

Load/Performance Type Testing Tools At A Price You Can Afford

Presentation by

Cordell Vail & Joe Towns

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at Construx in Bellevue, WA
Monthly Meeting



Washington School Information
Processing Cooperative



Seattle Area Software
Quality Assurance Group



The reason most people never
find a 4 leaf clover is that
they never look for one.
Life is a lot like that.

Cordell Vail

INTRODUCTION

Is this your view of Testing Tools?



OK! Now I am going to just sit here on this stool and hang on and I want the cow to jump up and down

Purpose of this Presentation

Was this **YOU**,
when they
asked you to
find a load
testing tool?



Purpose of this Presentation

Help you learn how to find an inexpensive testing tool that will give you predictable results

This presentation is **NOT** intended to teach you how to do the testing



The "Big Picture" (Overview)

- Know Where To Start
- Uniformity
- Definition Of Terms

Stress Testing

Load Testing

Volume Testing

Performance Testing

Benchmark Testing

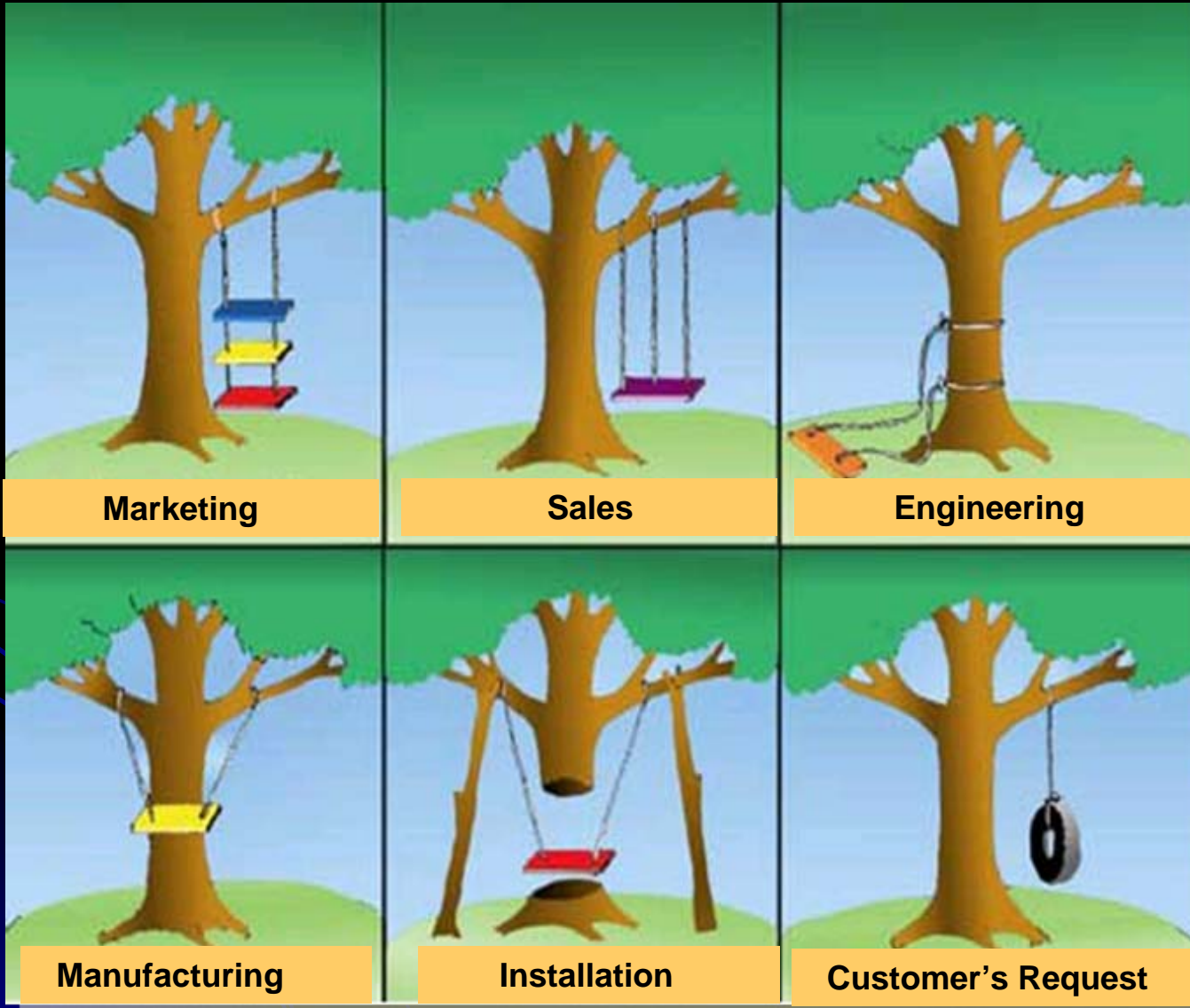
Baseline Testing



The "Big Picture" (Overview)

