AGILE LOAD TESTING

BJÖRN BESKOW

2015-01-29 | CALLISTAENTERPRISE.SE

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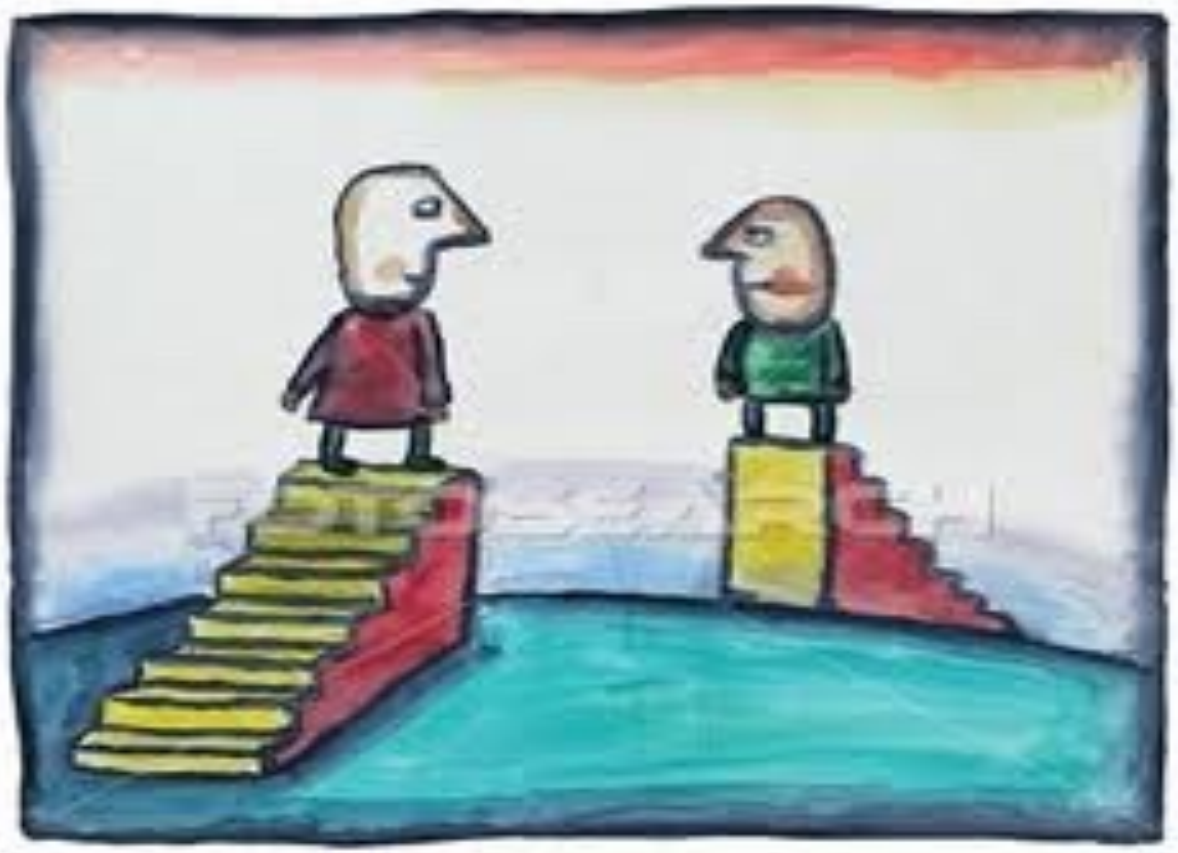
BRIDGING THE GAP



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"These are not the requirements the business communicated to us!"

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AGILITY IS WILLINGNESS TO LEARN

“Experience is simply the name we give our mistakes.”

