



Splunk Helping in Productivity

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About Me



turbotax



quickbooks



proconnect



mint



dynatrace



AppDynamics

OverOps

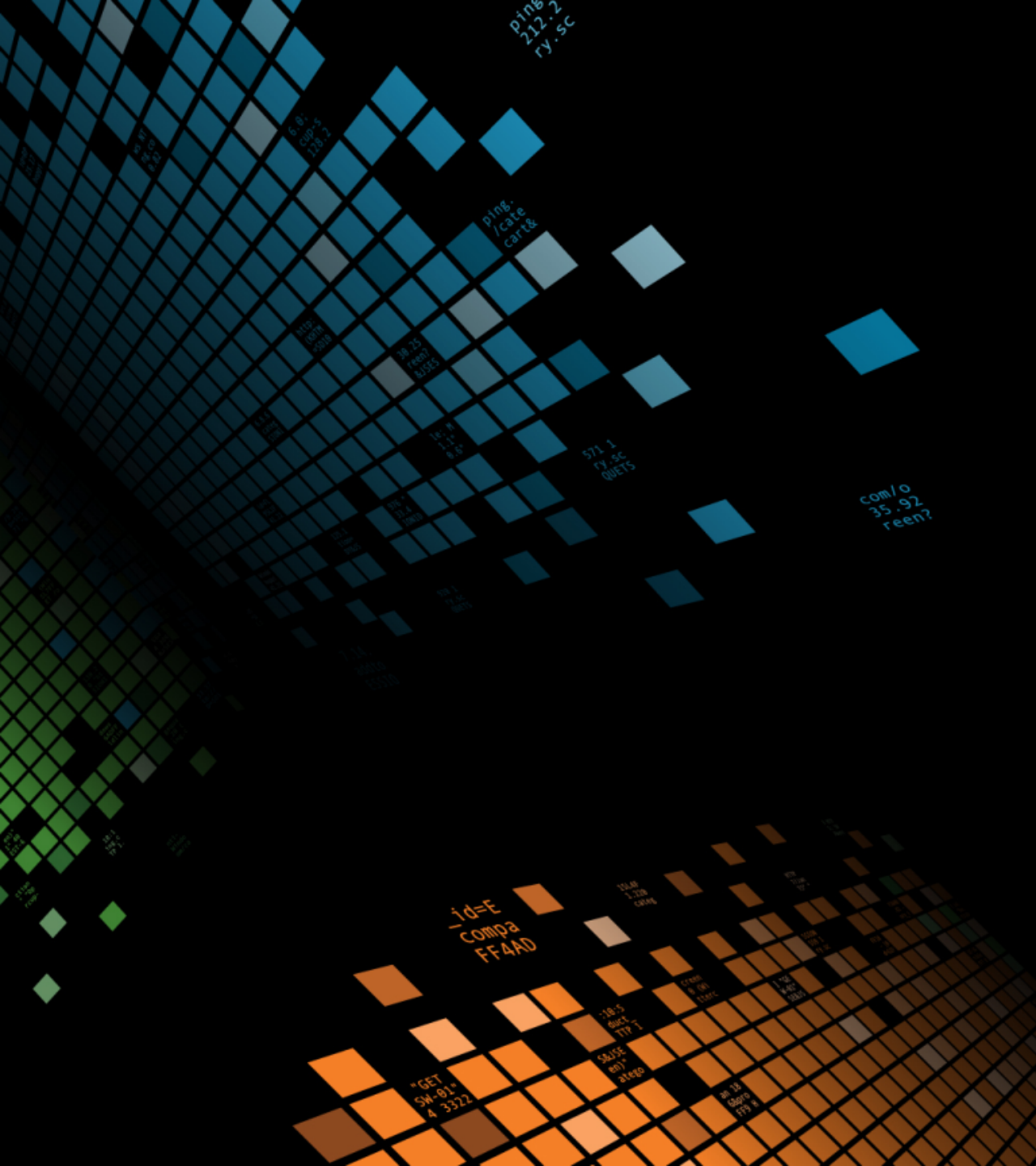


The Enterprise Jenkins Company



Agenda

- ▶ Overview
- ▶ In Quality
- ▶ In Development
- ▶ Improving Velocity
- ▶ Key Takeaways
- ▶ Q &A



Overview

Journey with Splunk in productivity

Overview

Jenkins and Splunk Background

- ▶ Many Jenkins
- ▶ Many Splunk
- ▶ Thousands of build, test and deploy data per day
- ▶ Splunk only for Application Logs
- ▶ Collaboration with development Tools challenge
- ▶ Data is scattered
- ▶ Splunk is Operation Tool

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130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP/1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" "Opera/9.80.2013.10; rv:11.0; Windows NT 6.0; SV1; .NET CLR 3.5.30729; .NET CLR 3.0.30729; .NET CLR 2.0.50727; .NET CLR 1.1.4322; .NET CLR 1.0.3705; .NET CLR 1.0.29095.55; .NET CLR 1.0.2754.3; .NET CLR 1.0.26085.1; .NET CLR 1.0.2538.1; .NET CLR 1.0.2420.1; .NET CLR 1.0.2367.1; .NET CLR 1.0.2262.1; .NET CLR 1.0.2167.1; .NET CLR 1.0.2062.1; .NET CLR 1.0.1957.1; .NET CLR 1.0.1852.1; .NET CLR 1.0.1747.1; .NET CLR 1.0.1642.1; .NET CLR 1.0.1537.1; .NET CLR 1.0.1432.1; .NET CLR 1.0.1327.1; .NET CLR 1.0.1222.1; .NET CLR 1.0.1117.1; .NET CLR 1.0.1012.1; .NET CLR 1.0.907.1; .NET CLR 1.0.802.1; .NET CLR 1.0.797.1; .NET CLR 1.0.692.1; .NET CLR 1.0.587.1; .NET CLR 1.0.482.1; .NET CLR 1.0.377.1; .NET CLR 1.0.272.1; .NET CLR 1.0.167.1; .NET CLR 1.0.6.1; .NET CLR 1.0.5.1; .NET CLR 1.0.4.1; .NET CLR 1.0.3.1; .NET CLR 1.0.2.1; .NET CLR 1.0.1.1"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP/1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01" "Mozilla/5.0 (Windows NT 6.0; rv:11.0; Windows NT 6.0; SV1; .NET CLR 3.5.30729; .NET CLR 3.0.30729; .NET CLR 2.0.50727; .NET CLR 1.1.4322)"
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Journey Line

How we started using Splunk for productivity

Velocity

- Visibility Jenkins Farm
- Collaboration Tools Integration
- Next Gen Dashboard
- Jenkins App integration

Development

- Build Optimization
- Splunk maven plugin
- Build Dashboard
- Webinar

Jenkins App

- Splunk App
- Jenkins App
- Conf 2016
- Jenkins Conf

Quality

- Splunk Validator
- Jira Validator
- Overops
- Forensic Dashboard



2016-July

2016-Sept

2016-Dec

2017- Mar

Quality

Operation

Developer

Management



Quality

Quality productivity – pulling data from Splunk

“Scaling the Automation with Quality.”

Quality

Problem

Opportunity

Solution

Test Failures

Accountability

Jira Validator

Root Cause Analysis

Traceability

Splunk Validator

Process

Transparency

Integrated with Test

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```

Quality – Solution

Scaling the Automation with Quality



Jira/Splunk Validator

Test Integration with
Splunk / Jira Validator

```
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128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP/1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01" "Mozilla/5.0 (Windows NT 6.0; rv:1.9.2.13) Gecko/20100303 Firefox/3.6.13"
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10.2.1.1 - - [07/Jan 18:10:55:198] "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD5SL7FF6ADFF9 HTTP/1.1" 200 3865 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP/1.1" 200 1316 "http://buttercup-shopping.com/changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD10SL9FF2ADFF9 HTTP/1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&product_id=K9-CU-01" "Mozilla/5.0 (Windows NT 6.0; rv:1.9.2.13) Gecko/20100303 Firefox/3.6.13"
```


Quality – Performance Time

How we are identity opportunity, reporting and taking action – pulling from Splunk

QBO Forensic

Environment: e2e | cluster: c4 | Select QBO Type: all | Field: | Value: TST-QBO-qbo-bats | Bucket: 5m | Time In: Perc90

Submit | Hide Filters

Company	Txn	perc90 Time	Success Rate	Failure Rate
12	684	0.55	100 %	0%

App - Status

company	cluster	svcDomain	apiName	uri	Total	PStotalTime	PSbstime	time
123146541870514	4	surveys	v1	-surveys-NPSQBO	1	4.140	0.420	3.720
123146541867889	4	subscriptions	v1	-subscriptions-subscriptionStatusInfo	1	3.260	0.960	2.300
123146541870514	4	subscriptions	v1	-subscriptions-subscriptionStatusInfo	1	2.250	0.500	1.750
123146541869334	4	subscriptions	v1	-subscriptions-subscriptionStatusInfo	1	1.830	0.620	1.210
123146541869589	4	subscriptions	v1	-subscriptions-subscriptionStatusInfo	1	1.390	0.370	1.020

Web - Status

company	cluster	svcDomain	apiName	referer	Total	time	success	5xx	4xx	latency_failure	failure
123146539835589	4	activityfeed	v1	https://e2e.qbo.intuit.com/app/rnvoice	1	0.220	1	0	0	0	0
123146539835589	4	activityfeed	v1	https://e2e.qbo.intuit.com/app/sales	1	0.220	1	0	0	0	0
123146539835589	4	activityfeed	v1	https://e2e.qbo.intuit.com/app/setup	1	0.850	1	0	0	0	0
123146539835589	4	alerts	v1	https://e2e.qbo.intuit.com/app/homepage	1	1.400	1	0	0	0	0
123146539835589	4	companysetup	v1	https://e2e.qbo.intuit.com/app/setup	1	0.150	1	0	0	0	0

Hystrix Information for company=123146541867889

company	host	index	svcDomain	CommandGroup	level	Command	cluster	env	tid	count	execTime	CircuitOpen	Failed	TimedOut	ShortCircuited	Successful	Rejected
123146541867889	pe2eqboas800.ie.intuit.net	qbo	activityfeed	ChatServiceGroup	I	getChatsCommand	4	e2e	TST-QBO-qbo-bats-4-e2e-en-US-automati	1	0.04	0	0	0	0	1	0
123146541867889	pe2eqboas800.ie.intuit.net	qbo	help	SubscriptionGroup	I	getServiceInstanceCommand	4	e2e	TST-QBO-qbo-bats-4-e2e-en-US-automati	1	0.71	0	0	0	0	1	0
123146541867889	pe2eqboas800.ie.intuit.net	qbo	help	SubscriptionGroup	I	getServiceInstanceCommand	4	e2e	TST-QBO-qbo-bats-4-e2e-en-US-automati	1	0.71	0	0	0	0	1	0
123146541867889	pe2eqboas800.ie.intuit.net	qbo	ipd	SubscriptionGroup	I	getPaymentsAccountStatus	4	e2e	TST-QBO-qbo-bats-4-e2e-en-US-automati	1	0.08	0	0	0	0	1	0
123146541867889	pe2eqboas800.ie.intuit.net	qbo	lists	IUSPersonasGroup	I	GetPersonasCommand	4	e2e	TST-QBO-qbo-bats-4-e2e-en-US-automati	1	0.08	0	0	0	0	1	0

DB Time for company=123146541867889

Domain DB Action for company=123146541867889

Class Memory for company=123146541867889

AuthInfo for company=123146541867889

About

If you want to debug specific company, user, thread, tid please use this Dashboard. If you want to debug exceptions/error Use this dashboard for QBO Forensic FCI. Use this dashboard for QBO Top Issues. Use this dashboard for QBO Forensic. Use this Dashboard for QBO Forensic Exception. Use this Dashboard for QBO TimeSeries. Use this dashboard for QBO GeoLocation Use this dashboard for QBO Prediction Use this dashboard for QBO Exception Prediction Use this dashboard for QBO Shell Use this dashboard for QBO RUM Use this wiki to know more in these dashboards WIKI

Environment Status

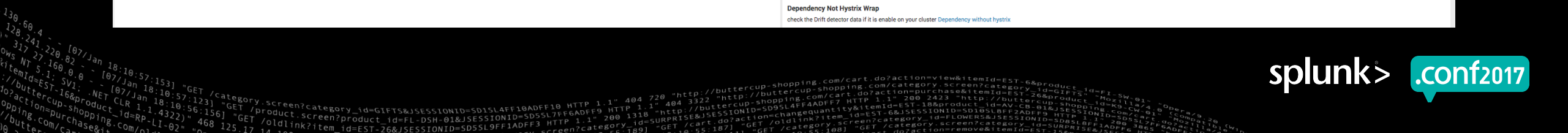
If you want to know Environment Status please use QBO Environment

Company Status - Only works once you select any company on this page right now using DM_QBO_APP and DM_QBO_WEB

check the company information q-shared q-1-click e2e perf

Dependency Not Hystrix Wrap

check the Drift detector data if it is enable on your cluster Dependency without hystrix



Quality – Application Error

How we are identity opportunity, reporting and taking action – pulling from Splunk

QBO Forensic Exception

Environment: e2e | cluster: c4 | Select QBO Type: all | Field: | Value: TST-QBO-qbo-bats | Bucket: 5m | Summary: Cache (selected), Live | Submit | Hide Filters

2	2	2	1	1	2	2	2
Unique Company	Total Exception	Unique Exception	Unique ErrorCode	Unique OraError	Unique ErrorMessage	Unique Functionality	Unique ExceptionClass

Exception			ErrorCode			OraError			Functionality			ExceptionClass		
errGenericEx	count	sparkline	errorCode	count	sparkline	errOraId	count	sparkline	svcDomain	count	sparkline	errExClass	count	sparkline
CriticalQBOException	1		-20200	1		00942	1		ipd	1		DB.java	1	
java.lang.NullPointerException	1								signupnewuser	1		IPDService.java	1	

Error by Company

errGenericEx	host	env	cluster	company	apiName	svcDomain	count	errType	errExMethod	errExLine	errOraId	errOraMsg	errExClass	errorCode
CriticalQBOException	pe2eqboas802.ie.intuit.net	e2e	4	0	sign	signupnewuser	1	Critical	qbo.data.DB.executePreparedSql	1827	00942	table or view does not exist	DB.java	-20200
java.lang.NullPointerException	pe2eqboas802.ie.intuit.net	e2e	4	123146541870514	v1	ipd	1		qbo.neo.service.ipd.IPService.isCountryAllowed	245			IPDService.java	

Exception Trace

_time	apiName	svcDomain	takipi_url	class	errGenericEx	takipi	count
2017-07-27 19:10:00	v1	ipd	http://tkp.to/jDRaoOQ	IPDService	java.lang.NullPointerException	jDRaoOQ	1

Information Error

host	_time	index	class	level	cluster	env	company	apiName	uri	thread	errGenericEx	transaction	hostname	takipi_url	userEmail	message	tid	svcDomain	errCausedEx	errMessage	errType	errorCode	err
pe2eqboas802.ie.intuit.net	2017-07-27 19:10:00	qbo	IPDService	E	4	e2e	123146541870514	v1	/qbo4/neo/v1/company/123146541870514/ipd/getSubscribeNowAlert	1501207884063	java.lang.NullPointerException					Error on isCountryAllowed [http://tkp.to/jDRaoOQ	TST-QBO-qbo-bats-4-e2e-en-US-automation-TestCreateInvoiceFromInvoiceList-TestCreateInvoiceFromInvoiceList-2017072-821fc5b8-1211-449f-8bcb-ba9ef93992c5	ipd					qb

