Special Interest Group in Software Testing (SIGiST)

08/12/2016

Perth

Sarah Benstead

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5:30pm ANZTB update

5:40pm Performance Testing Concepts by Versha Lall

6:15pm Networking & Refreshments

6:45pm Mobile Testing – Challenges and Road Maps to Success by

Jatin Janiyani

7:20pm Close

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SIGIST

- SIGiSTs are sponsored by ANZTB
- Discuss white papers, new trends in Testing, share information and networking
- About 30 SIGiST in a year
- Presentations on the ANZTB website

Please speak to your facilitator if you would like to get involved.

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Annual Conference

ANZTB Test 2017 Annual Conference

Theme: Testing for Tomorrow

When: Friday 5th May, 2017
Where: Intercontinental Wellington, New Zealand

This one-day event will feature local and international testing experts, discussing the latest advances in the profession.
For more details and registration visit www.anztb.org in coming months

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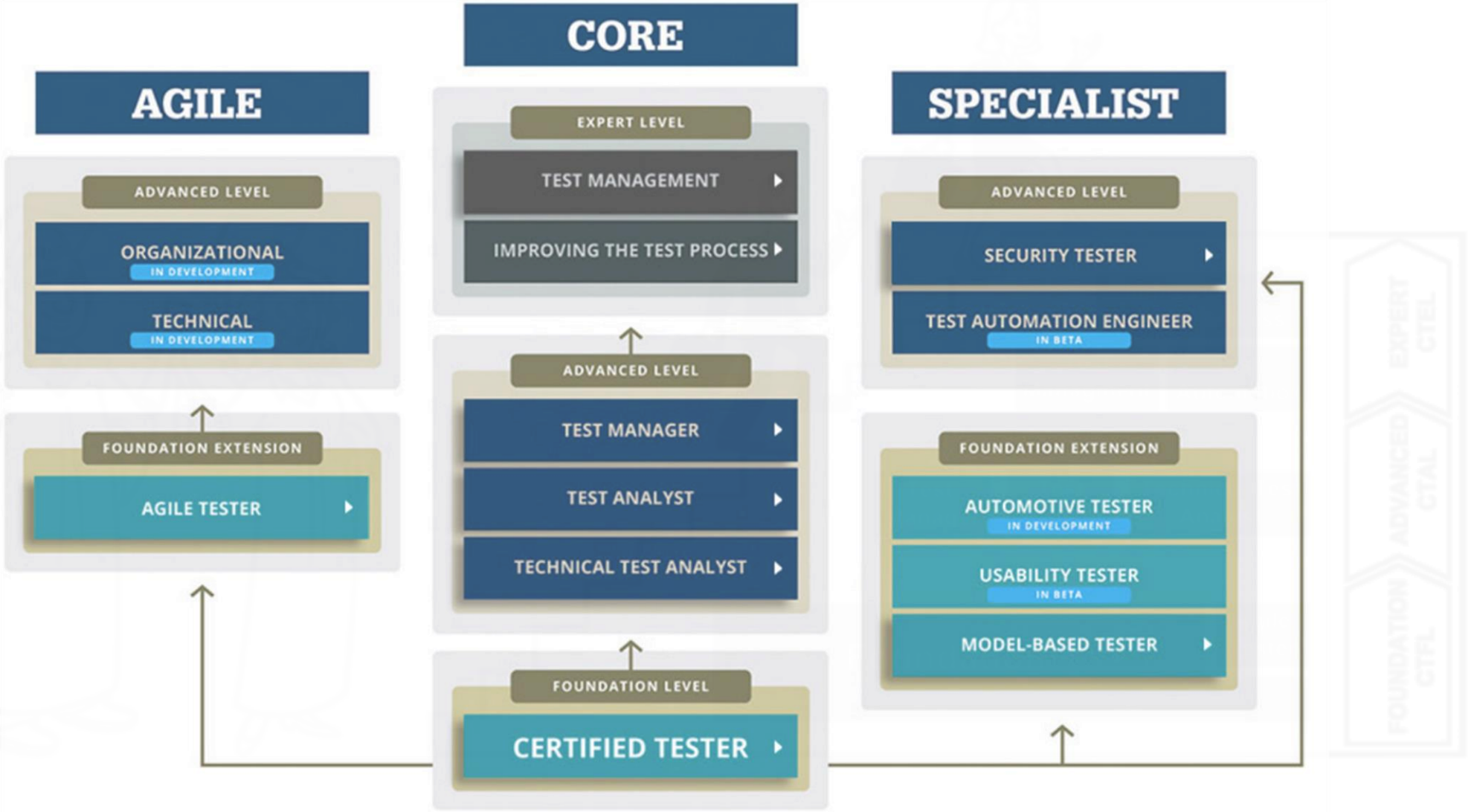
Certification Paths



