



IBM Rational Software Conference 2009
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IBM Rational Software Conference 2009

Effective and Best practices of load and performance testing
Oracle Applications using BSD Oracle plug-in for **Rational
Performance Tester**

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Rational software

Rational Performance Tester for Oracle E-Business

- **Rational Performance Tester**
- **Oracle Applications**
- **Supported Oracle Applications Modules**
- **Oracle Applications Architecture**
- **Oracle Version Support**
- **Rational Performance Tester Extension for Oracle Applications**
- **Standard Quality Management Pitfalls**
- **Installing the Oracle Extension for IBM Rational Performance Tester 8.0**
- **Performance Testing of Oracle Applications**
- **Sample Data**
- **Demo**



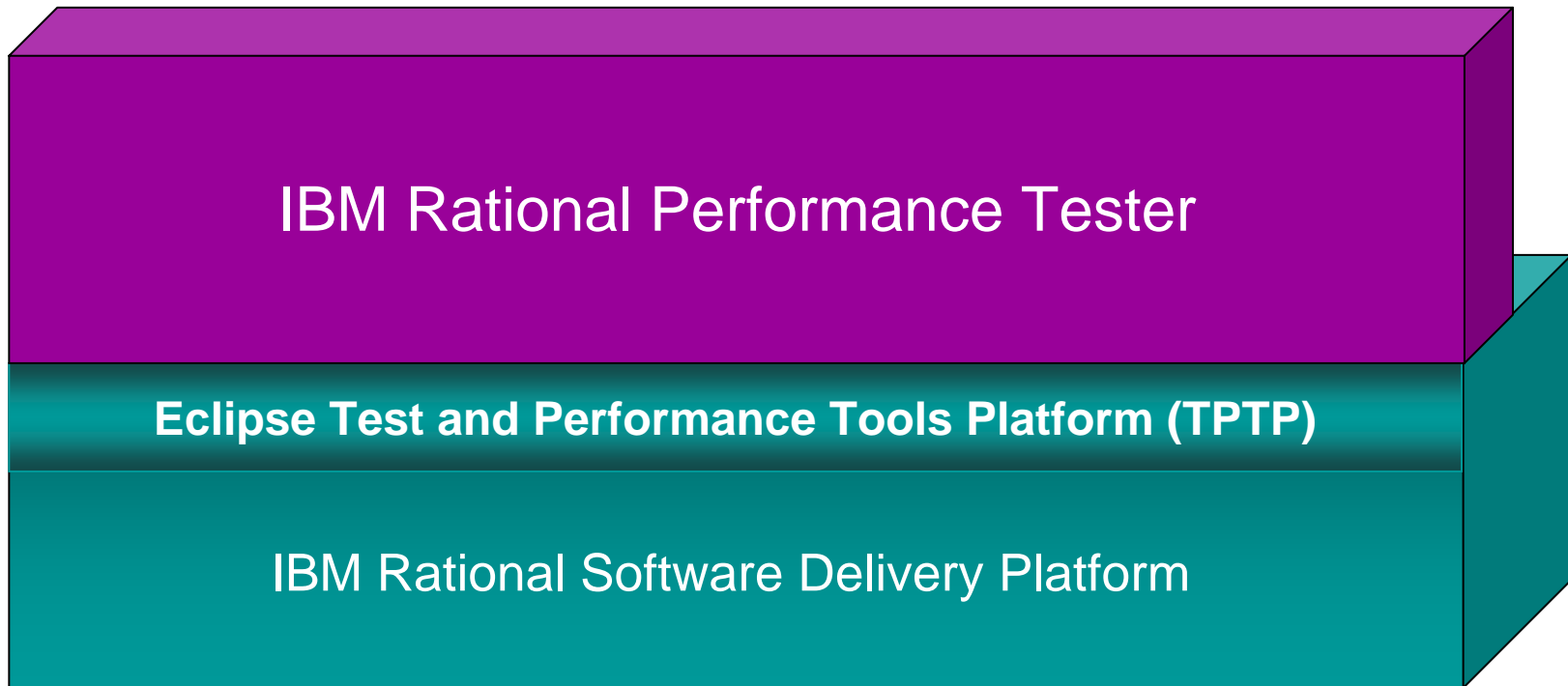
Rational Performance Tester: Overview

- **Multi-user automated performance testing tool for Web-based applications**
- **Hosted in the IBM Rational Software Delivery Platform, a version of the Eclipse shell**
- **Rational Performance Tester tests and execution engine based on the Java programming language**
- **Highly scalable**
- **Platform support**
 - Record and test execution on Microsoft® Windows® and Linux®
 - Agents (test execution) on some additional Microsoft® Windows Server® platforms