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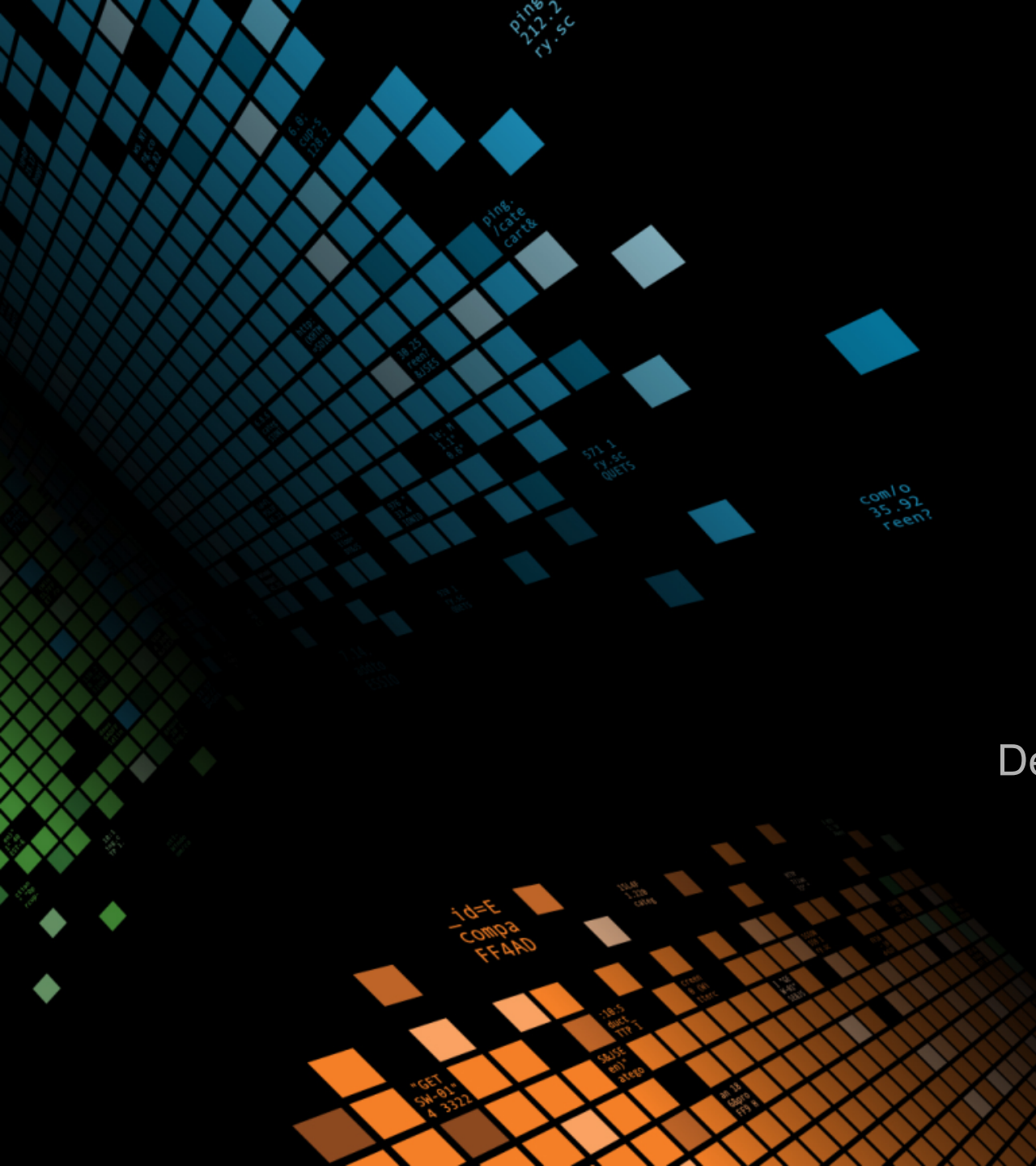
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Exception
 check the company information qa-shared qa-1 click e2e perf

Dependency Not Hystrix Wrap
 check the Drift detector data if it is enable on your cluster Dependency without hystrix

1m ago





Development

Developer productivity – pushing data in Splunk

“Making developer **10X** Productive.”

Developer

Problem

Opportunity

Solution

Build Time



Visibility



Splunk Data uploader

Build Failures



Problem identification



Error Categorization

Root Cause Process



Self Healing

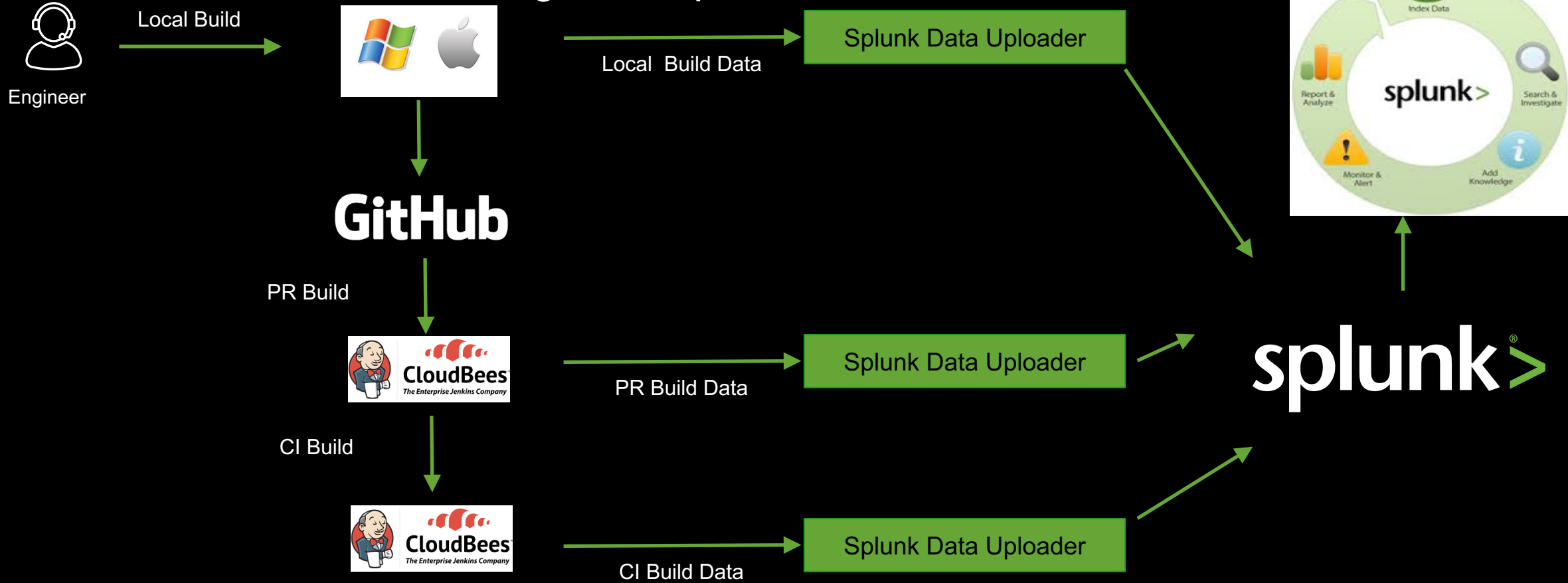


User contribution

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0 - - [07/Jan 18:10:56:189] "GET /cart.do?action=remove&itemid=EST-10&product_id=FL-SW-01 HTTP/1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemid=EST-10&product_id=FL-SW-01" "Opera/9.80.0 (Windows NT 6.0; U; en; rv:1.9.2.13) Gecko/20100305 Firefox/3.6.13"
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0 - - [07/Jan 18:10:56:189] "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD5SL9FF1ADFF3 HTTP/1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemid=EST-18&product_id=AV-CB-01&JSESSIONID=SD19SL1E2ADFF9 HTTP/1.1" 200 3865 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.0 (Windows NT 6.0; U; en; rv:1.9.2.13) Gecko/20100305 Firefox/3.6.13"
```


Developer - Solution

Making developer 10X Productive



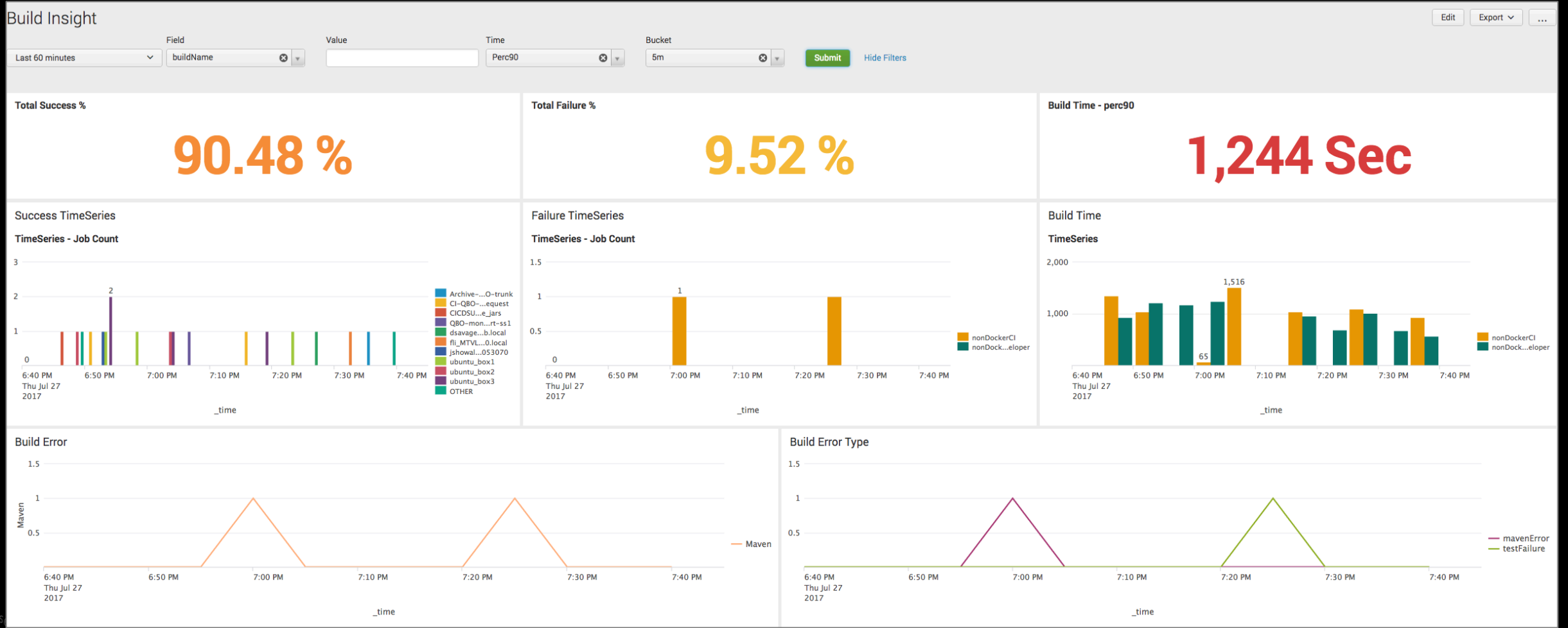
```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP/1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD55L7FF6ADFF9 HTTP/1.1" 404 3322 "http://shopping.com/cart.do?action=purchase&itemId=EST-20&product_id=K9-CU-01"
317.27.160.0.0 - - [07/Jan 18:10:56:150] "GET /oldlink?item_id=EST-26&JSESSIONID=SD55L9FF1ADFF3 HTTP/1.1" 200 1316 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&JSESSIONID=SD10SL9FF1ADFF3 HTTP/1.1"
...

```

Development - Build Insight

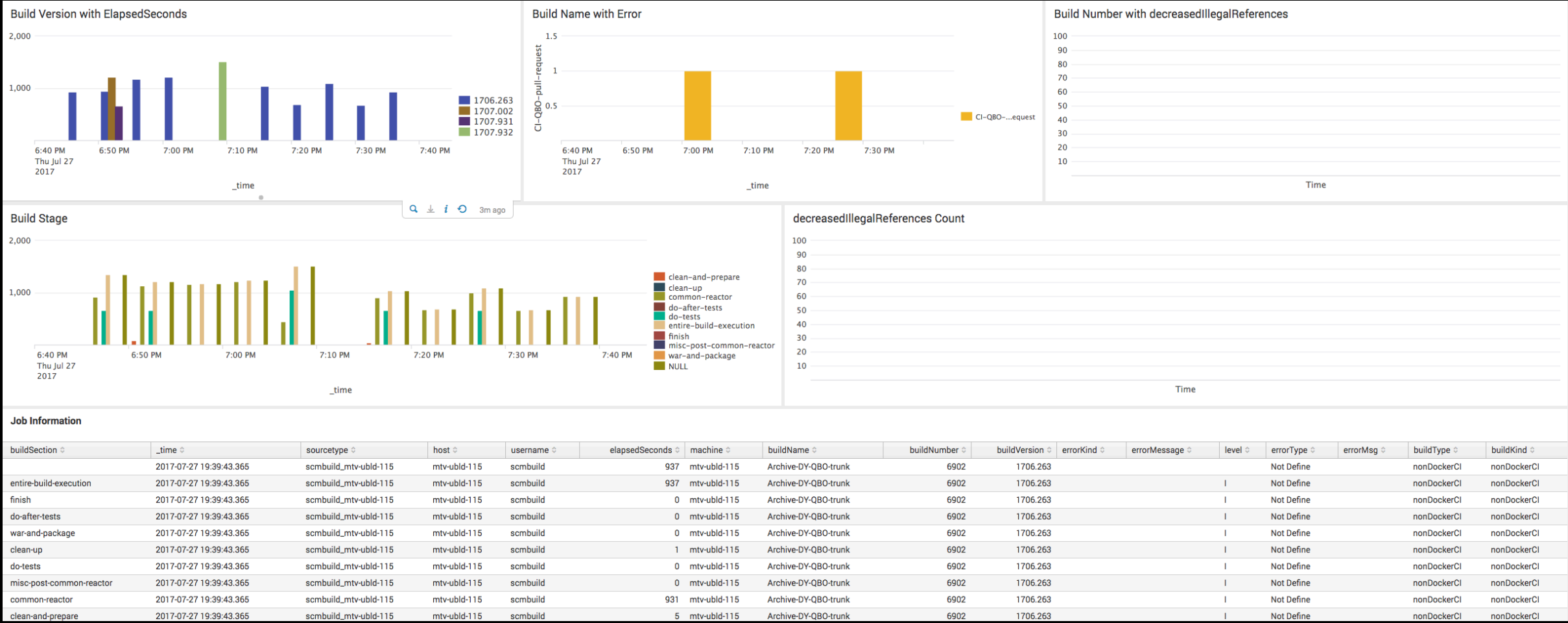
How we are getting build error across developer, PR and CI - pushing to Splunk



130.6... [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" Opera/9.80...
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-20&product_id=MK9-CU-01" Mozilla/5.0...
317.27.160.0 - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD19SLBE12ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-10&product_id=FL-SW-01" Mozilla/5.0...
[07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" Opera/9.80...
[07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-20&product_id=MK9-CU-01" Mozilla/5.0...
[07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD19SLBE12ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-10&product_id=FL-SW-01" Mozilla/5.0...
[07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" Opera/9.80...
[07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-20&product_id=MK9-CU-01" Mozilla/5.0...
[07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD19SLBE12ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-10&product_id=FL-SW-01" Mozilla/5.0...

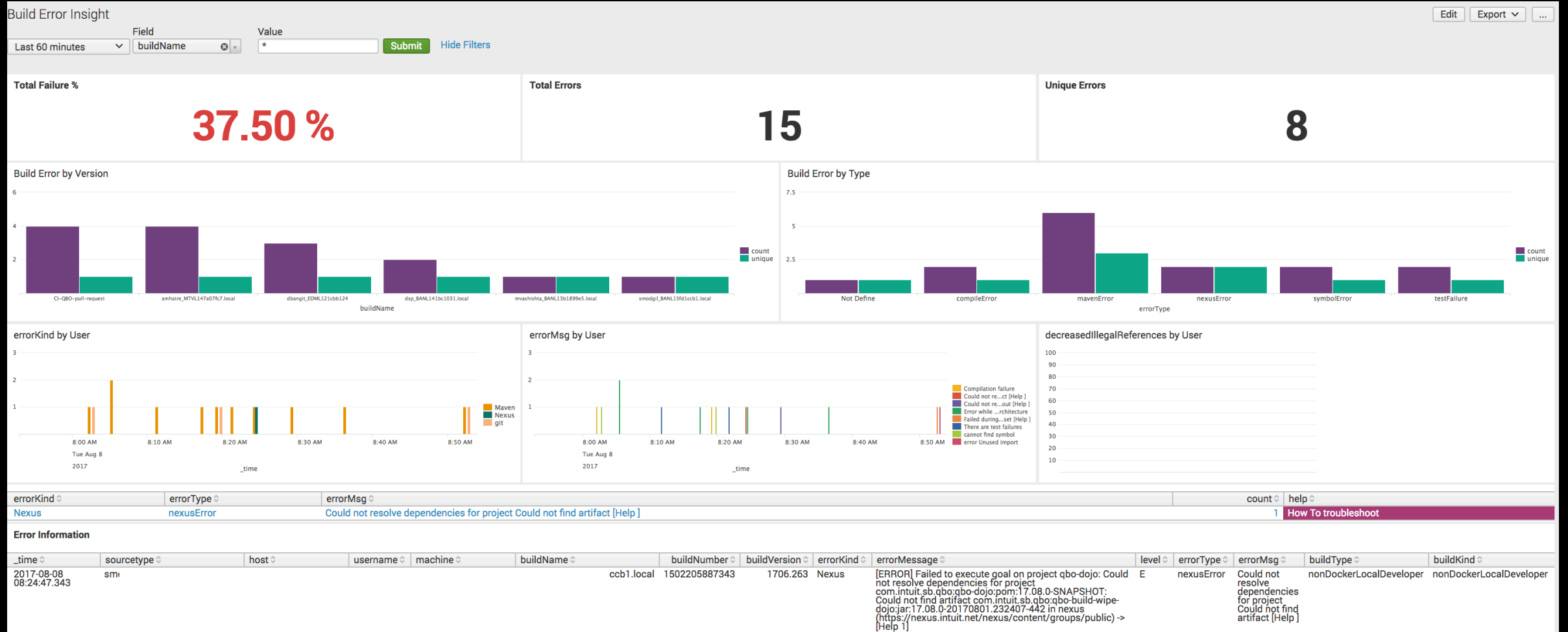
Development - Build Insight

How we are getting build error across developer, PR and CI - pushing to Splunk



Development - Build Error Insight

How we are getting build error across developer, PR and CI - pushing to Splunk



Improving Velocity

Improving Velocity – Leveraging Splunk Jenkins App

“If You can’t **Measure** it, You Can’t
Improve it.”

Journey Line – Jenkins App

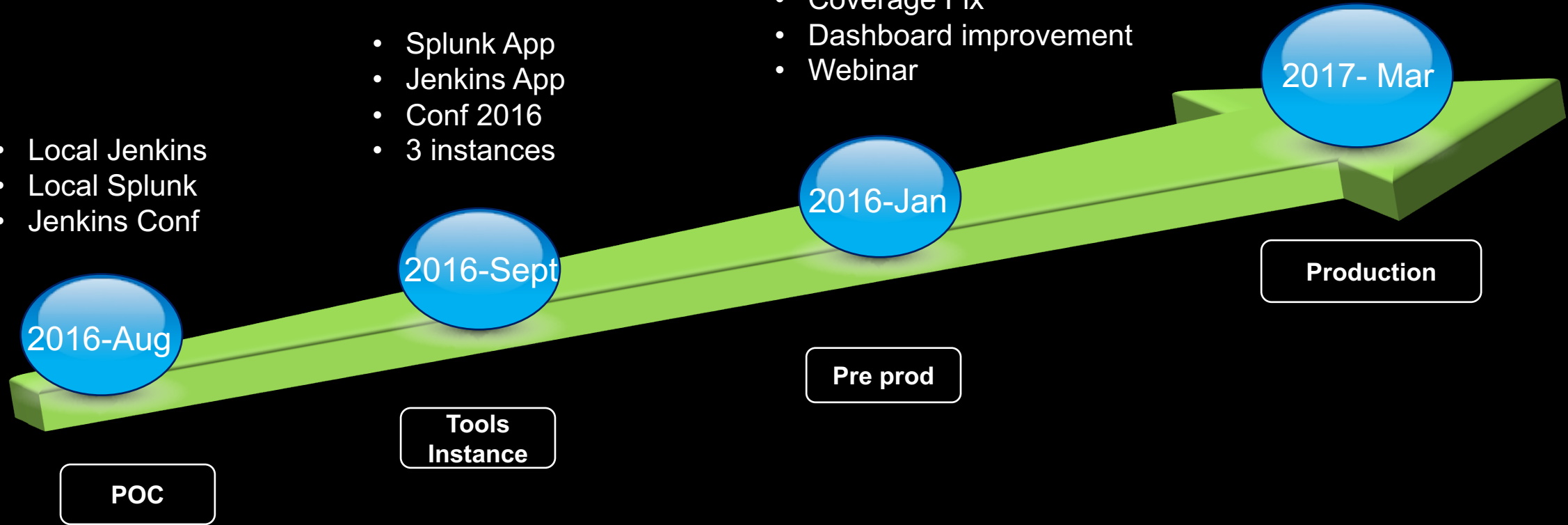
How we started using Splunk for productivity

- Local Jenkins
- Local Splunk
- Jenkins Conf

- Splunk App
- Jenkins App
- Conf 2016
- 3 instances

- Performance Fixes
- Coverage Fix
- Dashboard improvement
- Webinar

- Production roll out
- Visibility Jenkins Farm - SBG
- Collaboration Tools Integration
- Next Gen DashBoard



