



PRODUCT OVERVIEW

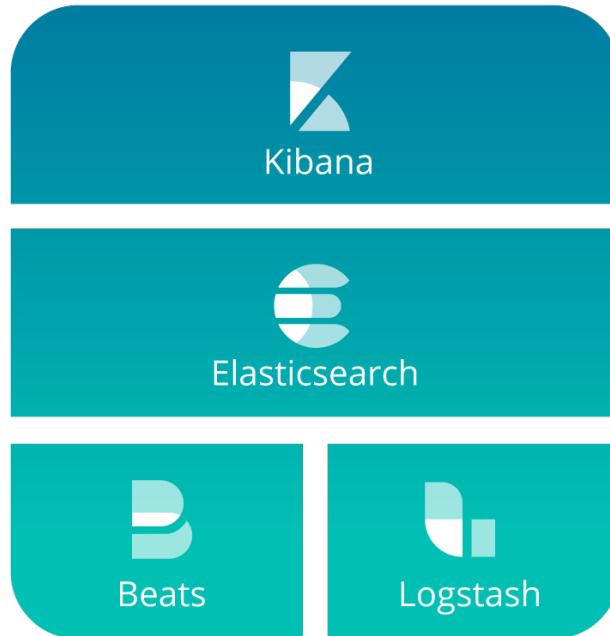
Elastic Stack, X-Pack, and Elastic Cloud





Elastic Stack

100% open source





X-Pack

Single install
Extensions for the Elastic Stack
Subscription pricing



Security



Alerting



Monitoring



Reporting



Graph



Machine Learning

Elastic Cloud

Hosted Elasticsearch & Kibana
Includes X-Pack features
Starts at \$45/mo



cloud Clusters Plugins Help Account Sign out

Summary

Region	US East (N. Virginia)
Memory	1 GB
Storage	24 GB
SSD	Yes
High availability	No
Hourly rate	\$0.0612
Monthly rate	\$45

Create

Cluster Size

Choose a cluster size. Cluster size can be changed later without downtime.

■ Memory ■ Storage

1GB 2GB 4GB 8GB 16GB 32GB 64GB 128GB 256GB
24GB 48GB 96GB 192GB 384GB 768GB 1536GB 3072GB 6144GB

SSD – Selected for improved storage performance.

Need a larger cluster? [Contact us.](#)

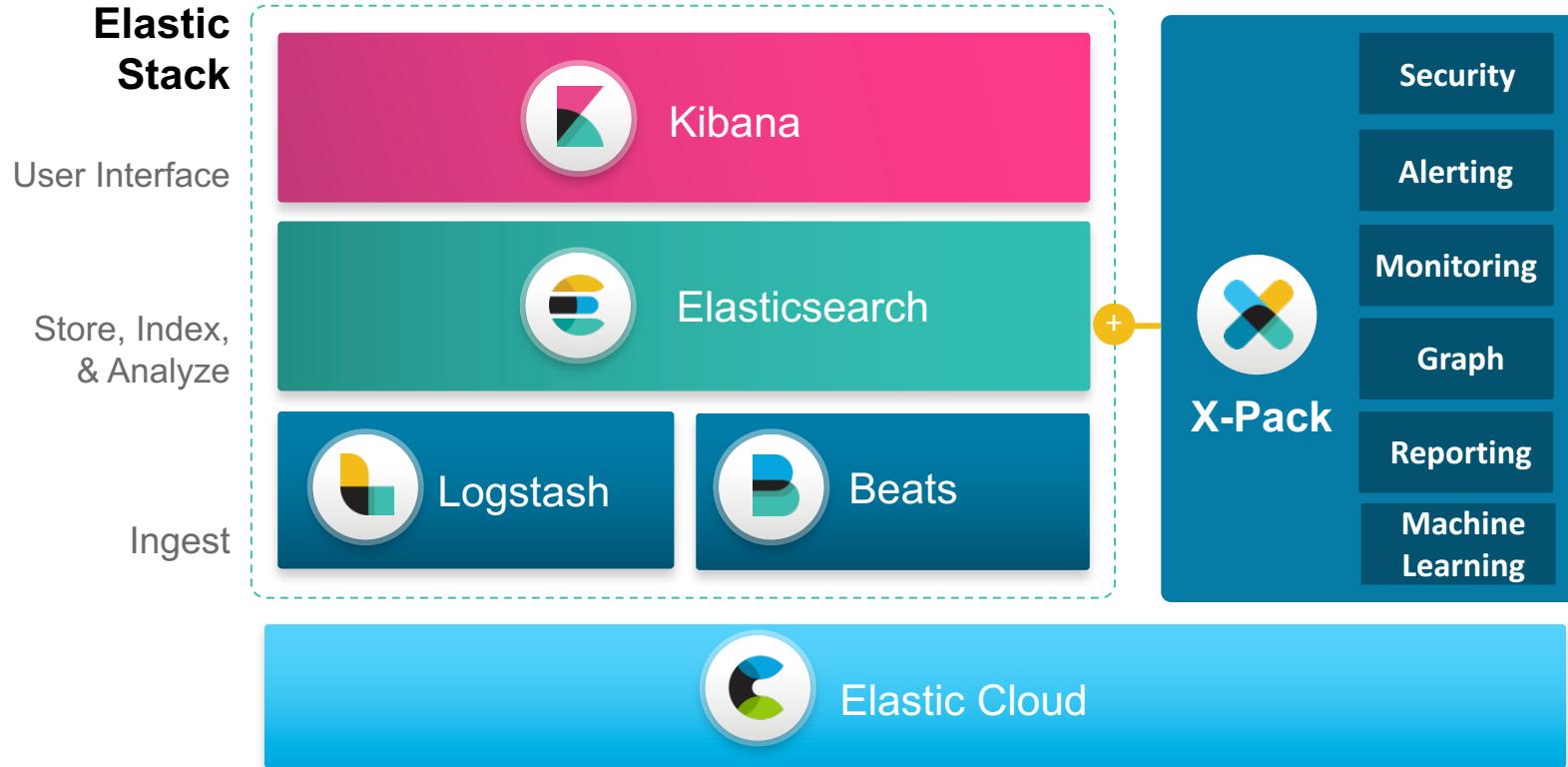
Region

Choose a region near you.

US East (N. Virginia) US West (N. California) US West (Oregon) EU (Ireland)
Asia Pacific (Singapore) Asia Pacific (Tokyo) South America East Asia Pacific (Sydney)

Available in AWS today
Available in Google Cloud Platform (soon)
Available as a private cloud/on-premise solution
(Elastic Cloud Enterprise)

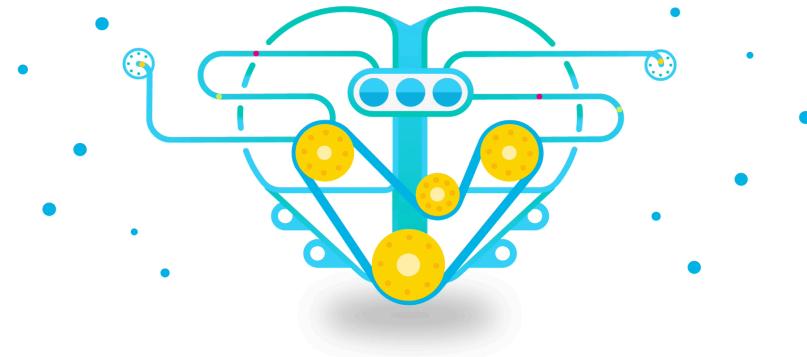
Elastic: Product Portfolio





Elasticsearch

Heart of the Elastic Stack



Distributed, Scalable

High-availability

Multi-tenancy

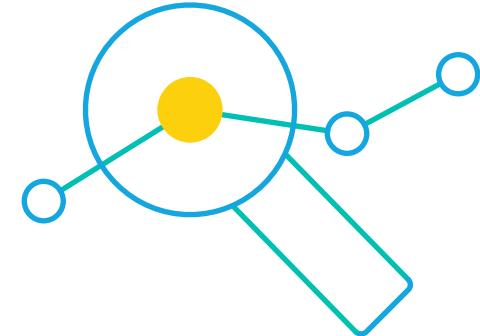
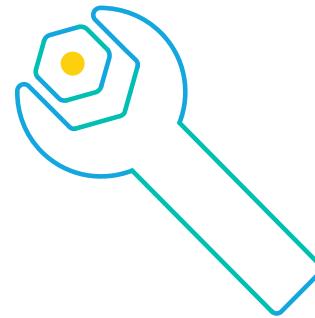
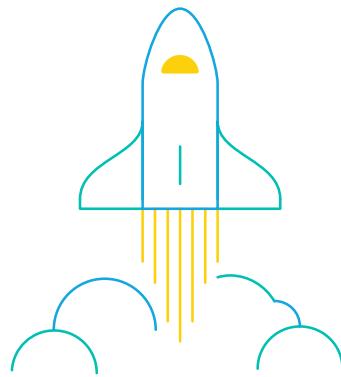
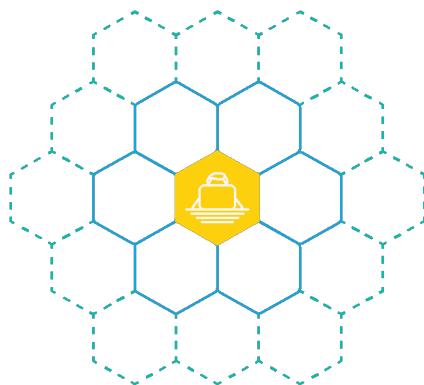
Developer Friendly

Real-time, Full-text Search

Aggregations

Elasticsearch is...

An open source, distributed, scalable, highly available, document-oriented, RESTful, full text search engine with real-time search and analytics capabilities





Kibana

Window into the Elastic Stack



Visualize and analyze

Graph Exploration

Geospatial

UX to secure and manage
the Elastic Stack

Customize and Share
Reports

Build Custom Apps



Apache - Total Visitors

2,317,838

Apache - Unique Visitors

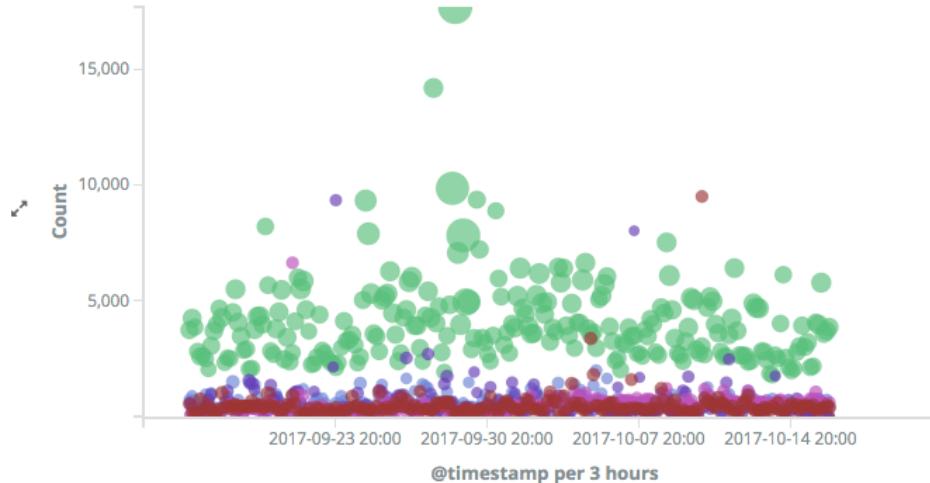
29,740

Apache - Unique Visitor... Apache - Country traffic by hour

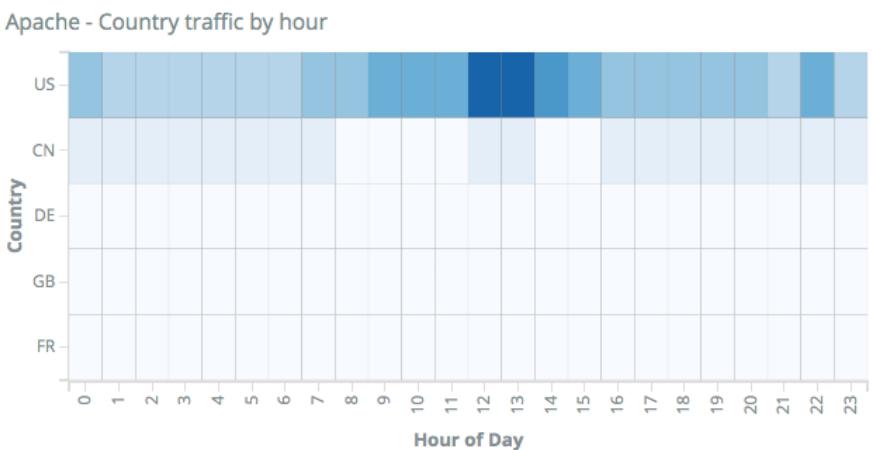
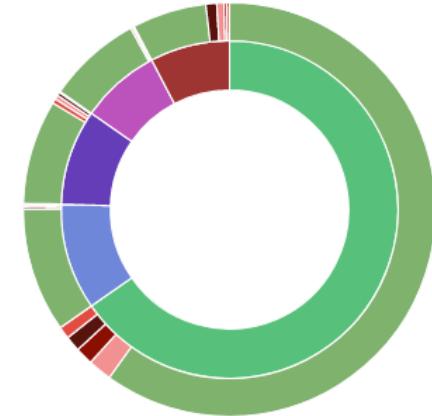
City	Count of Unique Clients
Beijing	569
Ashburn	397
Redmond	383
Chicago	379
London	248
Los Angeles	232

