

Real Time Trend & Failure Analysis using Test Trend Analyzer (TTA)

Anand Bagmar

Aasawaree Deshmukh

ThoughtWorks®

Reality in Organizations

Globalization

Cost

Talent

24 x 7

Mergers & Acquisitions

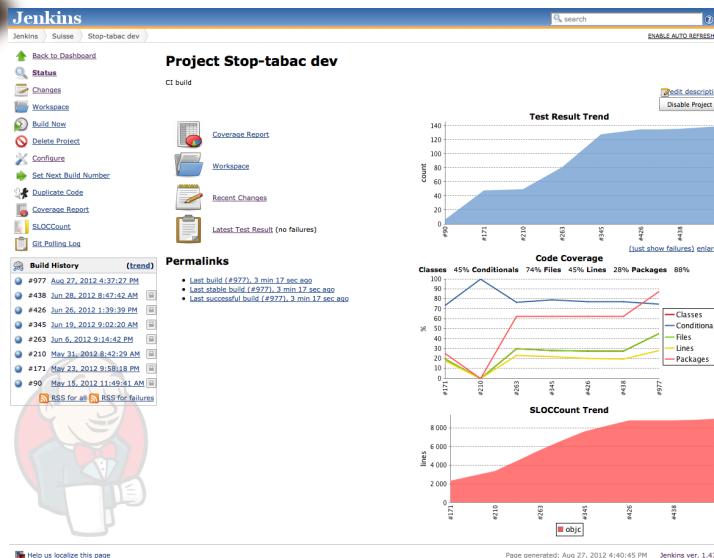
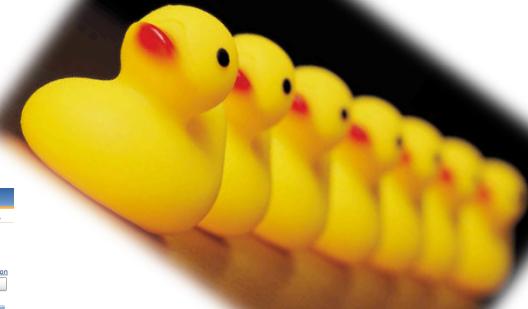
Team size



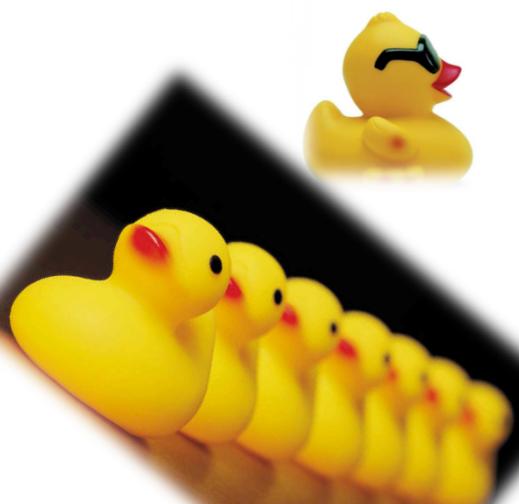
Product 1



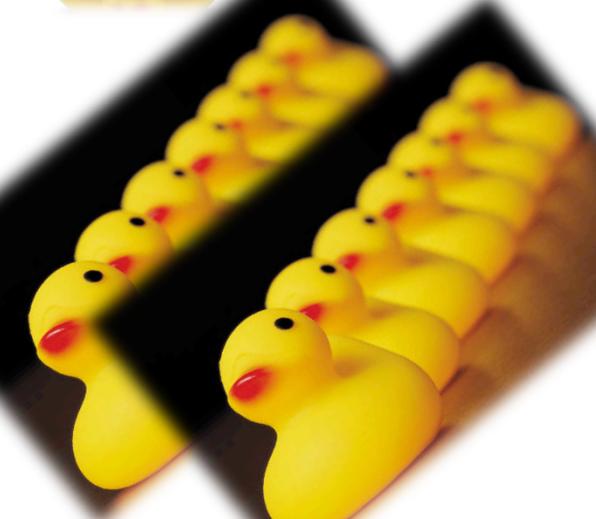
Product 2



Product 3



Product 4





Test Trend Analyzer

(TTA)



TTA – Test Trend Analyzer - Vision

- **A single point, visual solution to gauge the health of your product portfolio using Test Automation results by means of –**
 - Comparative views
 - Trends analysis
 - Failure analysis
- **and providing**
 - Drill-down reports
 - Customizable reports
- **So that**
 - Different stakeholders can get single click view of the health status and potential issues
 - A project team can decide if automation is useful or not.
 - automated data collation and trending to avoid manual data aggregation and interpretation
- **With the stakeholders being**
 - Developers
 - QA
 - QA Leads / Manager / Directors
 - Tech-Ops