- Know the testing objective
- Know the testing environment
- Only buy what you need
- Know how you are going to test
- Trusting the test results
- Possible solutions
- Can we trust market share
- Testing tool comparisons

Uniformity



Uniformity

**We need to define terms
to eliminate confusion**

- **Stress**
- **Load**
- **Volume**
- **Performance**
- **Benchmark**
- **Baseline**

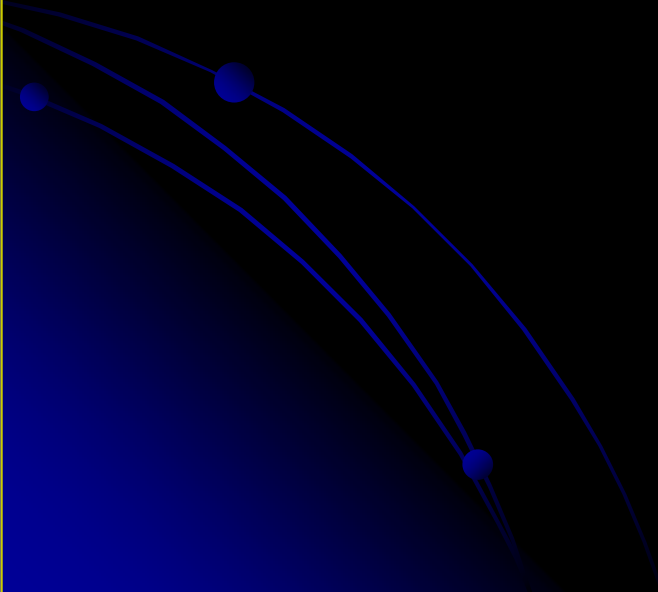
Uniformity

**It is not so important
how you define testing
terms as it is that everyone
in your organization use
the same definitions**

Stress Testing

Tests the server

Peak volume over a short span of time



Load Testing

Tests the database

Largest load the database can handle at one time



Volume Testing

Tests the server & the database

Heavy volumes of data over time

Combination of Stress Testing and Load Testing over time

Performance Testing

Tests user response time

With web applications this is normally the main consideration



Benchmark Testing

Compares your testing standards to the same testing standards in other similar organizations in the industry



Baseline Testing

Setting testing standards to be used as a starting point for comparison later within your own organization



Know Where to Start

In testing we would all do well to follow Stephen Covey's advice:

"Begin with the end in mind"

What is it you need to test?

Identify the Target of the Test

Will the tool need to test:

