



**Frank Cohen's Presentation To
Practical Software Quality Test Association Conference
May 12, 2011**

Ready Yourself for Cloud Testing The idea of Cloud Computing - where scalability is limitless and automatic, and users/groups are billed for their use as it happens - is marvelous. But, there is nothing quite like seeing and holding your server equipment and application data behind your firewall. New open source solutions for building and testing private Clouds emerges this year. In this presentation, Frank Cohen delivers an immediately useful checklist and actionable knowledge for any medium and large organization to make the move to the Cloud. Cohen shows how to adapt Business Service Management, Load Testing, and Application Service Monitoring to be proven techniques, tools, and methodologies to achieve secure and profitable IT operations in the Cloud. Cohen shows how open source Cloud Testing tools and processes reduce risks, increase security, and deliver service excellence.- Everyone is talking about Cloud Computing, but are you ready to move your testing to the Cloud?- What do you need to know about the risks and benefits of moving to Cloud Testing.- Find out how you can move to Cloud Testing successfully with real-world examples.

PushT↓Test

Practical Software Quality Test Association Conference

Ready Yourself for Cloud Testing

Frank Cohen, +01 (408) 871-0122, fcohen@pushtotest.com

May 12, 2011

About PushToTest

- ▶ Our Mission: We Test, For A More Reliable World
- ▶ Make It Easier To Move From Manual To Automated Testing
- ▶ Support Advanced Testing, including Agile, Load, Integration
- ▶ Open Source Testing (OST) For Everyone



Two Tales

- ▶ Cloud Testing - Running Your Tests In The Cloud
- ▶ Cloud Computing - Running An Application In The Cloud