Apache - Bytes and Count

US FR DE NL CN



Apache - Country and Status



Apache - Top OS small

Chrome Mobile iOS
Android 360Spider
Chrome Mobile IE Other blingbot
Balduspieler Opera
Iceweasel Safari
Googlebot Wget
Mobile Safari Chromium
Mobile Safari UI/WKWebView
Opera Mini FacebookBot
Mobile Safari UI/WKWebView

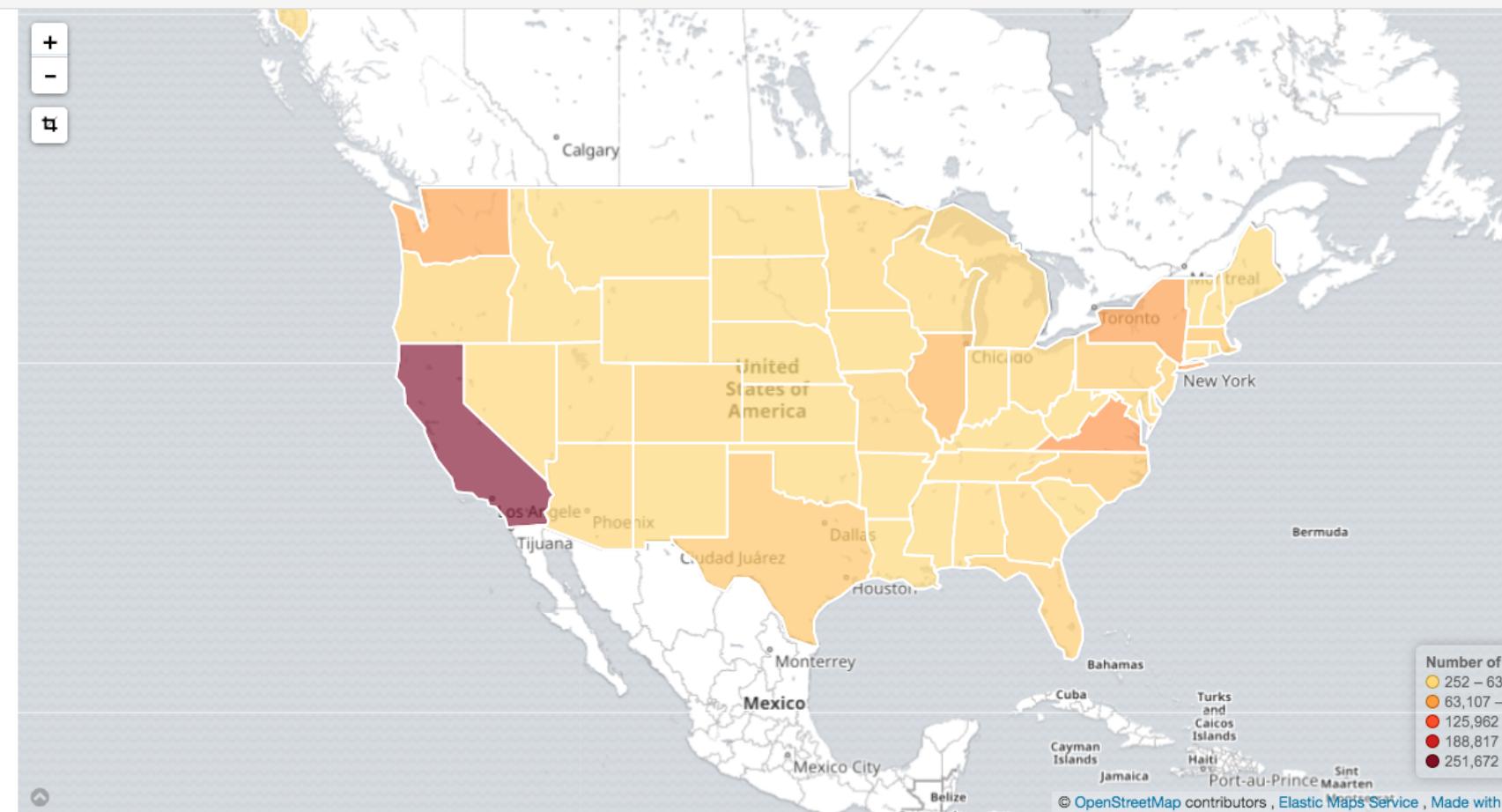
Uses lucene query syntax



apache2.access.geoip.country_iso_code:US

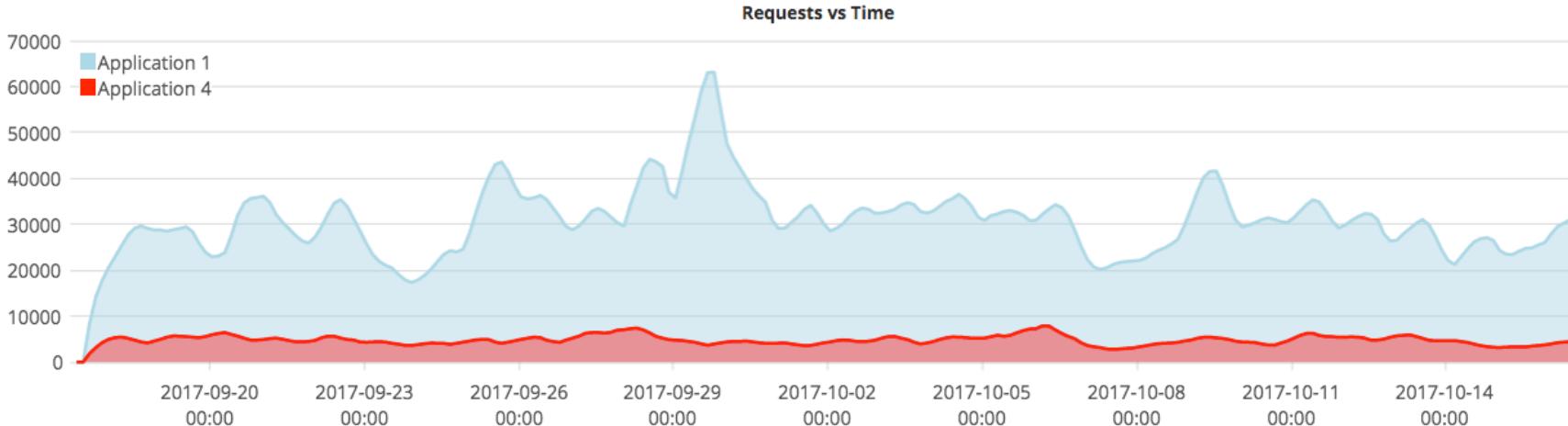
apache2.access.geoip.country_iso_code: "US" Add a filter +

Actions ▾

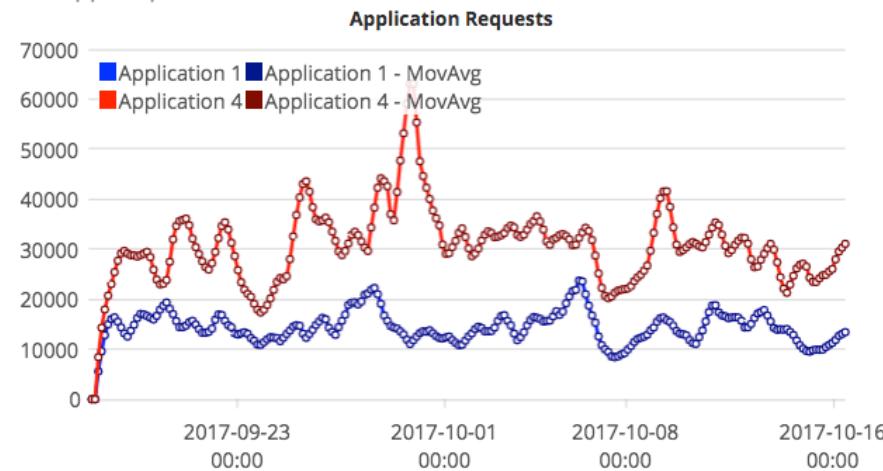




TS - Req v Time

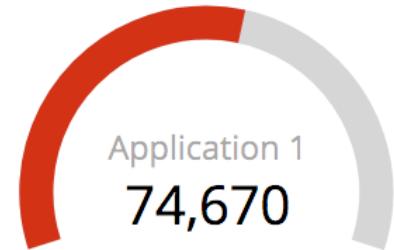


TS - App Requests



↗ TS - App4

↗ TS - App1



Console Search Profiler Grok Debugger

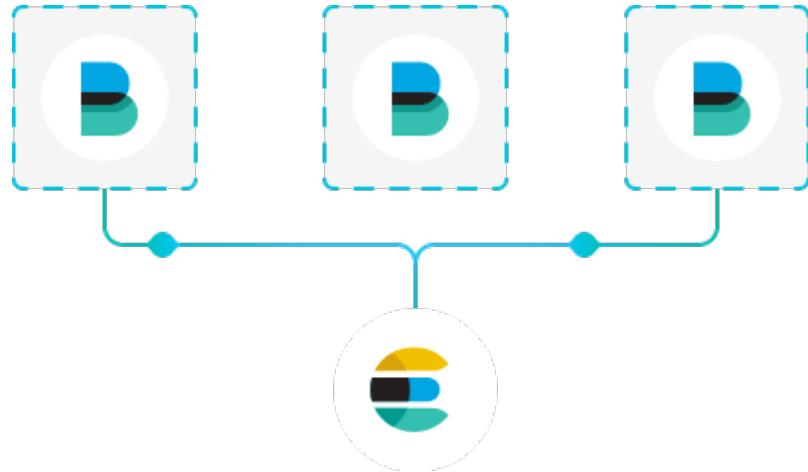
```
1 GET shakespeare/_search
2 {
3   "query": {
4     "bool": {
5       "must": [
6         {
7           "match": {
8             "play_name": {
9               "fuzziness": "AUTO",
10              "query": "Kariolanus"
11            }
12          }
13        },
14        {
15          "match_phrase": {
16            "text_entry": "Methinks thou"
17          }
18        }
19      ]
20    }
21  }
22}
23
24
```

```
1 {
2   "took": 10,
3   "timed_out": false,
4   "_shards": {
5     "total": 1,
6     "successful": 1,
7     "skipped": 0,
8     "failed": 0
9   },
10  "hits": {
11    "total": 1,
12    "max_score": 13.928457,
13    "hits": [
14      {
15        "_index": "shakespeare",
16        "_type": "doc",
17        "_id": "25107",
18        "_score": 13.928457,
19        "_source": {
20          "type": "line",
21          "line_id": 25108,
22          "play_name": "Coriolanus",
23          "speech_number": 3,
24          "line_number": "1.6.18",
25          "speaker": "COMINIUS",
26          "text_entry": "Methinks thou speakest not well."
27        }
28      }
29    ]
30  }
31}
```



Beats

Window into the Elastic Stack



Ship data from the source

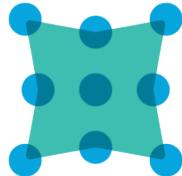
Ship and centralize in Elasticsearch

Ship to Logstash for transformation and parsing

Ship to Elastic Cloud

Libbeat: API framework to build custom beats

30+ community Beats



PACKETBEAT
Network Data



METRICBEAT
Metrics



WINLOGBEAT
Window Events



FILEBEAT
Log Files



HEARTBEAT
Uptime Monitoring

More than 30 community Beats
and growing ...