Bandwidth

Concurrent users

Multiple platforms

Multiple browsers

Users per server

Multithreading

Disk capacity

Faults

Memory

User response



Consider Team Composition

Developers

Source Code Analysis
Cyclomatic Complexity
Memory Leaks

Test Engineers

Error Handling
Fault Injection
User Response Time

System Engineers

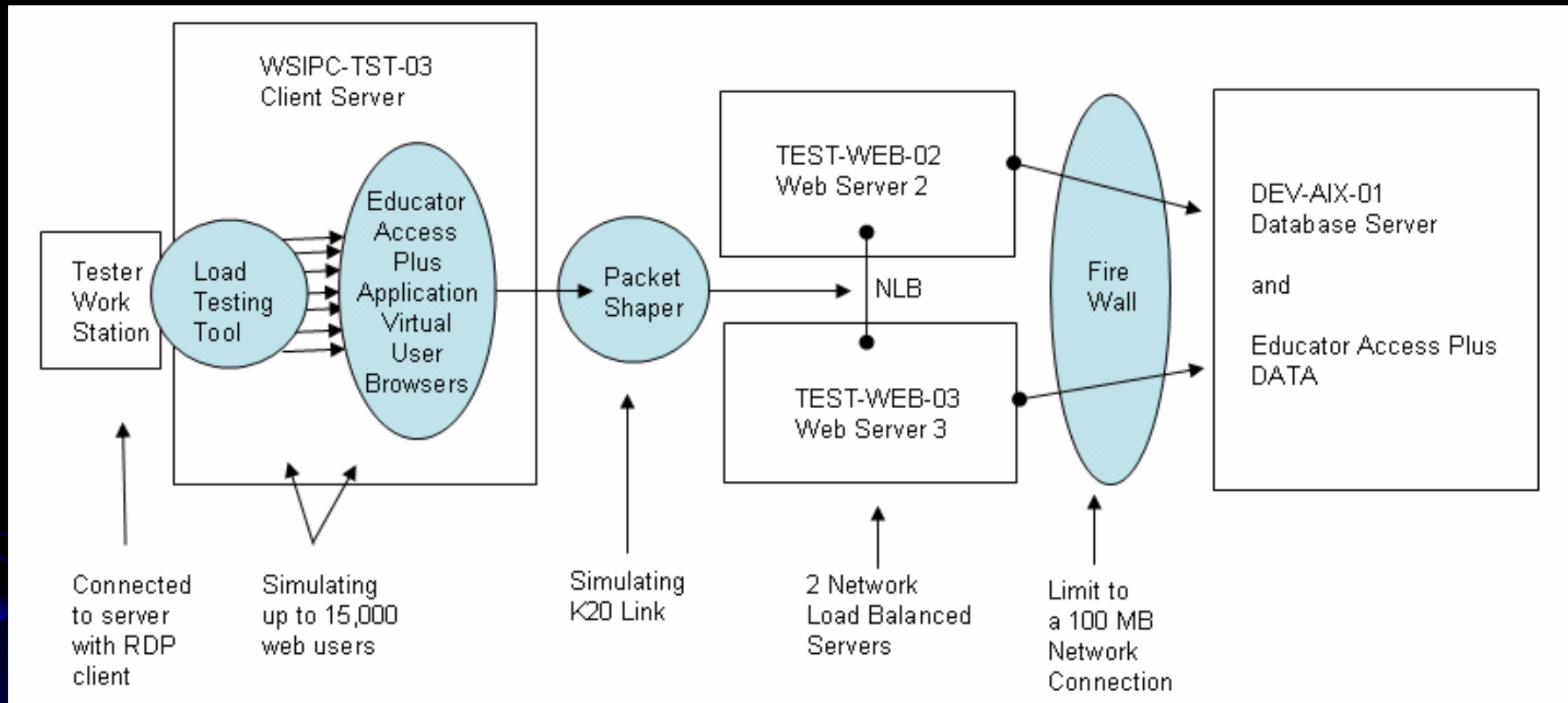
Bandwidth Restriction
Server Performance
Multithreading

The members of your testing team will be able to help determine what tests need to be done with which testing tool