Oscar Wilde

QUALITY ASSURANCE PRECEDES QUALITY ASSESSMENT

- Testing is about **Quality *Assurance***, not just **Quality *Assessment***
- Quality Assessment only *indirectly* affects quality
- Testing *reveals information*
- Testing helps *focus project activity*

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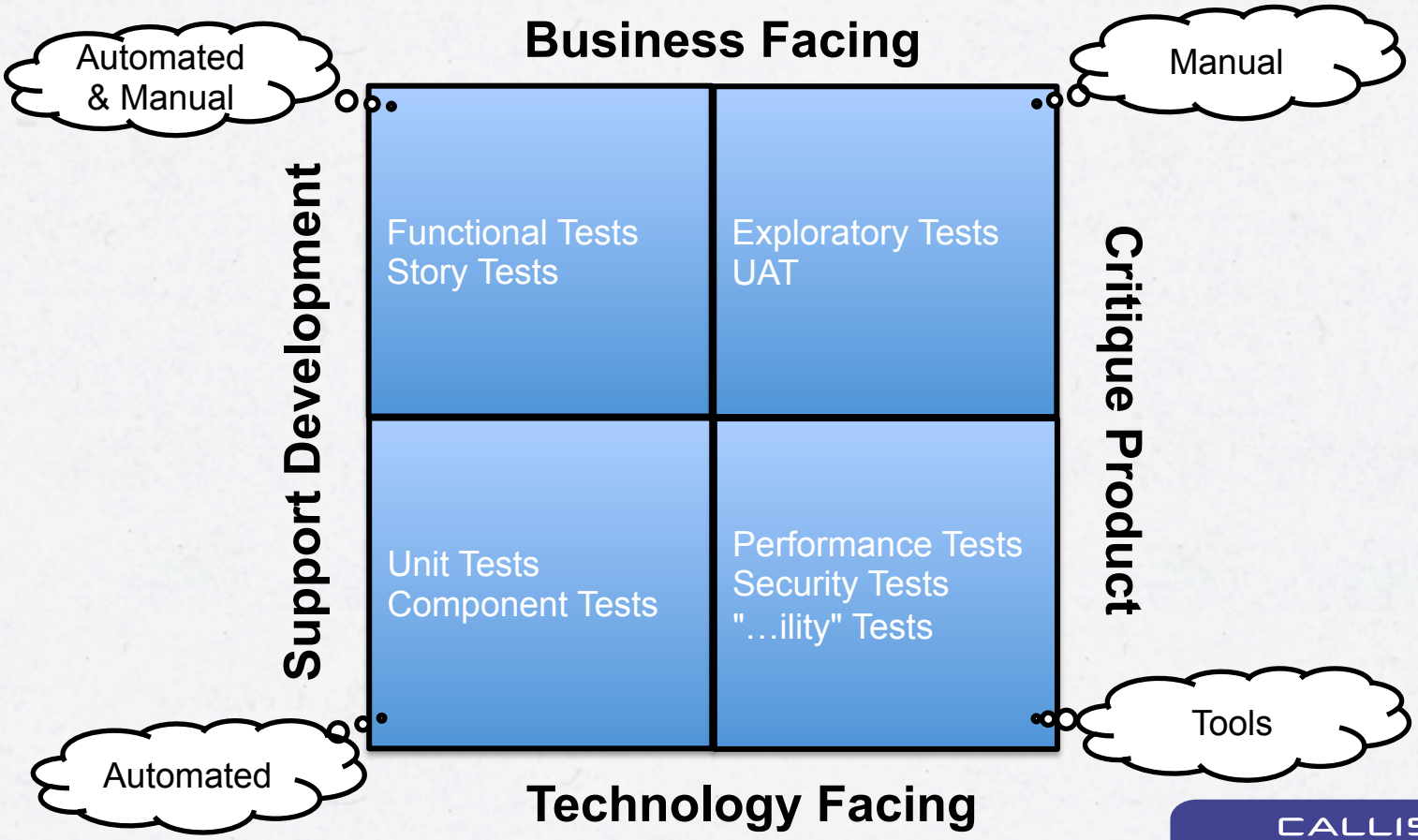
AGILE TESTING PURPOSES: WHY DO WE TEST?



