



# Splunk for DevOps? Absolutely!

Using Splunk across Docker, Bitbucket, Jenkins, Boomerang.js & Splunk-JS

Tom Martin | Staff ITOA Practitioner

Domnick Eger | Global DevOps Practitioner

August 8, 2017 Version 1.0

# Forward-Looking Statements

During the course of this presentation, we may make forward-looking statements regarding future events or the expected performance of the company. We caution you that such statements reflect our current expectations and estimates based on factors currently known to us and that actual events or results could differ materially. For important factors that may cause actual results to differ from those contained in our forward-looking statements, please review our filings with the SEC.

The forward-looking statements made in this presentation are being made as of the time and date of its live presentation. If reviewed after its live presentation, this presentation may not contain current or accurate information. We do not assume any obligation to update any forward looking statements we may make. In addition, any information about our roadmap outlines our general product direction and is subject to change at any time without notice. It is for informational purposes only and shall not be incorporated into any contract or other commitment. Splunk undertakes no obligation either to develop the features or functionality described or to include any such feature or functionality in a future release.

Splunk, Splunk>, Listen to Your Data, The Engine for Machine Data, Splunk Cloud, Splunk Light and SPL are trademarks and registered trademarks of Splunk Inc. in the United States and other countries. All other brand names, product names, or trademarks belong to their respective owners. © 2017 Splunk Inc. All rights reserved.

# Today's Agenda

- ▶ Introduction
- ▶ Buttercup-Go!
- ▶ Modern Application Architecture
- ▶ DevOps Tooling & Monitoring
- ▶ Splunking the Modern App Dev Ecosystem

130.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category\_id=GIFTS&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product\_id=FI-SW-01" "Mozilla/5.0 (Windows NT 6.0; Opera/9.80...)"  
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product\_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 404 322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product\_id=K9-CI-01" "Mozilla/5.0 (Windows NT 6.0; Opera/9.80...)"  
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-1&product\_id=AV-CB-01&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product\_id=K9-CI-01" "Mozilla/5.0 (Windows NT 6.0; Opera/9.80...)"  
100.100.100.100 - - [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-1&product\_id=AV-CB-01&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product\_id=K9-CI-01" "Mozilla/5.0 (Windows NT 6.0; Opera/9.80...)"  
100.100.100.100 - - [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-1&product\_id=AV-CB-01&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product\_id=K9-CI-01" "Mozilla/5.0 (Windows NT 6.0; Opera/9.80...)"

# Technology Level Set

- ▶ Docker & docker-compose
- ▶ Buttercup-Go: a Node.js application
- ▶ Login: Auth0
- ▶ DevOps: CI/CD
  - Source Code Control: Git & Bitbucket
  - Build Automation: Jenkins
- ▶ Application Monitoring
  - Logging: Splunk JavaScript Logging + HTTP Event Collector (HEC) ... or Mint.js!
  - End User Monitoring: Boomerang.js + HEC
  - APM Tools: New Relic





# Buttercup-Go

---

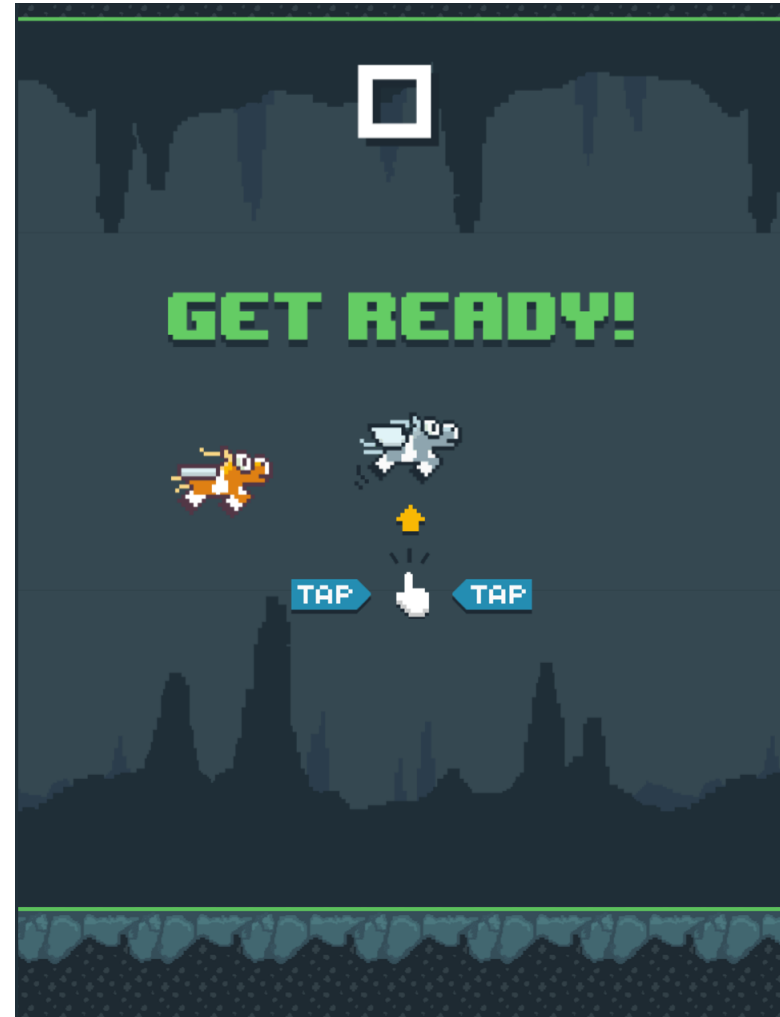
A quick introduction to our application

# Buttercup Go!

Give it a try!

<https://buttercup.rocks/>

[How did you do?](#)



138.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category\_id=GIFTS&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product\_id=FI-5W-01" "Opera/9.20 (Win  
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product\_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 404 322 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product\_id=K9-CW-01" "Mozilla/5.0 (Compati  
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=5D95L4FF4ADFF7 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product\_id=K9-CW-01" "Mozilla/5.0 (Compati  
doaction=purchase&is.com/ol  
doaction=purchase&is.com/ol  
doaction=purchase&is.com/ol



# Modern Architecture

---

The Technology behind the application







# ...and Docker Swarm Configured

```

docker-compose.yml x
1  version: "3.1"
2  services:
3  #####
4  #   BEFORE YOU BEGIN
5  #   Please make sure you have run:
6  #   docker swarm init
7  #
8  #   then you can execute this environment using:
9  #   docker-compose up -d
10 #####
11
12
13 # Buttercup-Go is the Node.js application that we'll be using in the workshop
14 → buttercup-go:
15   image: tmartin14/buttercupgo
16   hostname: buttercup-go
17   ports:
18     - "3040:3040"
19   networks:
20     - appdev_workshop
21
22
23 # Bitbucket is used to manage our source code
24 → bitbucket:
25   image: tmartin14/bitbucket_buttercupgo
26   hostname: bitbucket
27   ports:
28     - "7990:7990"
29     - "7999:7999"
30   networks:
31     - appdev_workshop
32
33
34 # Jenkins is our automation server. When code is committed in BitBucket, Jenkins will build & test it.
35 → jenkins:
36   image: tmartin14/jenkins_buttercupgo
37   hostname: jenkins
38   volumes:
39     - /var/run/docker.sock:/var/run/docker.sock
40     - /usr/bin/docker:/usr/bin/docker
41   ports:
42     - "8080:8080"
43     - "50000:50000"
44   networks:
45     - appdev_workshop
46
47

