

Adform case: from 0 to business metrics

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adform - Ad serving company



3000 clients

35 countries

150 employees

adform - Ad serving company





We started at zero..

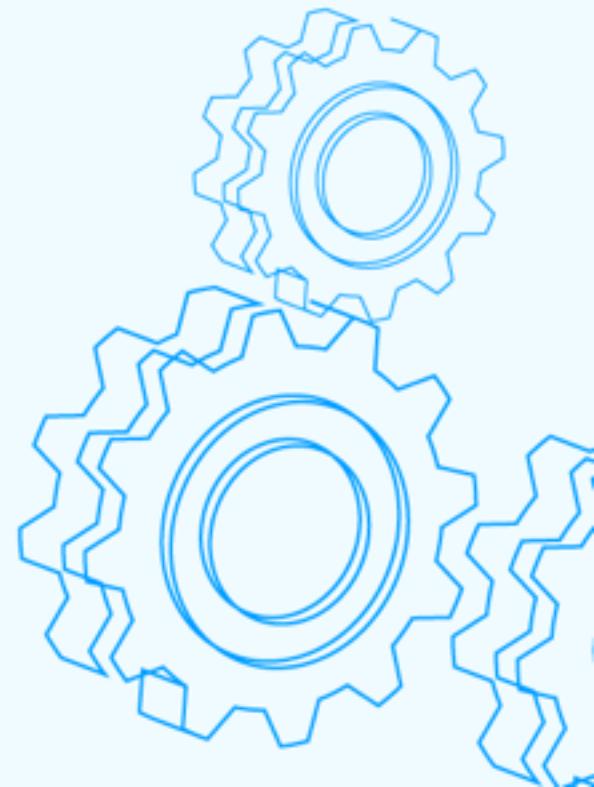
Operations team tool – “perfmon”

IT Commarkt	
Использование	100% 100%
Лицензии	Лицензии
Помощь	Помощь
Изменения	Изменения
Использование	Использование
Изменения	Изменения



Monitoring - Part of Continuous Deployment

- SCOM, Nagios+cacti, Zenoss, Splunk, Zabbix
- Why - **ZABBIX** ?
 - Templates
 - Screens
 - User Parameters