```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD5SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" "Opera/9.80.
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
ows NT 5.1; SV1: - - [07/Jan 18:10:56:150] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.
http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1&surprise&JSESSIONID=SD5SL9FF1ADFF3" "Opera/9.80.

```


Improving Velocity– Solution

If You can't Measure it, You Can't Improve it

GitHub



splunk>



Splunk Jenkins App with Velocity data

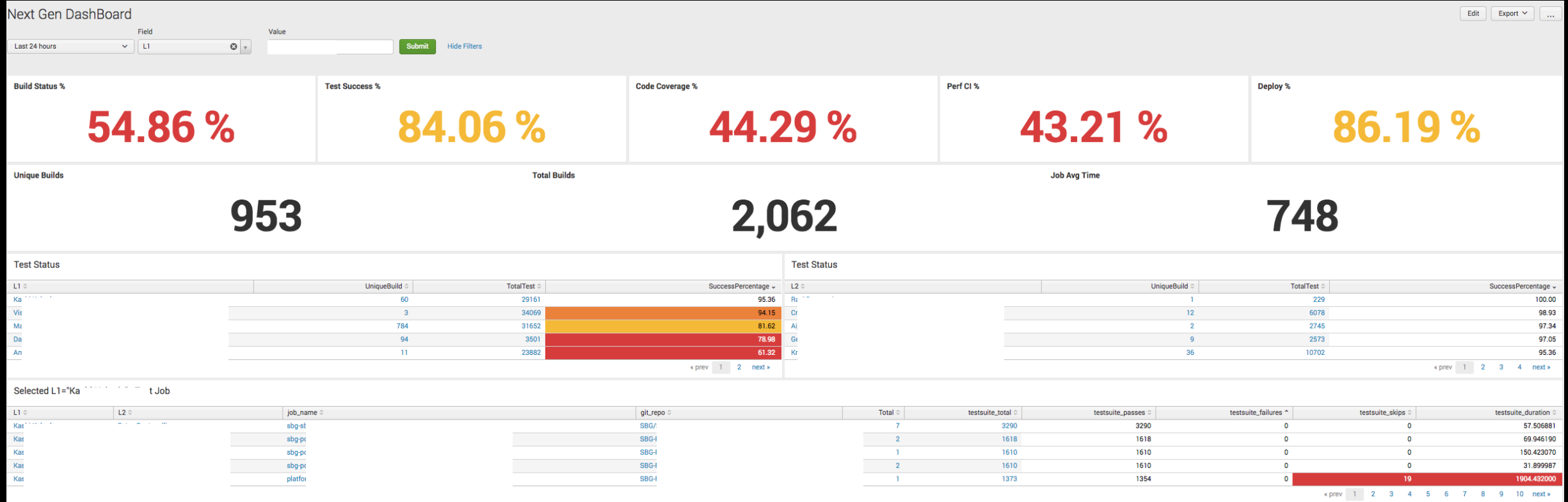


Integration with Collaboration Tools



Velocity - Overall

How we are identity opportunity, reporting and taking action – using Jenkins App



Velocity - Test

How we are identity detail information - using Jenkins App

Automation Insight
Edit Export ...

Last 24 hours
Select Environment: payment2
Field: job_name
Value:
Bucket: 1h
Time In: Perc90
Submit Hide Filters

Total Success %	Unique Builds	Total Builds	Success	Failure	Unstable	Abort
100.00 %	1	7	7	0	0	0
Test Success %	Unique Test Results Builds	Total Test Results Builds	Total Tests	Success	Failure	perc90 Test Time
100.00 %	1	7	3,290	3290	0	66.87 Sec

Build Information

job_name	hostname	SUCCESS	FAILURE	UNSTABLE	ABORTED	build_number	SUCCESSRate	Total
sbj-el	ihp-jenkins-payment2	7	0	0	0	531	100.00	7

Test Information

job_name	build_number	hostname	testsuite_total	testsuite_passes	testsuite_failures	testsuite_skips	testsuite_duration
sbj-sbg-payments-master-build-commit	525	ihp-jenkins-payment2	470	470	0	0	62.57
sbj-sbg-payments-master-build-commit	526	ihp-jenkins-payment2	470	470	0	0	51.11
sbj-sbg-payments-master-build-commit	527	ihp-jenkins-payment2	470	470	0	0	48.22
sbj-sbg-payments-master-build-commit	528	ihp-jenkins-payment2	470	470	0	0	66.87
sbj-sbg-payments-master-build-commit	529	ihp-jenkins-payment2	470	470	0	0	59.81

Test Case Information

testname	classname	result	duration
testComputeCardId_withTypeMasterCard	com.intuit	Passed	13.07
testDeTokenizeDelayed	com.intuit	Passed	10.60
testTokenizeDelayed	com.intuit	Passed	10.03
testDeTokenizeErrorResponse	com.intuit	Passed	3.68
testTokenizeBuildResponseError	com.intuit	Passed	1.75
GET	com.intuit	Passed	1.59
test	com.intuit	Passed	1.52
testEmptyViolation	com.intuit	Passed	1.39
testTokenize	com.intuit	Passed	1.16
testNoCustomize	com.intuit	Passed	1.15

Information

You have selected job sbj-sbg-payments-master-build-commit with build number 525 on https://jenkins2-ppd-qydc.payments.intuit.net/jenkins/

If you want to do [Build Analysis](#) If you want to do [Test Analysis](#) If you want to go to [Jenkins Instance](#) If you want to go to [TestNG Report](#) If you want to go to [Console Log](#)

Ownership Status

hostname	job_name	git_repo	build_number	L1	L2	job_result	ORG	testsuite_total	testsuite_passes	testsuite_failures	testsuite_skips	testsuite_duration
ihp-jenkins-payment2	sbj-el	SBG/SBG-Payments	525		ii	SUCCESS	SBG	470	470	0	0	62.569885
ihp-jenkins-payment2	sbj-el	SBG/SBG-Payments	526		ii	SUCCESS	SBG	470	470	0	0	51.108866

Overall Improvement

Key Takeaways

Scaling the Automation

Manual to Auto-magic
Context to Core

Measure & Improve Velocity

Visibility
Ownership /Accountability

Development

Time (from 50+ to 20+ min)
Success (80% to 98%)
Issues(Many to Few)

Data is Key

Collaboration of Data
Integration of Tools



Productivity

splunk> .conf2017

Using Splunk to Improve Splunk's Build Process

Eddie Shafaq
Splunk Infrastructure

First joined Splunk in August 2011 as a Systems Administrator. Aided in expanding engineering support in "exotic operating system" (AIX, HPUX, S390X and PowerLinux). Served as a member of release engineering to address operational and infrastructure support for products team. Currently serving an infrastructure leadership role around Core Engineering and Release Engineering services.

Bill Houston
Splunk Infrastructure

Bill started his career as an analog hardware engineer designing professional recording equipment. Currently he is a senior release engineer at Splunk working on improvements to the Jenkins CI systems. Prior to Splunk he spent 16 years at Adobe working in various roles; the last four were spent using Jenkins to build and test Adobe Flash.

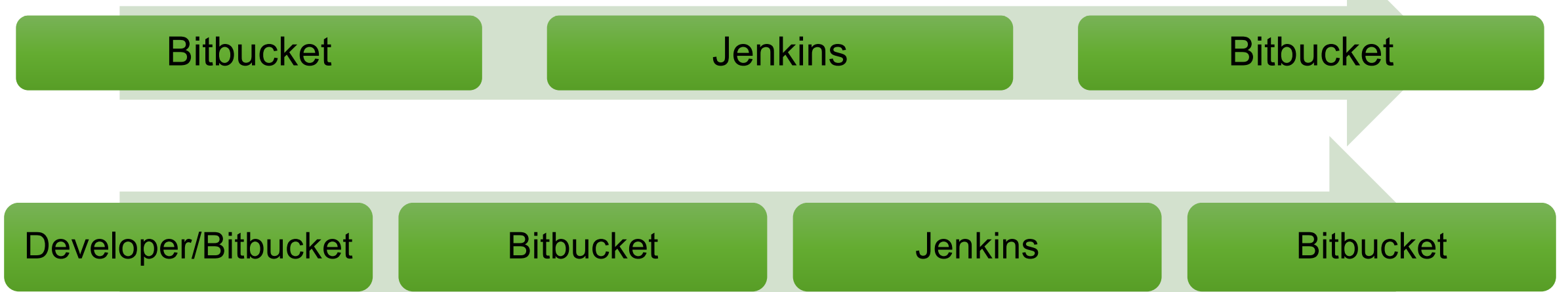
The Goal Set by Management

- ▶ Improve Developer Productivity
 - Our contribution: Get CI test results to developers faster