Collect Test Run data in TTA

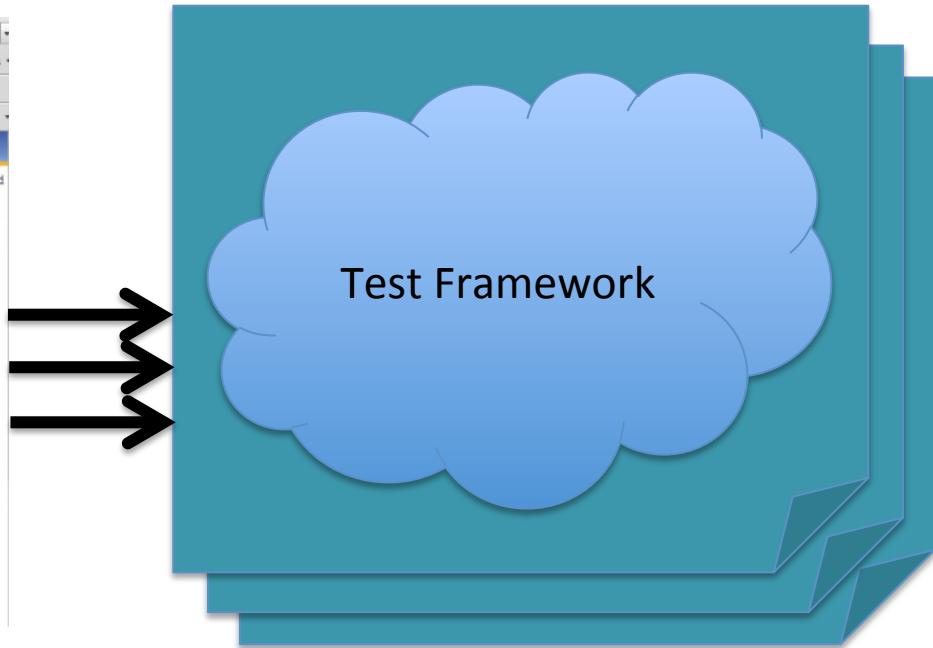
- Automatic Upload
- Manual Upload

CI Integration

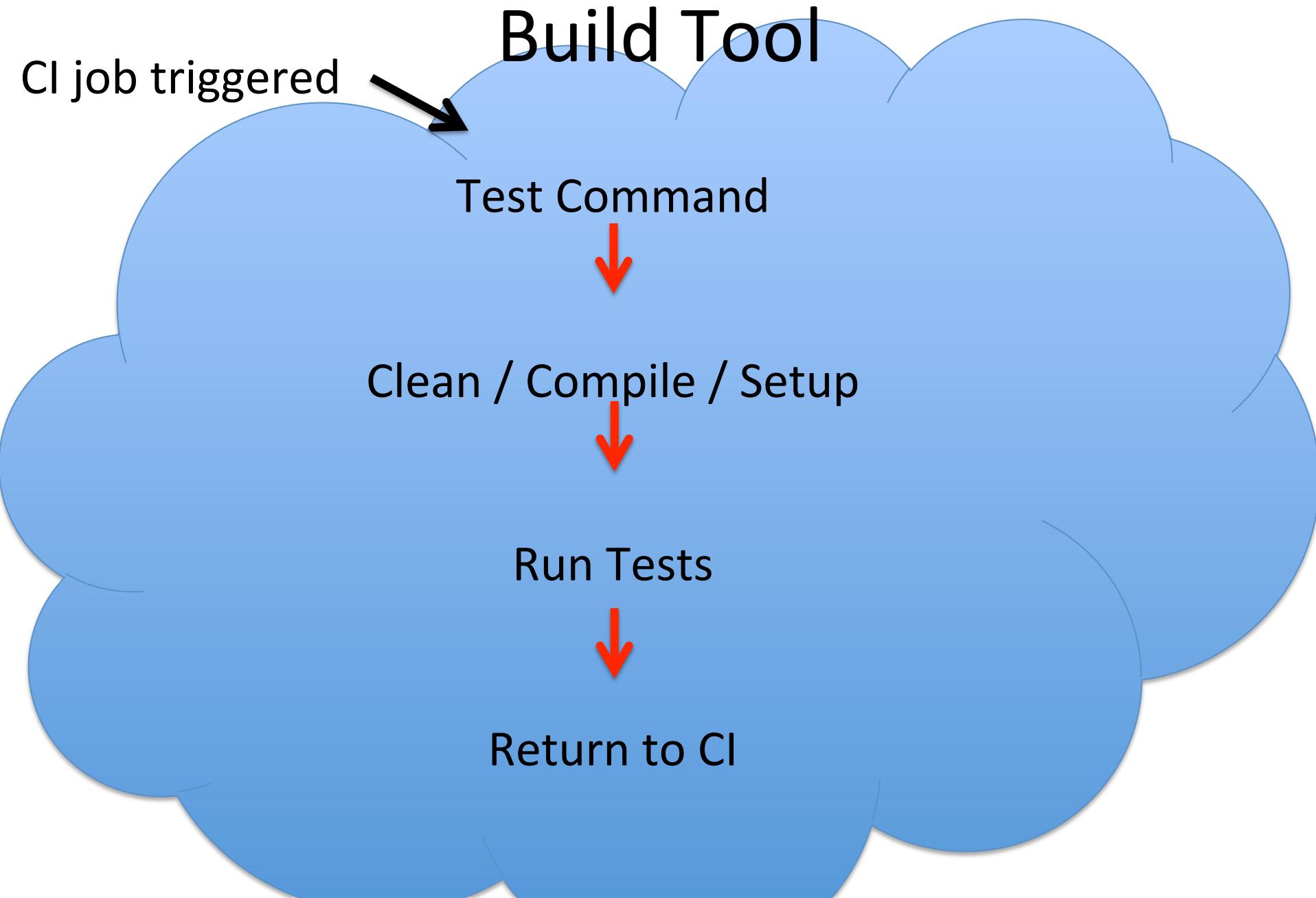
The screenshot shows the Jenkins dashboard with the following details:

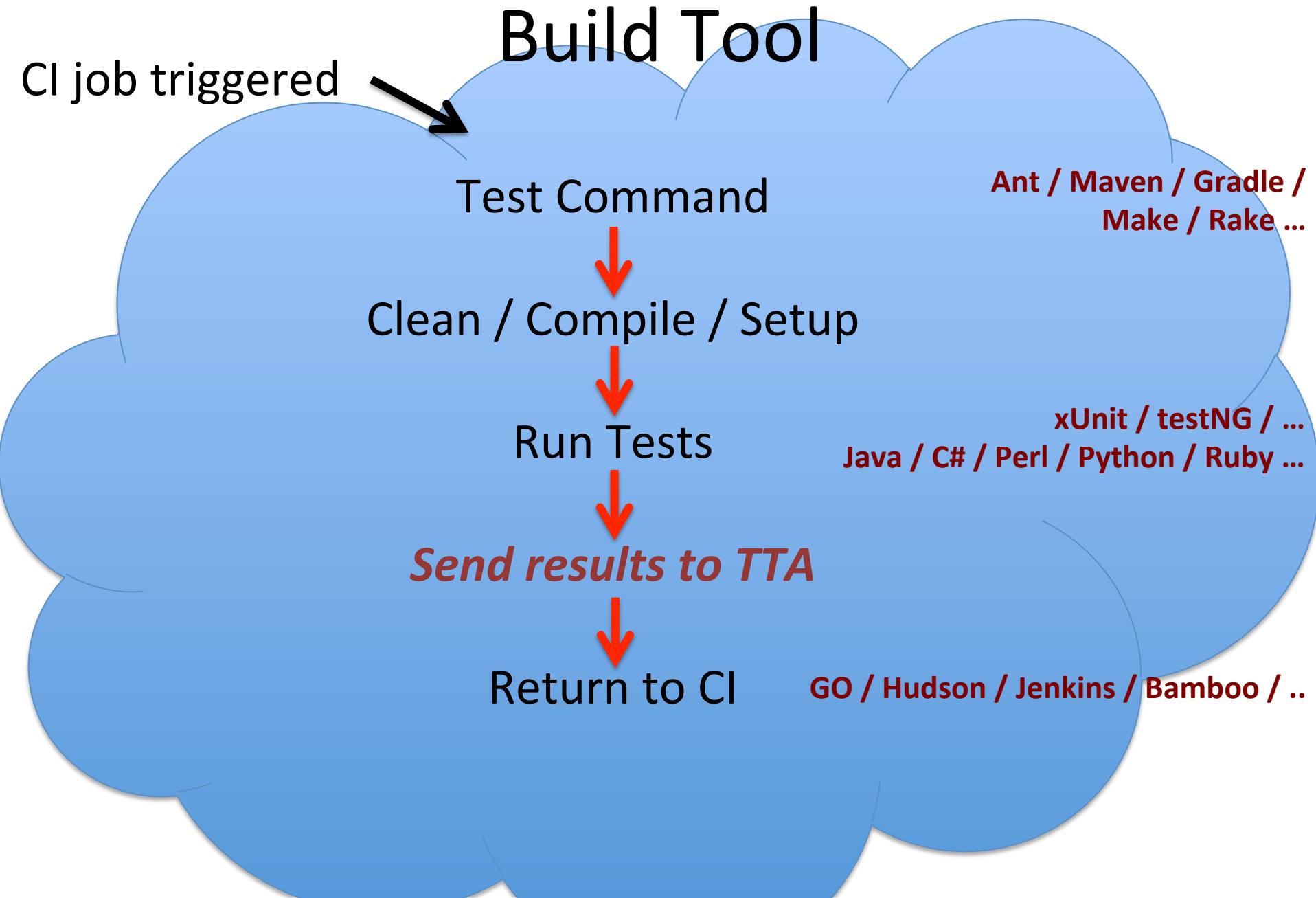
- Top Bar:** ladie.lbl.gov:8080, Home, Most Visited, Trackers, Cornify, Import to Mende...
- Header:** Options, Contacts, Events, Locations, Tagspaces, Bookmarks, Resources
- Left Sidebar:** New Job, People, Build History, Project Relationship, Check File Fingerprint, Manage Jenkins, My Views.
- Build Queue:** No builds in the queue.
- Build Executor Status:** 1 Idle, 2 Idle.
- Job List:** A table with columns: S, W, Name, Last Success, Last Failure, Last Duration. The data is as follows:

S	W	Name	Last Success	Last Failure	Last Duration
●	●	build-chebi	5 days 22 hr (#16)	9 days 14 hr (#5)	4 min 49 sec
●	●	build-cl	3 days 1 hr (#12)	19 days (#10)	1 min 55 sec
●	●	build-fbbt	5 days 22 hr (#7)	15 days (#6)	2 min 2 sec
●	●	build-fypo	3 days 9 hr (#7)	7 days 5 hr (#5)	2 min 22 sec
●	●	build-gaz	1 day 0 hr (#3)	1 day 0 hr (#2)	26 min
●	●	build-go	4 hr 55 min (#178)	N/A	6 min 48 sec
●	●	build-go-taxon	1 mo 3 days (#106)	44 min (#243)	3 min 40 sec
●	●	build-go-xp-chebi	4 hr 48 min (#115)	N/A	2 min 21 sec
●	●	build-mp	N/A	14 hr (#68)	4 min 1 sec



