

# Real-Time TLC

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Elasticsearch

Drew

Elasticsearch.**com**



Think different.

Key/value

~~Key/value~~

*(Super!)*Columns

~~(Super!) Columns~~



# Map/Reduce

~~Map/Reduce~~

Schema

~~Schema~~



Real-time

High-capacity

Dynamic



**H**igh-capacity

**D**ynamic

**R**eal-time



Events



**Rich Hickey** @richhickey

27 Feb 12

a new kind of database

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**46**  
RETWEETS

**4**  
FAVORITES



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2003 Tom moves to San Francisco

2012 Tom moves to NYC

<i>name</i>	<i>location</i>	<i>previous</i>
Tom	NYC	SF

<i>name</i>	<i>location</i>	<i>moved</i>
Tom	SF	2003
Tom	NYC	2012

**JASON  
STATHAM**

**RYAN  
PHILLIPPE**

**WESLEY  
SNIPES**

UN FILM écrit et réalisé par **TONY GIGLIO**

# CHAOS

Une seule règle : éliminer l'adversaire



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Mobilis

[www.tfdistribution.fr](http://www.tfdistribution.fr)

TF1

2003 Tom moves to San Francisco

2009 Betty moves to NYC

2012 Tom marries Betty

2012 Tom moves to NYC





**H**igh-capacity

**D**ynamic

**R**eal-time



elasticsearch



#hdrdata

persistent  
persistence

schema-~~less~~ *-ish*

fast



fast



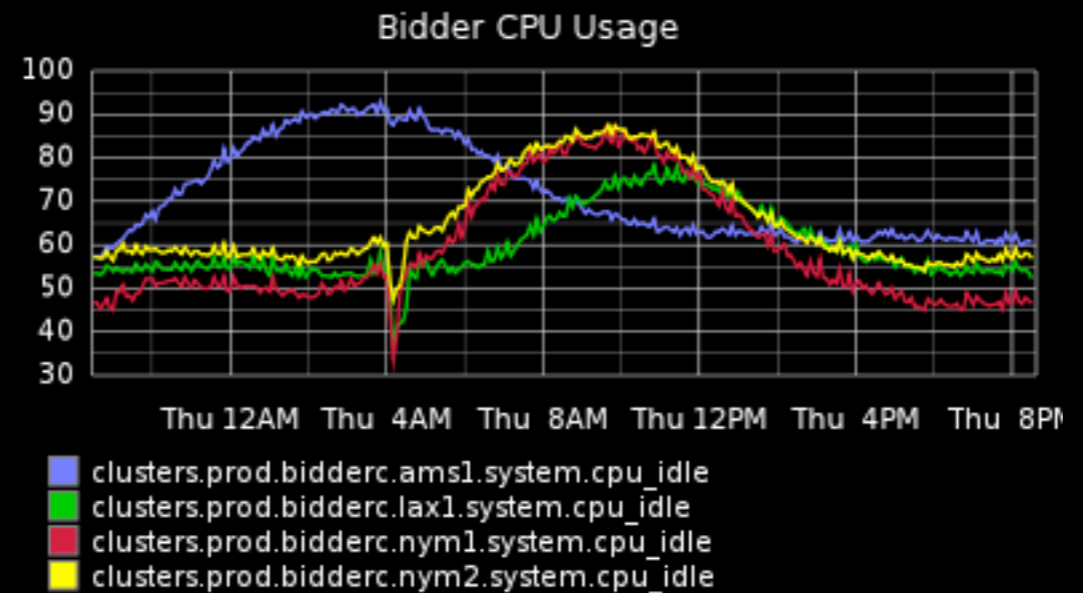
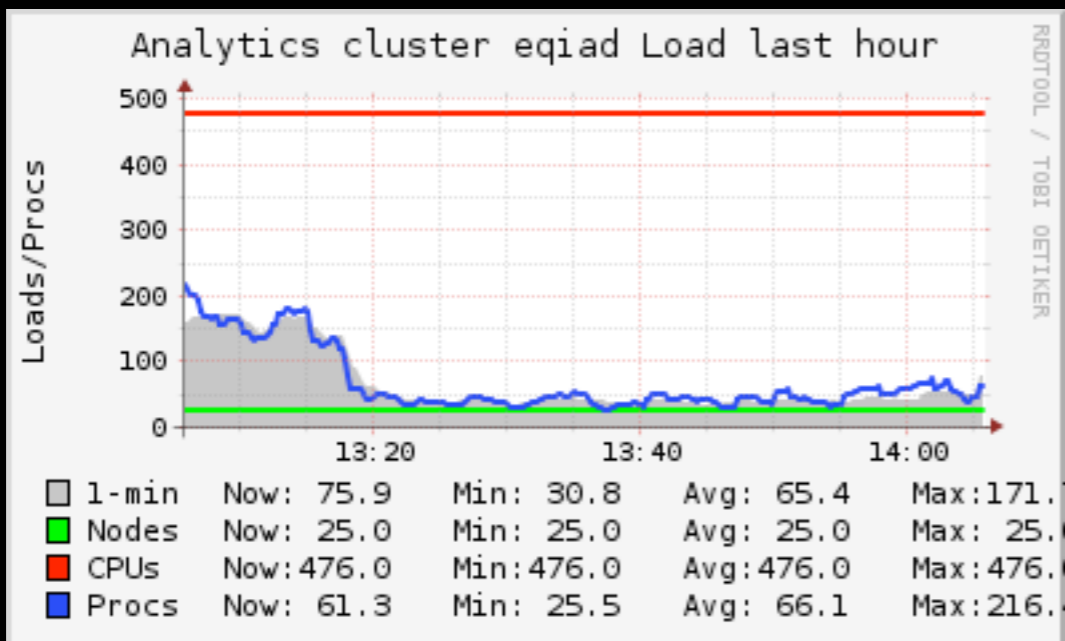
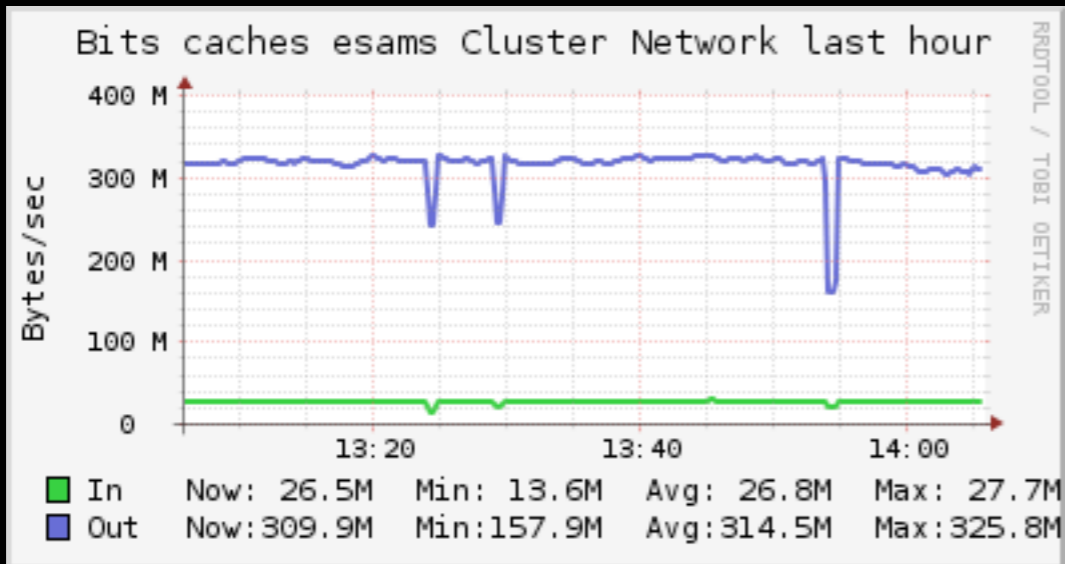
```
1 [||||| 55.4%] 9 [||||| 58.5%] 17 [||||| 78.9%] 25 [||||| 42.8%]
2 [||||| 79.0%] 10 [||||| 27.6%] 18 [||||| 61.5%] 26 [||||| 88.5%]
3 [||||| 29.2%] 11 [||||| 56.1%] 19 [||||| 95.5%] 27 [||||| 47.0%]
4 [||||| 65.4%] 12 [||||| 56.8%] 20 [||||| 43.8%] 28 [||||| 43.1%]
5 [||||| 61.3%] 13 [||||| 59.2%] 21 [||||| 50.6%] 29 [||||| 42.6%]
6 [||||| 58.7%] 14 [||||| 60.9%] 22 [||||| 50.3%] 30 [||||| 53.0%]
7 [||||| 21.9%] 15 [||||| 58.4%] 23 [||||| 98.7%] 31 [||||| 49.0%]
8 [||||| 80.4%] 16 [||||| 22.7%] 24 [||||| 37.7%] 32 [||||| 95.5%]
Mem [||||| 18477/59925MB] Tasks: 68, 597 thr; 30 running
Swp [ 0/0MB] Load average: 5.32 4.33 4.06
Uptime: 03:44:54
```

