# Business Analytics

for

# Developer Services

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# Who Am I?

FOUNDED

FLURRY from Yahoo!

Outlier

BLOG

seanonstartups.co

Every line is the perfect length if you don’t measure it.

- Marty Rubin

# What analytics…

*Can Do:*

- Measure performance
- Inform decisions
- Expose opportunities and challenges

*Cannot Do:*

- Fix your problems
- Motivate people
- Run your company

# Overview

- Key Performance Indicators
- Measurement & Tracking
- Selecting Tools
- Measuring Success

# 1 // WHERE ARE WE GOING?

KPIs

What are your goals?

Vision

↓

Goals

↓

KPIs

# Key Performance Indicators

(Not progress)

# Vision

Allow anyone, anywhere to have a latte when they need it by using drone delivery.

# Goals

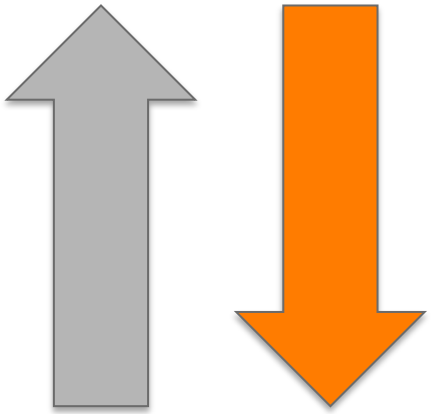
- Reach 100 deliveries per day in SF
- Reach 20,000 paying customers
- Launch in 3 more cities

# KPIs

- Total deliveries per day
- Total paying customers
- Cities with active customers

KPIs

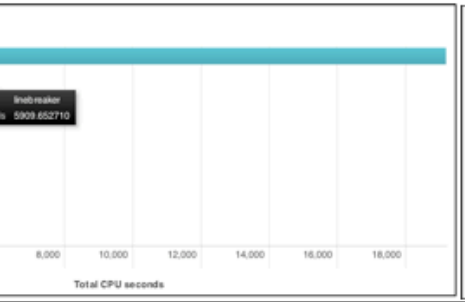
What do we need to track?

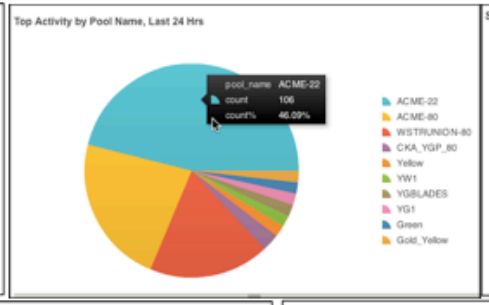


Where do we need to go?

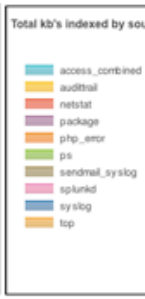
OKRs

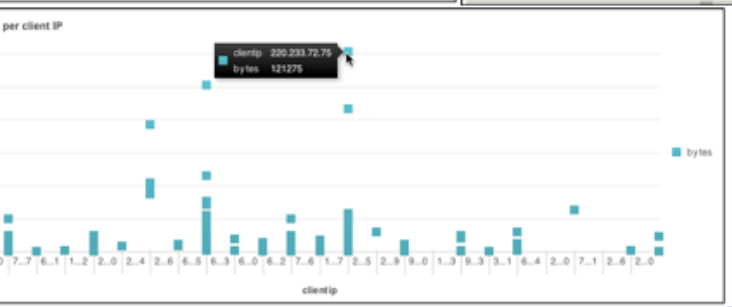
There can be only ~~one.~~ five.

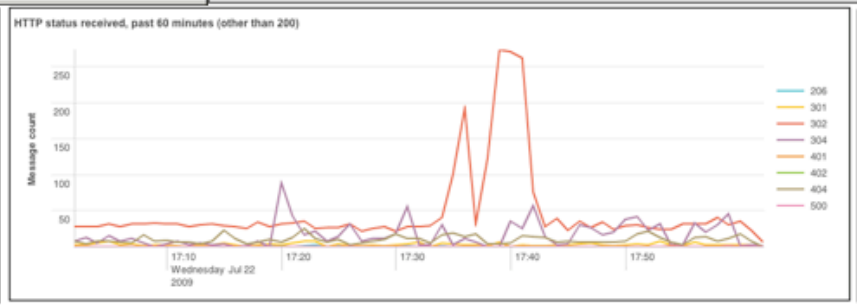

linebreaker
5909.652710
8,000
10,000
12,000
14,000
16,000
18,000
Total CPU seconds