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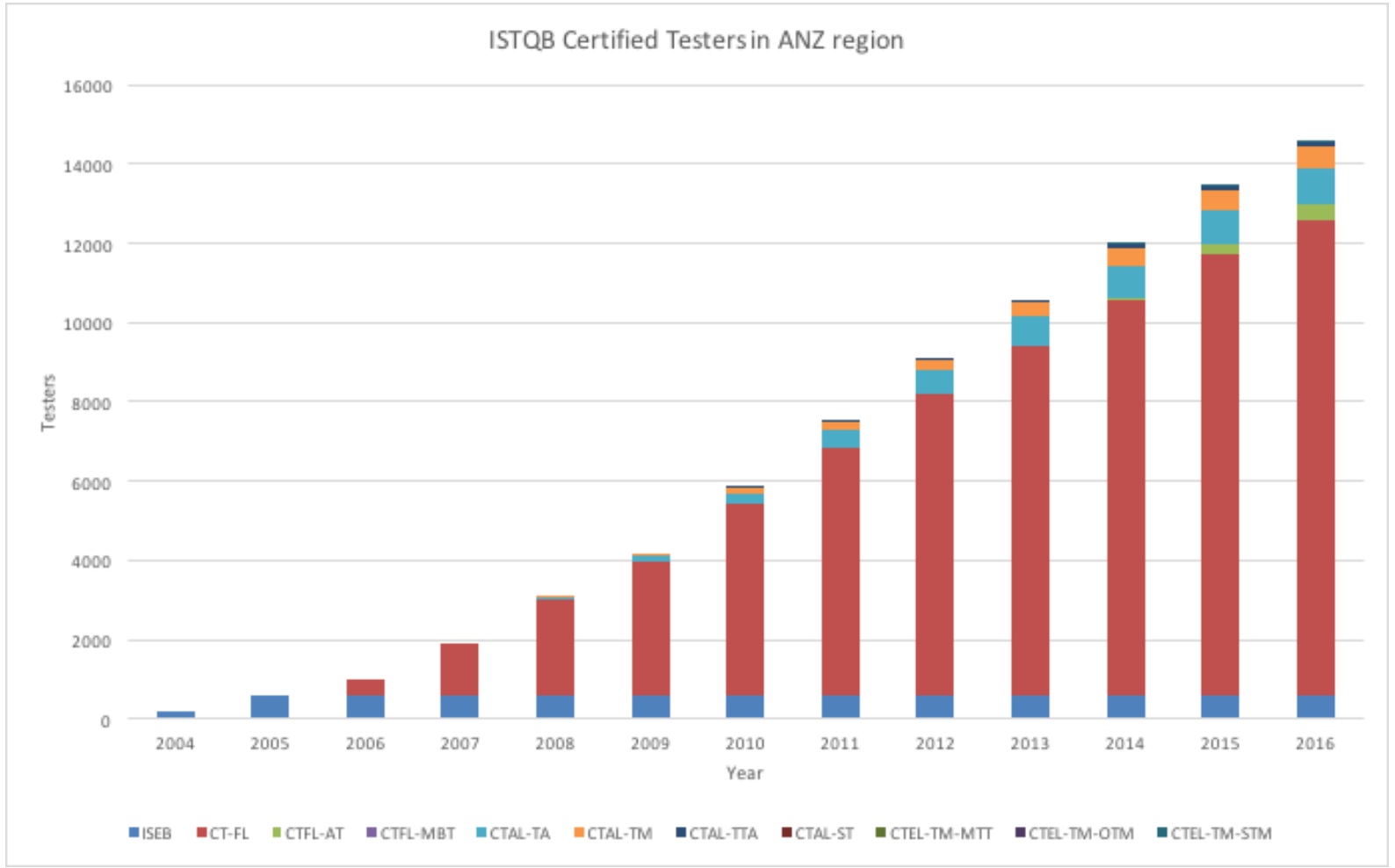