Apachebeat, dockbeat, httpbeat,
mysqlbeat, nginxbeat, redis beats,
twitterbeat, and more



beat.hostname:"orion.company.co"

Uses lucene query syntax



Add a filter +

System Navigation [Metricbeat System]

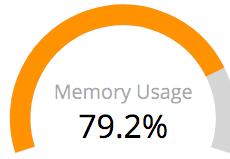
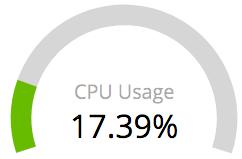
System Overview | Host Overview | Containers overview

CPU Usage Gauge [Metricbeat System] Memory Usage Gauge [Metricbeat System] Load Gauge [Metricbeat System]

Inbound Traffic [Metricbeat System]

Outbound Traffic [Metricbeat System]

Packetloss [Metricbeat System]



Inbound Traffic
5.3KB/s
Total Transferred 5.9MB

Outbound Traffic
776.2B/s
Total Transferred 2.8MB

In Packetloss
0
Out Packetloss 2

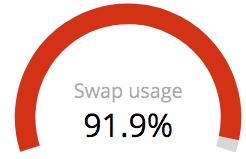
Swap usage [Metricbeat System]

Memory usage vs total

Number of processes [Metricbeat System]

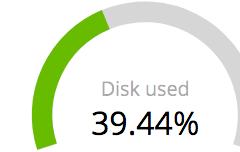
Disk used [Metricbeat System]

Disk Usage [Metricbeat System]

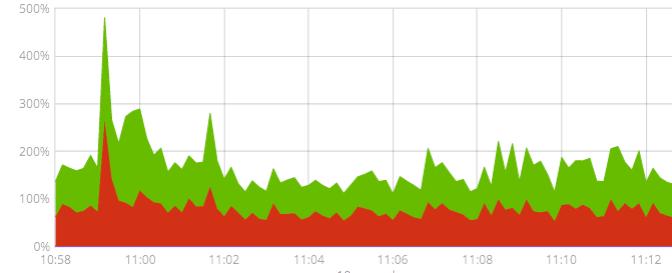


Memory usage
12.7GB
Total Memory 16.0GB

Processes
25

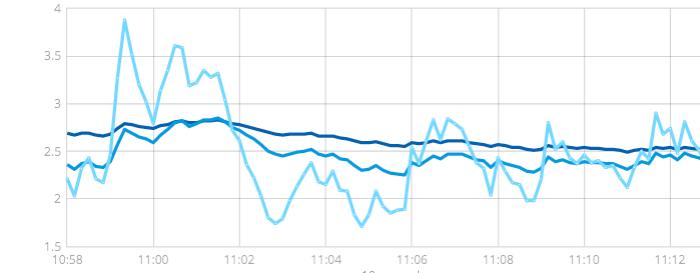


CPU Usage [Metricbeat System]



user	67.5%
system	71.6%
nice	0%
irq	0%
softirq	0%
iowait	0%

System Load [Metricbeat System]



1m	2.36
5m	2.4
15m	2.51

Memory Usage [Metricbeat System]

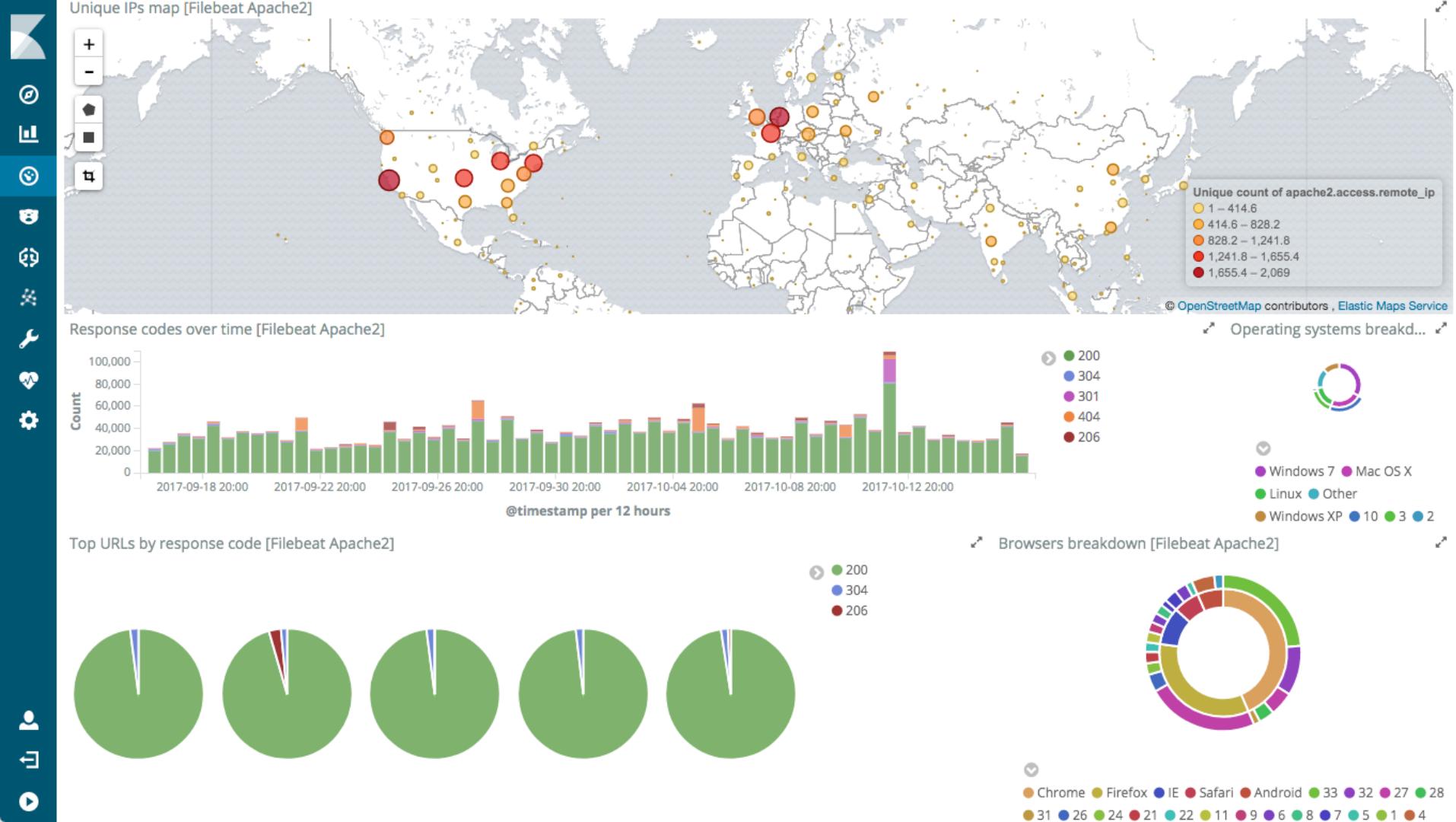


Used	18.6GB
Total	12.7GB

Disk IO (Bytes) [Metricbeat System]