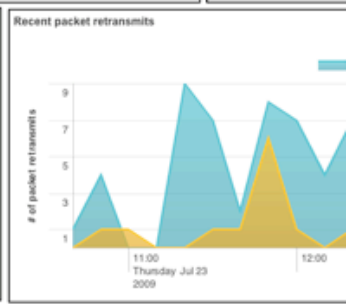

Top Activity by Pool Name, Last 24 Hrs
pool_name ACME-22
count 106
count% 46.09%
ACME-22
ACME-80
WSTRUNION-80
CKA_YGP_80
Yellow
YW1
YGBLADES
YG1
Green
Gold_Yellow

Splunk manual usage
Admin
Developer
Help
Installation
Knowledge
NULL
OTHER
ReleaseNotes
SearchReference
User
admin
user
_time 2009-07-22T08:00:00.000-07:00
User 123
Total pageviews
1,000
800
600
400
200
12:00
Tuesday Jul 21
2009
18:00
00:00
Wednesday Jul 22
06:00
Time

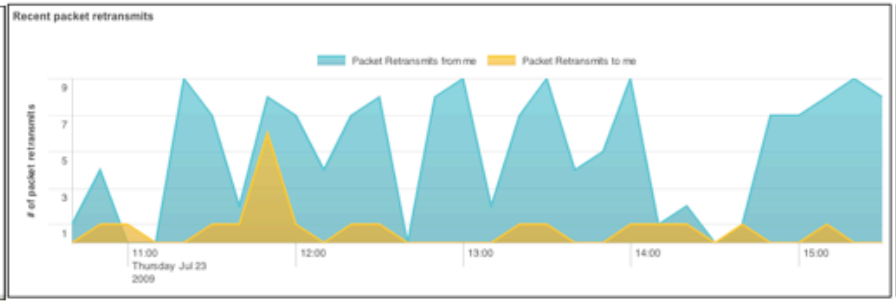

Total kb's indexed by so
access_combined
audittrail
netstat
package
php_error
ps
sendmail_syslog
splunkd
syslog
top

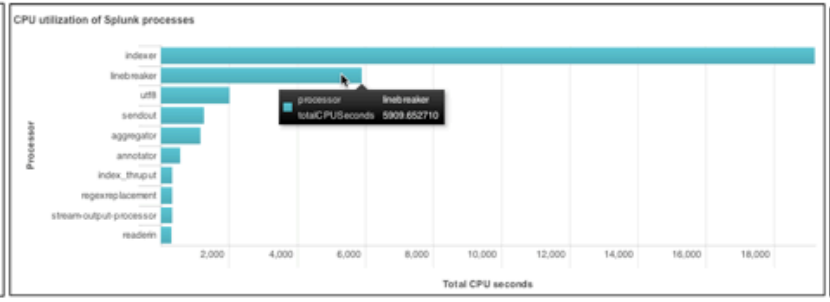

per client IP
clientip 220.233.72.75
bytes 121275
bytes
clientip


HTTP status received, past 60 minutes (other than 200)
Message count
250
200
150
100
50
17:10
Wednesday Jul 22
2009
17:20
17:30
17:40
17:50
206
301
302
304
401
402
404
500

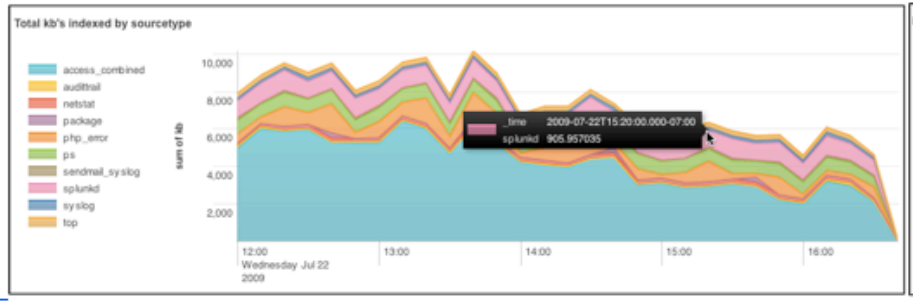

Recent packet retransmits
# of packet retransmits
9
7
5
3
1
11:00
Thursday Jul 23
2009
12:00

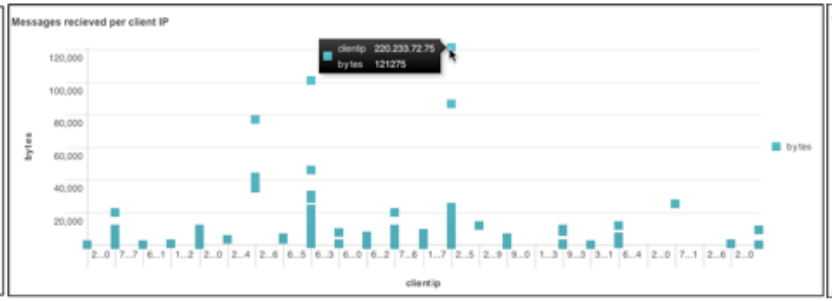
ACME-22
ACME-80
WSTRUNION-80
CKA_YGP_80
Yellow
YW1
YGBLADES
YG1
Green
Gold_Yellow