```
130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD15LAF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" "Opera/9.80.2016.10 (Windows NT 5.1; SV1; .NET CLR 1.1.4322)" "0"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD55L7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-20&product_id=K9-CU-01" "Mozilla/5.0 (Windows NT 6.0; WOW64; rv:38.0) Gecko/20100815 Firefox/38.0"
317.27.160.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD105LDE12ADF9 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
10.2.1.10 - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD55L7FF6ADFF9 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD105LDE12ADF9 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
10.2.1.10 - - [07/Jan 18:10:56:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
10.2.1.10 - - [07/Jan 18:10:56:189] "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
10.2.1.10 - - [07/Jan 18:10:56:189] "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
```

System Before Optimization



The system had **15 dedicated Linux agents** to perform continuous integration testing

Each job ran for approximately **54 minutes**, performing a build of Splunk and running a set of validation tests

That meant it could perform an approximate average of **17 jobs per hour**

System Before Optimization



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It was Obvious



Robert Hight runs a record
339.83 MPH at Sonoma Raceway
July 2017

We Needed To Speed Things Up!

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-5W-03"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF0 HTTP 1.1" 404 3322 "http://shopping.com/cart.do?action=purchase&itemId=EST-268product_id=KQ-CW-01"
1317 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3885 "http://shopping.com/cart.do?action=purchase&itemId=EST-16&product_id=RP-LI-02"
1317 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 468 125.17 14 "http://shopping.com/cart.do?action=remove&itemId=EST-16&product_id=RP-LI-02"
1317 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 468 125.17 14 "http://shopping.com/cart.do?action=remove&itemId=EST-16&product_id=RP-LI-02"

Our Analysis

Understanding the Situation

There were four factors that affected the delay developers experienced while waiting for test results

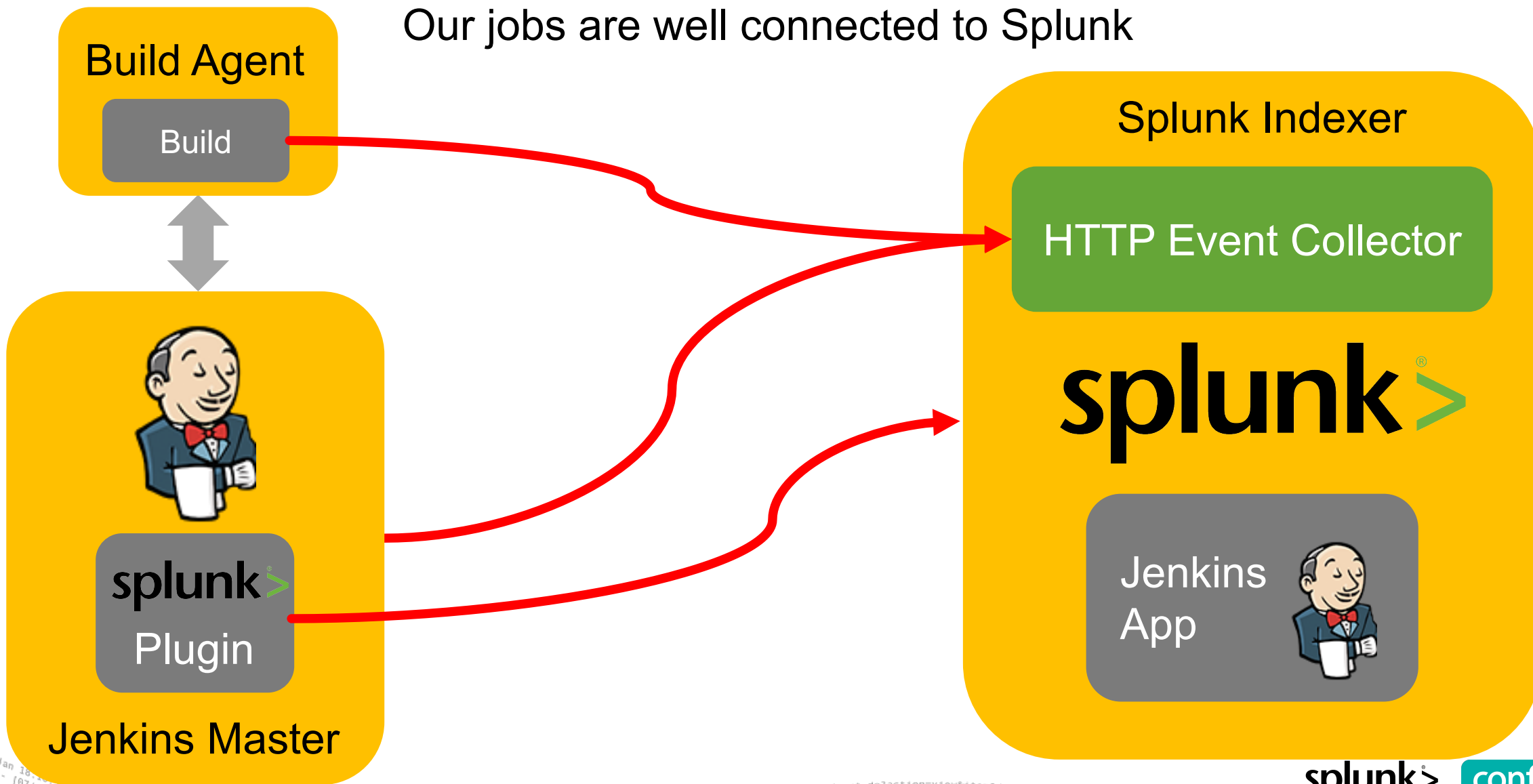
- Build time – how long it takes to build the Splunk executables
- Test time – how long it takes to perform the required set of tests
- Queue time – how long before the test actually started to run
- Notification – how long before developers know the test results

We need to quantify each of those factors and determine what we could do to mitigate their effects on the overall time



How We Collected The Data

Our jobs are well connected to Splunk



The Splunk Plugin for Jenkins

Makes it Easy to Send Your CI/CD Data to Splunk

The screenshot shows the Jenkins Plugins page for the Splunk 1.5.3 plugin. The page is titled "Find plugins" and features a navigation bar with links for Blog, Documentation, Plugins (active), Use-cases, Participate, Sub-projects, Resources, About, and a Download button. The main content area displays the following information:

- Splunk 1.5.3**: Minimum Jenkins requirement: 1.642.4, ID: splunk-devops
- Installs: 444**: GitHub →, Last released: 16 days ago
- Maintainers**: Danielle Jenkins, Kashyap Jotwani, Ted Xiao
- Dependencies**:
 - Script Security Plugin v.1.27 (required)
 - Jenkins Clover plugin v.4.7.1 (optional)
 - Jenkins Cobertura Plugin v.1.9.8 (optional)
 - Cucumber json test reporting. v.0.9.7 (optional)
 - Jenkins JaCoCo plugin v.2.1.0 (optional)
 - JUnit Plugin v.1.18 (optional)
 - TestNG Results Plugin v.1.14 (optional)
- Archives**: Get past versions (includes a line graph showing install trends from Jun to Jul)
- Labels**: Build notifiers, Build reports, Clean-up actions
- ARE YOU MAINTAINING THIS PLUGIN?**: Visit the [Jenkins Plugin Wiki](#) to edit this content.
- PREVIOUS SECURITY WARNINGS**

The Splunk logo is prominently displayed at the bottom of the plugin details section.

<https://wiki.jenkins.io/display/JENKINS/Splunk+plugin+for+Jenkins>

The Splunk Plugin for Jenkins

Easy to install

Splunk for Jenkins Configuration

Enable	<input checked="" type="checkbox"/>	
Indexer hostname	<input type="text"/>	?
HTTP Input Port	8088	?
HTTP Input Token	<input type="text"/>	?
SSL Enabled	<input checked="" type="checkbox"/>	?
Jenkins Master Hostname	jenkins_master	?
		<input type="button" value="Test Connection"/>
Raw Events Supported	<input checked="" type="checkbox"/>	?

```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-SW-01"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF0 HTTP 1.1" 404 322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS"
317.27.160.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-16&product_id=RP-LI-02"
0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3"
0 - - [07/Jan 18:10:56:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS"
0 - - [07/Jan 18:10:56:189] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS"
0 - - [07/Jan 18:10:56:189] "GET /category.action=remove&itemId=EST-18"
  
```

The Splunk Plugin for Jenkins

Easy to install

Splunk for Jenkins Configuration

Enable	<input checked="" type="checkbox"/>		
Indexer hostname		<input type="text" value="splunk_indexer.yourco.com"/>	?
HTTP Input Port		<input type="text" value="8088"/>	?
HTTP Input Token		<input type="text" value="0205A7BB-5388-4A89-B068-55DD7C8FEE54"/>	?
SSL Enabled	<input checked="" type="checkbox"/>		?
Jenkins Master Hostname		<input type="text" value="jenkins_master"/>	?
<input type="button" value="Test Connection"/>			
Raw Events Supported	<input checked="" type="checkbox"/>		?

```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-SW-03"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-268&product_id=KQ-CW-01"
317.27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3"
130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"

```

The Splunk Plugin for Jenkins

Easy to customize

Data Source ?

Config item ?

Value

Data Source ?

Config item ?

Value

- ✓ Build Event
- Build Report
- Console Log
- Jenkins Config
- Log File
- Queue Information
- Slave Information
- Default



The Splunk HTTP Event Collector

Simple to send custom data to your Splunk instance

In Bash

Format your data as a JSON string:

```
jsonData="{\"time\": 12345, \"index\": \"YourIndex\", \"sourcetype\": \"YourSourceType\", \"source\": \"YourSource\", \"event\": {\"YourFieldName\": \"SomeData\", more json formatted data goes here}}"
```

Include as much json formatted information as you need in the event section

Then execute a curl call:

```
curl \
  --tlsv1.2 --header "Authorization: <Splunk_auth_token_goes_here>" \
  --header "Content-Type: application/json" \
  --request 'POST' \
  --data $jsonData \
  https://YourSplunkInstance/services/collector/event
```

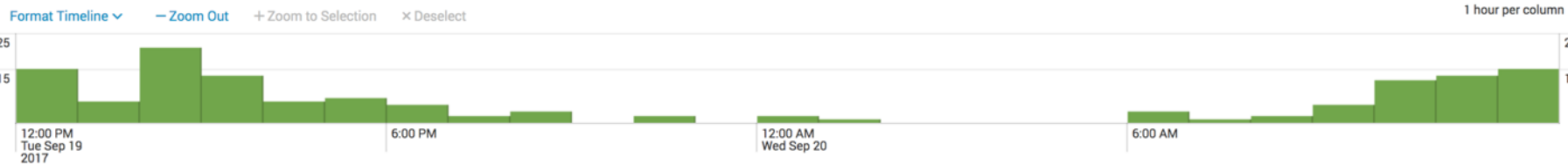
Its that simple...

New Search

index="build_info" sourcetype=jenkins-ci (job_name="rcvr" OR (job_name="Linux_ut_pr" branch="current" (result=SUCCESS OR result=UNSTABLE))) | eval qtime=(queueTime/60000) | timechart span=1h count(eval(job_name="rcvr")) AS "Triggers", eval(round(max(qtime), 0)) AS "Max Queued Time"

134 events (9/19/17 12:00:00.000 PM to 9/20/17 12:56:30.000 PM) No Event Sampling Job [controls] Verbose Mode

Events (134) Patterns Statistics (25) Visualization



List Format 50 Per Page < Prev 1 2 3 Next >

< Hide Fields All Fields

- Selected Fields
- a eventtype 1
 - a host 2
 - a index 1
 - a job_name 2
 - # linecount 1
 - a punct 2
 - a source 2
 - a sourcetype 1
 - a splunk_server 1
 - a tag 1
 - a tag:eventtype 1

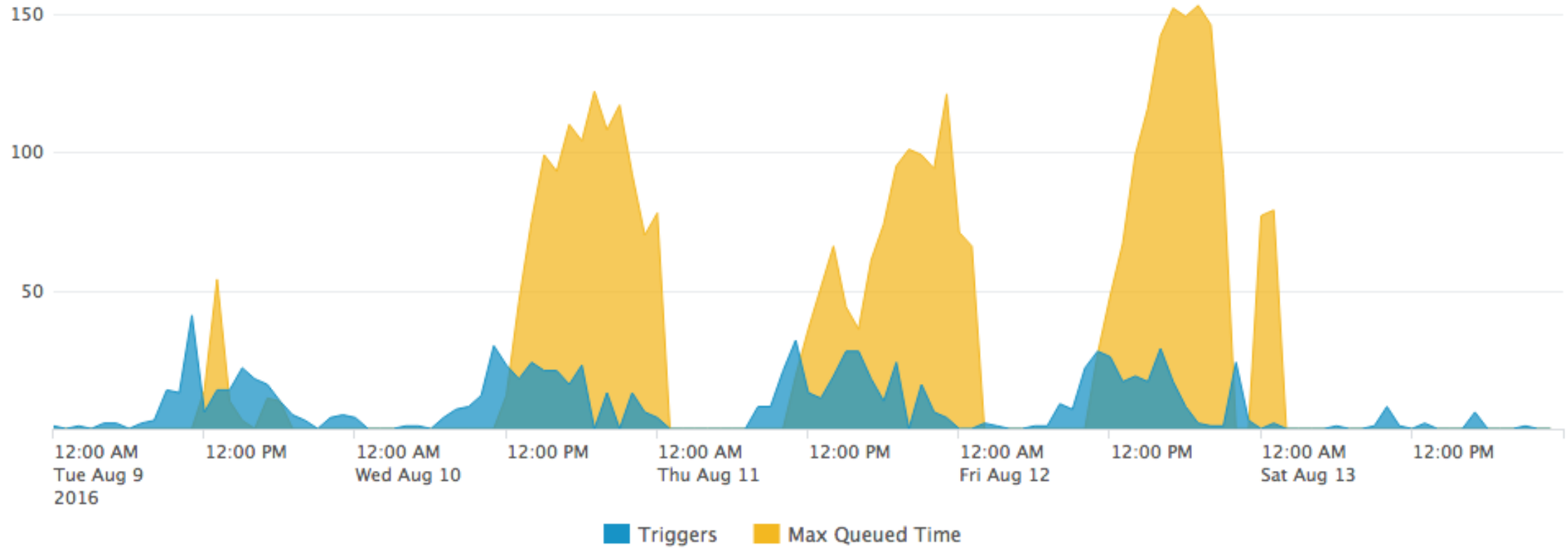
Interesting Fields # startTime 100+

i	Time	Event
>	9/20/17 12:52:48.735 PM	{ [-] branch: current build_url: https://re-...m/job/Pull_Request_Tests/job/Linux_ut_pr/8215/ change: 9f0dff07c5edebc2c399eb66d509720e013031b contribBuild: false duration: 8322426 failed_test_list: [[+]] job_name: Linux_ut_pr node: Fast_Linux-02 num_tests: 1113 num_tests_failed: 13 num_tests_passed: 1100 platform: Linux-x86_64 pull_request: 20108 queueTime: 30 result: UNSTABLE startTime: 1505928846 tested_by: timeoutCount: 1 }

Queue Times Before Optimization

Peak load period had significant delays

150 minutes! ↓



```
130.60.4 - - [07/Jun 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&item_id=EST-6&product_id=FI-SW-03" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
128.241.220.82 - - [07/Jun 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
317.27.160.0 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
10.1.1.1 - - [07/Jun 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD3SL7FF6ADFF0 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=KQ-CU-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_4; rv:53.0) Gecko/20100801 Firefox/53.0"
```


The Search We Use to Analyze Jobs

Of course this won't work for you, but...