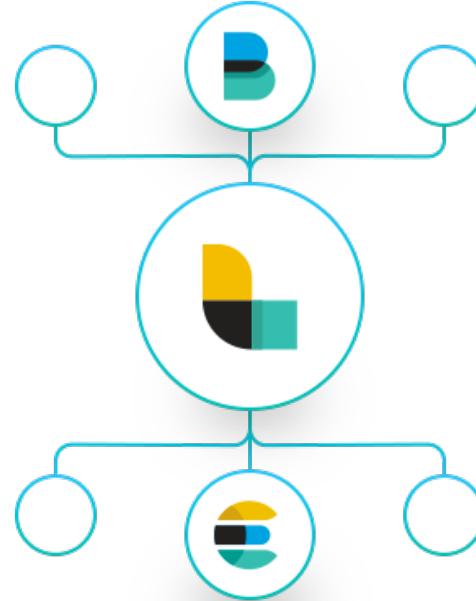
reads	0.0B/s
writes	0.0B/s





Logstash

Data processing pipeline



Ingest data of all shapes,
sizes, and sources

Parse and dynamically
transform data

Transport data to any
output

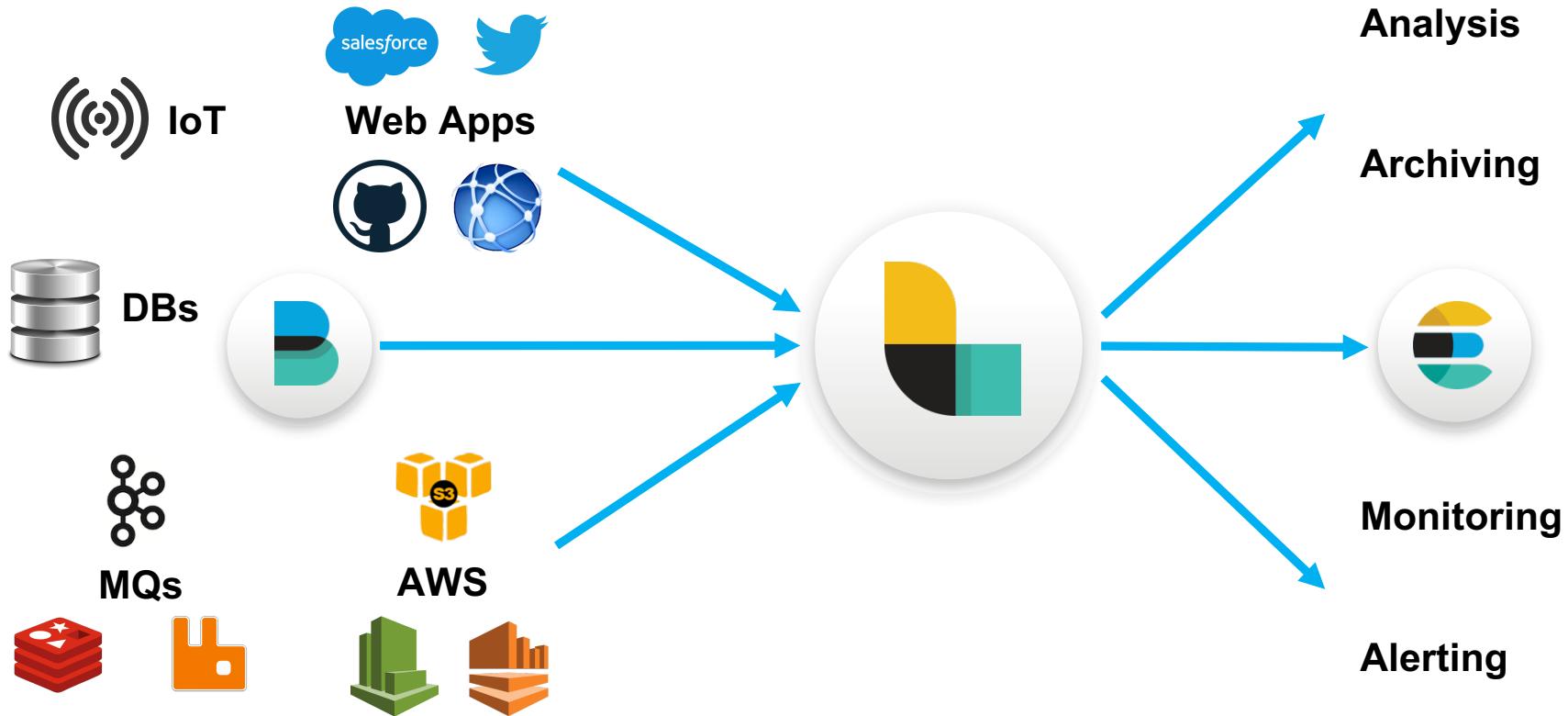
Secure and encrypt data
inputs

Build your own pipeline

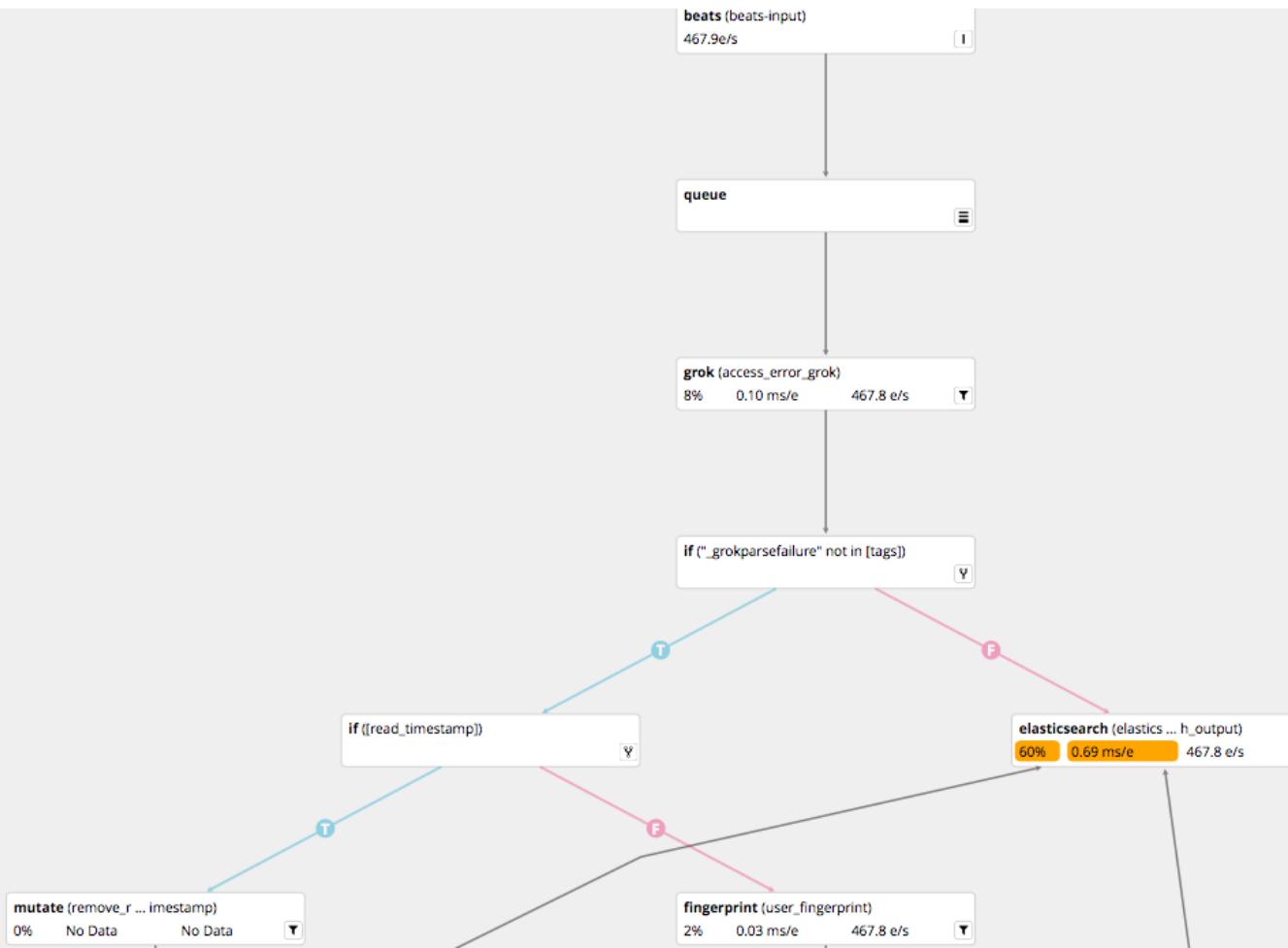
More than 200+ plugins

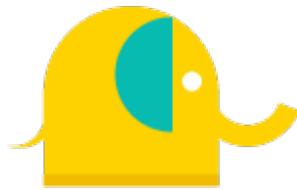


Popular Data Sources



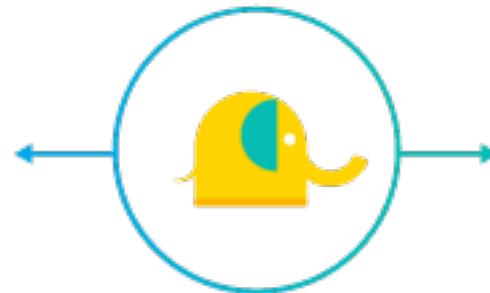
Version e456ab





ES-Hadoop

Elasticsearch for Hadoop



Two-way connector

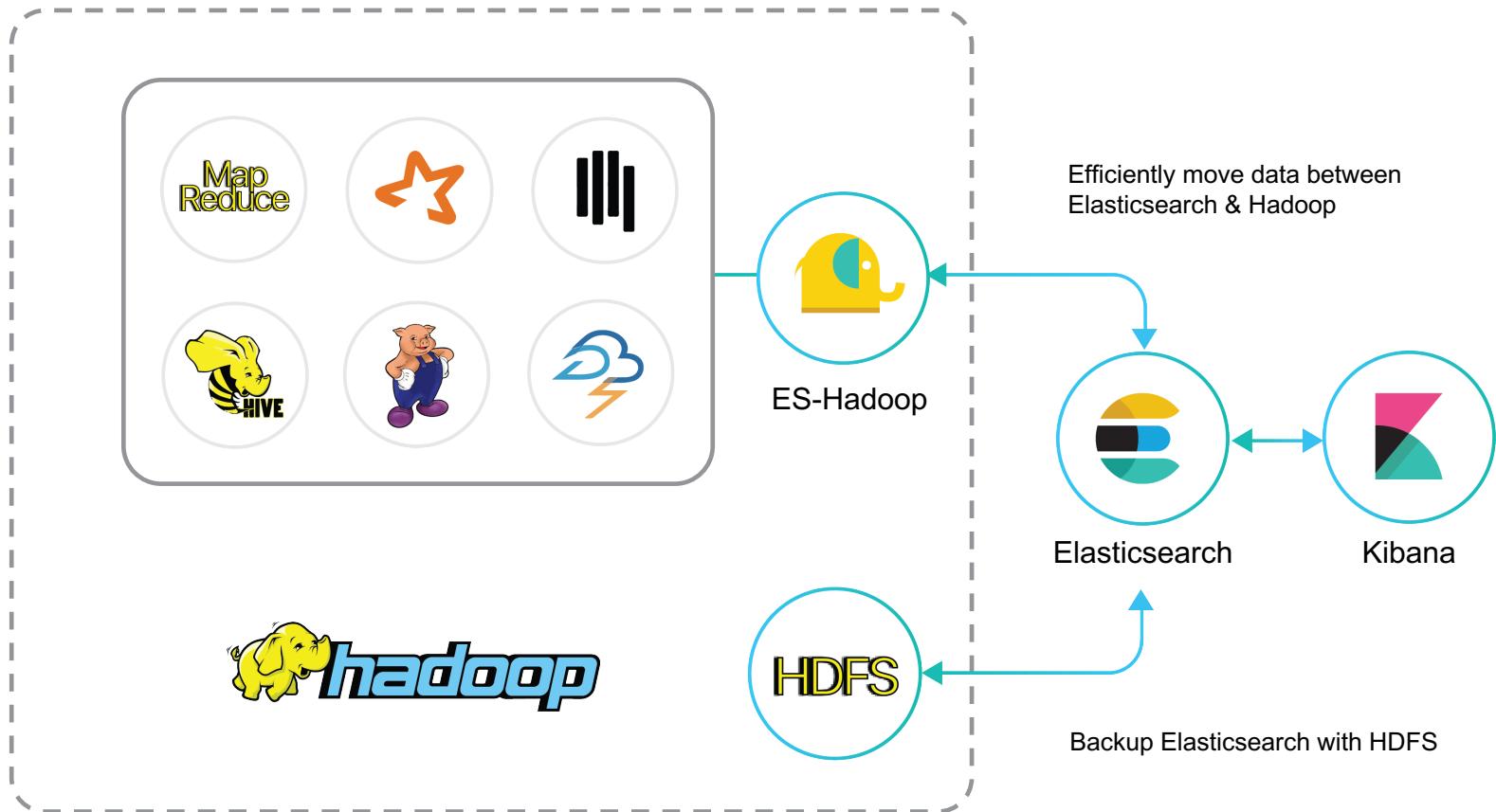
Index Hadoop data in
Elasticsearch

Enable real-time search
capabilities

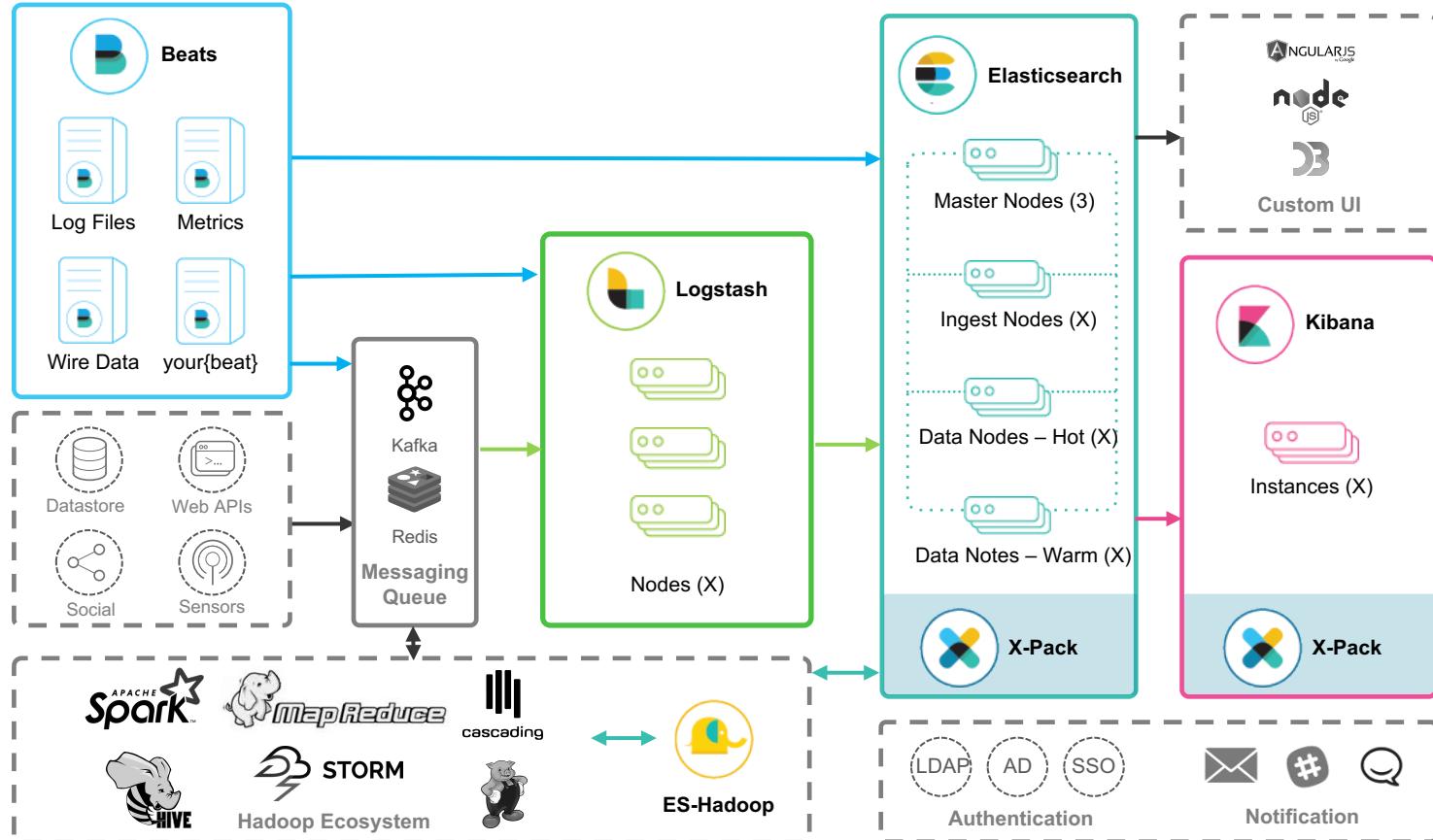
Visualize HDFS data
in Kibana

Snapshot and restore
with HDFS

Support for Spark, Storm
MapReduce, and more



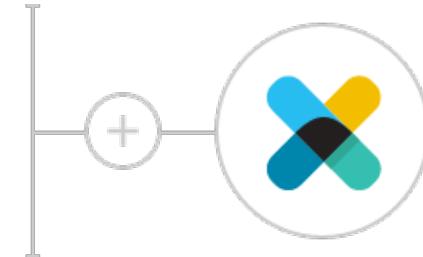
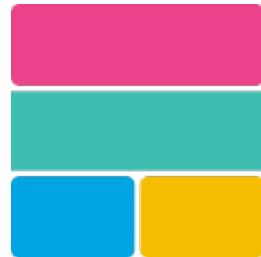
System Architecture





X-Pack

Extensions for the Elastic Stack



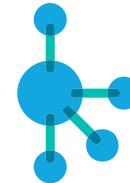
Security



Alerting



Monitoring



Graph



Reporting



Machine Learning



X-Pack



Security

AUTHENTICATION

- Username and password
- Integrate with authentication systems
- Create a custom realm to authenticate users

AUTHORIZATION

- Manage users and roles
- Assign permissions and privileges

ADDITIONAL CONTROLS

- SSL/TLS encryption
- IP filtering
- Field and document level security
- Audit logging

 Username

 Password





“it-admin” Role

 Delete role

Name _____

it-admin

Cluster Privileges

- all
 - monitor
 - manage
 - manage_security
 - manage_index_templates
 - manage_pipeline
 - manage_ingest_pipelines
 - transport_client
 - manage_ml
 - monitor_ml
 - manage_watcher
 - monitor_watcher

Run As Privileges

Add a user...