Recent packet retransmits
Packet Retransmits from me
Packet Retransmits to me
# of packet retransmits
9
7
5
3
1
11:00
Thursday Jul 23
2009
12:00
13:00
14:00
15:00


CPU utilization of Splunk processes
indexer
linebreaker
utf8
sendout
aggregator
annotator
index_thruput
regexreplacement
stream-output-processor
readerin
Processor
processor linebreaker
totalCPUSeconds 5909.652710
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
Total CPU seconds

Total kb's indexe
access_c
audittrail
netstat
package
php_erro
ps
sendmail_
splunkd
syslog
top


Total kb's indexed by sourcetype
access_combined
audittrail
netstat
package
php_error
ps
sendmail_syslog
splunkd
syslog
top
sum of kb
10,000
8,000
6,000
4,000
2,000
_time 2009-07-22T15:20:00.000-07:00
splunkd 905.957035
12:00
Wednesday Jul 22
2009
13:00
14:00
15:00
16:00


Messages recieved per client IP
clientip 220.233.72.75
bytes 121275
bytes
120,000
100,000
80,000
60,000
40,000
20,000
bytes
clientip

Top Activity by Pool Name,

# The 5 KPIs

Acquisition

Engagement

Retention

Revenue

Cost

| Bad KPIs | Good KPIs |
| --- | --- |
| • Unique website visitors | • Total purchases |
| • Total downloads | • Conversion rate |
| • Total revenue | • Profit |

# 2 // NUMBERS LIE

Measurement & Tracking

## Canarsie Hedge Fund Collapses

Losses Slash Assets from $60 Million to $200,000 in Three Weeks; Manager: 'I Acted Overzealously'

## Everest Capital to Close $830 Million Global Fund After Losses on Swiss Franc

Firm to Keep Running More Than $2 Billion of Other Funds Not Exposed to Switzerland's Currency

## Alpari Applies for Insolvency as Potential Buyers Circle

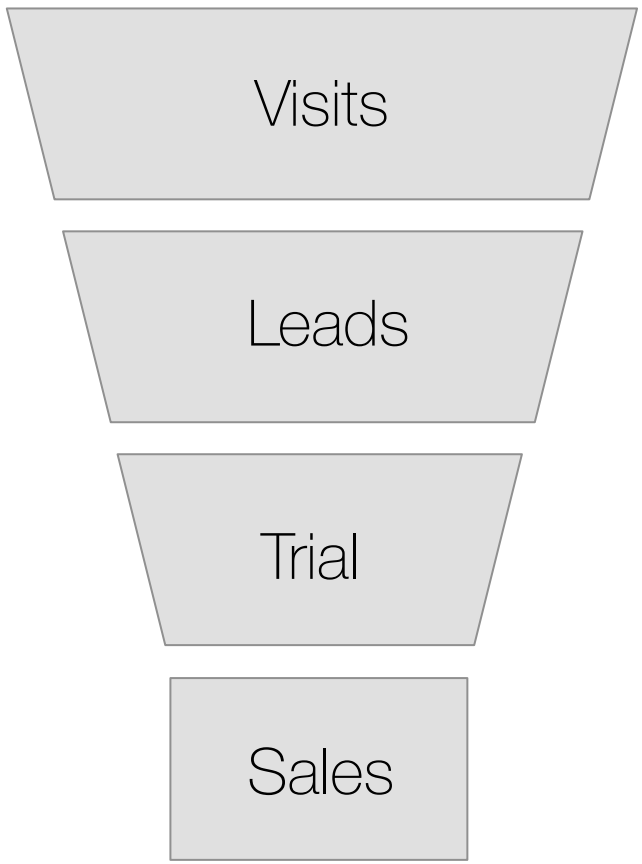
Online Currency Trader 'Looking at' Retail Broker