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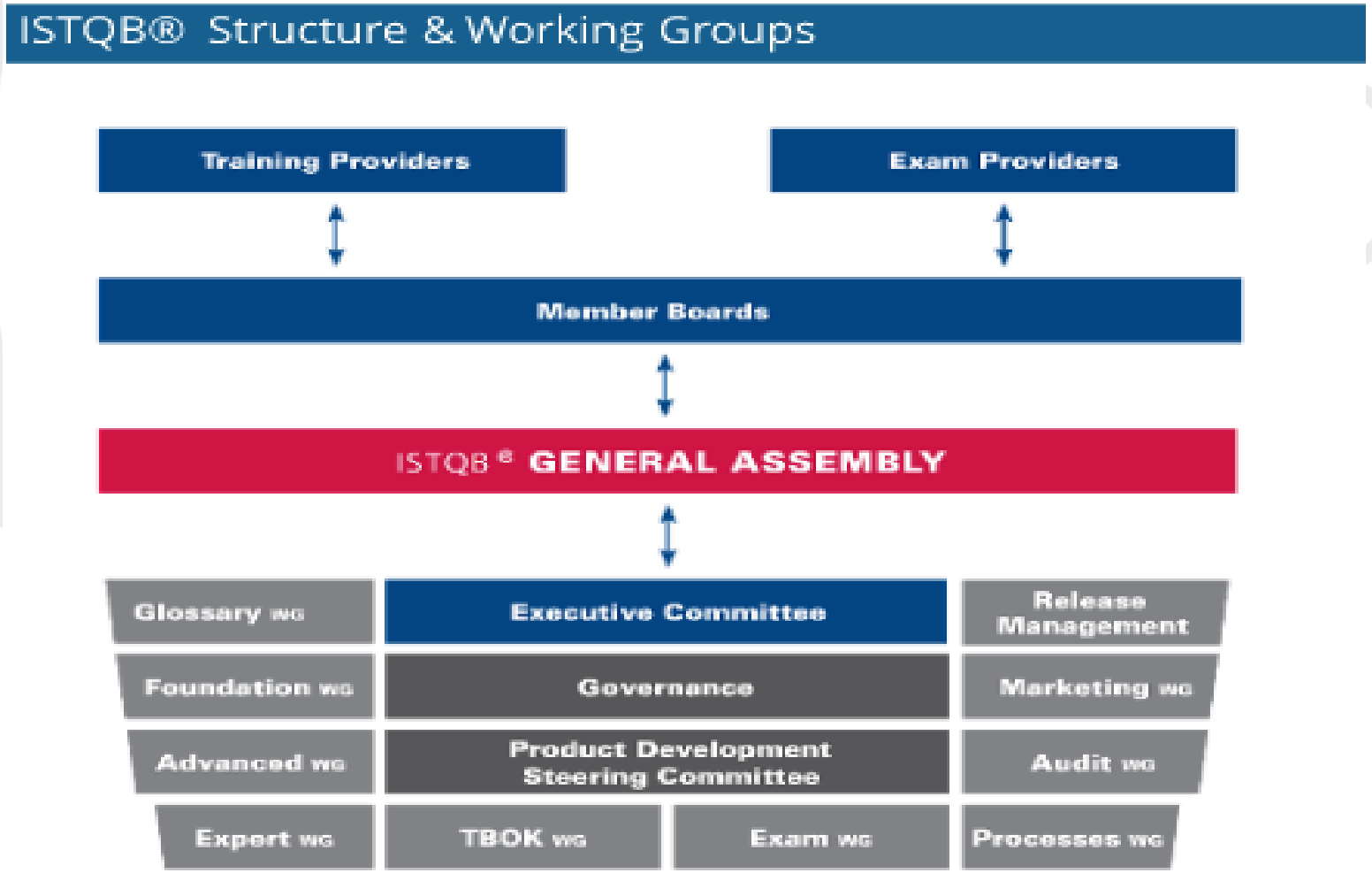

