ready for
IBM Rational
 software ▶

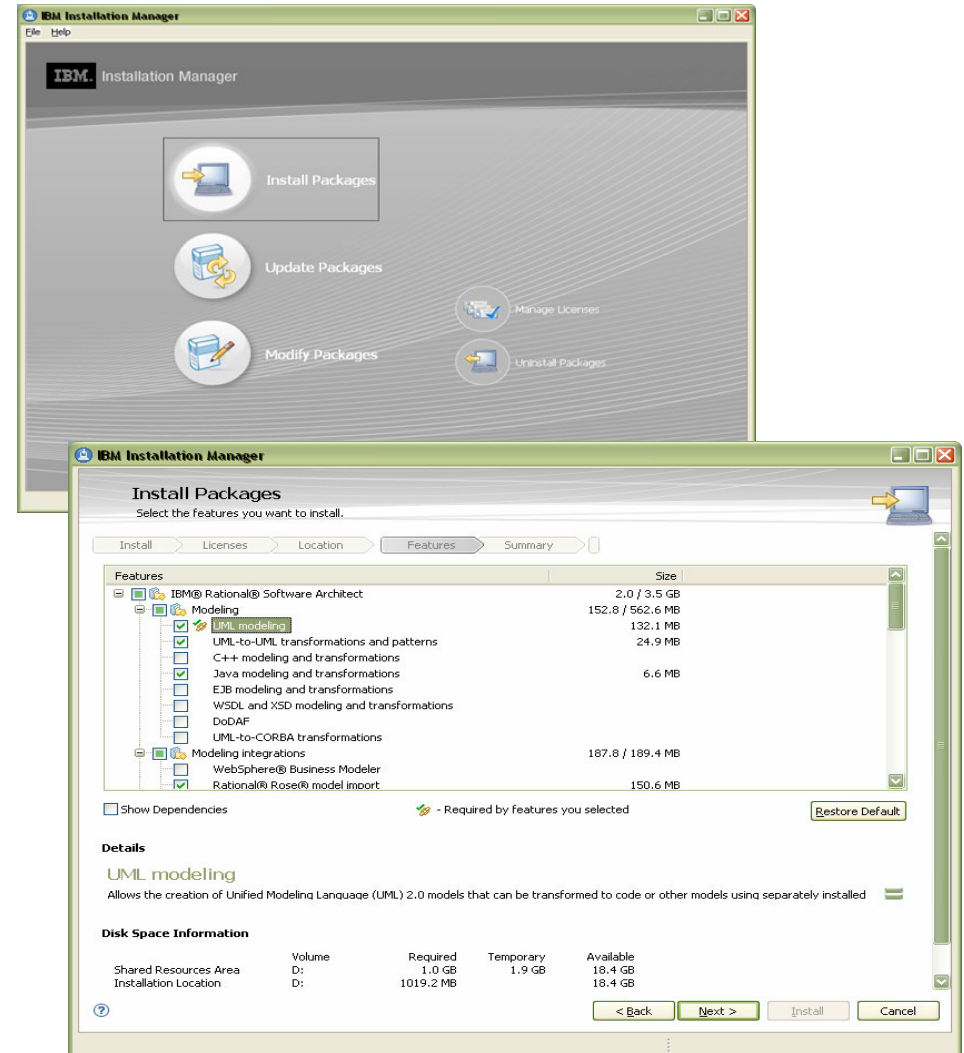
Ready for
IBM SOA
 Specialty



Solution: Making Product Installation and Deployment Easier

- Optionally install into existing Eclipse environment
 - ▶ Checks plug-in versions for compatibility
- Smaller “features” to optionally install
- Managed updates
- No re-installation from trial to product

New and Enhanced!



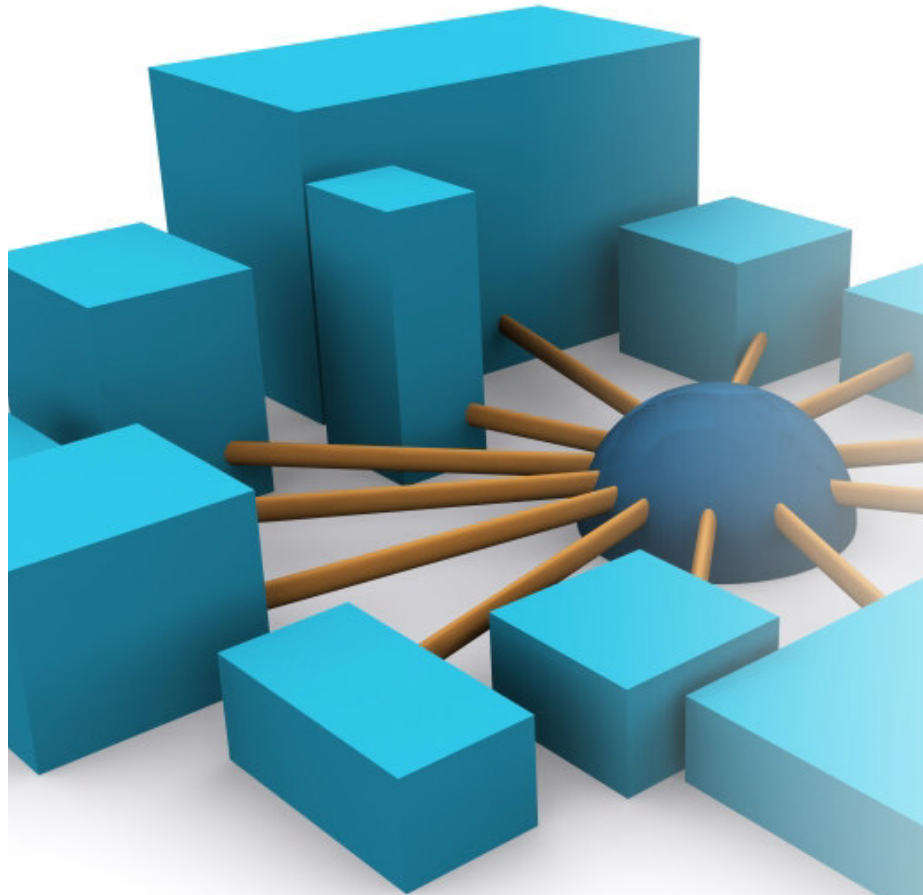
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ClearQuest: Governing Test and Development

The Hub for Life-Cycle development



IBM Rational ClearQuest

Test Change Defects

- Single project view
- Global test project coordination
- Configurable, enforceable processes
- Extensible test ecosystem