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TDD
ALL CODE IS GUILTY
UNTIL PROVEN INNOCENT
CODESMACK

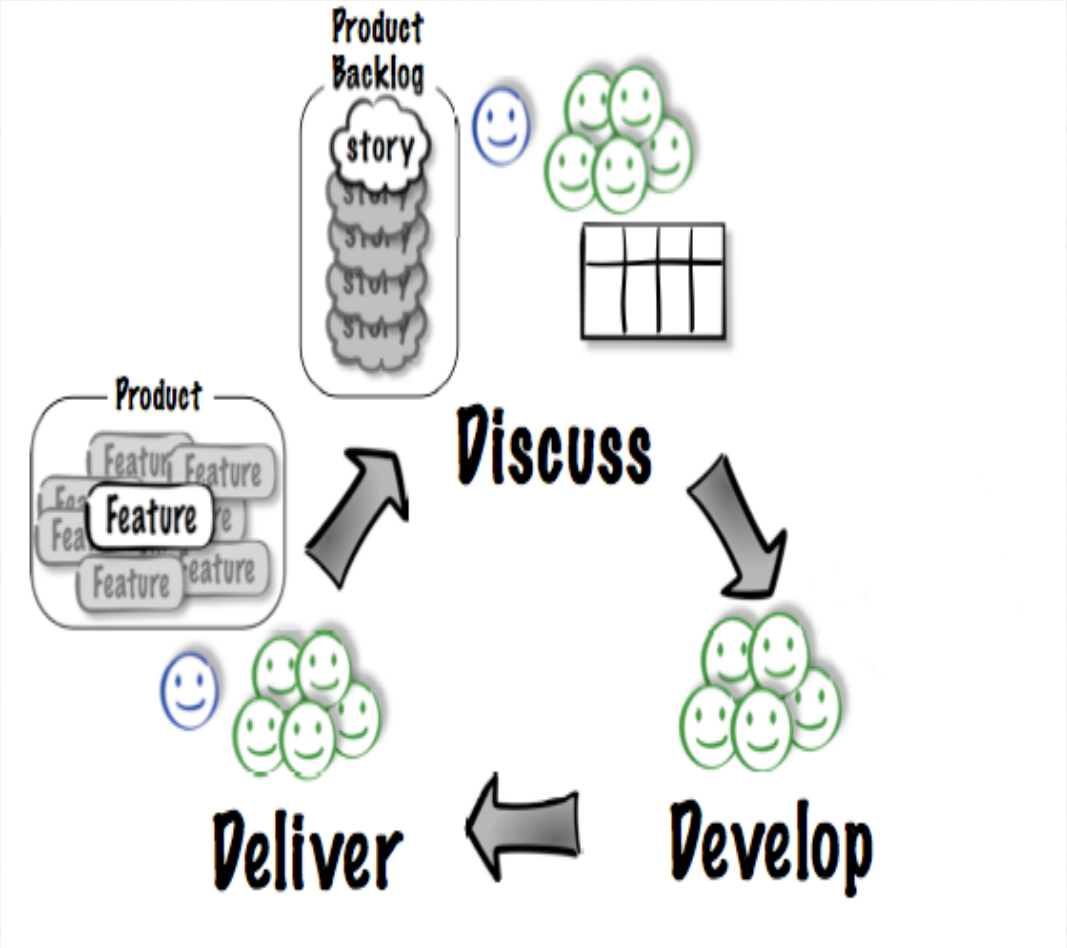

Image courtesy Elisabeth Hendrickson, www.qualitytree.com

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WHAT ABOUT NON-FUNCTIONAL ASPECTS?