Rational Performance Tester: Architecture

- **Built on top of the IBM Rational Software Delivery Platform, TPTP, and custom components**



No-Code Tests



- Tests are represented in a tree view as a list of web pages and their elements, such as images.
- No programming necessary to create a test
- Underlying detail is accessible but hidden to simplify test creation and maintenance

Performance Test - RoomReservation

Test Contents

This section shows the test contents

- [-] RoomReservation
 - [+] Whistler Blackcomb - Ski Resort Website - Whistler, Canada
 - [+] Guest Services
 - [+] Room Reservations
 - [+] Specify Room Details
 - [+] Blackcomb Lodge - Room Details
 - [+] My Reservations
 - [+] Reservation Confirmation Details

Add

Insert

Remove

Up

Down



Oracle Applications



Generic Term for Oracle Corporations Applications and Business Software comprises the following:

- Oracle E-Business Suite
- Oracle Financial Applications
- Oracle Projects Applications
- Oracle Accelerate
- Other



Oracle Applications

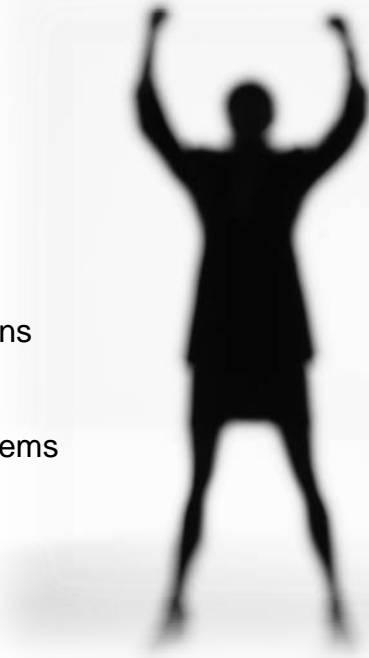
- **It is NOT**
 - Oracle Database – RDBMS
 - Not Supported directly by Rational Tools [Need Additional Plug-in]
- **Other Oracle Corporations Software (supported directly by Rational tools)**
 - PeopleSoft Enterprise
 - Siebel
 - JD Edwards
 - EnterpriseOne
 - World
 - Oracle Fusion



Supported Oracle Applications Modules

• Many – Many modules (partial list)

- Oracle CRM
- Oracle Financials
 - Oracle Assets
 - Oracle General Ledger
 - Oracle Payables
 - Oracle Receivables
 - Oracle Cash Management
- Oracle HRMS
- Oracle Logistics
- Oracle Mobile Supply chain Applications
- Oracle Order Management
- Oracle Transportation Management
- Oracle Warehouse Management Systems
- Oracle Projects Applications
 - Oracle Project Billing
 - Oracle Project Collaboration
 - Oracle Project Contracts
 - Oracle Project Costing
 - Oracle Project Management
 - Oracle Project Portfolio Analysis
 - Oracle Project Resource Management