```

```

48 # Splunk Enterprise to collect, aggregate, investigate and visualize the data
49 → splunk-enterprise:
50   image: tmartin14/splunk_for_appdev_workshop
51   volumes:
52     - /opt/splunk/etc
53     - /opt/splunk/var
54   ports:
55     - "8000:8000"
56     - "9997:9997"
57     - "8088:8088"
58     - "8089:8089"
59   hostname: splunk-enterprise
60   environment:
61     SPLUNK_START_ARGS: "--accept-license --answer-yes"
62     SPLUNK_ENABLE_LISTEN: 9997
63     SPLUNK_ADD: tcp 1514
64     SPLUNK_USER: root
65     SPLUNK_CMD_1: "cmd python -c 'open(\"/opt/splunk/etc/.ui_login\", \"a\").close()'"
66   networks:
67     - appdev_workshop
68
69
70 # This is the network that allows all of our components to talk to each other.
71 → networks:
72   appdev_workshop:
73     driver: overlay
74

```

# What about Authentication?

---

Using Auth0 to track users and device information

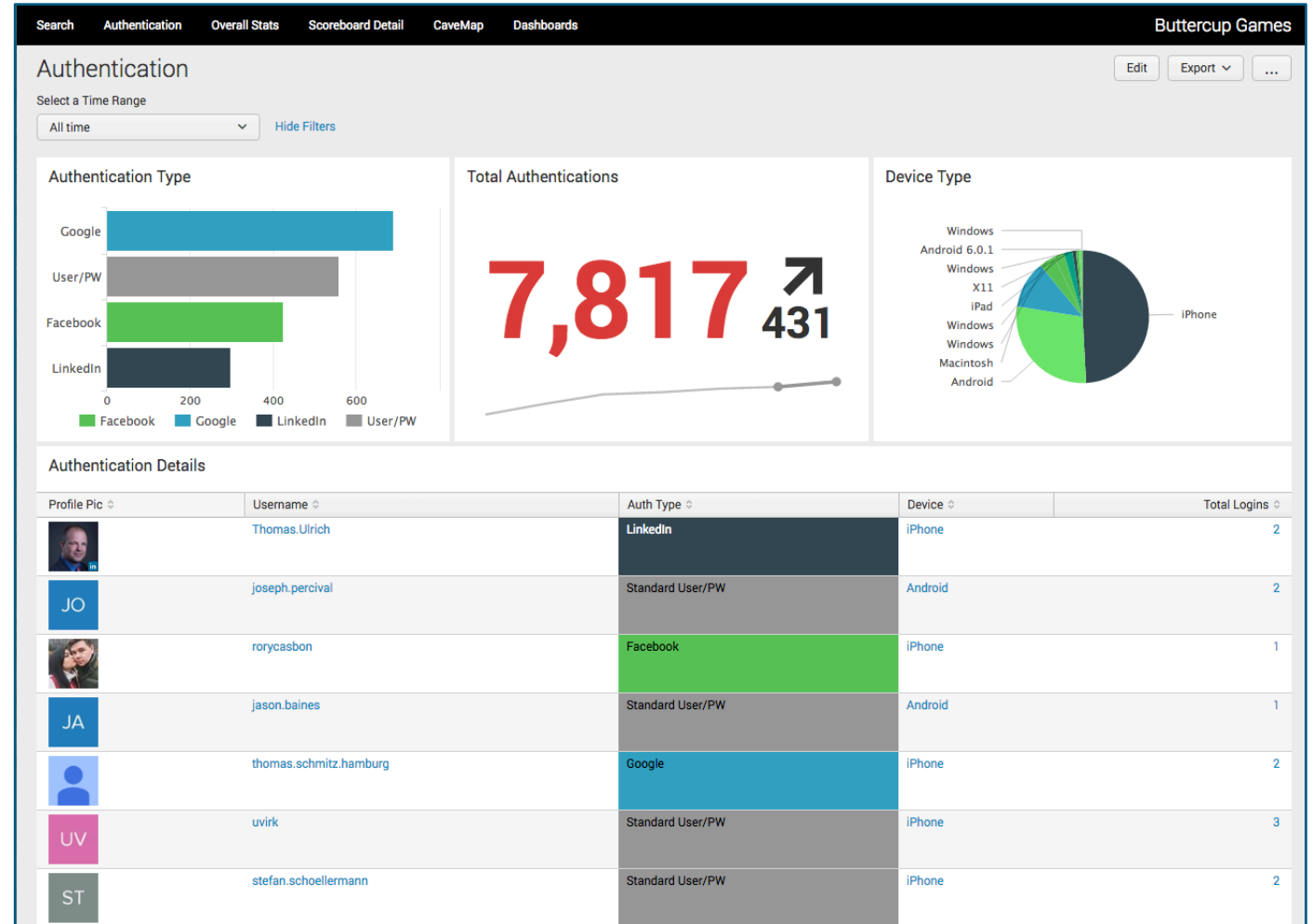




# What Can I See In Splunk?

## ► User Behaviors

- Number of logins
- Authentications by source
- Errors for a given user
- Platforms
- Trends





# Modern Application Development Tools

---

What will we be using today?





# Source Code Management (Bitbucket/GitHub)

- ▶ Devs work on 'Projects'
- ▶ Projects have 'repos'
- ▶ '*git clone*' your repo
- ▶ Source is now local

The image illustrates the process of cloning a repository from Bitbucket. It shows three sequential steps:

- Projects Page:** The user is in the 'Workshop' project.
- Repositories Page:** The user navigates to the 'Repositories' section, where a repository named 'buttercup-go' is visible.
- Clone in SourceTree:** The user clicks the 'Clone in SourceTree' button, which opens a dialog box. The 'HTTP' clone URL is entered as `http://admin@localhost:7990/scm/dev/`.

# Making Changes...There's a Process

## Actions

- ▶ Create a new "branch"
- ▶ Switch context to your new branch
- ▶ Modify the code
- ▶ Verify the changes you made
- ▶ Add your changes to the be submitted
- ▶ Commit your changes
- ▶ Push your changes to Bit Bucket

## ▶ Bitbucket UI

- Create Pull Request
- Merge

## Command Line

- ▶ git branch <branch name>
- ▶ git checkout <branch name>
- ▶ git status
- ▶ git add \*
- ▶ git commit -m "your comments here"
- ▶ git push origin module1

The image shows two overlapping screenshots of the Bitbucket web interface. The background screenshot displays the 'Updates for AppDev Workshops' repository page, showing a pull request created by 'Splunk Ops' from the 'workshop\_updates' branch to the 'master' branch. The foreground screenshot is a 'Merge Pull Request' dialog box, which includes a text input field for 'Add to the commit message...', a visual branch comparison diagram showing 'workshop\_updates' and 'master', and 'Merge' and 'Cancel' buttons at the bottom.

# Automated Deployment - CI/CD Using Jenkins

- ▶ 1 Build Plan per Developer
- ▶ 1 Branch per Build Plan
- ▶ Jenkins will automatically build your project and deploy it when you merge your code

## ▶ Build Plan

```
npm install
npm install newrelic
npm build

npm start
```

The screenshot shows the Jenkins web interface. At the top, there's a navigation bar with the Jenkins logo and a red notification badge with the number '2'. Below the navigation bar, there's a sidebar with various menu items: New Item, People, Build History, Project Relationship, and a main navigation area with Jenkins logo and 'Jenkins > buttercup-go >'. The main content area displays a table of build jobs for the 'buttercup-go' project. The table has columns for 'S' (Status), 'W' (Workspace), 'Name', and 'Last Success'. One build job is listed: 'buttercup-go' with a status of 'S' and a last success time of '2 mo 4 days - #7'. Below the table, there are several sections: 'Project buttercup-go', 'Configurations' (with a 'default' configuration), and 'Permalinks' (with links for 'Last build (#7), 2 mo 4 days ago' and 'Last stable build (#7), 2 mo 4 days ago').