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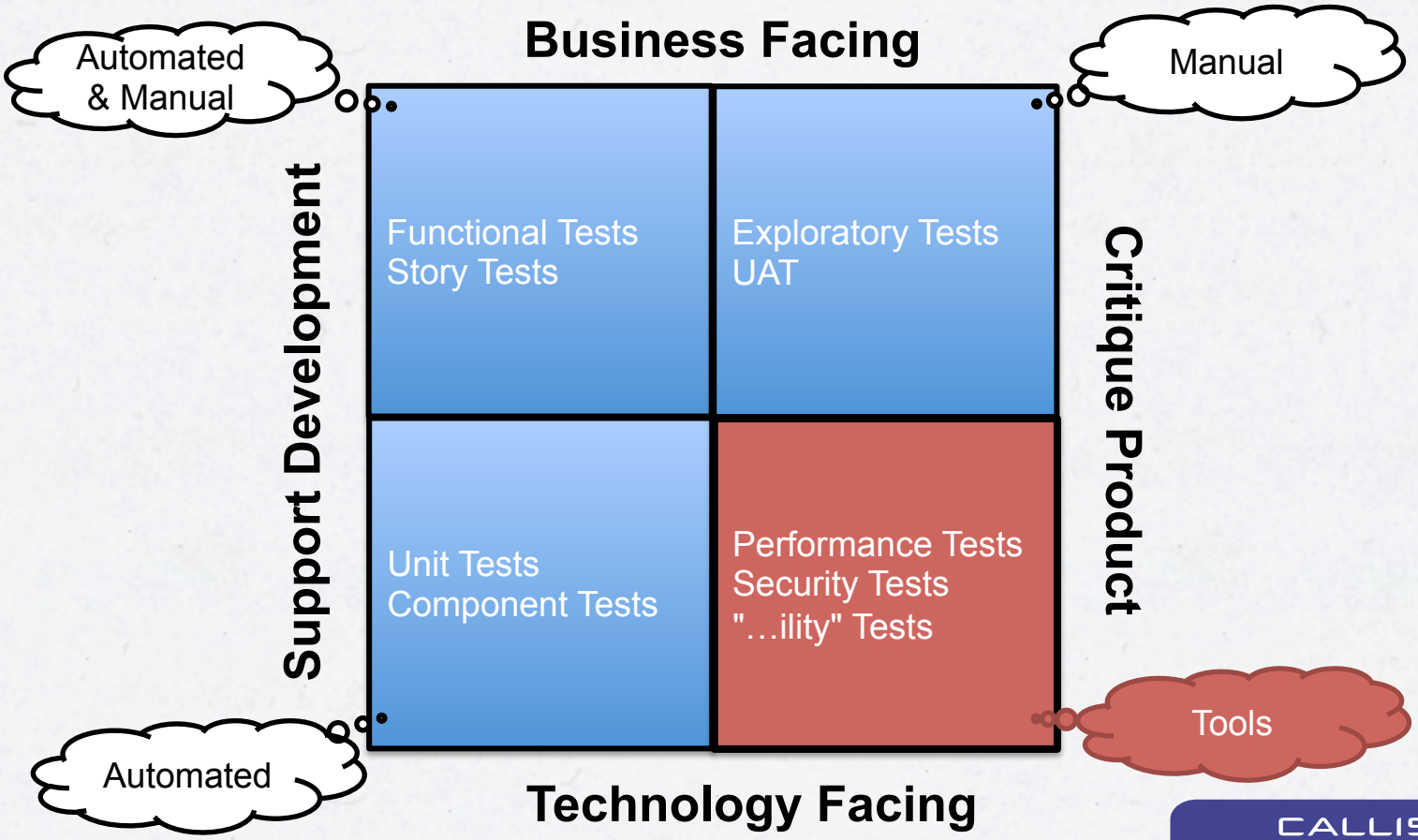

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- What are the real requirements, anyway?
- How can we possibly verify that (in just 2 weeks)?
  - Data
  - Load

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ELICITATE
ALL THE REQUIREMENTS!

Performance

Search and replace:

Replacing 100 occurrences of a 4-character string in a 25MB document has to take < 750ms

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SCAFFOLD

AUTOMATION CHALLENGES

- Generate sufficient data
- Generate sufficient load

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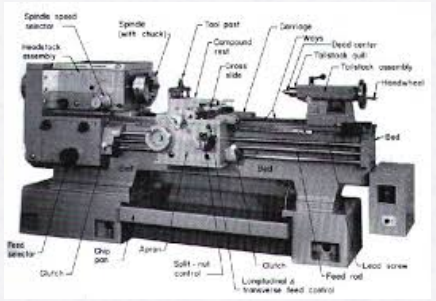
LOAD TESTING TOOLS

- Historically, Load Testing tools have been complex and expensive
  - LoadRunner
  - Rational Performance Tester
  - …
- Lately, they have been challenged by open source alternatives
  - Apache JMeter
  - LoadUI
  - Grinder
  - …