Job(s) Triggered







Test Trend Analyzer

Version 0.5.8 (11 Oct 2013)

Legend:

- Test Category
- Failure Message
- Failing Tests

Sub Project : SUB_PROJECT 2.2

Analysis Date : 2013-10-16

FAILURE MESSAGE -> FAILING TESTS	PERCENTAGE
FUNCTIONAL TEST	
----- NO FAILURES FOR THIS TEST CATEGORY -----	
UNIT TEST	
Here is the failure message for respective Test Suite and Test Case	66.67%
Test Case 1.4.1 Test Case 3.2.2	
Here is the failure message for Test Suite 2.5 and its respective Test Case	33.33%
Test Case 2.5.1	



Compare Runs

UNIQUE TEST-CASES FAILING ON BOTH DATES

Number of failing tests: 1

CLASS-NAMES

Test Case 1.4.1	
-----------------	--

ALL UNIQUE FAILING TEST-CASES (IN BOTH RUNS)

Number of failing tests: 11

CLASS-NAMES

Test Case 1.4.1	Test Case 7.1.1
Test Case 7.4.1	Test Case 8.2.2
Test Case 8.4.1	Test Case 8.5.1
Test Case 9.4.1	Test Case 9.5.1
Test Case 9.5.3	Test Case 2.5.1
Test Case 3.2.2	

UNIQUE TEST-CASES FAILING ON DATE 1: 2013-09-01 05:51:00

Number of failing tests: 9

CLASS-NAMES

Test Case 1.4.1	Test Case 7.1.1
Test Case 7.4.1	Test Case 8.2.2
Test Case 8.4.1	Test Case 8.5.1
Test Case 9.4.1	Test Case 9.5.1
Test Case 9.5.3	

UNIQUE TEST-CASES FAILING ON DATE 2: 2013-09-02 06:51:00

Number of failing tests: 3

CLASS-NAMES

Test Case 1.4.1	Test Case 2.5.1
Test Case 3.2.2	



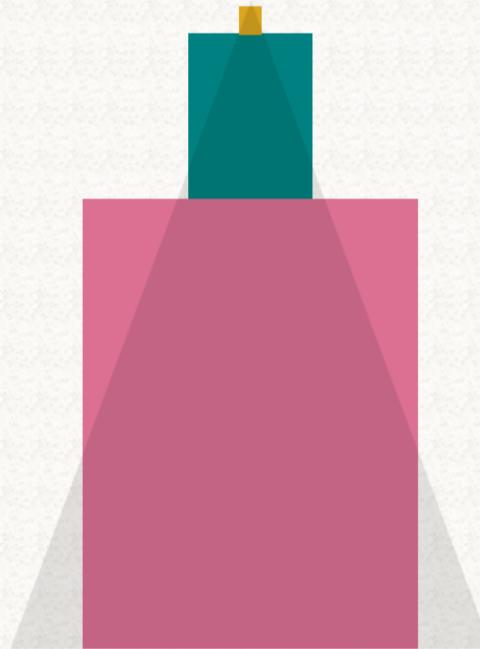
Test Trend Analyzer

Version 0.5.8 (11 Oct 2013)