S	W	Name ↓	Last Success
		<a href="#">buttercup-go</a>	2 mo 4 days - <a href="#">#7</a>

**Project buttercup-go**

**Configurations**

- [default](#)

**Permalinks**

- [Last build \(#7\), 2 mo 4 days ago](#)
- [Last stable build \(#7\), 2 mo 4 days ago](#)





# Capture Business Metrics From The App Via HEC

- ▶ Create HEC Token
- ▶ Install Splunk Logging

```
npm install --save splunk-logging
```

- ▶ Add logging code
- ▶ Monitor your app

```
var SplunkLogger = require('splunk-logging');

var config = {
  token: "your-hec-token",
  url: "https://splunk.com:8088/_collector"
};

var Logger = new SplunkLogger(config);

var payload = {
  message: {
    temperature: 75,
    chickenCount: 10
  }
};

Logger.send(payload);
// If successful, console.log("Sent")
};
```

The screenshot shows the Splunk web interface for the 'Buttercup Games' app. The 'Overall Stats' dashboard displays the following metrics:

- Games Played:** 2,434
- Total Users:** 323
- Total Flaps:** 53,162

Below the summary cards, a table lists the top performers:

Player	Total Games	Avg. Duration	Max. Duration	Total Flaps	Highest Score	Gates Passed	Avg. Score
1 thomas.nordmann	15	27.91 sec	45.47 sec	1430	46	414	27.6
2 christian.k186	11	20.81 sec	44.52 sec	796	45	222	20.2
3 karasawa-ta	116	19.45 sec	41.53 sec	7572	42	2160	18.8
4 koga-t	46	23.06 sec	40.58 sec	3640	41	1036	22.5
5 marcel.dutt	3	21.69 sec	40.76 sec	222	41	63	21.0
6 florian.metz90	47	16.80 sec	32.07 sec	2613	32	736	16.0
7 timo.lamm	6	15.58 sec	30.11 sec	341	30	88	14.7
8 c.thal	115	12.33 sec	29.25 sec	4837	29	1296	11.3
9 dennisgosing	34	10.84 sec	29.22 sec	1226	29	312	9.8
10 franziska.lucas	7	15.80 sec	28.25 sec	379	28	104	14.9
11 martin.gawantka	64	9.26 sec	26.54 sec	2049	26	515	8.0
12 i.schmitt	126	7.15 sec	25.35 sec	3011	25	731	5.8
13 martin.mueller	32	6.17 sec	25.53 sec	687	25	152	4.8
14 facebook	65	8.38 sec	24.39 sec	1938	24	455	7.1



# End User Experience - Mint.js

- ▶ Add Mint.js to your app (mint.min.js) [ /app/utils/splunkhttp.js ]
- ▶ Initialize Mint.js & start sending data!
- ▶ Monitor Real Users

```
// Adding Mint.js
const mint = require('assets/scripts/mint/mint.min.js');

// Initialize Mint.js
Mint.initAndStartSession({ apiKey: 'abcdefgh', collectLogs: true, collectNetworkCalls: false });
Mint.setPackageName('Buttercup-Go');

...

// Send data to Mint!
Mint.setUserIdentifier('abc123');
Mint.logEvent('Buttercup-Go', 'info', <JSON - whatever data you want to send>);
```



# APM – New Relic

- ▶ Instrument the app
- ▶ Add the JavaScript
- ▶ APM Add-On in Splunk
- ▶ View APM Data!