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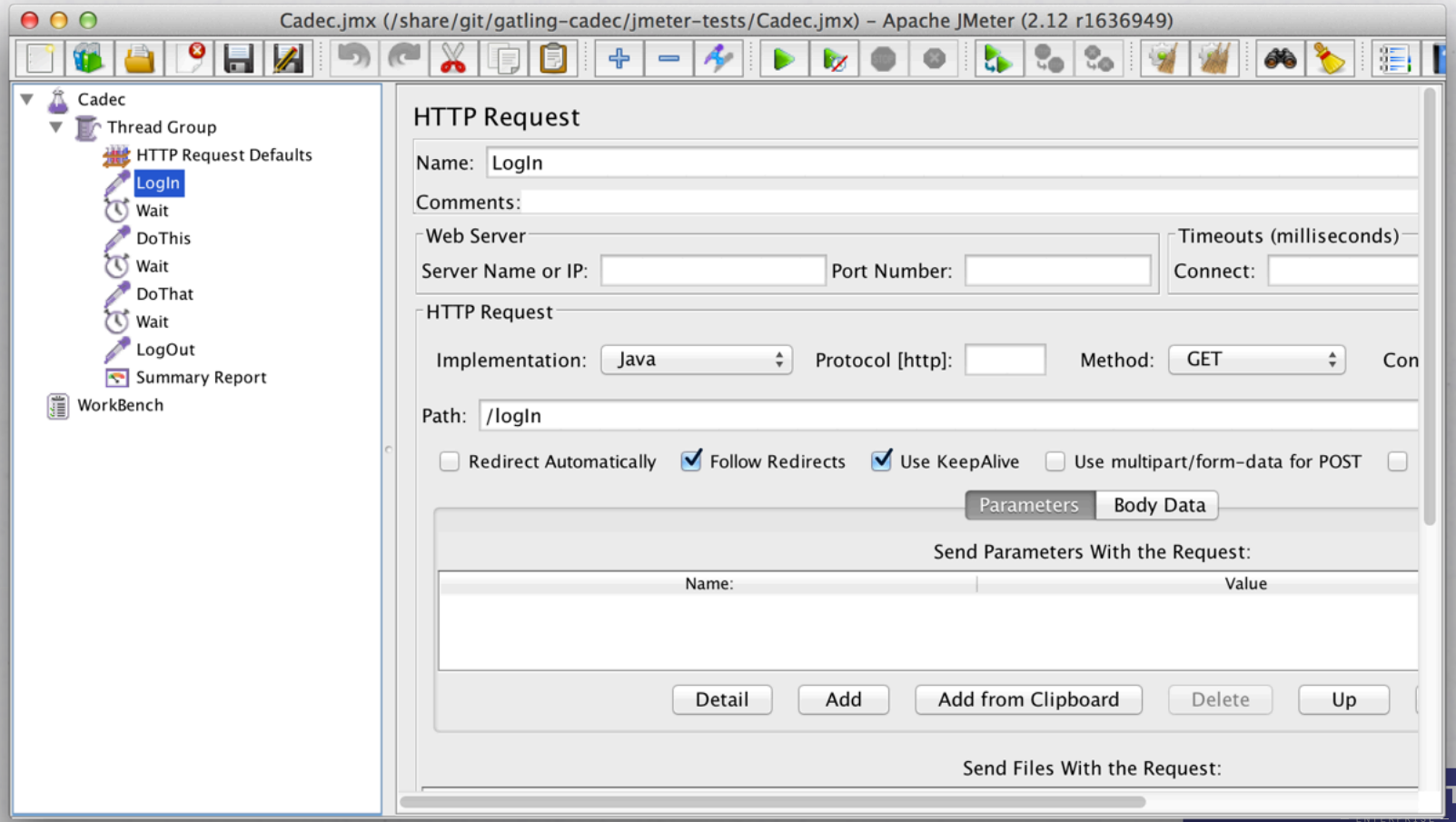
JMETER WITH FRIENDS: ISSUE #1 GRAPHICAL USER INTERFACE