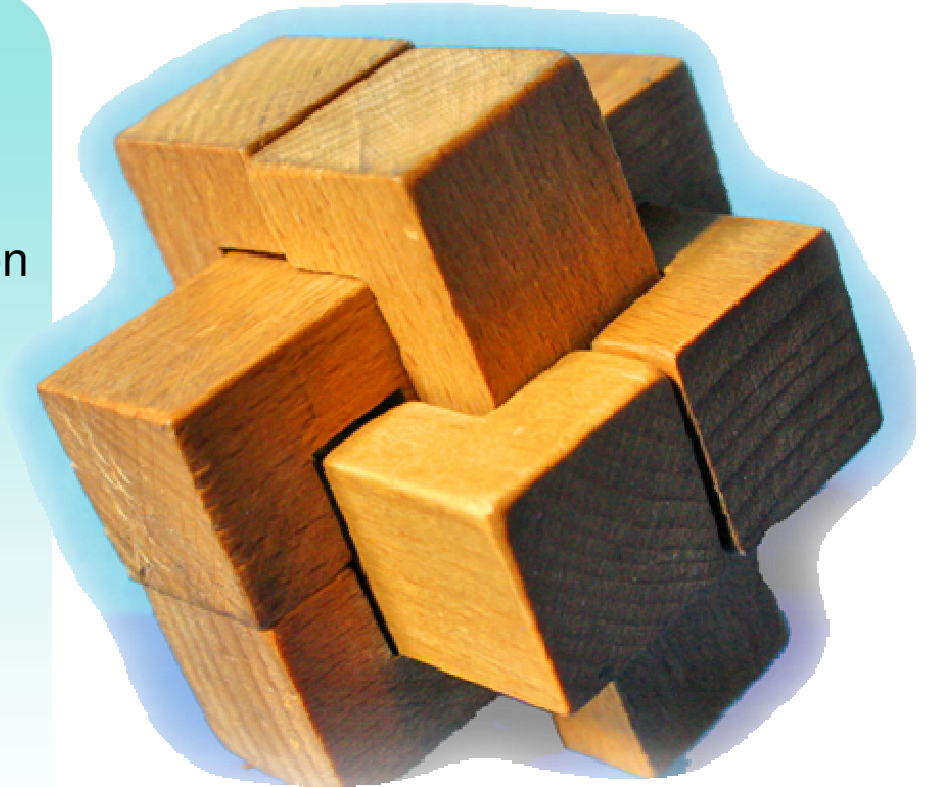


Single Project View

Single solution to manage tests, defects and project change

Benefits:

- Consolidated, real-time view of the entire project status
- Traceable, auditable relationships between development, test and project artifacts
 - ▶ Manages test planning, test results, quality metrics, and defects
 - ▶ Central repository with integrated version control
 - ▶ Comprehensive quality metrics in project dashboards and reports



IBM Rational ClearQuest



Global Project Coordination

Distributed and co-located test and development support

Benefits:

- Ability to leverage globally distributed talent
- Simplifies the complexities of geographically distributed test coordination
 - ▶ High scalability for large enterprise projects
 - ▶ Web-based test planning and quality metrics reporting
 - ▶ Automates sharing and reuse of distributed test assets
 - ▶ Centralized user management



IBM Rational ClearQuest

Configurable, Enforceable Process

Customize and enforce your test processes and workflows

Benefits:

- Compliance enforcement of project and company policies
- Configurable for project-specific needs and workflow automation
 - ▶ Data collection and process customization & enforcement
 - ▶ Auditable test change history
 - ▶ e-Signature support for regulatory compliance



IBM Rational ClearQuest

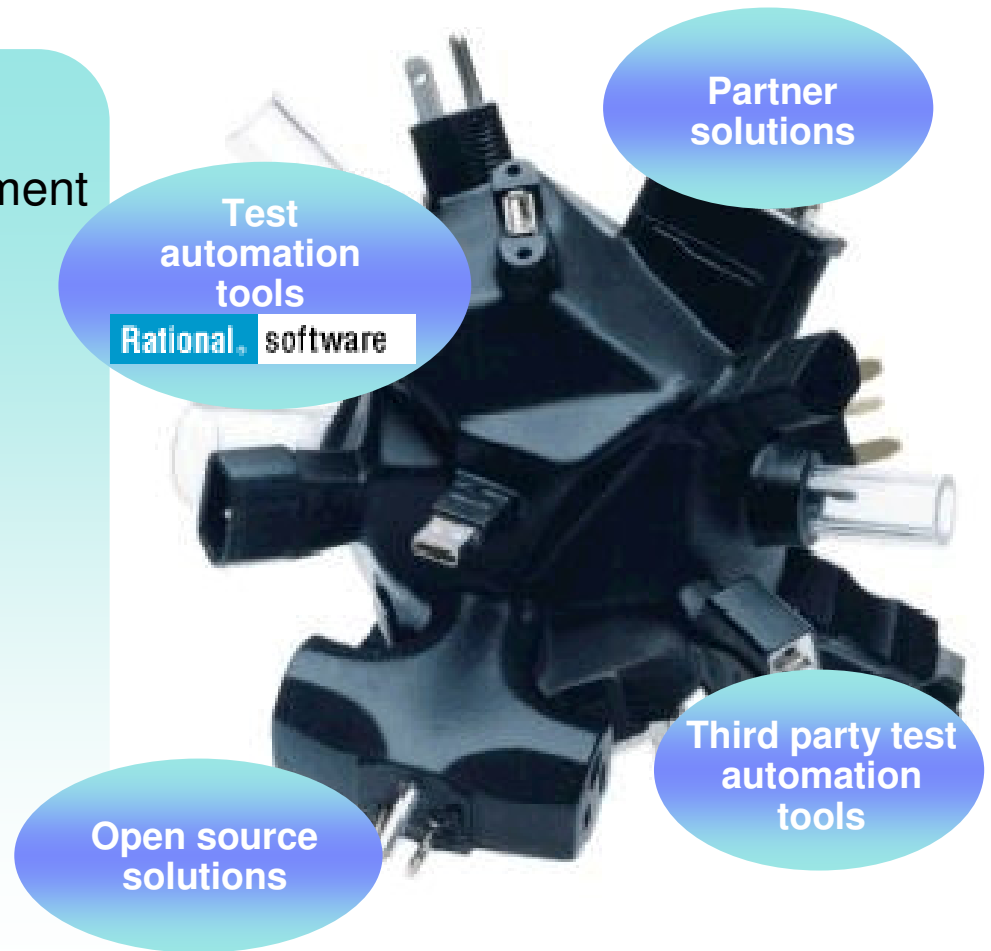


Extensible Test Ecosystem

Integrated with Rational, open source and 3rd party test automation tools

Benefits:

- Lowers the cost of test lab management
- Simplifies the management of tools from multiple vendors
 - ▶ Customer extensibility for automation of logging custom test results
 - ▶ Integrated with Rational Functional Tester, Rational Manual Tester and Rational Performance Tester
 - ▶ Integrates with SPI Dynamics QAInspect for security testing
 - ▶ Partner extensibility for execution of 3rd party test tools