Index Privileges

Indices

it_ops_metrics ✎ it_ops_logs-* ✎

Granted Documents Query Optional

all
manag
read
index
create
delete
write
monitor

Granted Fields Option

Sym

[Cancel](#)

SETUP ALERTS



X-Pack

- Create Watches to detect changes in your data
- Trigger automatic notifications
- Setup nested alerts
- Store and track alert history

NOTIFY AND INTEGRATE



Alerting

- Email
- Slack
- Pagerduty
- Hipchat or JIRA
- Other monitoring systems

Status Edit

Host CPU Watcher

Send out an alert when specific conditions are met. This will run once every 5 minutes.

Name

Host CPU Watcher

Select an Indexmetricbeat.*

Broad searches can be done by adding * to your query

Select a time field

@timestamp

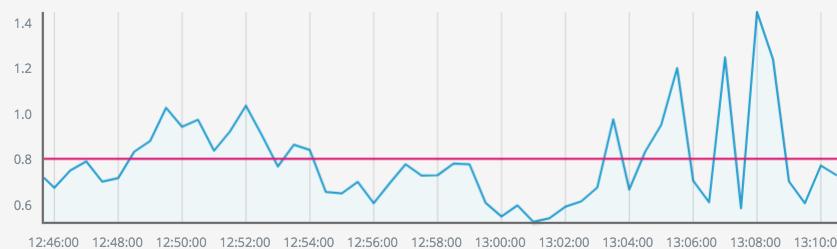
Run this watch every

5 minutes

Matching the following condition

```
WHEN average() OF system.cpu.user.pct GROUPED OVER top 5 'beat.hostname' IS ABOVE 0.8 FOR THE LAST 5 minutes
```

beat.hostname (1 of 3): orion.company.co





X-Pack



Monitoring

MONITOR CLUSTER HEALTH

- Prebuilt Kibana dashboards to monitor the performance of the Elastic Stack
- Get vital statistics at various levels -- cluster, node, and indices

OPTIMIZE CLUSTER PERFORMANCE

- Multicluster support to compare health and performance of multiple clusters
- Analyze historical or real-time data for root cause analyses
- Utilize analyses to proactively optimize and improve cluster performance
- Configure data retention policy



Nodes: 3 Indices: 24 Memory: 3GB / 5GB Total Shards: 56 Unassigned Shards: 0 Documents: 3,665,331 Data: 3GB

Health: Green

Indices

Filter Indices

3 of 3 Show system indices

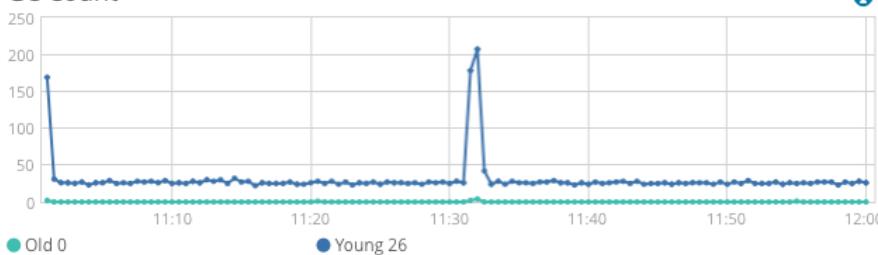
Name	Status	Document Count	Data	Index Rate	Search Rate	Unassigned Shards
elasticlogs-2017.10.12	Green	2m	1.3 GB	372.73 /s	0 /s	0
filebeat-6.0.0-rc1-2017.10.10	Green	994.7k	545.9 MB	0 /s	0 /s	0
filebeat-6.0.0-rc1-2017.10.11	Green	5.4k	2.1 MB	0 /s	0 /s	0

Overview Advanced

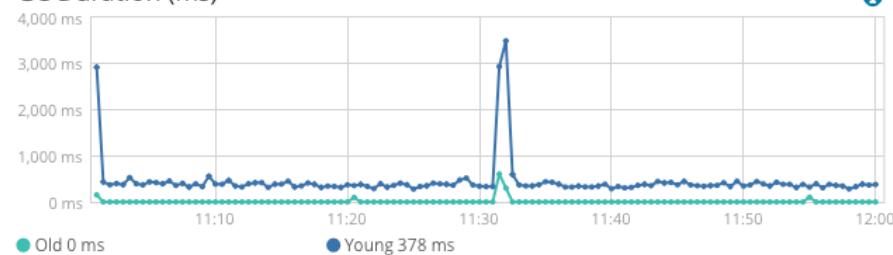
10.141.15.207:19471 JVM Heap: 17% Free Disk Space: 101.1 GB Documents: 3.6m Data: 1.3 GB Indices: 24 Shards: 28 Type: Node

Health: Online

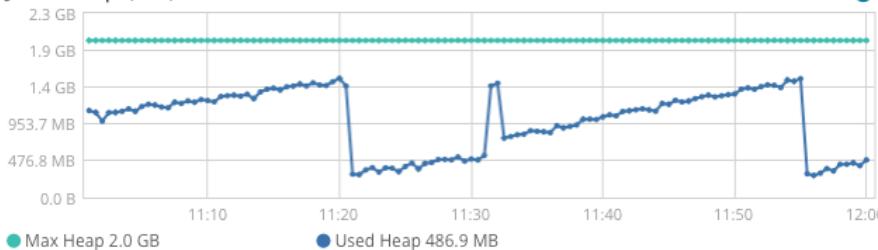
GC Count



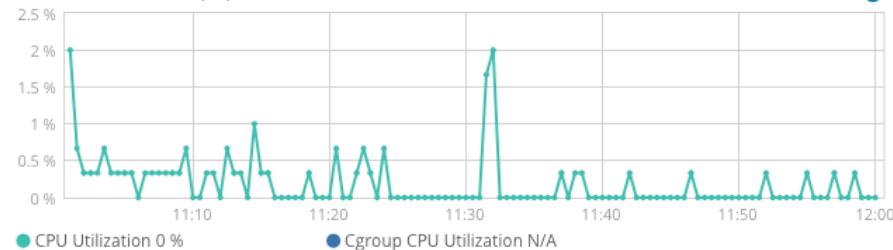
GC Duration (ms)



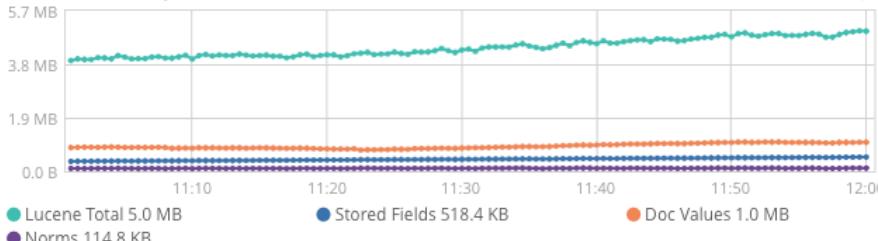
JVM Heap (GB)



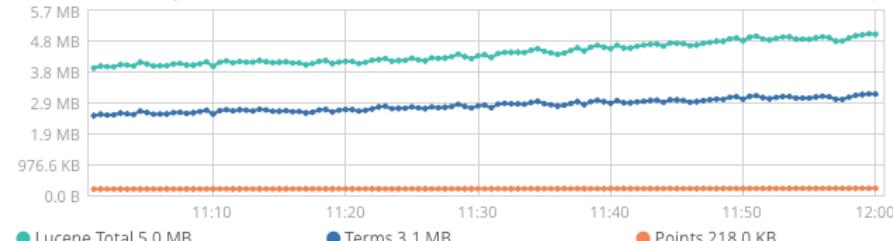
CPU Utilization (%)



Index Memory - Lucene 1 (MB)



Index Memory - Lucene 2 (MB)





X-Pack



Reporting

AUTOMATE SCHEDULING

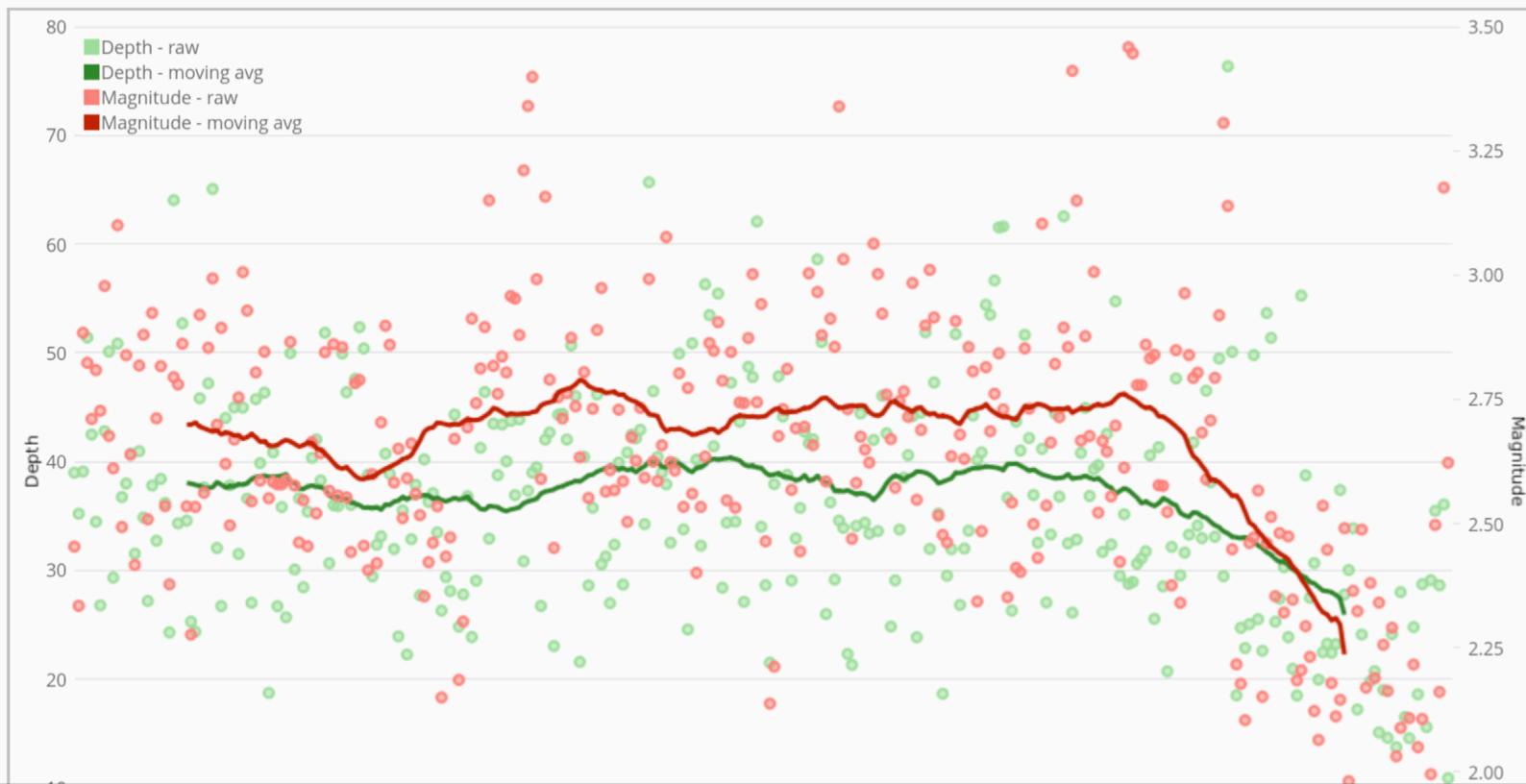
- Email recurring status updates daily, weekly, monthly, etc.
- Combine reporting with X-Pack alerting capabilities to trigger conditional reports

SHARE AND COLLABORATE

- Export any Kibana visualization or dashboard
- Print-optimized and PDF formatted
- Download and share past reports
- Export search results to CSV format.