Know the Testing Environment

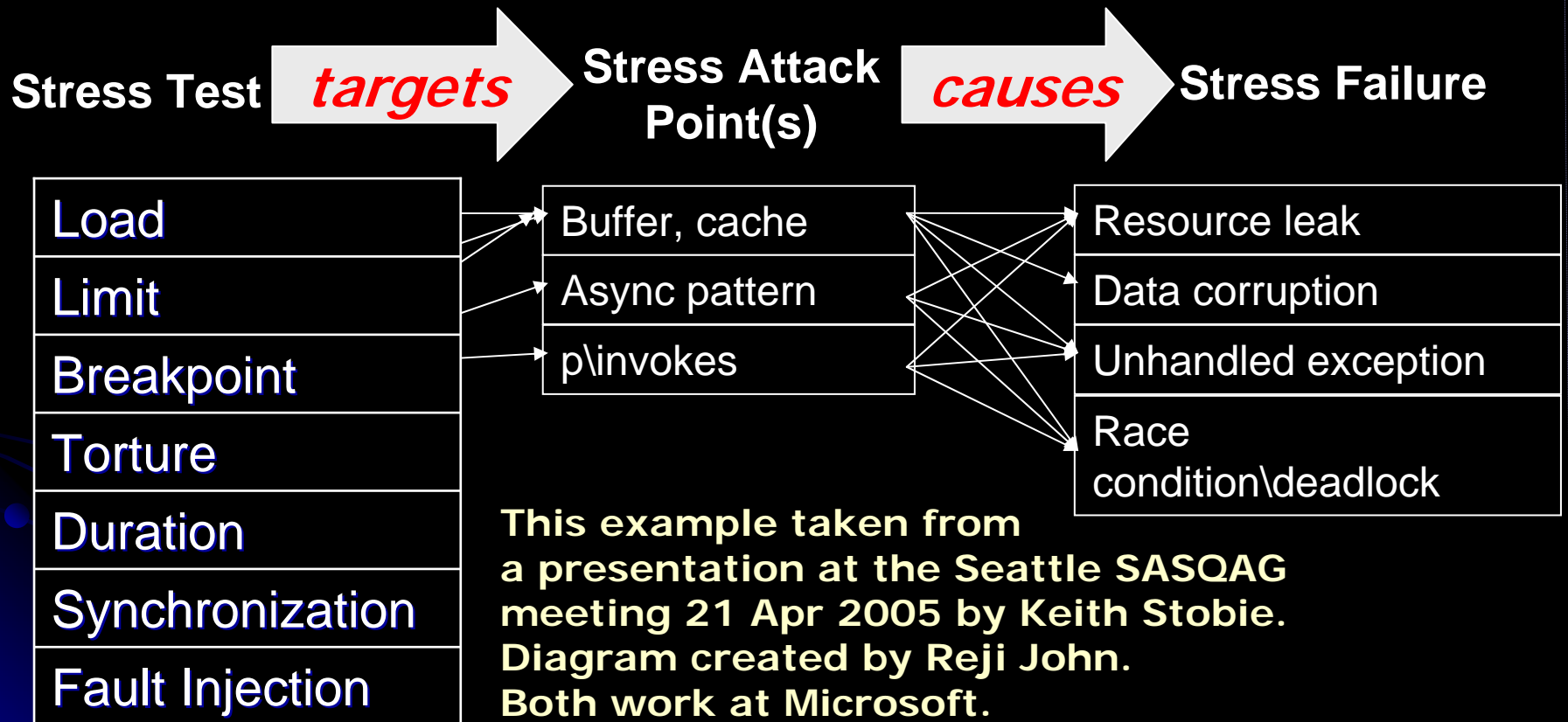
- **Number of client workstations**
- **Connectivity to servers**
- **Database availability**
- **Production copy of application**
- **Application and web servers**
- **Bandwidth and LAN**
- **Test tools to monitor results**

WSIPC Testing Environment



NOTE: The Client Server and the 2 Web Servers are HP Proliant BL 20 PG2 Dual 3GH Xeon with 2GB Ram

Know How You Test



This example taken from a presentation at the Seattle SASQAG meeting 21 Apr 2005 by Keith Stobie. Diagram created by Reji John. Both work at Microsoft. (Used with permission)



Only Buy What You Need

To find an economical tool you must know what your testing needs are

Each tool is very different

You are not going to pay \$200 and get a tool that will do what an \$85,000 tool will do!



Trusting The Test Results

With a new testing tool, how do you know your results are accurate or even valid unless you have something to compare against



Trusting The Test Results



How big is this equipment?



Trusting The Test Results



Now how big is it?



Two Possible Solutions

#1 - Test the tool on an existing application and web server where you already know what the test results should be

Two Possible Solutions

#2 - Test with more than one testing tool and compare the results

Is that feasible with the cost of the tools on the market today?