Severely affects maintainability

Clumsy integration with build automation and Continuous Integration tools

Blocking I/O

means

1 user = 1 thread

JMETER WOE: THREADS

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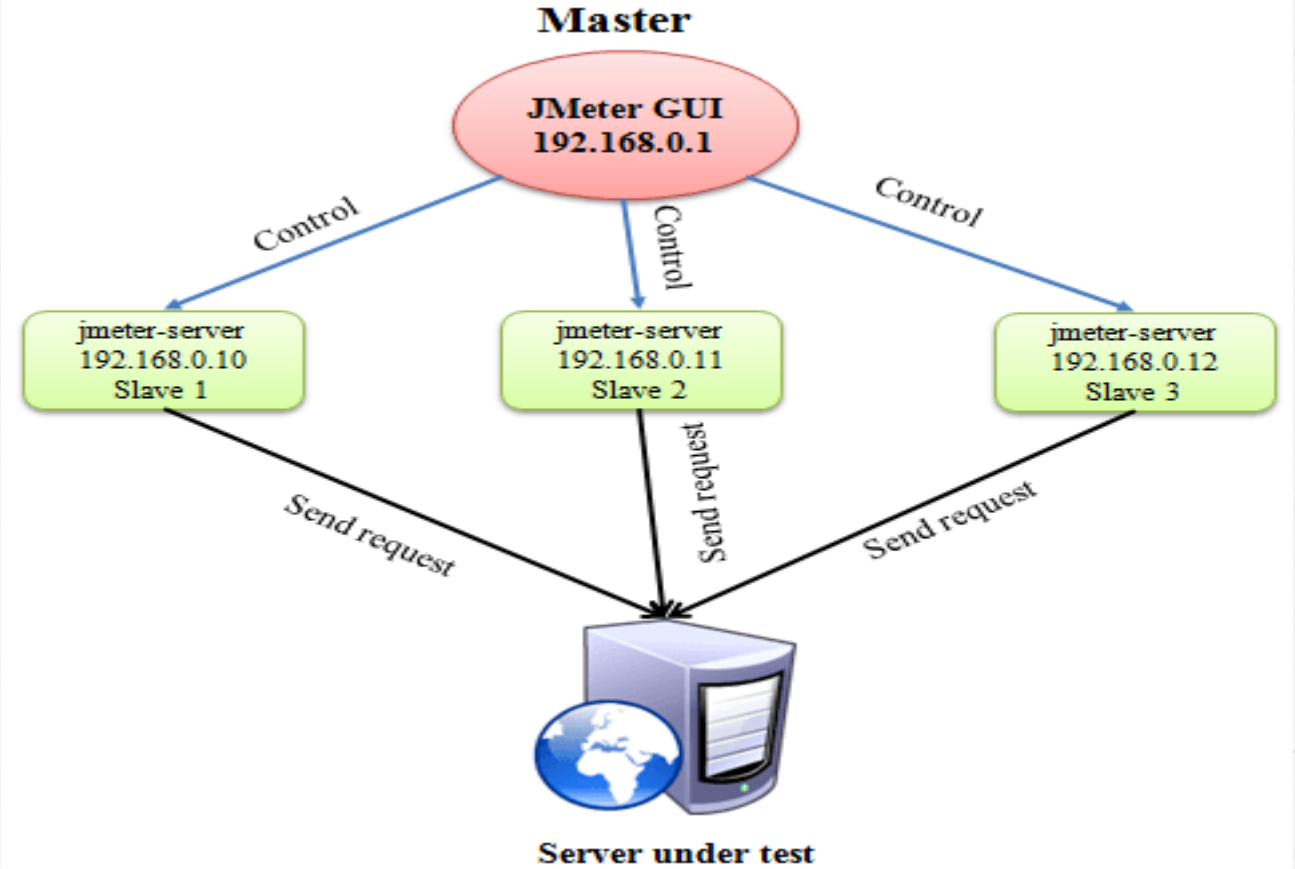
JMETER WITH FRIENDS: ISSUE #2 SOLVED?