# Metrics

[ganglia.sourceforge.net](http://ganglia.sourceforge.net)

[graphite.wikidot.com](http://graphite.wikidot.com)

[github.com/etsy/statsd](https://github.com/etsy/statsd)



## CPU

Zoom In Zoom Out | ● query1 (1608) gauges.cpu.all.cpu.total total per 1m | (1608 hits)



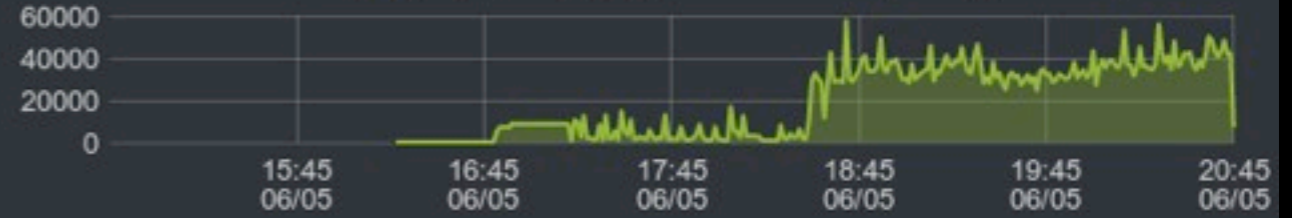
## Load (One Min Avg)

Zoom In Zoom Out | ● query1 (1608) gauges.load.one total per 5m | (1608 hits)



## Rate Send

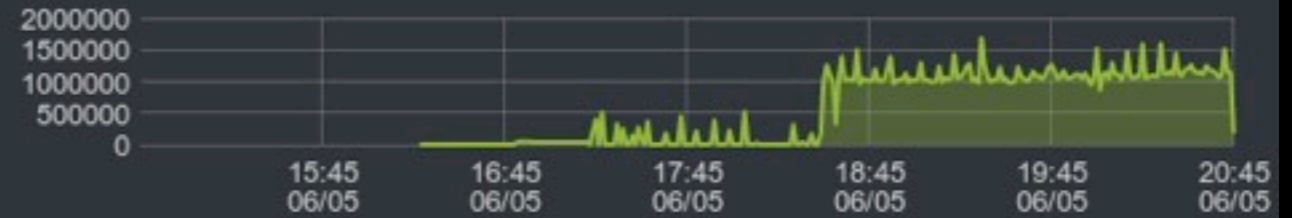
Zoom In Zoom Out | ● query1 (1608) gauges.net.send total per 1m | (1608 hits)



histogram

## Rate Receive

Zoom In Zoom Out | ● query1 (1608) gauges.net.receive total per 1m | (1608 hits)



Cores

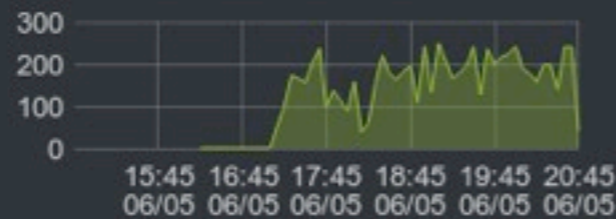
### core0

Zoom In Zoom Out | ● query1 (1608) gauges.cpu.core.cpu0.total total per 5m | (1608 hits)



### core1

Zoom In Zoom Out | ● query1 (1608) gauges.cpu.core.cpu1.total total per 5m | (1608 hits)



### core2


Zoom In Zoom Out | ● query1 (1608) gauges.cpu.core.cpu2.total total per 5m | (1608 hits)





### core3

Zoom In Zoom Out | ● query1 (1608) gauges.cpu.core.cpu3.total total per 5m | (1608 hits)



Query  Search

 \*



```
% git clone git://github.com/elasticsearch/kibana.git
% cd kibana
% npm install -g http-server \
    # or python -m SimpleHTTPServer
% http-server
Starting up http-server, serving ./ on port: 8080
Hit CTRL-C to stop the server
% open http://localhost:8080
```

```
bin/elasticsearch -f
```



@drewr

[elasticsearch.com](https://elasticsearch.com)

[elasticsearch.org](https://elasticsearch.org)

[github.com/elasticsearch](https://github.com/elasticsearch)

[three.kibana.org](https://three.kibana.org)

[demo.kibana.org](https://demo.kibana.org)