Metrics - is (not) for operations team



OPS know
infrastructure

Engineers
write
applications

BUT

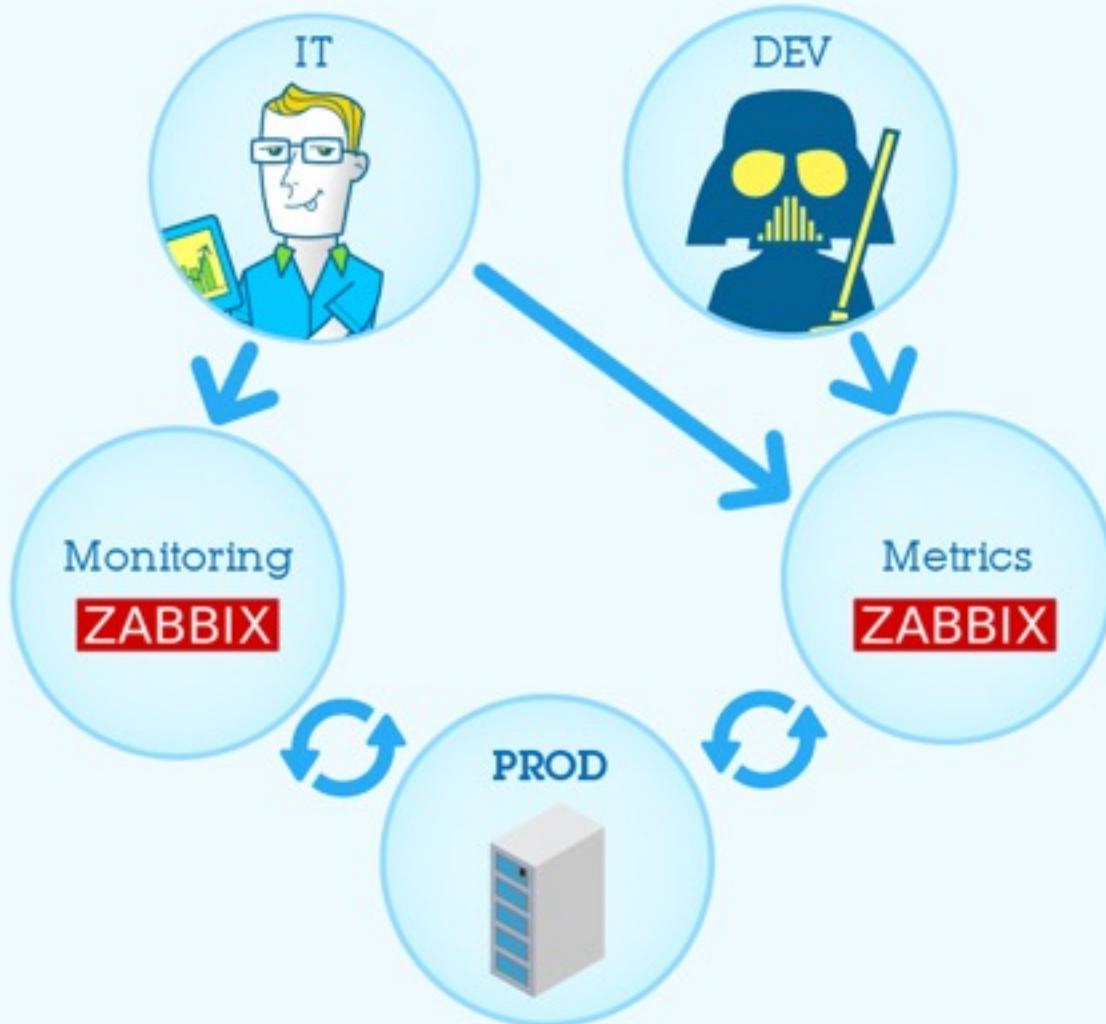
Attracting DEV: shot 1

- Joint server for OPS and DEV
- DEV provides templates for OPS
- OPS supervises and implements

FAILED



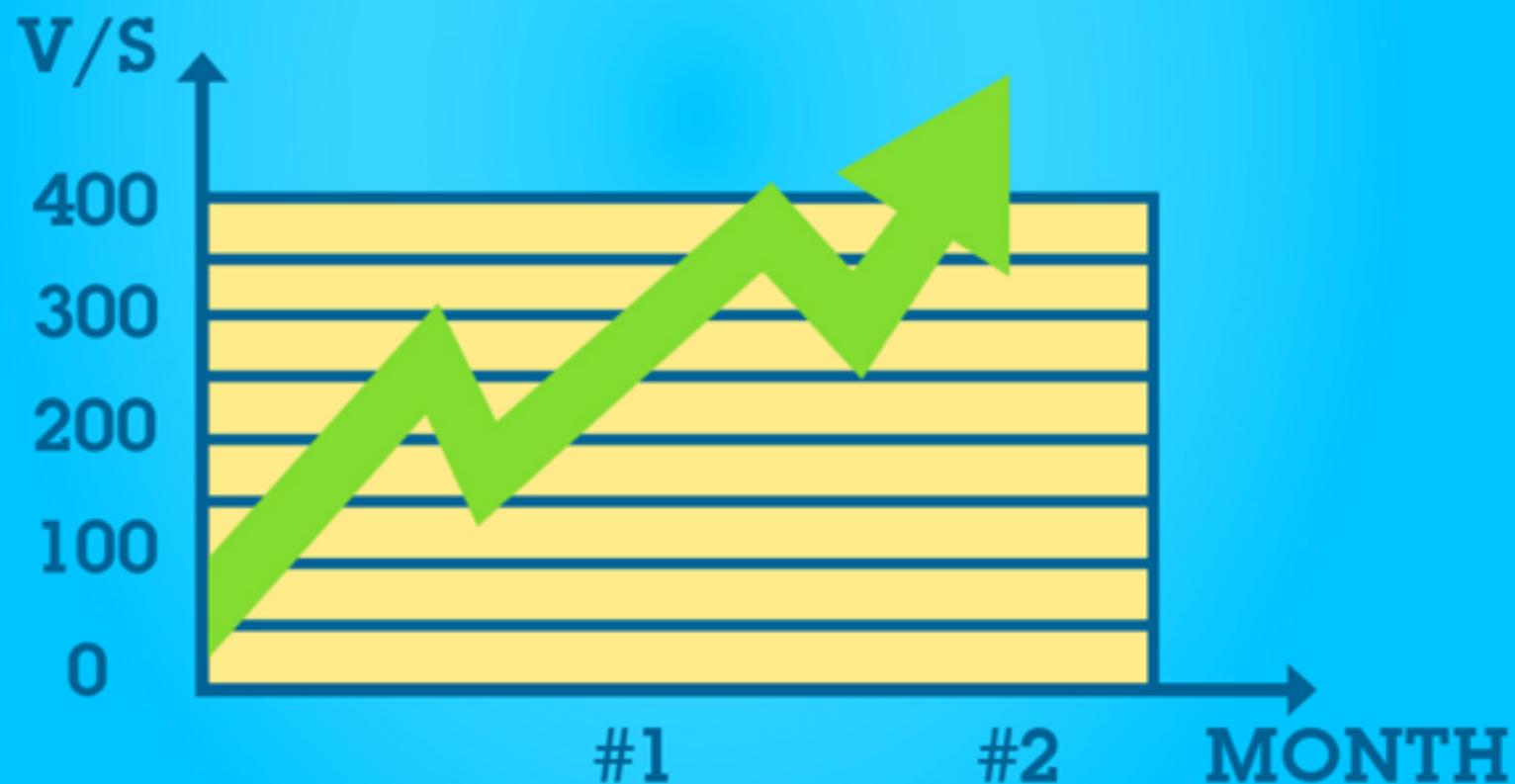
Attracting DEV: shot 2



Success!!! - First adopters

“Monitor everything”

“Monitor frequently”



Real-time bidding...

Real-time bidding - use case



Throughput only ~ 5000
QPS
~25% failed requests

What we are missing?