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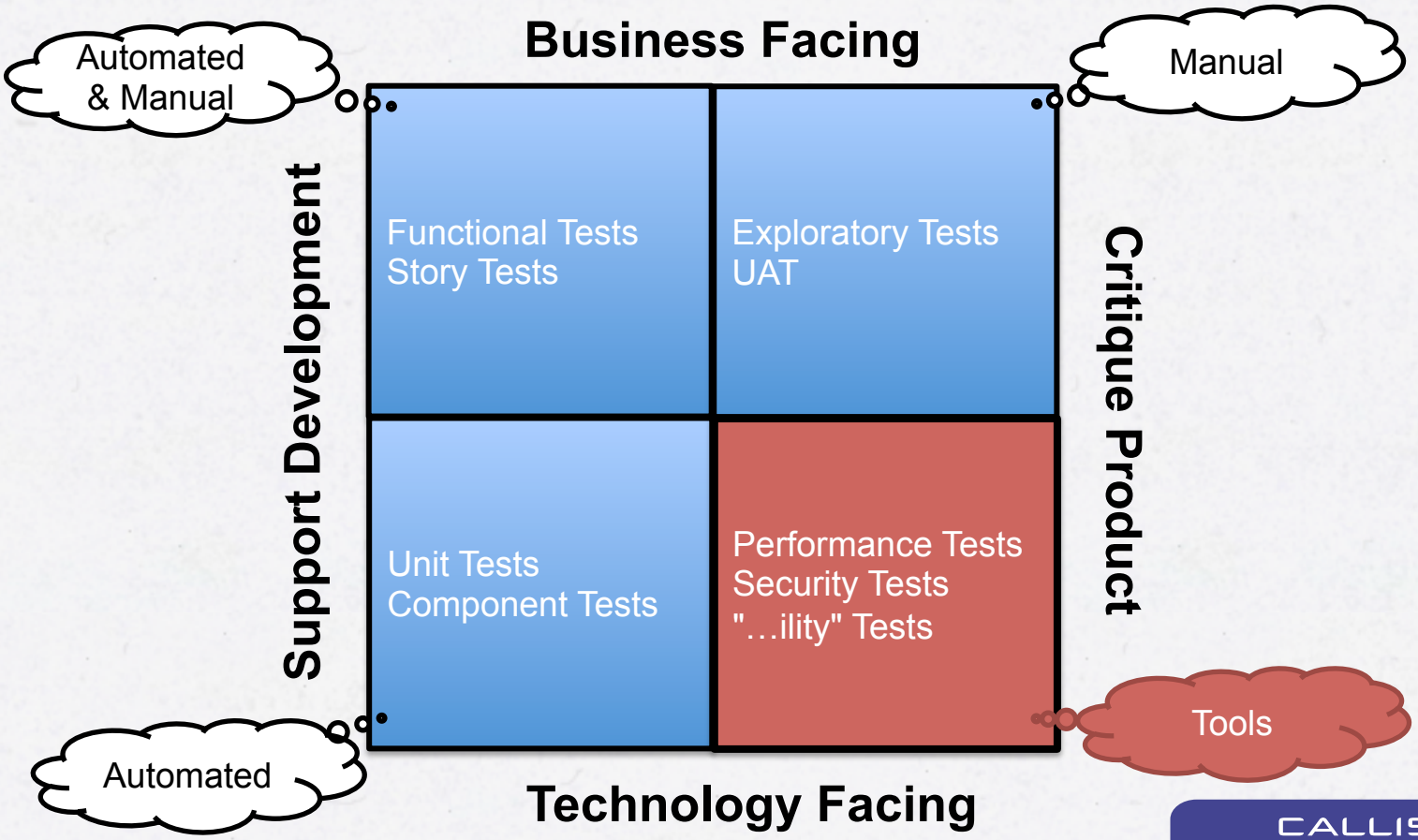
GATLING.IO

- Released in October 2012
- Now in version 2.0.3
- Different in 2 significant ways
  - Domain Specific Language (DSL) for expressing scenarios, instead of GUI
  - Uses modern, non-blocking technology (Scala, Akka, Netty), which means generating sufficient load on a single machine suddenly becomes feasible

GATLING TO THE RESCUE!