1 Get your license

Reveal license key

2

```

<!--
<script
  
```

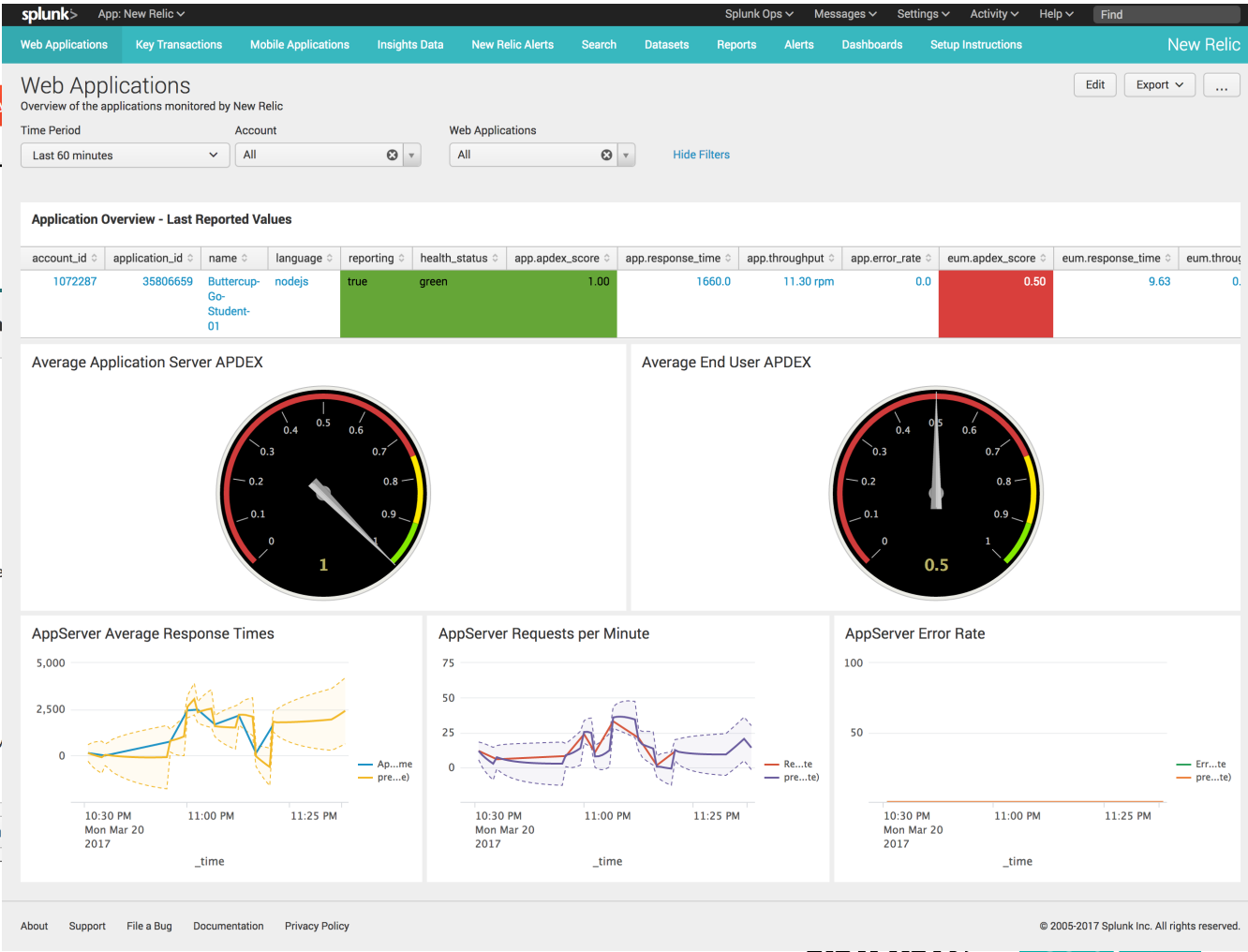
3

Replace the license key

4 Require New Relic

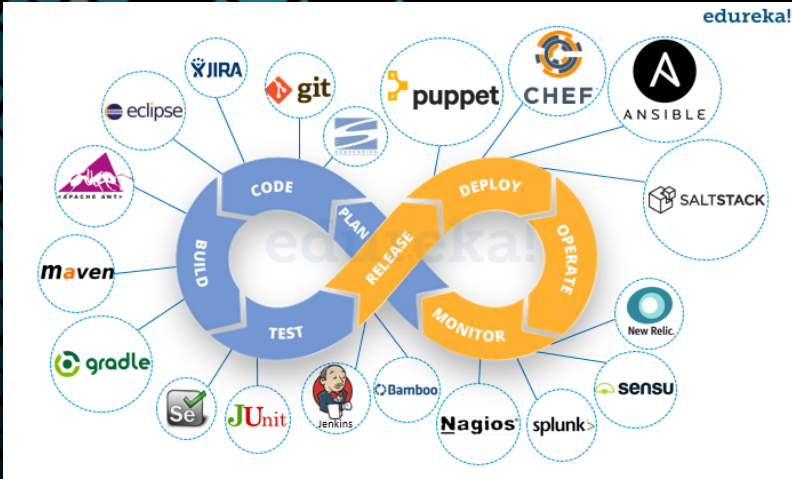
require('newrelic')

5 Deploy your code



```

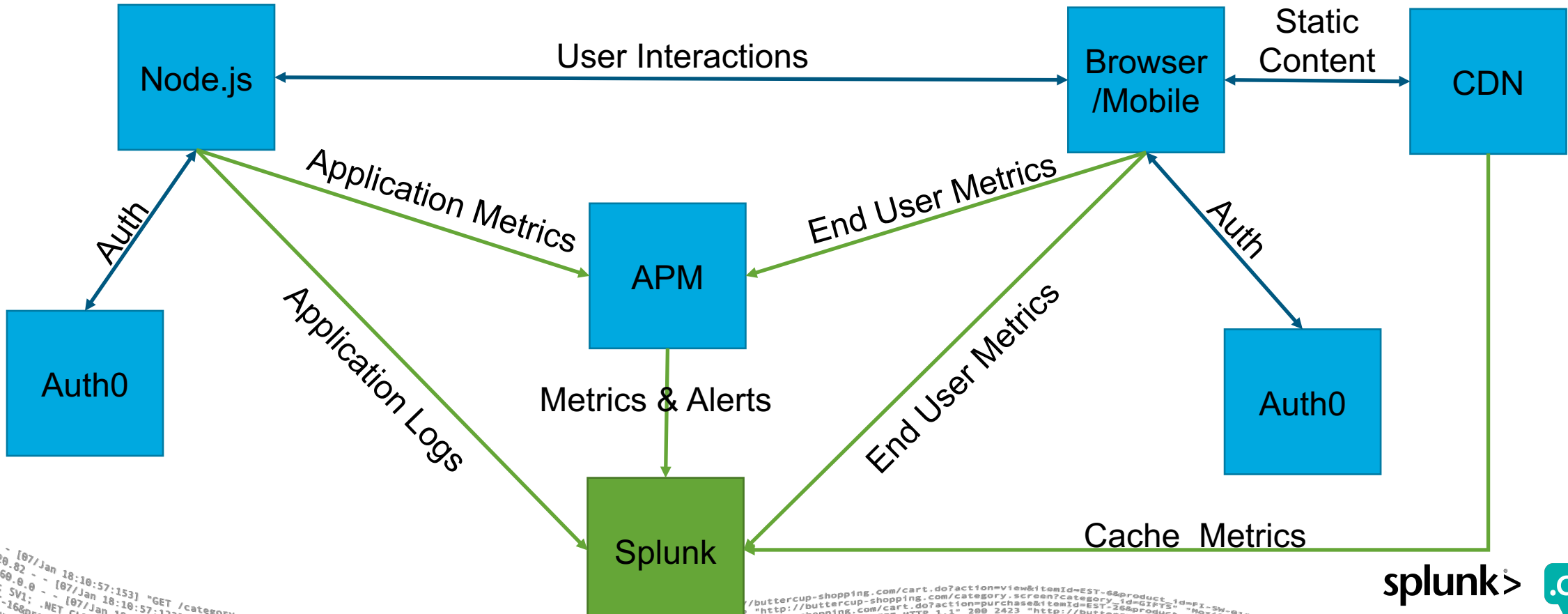
138.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&item_id=EST-6&product_id=FI-SW-01"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 404 3522 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-2"
317.27.160.0 - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-2&product_id=FI-SW-01"
10.10.10.10 - - [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&item_id=EST-26&product_id=FI-SW-01"
10.10.10.10 - - [07/Jan 18:10:55:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=FI-SW-01"
10.10.10.10 - - [07/Jan 18:10:55:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=FI-SW-01"
10.10.10.10 - - [07/Jan 18:10:55:187] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D15L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=FI-SW-01"
  
```



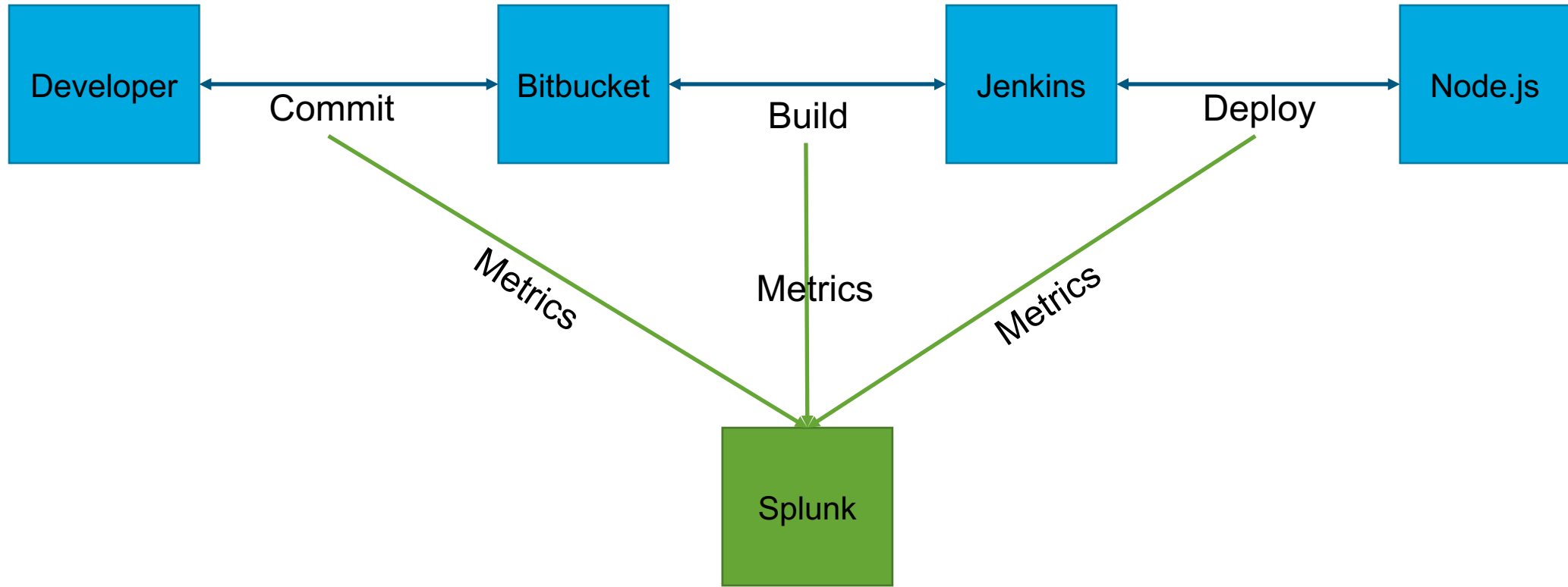
# How Does This All Fit Together?

