



# SWISS TESTING NIGHT 2011

An evening event with Presentation, Apéro and Networking



3. Referat:

## Performance Testing in Cloud

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# Performance Testing in Cloud

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PACE (Performance Architecture Consulting &  
Engineering)



# Agenda

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- **What is Performance?**
- **Typical Performance Test & Restriction**
- **Average % QA Spend Distribution in an Organization\***
- **Answer is Cloud**
- **Cloud Performance testing model**
- **Business Value**



# What is Performance?

“System Performance” is not how routine transactions are handled, but how it performs under “exceptional situations” to meet the business demands



**A 1 SECOND DELAY IN PAGE RESPONSE CAN RESULT IN A 7% REDUCTION IN CONVERSIONS.**

If an e-commerce site is making \$100,000 per day, a **1 second page delay could potentially cost you \$2.5 million in lost sales every year.**



## HOW WEBSITE PERFORMANCE AFFECTS SHOPPING BEHAVIOR



47% of consumers expect a web page to load in 2 seconds or less.



40% abandon a website that takes more than 3 seconds to load.



79% of shoppers who are dissatisfied with website performance are less likely to buy from the same site again.



52% of online shoppers state that quick page loading is important to their site loyalty.



A 1 second delay (or 3 seconds of waiting) decreases customer satisfaction by about 16%.



44% of online shoppers will tell their friends about a bad experience online.

