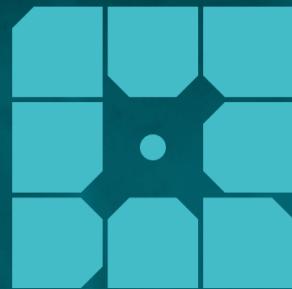




POWERED BY



WPengine



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WE'RE HIRING!



PERFORMANCE TESTING WITH **PYTHON AND LOCUST**

AKA...

SNAKES AND BUGS
EAT
YOUR
WEBSITE

WHY?

WHAT?

HOW?

WHO?

WHEN?

WHY?

“In our new study, “The Need for Mobile Speed”, we found that 53% of mobile site visits are abandoned if pages take longer than 3 seconds to load.”

<https://www.doubleclickbygoogle.com/articles/mobile-speed-matters/>

PICKER

Last 1 month ending now

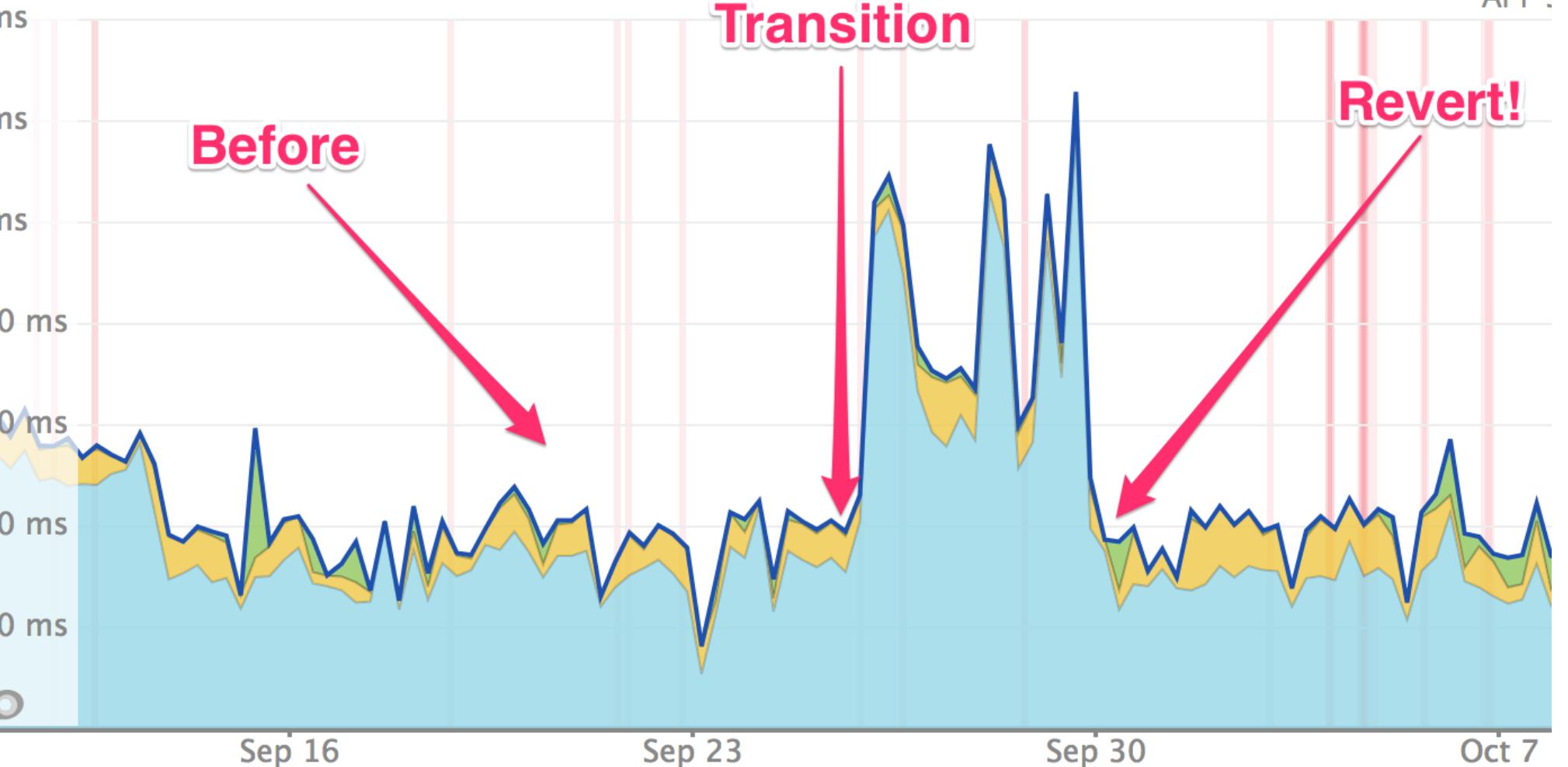
SERVERS

All servers

Web transactions time

2,5

APP %



TIME PICKER

Last 1 month ending now