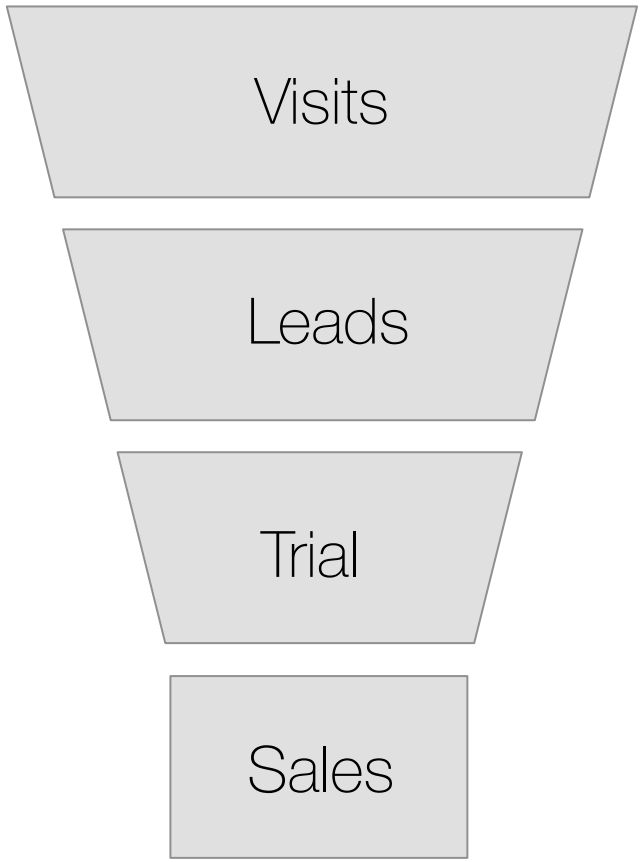
Collection Bias

Interpretation Bias

Collection Bias

Interpretation Bias


Visits
Leads
Trial
Sales