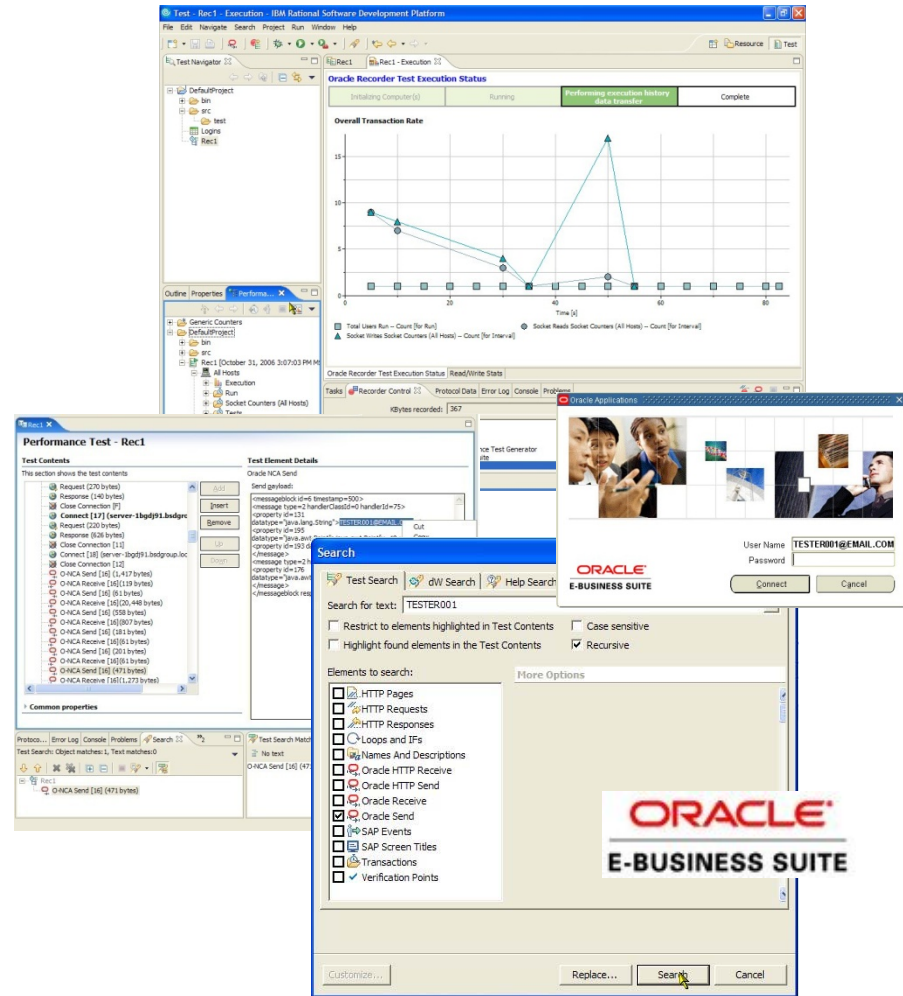


– Others

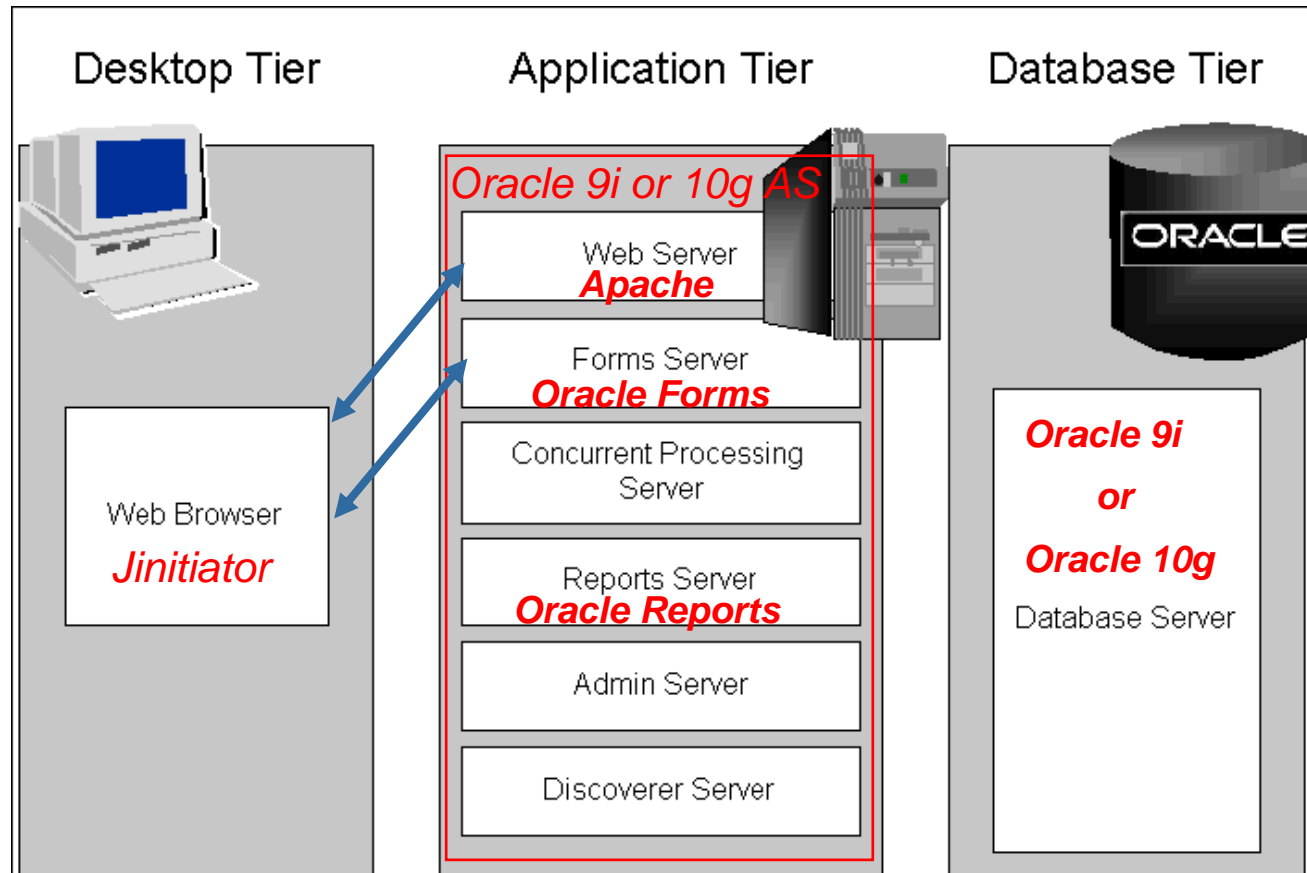
- Oracle Bills of Material
- Oracle Capacity
- Oracle CRM
- Oracle Advanced Planning & Scheduling
- Oracle Business Intelligence
- Oracle Engineering
- Oracle HRMS
- Oracle Inventory
- Oracle Integrated Receiving (Brazil localization)
- Oracle MRP
- Oracle Order Entry
- Oracle Order Fulfillment (order to cash process)
- Oracle Payroll
- Oracle Purchasing
- Oracle Receivables
- Oracle TMS (Transportation/G-Log)
- Oracle Work in Process
- Oracle Process manufacturing
- Oracle Federal Administration

Performance Test Oracle E-Business Suite and Oracle Forms Applications

- Oracle E-Business Suite applications impact core business processes. Performance is always an issue.
- The Need:
 - Ensure the performance of Oracle Forms based applications
 - While coping with customizations and frequent application changes
- The Solution:
 - **BSD Rational Performance Tester Extension for Oracle Applications in conjunction with IBM Rational Performance Tester**



Oracle Applications Architecture



Oracle Version Support

“I need to load test Oracle version xxx” – what does that mean?

- 12 or R12 – Oracle E-Business Suite release 12, HTTP- or Forms-based.
- 11 or 11i - Oracle E-Business Suite 11i, HTTP- or Forms-based.
- 6 or 6i – Oracle Forms 6i applications.
- 9 or 9i – Could mean
 - Apps running on Oracle 9i Application Server
 - Oracle Forms 9i application
 - Oracle 9i Database
- 10 or 10g – Could mean
 - Apps running on Oracle 10g Application Server
 - Oracle Forms 10g Application
 - Oracle 10g Database



Key Questions

How does your company run it's back office?

How many users have access to your ERP/CRM system?

To what extent is the application customized?

How do your customizations of your ERP application effect other applications your business runs on?

How do upgrades of your ERP applications impact your customizations?

How do you manage patches produced by vendors?

What is your current approach to performance testing your back office?

What is your approach to testing your ERP system prior to deployment?

What kind of challenges do you have translating performance issues into a language that IT can understand and use to verify that issues have been fixed?

What kind of control do you need to identify and fix performance problems earlier in the lifecycle?

How do you currently monitor your ERP application in production?

BUSINESS VALUE:

Reduce down-time and increase customer satisfaction by finding performance bottlenecks early, monitoring Oracle servers and applications for potential problems, and sending production data to developer desktops to speed the process of repairing defects



Key Questions – specific to Oracle

What types of Oracle Applications or modules of the Oracle E-Business Suite do you currently have deployed and how are they used?

How many users access your Oracle Applications?