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Performance Testing Concepts by Versha Lall

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Introduction

I am a Senior technical test consultant with 10 years of expertise in Non Functional Testing. I have managed performance throughout the SDLC for a number of very large projects both in Australia and USA.I also specialise in Web services, Mobile and API testing. I have involved with companies such as Thrivent, Metlife, Allianz, Wespac and BankWest

Performance Testing Concepts

Agenda

- What is Performance
- Need for Performance Testing
- Performance Testing Terms
- Types of Performance testing
- Performance Testing Process

What is Performance Testing

- Speed
- Capacity
- Cost-saving
- Stability
- Accuracy
- Endurance
- How is work done with respect to norms and standards?

Need for Performance Testing

- Meet user expectations
- Impress users
- Contractual requirements
- Comparison with competing products or services
- Comparison with prior releases

Performance Testing Terms

Business Transactions

- Main task work flow
- By user types
- Examples
  - Booking flight tickets
  - Bank transaction
  - Calming insurance

Performance Testing Terms

Virtual Users

- Software representations of real user
- Independent
- Perform business transactions
- Typically concurrent i.e. not consecutive

Performance Testing Terms

Customised scripts

- Scripts are based on business transactions
- Scripts contain
  - Operations
  - Parameters
  - Think times
  - Correlations

Performance Testing Theory

Workload Model

- A collection of tests running concurrently is called Workload
- A test contains one or more scripts
- Each test may have one or more iterations
- A test is executed by one or more virtual users
- A test has miscellaneous settings e.g. VU ramp up and bandwidth mix
- A test can be scheduled to run

Performance Testing Tools

Tools

Open Source	Commercial
Supports less protocols	Supports more protocols
Limited user interface	Feature rich user interface
Operations require more steps	Operations require less steps
Need more time for modelling	Need less time for modelling
Free to use	Licenses can be very expensive

Performance Testing Terms

Performance KPI (Key Performance Indicator)

- Response time
  - Total time taken by the server to response to a request back to the client
  - Latency + Processing Time= Response Time
- Latency
  - The delay involved for the request to reach the server and back
- Maximum concurrent VU
  - Simultaneous virtual users
- Throughput
  - Number of transactions per second that an application can handle

Performance Testing Types

Types of Performance testing

Load Test

- Fixed number of concurrent VU
- Fixed iterations of business transactions OR fixed duration
- Also called performance test, reliability test and volume test

Performance Testing Types

Stress Test

- Extreme load until system failure
- Increasing number of concurrent VU or test data or throughput
- Continuous business transactions iterations
- Used for benchmarking and finding bottlenecks
- Also called Torture Test

Performance Testing Types

Endurance Test (Soak Test)