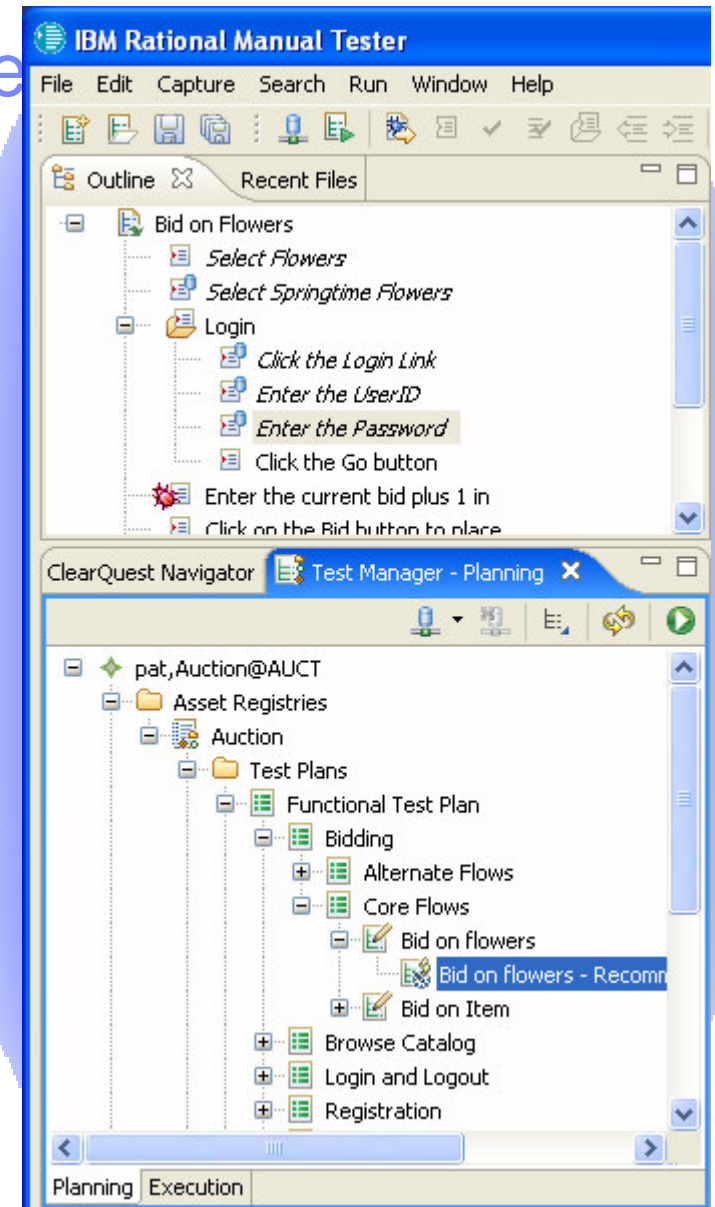
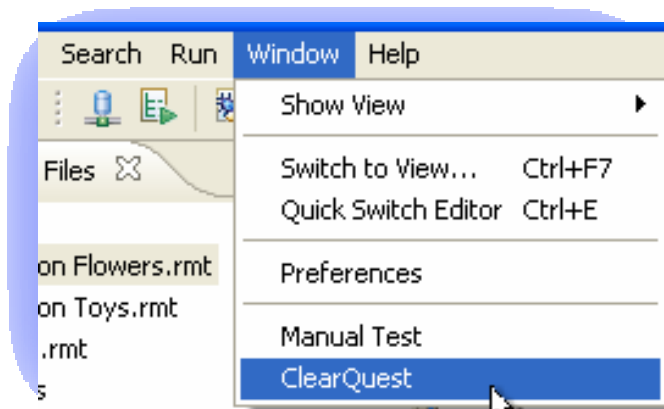