Autoscaling Requires
End User Experience
Measurement/Monitoring

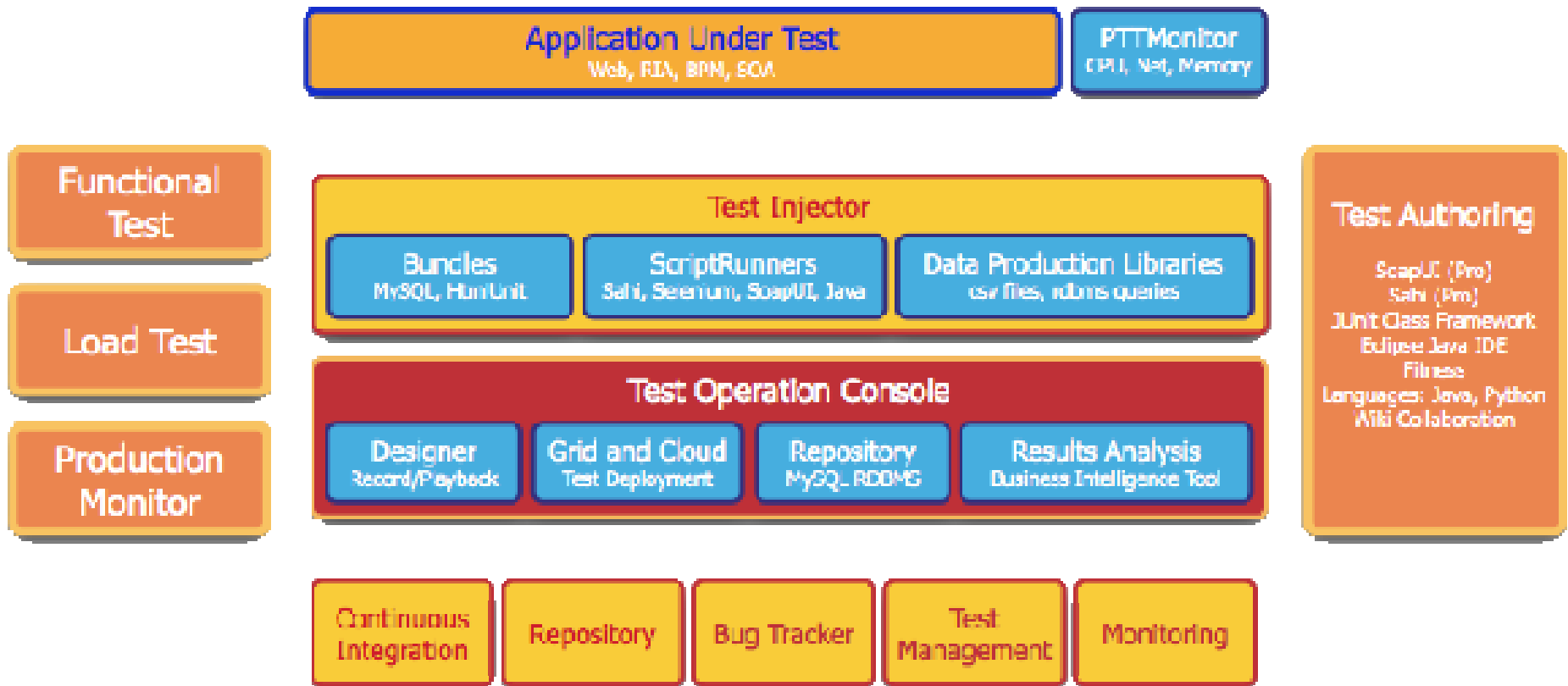
Cloud Testing

Cloud Testing Benefits

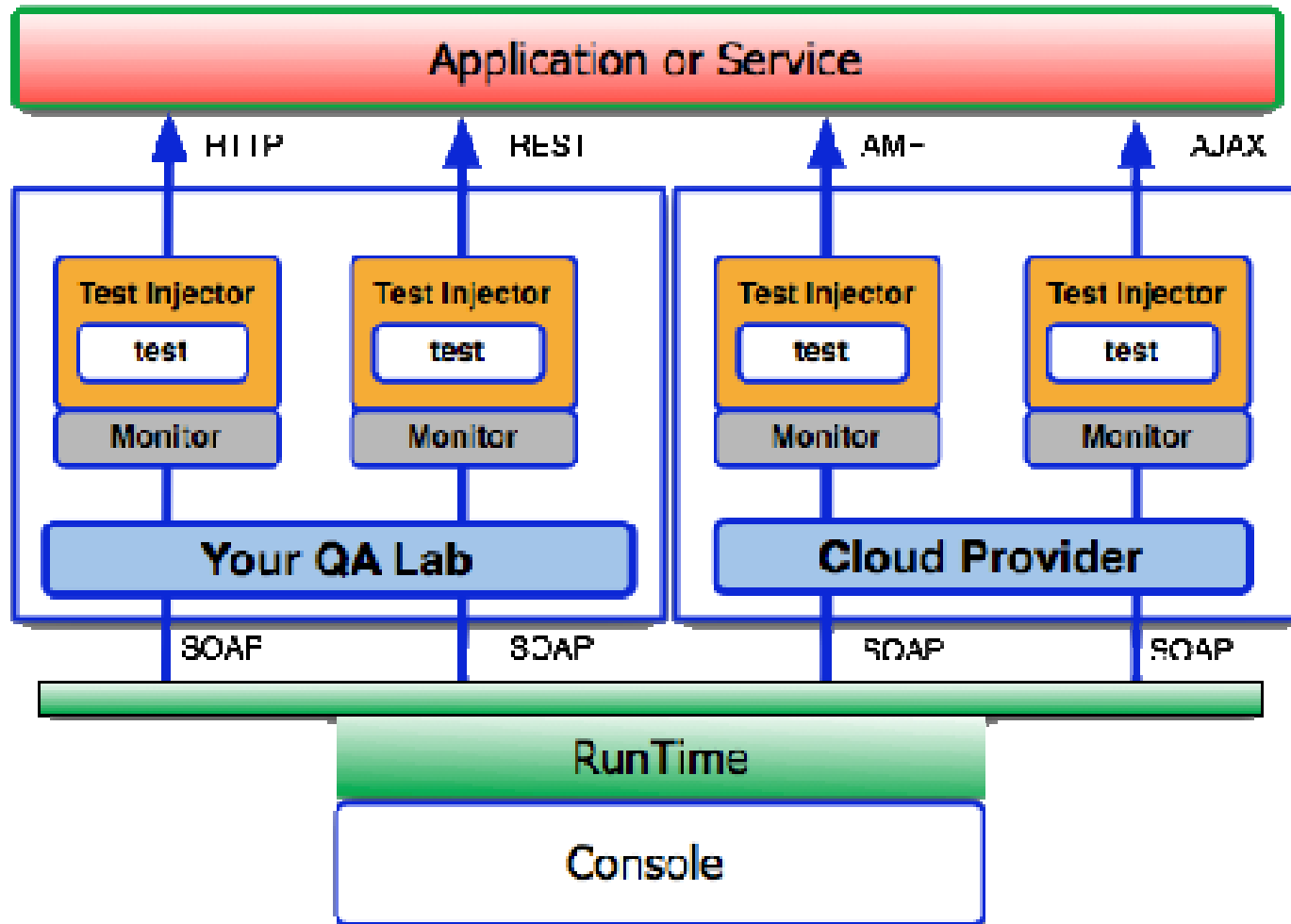
- ▶ Test In Your Cloud, Ours, Both
- ▶ Reduce Costs To Operate Tests
- ▶ Pay As You Go Test Equipment
- ▶ Ideal For Consulting Organizations Where Test Needs Are Unknown
- ▶ Scales Up To Millions of Virtual Users
- ▶ Advances Department-level Cost Management