00110101010000100110101010000100110101010
01101010100001001101010100001001101010100
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The Prescription

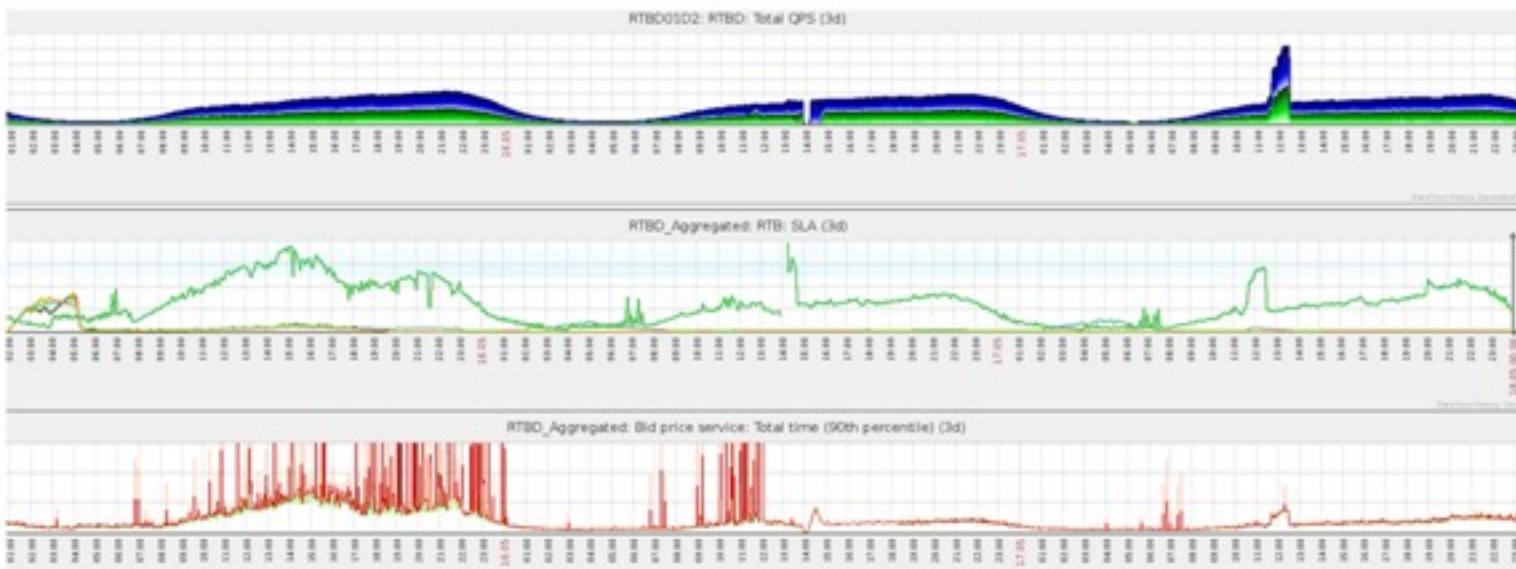
- Organized data
- Correlated data
- Added additional counters
- Picked really important metrics



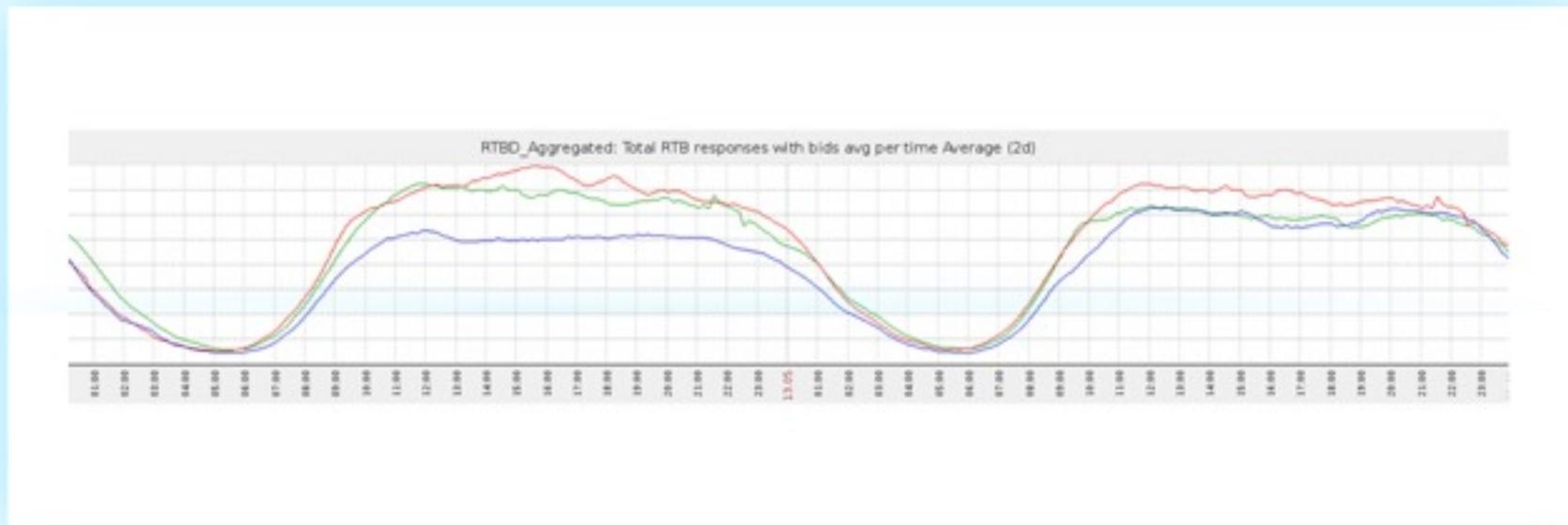
Organize data

- 
- Infrastructure metrics
 - Application metrics
 - Latencies
 - Business metrics

