



SAGE Computing Services

Customised Oracle Training Workshops and Consulting

Take a load off!

Load testing your Oracle APEX and JDeveloper web
(...and other) applications

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Disclaimer: SAGE Computing Services makes no claims so-ever that anything Chris Muir says actually **is based the truth.** In fact we're pretty sure he **makes stuff up** his technical presentations are often **not based on** We also take no responsibility on his jokes about DBAs and their hygiene, and we're slightly disturbed about his obsession with all things Oracle.

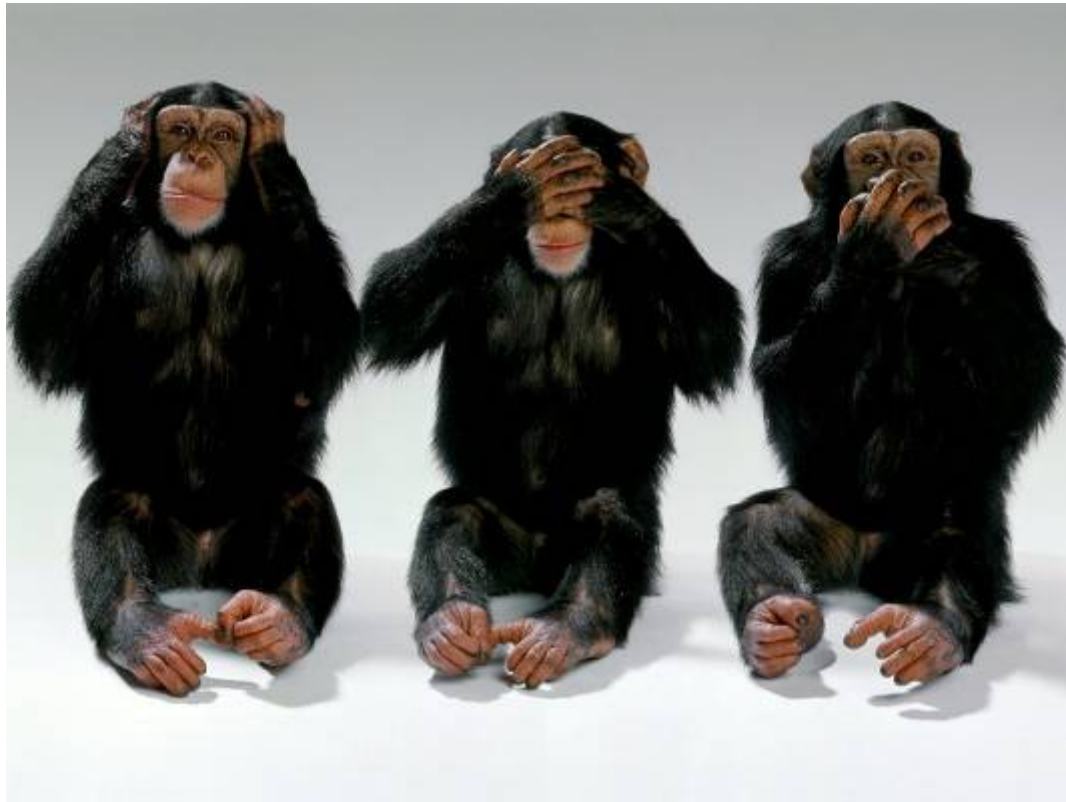


The Need for Load and Stress Testing

Or “Oh,..... those requirements....”

- The system shall respond in a timely manner
- The system shall be usable on slow network and dialup connections
- The system shall deal with X users without performance degradation
- The system shall remain stable under load





The Pandora's Box of Web Development

Or “What goes around, comes around”

- Forms is dead. Long live Forms! Forms is dead
- Focus moving to web applications
- Potentially 1000's of users
- Peak periods = high demand
- Multi-tiers of complexity and aggregate performance issues



Ignorance is Bliss (for only so long)

Or “Ignorance is a business expense”

- Plenty of stories of web applications failing under load
- Goodbye SLAs
- Goodbye customers
- Goodbye profits
- Hello cranky IT manager



Load vs Stress Testing



The “Better Late than Never” Agenda

- HTTP Protocol 101
- JDeveloper’s HTTP Analyzer
- Apache’s JMeter



So how does this web thing work anyway?

Or “HTTP Protocol 101”

- HTTP Request-Response Cycle
- Headers and Body
- Client Request Types: GETs and POSTs
- Server Responses: Web pages and HTTP Error Codes



JDeveloper's HTTP Analyzer

- A HTTP Protocol “packet sniffer”
- Acts like a web proxy
- Free
- Available from JDeveloper 9, JDeveloper 10g, better under JDev 11g



JDeveloper's HTTP Analyzer Demonstration



Apache's JMeter

- Load and stress testing utility
- Written in Java, but can test any web application (and more)
- Runs from 1 or more networked computers
- Free



Supported Protocols

- HTTP + HTTPS
- Java Message Services (JMS)
- JDBC
- FTP
- LDAP
- Web-Services



JMeter Concepts

- Test plans
- Thread groups
- Samplers eg:
 HTTP Requests
- Listeners, aggregators
 and graphs



Apache's JMeter Demonstration



Other JMeter Uses

- Conditional testing
- Periodic verification of internet host or vendor capacity
- Tender software evaluation

JMeter Out-of-the-Box Uses

- Bloat your blog visitor statistics
- Denial of service attacks
- On-line click fraud
- Disclaimer: don't try this at home



Other HTTP Monitoring Choices

- Firefox browser extensions eg: Mozilla's LiveHTTPHeaders
- IE extensions eg: IE Inspector's HTTP Analyzer v2
- Plenty more

Other Stress Monitoring Choices

- Mercury Interactive's Load Runner
- The Grinder – open source





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Questions and Answers?

Presentations are available from our website:

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