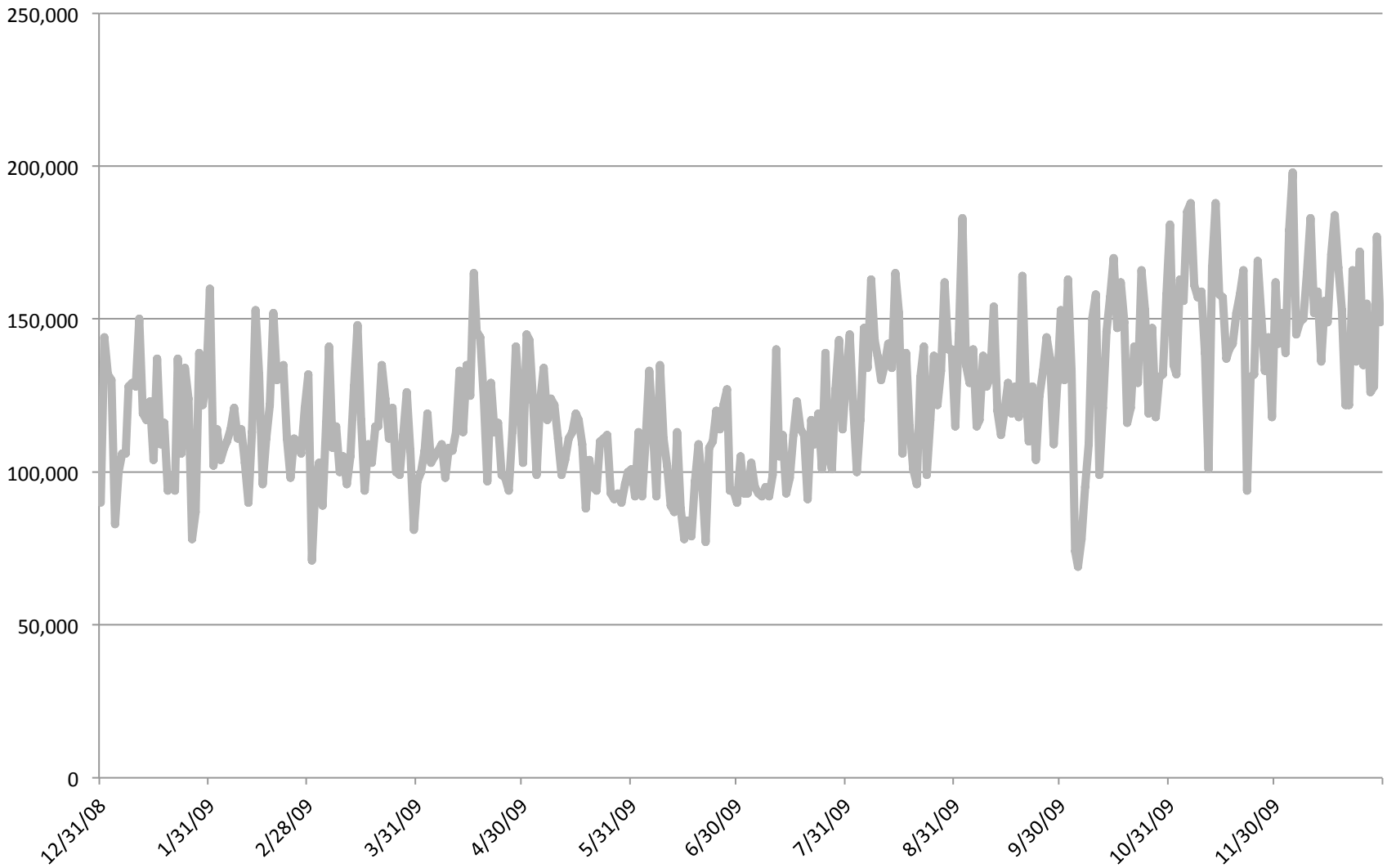

| | |
|---|---|
| 100,000 | |
| 5,000 | 5% |
| 500 | 0.5% |
| 50 | 0.05% |

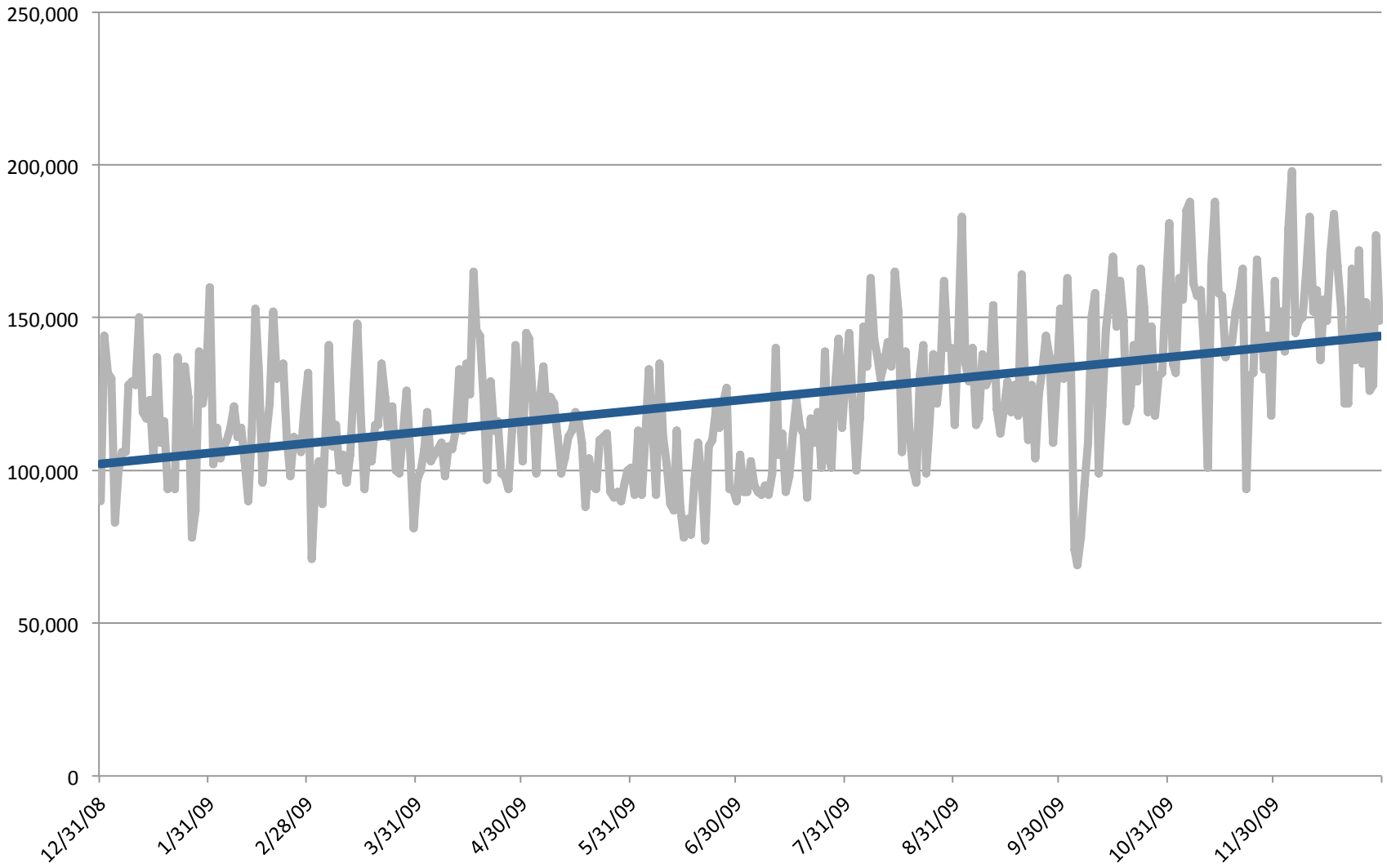