# Typical Performance Test & Restrictions



Webserver



Appserver



DB Server



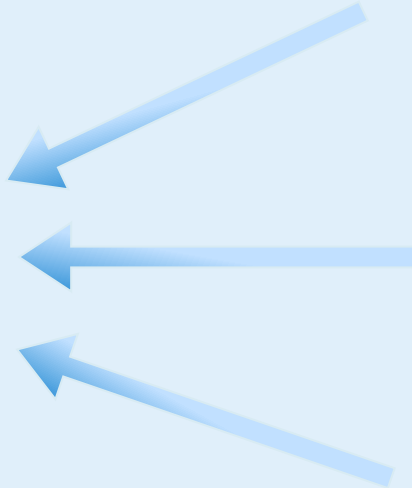
Load Generator



Virtual user



Load Controller



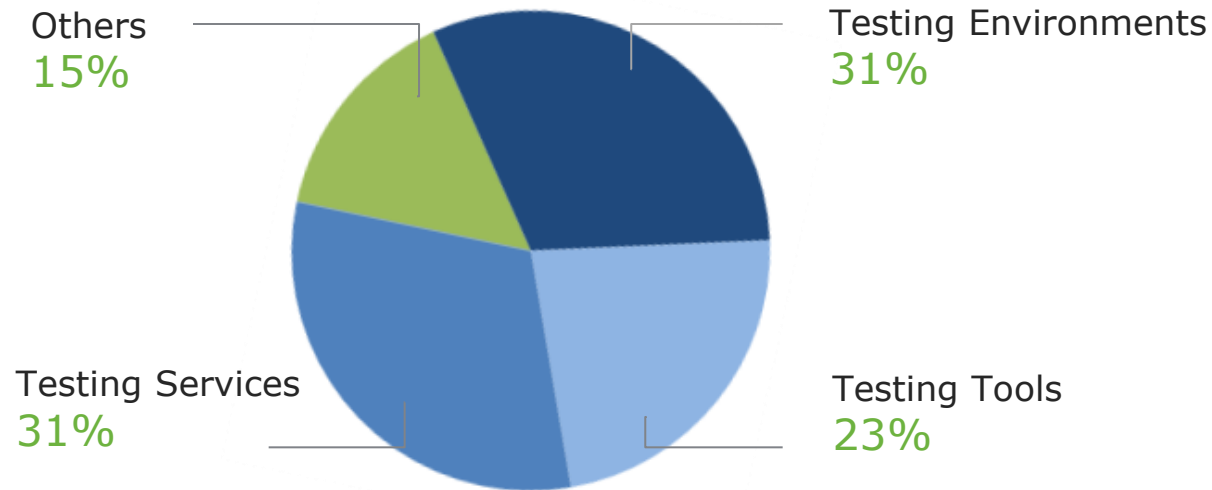
Higher Investment & Operational cost

No support global & enterprise test

Restriction in scaling to large peak load

Restriction in quick execution of tests

# Average % QA Spend Distribution in an Organization\*

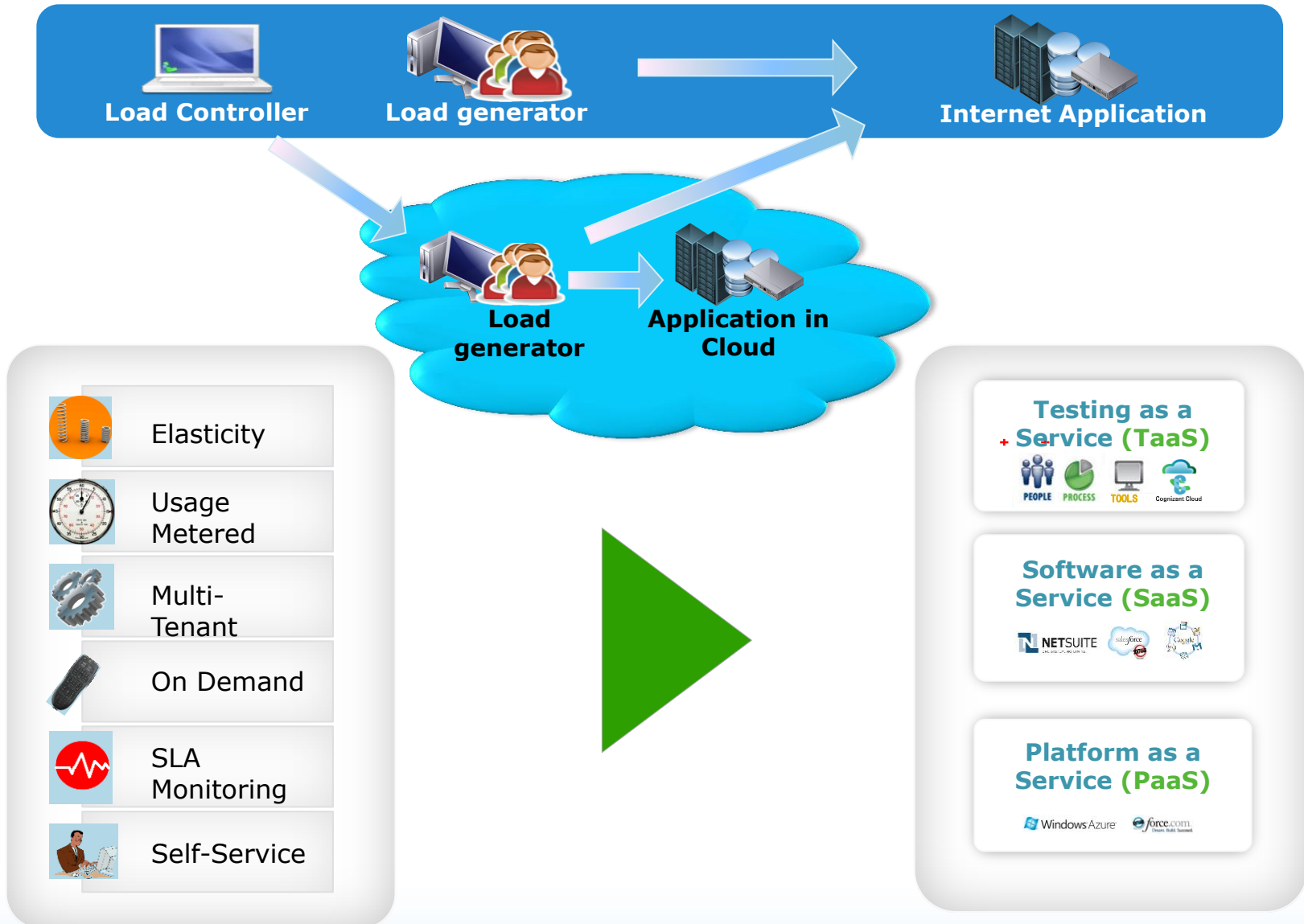


QA Organizations spend close to 54% of their budget in Test Infrastructure  
(Testing Tools and Environments)

CIO Survey on Trends in Software Testing & Quality Assurance, Conducted by CIO-Market Pulse on behalf of Cognizant in 2010