Pyramid View

Select Sub-Project	--Select--
	Plot

Test-Pyramid for : DEMO SUB



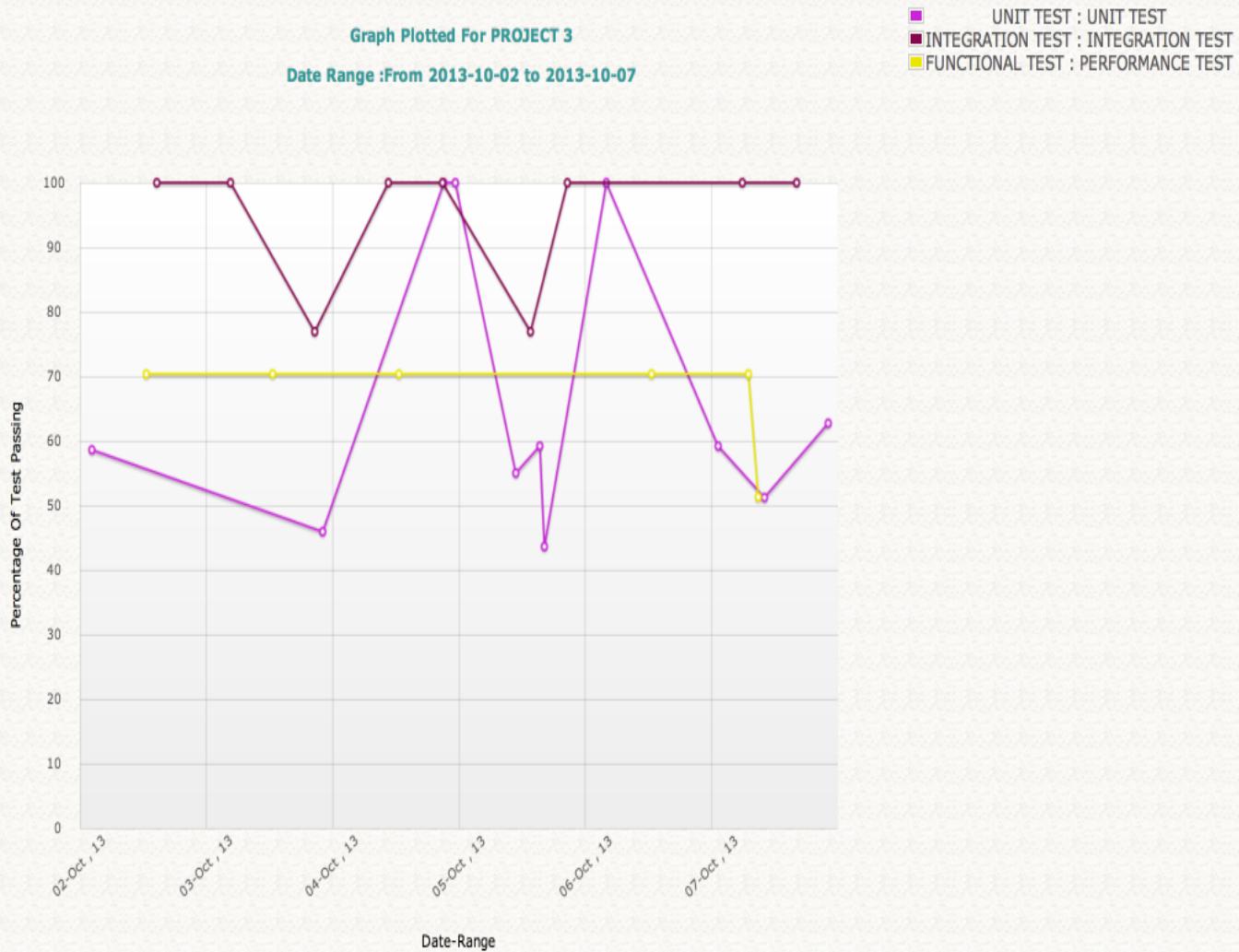
TEST TYPES	NUMBER OF TESTS	TOTAL RUN TIME (HH:MM:SS:MS)	TEST TYPE %	PASSING %
FUNCTIONAL	7	00:04:22:519	4.64 %	85.71 %
INTEGRATION	39	00:00:22:950	25.83 %	76.92 %
UNIT	105	00:00:17:818	69.54 %	97.14 %



Test Trend Analyzer

Version 0.5.8 (11 Oct 2013)

Comparative Analysis View





Test Trend Analyzer

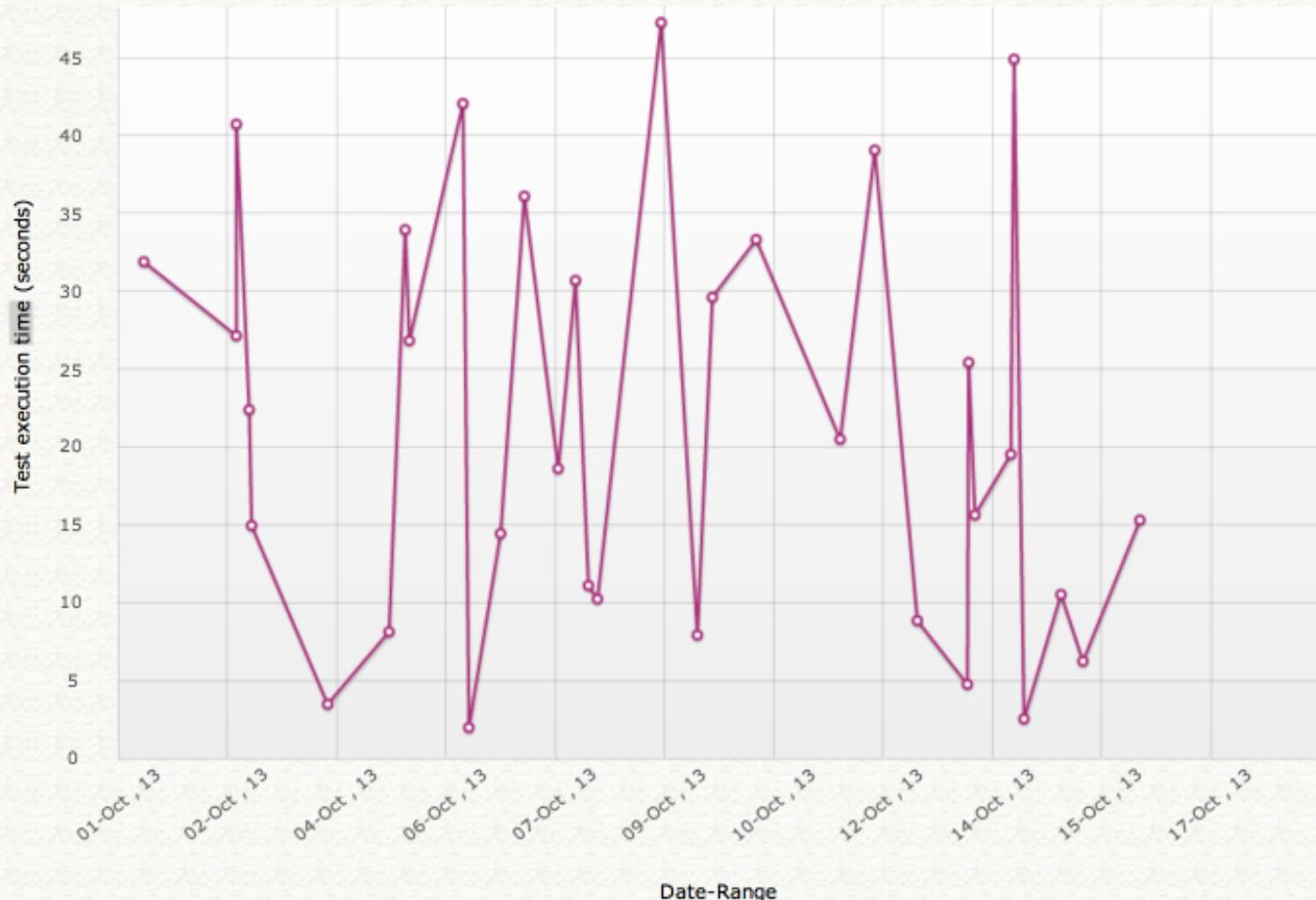
Version 0.5.8 (11 Oct 2013)