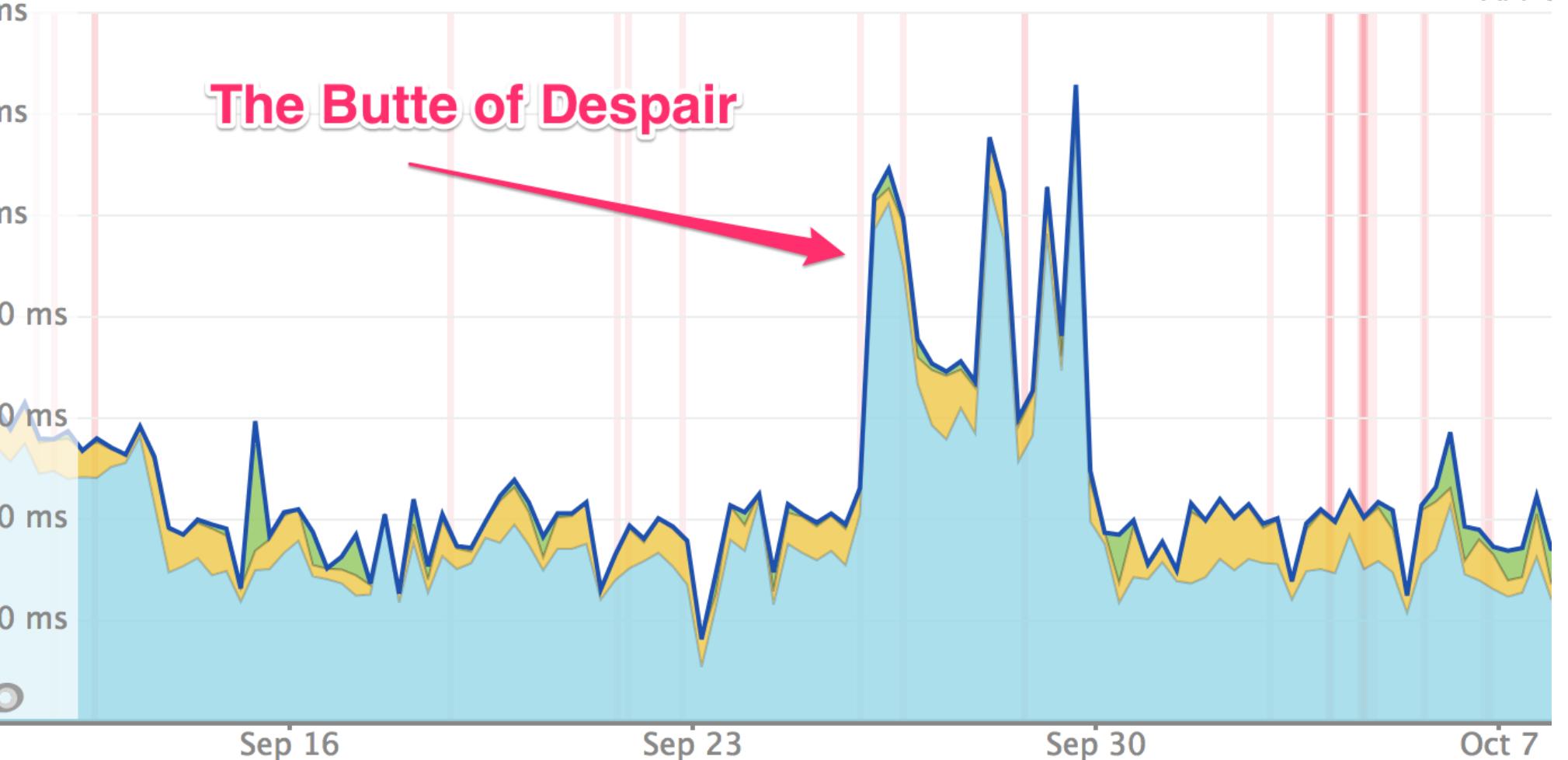
SERVERS

All servers

Web transactions time

2,5

APP 1



PHP

MySQL

Memcached

Web external

Response time

Repeatability
Predictability

WHAT?

TARGETS

(Things we measure)

- Availability or uptime
- Concurrency
- Throughput
- Response time
- Network utilization
- Server utilization

O'REILLY®

Copyrighted Material

/theory/in/practice

The Art of Application Performance Testing

From Strategy to Tools

Ian Molyneaux

2nd
Edition



Copyrighted Material

HOW?

LOCUST



LOCUST

[Documentation](#)

[Code](#)

An open source load testing tool.

Define user behaviour with Python code, and swarm your system with millions of simultaneous users.

