Automating Performance Testing with JMeter

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15.February.2007

Agenda

- General Truths about Performance
- Performance Test Design Approaches
- JMeter Architecture
- Practical Solution with JMeter
- Demo

General Truths about Performance

- Doubling an attribute, like CPU speed, doesn't necessarily increase performance 2X
- Increasing a resource that is not bottleneck will not necessarily increase performance
- With respect to cache, size matters

Test Design Approaches

- A brand new application
  - Table of comparison between environments
- Application is on production
  - Comparison analysis between versions

The Test Tool – Apache JMeter

- Apache JMeter is

  100% pure Java desktop application designed to load test functional behavior and measure performance. It was originally designed for testing Web Applications but has since expanded to other test functions

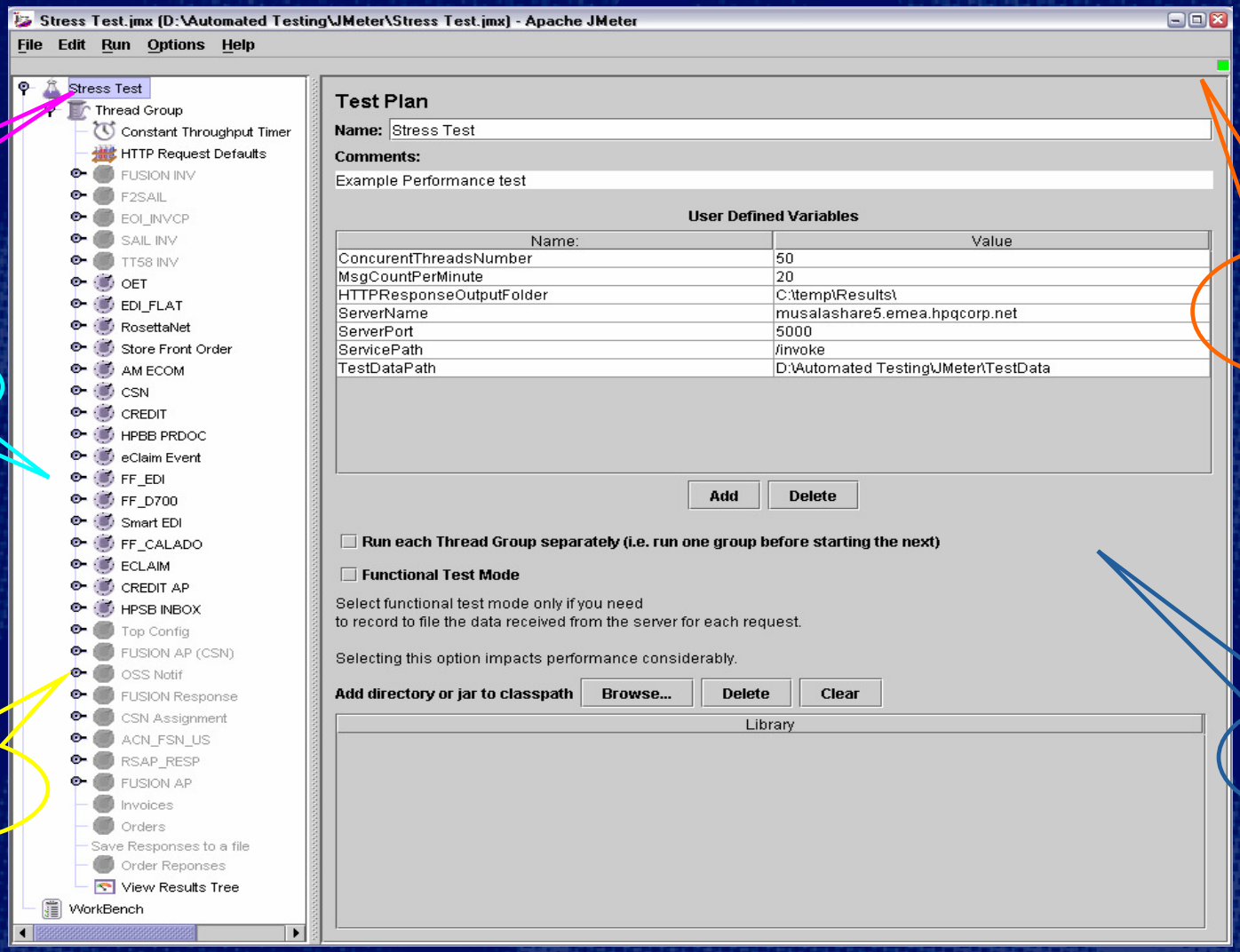
- Java based
- Highly extensible
- URL: http://jakarta.apache.org/jmeter/

JMeter Architecture

Test Plan:

- Thread Groups
- Controllers
- Samplers
- Listeners
- Config elements
- Assertions
- Timers
- Other Elements