Understanding the pieces...

# Run & Monitor



# Build Chain Automation

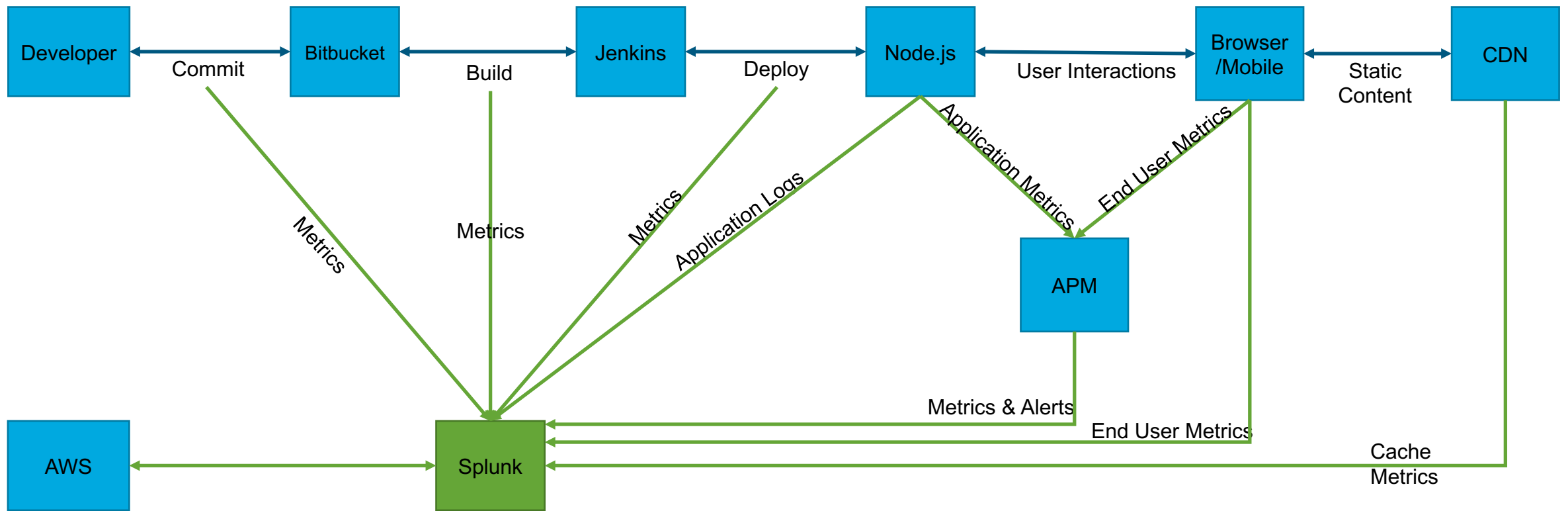


```

138.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&JSESSIONID=5D15L9FF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-68&product_id=FI-5W-01"
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=FI-5W-01"
317 27.160.0.0 - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-26&product_id=FI-5W-01"
doaction=purchase&itemId=EST-16&product_id=RP-LI-02" 468 125.17 14.13.15.189] "GET /cart.do?action=changequantity&itemId=EST-18&product_id=AV-CB-01&JSESSIONID=5D15L9FF10ADFF10 HTTP 1.1" 200 386 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-18&product_id=AV-CB-01"
opping.com/purchase&itemId=EST-18&product_id=AV-CB-01" 200 386 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-18&product_id=AV-CB-01"

```

# DevOps + Application Monitoring



```
138.60.4 - - [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=FI-SW-01"
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/category.screen?category_id=GI"
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=purchase&itemId=EST-2&product_id=K9-CU-01"
do?action=purchase&itemId=EST-16&product_id=RP-LI-02" 468 125.17 14.13.13.189] "GET /category.screen?category_id=FLOWERS&JSESSIONID=5D55L9FF1ADFF3 HTTP 1.1" 200 388 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01"
http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01" 200 388 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01"
http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01" 200 388 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product_id=K9-CU-01"
```



# Live Demo!

---

# Bringing It Together for DevOps

The image displays a collage of four overlapping Splunk App for Jenkins dashboards. The top-most dashboard shows the 'Overview' page with a navigation bar and a search bar. Below it, a 'Build Trends' dashboard shows a red error message: '#26196 was failed for fluffybunny/generic\_jobs/generic\_ui\_test\_WINDOWS\_pip'. To the right, a 'Jenkins Health' dashboard provides a detailed view of the Jenkins Master, including a 'JVM Heap Memory' line chart showing fluctuations between 5,000 and 15,000 MB, a 'Queue Size' chart with a single sharp peak, and a 'JVM Threads' chart showing a spike in threads. Below these are charts for 'Queue Size' and 'Slaves', with the latter showing a peak in both 'Executor' and 'Computer' counts. The bottom-most dashboard shows a 'Build Status Overview' with a donut chart indicating a 28.00% success rate. The background of the bottom dashboard is filled with a log stream of HTTP requests and responses.

# Bringing It Together for Business & Users

**splunk** App: Buttercup Games

Search Authentication Overall Stats Scoreboard Detail CaveMap Dashboards

### Authentication

Select a Time Range: All time

**Total Authentications: 7,838**

**Authentication Type**

Google	~550
User/PW	~450
Facebook	~350
LinkedIn	~200

**Authentication Details**

Profile Pic	Username	Auth Type
	martinzerbib	Facebook
	bianca.olteanu.ext	Google
	darrenskuse	Google
	prabmutti	Facebook
	victor.saiz	LinkedIn
	amball48	Google
	thomas.nordmann	Facebook
	officedchou	Google
	chermosillo	Standard User/PW
	edvardfranke	Standard User/PW