Test Execution Trend

Graph Plotted For

Test Case 3.1.1.5

Date Range :From 2013-10-01 to 2013-10-17





Test Trend Analyzer

Version 0.5.4 (30/08/2013)

[TEST PYRAMID VIEW](#)[COMPARATIVE ANALYSIS](#)[COMPARE RUNS](#)[FAILURE ANALYSIS](#)[UPLOAD TEST DATA](#)

External Dashboard

[GO HOME PAGE](#)

The screenshot shows the 'go' dashboard interface. At the top, there's a navigation bar with links for Pipelines, Environments, Agents, Preferences, and Admin. A 'Help' link is also present. Below the navigation, the word 'Pipelines' is displayed next to a 'PERSONALIZE' dropdown menu. The main content area features two pipeline status cards:

- Development**:
 - Label: 372
 - Compare | Changes ▾
 - (Triggered by changes about 4 hours ago)
 - Failed: FunctionalTests
 - A progress bar consisting of three green segments.
 - Control buttons: back, forward, and play/pause.
- TestRelease**:
 - Label: 40
 - Compare | Changes ▾
 - (Triggered by anonymous 3 days ago)
 - Building: FunctionalTests
 - A progress bar consisting of three green segments followed by a yellow segment.
 - Previously: Passed
 - Control buttons: back, forward, and play/pause.



Test Trend Analyzer

Version 0.5.8 (11 Oct 2013)