\* The data depicted is a typical global QA Spend observed in 2010

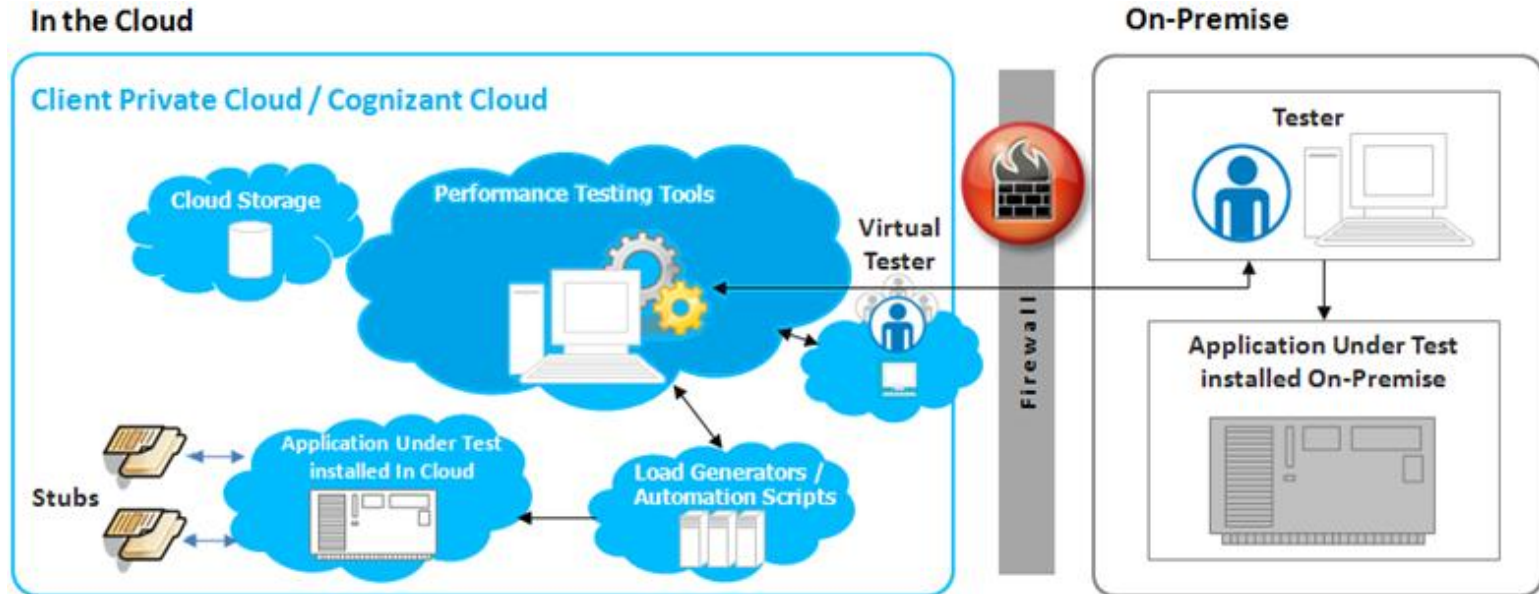
# Answer is Cloud



# Cloud Performance Testing Model

## Delivery Model I

Testing applications in The Cloud



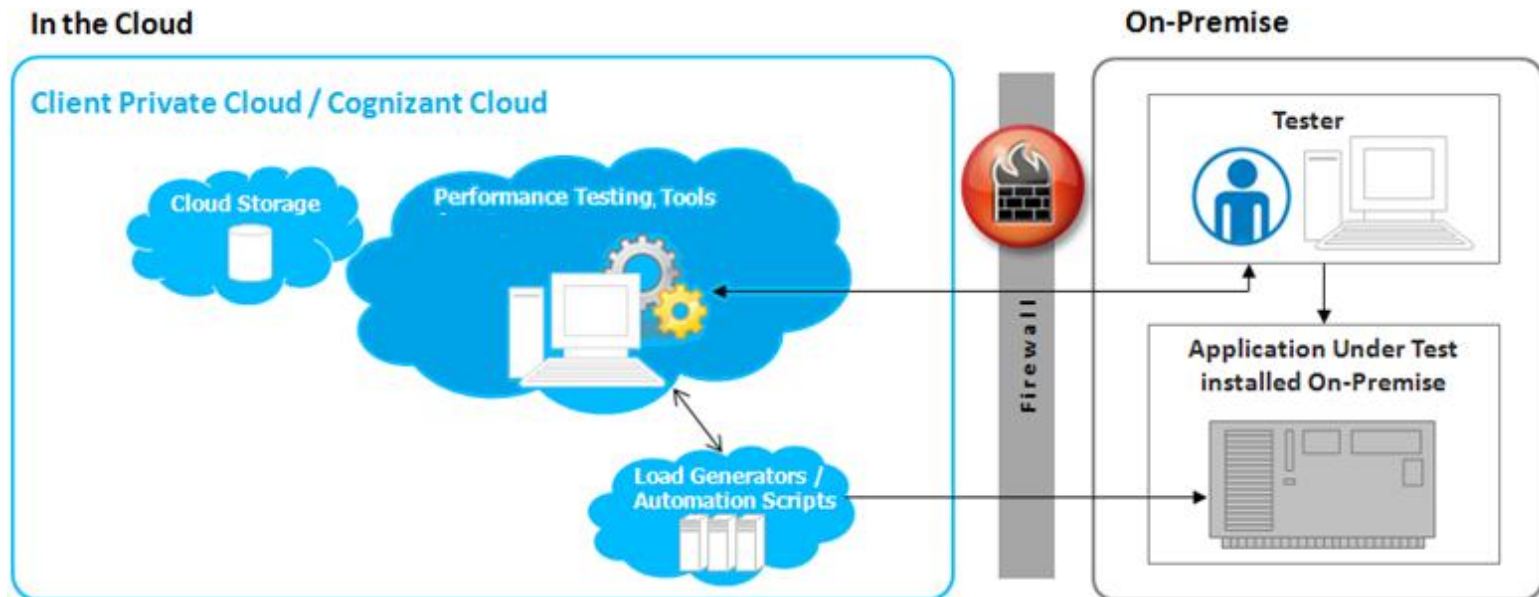
## Description

- Application deployed in cloud / on-premise, with any required stubs / drivers
- Cloud infrastructure used for installing tools and offering PE services
- Hybrid model, where application can be tested at different server and load configurations by exploiting on-demand scalability of cloud infrastructure
- Tools available on a 'Pay as you use' model

# Cloud Performance Testing Model ctd.

## Delivery Model II

Performance Engineering On-Premises applications from the Cloud



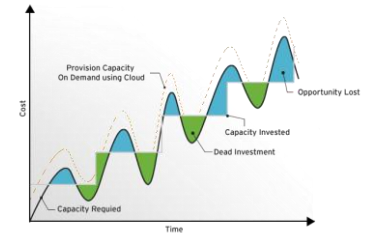
## Description

- Application is deployed on-premise
- Cloud infrastructure used for installing tools and offering PE services, used mainly for service delivery and not for application deployment
- Tools available on a 'Pay as you use' model

# Business Value

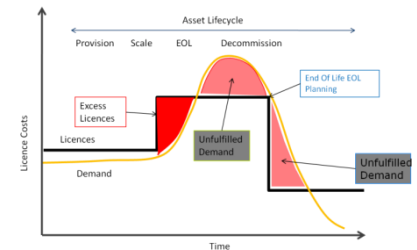
## Low Investment & Operational cost

On demand provisioning reduces dead investment



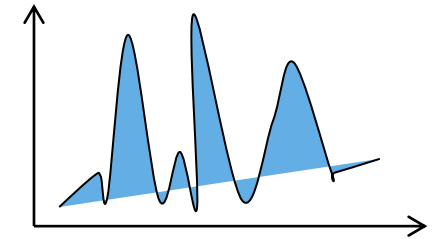
## Rapid provision & Management

Rapid provisioning reduces ideal time  
Effective resource management



## Elasticity

Elasticity enables to test any peak loads  
User load created on need basis



## Global enablement

Enables to test the realistic Global load  
Realistic Enterprise environment



## Thank You

Your local PACE contact:

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# Appendix Cognizant's PACE

# Service Offerings

Cognizant PACE addresses all needs pertaining to Capacity, Availability, Security, Scalability, Performance, Extendibility, Reliability

**PREP (Production Readiness Evaluation Practice)** - Last phase of industrialization after Functional Testing

## MIPS optimization

**Save our systems (SoS)** - After identification of production performance issues

## Code profiling

**Industrialization** - Early involvement in requirements and coding phase, typical approach for large projects



Non-Functional Requirements (NFR) management  
Enterprise performance architecture  
Cloud-based solution architecture  
Performance Assessment  
Performance Engineering process consulting  
System monitoring Strategy  
Capacity Planning

Internet performance testing  
Security testing  
Accessibility testing  
Early performance testing  
Operational acceptance testing  
Independent scripting & execution