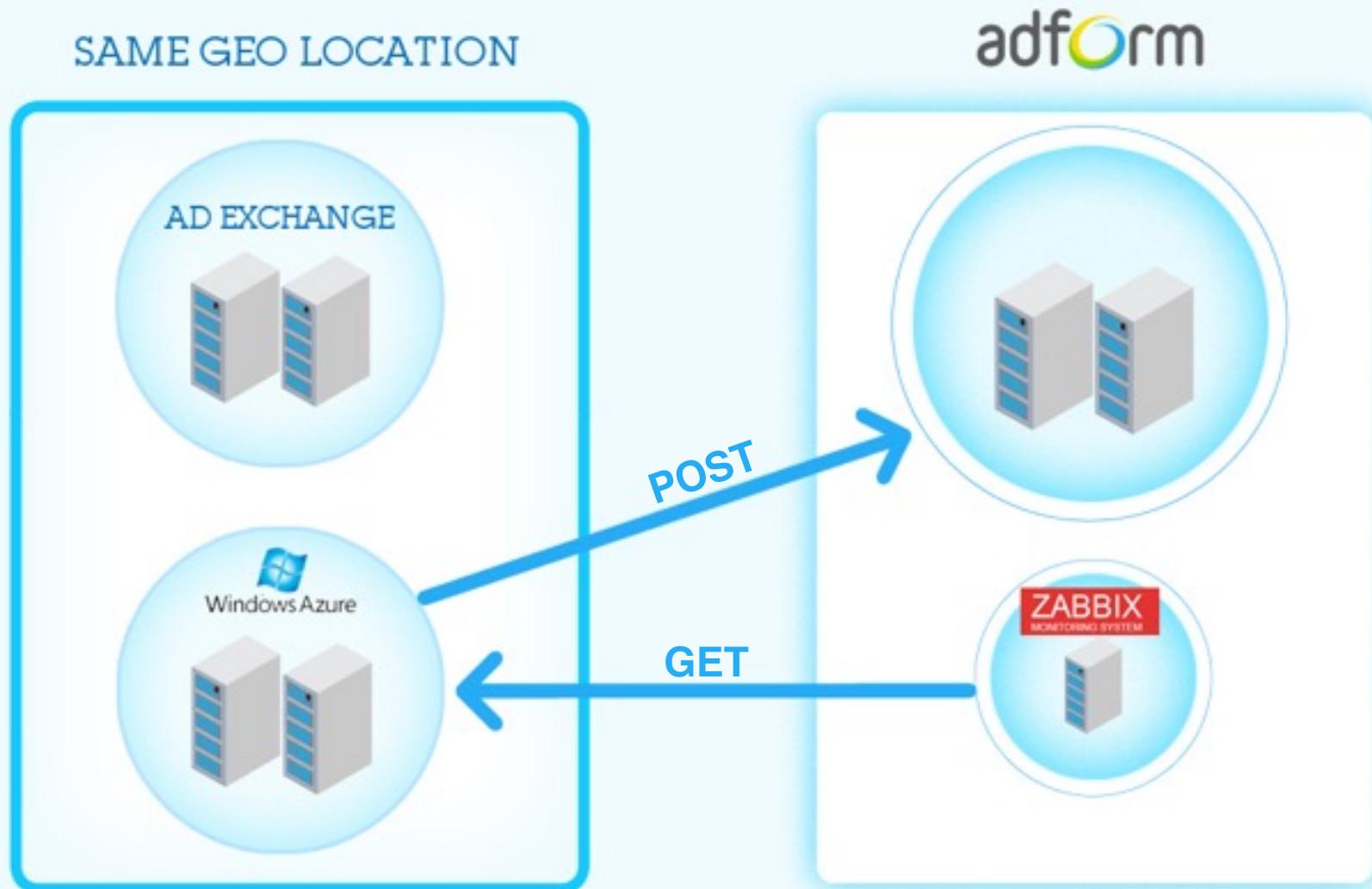
Correlate - recent data



Correlate - time shifted data

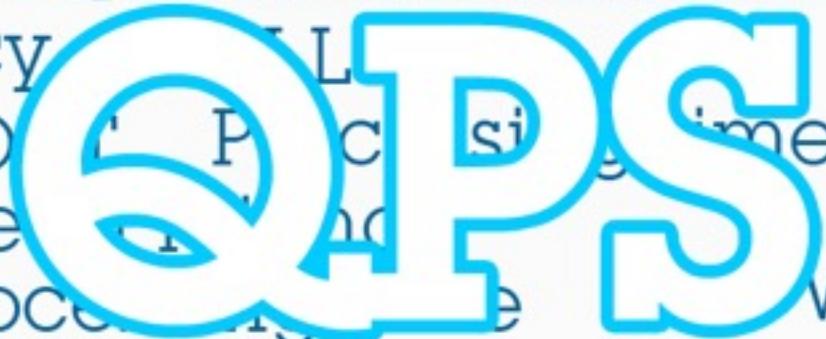


Add additional counters



Pick only key metrics

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Re
Proce



QPS

Time

si

LL

PC

si

time

LL

PC

si

time

Traffic IN Memory
Write latency
Ping Data growth
Write latency Calculations
Latency CPU LOAD