To what extent are these applications customized?

How do your customizations impact other Forms Applications or E-Business Suite modules?

How do Oracle upgrades impact your customizations?

What is your current approach to performance testing Oracle Applications?

What is your approach to testing Oracle Applications pre-deployment?

What kind of challenges do you have translating performance issues into a language that IT can understand and use to verify that issues have been fixed?

What kind of control do you need to identify and fix performance problems earlier in the lifecycle?

How do you currently monitor Oracle Applications in production?

BUSINESS VALUE:

Reduce down-time and increase customer satisfaction by finding performance bottlenecks early, monitoring Oracle servers and applications for potential problems, and sending production data to developer desktops to speed the process of repairing defects



Rational Performance Tester Extension for Oracle Applications



- **Plug-in for Rational Performance Tester that provides support for Oracle Forms 6i and above**
- **Generates test assets that can be used within RPT**
- **Test functionality is identical to base RPT functionality**
- **If you know RPT, you know how to test Oracle Apps**



Rational Performance Tester Extension for Oracle Applications

- **The process of performance testing and monitoring Oracle Applications...**
 - ▶ Follows the same steps as testing and monitoring web based applications...
 - Record
 - Edit
 - Execute & measure response times
 - ▶ ..Requires new technology to enable the process
 - Oracle Apps Recorder
 - Oracle Apps Protocol Browser for test editing
 - Oracle Apps Performance Reports



Rational Performance Tester Extension for Oracle Applications

- **Standard Quality Management Pitfalls**
 - Functional Testing done manually
 - Test Management done on spreadsheets
 - Performance testing is often overlooked during upgrades
 - Project timelines and cost overruns decrease time left for testing
 - Many customers let End Users do functional and especially performance testing in production
 - Customers don't realize the value of Quality Management, Cost of not testing



Performance Testing of Oracle Applications

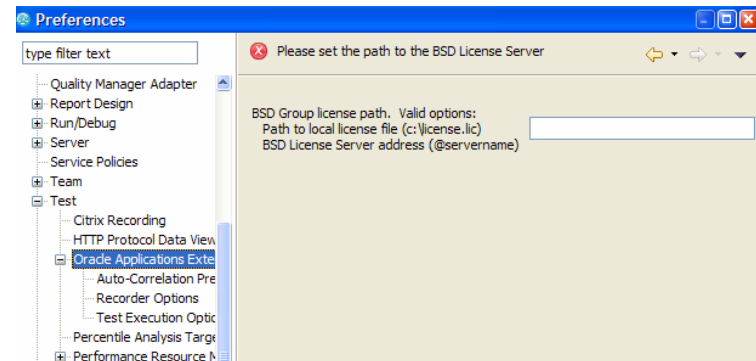
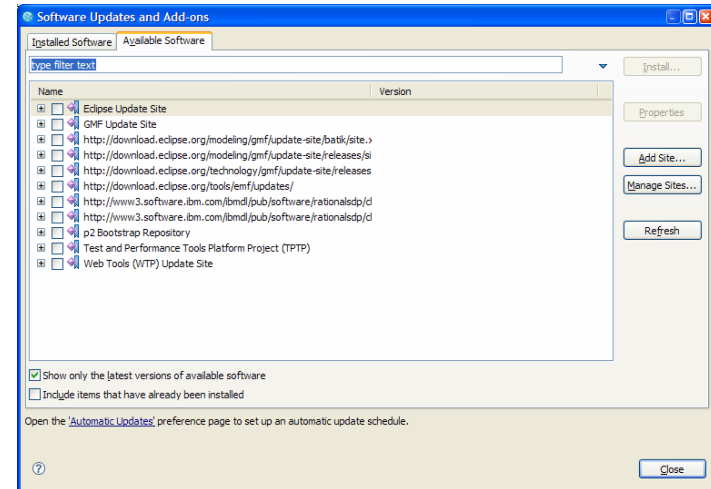
IBM Rational Performance Tester simplifies Oracle testing

- Oracle recorder enables users to easily capture all Oracle transactions
- Oracle Protocol Browser enables users to easily read and edit tests
- Oracle Performance Reports enables users to quickly pinpoint bottlenecks