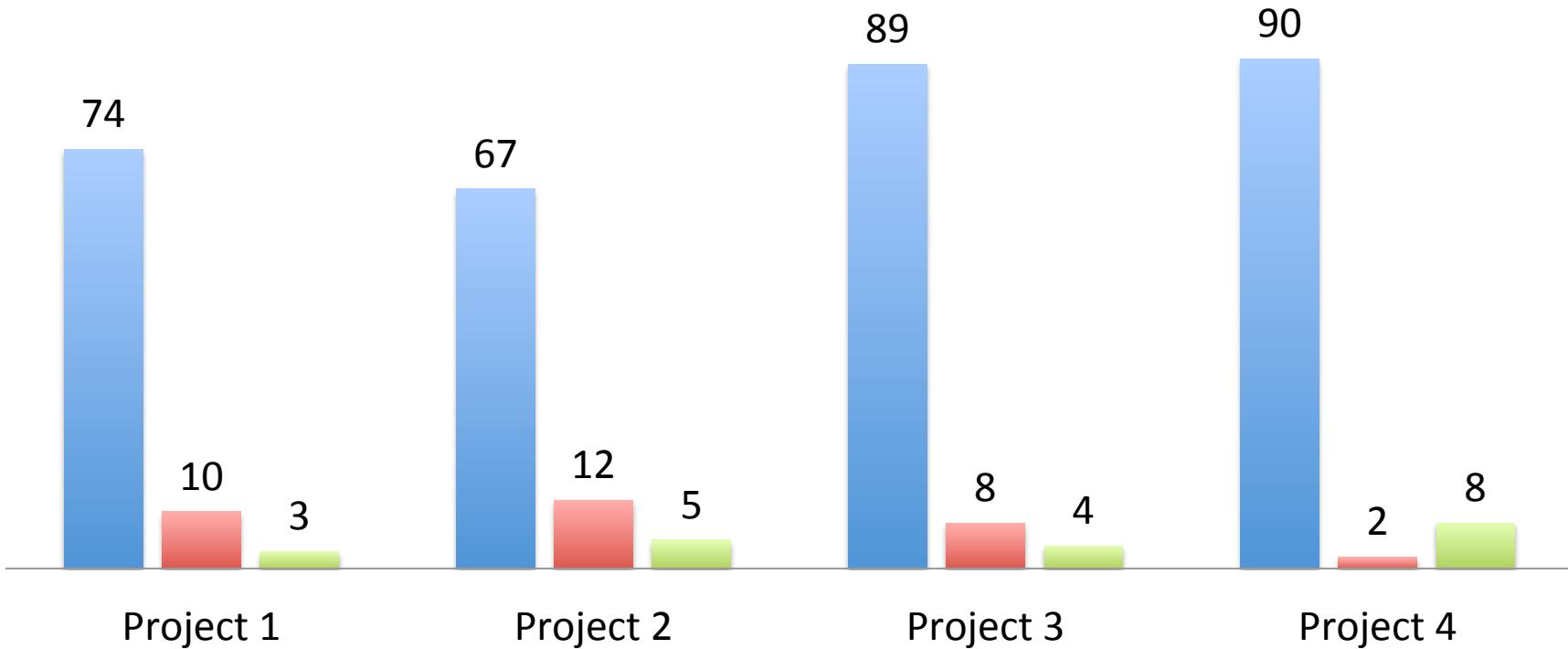
TTA's PROJECT INFORMATION

No	PROJECT NAME	SUB PROJECT NAME	TEST UPLOAD COUNT
1	PROJECT 1		
		SUB_PROJECT 1.1	30
		SUB_PROJECT 1.2	2
		SUB_PROJECT 1.3	15
		SUB_PROJECT 1.4	7
2	PROJECT 2		
		SUB_PROJECT 2.1	6
3	PROJECT 3		
		SUB_PROJECT 3.1	51
		SUB_PROJECT 3.2	20
		SUB_PROJECT 3.3	5
4	PROJECT 4		
		SUB_PROJECT 4.1	6