Write latency Calculations

Latency CPU LOAD

Traffic OUT Processing

Read latency

Processing time

STA

Time

Traffic IN Me
Write later
Ping Data
ency Cal
Latency CPU I

Real-time bidding - result

QPS increased ~14 times (>70k)

Fails decreased ~50 times (<0.5%)

Same Hardware



What we have now

Monitoring Infrastructure

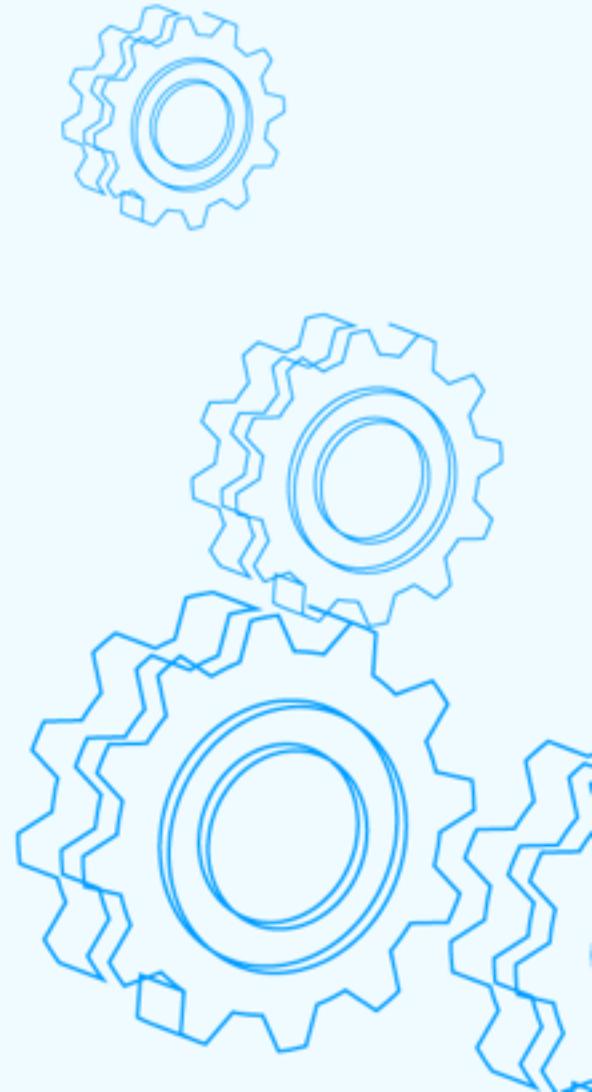
- Zabbix – Monitoring application
- 2 servers
- > 230 hosts
- > 20 000 items
- > 5 000 triggers
- ~ 400 values per second



What we monitor

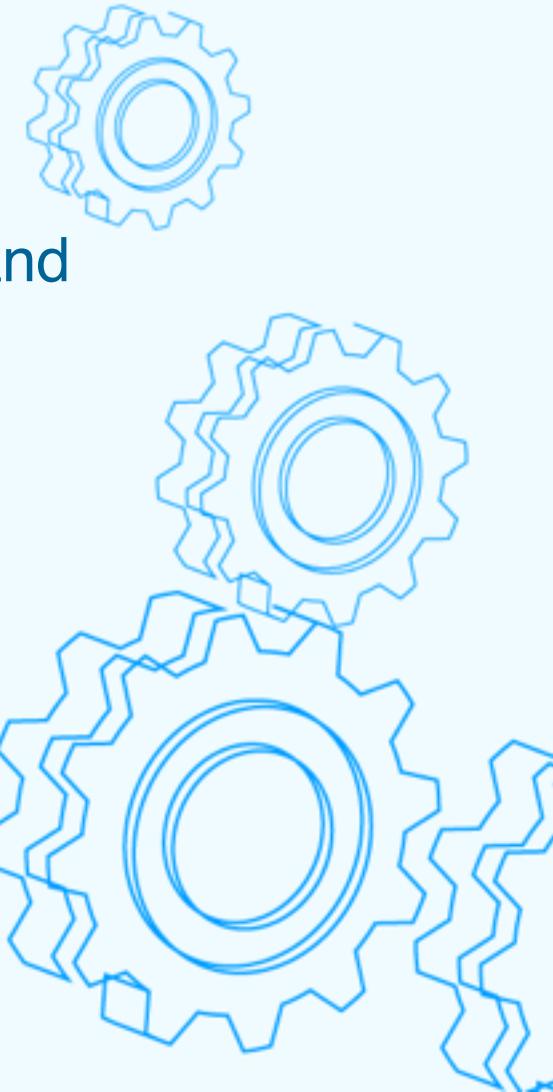
Servers
Applications
Latencies
Team performance
Network devices
Money