```

index="jenkins console" host="aJenkins.ourco.com" source="*Linux ut pr*" ("make -j48 || exit 0" OR
"Install the project..." OR "Core build is done" OR "run the tests again" OR "Starting backend unit
tests" OR "Package and publish Splunk" OR "starting Linux 64 test" OR "fetch the jenkins scripts
directory" OR ("nodes run &gt;&gt;&gt;&gt; STARTING ACTION" AND "Write splunk-version.txt") OR
("STARTING COMMAND" AND "Running the contrib command") OR "Done all requested steps") | rex
field=source "job/Pull Request Tests/job/Linux ut pr/(?&lt;build number&gt;.*)/console" | eval
buildStep=case(searchmatch("fetch the jenkins scripts directory"),"start", searchmatch("starting Linux
64 test"),"clone", searchmatch("Running the contrib command"),"chroot", searchmatch("Write splunk-
version.txt"),"contrib", searchmatch("make -j48 || exit 0"),"setup", searchmatch("Core build is
done"),"build 1", searchmatch("Install the project..."), "build 2", searchmatch("Starting backend unit
tests"), "package", searchmatch("run the tests again"), "tests 1", searchmatch("Package and publish
Splunk"), "tests 2", searchmatch("Done all requested steps"), "publish") | chart values( time) by
build number, buildStep | eval gc = round(('clone' - 'start')/60) | eval cs = round((chroot -
'clone')/60) | eval "cb" = round((contrib - chroot)/60) | eval "bs" = round((setup - contrib)/60) |
eval "cub" = round((build 1 - setup)/60) | eval "cbc" = round((build 2 - build 1)/60) | eval "ts" =
round((package - build 2)/60) | eval "pst" = round((tests 1 - package)/60) | eval "sst" =
round(('tests 2' - 'tests 1')/60) | eval "pub" = round(('publish' - 'tests 2')/60) | search cb &lt; 5
| search sst &gt; 0 | search pst &lt; 25 | chart values(pub) as Publishing, values(sst) as "Sequential
Smoke Tests", values(pst) as "Parallel Smoke Tests", values(ts) as "Test Setup", values(cbc) as "Core
Build Continues", values(cub) as "Core and UI build", values(bs) as "Build Setup", values(cb) as
"Contrib Build", values(cs) as "Chroot Setup", values(gc) as "Git Clone" by build number

```

The Search We Use to Analyze Jobs

Collect the specific log file lines we will use in our analysis

```
index="jenkins_console" host="aJenkins.ourco.com"
source="*Linux_ut_pr*" ("make -j48 || exit 0" OR
"Install the project..." OR "Core build is done" OR
"run the tests again" OR "Starting backend unit
tests" OR "Package and publish Splunk" OR "starting
Linux 64 test" OR "fetch the jenkins scripts
directory" OR ("nodes run >>>> STARTING ACTION" AND
"Write splunk-version.txt") OR ("STARTING COMMAND"
AND "Running the contrib command") OR "Done all
requested steps")
```


The Search We Use to Analyze Jobs

Build a table of time stamps by job number and job step

```
| eval buildStep=case(searchmatch("fetch the jenkins scripts
directory"),"start", searchmatch("starting Linux 64
test"),"clone", searchmatch("Running the contrib
command"),"chroot", searchmatch("Write splunk-
version.txt"),"contrib", searchmatch("make -j48 || exit
0"),"setup", searchmatch("Core build is done"),"build 1",
searchmatch("Install the project..."), "build 2",
searchmatch("Starting backend unit tests"), "package",
searchmatch("run the tests again"), "tests 1",
searchmatch("Package and publish Splunk"), "tests 2",
searchmatch("Done all requested steps"),"publish")
```

```
| chart values( time) by build number, buildStep limit=50
```

The Search We Use to Analyze Jobs

Calculate the deltas between job steps

```
| eval gc = round(('clone' - 'start')/60) | eval cs
= round((chroot - 'clone')/60) | eval "cb" =
round((contrib - chroot)/60) | eval "bs" =
round((setup - contrib)/60) | eval "cub" =
round((build 1 - setup)/60) | eval "cbc" =
round((build 2 - build 1)/60) | eval "ts" =
round((package - build 2)/60) | eval "pst" =
round((tests 1 - package)/60) | eval "sst" =
round(('tests 2' - 'tests 1')/60) | eval "pub" =
round(('publish' - 'tests 2')/60) | search cb &lt; 5
| search sst &gt; 0 | search pst &lt; 25
```

The Search We Use to Analyze Jobs

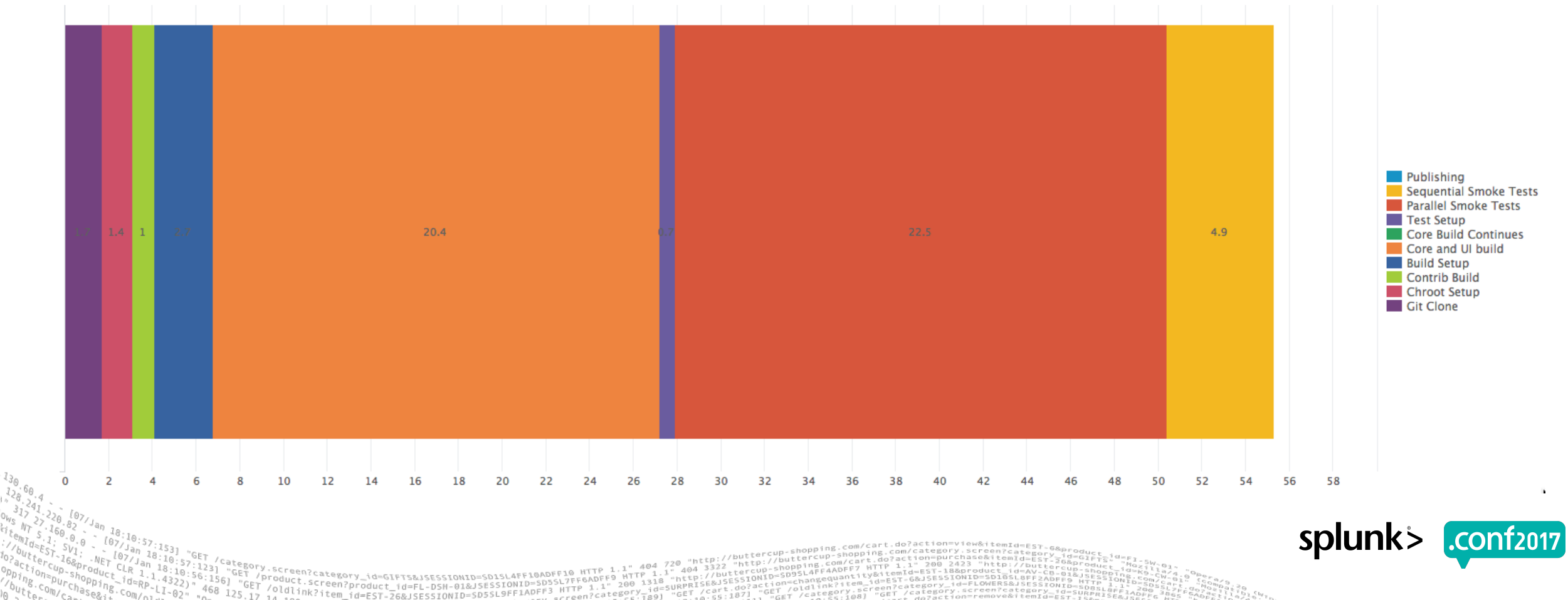
Build the final table with user friendly names for display

|chart values(pub) as Publishing, values(sst) as "Sequential Smoke Tests", values(pst) as "Parallel Smoke Tests", values(ts) as "Test Setup", values(cbc) as "Core Build Continues", values(cub) as "Core and UI build", values(bs) as "Build Setup", values(cb) as "Contrib Build", values(cs) as "Chroot Setup", values(gc) as "Git Clone" by build number limit=50

Our Analysis

How long does each step of a job take?

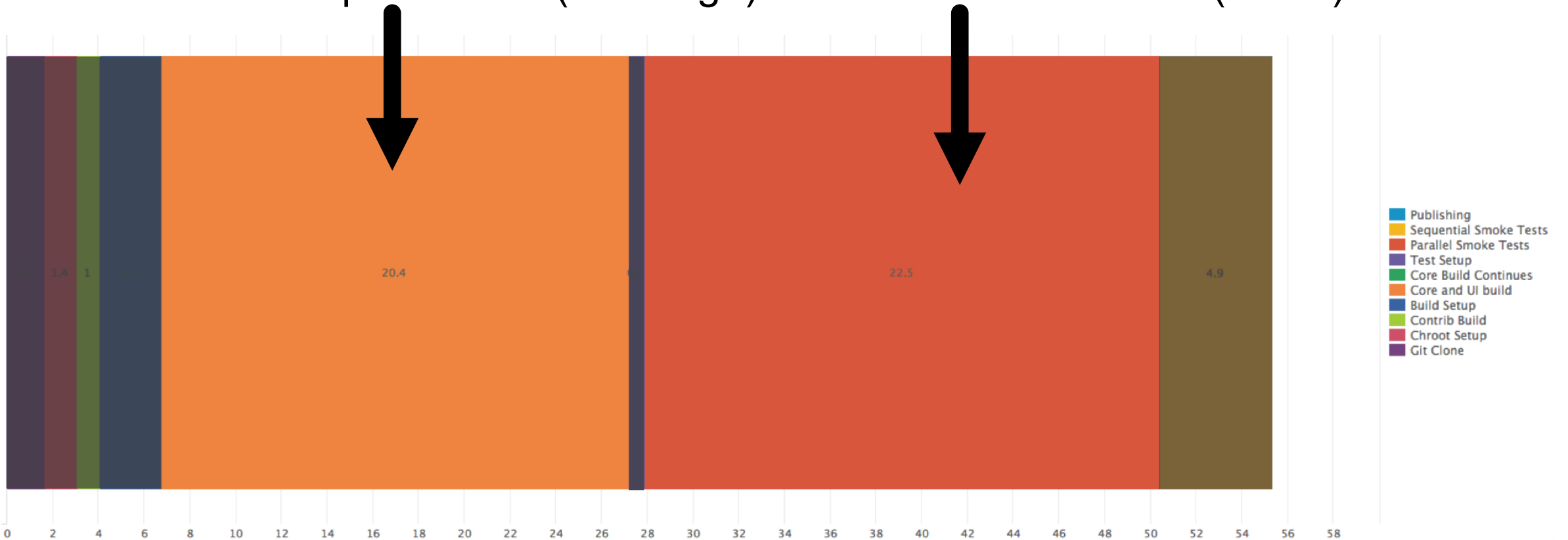
- We used the previous search to chart the time each step took



Our Analysis

How long does each step of a job take?

- We Identified the two portions of the job that took the longest
- The Splunk build (in orange) and the validation tests (in red)



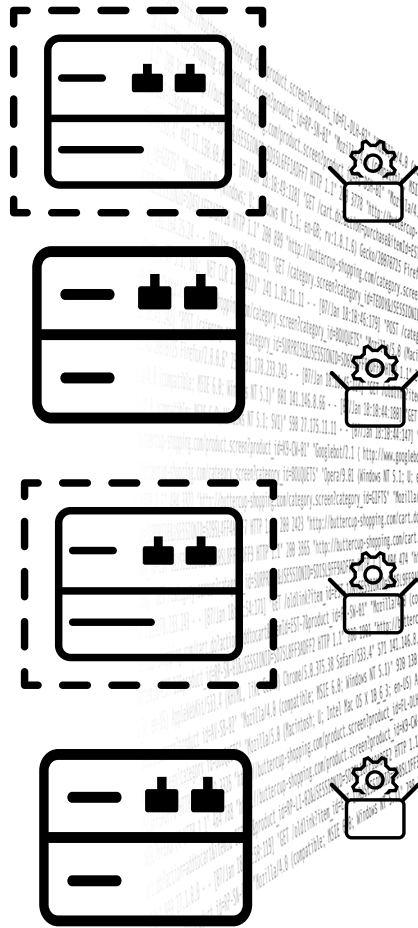
```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-SW-03"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD5L9FF1ADFF3"
317.27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
10.10.10.10 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5L9FF1ADFF3"
  
```


Distcc Architecture

Physical Machines and VMs:

12 x 20 Core VMs



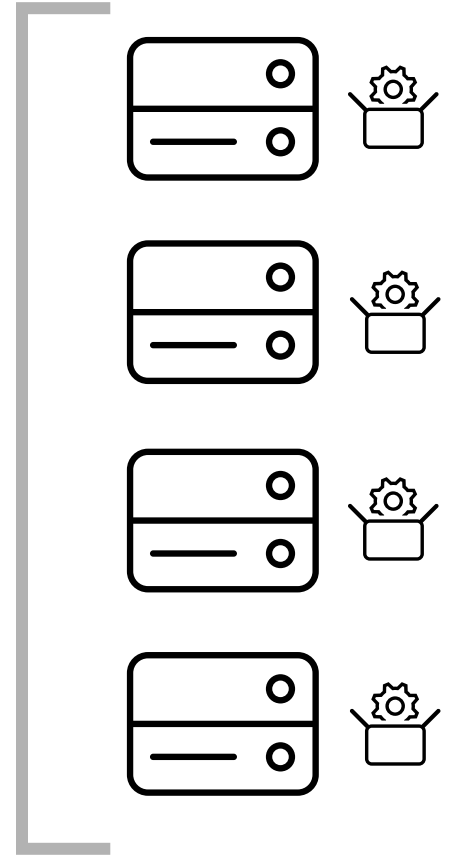
- All DistCC Build Clients and servers use the same build toolchain and chroot

- 15 Build agents

- 12 compile nodes

- DistCC server is used ONLY for compile

- make -j48



DistCC VS Normal Build

Building Splunk with DistCC

► 24 Min Build

- make -j 24
- Web UI -j 1
- Optimal 24 core VM agent

24m



► 19 Min Build

- make -j 48
- Web UI -j 1
- Optimal 24 core VM agent
 - 12 DistCC hosts

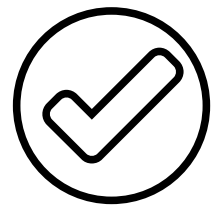
19m



► 8 Min Build

- make -j 48
- **Web UI -j 6**
- Optimal 24 core VM agent
 - 12 DistCC hosts

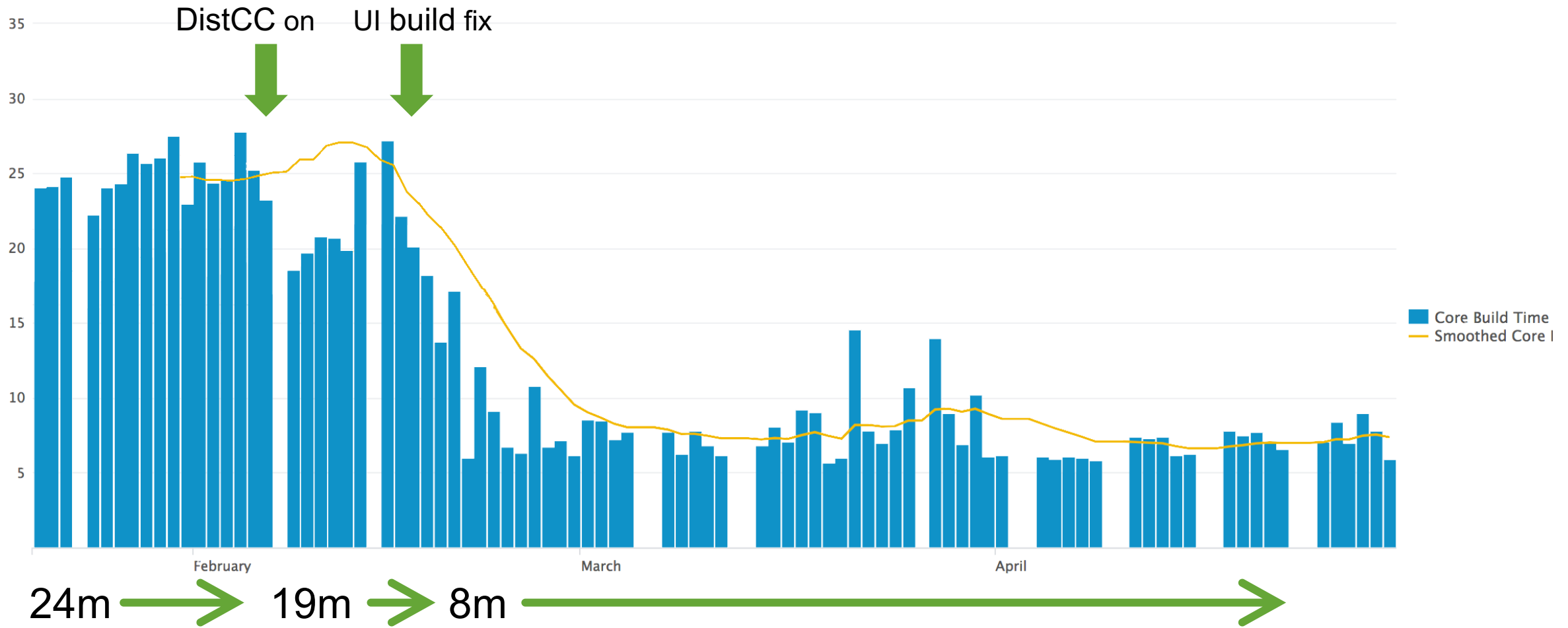
8m



130.60.4 - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15LAF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=F1-5W-03"
128.241.220.82 - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D35L7FF6ADFF9 HTTP 1.1" 404 322 "http://shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K9-CW-01"
ows NT 5.1; SV1; .NET CLR 1.1.4322" 468 125.17 14 - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D5L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 200 385 "http://shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K9-CW-01"
buttercup-shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K9-CW-01" 200 385 "http://shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K9-CW-01"
buttercup-shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K9-CW-01" 200 385 "http://shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K9-CW-01"

Build Time Improvement - Results

Dramatic reduction in the overall build time