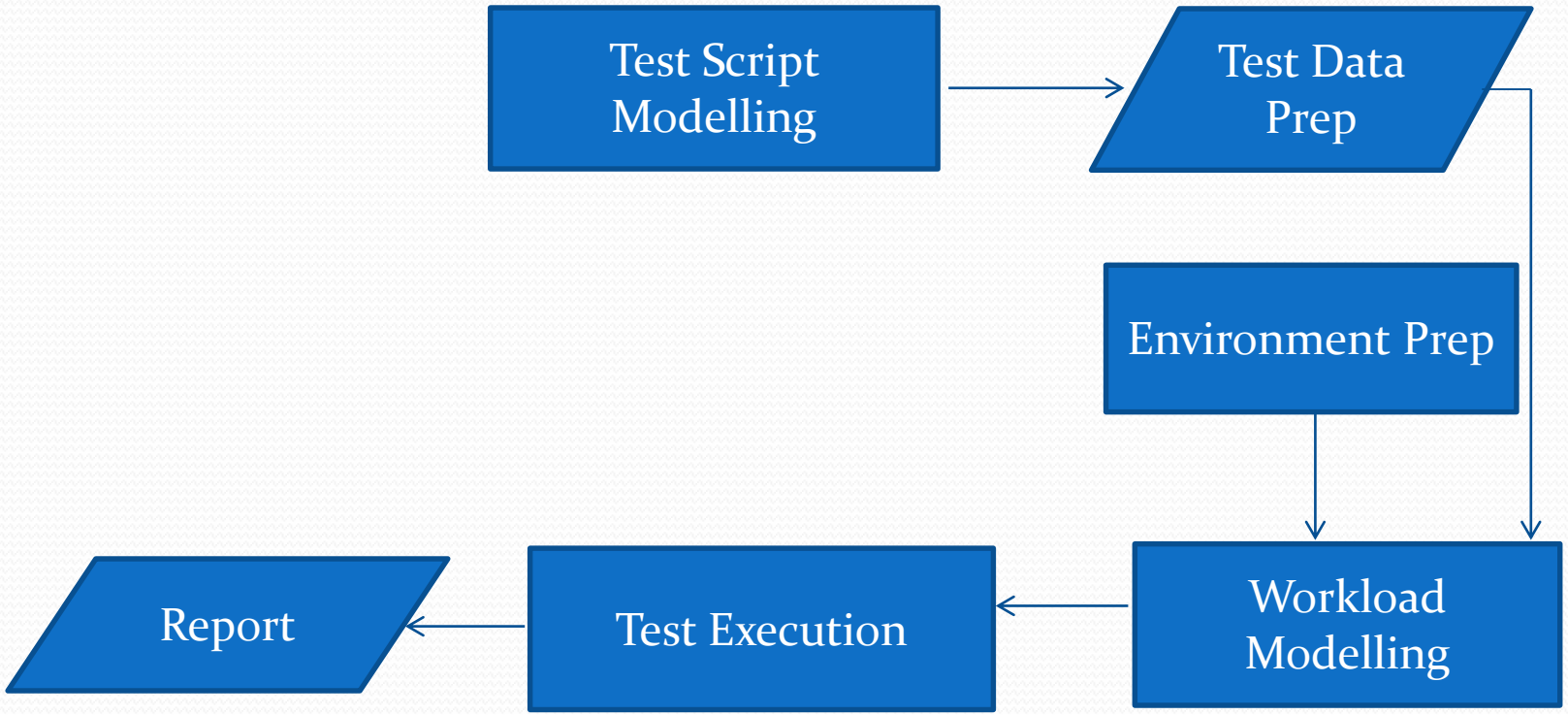
- Expected load for long duration
- Fixed number of concurrent VU
- Continuous test

Performance Testing Types

Other Types of Performance Testing

- Spike Test
- Fail over Test
- Scalability Test

Performance Testing Process



Test Data Preparation

- Volume of test data to make the test realistic
- Big volume of data is required if
  - The user volume is high
  - Test scripts have various iterations

Performance Test Reporting

- Types – Status Report and Final Report
- Contain sections
  - Executive summary
  - Performance approach
  - Test scripting, test data and test environment
  - Test results
    - Benchmarks
    - Suggested actions
  - Supporting data

Questions?

- Contact: Versha Lall
- Email: lallversha@gmail.com

Networking and Refreshments

We will resume at 18:45

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Mobile Testing – Challenges and Road Maps to Success