About Support File a Bug Documentation Privacy Policy

**splunk** App: Buttercup Games

Search Authentication Overall Stats Scoreboard Detail CaveMap Dashboards

### Overall Stats

Last 7 days

To play go to: <http://buttercup.rocks>

**Games Played: 2,234**

**Total Users: 326**

**Most Deaths: i.schmitt**

**Best Avg Game Time: thomas.nordmann**

**Top Score: thomas.nordmann**

**Best Avg Score: thomas.nordmann**

user.nickname	Total_Games	Avg_Duration	Max_Duration	Total...
1 thomas.nordmann	19	24.53 sec	45.47 sec	
2 christian.k186	11	20.81 sec	44.52 sec	
3 marcel.dutt	3	21.69 sec	40.76 sec	
4 koga-t	24	23.30 sec	38.03 sec	
5 florian.metz90	47	16.80 sec	32.07 sec	
6 c.thal	119	12.33 sec	29.23 sec	
7 dennisgosing	34	10.84 sec	29.22 sec	
8 tim	29	9.25 sec	29.38 sec	
9 franziska.lucas	7	15.80 sec	28.25 sec	
10 martin.gawantka	64	9.26 sec	26.54 sec	
11 i.schmitt	129	7.00 sec	25.35 sec	
12 martin.mueller	32	6.17 sec	25.53 sec	
13 facebook	65	8.38 sec	24.39 sec	
14 puyan.ahmadi	2	14.06 sec	24.45 sec	
15 freanki	13	9.26 sec	23.55 sec	
16 dominik.holste	18	7.49 sec	22.62 sec	
17 goelli	24	8.62 sec	22.51 sec	
18 feroluffuchs	15	11.26 sec	20.78 sec	
19 unknow2.dp	20	9.55 sec	20.73 sec	
20 christophmay84	13	8.89 sec	18.77 sec	
21 govert.tobias	6	10.93 sec	18.84 sec	
22 marc-kev.lindner	11	10.45 sec	18.87 sec	
23 uvirk	33	5.05 sec	18.43 sec	
24 stefan.schoellermann	22	7.16 sec	17.85 sec	
25 brenq.benjamin	7	5.73 sec	16.86 sec	
26 michael	23	6.16 sec	16.99 sec	
27 nathalie.hoppe	61	5.23 sec	16.85 sec	
28 f.aberlaender	11	3.82 sec	16.08 sec	
29 gklos	20	3.04 sec	14.99 sec	
30 henrik.busch	3	6.41 sec	15.08 sec	
31 julian.wiegmann	2	10.31 sec	15.03 sec	
32 kay.pitzschel	29	4.90 sec	14.57 sec	
33 matthias2maier	14	7.46 sec	15.00 sec	
34 maddin.kraus	26	3.34 sec	14.02 sec	
35 osman.nidal	32	5.29 sec	14.08 sec	
36 franz.kellhuber	18	4.88 sec	12.98 sec	
37 inaje1109	3	5.23 sec	13.05 sec	
38 invisible7x	19	4.30 sec	12.98 sec	
39 a.lenzgen.tx	12	4.78 sec	12.07 sec	
40 chermosillo	6	3.92 sec	12.20 sec	
	2234	601.61 sec	1,409.94 sec	

About Support File a Bug Documentation Privacy Policy

**splunk** App: Buttercup Games

Search Authentication Overall Stats Scoreboard Detail CaveMap Dashboards

### Scoreboard Detail

Select a Time Range: Last 7 days

To play go to: <http://buttercup.rocks>

**Current Games: 0**

**Highest Score: thomas.nordmann: 46**

**Total Games Played: 2,234**

**Longest Game Duration: thomas.nordmann: 45.5 s**

**Most Games Played: i.schmitt: 129**

**Highest # of Flaps: thomas.nordmann: 158**

**Total # of Flaps: 43,286**

InGame (CLICK TO DRILLDOWN BELOW)

game.id	Profile Pic	Games Played	user.nickname	Game Status	Duration	Flaps	Score	ScoreTrend
895d06d29c5		17	thomas.nordmann	Game Over	45.47 s	158	46	
d30d8a393f11		11	christian.k186	Game Over	44.52 s	154	45	
bdf3b9841858		17	thomas.nordmann	Game Over	41.65 s	142	42	
3a2a81433f73		3	marcel.dutt	Game Over	40.76 s	141	41	
50d8aabc98b		17	thomas.nordmann	Game Over	39.58 s	139	40	
6922f764c48e		17	thomas.nordmann	Game Over	38.92 s	134	39	
9433e9f299b8		24	koga-t	Game Over	38.83 s	136	39	
432410dadce27		17	thomas.nordmann	In Progress	37.10 s	130	38	
7f0c90f60ce3		17	thomas.nordmann	Game Over	35.09 s	116	35	
c59a94a3ebd7		24	koga-t	Game Over	34.00 s	115	34	
70931					12,412.41 s	43286	9780	

**Game Status for thomas.nordmann: game\_over**

**Current Score for thomas.nordmann: 46**

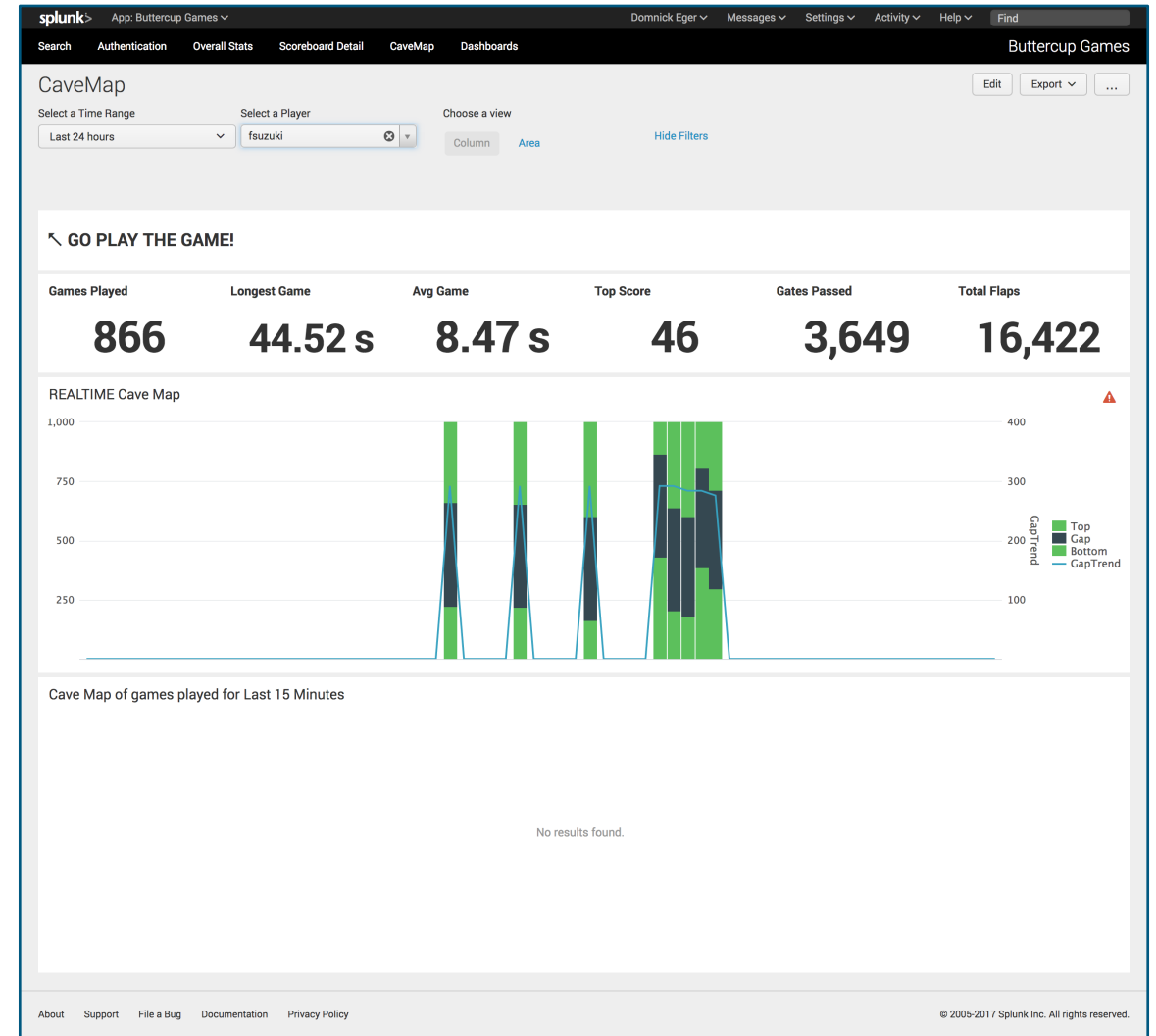
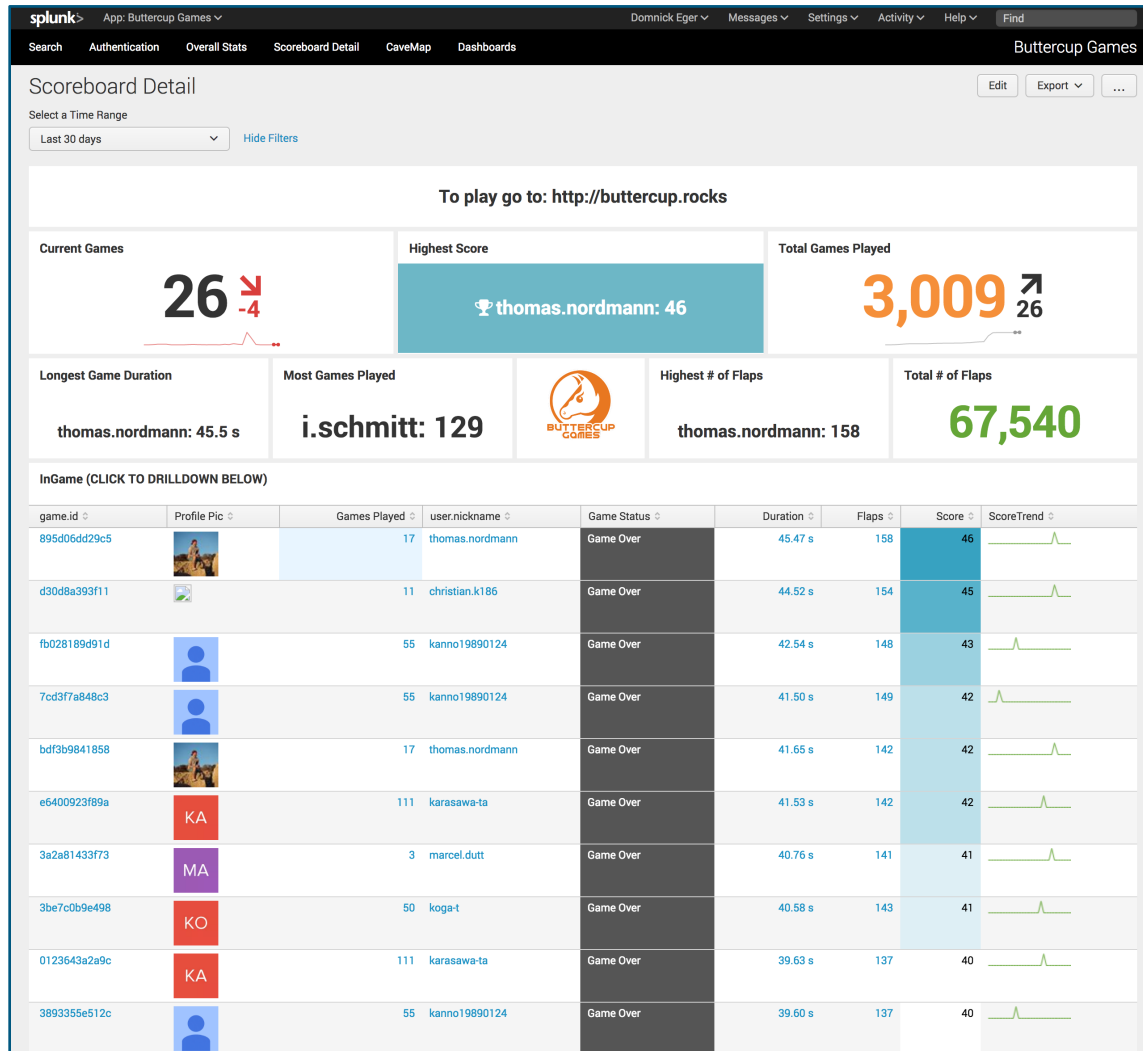
**Flap Timeline**