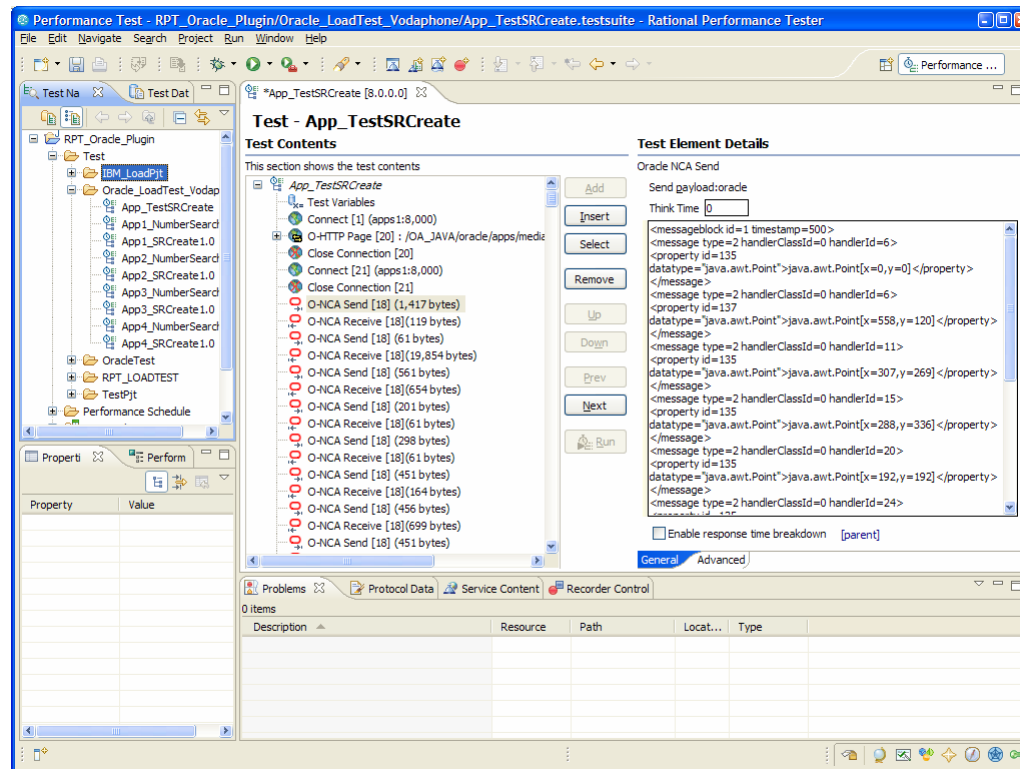
Installing the Oracle Extension for IBM Rational Performance Tester 8.0

- 1) Install and Configure the BSD License Server
- 2) Install the update site into Rational Performance Tester
- 3) Connect the Oracle Extension to the License Server
- 4) Configure Forms listeners**
(required for Forms 9/10 support)



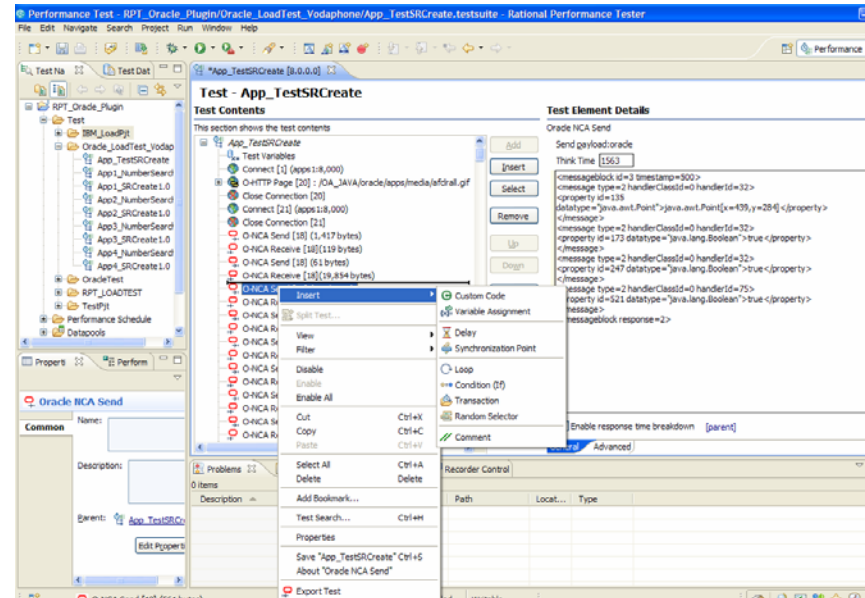
Rational Performance Tester Extension for Oracle Applications