IBM Rational ClearQuest

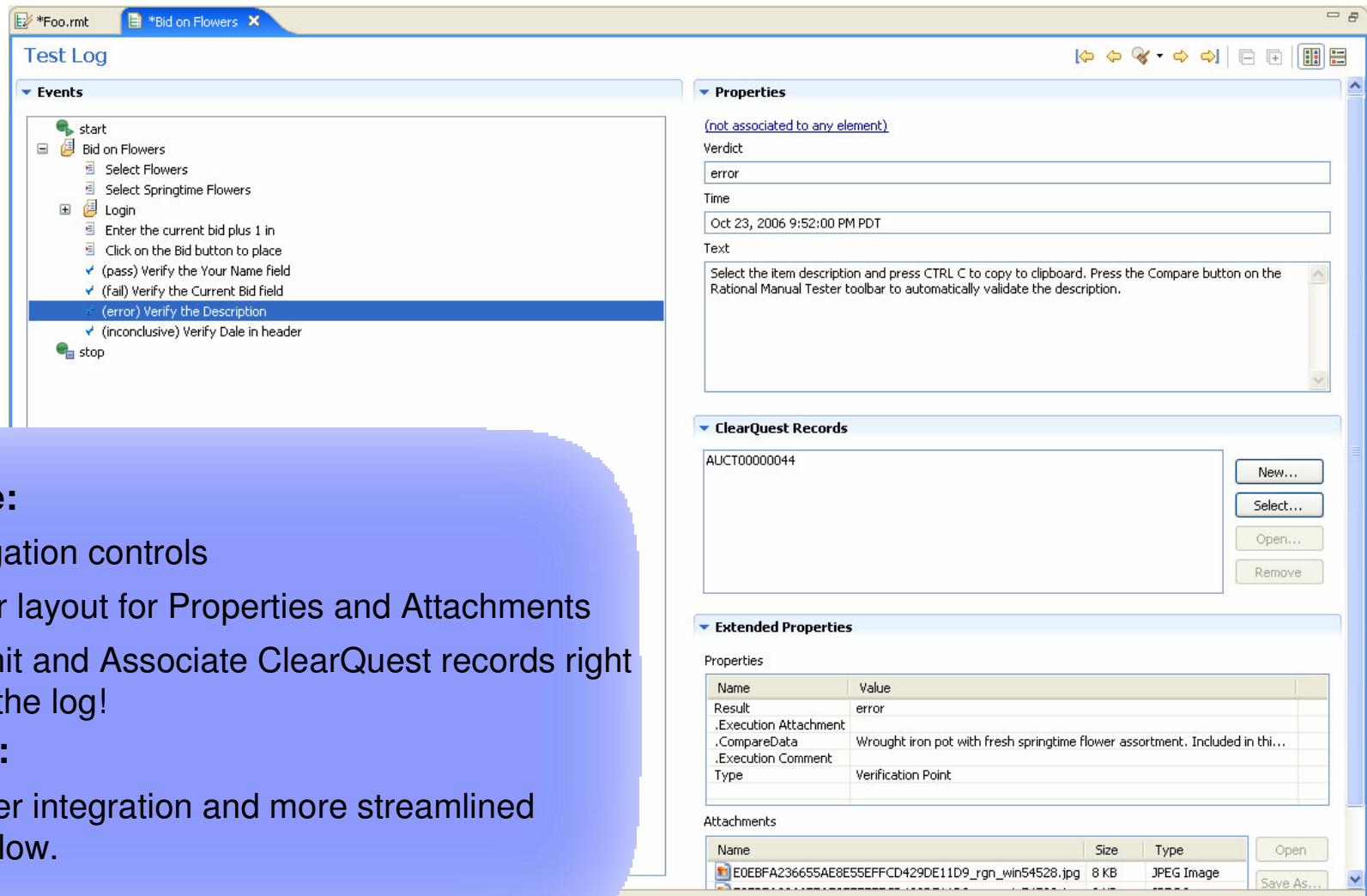


RMT: Shell-sharing with ClearQuest

- **Feature:**
 - ▶ Toggle perspectives
 - ▶ Mix views in a single perspective
- **Benefit:**
 - ▶ More unified user experience
 - ▶ Smoother workflow
 - ▶ No more Alt-TAB



RMT: Adoption of TPTP 4.2 Log Viewer



Test Log

Events

- start
- Bid on Flowers
 - Select Flowers
 - Select Springtime Flowers
 - Login
 - Enter the current bid plus 1 in
 - Click on the Bid button to place
 - (pass) Verify the Your Name field
 - (fail) Verify the Current Bid field
 - (error) Verify the Description
 - (inconclusive) Verify Dale in header
- stop

Properties

(not associated to any element)

Verdict: error

Time: Oct 23, 2006 9:52:00 PM PDT

Text: Select the item description and press CTRL C to copy to clipboard. Press the Compare button on the Rational Manual Tester toolbar to automatically validate the description.

ClearQuest Records

AUCT00000044

New...
Select...
Open...
Remove

Extended Properties

Properties

Name	Value
Result	error
.Execution Attachment	
.CompareData	Wrought iron pot with fresh springtime flower assortment. Included in thi...
.Execution Comment	
Type	Verification Point

Attachments

Name	Size	Type	Open
E0EBFA236655AE8E55EFFCD429DE11D9_rgn_win54528.jpg	8 KB	JPEG Image	Open

- **Feature:**
 - ▶ Navigation controls
 - ▶ Better layout for Properties and Attachments
 - ▶ Submit and Associate ClearQuest records right from the log!
- **Benefit:**
 - ▶ Tighter integration and more streamlined workflow.



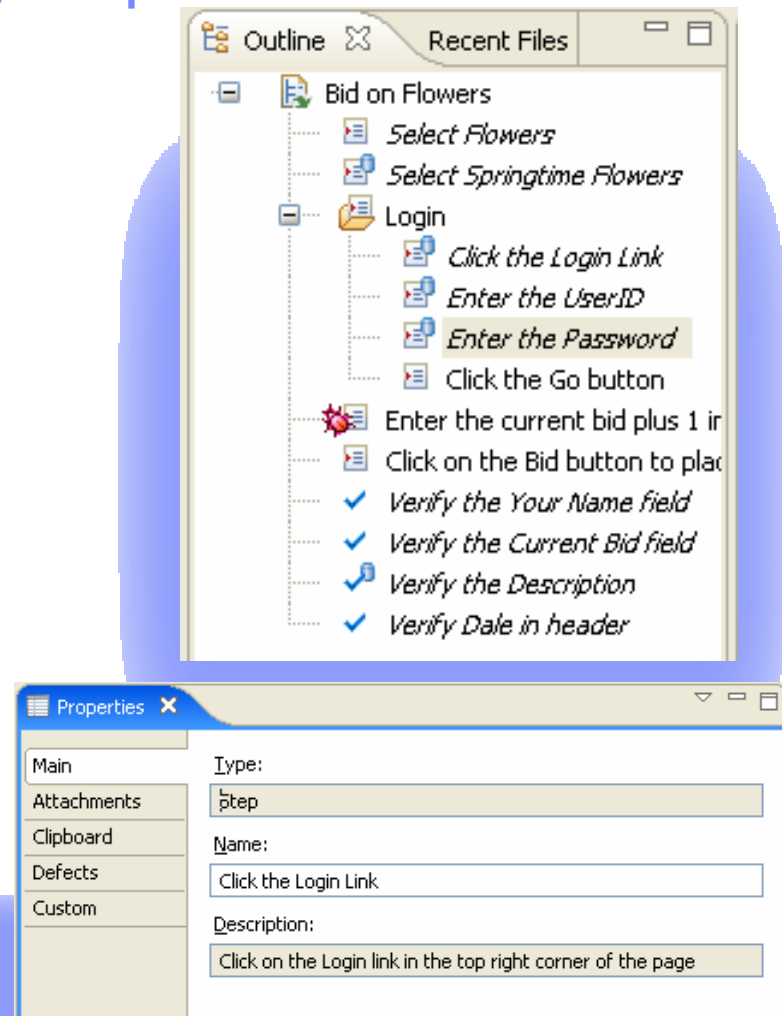
RMT: Miscellaneous Usability Improvements

Feature:

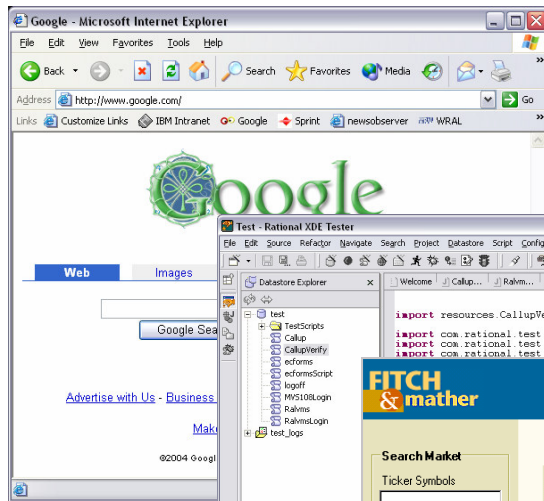
- ▶ More icons, more intuitive symbols
- ▶ Enhanced toolbar
 - Connect to ClearQuest
 - Submit Defect
 - Run Active Test
 - Save Image, Paste data, and Compare data to statement
 - Undo / Redo
- ▶ New Property view
 - Properties organized by category
 - Adequate space for property names and values

Benefit:

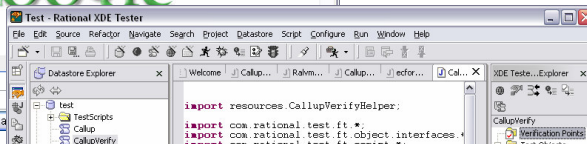
- ▶ Easier to use, more intuitive tool
- ▶ Enhanced Readability
- ▶ Customized look