```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-5W-01"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD35L7FF6ADFF0 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=KQ-CW-01"
ows NT 5.1: SV1: - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD35L7FF6ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD55L9FF1ADFF3"
//buttercup-shopping.com/ol - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/ol?action=purchase&itemId=EST-26&product_id=RP-LI-02"
do?action=purchase&itemId=EST-26&product_id=RP-LI-02" 468 125.17 14 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/ol?action=purchase&itemId=EST-26&product_id=RP-LI-02"
http://buttercup-shopping.com/ol?action=purchase&itemId=EST-26&product_id=RP-LI-02" 468 125.17 14 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=SD55L9FF1ADFF3 HTTP 1.1" 200 385 "http://buttercup-shopping.com/ol?action=purchase&itemId=EST-26&product_id=RP-LI-02"

```


Our Analysis

Reducing the Build Testing Time

Analysis:

- We sequentially run two different test configurations on build agents – parallel and sequential
- Parallel tests scheduled across 8 Splunk test instances
- Sequential tests ran one at a time
- We used Splunk to measure the overall timing of each test configuration as well as the individual tests

Mitigation:

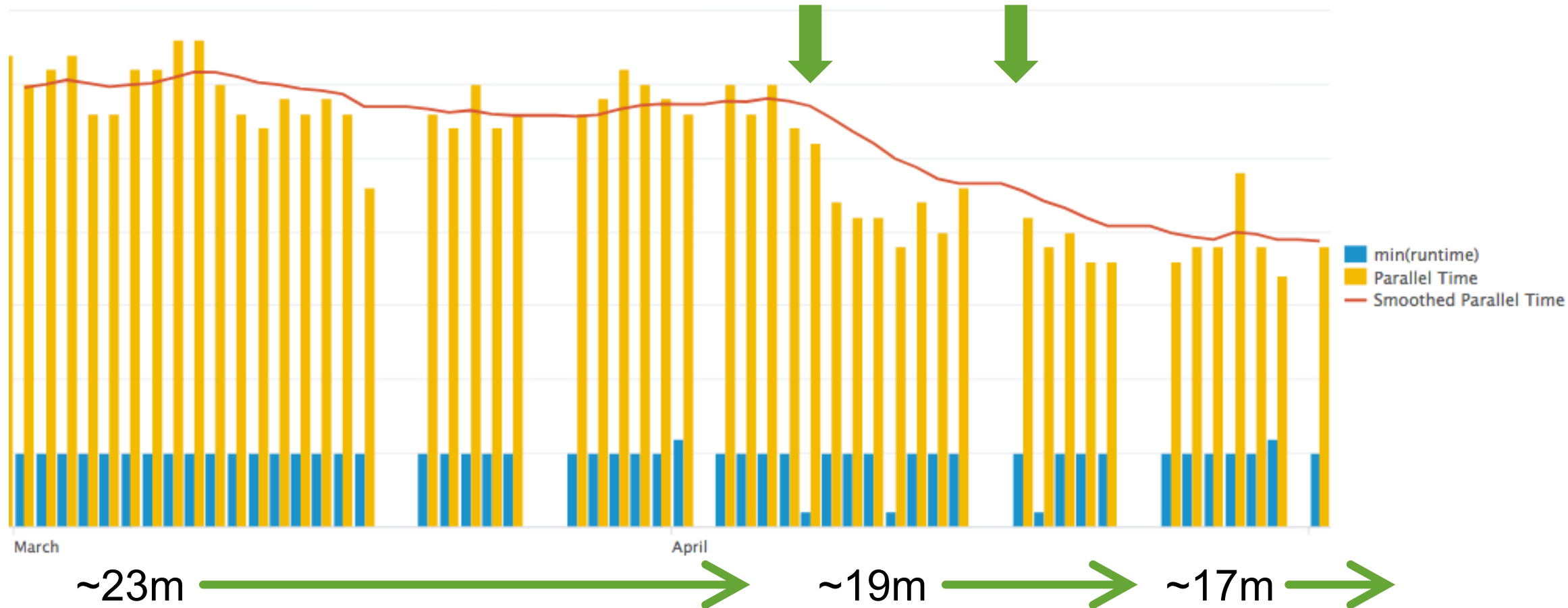
- Nothing could be done about the sequential tests
- Increased the number of parallel test instances to **12** and measured over a few days
- Increased the number of parallel test instances to **16** and measured over a few days

Increasing Test Parallelization

Improvement in the overall test time as parallel instances were increased

8->12

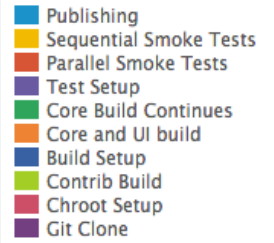
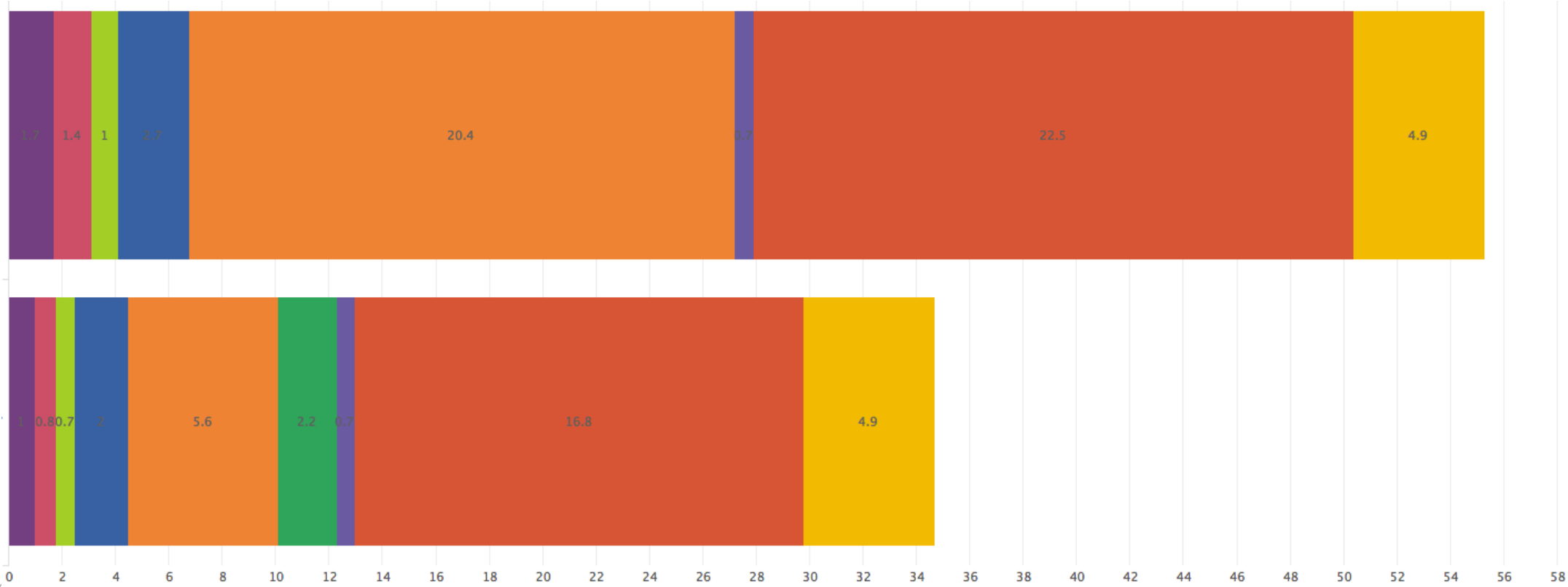
12->16



The Final Overall Result

Overall job time reduced to ~35 minutes

- Build time reduced to under 8 minutes
- Test time reduced to under 22 minutes



```
130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D35L7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS"
ows NT 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3"
item_id=EST-16&product_id=RP-LI-02" 468 125.17 14 "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3885 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3"
do?action=purchase&is.com/ol
opping.com/ca
0 - -
```


Our Analysis

Breaking Down The Timing

Reducing the Pull Request Queue time

Analysis:

- Developers are only waiting for results from pull request tests
- Triggers on commits to some branches and all pull requests

Mitigation:

- Use more agents for the pull request tests
- Manage the allocation of agents to tasks -> shift resources to pull requests when the queue starts to climb
- Add 5 “standby agents” with reduced capabilities that are powered up on demand -> smaller footprint on VM hosts

Our Analysis

Breaking Down The Timing

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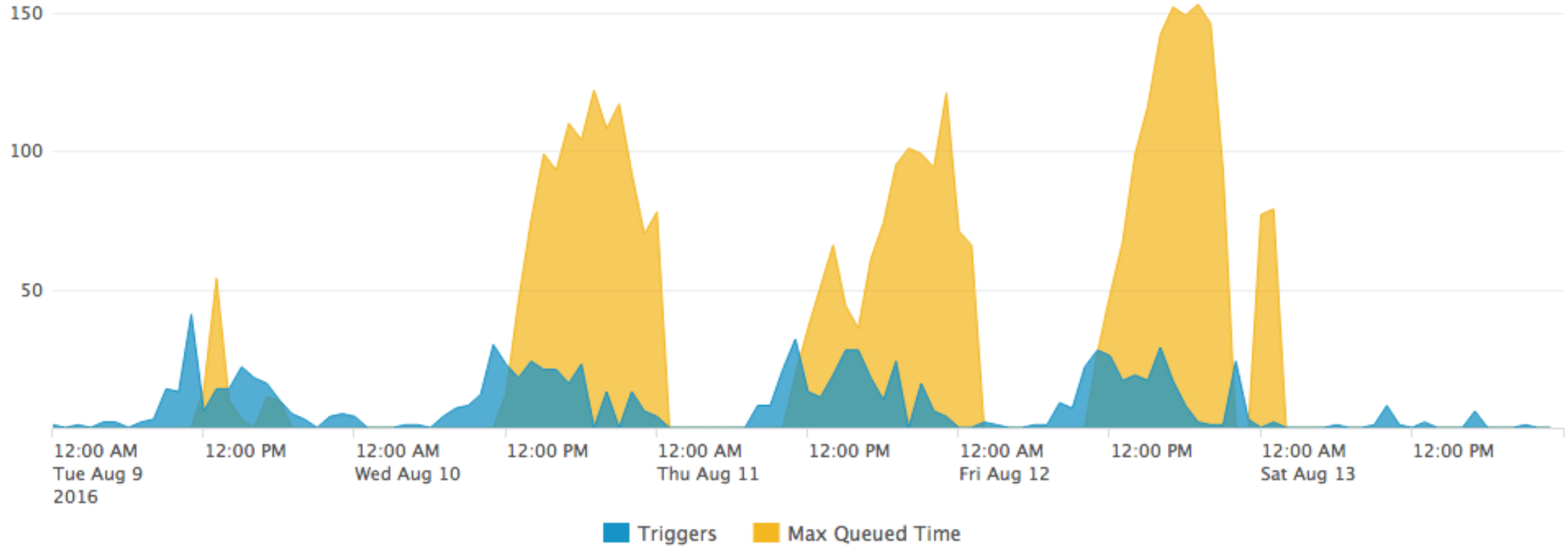
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```
130.60.4 ... [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=F1-5W-03" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0; rv:52.0) Gecko/20100801 Firefox/52.0"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=K9-CW-01" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0; rv:52.0) Gecko/20100801 Firefox/52.0"
317 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L7FF6ADFF3" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0; rv:52.0) Gecko/20100801 Firefox/52.0"
... [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3" 468 125.17 14.43322" "NET CLR 1.1.4322" "0-0-0" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0; rv:52.0) Gecko/20100801 Firefox/52.0"
... [07/Jan 18:10:55:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3" 404 385 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-14" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0; rv:52.0) Gecko/20100801 Firefox/52.0"
... [07/Jan 18:10:55:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3" 404 385 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-14" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0; rv:52.0) Gecko/20100801 Firefox/52.0"
```