Earthquake Summary – Fri, Jan 1, 2016 12:00 AM to Tue, Nov 15, 2016 6:42 AM

Earthquakes - depth v mag



@timestamp,depth,mag,location,message

"June 11th 2016, 03:55:17.140","7.59","1.46","44.3883, -110.9933","2016/06/11 03:55:17.14,44.3883,-110.9933,7.59,1.46,ML,15,124,14,0.12,WY,"

"June 11th 2016, 03:50:19.480","10.67","1.39","33.4712, -116.476","2016/06/11 03:50:19.48,33.4712,-116.4760,10.67,1.39,ML,84,,,0.17,CI,37381431"

"June 11th 2016, 03:49:12.000","3.04","1.05","38.8247, -122.8028","2016/06/11 03:49:12.00,38.8247,-122.8028,3.04,1.05,Md,23,55,1,0.02,NC,72649791"

"June 11th 2016, 03:38:12.690","8.95","1.66","41.9007, -119.647","2016/06/11 03:38:12.69,41.9007,-119.6470,8.95,1.66,ML,10,216,13,0.11,NN,547552"

"June 11th 2016, 03:18:10.050","7.69","1.05","41.8539, -119.6714","2016/06/11 03:18:10.05,41.8539,-119.6714,7.69,1.05,ML,9,223,15,0.11,NN,547585"

"June 11th 2016, 03:08:45.170","9.77","1.48","33.4745, -116.4438","2016/06/11 03:08:45.17,33.4750,-116.4438,9.77,1.48,ML,94,,,0.16,CI,37381319"

"June 11th 2016, 03:07:45.430","8.74","1.87","33.4708, -116.4455","2016/06/11 03:07:45.43,33.4708,-116.4455,8.74,1.87,ML,103,,,0.21,CI,37381311"

"June 11th 2016, 03:04:43.910","9.91","2.22","33.4807, -116.4157","2016/06/11 03:04:43.91,33.4807,-116.4157,9.91,2.22,ML,148,,,0.16,CI,37381287"

"June 11th 2016, 02:43:34.780","579.26","4.8","-18.0502, -178.3982","2016/06/11 02:43:34.78,-18.0502,-178.3982,579.26,4.80,MB,,74,3,0.80,us,201606112008"

"June 11th 2016, 01:59:43.4550","7.58","1.03","33.4822, -116.4144","2016/06/11 01:59:43.4553,33.4822,-116.4140,7.58,1.03,ML,50,,,0.21,CI,37381055"

"June 11th 2016, 01:40:30.950","10.81","3.04","33.4598, -116.4883","2016/06/11 01:40:30.95,33.4598,-116.4883,10.81,3.04,ML,220,,,0.18,CI,37380967"

"June 11th 2016, 01:39:52.720","10.09","1.78","33.4553, -116.4637","2016/06/11 01:39:52.72,33.4553,-116.4637,10.09,1.78,ML,93,,,0.20,CI,37380959"

"June 11th 2016, 01:38:47.980","7.26","1.8","36.082, -89.7815","2016/06/11 01:38:47.98,36.0820,-89.7815,7.26,1.80,MD,24,78,8,0.14,NM,"

"June 11th 2016, 01:36:36.260","2.51","1.01","37.2795, -121.6575","2016/06/11 01:36:36.26,37.2795,-121.6570,2.51,1.01,MD,16,85,7.0.05,NC,72649711"

"June 11th 2016, 01:26:37.520","8.39","1.05","34.036, -117.0975","2016/06/11 01:26:37.52,34.0360,-117.0975,8.38,1.05,ML,34,,,0.12,CI,37380911"

"June 11th 2016, 01:22:23.340","12.27","1.28","33.484, -116.4567","2016/06/11 01:22:23.34,33.4840,-116.4567,12.27,1.28,ML,65,,,0.22,CI,37380887"

"June 11th 2016, 01:17:18.500","7.26","3.5","36.4987, -98.7261","2016/06/11 01:17:18.50,36.4987,-98.7261,7.26,3.50,ML,,49,,0.51,tu1,201606112006"

"June 11th 2016, 01:16:19.820","9.57","1.02","33.4783, -116.4055","2016/06/11 01:16:19.82,33.4783,-116.4055,9.57,1.02,ML,44,,,0.16,CI,37380879"

"June 11th 2016, 01:05:24.970","1.8","1.01","38.8388, -122.7983","2016/06/11 01:05:24.97,38.8388,-122.7983,1.80,1.01,MD,7,154,1,0.05,NC,72649696"

"June 11th 2016, 01:05:16.950","10,4,"-0.5957, 29.4435","2016/06/11 01:05:16.95,-0.5957,29.4435,10,00,4.00,MB,,113,1,0.90,us,201606112005"

"June 11th 2016, 00:58:16.410","92.4","4.1","2,4287, 128.0806","2016/06/11 00:58:16.41,2,4287,128.0806,92,40,4.10,MB,,117,2,0.80,us,201606112004"

"June 11th 2016, 00:43:19.470","6.75","1.22","41.8917, -112.7938","2016/06/11 00:43:19.47,41.8917,-112.7938,6.75,1.22,Mc,,11,207,13,0.10,UU,"

"June 11th 2016, 00:41:37.800","3.5","1.7","48.157, -116.36","2016/06/11 00:41:37.80,48.1570,-116.3600,3.50,1.70,ML,12,143,58,0.16,MB,"

"June 11th 2016, 00:39:48.600","2.12","1.3","33.1815, -115.6133","2016/06/11 00:39:48.60,33.1815,-115.6133,2,12,1,30,ML,13,,,0.12,CI,37380799"

"June 11th 2016, 00:36:30.140,"475.27","4.2","-24.1258, 19.1065","2016/06/11 00:36:30.14,475.27,24.1258,19.1065,475.27,4.20,MB,,92,6,0.92,us,201606112003"

"June 11th 2016, 00:27:57.750","9.19","2.11","33.4788, -116.4152","2016/06/11 00:27:57.75,33.4788,-116.4152,9.19,2.11,ML,124,,,0.17,CI,37380735"

"June 11th 2016, 00:27:29.270","77.69","4.6","4.0462, 126.4564","2016/06/11 00:27:29.27,4.0462,126.4564,77.69,4.60,MB,,93,3,0.64,us,201606112002"

"June 11th 2016, 00:24:01.310","521.14","4.5","-23.663, -179.7763","2016/06/11 00:24:01.31,-23.6630,-179.7763,521.14,4.50,MB,,121,6,0.84,us,201606112001"

"June 11th 2016, 00:22:21.380","5.97","1.3","36.2727, -89.5548","2016/06/11 00:22:21.38,36.2727,-89.5548,5.97,1.30,Md,12,109,4,0.02,NM,"

"June 11th 2016, 00:20:47.110","3.44","1.66","38.8237, -122.8022","2016/06/11 00:20:47.11,38.8237,-122.8022,3.44,1.66,MD,79,53,1,0.06,NC,72649671"

"June 11th 2016, 00:05:36.440,"-0.85","1.55","38.7853, -122.7652","2016/06/11 00:05:36.44,38.7853,-122.7652,-0.85,1.55,MD,46,65,2,0.10,NC,72649651"

"June 11th 2016, 00:00:49.870","3.42","1.85","38.824, -122.8018","2016/06/11 00:00:49.87,38.8240,-122.8018,3.42,1.85,Md,79,42,1,0.06,NC,72649611"

"June 10th 2016, 23:59:40.500","2.4","1,"38.8235, -122.8007","2016/06/10 23:59:40.50,38.8235,-122.8007,2.40,1.00,MD,12,123,1,0.02,NC,72649621"

"June 10th 2016, 23:57:55.220","2.94","3.31","38.8253, -122.7983","2016/06/10 23:57:55.22,38.8253,-122.7983,2.94,3.31,ML,86,31,1,0.06,NC,72649606"

"June 10th 2016, 23:54:38.540","77.86","4.5","13.0767, 144.3792","2016/06/10 23:54:38.54,13.0767,144.3792,77.86,4.50,MB,,153,1,0.91,us,201606102086"

"June 10th 2016, 23:51:03.860","11.51","1.07","33.4797, -116.4697","2016/06/10 23:51:03.86,33.4797,-116.4697,11.51,1.07,ML,62,,,0.26,CI,37380623"

"June 10th 2016, 23:49:09.460","10.29","1.15","33.4665, -116.4137","2016/06/10 23:49:09.46,33.4665,-116.4137,10.29,1.15,ML,62,,,0.13,CI,37380607"

"June 10th 2016, 23:46:11.710","9.38","1.78","33.4618, -116.4237","2016/06/10 23:46:11.71,33.4618,-116.4237,9.38,1.78,ML,97,,,0.22,CI,37380559"

"June 10th 2016, 23:42:58.090","11.08","2.95","33.4592, -116.4247","2016/06/10 23:42:58.09,33.4592,-116.4247,11.08,2.95,ML,152,,,0.16,CI,37380543"

"June 10th 2016, 23:38:22.140","7.34","1.36","35.7717, -121.097","2016/06/10 23:38:22.14,35.7717,-121.0970,7.34,1.36,MD,33,66,5,0.09,NC,72649586"

"June 10th 2016, 23:34:28.740","-0.86","1.75","39.0873, -122.6283","2016/06/10 23:34:28.74,39.0873,-122.6283,-0.86,1.75,MD,22,71,13,0.12,NC,72649581"

"June 10th 2016, 23:31:00.000","9.94","1.49","33.4545, -116.4628","2016/06/10 23:31:00.00,33.4545,-116.4628,9.94,1.49,ML,76,,,0.22,CI,37380527"

"June 10th 2016, 23:19:56.550","341.09,"4.4,"-31.0368, -179.8159","2016/06/10 23:19:56.55,-31.0368,-179.8159,341.09,4.00,MB,,124,2,0.96,us,201606102084"

"June 10th 2016, 23:12:42.480","70.17","4.2","-5.5807, 146.4612","2016/06/10 23:12:42.48,-5.5807,146.4612,70.17,4.20,MB,,128,4,0.61,us,201606102083"

"June 10th 2016, 23:11:18.920","118.54","4.6","37.563, 71.8189","2016/06/10 23:11:18.92,37.5630,71.8189,118.54,4.60,Mw,,65,0,1.00,us,201606102082"

"June 10th 2016, 23:11:00.520","12.75","1.09","33.4752, -116.5057","2016/06/10 23:11:00.52,33.4752,-116.5057,12.75,1.09,ML,59,,,0.20,CI,37380479"

"June 10th 2016, 23:03:28.410","10.24","1,"33.4718, -116.4125","2016/06/10 23:03:28.41,33.4718,-116.4125,10.24,1.00,ML,53,,,0.12,CI,37380471"

"June 10th 2016, 23:03:20.690","11.73","1.48","35.6165, -118.2395","2016/06/10 23:03:20.69,35.6165,-118.2395,11.73,1.48,ML,32,,,0.13,CI,37380463"

"June 10th 2016, 23:01:19.470","12.03","1.9","35.6152, -118.2405","2016/06/10 23:01:19.47,35.6152,-118.2405,12.03,1.90,ML,56,,,0.13,CI,37380455"

"June 10th 2016, 22:47:08.990","3.83","1.76","36.9413, -122.2048","2016/06/10 22:47:08.99,36.9413,-122.2048,3.83,1.76,MD,18,235,14,0.07,NC,72649551"

"June 10th 2016, 22:44:26.220","2.34","1.19","38.8273, -122.8532","2016/06/10 22:44:26.22,38.8273,-122.8532,2.34,1.19,MD,22,61,0,0.02,NC,72649531"

"June 10th 2016, 22:44:09.560","11.65","1.7","33.4705, -116.4458","2016/06/10 22:44:09.56,33.4705,-116.4458,11.65,1.70,ML,93,,,0.22,CI,37380415"

"June 10th 2016, 22:43:23.710","13.42","1.06","33.4718, -116.4308","2016/06/10 22:43:23.71,33.4718,-116.4308,13.42,1.06,ML,53,,,0.20,CI,37380407"

"June 10th 2016, 22:42:59.490","34.89","4.4","36.1248, 143.359","2016/06/10 22:42:59.49,36.1248,143.3590,34.89,4.40,MB,,131,3,0.70,us,201606102081"

"June 10th 2016, 22:40:15.970,"9.93","1.77","33.4723, -116.4803","2016/06/10 22:40:15.97,33.4723,-116.4803,9.93,1.77,ML,94,,,0.21,CI,37380399"

"June 10th 2016, 22:31:27.440","2.74","1.75","35.1362, -116.5507","2016/06/10 22:31:27.44,35.1362,-116.5507,2.74,1.75,ML,36,,,0.18,CI,37380391"

"June 10th 2016, 22:30:41.270","10.47","-37.1629, -95.3267","2016/06/10 22:30:41.27,-37.1629,-95.3267,10.00,4.70,MB,,75,17,0.62,us,201606102080"

"June 10th 2016, 22:17:42.730","10.01","1.01","33.4847, -116.4938","2016/06/10 22:17:42.73,33.4847,-116.4938,10.01,1.01,ML,60,,,0.23,CI,37380359"

"June 10th 2016, 22:07:23.170","4.7","1.61","34.702, -116.2407","2016/06/10 22:07:23.17,34.7020,-116.2407,4.70,1.61,ML,19,,,0.09,CI,37380335"

"June 10th 2016, 21:51:27.400","14.41","4.2","24.2918, 125.1914","2016/06/10 21:51:27.40,24.2918,125.1914,14.41,4.20,MB,,120,2,0.73,us,201606102079"

"June 10th 2016, 21:36:11.820","12.34","1.01","33.4746, -116.461","2016/06/10 21:36:11.82,33.4746,-116.4610,12.34,1.01,ML,50,,,0.12,CI,37380207"