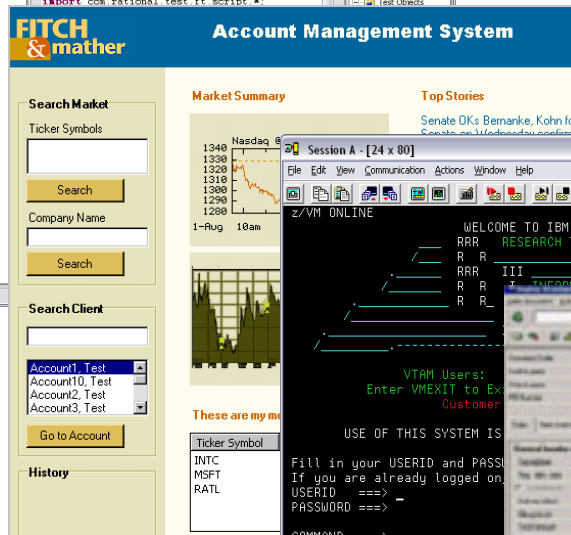
RFT : Robust support for Java, Web, Visual Studio .NET, terminal-based, PeopleSoft, Siebel, SAP applications



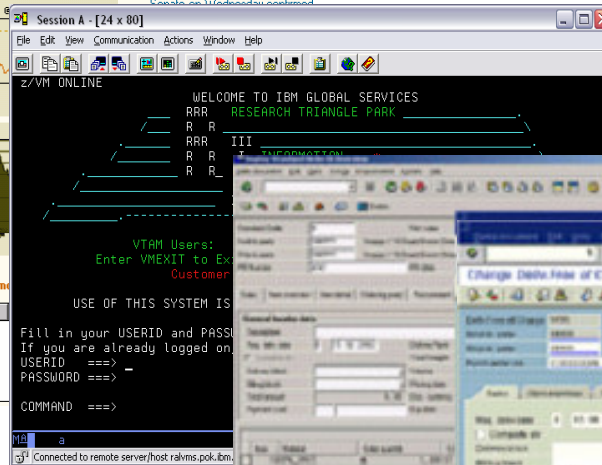
Browser UI



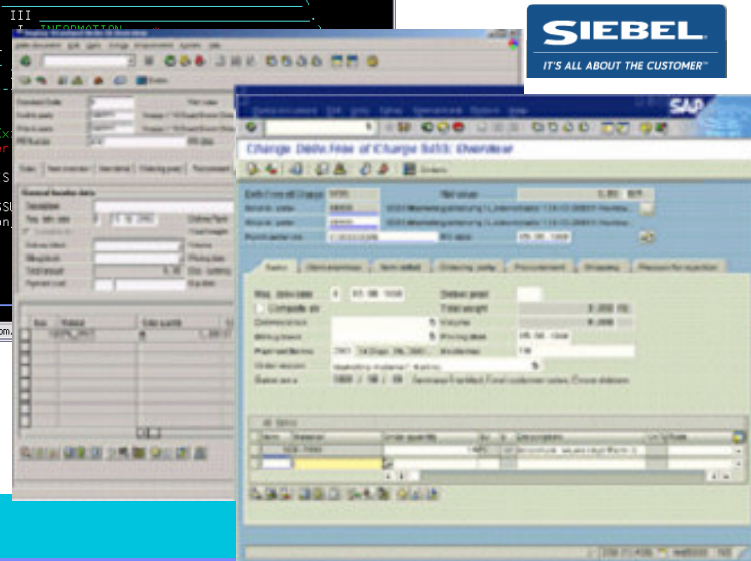
Java UI



.NET UI



Host UI

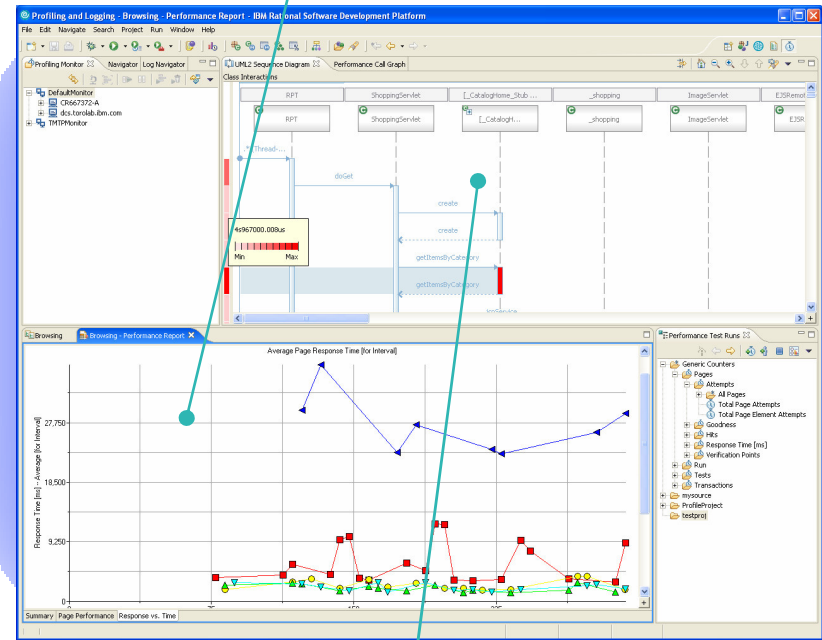


- Benefit :
 - Customers can test applications with all the most popular, state-of-the-art development technologies with a single tool.

RPT Solution: Root Cause Analysis **New!**

- **Root Cause Analysis is a collection of features which provide the user with information to diagnose the cause of their performance problems**
- **Benefits:**
 - ▶ Ability to perform detailed analysis and breakdown of J2EE transactions when a system is under load.
 - ▶ Helps testing teams to pinpoint the component responsible for the bottleneck.
 - ▶ For IT organizations that use Tivoli ITCAM solutions, detailed performance data can be delivered directly to the developers desktop to help the developer pinpoint the source code causing the bottleneck.
- **Key Features:**
 - ▶ Problem Analysis Tools
 - ▶ Response Time Breakdown
 - ▶ Agentless Resource Monitoring
 - ▶ Resource Overlays with Response Times
 - ▶ IBM Tivoli Monitoring Collectors Additions

IBM Rational Performance Tester decomposes poor response times identified during a performance test...



...into the amount of time spent within each application component.