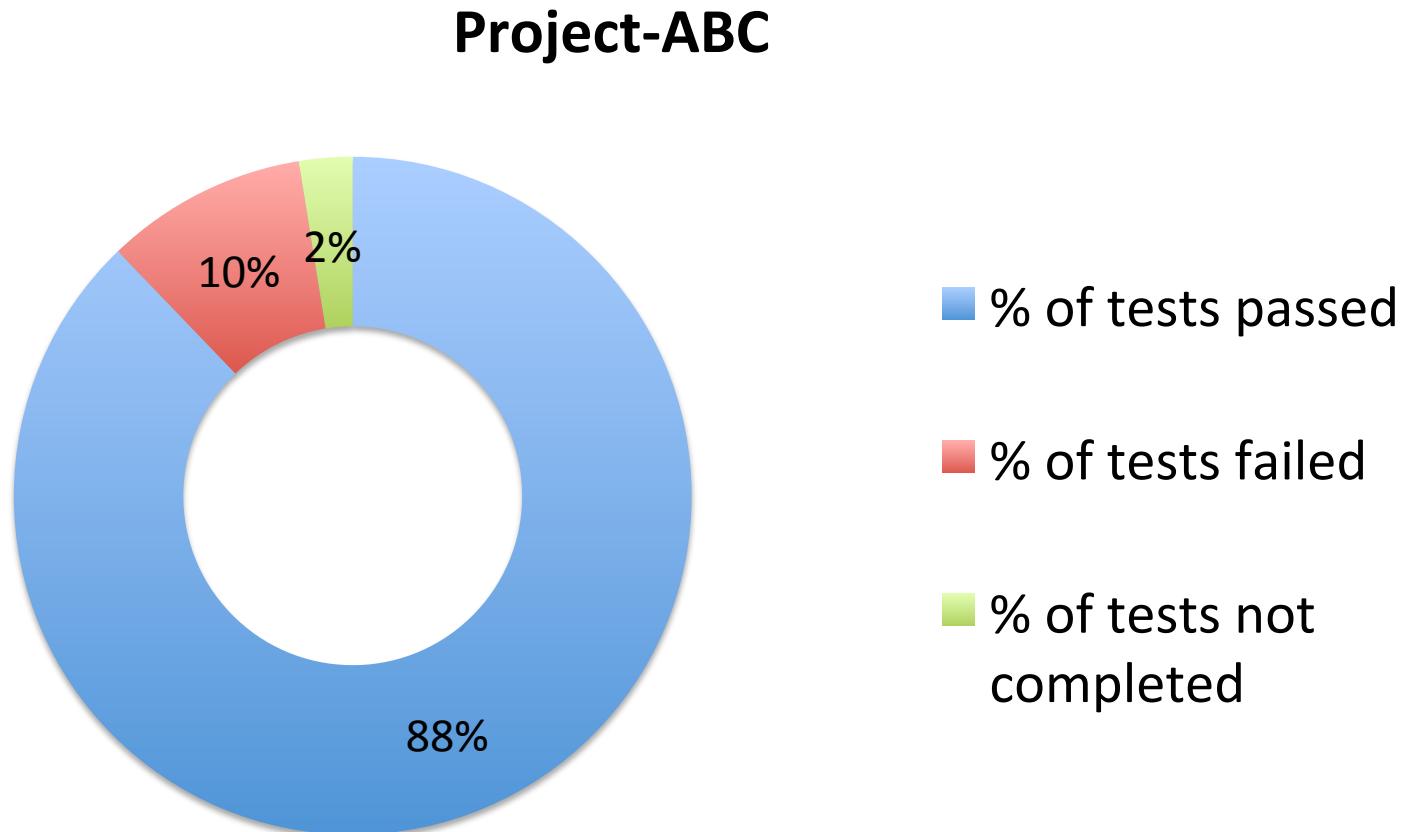
For Different Sub – Projects

Tests Summary

■ % of Tests Passed ■ % of Tests Failed ■ % of Errors

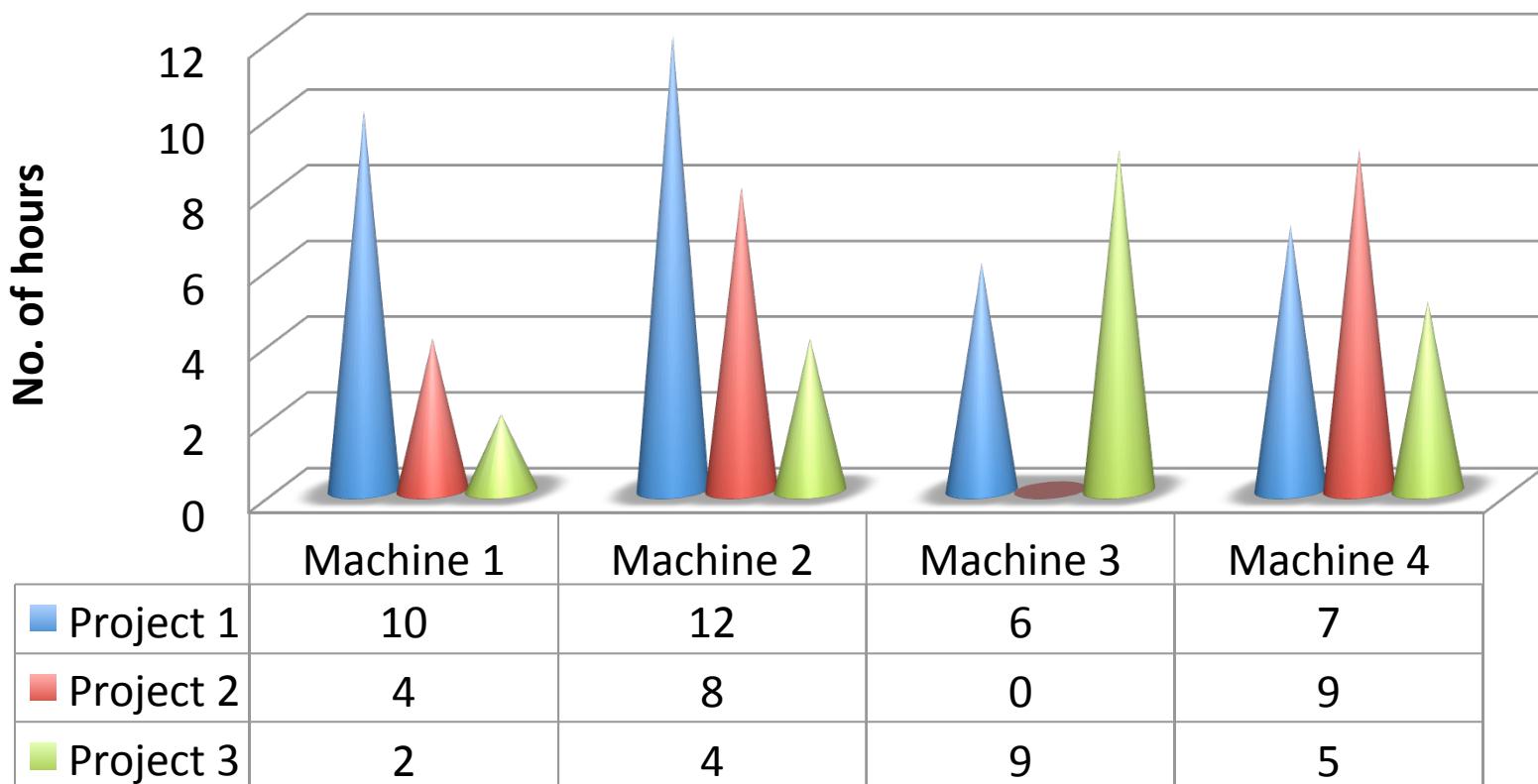


Test Status for a Single Project



For Tech-Ops / IT

Machine Utilization for Test Execution



How to use TTA

- Copyright 2013 ThoughtWorks, Inc.
- Distributed under the Apache 2.0 License
- Available on github at:
 - <https://github.com/anandbagmar/tta>
- Instructions available on github wiki at:
 - <https://github.com/anandbagmar/tta/wiki>



Upload Test Data

<i>Fields marked with (*) are compulsory</i>	
Project Name *	TTA
Sub-Project name *	TTA SUB
CI Job Name	build
Test Category *	UNIT TEST
Test Sub Category *	UNIT TEST
Test Report Type *	JUnit
OS Tested On *	mac
Host-Machine Name *	aasawaree
Browser Tested On *	chrome
Environment Run on *	local
Date Of Execution *	2013 <input type="button" value="▼"/> October <input type="button" value="▼"/> 18 <input type="button" value="▼"/> - 03 <input type="button" value="▼"/> : 14 <input type="button" value="▼"/>
Upload Logs *	<input type="button" value="Choose File"/> xml.zip
	<input type="button" value="SUBMIT"/> <input type="button" value="Clear All"/>



- Contact:
 - Send an email to tta@thoughtworks.com
 - @BagmarAnand

Copyright 2013 ThoughtWorks, Inc.
Apache 2.0 License