X-Pack



Graph

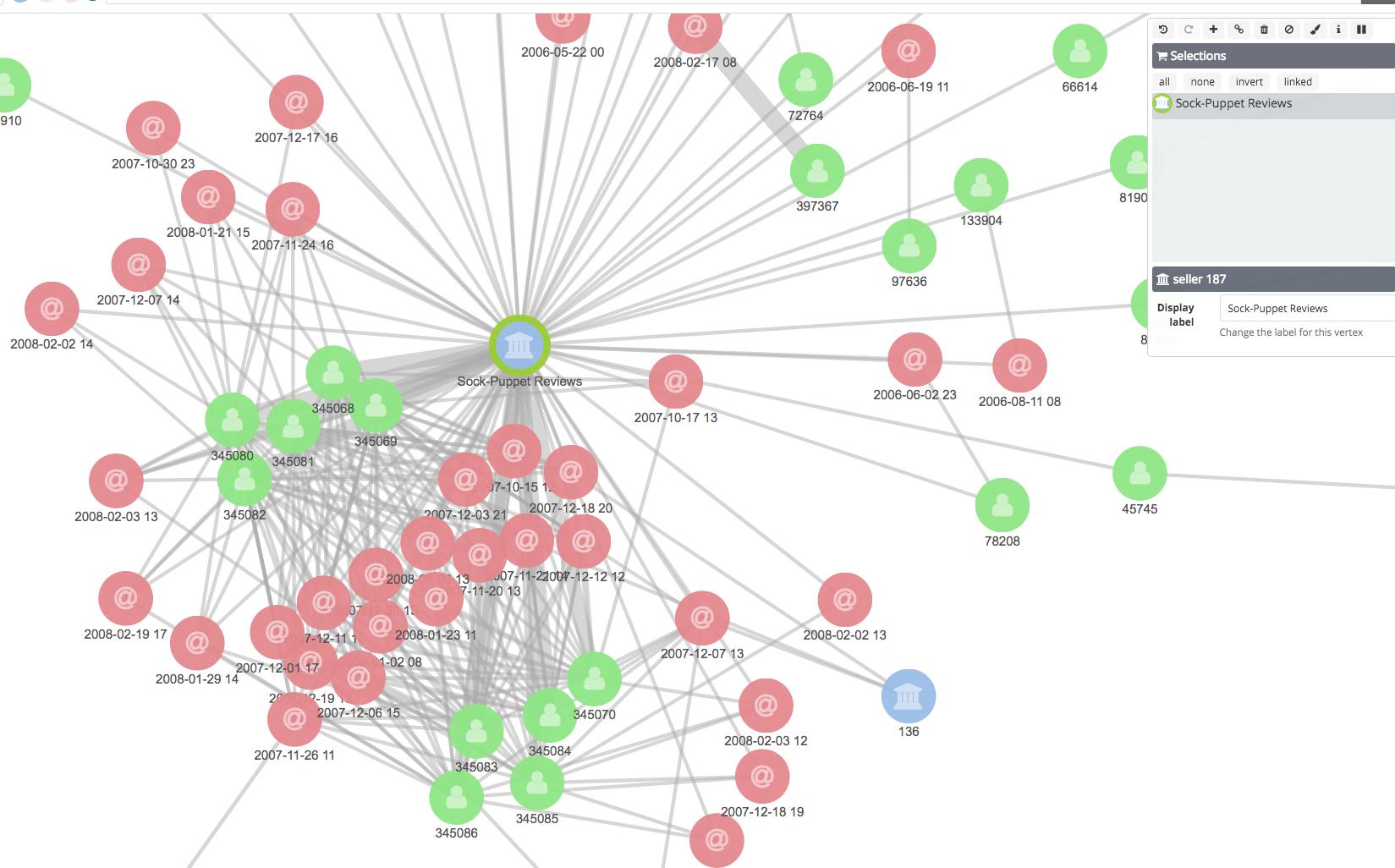
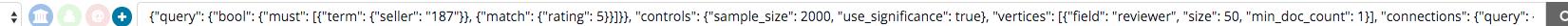
A NEW WAY TO EXPLORE DATA

- Uses relevance capabilities of Elasticsearch
- Discover linkages and connections
- Leverage API and UI-drive tool

EXTEND TO NEW USE CASES

- Fraud discovery
- Recommendations
- Cyber security
- Behavioral analyses

reviews





X-Pack



Machine
Learning

UNSUPERVISED MACHINE LEARNING

- Automatically detect anomalies
- Advanced correlation and categorization
- Identify root cause(s)
- Expose early warning signs

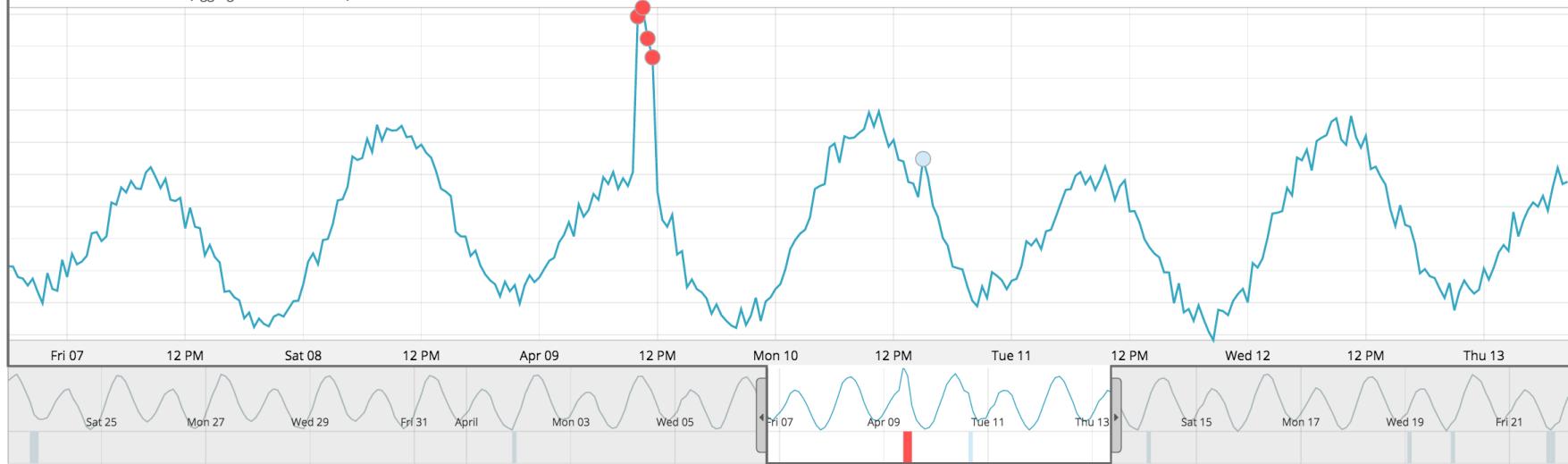
ENABLE NEW USE CASES

- Analyze time series data
- Expand security, IT Ops, fraud, finance, and many more use cases
- Available as beta in the 5.4 release



Zoom: auto 12h 1d 1w 2w (aggregation interval: 30m)

Model bounds are not available



Anomalies

Severity threshold: ▲ warning Interval: Auto

time	max severity	detector	found for	influenced by	actual	typical	description	job ID
April 9th 2017, 10:00	⚠ 92	mean(response) (mm-job-3)	server_3 ⓘ ⓘ	host: server_3 service: app_5	2.42113	2.31031	⚠ Unusually high	mm-job-3

Description:

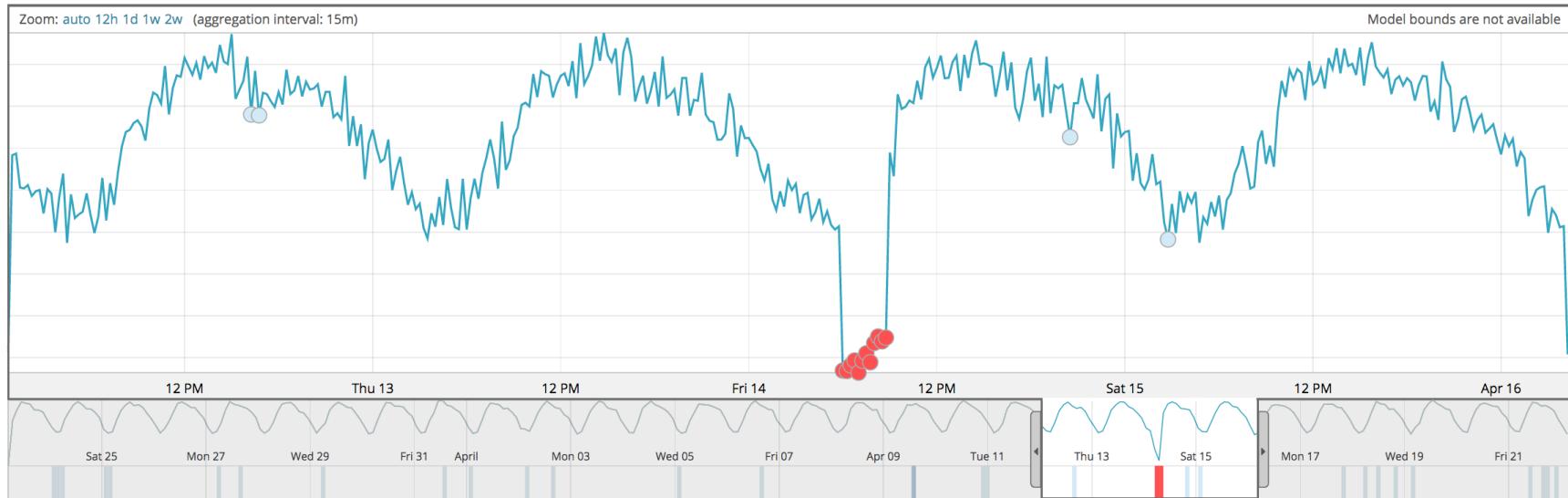
critical anomaly in mean(response) (mm-job-3) found for host server_3

Details on highest severity anomaly:

host: server_3 ⓘ ⓘ
time: April 9th 2017, 10:15:00 to April 9th 2017, 10:30:00
function: mean
fieldName: response
actual: 2.42113
typical: 2.31031
job ID: mm-job-3
probability: 5.59379e-13

Influenced by:

host server_3
service app_5



Anomalies

Severity threshold: warning Interval: Auto

time	max severity	detector	found for	influenced by	actual	typical	description	job ID
April 14th 2017	⚠ 98	sum(total) (mm-job-4)	app_1 ⚡	service: app_1	938905	1705380	↓ 2x lower	mm-job-4

Description:

critical anomaly in sum(total) (mm-job-4) found for service app_1

Details on highest severity anomaly:

service: app_1 ⚡
time: April 14th 2017, 06:00:00 to April 14th 2017, 06:15:00
function: sum
fieldName: total
actual: 938905
typical: 1705380
job ID: mm-job-4
probability: 4.84657e-20

Influenced by:

service app_1

▶ April 15th 2017	⚠ < 1	sum(total) (mm-job-4)	app_1 ⚡	service: app_1	1564560	1789200	↓ 1.1x lower	mm-job-4
▶ April 12th 2017	⚠ < 1	sum(total) (mm-job-4)	app_1 ⚡	service: app_1	2156840	2353140	↓ 1.1x lower	mm-job-4



New job from index pattern server*

Chart interval: 1h [Use full server* data](#)

Job settings

Fields

<input type="checkbox"/> event rate	Count
<input type="checkbox"/> accept	Mean
<input type="checkbox"/> deny	Mean
<input type="checkbox"/> response	Mean
<input checked="" type="checkbox"/> total	Sum
<input type="checkbox"/> Sparse data <small>i</small>	

Split Data

host.keyword

Key Fields (Influencers)

- host.keyword
- service.keyword

Bucket span i

30m

[Estimate bucket span](#)

Job Details

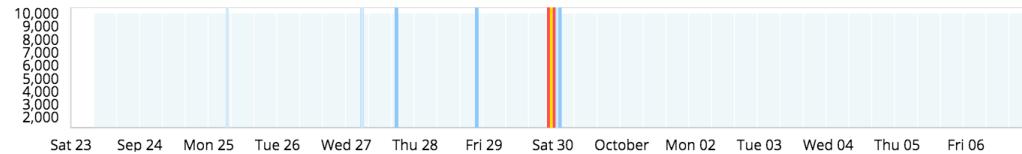
Job multimetric-1 created

[Reset](#) [View Results](#)