AWS



DEV, PM and Metrics

- SCRUM team monitors their applications
- SCRUM team decides & implements what and how shall be monitored
- Product managers monitor business side
- If it is critical to do “night watch”, OPS gets involved

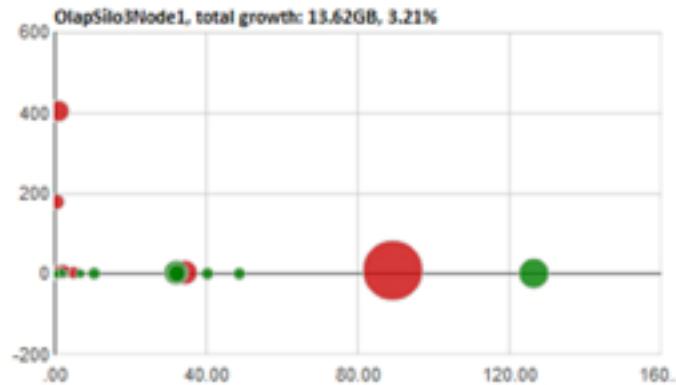
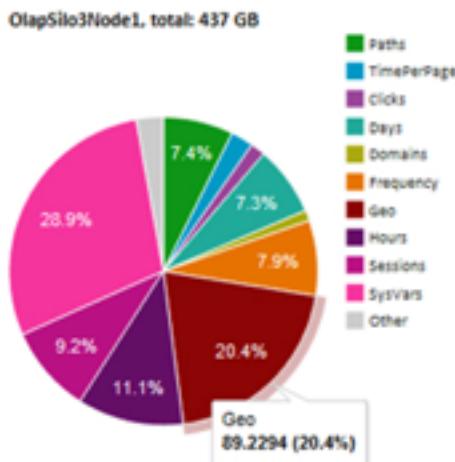


DEV comments

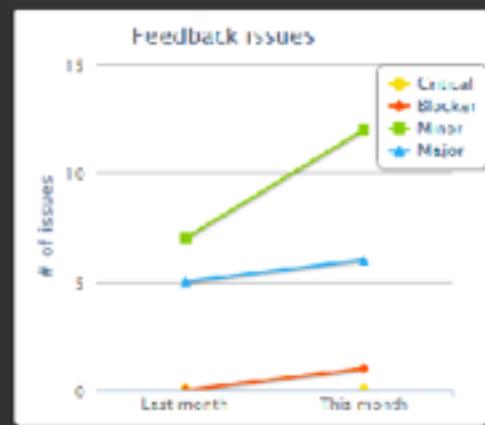
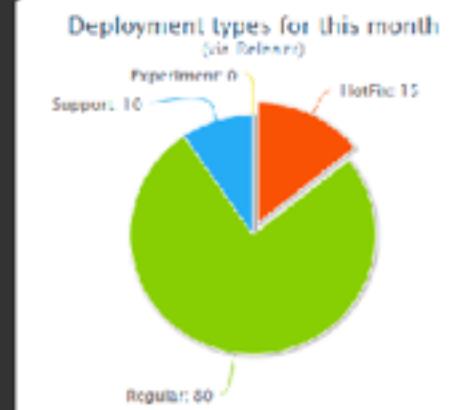
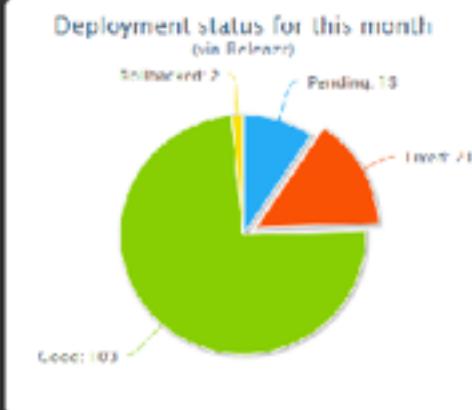
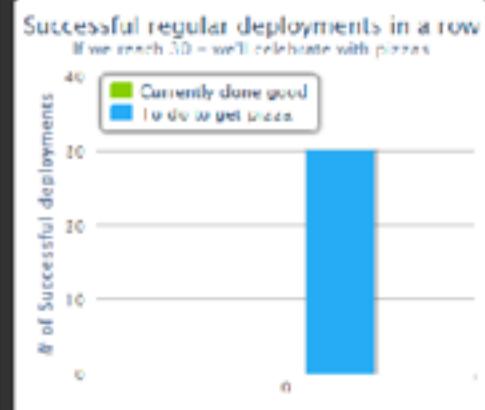
- “We are blind without metrics/”
- “We would like to know what is happening with our application, what features are used and how our performance changes after release. ”
- “(2012.05.13 23:02:42) Ramunas Urbonas: Have a look. It's almost finished now. ”