**Game Timeline for thomas.nordmann**

About Support File a Bug Documentation Privacy Policy



# Realtime Gaming Metrics



138.60.4...  
128.241.220.82...  
317.27.160.0.0...  
[07/Jan 18:10:57:123] "GET /category.screen?category\_id=GIFTS&JSESSIONID=5D15L4FF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product\_id=FI-SW-01"  
[07/Jan 18:10:57:123] "GET /product.screen?product\_id=FL-DSH-01&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 404 3522 "http://buttercup-shopping.com/cart.do?action=purchase&itemId=EST-2&product\_id=K9-CW-01"  
[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=5D95L4FF4ADFF7 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-198" "GET /category.screen?category\_id=FLOWERS&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 200 289 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-6&product\_id=K9-CW-01"  
[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=5D95L4FF4ADFF7 HTTP 1.1" 200 2423 "http://buttercup-shopping.com/cart.do?action=remove&itemId=EST-198" "GET /category.screen?category\_id=FLOWERS&JSESSIONID=5D55L7FF6ADFF9 HTTP 1.1" 200 289 "http://buttercup-shopping.com/cart.do?action=changequantity&itemId=EST-6&product\_id=K9-CW-01"

# Splunk with Modern Application Development

- ▶ Dev (Commit)
- ▶ Build
- ▶ Test
- ▶ Deploy
- ▶ Monitor
- ▶ End User
- ▶ APM
- ▶ Business

Terminal Output:

```

$ git clone https://Splunk@bitbucket.buttercuplabs.win/scm/aw/buttercupgo-student02.git .
Cloning into '.'...
remote: Counting objects: 320, done.
remote: Compressing objects: 100% (297/297), done.
remote: Total 320 (delta 79), reused 204 (delta 9)
Receiving objects: 100% (320/320), 3.27 MiB | 1.02 MiB/s, done.
Resolving deltas: 100% (79/79), done.

$ git branch images

$ git checkout images
Switched to branch 'images'

$ git add *

$ git commit -m "making stuff up"

```

Scoreboard Detail: To play go to: <http://buttercup.rocks>

game\_over 46

Game Timeline for thomas.nordmann

# Splunk with Modern Application Development

- ▶ Dev (Commit)
- ▶ Build
- ▶ Test
- ▶ Deploy
- ▶ Monitor
- ▶ End User
- ▶ APM
- ▶ Business

## Visualize, Correlate, Search & Discover



 A vertical stack of seven Splunk dashboard screenshots. From top to bottom:
 

- A dashboard with a bar chart and a donut chart.
- A dashboard with a line graph and a table.
- A dashboard with a bar chart and a table.
- A dashboard with a table and a bar chart.
- A dashboard with a table and a bar chart.
- A dashboard with a line graph and a bar chart.
- A dashboard with a line graph and a bar chart.

A screenshot of an APM dashboard showing performance metrics. At the top, it displays "12" requests, "1 ms" average response time, "0.020 sec" for a specific step, and "11.380 sec" for the total. Below this are several charts, including a bar chart and a line graph.

A dashboard featuring two large circular gauges at the top. Below them are several smaller charts, including a bar chart and a line graph, all displaying various data points and trends.

A dashboard with a prominent bar chart on the left and a line graph on the right. There are also some smaller summary cards or metrics at the top of the dashboard.

```

30.60.4 - - [07/Jan 18:10:57:153] "GET /category.screen?category_id=GIFTS&SESSIONID=SD5L4FF10ADFF10 HTTP 1.1" 404 720 "http://buttercup-shopping.com/cart.do?action=view&itemId=EST-6&product_id=SI-5W-01-00"
128.241.220.82 - - [07/Jan 18:10:57:123] "GET /product.screen?product_id=FL-DSH-01&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1" 404 3322 "http://buttercup-shopping.com/category.screen?category_id=GIFTS"
vs NT 5.1; SV1; - - [07/Jan 18:10:56:156] "GET /product.screen?product_id=FL-DSH-01&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=K9-01-00"
/buttercup-shopping.com/... [07/Jan 18:10:56:156] "GET /product.screen?product_id=RP-LI-02" 468 125 1 "http://buttercup-shopping.com/cart.do?action=purchase&item_id=EST-26&product_id=K9-01-00"
buttercup-shopping.com/... [07/Jan 18:10:56:156] "GET /oldlink?item_id=EST-26&SESSIONID=SD5L9FF1ADFF3 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1"
buttercup-shopping.com/... [07/Jan 18:10:56:156] "GET /category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1"
buttercup-shopping.com/... [07/Jan 18:10:56:156] "GET /category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1"
buttercup-shopping.com/... [07/Jan 18:10:56:156] "GET /category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1"
buttercup-shopping.com/... [07/Jan 18:10:56:156] "GET /category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1" 200 1318 "http://buttercup-shopping.com/category.screen?category_id=FLOWERS&SESSIONID=SD5L7FF6ADFF9 HTTP 1.1"
  
```

# Bringing It Together for Business & Users

The image displays three Splunk dashboards for the 'Buttercup Games' application, illustrating data integration for business and users.