JMeter Outlook



Selected Element

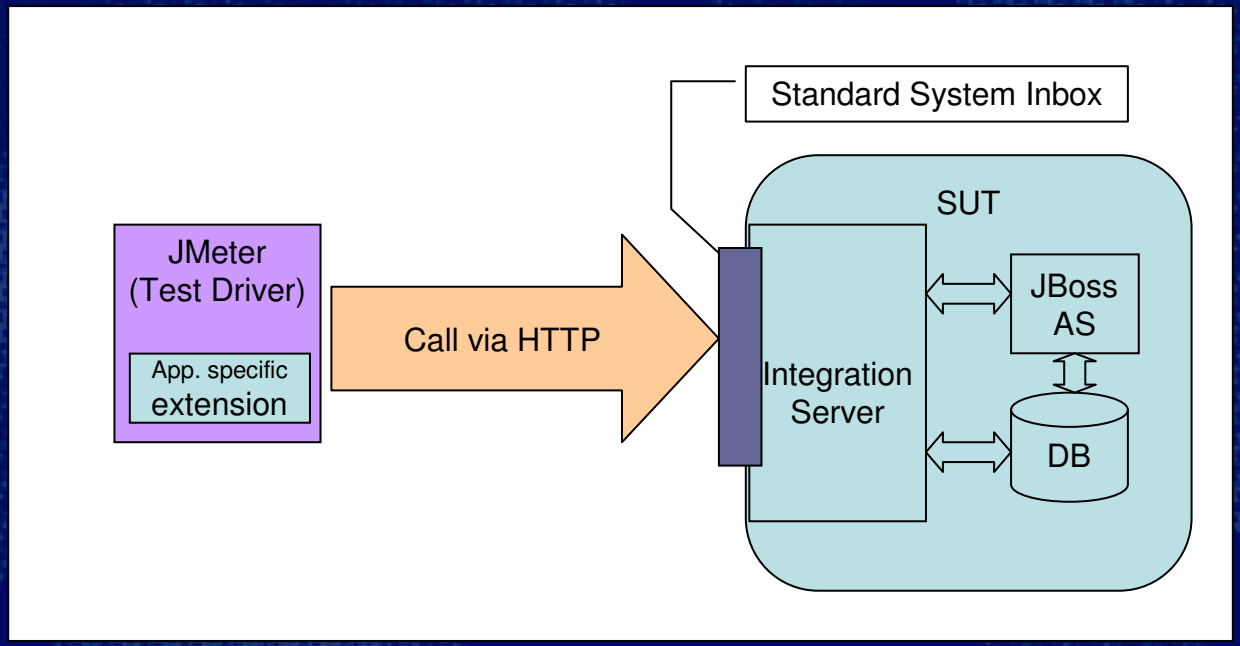
Active Element

Deactivated Element

Run Test Indicator

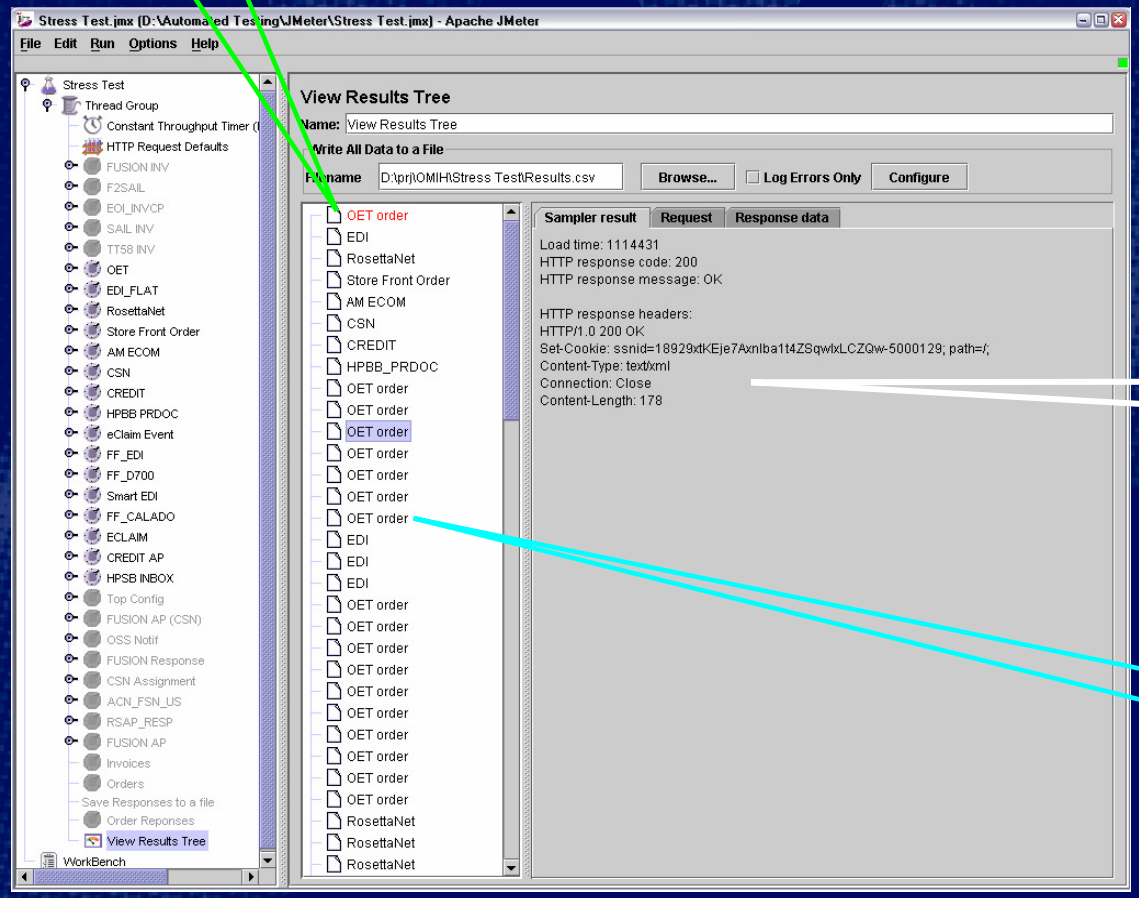
Properties Area

Practical Case - Background Info



- **Technology:** webMethods IS, Java, Oracle 9i
- **Goals:** Identify bottlenecks in webMethods components
- **Approach:** Simulated production peak hours load

Analyzing Results – JMeter Metrics



JMeter Tree View

- Node for every request
- Properties of the request

Analyzing Results – Server Utilization