More difficult/ interesting cases



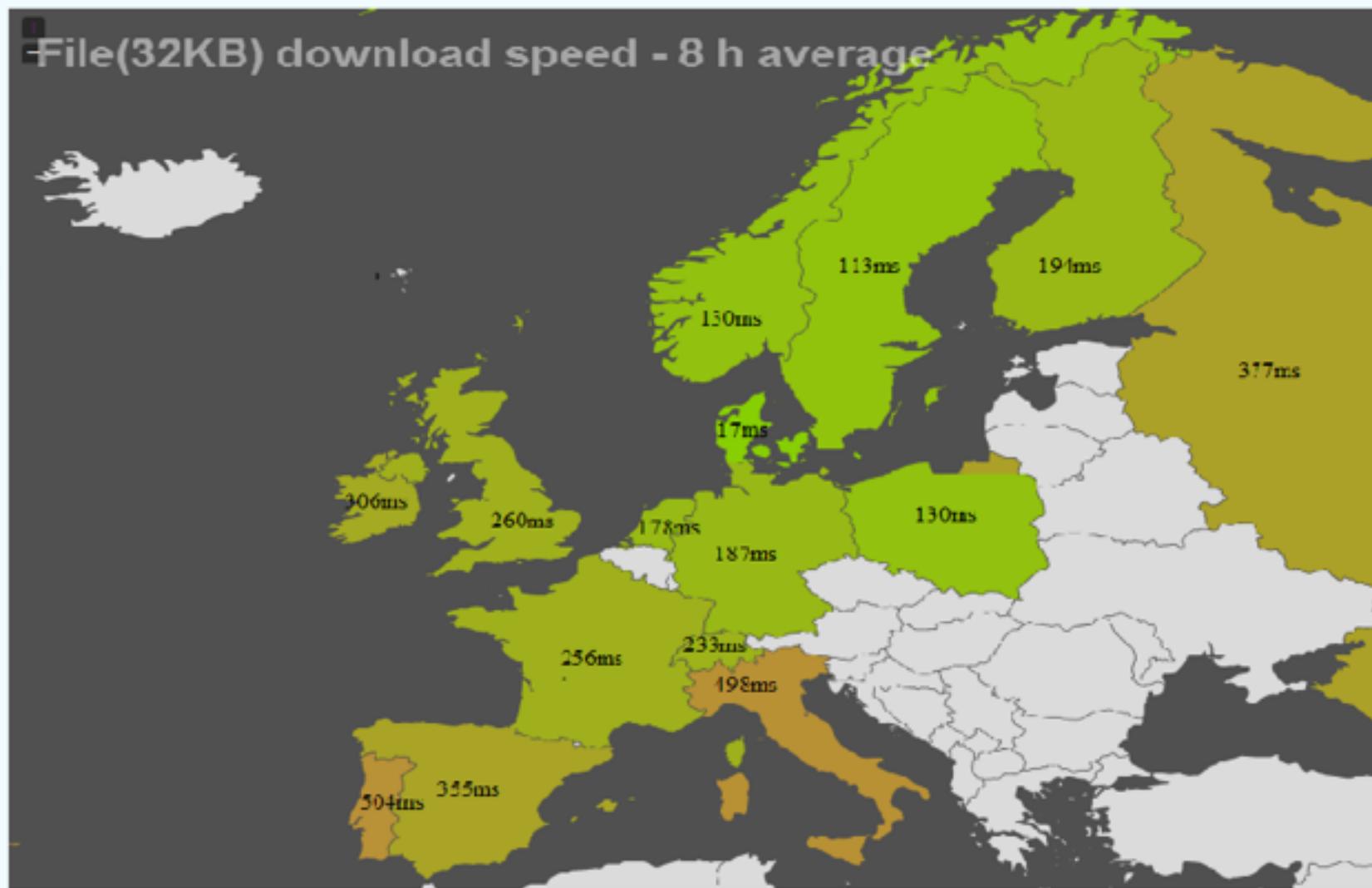
More difficult/ interesting cases



More difficult/ interesting cases



More difficult / interesting cases



More difficult/ interesting cases

QuickStats

SLA:100%

SE

SLA:100%

DS

SLA:86.11%



- Service is running normally



- Performance degradation



- Service interruption

SLA - weekly service SLA

**Real Time
Bidding**

SLA:99.52%

**Product
Targeting**

SLA:57.07%

**Container
Tags**

SLA:71.48%

**Cherry
Picking**

SLA:100%

Impressions

SLA:98.81%

Clicks

SLA:99.92%

Unload