# Avoiding Collection Bias

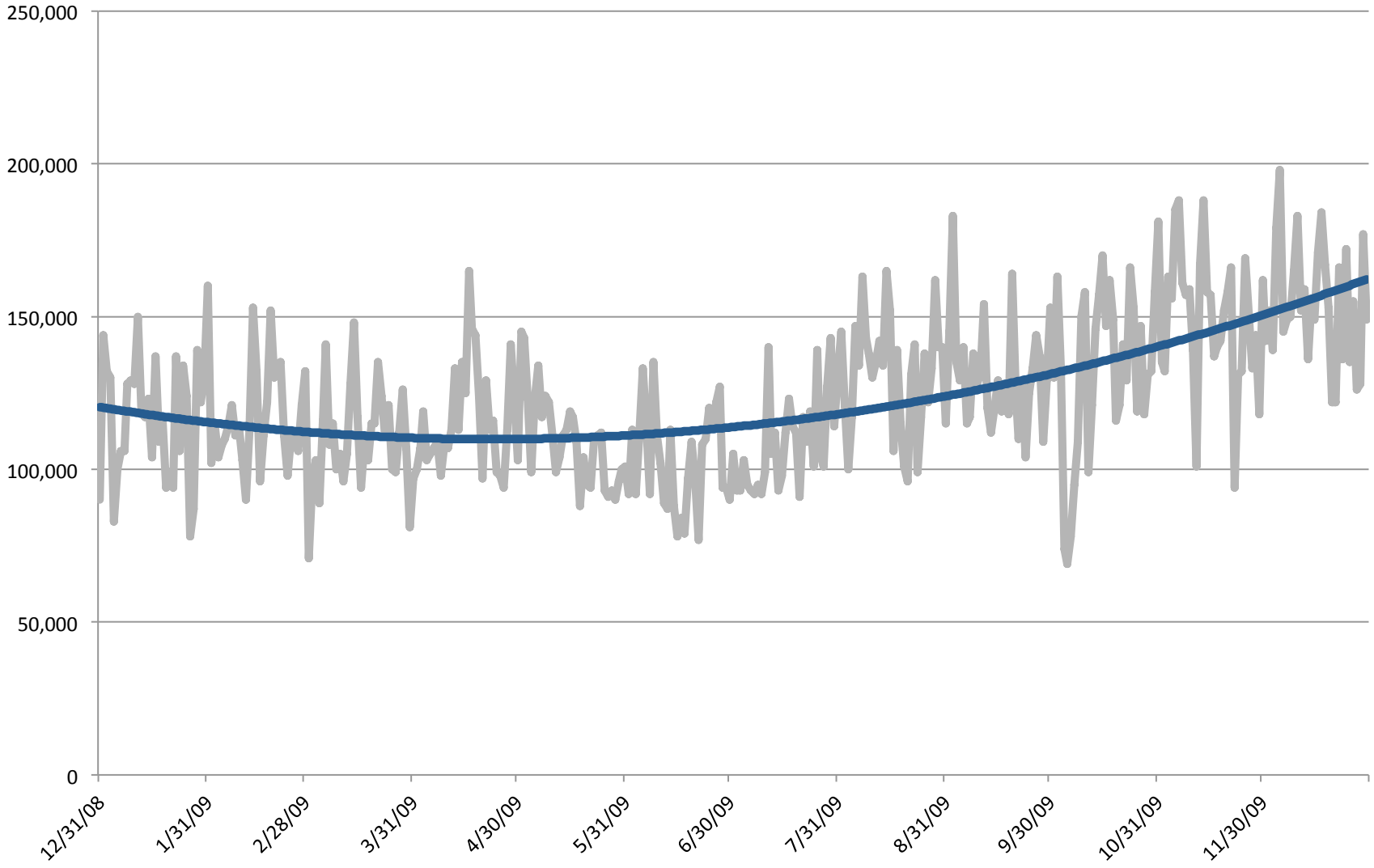
- Don’t collect EVERYTHING
- Clearly define data you collect
- Test data collection just like a feature