Before Optimization

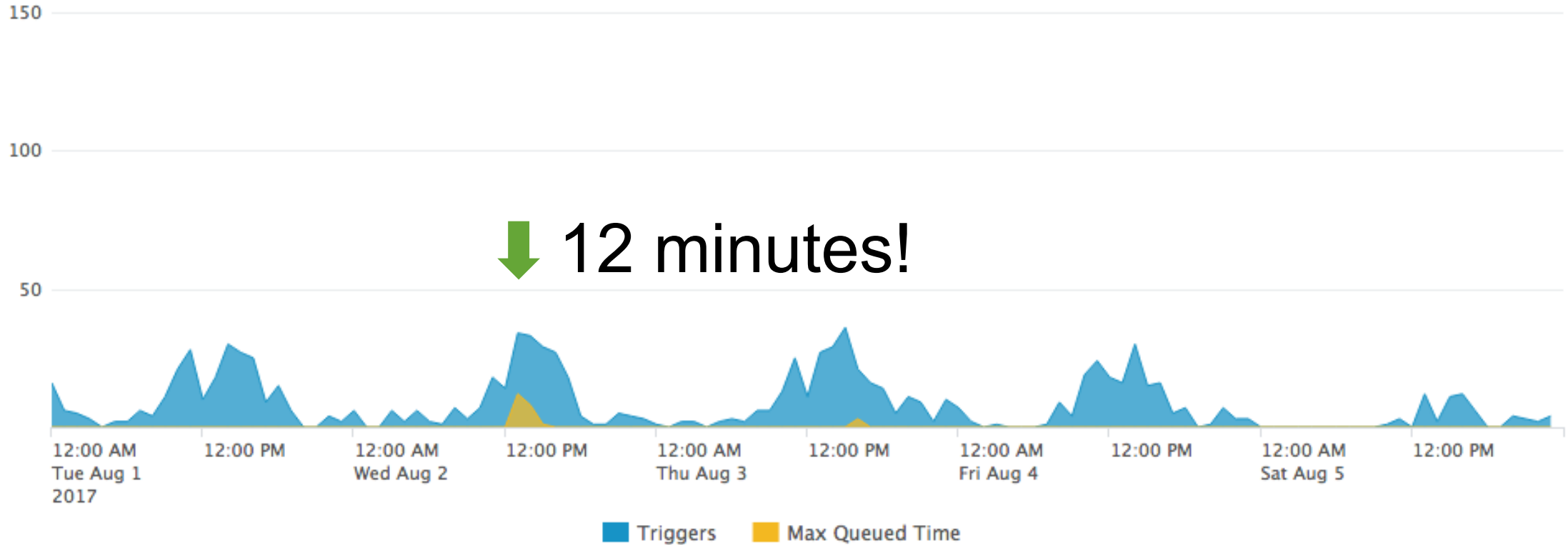
Peak load period → significant delays



130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15LAF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=F1-SW-03"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF0 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-268product_id=K0-CW-01"
317.27.160.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L7FF6ADFF0"
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After Optimization

Recent similar trigger conditions



```
130.60.4 - - [07/Jun 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=F1-SW-01"
128.241.220.82 - - [07/Jun 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3"
317.27.160.0 - - [07/Jun 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-18"
10.0.0.0 - - [07/Jun 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-18"
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```

Improving Notifications

```
130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" "Opera/9.80.8633.0 (Windows NT 6.0; WOW64; Trident/6.0; rv:11.0) like Gecko"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=Moz11.7.0-32bit-en-US"
1317.27.160.0.0 - - [07/Jan 18:10:56:150] "GET /oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD10SL9FF2ADFF9 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-13&product_id=FL-SW-01"
1317.27.160.0.0 - - [07/Jan 18:10:57:123] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=Moz11.7.0-32bit-en-US"
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```

Our Analysis

Speeding up Developer Notification

Analysis:

- Test results only available as comments in pull request UI
- Developers need to go to Bitbucket frequently to check for results
- All employees are connected via Atlassian HipChat

Mitigation:

- Added personal HipChat messages
 - On receipt of trigger → includes the current queue time
 - When job is completed → includes test results

Overall Improvement

Key Takeaways

Parallelize Builds

Improved efficiency in builds by optimizing parallelization

DistCC in Build System

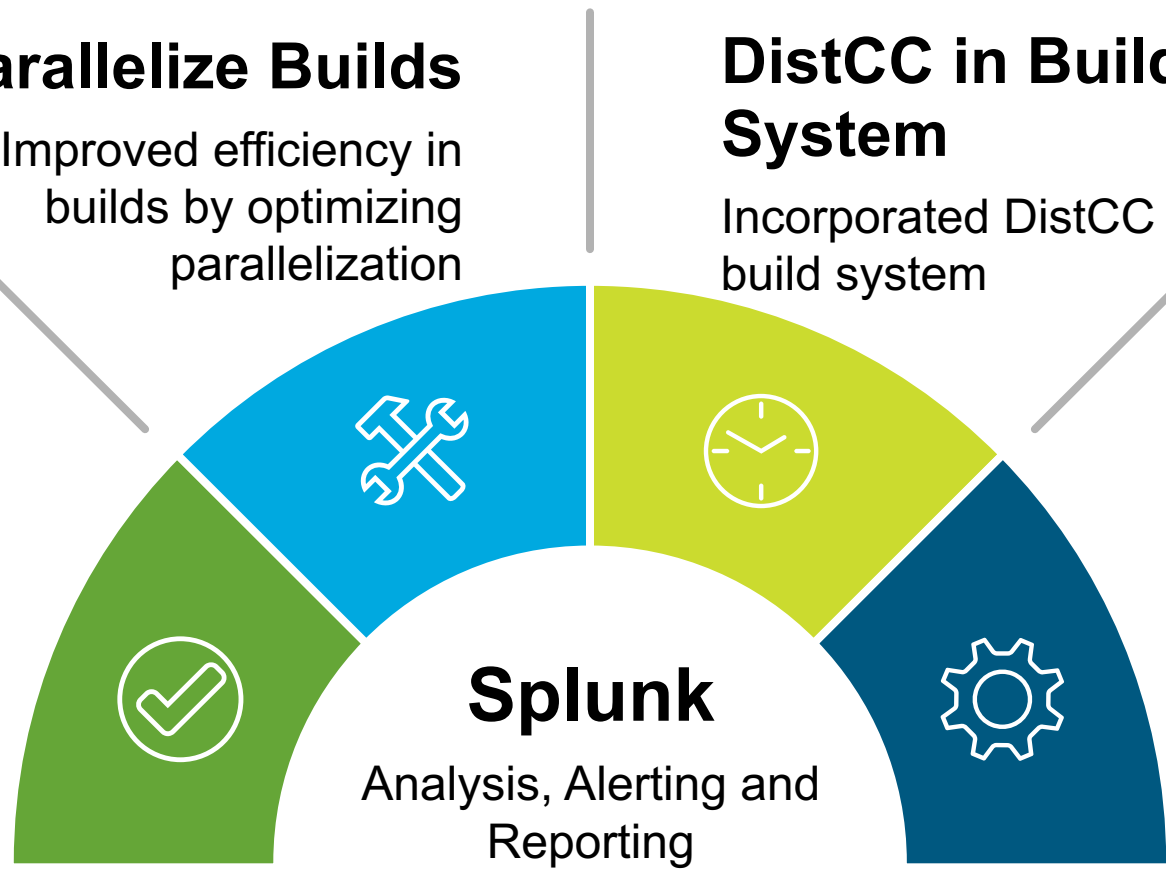
Incorporated DistCC in build system

Alerting Developers

Notified Developers about build and merge status

Parallelize Tests

Improved efficiency in test by optimizing parallelization



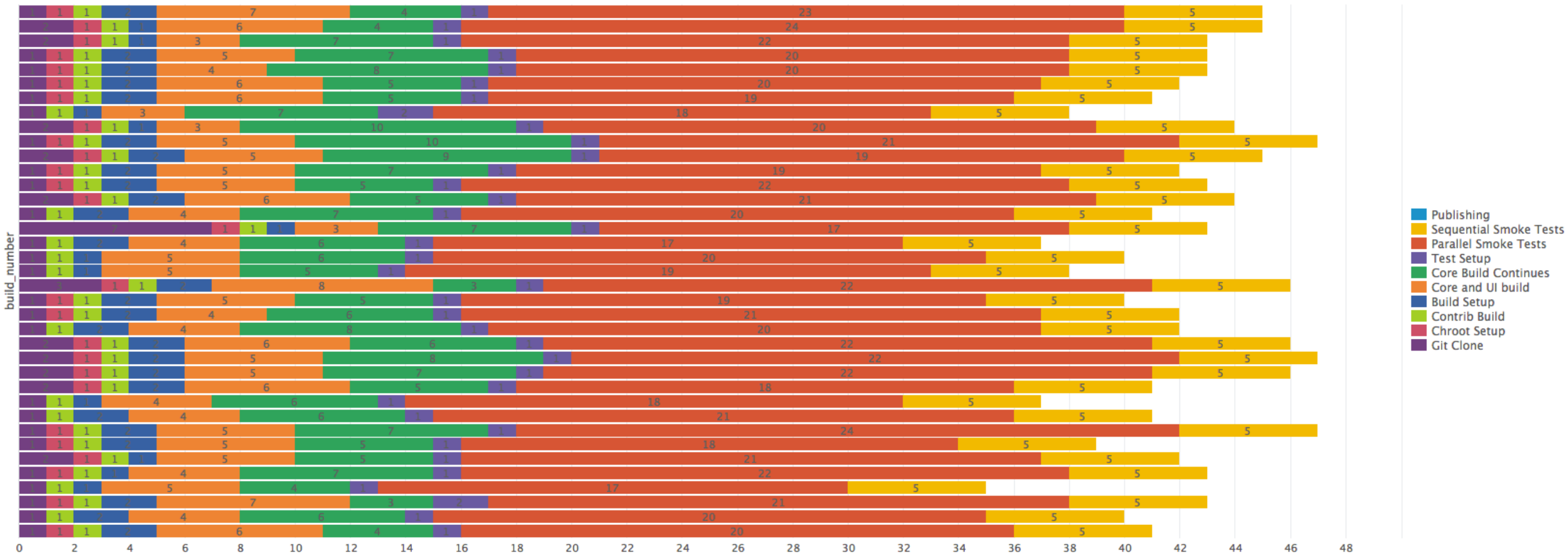
Splunk

Analysis, Alerting and Reporting

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-5W-03"
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317.27.160.0.0 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3"
130.60.4 - - [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D55L9FF1ADFF3"
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The Search We Used to Analyze Jobs

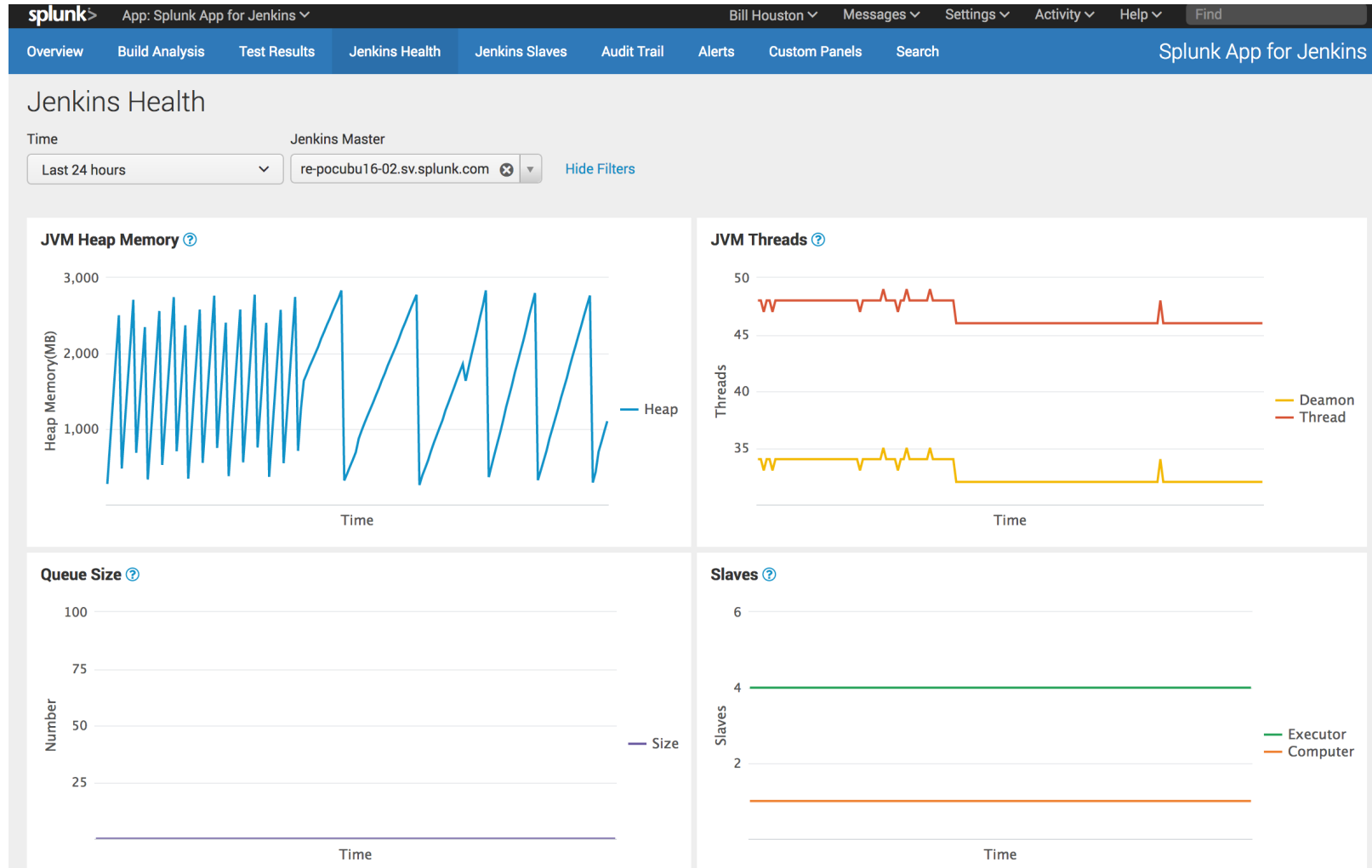
Here is what the full output of the search we presented earlier looks like



130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FI-5W-03"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD55L7FF6ADFF9 HTTP 1.1" 404 322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=K0-CU-01"
ows NT 5.1; SV1; .NET CLR 1.1.4322" 468 125.17 14 - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD55L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD55L7FF6ADFF9 HTTP 1.1" 200 385 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=K0-CU-01"
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The Jenkins App for Splunk

Seamlessly collect, monitor and analyze Your Jenkins Data



Thank You

Don't forget to **rate this session** in the
.conf2017 mobile app

splunk® **.conf2017**

Q&A

Splunk – Jenkins Configuration - 1

Name ▾	Folder name ▾	Version ▾	Update checking ▾	Visible ▾	Sharing ▾	Status ▾	Actions
Splunk App for Jenkins	splunk_app_jenkins	1.0.4	Yes	Yes	App Permissions	Enabled	Launch app Edit properties View objects View details on SplunkApps

JaCoCo plugin

No description available.