NON-FUNCTIONAL ASPECTS …



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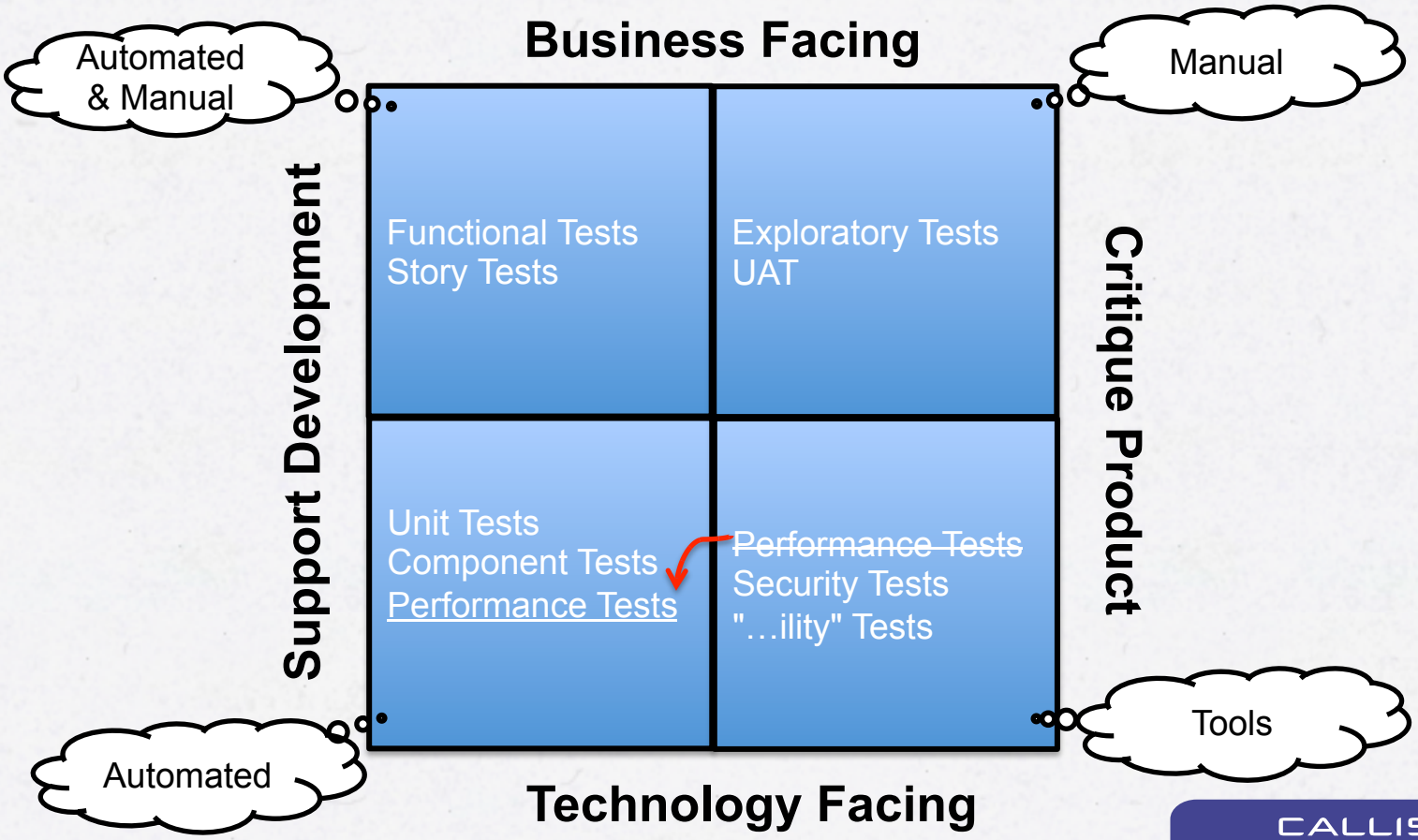
… SHOULD BE DONE PROACTIVELY AS WELL!



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TIME FOR QUESTIONS!

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