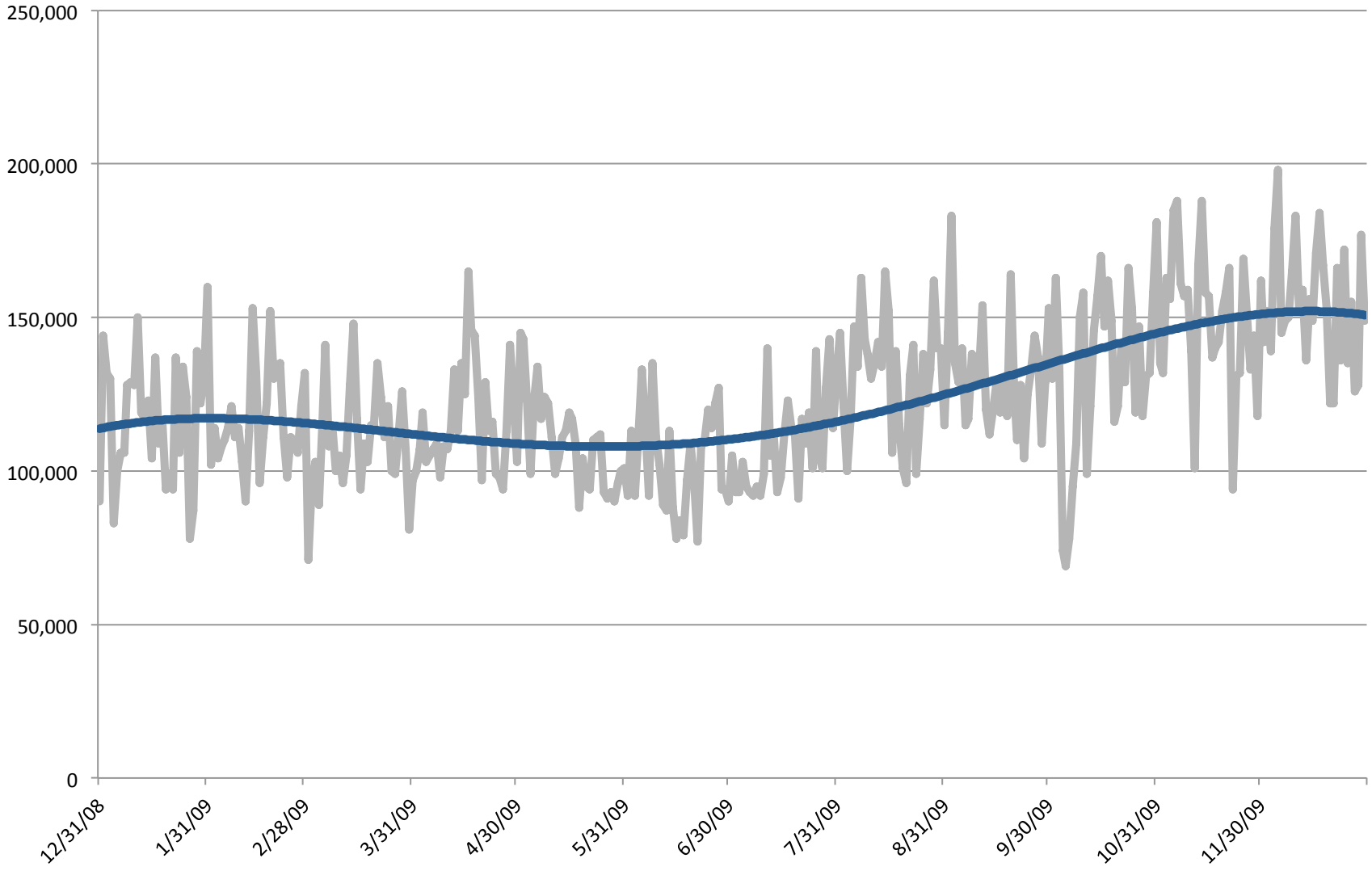
Collection Bias

Interpretation Bias


250,000
200,000
150,000
100,000
50,000
0
12/31/08
1/31/09
2/28/09
3/31/09
4/30/09
5/31/09
6/30/09
7/31/09
8/31/09
9/30/09
10/31/09
11/30/09


250,000
200,000
150,000
100,000
50,000
0
12/31/08
1/31/09
2/28/09
3/31/09
4/30/09
5/31/09
6/30/09
7/31/09
8/31/09
9/30/09
10/31/09
11/30/09


250,000
200,000
150,000
100,000
50,000
0
12/31/08
1/31/09
2/28/09
3/31/09
4/30/09
5/31/09
6/30/09
7/31/09
8/31/09
9/30/09
10/31/09
11/30/09


250,000
200,000
150,000
100,000
50,000
0
12/31/08
1/31/09
2/28/09
3/31/09
4/30/09
5/31/09
6/30/09
7/31/09
8/31/09
9/30/09
10/31/09
11/30/09

# Avoiding Interpretation Bias

- Form conclusions from the data, not vice versa
- Seek out independent analysis
- Triangulate trends using multiple data sources