SLA:99.9%

**Tracking
Points**

SLA:91.83%

Event

SLA:99.92%

**Cherry
picking**

SLA:37.32%

AdX

SLA:100%

**Video
Converter**

SLA:100%

**Screen
Capture**

SLA:100%

AdCapture

SLA:100%

Publishing

SLA:100%

**S#1 Stats on
Time**

SLA:100%

**S#2 Stats on
Time**

SLA:100%

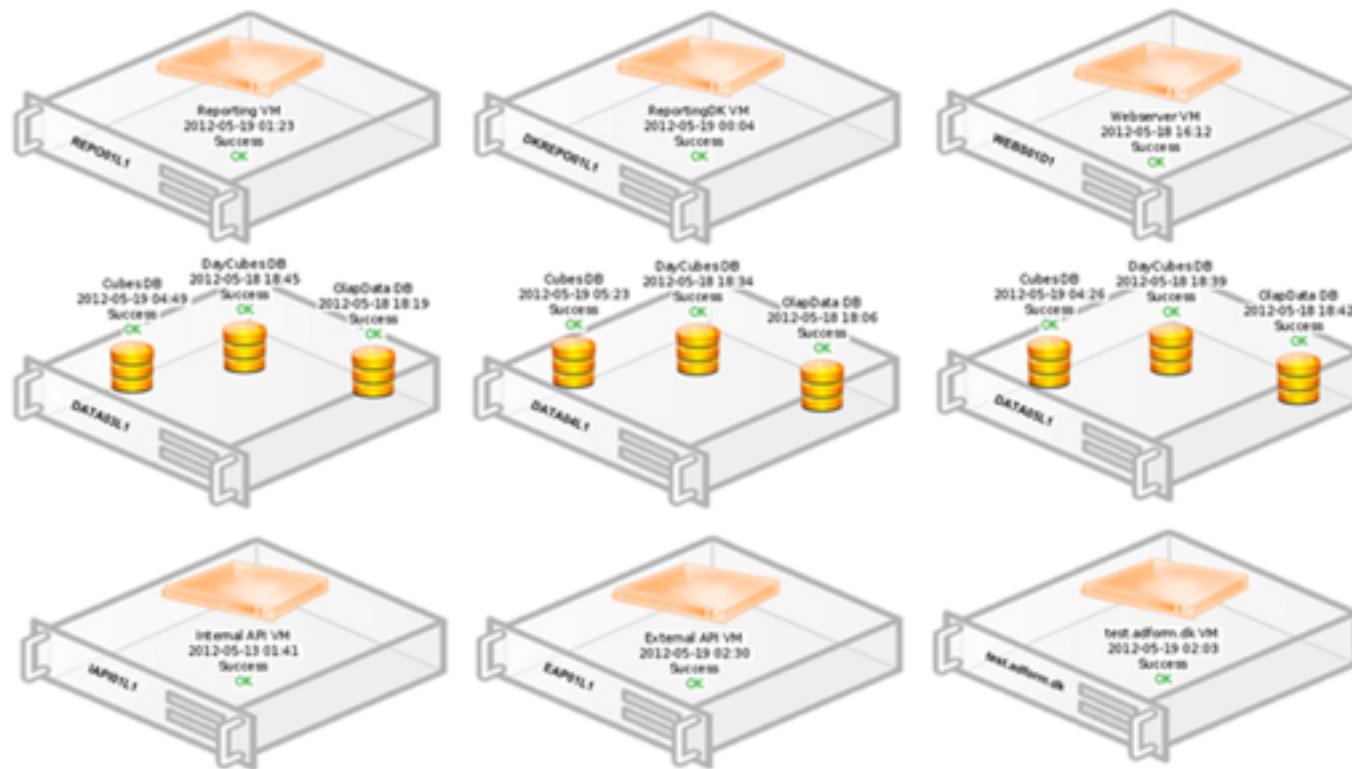
**S#3 Stats on
Time**

SLA:89.29%

**S#4 Stats on
Time**

SLA:89.66%

More difficult/ interesting cases

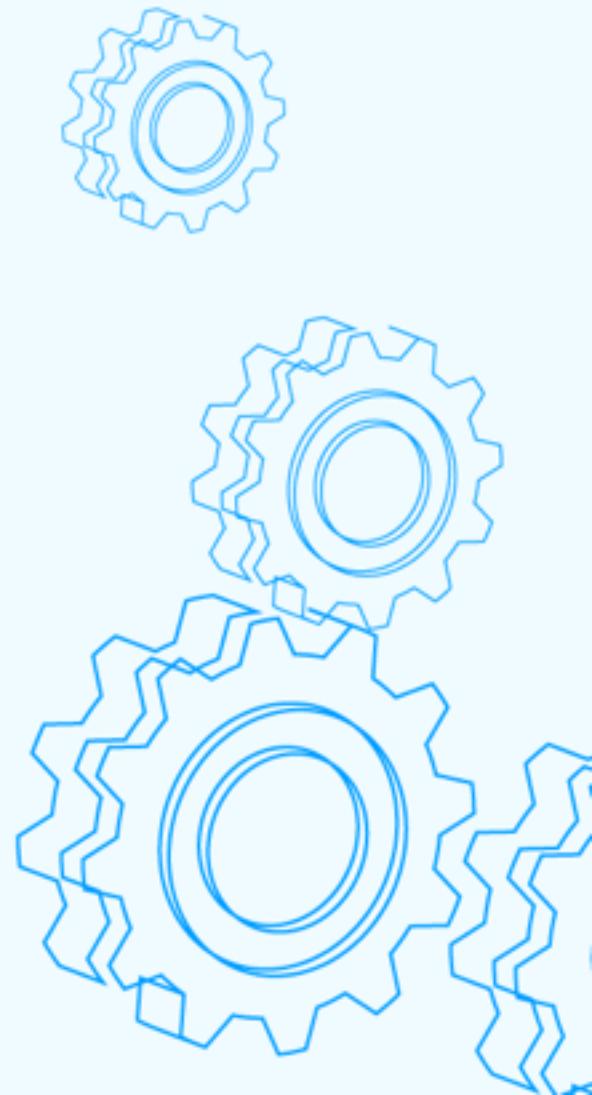




Summarise

Why it worked

- True value
- Right tools
- No man in the middle
- Management support





Questions?