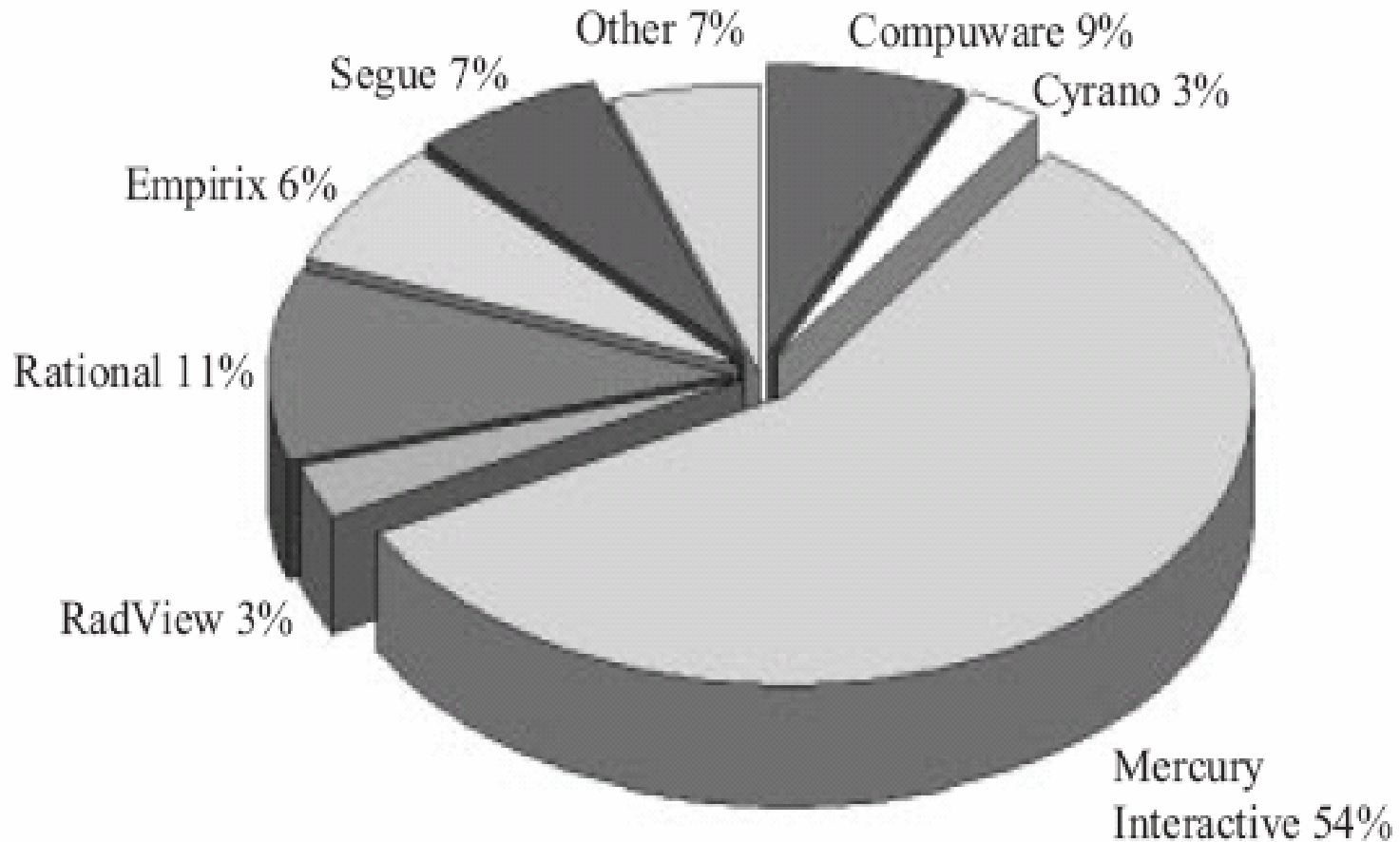


Can We Trust Market Share

93% of the market share is controlled by 7 vendors all charging very high prices



Can We Trust Market Share



Source:

http://www.mercury.com/us/pdf/company/newport_load2000.pdf



Testing Tool Vendor Links

Here are links to those 7 larger vendors that are holding 93% of the market share

www-306.ibm.com/software/awdtools/tester/performance/index.html

www.segure.com/products/load-stress-performance-testing/index.asp

www.mercury.com/us/products/performance-center/loadrunner/

www.radview.com/products/WebLOAD.asp

www.quotium.com/qpro_overview_load_testing.html

www.empirix.com/default.asp?action=article&ID=418

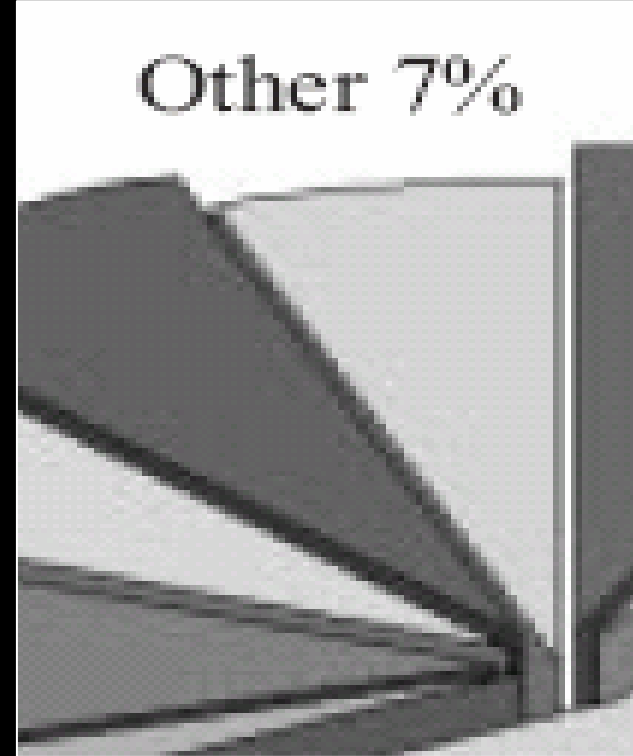
www.compuware.com/products/qacenter/performance.htm