Partner BSD Group : Oracle Applications 11i Support

- Oracle 11i Applications Performance Testing and Monitoring
 - ▶ BSD agreement with Oracle to use proprietary NCA protocol
- Integrated with Rational Performance Tester and Tivoli ITCAM RTT
 - ▶ RPT Base Price \$37,500 USD
 - Includes 500 BSD VTs and 1st year maintenance.
 - Customer must purchase both Rational VTs and BSD VTs
 - Approximate 50% of Mercury Pricing
 - ▶ ITCAM Base Price \$4,500 USD
 - Includes 1st year maintenance and 2 floating licenses (1 per RTT processor license)

Performance Test - OracleTest

Test Contents
This section shows the test contents

- HTTP Send [14] (437 bytes)
- Connect [15] (server-1bgdj91.bsdgroup.local:9,000)
- HTTP Receive [14] (1,414 bytes)
- Close Connection [D]
- Oracle Send [15] (2,196 bytes)**
- Oracle Receive [15] (149,933 bytes)
- HTTP Send [14] (468 bytes)
- HTTP Receive [14] (140 bytes)
- Close Connection [E]
- Connect [16] (server-1bgdj91.bsdgroup.local:8,000)**
- Oracle Receive [15] (1,571 bytes)
- HTTP Send [16] (418 bytes)
- HTTP Receive [16] (313 bytes)
- Close Connection [10]
- Connect [17] (server-1bgdj91.bsdgroup.local:8,000)
- Close Connection [11]
- Oracle Send [15] (1,418 bytes)
- Oracle Receive [15] (119 bytes)
- Oracle Send [15] (61 bytes)
- Oracle Receive [15] (49,643 bytes)
- Oracle Send [15] (418 bytes)
- Oracle Receive [15] (104,832 bytes)
- Oracle Send [15] (734 bytes)
- Oracle Receive [15] (100,475 bytes)
- Oracle Send [15] (61 bytes)
- Oracle Receive [15] (6,519 bytes)

Test Element Details
Send

Send payload:

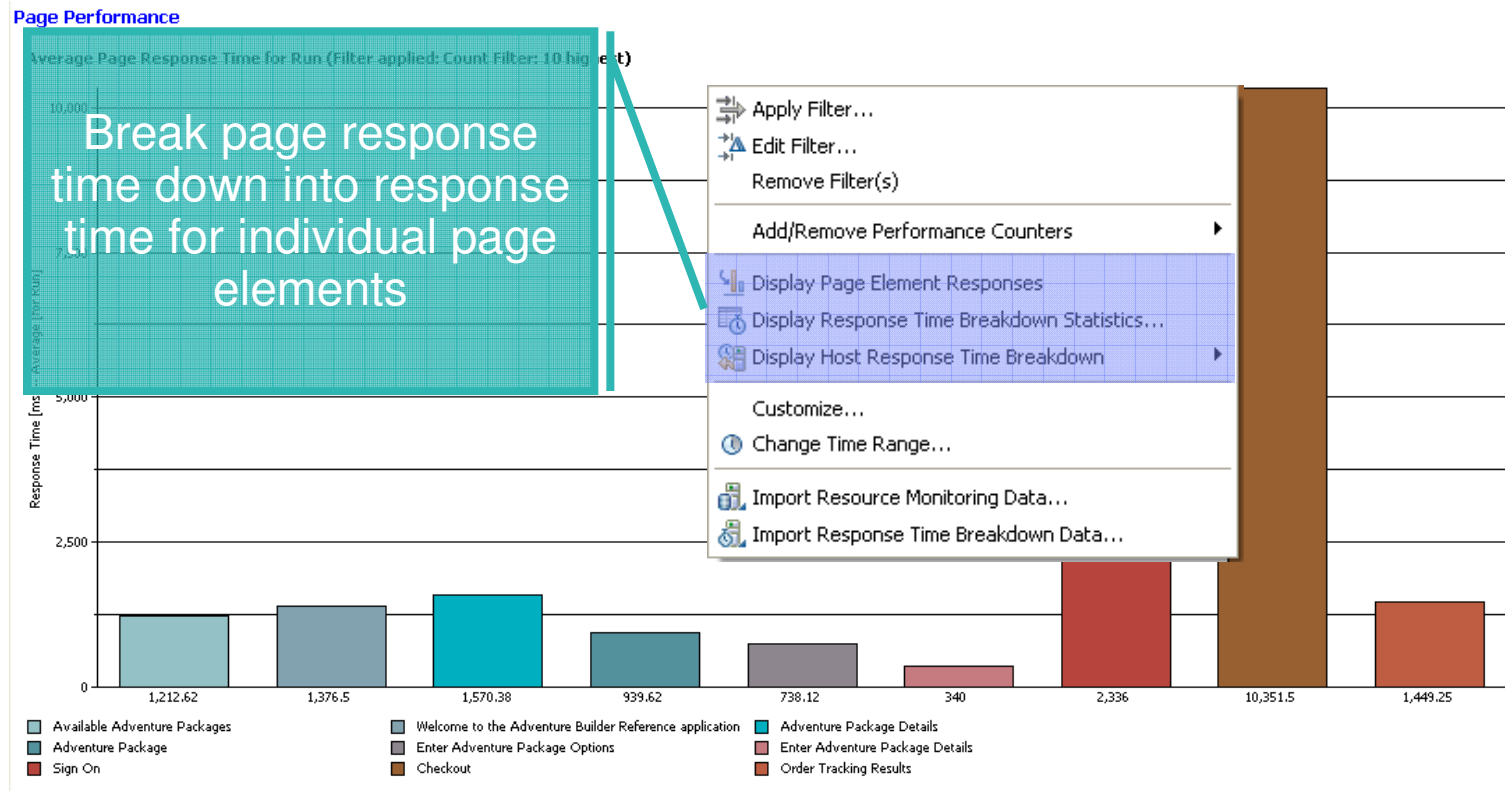
```
<messageblock id=0 timestamp=500>
<message type=2 handlerClassId=0 handlerId=1>
<property id=268 datatype='java.lang.Integer'>60825</property>
<property id=263
datatype='java.awt.Point'>java.awt.Point[x=96,y=96]</property>
<property id=264
datatype='java.awt.Point'>java.awt.Point[x=1920,y=1200]</property>
<property id=265 datatype='java.lang.String'>server
module=:/oracle/visapp/fnd/11.5.0/forms/US/FNDSCSGN.fndnam=APPS
record=names config='vis' icx_ticket='1946844418' resp='CSS/ORACLE_SUPPORT'
secgrp='STANDARD' start_func='CSXSRISV'</property>
<property id=266 datatype='java.lang.Integer'>256</property>
<property id=284 datatype='java.lang.Integer'>0</property>
<property id=284 datatype='java.lang.Integer'>255</property>
<property id=284 datatype='java.lang.Integer'>65535</property>
<property id=284 datatype='java.lang.Integer'>4210752</property>
<property id=284 datatype='java.lang.Integer'>8421504</property>
<property id=284 datatype='java.lang.Integer'>65280</property>
<property id=284 datatype='java.lang.Integer'>12632256</property>
<property id=284 datatype='java.lang.Integer'>16711935</property>
<property id=284 datatype='java.lang.Integer'>16762880</property>
<property id=284 datatype='java.lang.Integer'>16756655</property>
<property id=284 datatype='java.lang.Integer'>16711680</property>
<property id=284 datatype='java.lang.Integer'>16777215</property>
<property id=284 datatype='java.lang.Integer'>16776960</property>
<property id=383 datatype='java.lang.String'>Dialog</property>
<property id=377 datatype='java.lang.Integer'>900</property>
<property id=378 datatype='java.lang.Byte'>0</property>
<property id=379 datatype='java.lang.Byte'>0</property>
<property id=267 datatype='java.awt.Point'>java.awt.Point[x=8,y=20]</property>
<property id=291 datatype='java.lang.Boolean'>>true</property>
<property id=510
datatype='java.lang.String'>NLS_LANG='AMERICAN_AMERICA.UTF8'
```