# 3 // DON’T BUY 200 HAMMERS

Selecting Tools

# Types of Business Intelligence

## Sales/CRM

salesforce

Yesware

## Descriptive Analytics

Google Analytics

FLURRY

## Event-Based Analytics

mixpanel

Keen IO

## Ops

New Relic

## Customer Support

zendesk

## Financial Accounting

intuit QuickBooks

zenpayroll

## Billing

stripe

zuora

## Advertising

Google AdWords

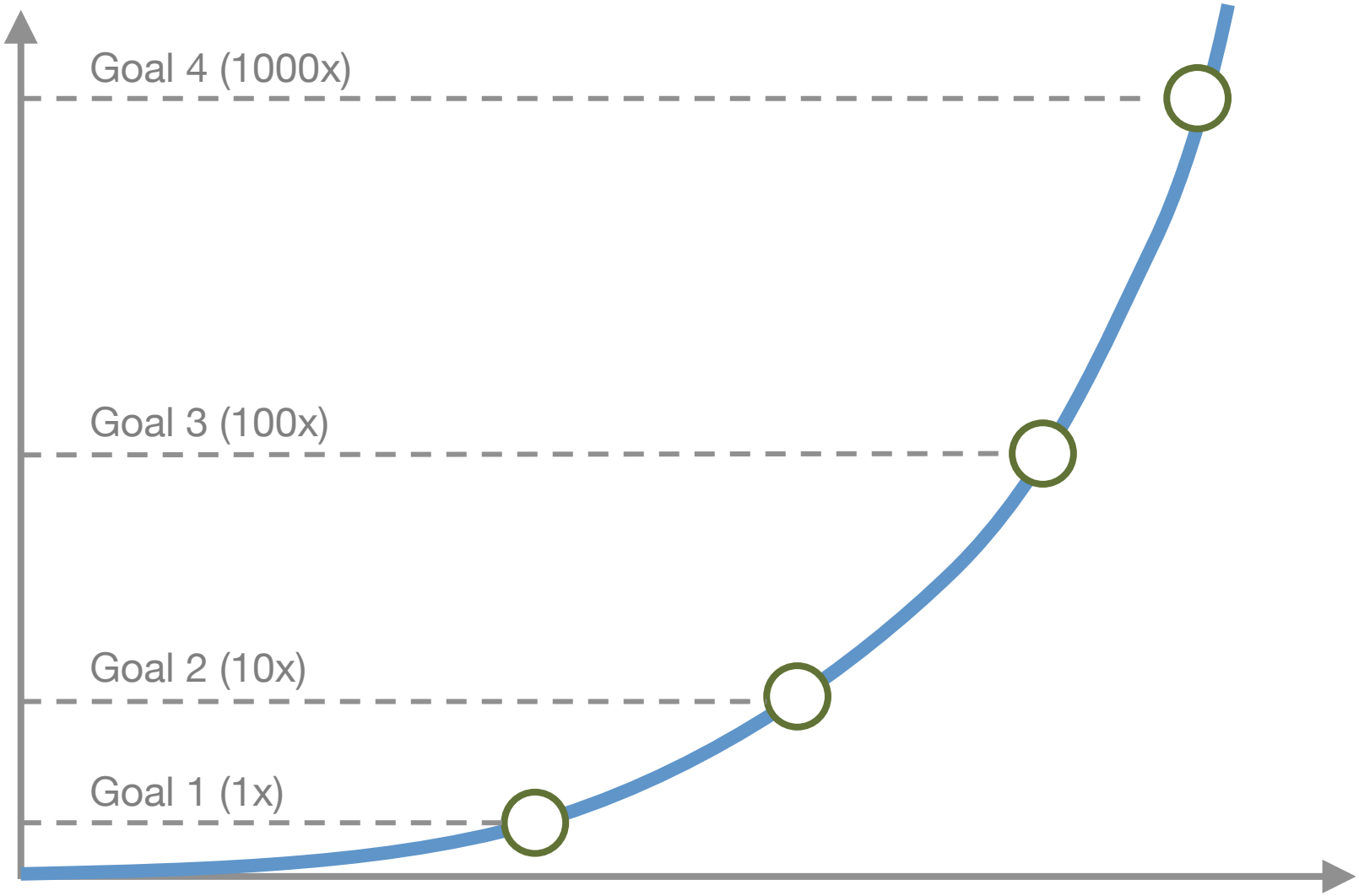
# What do you NEED?

# Beware taxes on success

| | |
|---|---|
| $0.01 | Per 1,000 events |
| 10 | Events per session |
| 3 | Sessions per day per user |

# Vision > Metrics

# Wait, what about growth?


Goal 4 (1000x)
Goal 3 (100x)
Goal 2 (10x)
Goal 1 (1x)

# Review

- Choose 5 KPIs
- Make sure your metrics are accurate
- Use only the tools you need
- Your vision is the most important

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Outlier

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