***Check the Prices out for yourself!
They are all over \$50,000 for
1,000 virtual users***



Affordable Testing Tools

We decided to look at that "OTHER" 7% mostly because of price



Affordable Testing Tools

<http://www.vcaa.com/testengineer/links.htm>

<http://www.testingfaq.org/t-load.html>

<http://hammerhead.sourceforge.net/>

<http://opensource-testing.org/performance.php>

http://www.grove.co.uk/Tool_Information/Choosing_Tools.html

<http://www.softwaregatest.com/gatweb1.html#LOAD>

<http://www.sqa-test.com/toolpage.html>

<http://www.webservices.org/index.php/ws/content/view/full/102>

<http://opensource-testing.org/performance.php>

<http://sourceforge.net/projects/dieseltest/>

NOTE: See our comparison list on the session CD handout



Our Testing Tool Findings

TestMaker – PushToTest: FREE

<http://www.pushtotest.com/Downloads/>

WAST – Microsoft: FREE

<http://www.microsoft.com/downloads/details.aspx?FamilyID=E2C0585A-062A-439E-A67D-75A89AA36495&displaylang=en>

LoadTester – AppPerfect: FREE

<http://www.appperfect.com/products/devsuite/lt.html>

TestMaker – PushToTest: FREE

<http://www.pushtotest.com/Downloads/>



Our Testing Tool Findings

Site Tester 1 – Pilot: **\$29**

<http://www.pilotltd.com/eng/index.html>

Portent Supreme – **\$279**

Loadtesting.com:

www.loadtesting.com

WAPT - Logasoft: **\$299**

<http://www.loadtestingtool.com>



Our Testing Tool Findings

Webserver Stress

\$625

Tool 7 – Paessler:

www.paessler.com

HOLODECK - SISE:

\$1,500

<http://www.sisecure.com/holodeck/learn.shtml>

***NOTE: Holodeck is a fault injection tool-
not a normal virtual user testing tool***



Other Options

(Onshore) Outsource Testing

http://www.veritest.com/services/load_stress.asp

Online Hosted Services

<http://servers.aplus.net/loadbalance.html>

http://www.webpartner.com/products/st_main.html

<http://www.keynote.com/>

<http://www.webmetrics.com/loadtesting.html>

***NOTE:** Hosted or online testing may be available free from your ISP*



Seeing the Results

TOOL DEMONSTRATION

**You can follow along in the
Tool Demonstration Handout**

For More Information

www.vcaa.com

Vail Consulting And Associates
Cordell Vail, cste
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MakingSuccessWork@Yahoo.com



The Authors



Cordell Vail, cste – Quality Assurance Analyst. Cordell grew up in Utah and graduated from the Brigham Young University and has completed two years of graduate school work at the University of Utah in Interpersonal Communications. Cordell brings to the presentation a test engineers perspective. He is a Certified Software Test Engineer and Certified School Business Specialist with 9 years experience in manual and automated testing. Cordell has made several presentations on “Improving Testing Processes” at both local and national conferences.
MakingSuccessWork@Yahoo.com – www.vcaa.com



Joe Towns, Applications Development Manager/ Project Manager. Joe grew up in the Seattle area, attained his degree in Computer Science and has worked in the field of software development for over 18 years. Joe has worked in various phases of software development, with focus on quality assurance, quality control and configuration management. Joe is currently the Applications Development Manager and Project Manager for the Financial Management development team at Washington School Information Processing Cooperative (WSIPC), where he is pursuing PMI certification. Joe brings a development perspective to the presentation. jtowns@wsipc.org – www.wsipc.org



Credits

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