OST Architecture



Your cloud or mine? Or both!



Internal Clouds

- ▶ Eucalyptus Open Source Hybrid Clouds
- ▶ Implements Amazon EC2 Infrastructure In Your Data Center
- ▶ Watch the Screencast
<http://www.pushtotest.com/screencastcentral>
- ▶ Typica client for Java

Clouds Enable Testing



Seattle, Datacenter
TestNode

Test Sent

TestMaker



Generating Load



Dallas, Texas
Datacenter

You're Such A Geek!

Cloud Testing Risks

- ▶ Operational Test Data Security
 - ▶ Letting User IDs/Passwords Out of Your Data Center
- ▶ Network Issues While Test Operates
- ▶ Un-Calibrated Tests
- ▶ Over-subscribed Hypervisors
- ▶ Missing Expertise: Operating Environments, Servers, DB

Cloud Computing

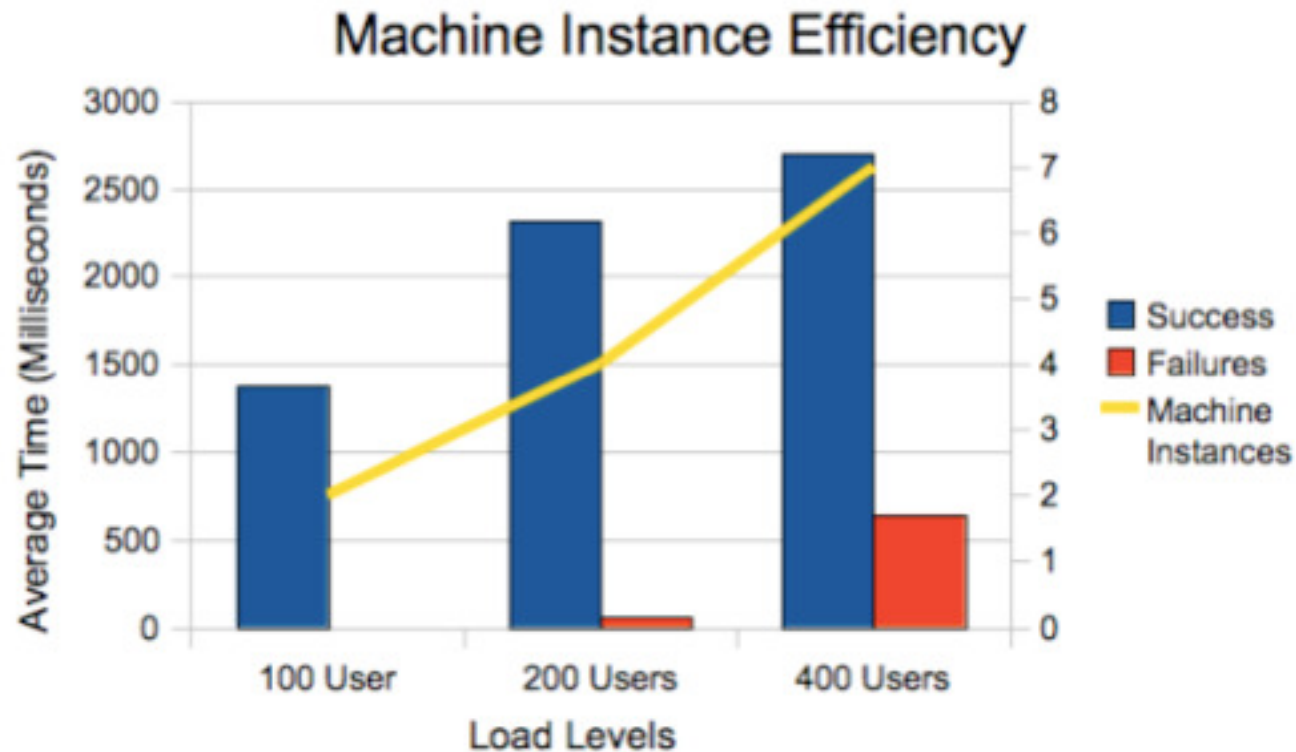
Emerging Cloud Types

- ▶ Cloud In A Box
 - ▶ Amazon Web Services EC2 - Bare Iron
 - ▶ Oracle - RDBMS on Bare Iron
- ▶ Cloud As A Service
 - ▶ VMForce - Salesforce, VMWare, Spring
 - ▶ PushToTest OnDemand - Sahi, Selenium, SoapUI, TestMaker
- ▶ Private Cloud
 - ▶ Eucalyptus - Cloud In Your Datacenter

PepsiCo In The Cloud

- ▶ The Cloud... Where Scaling Is Automatic and Limitless
- ▶ Really? Really?!
- ▶ Goals
 - ▶ Validate PepsiCo capability to trigger capacity on demand with virtual nodes
 - ▶ Viability of Amazon to run the PepsiCo Web application campaigns
 - ▶ What can and should PepsiCo expect in auto-scaling (FreedomOSS)

When Autoscaling Doesn't



PepsiCo Results

- ▶ Freedom OSS successfully auto-scaled the application by automatically adding virtual application server nodes as load increased
- ▶ Auto-scaling based on CPU and memory monitoring alone did not stay ahead of the increased load and the end-user experience suffered
- ▶ Amazon EC2 c1.xlarge machine instances sustained approximately 50 concurrently running virtual users each
- ▶ The application did not fail during the load and performance tests at up to 400 concurrent user sessions on 7 Amazon machine instances

Where To Go From Here

- ▶ Download TestMaker and Read The Tutorials
 - ▶ <http://www.pushtotest.com/download-testmaker6-preview>
- ▶ Watch the Screencasts
 - ▶ <http://www.pushtotest.com/screencastcentral>
- ▶ Ask For A Proposal on Licenses, Training, Support, Consulting
 - ▶ Troy Amyett, +01 512-750-8769 (USA, Texas),
troy@pushtotest.com

The Manifesto