[2.2.1](#)

Splunk Plugin

"{color:#474444}Splunk plugin for Jenkins provides deep insights into your Jenkins master and slave infrastructure, job and build details such as console logs, status, artifacts, and an incredibly efficient way to analyze test results. The plugin is used together with a{color} {color:#474444} [Splunk App for Jenkins](#){color} {color:#474444}that provides out-of-the-box dashboards and search capabilities to enable organizations to run a high performing Jenkins cluster and bring operational intelligence into the software development life cycle.{color}"

[1.5.1](#)

Splunk for Jenkins Configuration	
Enable	<input checked="" type="checkbox"/>
Indexer hostname	splunk.
HTTP Input Port	443
HTTP Input Token	5765CFBF-9C5C-425A-RF79-BR0C:17D1100n
SSL Enabled	<input checked="" type="checkbox"/>
Jenkins Master Hostname	mtv-jenkins-qbo

Splunk – Jenkins Configuration - 2

Raw Events Supported
Custom Metadata

Data Source	Build Report	Index	Delete
Config Item	Index	jenkins	Delete
Value	jenkins		Delete
Data Source	Queue Information	Index	Delete
Config Item	Index	jenkins_statistics	Delete
Value	jenkins_statistics		Delete
Data Source	Build Event	Index	Delete
Config Item	Index	jenkins_statistics	Delete
Value	jenkins_statistics		Delete
Data Source	Console Log	Index	Delete
Config Item	Index	jenkins_console	Delete
Value	jenkins_console		Delete
Data Source	Log File	Index	Delete
Config Item	Index	jenkins_artifact	Delete
Value	jenkins_artifact		Delete
Data Source	Default	Index	Delete
Config Item	Index	jenkins_statistics	Delete
Value	jenkins_statistics		Delete
Data Source	Slave Information	Index	Delete
Config Item	Index	jenkins_statistics	Delete
Value	jenkins_statistics		Delete

Event Source: jenkins

Splunk App for Jenkins Link: https://splunk

Max Events Batch Size: 262144

Retries on Error: 3

Ignored Job Names Pattern: (?DY-QBO-v88Isplunk_health_pull_prod-goldenscan-jenkins)

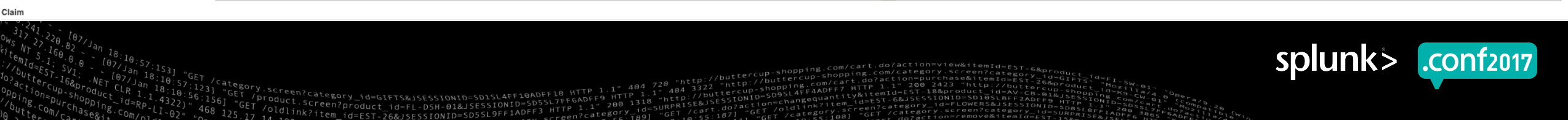
Customize Event Processing Script

Customize Event Processing Command

```
//send job metadata and junit reports with page size set to 50 (each event contains max 50 test cases)
splunkins.sendTestReport(50)
//send coverage, each event contains max 50 class metrics
splunkins.sendCoverageReport(50)
//send all logs from workspace to splunk, with each file size limits to 10MB
//splunkins.archive("**/*.log", null, false, "10MB")

//end
```

Claim



splunk > .conf2017

Splunk/Jira Validator Flow

```
<dependency>
  <groupId>com.intuit.qbo.qa</groupId>
  <artifactId>SplunkValidator</artifactId>
  <version>1.0.10</version>
</dependency>
```

POM.XML

Test

```
@Test(enabled = true)
@SplunkValidator(testFunctionality = "companyCreationforUS", enabledValidation=true, enabledJiraValidation=true, jiraProject="SBGCOMP")
public void USCompanyCreation() throws Exception {
    String i      _      = RuntimeSplunkConfig.getInstance().getTestToken();
    System.out.println("I#####_#####_   intuit_tid);
```

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <listeners>
    <listener class-name="com.intuit.sbg.splunk.SplunkValidatorListener" />
  </listeners>
  <test name="Test">
    <classes>
      <class name="healthcheck.CompanyCreationTest" />
    </classes>
  </test>
</suite>
```

Configuration

Jira defect

Secure https://jira.intuit.com/browse/SBGCOMP-363

TestAutomation Failure -> testQBOCompanyCreation

Comment Agile Board More

Details

Type: Bug Status: **CLOSED** (View Workflow)

Priority: P3: Low Resolution: Fixed

Component/s: None Fix Versions: None

Labels: None

Countries: United States English - en_US

Severity: S4-Minor

Environments: Test

Test Case ID: testQBOCompanyCreation_query.error

Description

Test Automation - Issue -> Test Exception ->

```
index=qbo* sourcetype=qboapplog TST-QBO-65-qa-testQBOCompanyCreation-QBOCompanyCreation_NewUser-2017031609272375-07544 exception | rex field=_raw "http://tkp.to/(?<takepi_url>[^ ]+)" | eval takepi_url="http://tkp.to/" + takepi_url | rex field=_raw "(?<errGenericEx>[\w.]*Exception)(:)*" max_match=1 | stats count by errGenericEx,intuit_tid,cluster,_time,takepi_url | appendpipe [ stats count | where count=0 | fields count ];Splunk_Verification_Test_Failed=TST-QBO-65-qa-testQBOCompanyCreation-QBOCompanyCreation_NewUser-2017031609272375;Splunk_Query_Result::takepi_url : http://tkp.to/jIhjqoX, cluster : 65, intuit_tid : TST-QBO-65-qa-testQBOCompanyCreation-QBOCompanyCreation_NewUser-2017031609272375-07544, count : 1, errGenericEx : java.lang.Exception, _time : 2017-03-16T09:27:24.000-07:00,
```

Attachments

Drop files to attach, or browse.

Activity

All Comments Work Log History Activity Emails Transitions

- SBGcompanyautomation created issue - 16/Mar/17 9:27 AM
- SBGcompanyautomation made changes - 16/Mar/17 11:36 AM

Field	Original Value	New Value
Status	Open [1]	Closed [6]
Resolution		Fixed [1]

```


130.60.4 - - [07/Jan 18:10:57:153] "GET /category/screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP/1.1" 404 220
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP/1.1" 200 1318
317.27.160.0 - - [07/Jan 18:10:56:156] "GET /category/screen?category_id=FLOWERS&JSESSIONID=SD5SL7FF6ADFF9 HTTP/1.1" 200 3865
468.125.17.14 [07/Jan 18:10:56:150] "GET /oldLink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP/1.1" 200 1189
100.238.238.238 [07/Jan 18:10:56:150] "GET /cart.do?action=changequantity&item_id=EST-6&JSESSIONID=SD10SL9FF1ADFF9 HTTP/1.1" 200 1318



```






Splunk Configuration

Branch: master ▾ EnvHealthCheck / healthcheck / src / test / resources / splunkConfig.properties Find file Copy path

 snagal upgrade for latest splunk query 92689cd on Apr 30

2 contributors  


9 lines (9 sloc) | 1.74 KB Raw Blame History   



```




1  env=qa
2  splunk.app.name=intu_sbg_qbo_search
3  delay.splunk.operations.milis=20000
4  USCompanyCreation=splunk.query.fci;count:1;error:null;status:true && splunk.query.error;count:0 && splunk.query.perf;count:1;er
5  GlobalCompanyCreation=splunk.query.fci;count:1;error:null;status:true && splunk.query.error;count:0 && splunk.query.perf;count:
6  OBILLCompanyCreation=splunk.query.fci;count:1;error:null;status:true && splunk.query.error;count:0 && splunk.query.perf;count:1
7  GlobalSubscription=splunk.query.fci;count:1;error:null;status:true && splunk.query.error;count:0 && splunk.query.perf;count:1;e
8  GlobalItemSubscription=splunk.query.fci;count:1;error:null;status:true && splunk.query.error;count:0 && splunk.query.perf;count
9  OBILLGetOffersAndSubscription=splunk.query.fci;count:1;error:null;status:true && splunk.query.error;count:0 && splunk.query.per

```

Branch: master ▾ EnvHealthCheck / healthcheck / src / test / resources / splunkQueries.properties Find file Copy path

 snagal upgrade for latest splunk query 92689cd on Apr 30

2 contributors  

6 lines (6 sloc) | 2.01 KB Raw Blame History   

```

1  splunk.query.fci=index=qbo* $intuit_tid$ sourcetype=access_combined 200 signupnewuser| stats dc(intuit_tid) as count by intuit_
2  splunk.query.perf=index=qbo* sourcetype=qboapplog $intuit_tid$ PerfStat signupnewuser service| stats dc(intuit_tid) as count,ma
3  splunk.query.error=index=qbo* sourcetype=qboapplog $intuit_tid$ "*Exception"| rex field=_raw "\http://tkp.to/(?<takepi_url>[^ ]
4  splunk.query.InternalQB0Exception=index=qbo* sourcetype=qboapplog $intuit_tid$ InternalQB0Exception| rex field=_raw "\http://tk
5  splunk.query.CriticalQB0Exception=index=qbo* sourcetype=qboapplog $intuit_tid$ CriticalQB0Exception| rex field=_raw "\http://tk
6  splunk.query.RuntimeException=index=qbo* sourcetype=qboapplog $intuit_tid$ RuntimeException| rex field=_raw "\http://tkp.to/(?<

```

Splunk/Jira Validator Flow

```

Splunk Verification_Test=QBO-65
Delaying splunk query for::10000 mili-seconds
Querying For:QUERY.FCI
SPLUNK QUERY::search index=qbo* sourcetype=qboapplog TST-QBO-65-ga-testQBACompanyCreation-QBACompanyCreation_NewUser-
20170316103616672-23419 signuexistinguser QboAuthFilter httpStatusCode=500 PerfStat| stats count
Time Range: From---15m - To --now
PATH:: /servicesNS/rest_tbarua/intu_sbg_qbo_search/search/jobs
intu_sbg_qbo_search
From Splunk:
  count: 0
Expected::
count :: 0
[Splunk Verification]

```

Successful Test

```

[Splunk Verification]
Mismatch:0, against:2
Mismatch:0, against:3
Mismatch:0, against:1
Mismatch:0, against:1
Splunk Verification_Test_Failed=TST-QBO-qbo-bats-4-e2e-en_US-testCreateInvoiceFromInvoiceList-TestCreateInvoiceFromInvoiceList
Action=Updated bug comments -> for JiraId=https://jira.intuit.com/browse/SBGCOMP-486

```

Failed Test

```

Querying For:QUERY.ERROR
SPLUNK QUERY::search index=qbo* sourcetype=qboapplog TST-QBO-65-ga-testQBACompanyCreation-QBACompanyCreation_NewUser-
20170316103616672-23419 exception| rex field=_raw "http://tkp.to/(?<takipi_url>[^\ ]+)" | eval takipi_url="http://tkp.to/" + takipi_url
| rex field=_raw "(?<errGenericEx>[\w\.]*)Exception(:)*" max_match=1 | stats count by errGenericEx,intuit_tid,cluster,time,takipi_url
| appendpipe [ stats count | where count=0 | fields count ]
Time Range: From---15m - To --now
PATH:: /servicesNS/rest_tbarua/intu_sbg_qbo_search/search/jobs
intu_sbg_qbo_search
From Splunk:
  count: 0
Expected::
count :: 0
[Splunk Verification]
Updated / closed jira https://jira.intuit.com/browse/SBGCOMP-364
Splunk Attributes::-----

```

Closed Test

```

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=FL-SW-01" "Opera/9.80.
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /category.screen?category_id=GIFTS&JSESSIONID=SD1SLAFF10ADFF10 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS" "Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1; .NET CLR 1.1.4322)"
317.27.160.0.0 - - [07/Jan 18:10:56:150] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 1316 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=K9-CU-01" "Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1; .NET CLR 1.1.4322)"
/buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 189 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=SD10SL9FF2ADFF9 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
/buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 189 "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
/buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 189 "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
/buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 189 "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"
/buttercup-shopping.com/oldlink?item_id=EST-26&JSESSIONID=SD5SL9FF1ADFF3 HTTP 1.1" 200 189 "GET /category.screen?category_id=FLOWERS&JSESSIONID=SD5SL7FF6ADFF9 HTTP 1.1" 200 3865 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-1"

```

Splunk Data uploader -1

```
12:35:30 entire-build-execution: 13 minutes, 27 seconds *** >>> !!! FOCUS ON SPEEDING THIS UP !!! *** <<<
12:35:30 Executing /home/scmbuild/.jenkins/workspace/QBO-Resiliency/Coverage-Daily-Build/build/maven/bin/mvn -quiet -s
/home/scmbuild/.m2/settings.xml -f /home/scmbuild/.jenkins/workspace/QBO-Resiliency/Coverage-Daily-
Build/qbo/build/upload_splunk_data/pom.xml install -DBUILD_KIND=nonDockerCI -DJOB_NAME=Coverage-Daily-Build -DBUILD_NUMBER=45
```

Uploading result After Build

i	Time	Event
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=807 host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=807 buildSection=entire-build-execution host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=0 buildSection=finish host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=0 buildSection=do-after-tests host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=0 buildSection=war-and-package host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=0 buildSection=clean-up host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=0 buildSection=do-tests host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=1 buildSection=misc-post-common-reactor host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=782 buildSection=common-reactor host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114
>	7/28/17 12:35:22.691 PM	2017-07-28T12:35:22.691-0700 buildKind=nonDockerCI buildName=Coverage-Daily-Build buildNumber=45 buildVersion=1707.045 buildLevel=I elapsedSeconds=24 buildSection=clean-and-prepare host = mtv-ubld-114 source = splunk_data.txt sourcetype = scmbuild_mtv-ubld-114

Result in Splunk

Splunk Data uploader - 2

```

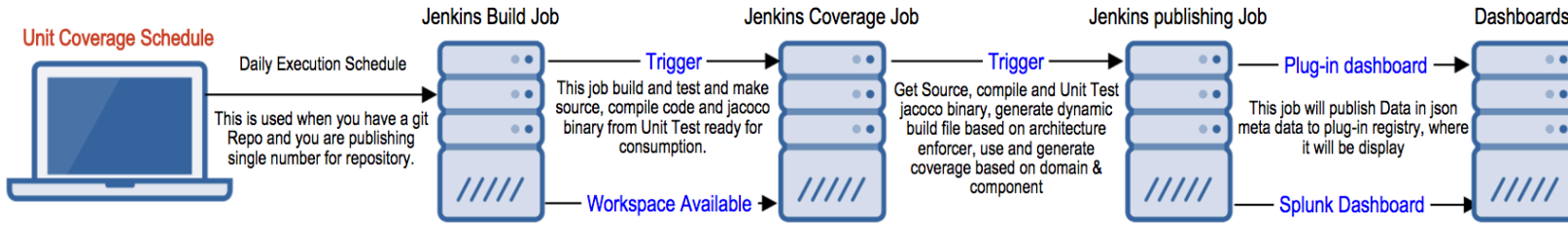
<parent>
  <groupId>com.intuit.sb.qbo</groupId>
  <artifactId>qbo-build-modules-list</artifactId>
  <version>17.08.0-SNAPSHOT</version>
</parent>

<artifactId>qbo-build-upload-splunk-data</artifactId>
<packaging>jar</packaging>
<name>QBO Splunk Data Upload Executor</name>

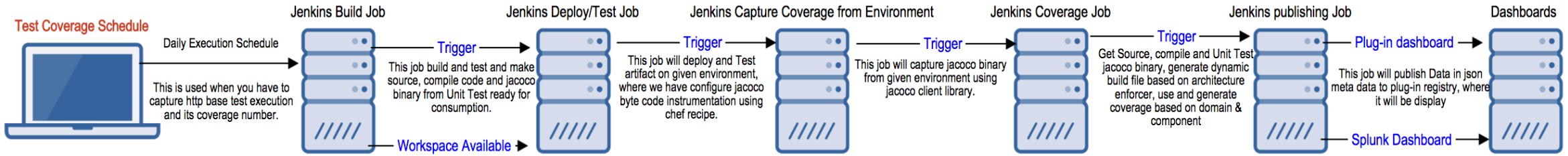
<build>
  <plugins>
    <plugin>
      <groupId>${project.groupId}</groupId>
      <artifactId>qbo-splunk-data-uploader-maven-plugin</artifactId>
      <version>${custom.maven.plugins.version}</version>
      <executions>
        <execution>
          <id>upload</id>
          <phase>install</phase>
          <goals>
            <goal>upload</goal>
          </goals>
          <configuration>
            <rootSourceDir>${src.home}</rootSourceDir>
            <host>${env.SPLUNK_DATA_UPLOADER_HOST}</host>
            <port>${env.SPLUNK_DATA_UPLOADER_PORT}</port>
          </configuration>
        </execution>
      </executions>
    </plugin>
  </plugins>
</build>

```


Coverage Process



Above is process to get coverage from Unit coverage and distribute in domain and components



Above is process to get coverage from QA, Test and V4 coverage and distribute in domain and components