### Authentication Dashboard

**Total Authentications: 7,838**

**Authentication Type:**

- Google: ~550
- User/PW: ~450
- Facebook: ~350
- LinkedIn: ~200

**Authentication Details Table:**

Profile Pic	Username	Auth Type
	martinzerbib	Facebook
	bianca.olteanu.ext	Google
	darrenskuse	Google
	prabmutti	Facebook
	victor.saiz	LinkedIn
	amball48	Google
	thomas.nordmann	Facebook
	officedchou	Google
	chermosillo	Standard User/PW
	edvardfranke	Standard User/PW

### Overall Stats Dashboard

**Games Played: 2,234** | **Total Users: 326**

**Most Deaths: i.schmitt** | **Best Avg Game Time: thomas.nordmann**

**Top Score: thomas.nordmann** | **Best Avg Score: thomas.nordmann**

user.nickname	Total_Games	Avg_Duration	Max_Duration	Total...
1 thomas.nordmann	19	24.53 sec	45.47 sec	
2 christian.k186	11	20.81 sec	44.52 sec	
3 marcel.dutt	3	21.69 sec	40.76 sec	
4 koga-t	24	23.30 sec	38.03 sec	
5 florian.metz90	47	16.80 sec	32.07 sec	
6 c.thal	115	12.33 sec	29.23 sec	
7 dennisgosing	34	10.84 sec	29.22 sec	
8 tim	29	9.25 sec	29.38 sec	
9 franziska.lucas	7	15.80 sec	28.25 sec	
10 martin.gawantka	64	9.26 sec	26.54 sec	
11 i.schmitt	129	7.00 sec	25.35 sec	
12 martin.mueller	32	6.17 sec	25.53 sec	
13 facebook	65	8.38 sec	24.39 sec	
14 puyan.ahmadi	2	14.06 sec	24.45 sec	
15 freanki	13	9.26 sec	23.55 sec	
16 dominik.holste	18	7.49 sec	22.62 sec	
17 goelli	24	8.62 sec	22.51 sec	
18 feroluffuchs	15	11.26 sec	20.78 sec	
19 unknow2.dp	20	9.55 sec	20.73 sec	
20 christophmay84	13	8.89 sec	18.77 sec	
21 govert.tobias	6	10.93 sec	18.84 sec	
22 marc-kev.lindner	11	10.45 sec	18.87 sec	
23 uvirk	33	5.05 sec	18.43 sec	
24 stefan.schoellermann	22	7.16 sec	17.85 sec	
25 brenq.benjamin	7	5.73 sec	16.86 sec	
26 michael	23	6.16 sec	16.99 sec	
27 nathalie.hoppe	61	5.23 sec	16.85 sec	
28 f.aberlaender	11	3.82 sec	16.08 sec	
29 gklos	20	3.04 sec	14.99 sec	
30 henrik.busch	3	6.41 sec	15.08 sec	
31 julian.wiegmann	2	10.31 sec	15.03 sec	
32 kay.pitzschel	29	4.90 sec	14.57 sec	
33 matthias2maier	14	7.46 sec	15.00 sec	
34 maddin.kraus	26	3.34 sec	14.02 sec	
35 osman.nidal	32	5.29 sec	14.08 sec	
36 franz.kellhuber	18	4.88 sec	12.98 sec	
37 inaje1109	3	5.23 sec	13.05 sec	
38 invisible7x	19	4.30 sec	12.98 sec	
39 a.lenzgen.tx	12	4.78 sec	12.07 sec	
40 chermosillo	6	3.92 sec	12.20 sec	
	2234	601.61 sec	1,409.94 sec	

### Scoreboard Detail Dashboard

**Current Games: 0** | **Highest Score: thomas.nordmann: 46** | **Total Games Played: 2,234**

**Longest Game Duration: thomas.nordmann: 45.5 s** | **Most Games Played: i.schmitt: 129** | **Highest # of Flaps: thomas.nordmann: 158** | **Total # of Flaps: 43,286**

game.id	Profile Pic	Games Played	user.nickname	Game Status	Duration	Flaps	Score	ScoreTrend
895d06d29c5		17	thomas.nordmann	Game Over	45.47 s	158	46	📈
d30d8a393f11		11	christian.k186	Game Over	44.52 s	154	45	📈
bdf3b9841858		17	thomas.nordmann	Game Over	41.65 s	142	42	📈
3a2a81433f73		3	marcel.dutt	Game Over	40.76 s	141	41	📈
50d8aabc98b		17	thomas.nordmann	Game Over	39.58 s	139	40	📈
6922f764c48e		17	thomas.nordmann	Game Over	38.92 s	134	39	📈
9433e9f299b8		24	koga-t	Game Over	38.83 s	136	39	📈
432410dadce27		17	thomas.nordmann	In Progress	37.10 s	130	38	📈
7f0c90f60ce3		17	thomas.nordmann	Game Over	35.09 s	116	35	📈
c59a94a3ebd7		24	koga-t	Game Over	34.00 s	115	34	📈
70931					12,412.41 s	43286	9780	

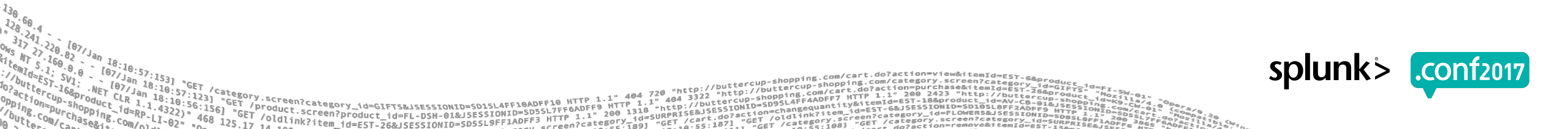
**Game Status for thomas.nordmann: game\_over** | **Current Score for thomas.nordmann: 46**

**Flap Timeline:** Line chart showing average flaps per game over time (12:00:00 PM to 12:00:30 PM).

**Game Timeline for thomas.nordmann:** Bar chart showing game start, end, and point over time.

# Next Steps...

- ▶ Try HEC for yourself: <http://docs.splunk.com/Documentation/Splunk/6.6.2/Data/UsetheHTTPEventCollector>
- ▶ Test drive the Splunk App for AWS: <https://splunkbase.splunk.com/app/1274/>
- ▶ Tryout the New Relic Integration:  
Add-On: <https://splunkbase.splunk.com/app/3465/>  
App: <https://splunkbase.splunk.com/app/3465/>
- ▶ Tryout the Jenkins App: <https://splunkbase.splunk.com/app/3332/>
- ▶ Test Drive the Akamai App: <https://splunkbase.splunk.com/app/3026/>



# Thank You

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

splunk> .conf2017