Common properties

- **BSD Contacts for additional information**
 - ▶ Mills Ripley: 303.810.5571
 - Mills Ripley/Denver/Contr/IBM@IBMus
 - ▶ Robb Ralston: 303.522.0335
 - Robb Ralston/Denver/Contr/IBM@IBMus



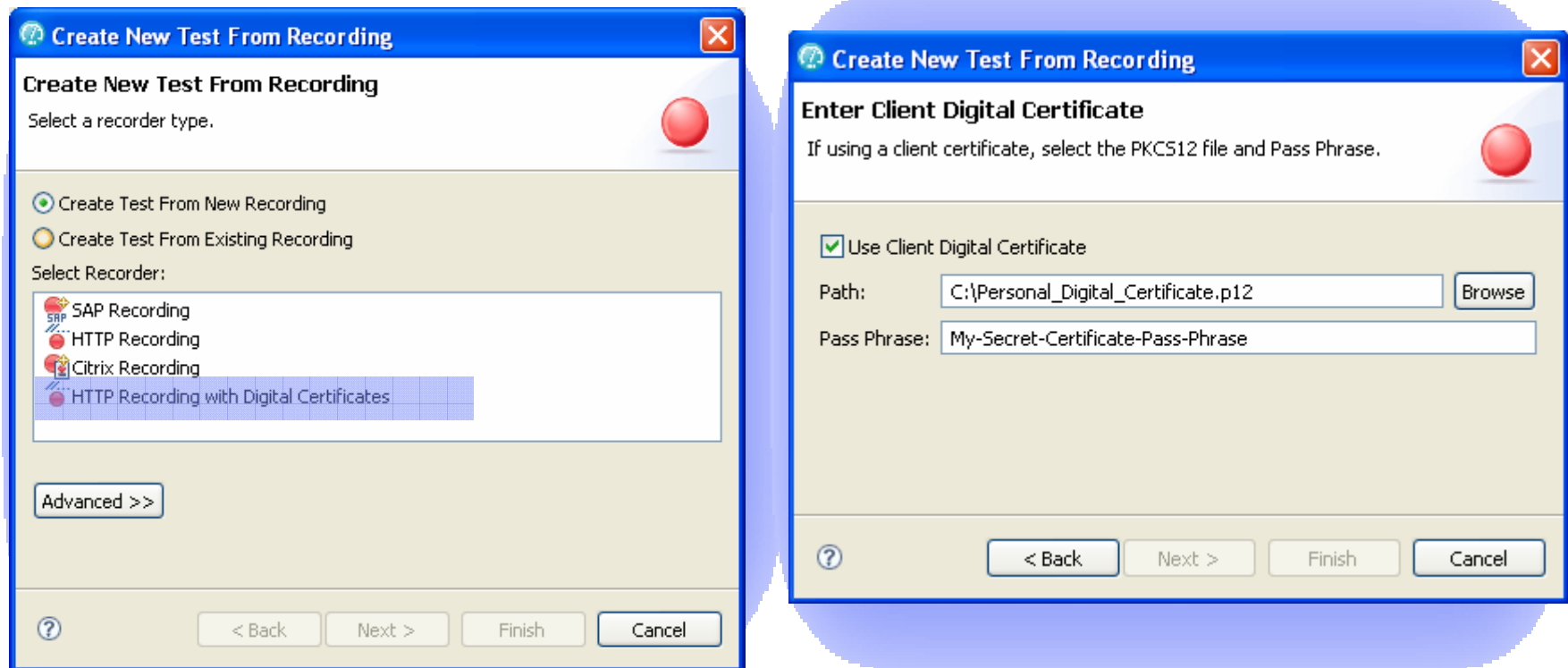
RPT: Response Time Breakdown



- **Feature:**
 - ▶ Breakdown page response times into composite element response time
- **Benefit:**
 - ▶ Performance report identifies slow performing page. Breakdown data drills down to highlight slowest elements of a given page.



RPT: Client Side Digital Certificates



- **Feature:**
 - ▶ New support for applications using Client Side Digital Certificates
- **Benefit:**
 - ▶ Expands the breadth of environments supported by RPT



RPT: IP Aliasing

Schedule Element Details

Browsers (80%)

Group name: Browsers

Group size

Absolute:

Percentage: 80

Run this group on the local computer

Run this group on the following locations

Name	Hostname	Directory	IP Aliasing
localhost	localhost	c:\temp	enabled

Add Location

Please use this page to specify the IP Aliasing properties for the location.

Enable IP Aliasing

Use IP addresses from all network interfaces:

Only use IP addresses from the following network interfaces:

Feature

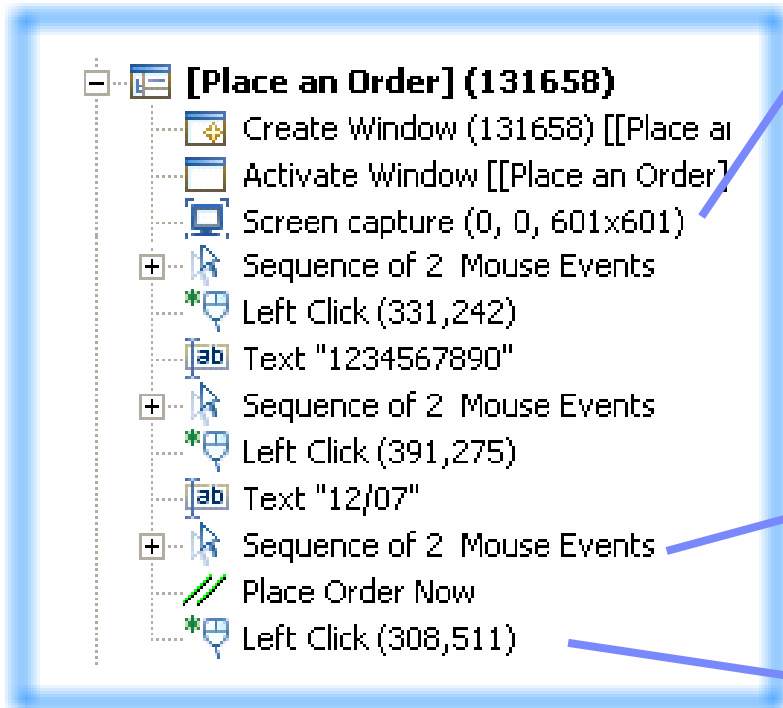
- ▶ Enable individual Virtual Testers to send and receive data from individual IP addresses instead of using one IP address for all virtual testers
- ▶ Feature released in previous iFix, though only in Caspian is IP aliasing configurable through GUI