Continue job in real-time

Results

Document count

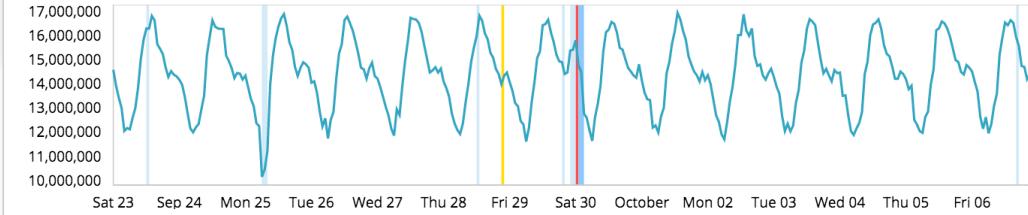


Data split by host.keyword

server_3
server_2

server_1

Sum total

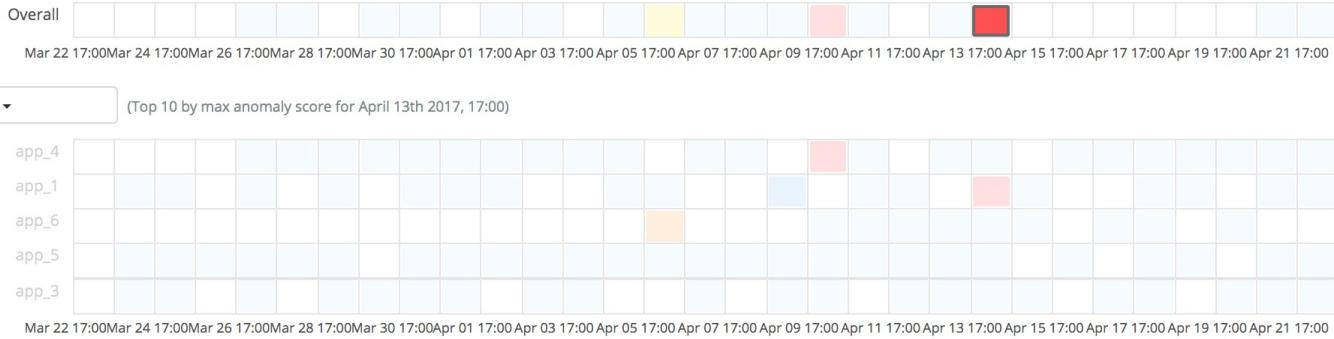




Top Influencers

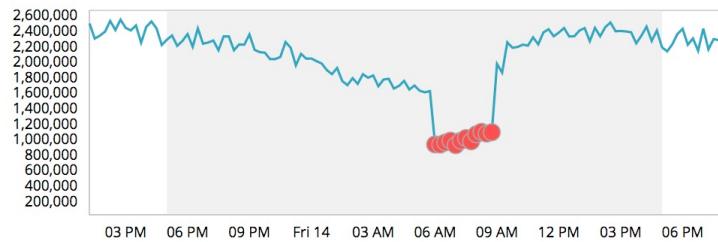
service	anomaly score
app_4	99
app_1	98
app_6	57
app_0	5
app_5	2
app_2	< 1
app_3	< 1

Anomaly timeline

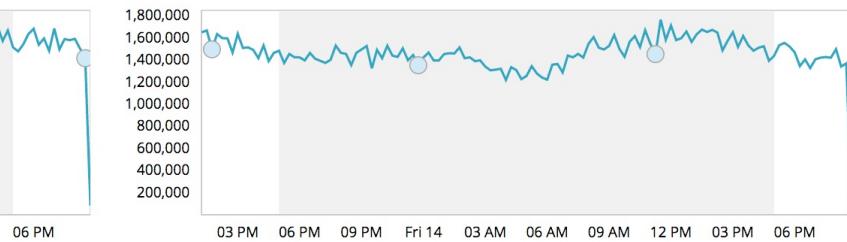


Anomalies

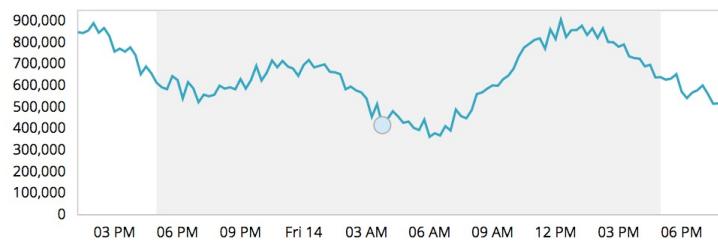
sum(total) (mm-job-5) - service app_1 ⓘ



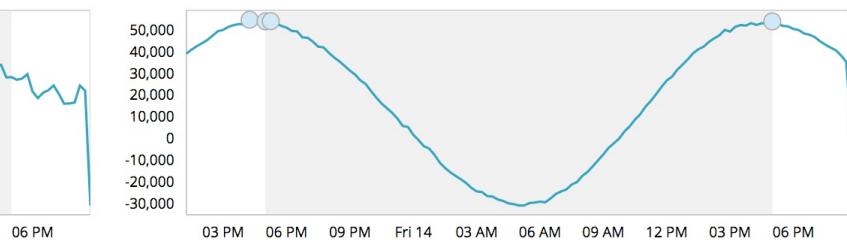
sum(total) (mm-job-5) - service app_3 ⓘ



sum(total) (mm-job-5) - service app_4 ⓘ



sum(total) (mm-job-5) - service app_6 ⓘ



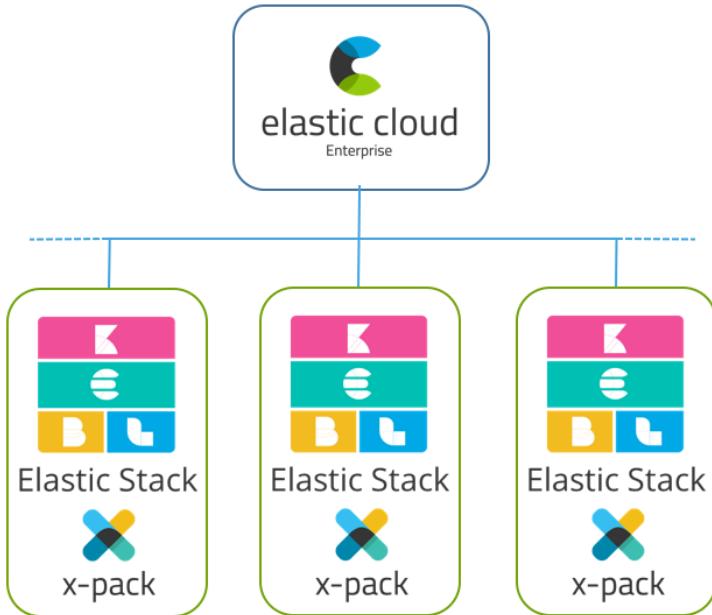
sum(total) (mm-job-5) - service app_5 ⓘ





Elastic Cloud Enterprise

Provision and manage multiple Elastic Stack environments; Expose logging as a service to your entire organization



Zones: 3 Nodes per Zone: 3 Memory per node: 1 GB Total memory: 9 GB [Edit Cluster](#)

Endpoints

Elasticsearch Kibana

Availability zones and nodes

eu-west-1b



Memory pressure
30 % of 1 GB

Disk used

0 MB of 24 GB

[Stop routing](#)

[Pause](#)



Memory pressure
61 % of 1 GB

Disk used

46 MB of 24 GB

[Stop routing](#)

[Pause](#)



Memory pressure
38 % of 1 GB

Disk used

45 MB of 24 GB

[Stop routing](#)

[Pause](#)



eu-west-1a



Memory pressure
14 % of 1 GB

Disk used

0 MB of 24 GB

[Stop routing](#)

[Pause](#)



Memory pressure
54 % of 1 GB

Disk used

48 MB of 24 GB

[Stop routing](#)

[Pause](#)



Memory pressure
29 % of 1 GB

Disk used

0 MB of 24 GB

[Stop routing](#)

[Pause](#)



eu-west-1c



Memory pressure
47 % of 1 GB

Disk used

47 MB of 24 GB

[Stop routing](#)

[Pause](#)



Memory pressure
51 % of 1 GB

Disk used

1 MB of 24 GB

[Stop routing](#)

[Pause](#)



Memory pressure
36 % of 1 GB

Disk used

1 MB of 24 GB

[Stop routing](#)

[Pause](#)

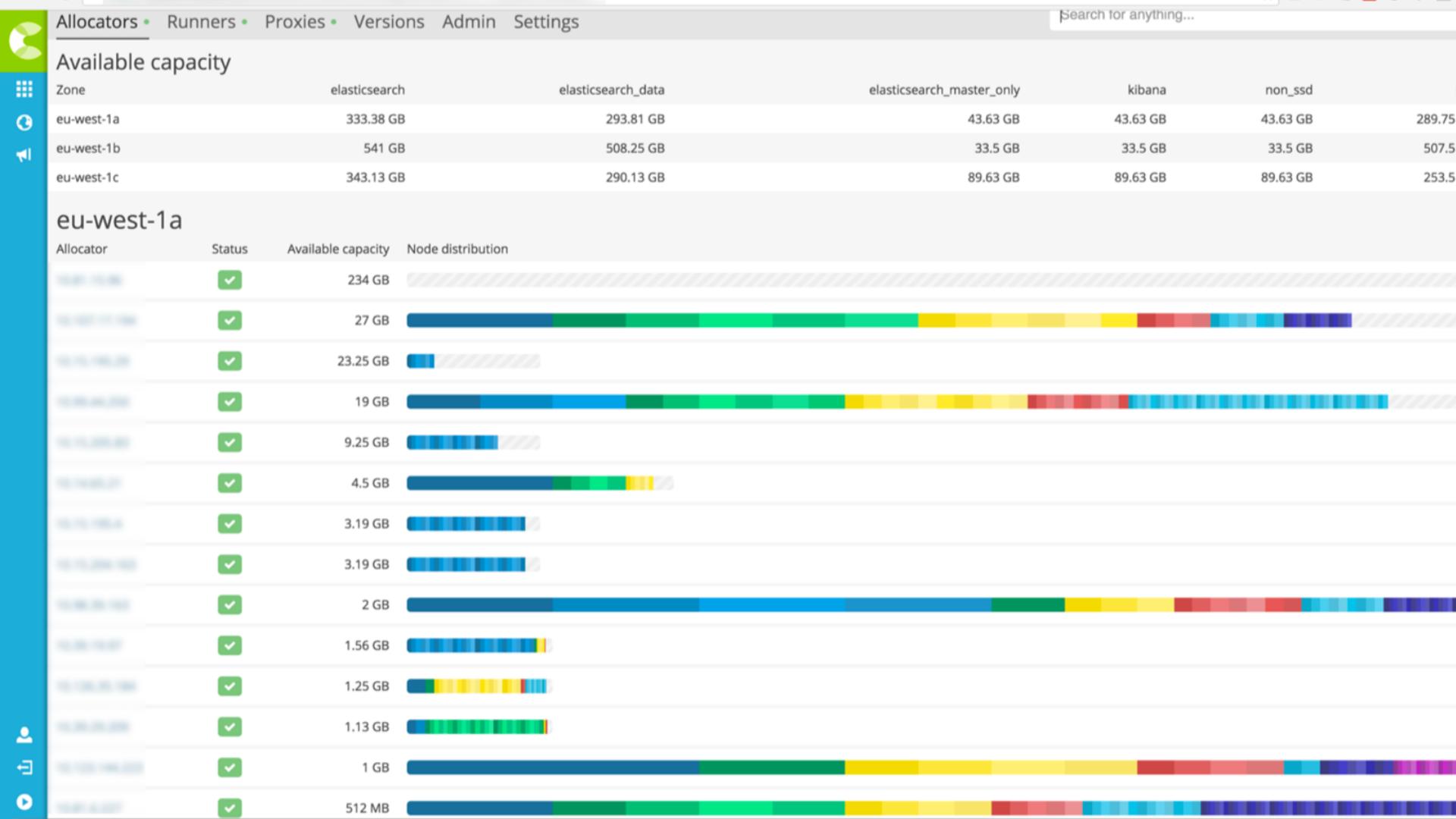


Elasticsearch Kibana

Add filter Elasticsearch version (5.1.1) x Create cluster

Cluster (showing all 8 matching clusters)

	Status	Version	Zones	Nodes per Zone	Memory per node	Total memory
5.1 fresh (2e9785)	✓	5.1.1	3	1	1 GB	3 GB
5.1 test (463668)	✓	5.1.1	3	3	1 GB	9 GB
5.1.1-QA (858edc)	✓	5.1.1	2	1	8 GB	16 GB
5.1.1-qa-small (9e9fbf)	✓	5.1.1	2	1	1 GB	2 GB
8263ecf4105b8b16a5c81045fd7b4f71 (8263ec)	✓	5.1.1	1	1	1 GB	1 GB
c58e6934c472a00e07de8e756e5f3673 (c58e69)	✓	5.1.1	1	1	1 GB	1 GB
fadbd71e6b01cafdb3b9a687369bc94b (fadbd7)	✓	5.1.1	1	1	1 GB	1 GB
ff9edb7647b2a760670dd0c3a21dc018 (ff9edb)	✓	5.1.1	1	1	1 GB	1 GB



THANK YOU

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