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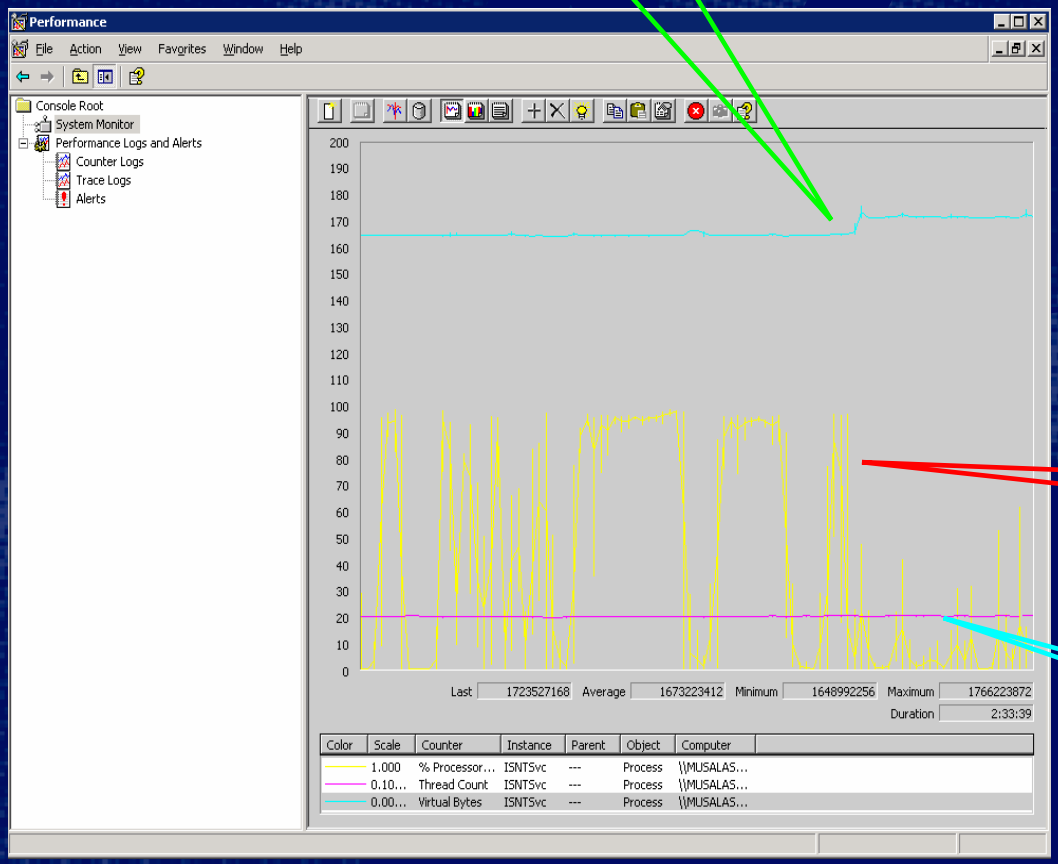

Windows Performance Monitor Utility

Perfmon.exe

- CPU utilization
- VM utilization
- Thread Count

Analyzing Results – Manual Correction

- Runtime
  - Monitor PerfMon GUI and JMeter Tree View Results
- Recorded data
  - JMeter CSV file (timestamp, request time, request name, response status)
  - Excel Spreadsheet

JMeter Demonstration

Thank You!

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presentation:
http://www.musala.com/ppt/MusalaSoft_Perf_Testing_JMeter.pdf