by Jatin Janiyani

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Mobile Testing

Challenges and Road map to success

- Jatin Janiyani

Agenda

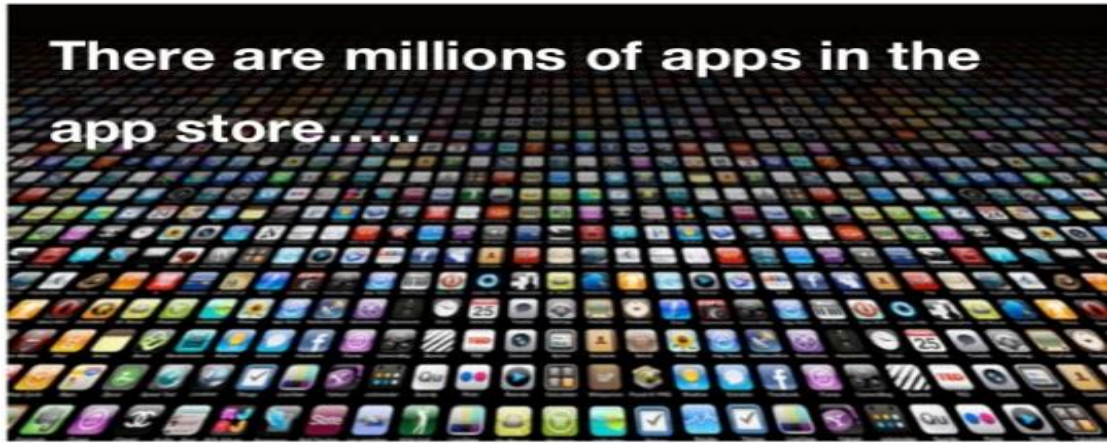
- About Me
- Reality Check
- Challenges in Testing Mobile apps
- Road map to success
- References
- Queries

About me

- 10+ years of IT experience, worked on various start-ups and large companies
- Currently working for **HBF** as an Automation Test Analyst
- Cricket and fast cars are my hobbies

https://www.linkedin.com/in/jatin-janiyani-32a0674

Reality Check



Ratings of apps on Google Play

Apps that have less than 3 ratings we consider to not have a rating yet.

Total number of apps with a rating:

1,535,555

Average number of stars for all apps:

4.1

Number of apps with less than 3 ratings:

1,033,953 (40.2 %)

What do ratings say about our brand reputations ?

Customers beware.

Only 10% of consumers are willing to download a 1-star app. 56% are left with a diminished perception of your brand as a whole.

Meh. 50% of consumers are willing to download a 3-star app. 15% are left with a diminished perception of your brand.

Customers love your app—and your brand.

100% of consumers are willing to download a 5-star app. 70% are left with a more favorable perception of your brand.

Challenges in Testing Mobile apps

- Device Fragmentation
- Mobile Networks
- Speed to Market

Device fragmentation – Multiple devices

Device fragmentation – Different OS

Mobile networks

Speed to market

Road map to success - Best Practices for Mobile testing to Ensure Quality Mobile Apps

- Target Device/OS Selection
- Apply Automated Testing
- Cloud Solution

Road map to success - Best Practices for Mobile testing to Ensure Quality Mobile Apps

Target Device/OS Selection

Which Mobile Devices/OS Should You Test?

OS / Device	Device Weighting	iOS 9	iOS 8	iOS 7	Android 6	Android 5	Blackberry 5.0
OS Weighting		7	9	8	6	5	4
iPhone 7	7	49	63	N/A	N/A	N/A	N/A
iPhone 6 S	9	63	81	N/A	N/A	N/A	N/A
Samsung 6	8	N/A	N/A	64	48	N/A	N/A
HTC	6	N/A	N/A	48	36	N/A	N/A
Blackberry	6	N/A	N/A	N/A	N/A	30	24