- RPT Oracle Sample Test

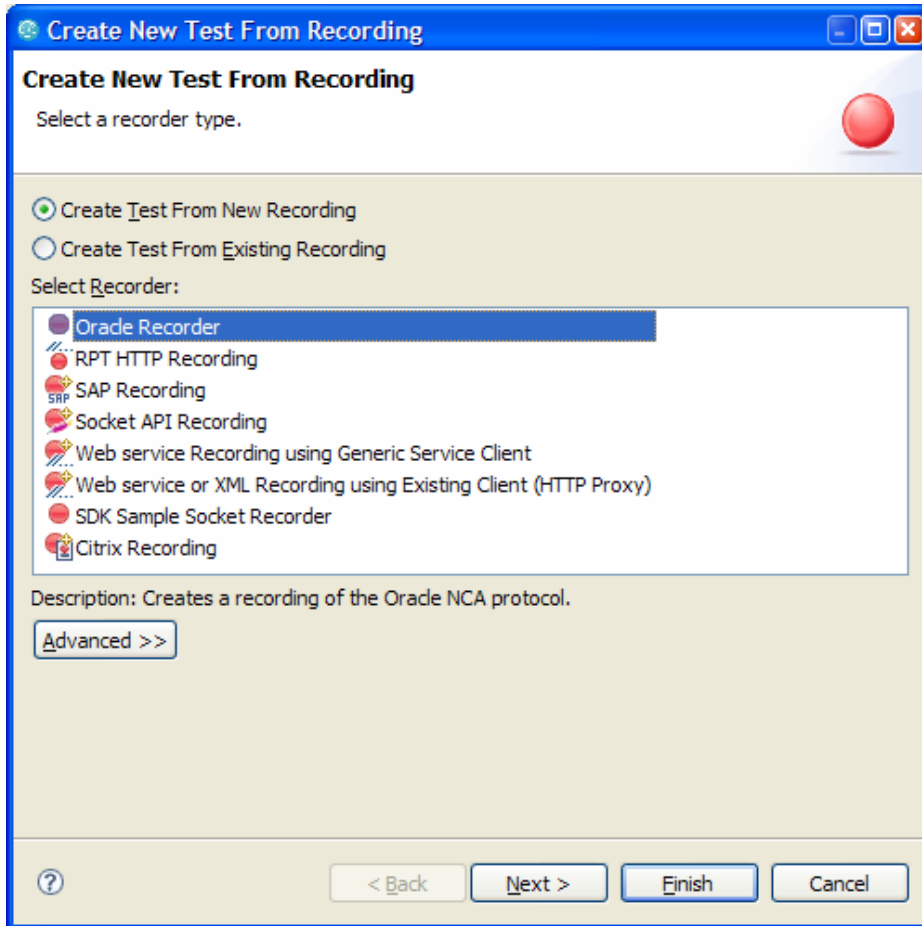


Rational Performance Tester Extension for Oracle Applications

- **Edit and Enhance RPT Oracle Tests same as conventional RPT Tests**
- **All Test Elements supported by RPT is supported for Oracle Tests**



Oracle Technologies: Oracle Recorder



- **New Oracle Apps recorder captures transactions using Oracle NCA technology**
- **Oracle recorder provides full visibility into all Oracle Apps activity**
 - Screen transactions
 - Data entry
 - Server responses

Oracle Technologies: Oracle Applications Protocol Browser

- **Protocol Browser enables users to easily read and edit tests**
- **Protocol Browser shows a screenshot of Oracle screen being tested and highlights the individual objects that are acted upon**
- **Provides Object Data view with detailed screen and object information for power user**



RPT Oracle Sample Performance Schedule

- Schedule same as RPT

The screenshot displays the Rational Performance Tester (RPT) interface for configuring a performance schedule. The main window is titled "Performance Schedule - RPTOracle_Schedule".