[Tweet](#)

[Follow @locustio](#)

LOCUST
A MODERN LOAD TESTING TOOL

STATUS
RUNNING
9600 users
[Edit](#)

SLAVES **6** RPS **76.4** FAILURES **0%**

[STOP](#) [Reset Stats](#)

[Statistics](#) [Failures](#) [Exceptions](#)

Type	Name	# requests	# fails	Median	Average	Min	Max	Content Size	# reqs/sec
GET	/	1831	0	21	21	4	38	19947	18.3
GET	/blog	608	0	25	26	3	49	19841	6.9
GET	/about	615	0	11	15	0	25	19855	5.9

	GET	/blog/{post-slug}	612	0	14	15	2	27	19858	7.8	
	GET	/forum	573	0	26	26	3	49	20209	5.5	
	GET	/forum/{thread-slug}	596	0	30	30	6	55	20209	5.3	
	POST	/forum/{thread-slug}	71	0	62	63	13	120	11188	0.6	
	POST	/forum/new	64	0	59	58	6	108	3272	0.7	
	GET	/signin	3439	0	26	26	3	49	19850	31.3	

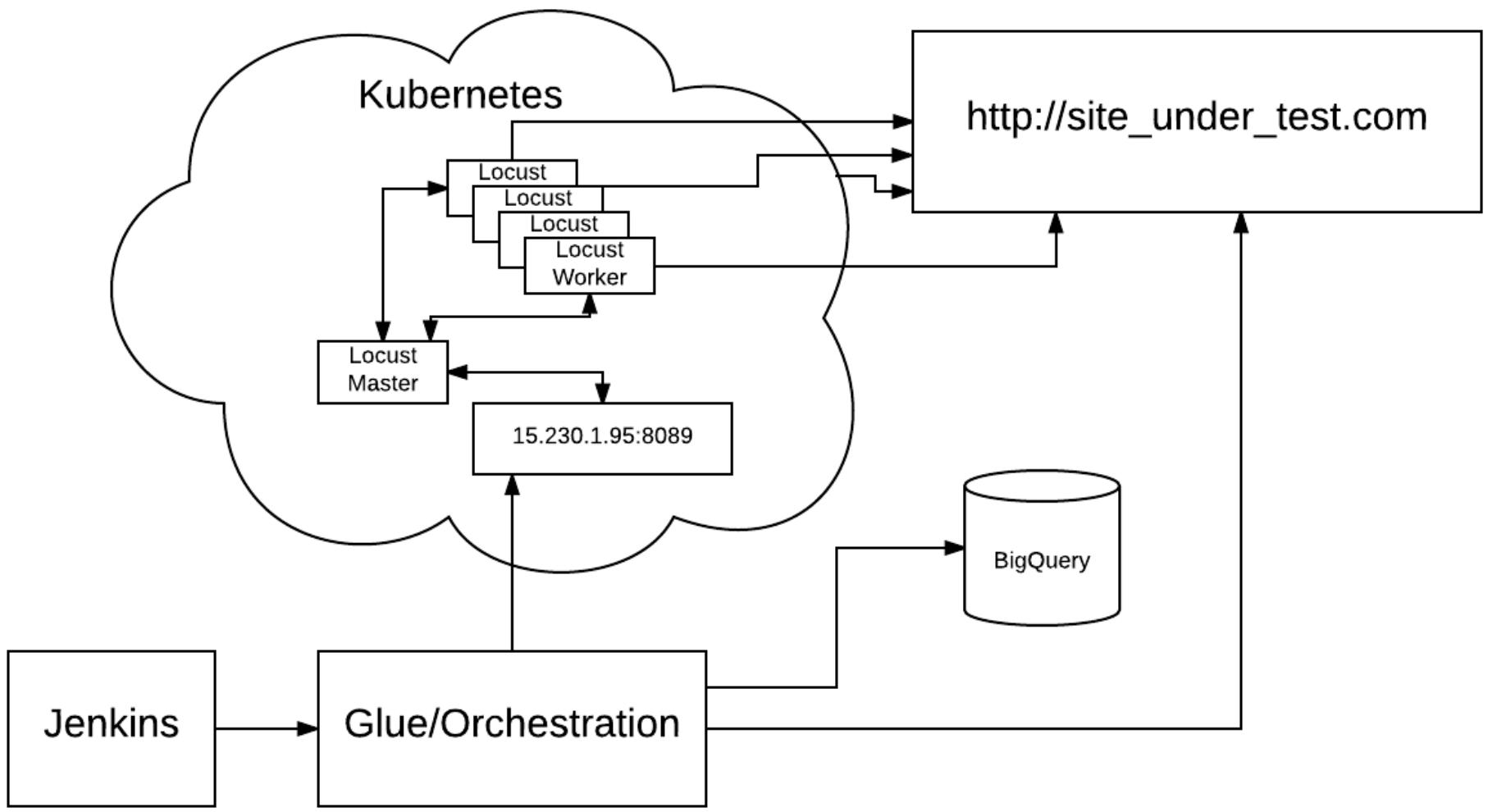
- MIT License: <https://github.com/locustio/locust>
- Docs: locust.io
- Supports Python 3.6

DEMO...

SCALING LOCUST

```
# On master
locust -f my_locustfile.py --master

# On slaves
locust -f my_locustfile.py --slave --master-host=192.168.0.14
```



ORCHESTRATION

- Installs locust in kubernetes (via helm)
- Starts locust workers
- Lets test run for a defined period of time
- Retrieves locust results
- Stops locust
- Writes results to BigQuery

TIPS

- Beware of failures
- Be aware of caching
- Automate bookkeeping

WHO?

YOU!

WHEN?

NOW!

Examples: https://github.com/msluyter/locust_pres

michael.sluyter@wpengine.com