Benefit

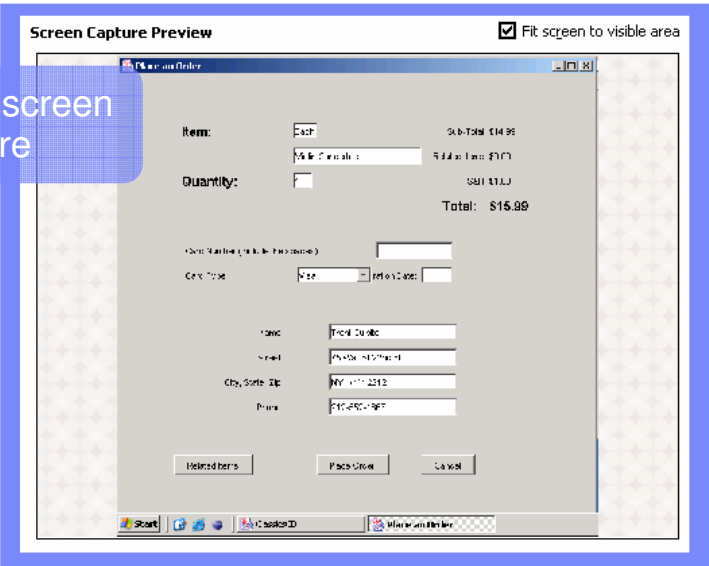
- ▶ Provides a more realistic workload
- ▶ Avoids problems where load balancers examine IP address as part of load balancing algorithm



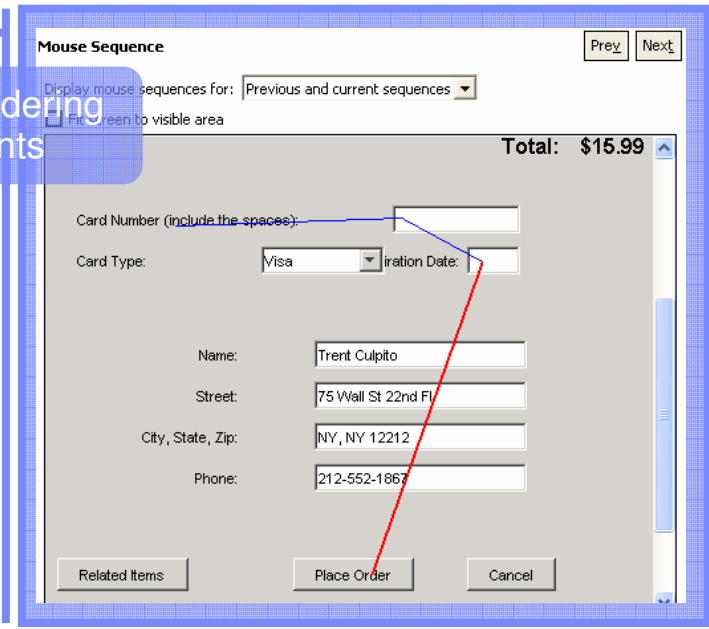
RPT: Citrix Performance Tests



Automatic screen capture



Visual rendering of events



Automatic response time measurement

Think Time

Enable Think Time

Think Time:

Response Time

Start response time for:

[Go to response time definition](#)

[Go to Stop](#)

Road Ahead: Web Services/SOAP Testing

SOAP Protocol added to Rational Performance Tester

- **Test Creation**
 - ▶ Test recording using an existing client application
 - ▶ Test Recording via Eclipse Web Service Explorer
 - ▶ Interactive test creation from Service description (WSDL)
 - ▶ Business Process Testing - Create test cases from BPEL models

- **Test Enhancement**
 - ▶ New data correlation, data pooling and verification points

- **Test Execution**
 - ▶ Functional and regression testing
 - ▶ Integrated with Test Management tools (CQTM)
 - ▶ Command line test execution

- **Test Analysis**
 - ▶ Root cause analysis of SOA performance problem : SOA Asset Management Tools (*New Rational product to be released*)
 - ▶ Integration with Tivoli tool (ITCAM for SOA)



Road Ahead: Web Services/SOAP Testing

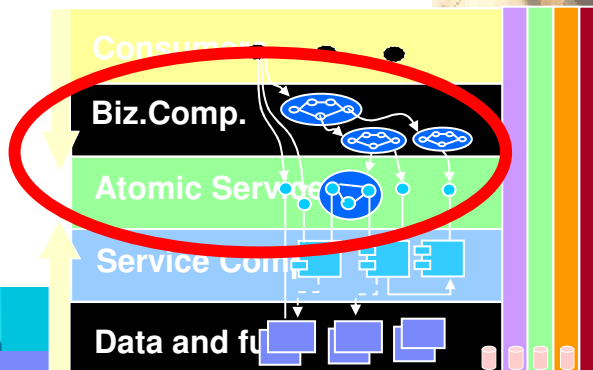
SOAP Protocol added to Rational Performance Tester

- **Supported Standards**

- ▶ HTTP 1.0 & 1.1
- ▶ WSDL 1.0 & 1.1
- ▶ SOAP 1.1
- ▶ JMS

- **Support for Secure Web Services Testing**

- ▶ Create/Edit Security Profile for a WSDL
- ▶ XML signature and encryption (WS-Security 1.0)
- ▶ User Name Token (WS-Security 1.0)
- ▶ X509 Binary Token (WS-Security 1.0)
- ▶ HTTPS (SSL 3.0)
- ▶ HTTP Simple Authorization
- ▶ HTTP Proxy



Other ASQ Product Updates : PurifyPlus

- **Various environment and platform updates :**
 - ▶ Support for Microsoft Visual Studio 2005 generated code
 - This includes support for unmanaged C/C++ code as well as managed code targeting .NET Framework 2.0 and ASP.NET 2.0.
 - ▶ Support for Java 5

- **PurifyPlus supports a governance dashboard, like RFT, RPT and RMT**
 - ▶ Collecting feedback & compliance metrics on code coverage, defect densities and performance

- **PurifyPlus now added to the Software Development Platform**
 - ▶ Premier runtime analysis solution for developers



Today's Agenda

- **IBM Rational Overview**
- **What's New in the Rational ASQ v7 desktop portfolio**
- **Scaling the business of global architecture, design & quality**
- **Summary and Q&A**



Take Action

Visit IBM Rational Product Pages

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



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