Schedule Contents:

- RPTOracle_Schedule
 - Create Users (25%)
 - Synchronization Point: WaitforUsers
 - CreateUsersV1.0
 - Create Orders (25%)
 - Synchronization Point: WaitforUsers
 - CreateOrders_V1.0
 - Create Service Requests (25%)
 - Loop (1 iteration)
 - Delay (1000 ms.)
 - Transaction: Create Order
 - Create Service Requests
 - Update Service Requests (25%)
 - Synchronization Point: WaitforUsers
 - Update Service Requests

Schedule Element Details:

Users: 4,000, Stage: Until Fl..., Chang...: One/30..., Settle...: 0

Time limit for a user to respond to a stop request: 30 Seconds

User Load Preview:

The graph shows the number of users over time. The x-axis is "Run duration [min]" (0 to 30) and the y-axis is "Users" (0 to 4,000). The load increases linearly from 0 to 4,000 users over the first 20 minutes and then remains constant at 4,000 users until the end of the 30-minute run.

Problems:

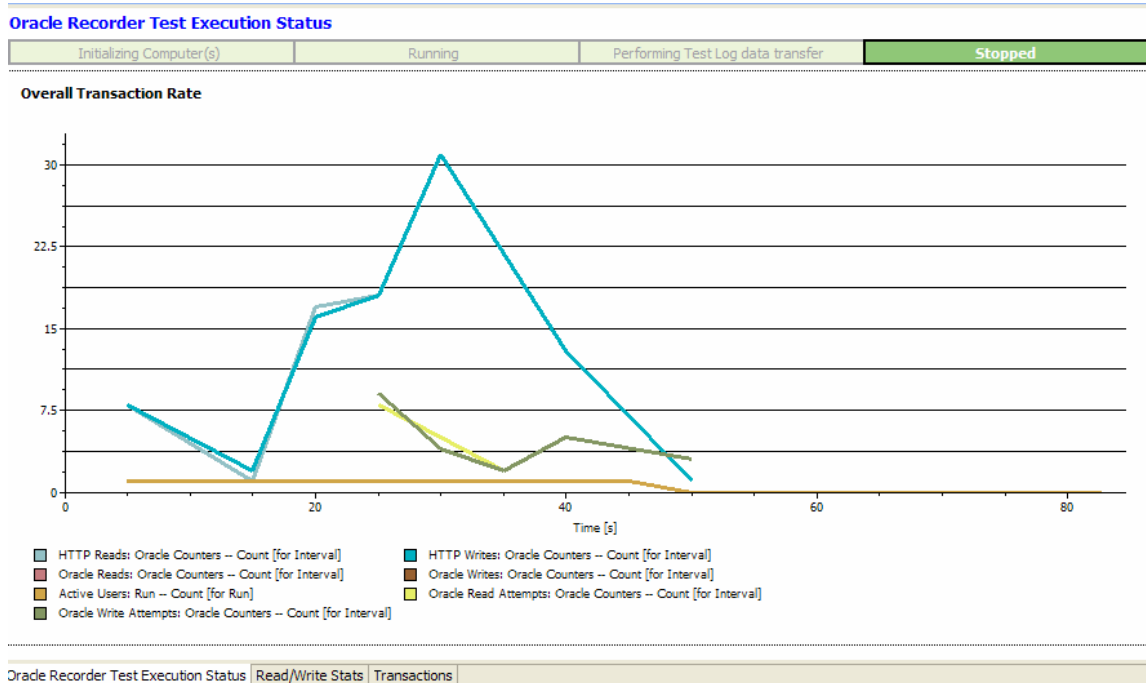
29 errors, 0 warnings, 0 others

Description	Resource	Path	Locat...	Type
Errors (29 items)				



RPT Oracle Performance Reports

- Sample Report 1



RPT Oracle Performance Reports

- **Sample Report 2**

Read/Write Stats
Read/Write Statistics

	Oracle Counters -- Count [for Run]
HTTP Read Attempts	89
HTTP Reads	89
HTTP Write Attempts	89
HTTP Writes	89
Oracle Read Attempts	23
Oracle Write Attempts	23
Oracle Writes	23
Socket Connect Attempts	138
Oracle Reads	23
Socket Connects	138

Oracle Recorder Test Execution Status | Read/Write Stats | Transactions



Demo





Thank You

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