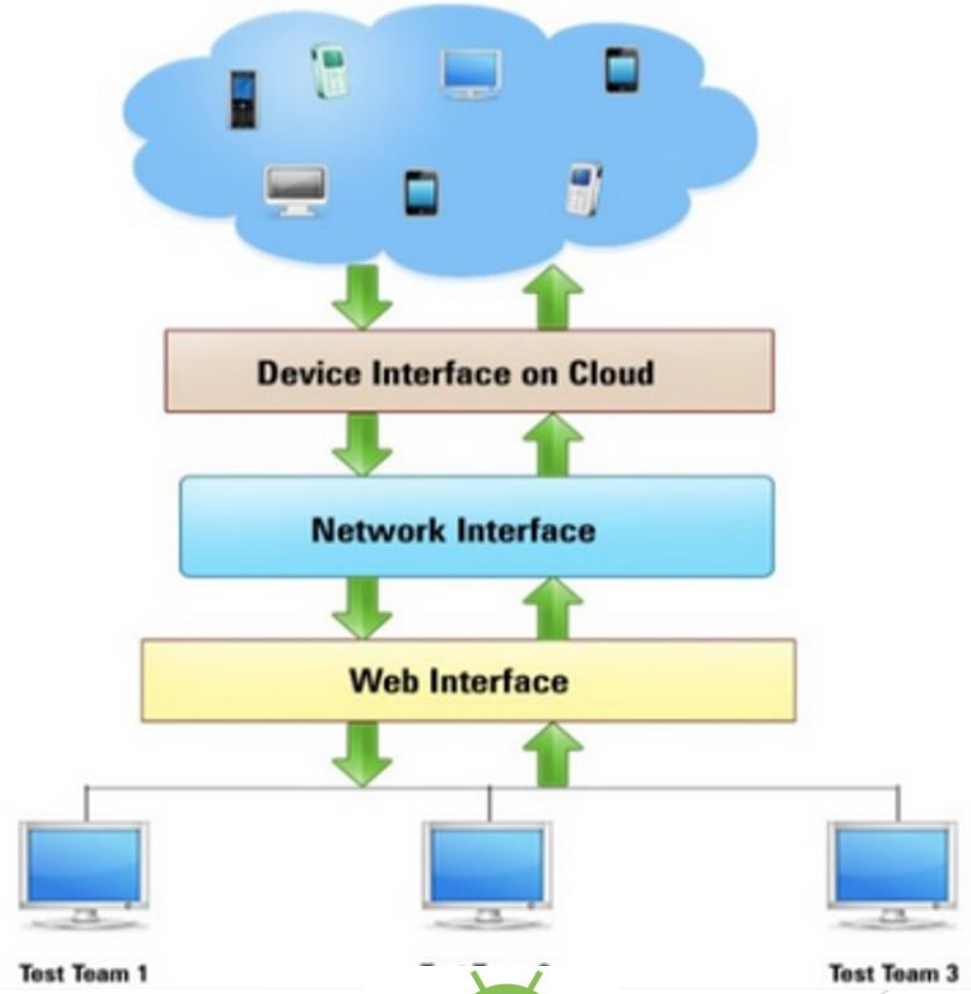
Road map to success - Best Practices for Mobile testing to Ensure Quality Mobile Apps

Apply Automated Testing

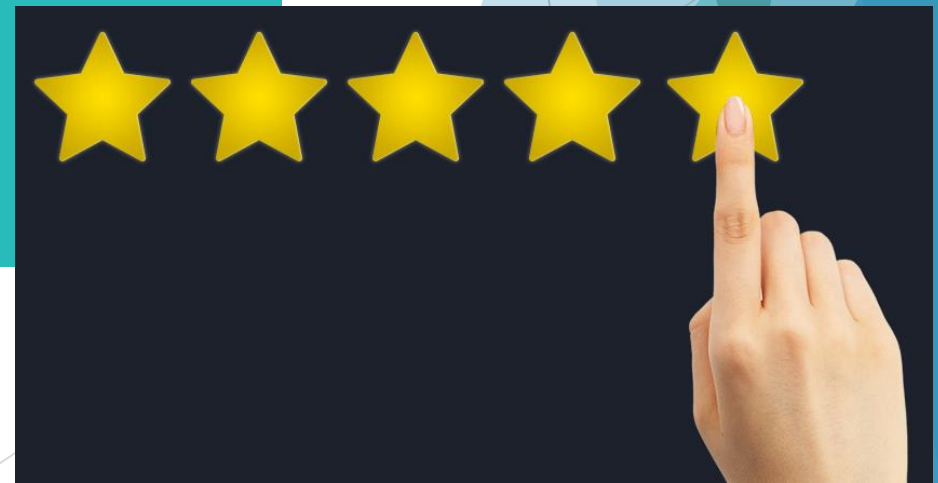
Tools

Road map to success - Best Practices for Mobile testing to Ensure Quality Mobile Apps

Cloud Solution



Outcome



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- https://saucelabs.com/
- https://www.browserstack.com/
- http://bitbar.com/
- https://crossbrowsertesting.com/

Any Queries

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or our SIGiST Coordinator Ronak Panchal (ronakpanchal@anztb.org).

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