elastic

elastic 中文社区 | IT大咖说 知识共享平台

Elastic 探秘之遗落的珍珠

elastic

elastic 中文社区 | IT大咖说 知识共享平台

Elastic 探秘之遗落的功能

关于我

来自Elastic的工程师
@medcl

elastic
世界领先的开源软件提供商
加入我们：http://grnh.se/iup1q61

寻宝图

1.Elasticsearch 里的几个不起眼的小功能
2.Kibana 里面几个值得留意的新功能
3.Logstash/Beats 里面几个值得留意的功能
4.X-Pack 不容错过的免费功能

elasticsearch

Query 1

```
1  CREATE TABLE `aws_answer` (
2    `answer_id` int(11) NOT NULL AUTO_INCREMENT COMMENT '回答id',
3    `question_id` int(11) NOT NULL COMMENT '问题id',
4    `answer_content` text COMMENT '回答内容',
5    `add_time` int(10) DEFAULT '0' COMMENT '添加时间',
6    `against_count` int(11) NOT NULL DEFAULT '0' COMMENT '反对人数',
7    `agree_count` int(11) NOT NULL DEFAULT '0' COMMENT '支持人数',
8    `uid` int(11) DEFAULT '0' COMMENT '发布问题用户ID',
9    `comment_count` int(11) DEFAULT '0' COMMENT '评论总数',
10   `uninterested_count` int(11) DEFAULT '0' COMMENT '不感兴趣',
11   `thanks_count` int(11) DEFAULT '0' COMMENT '感谢数量',
12   `category_id` int(11) DEFAULT '0' COMMENT '分类id',
13   `has_attach` tinyint(1) DEFAULT '0' COMMENT '是否存在附件',
14   `ip` bigint(11) DEFAULT NULL,
15   `force_fold` tinyint(1) DEFAULT '0' COMMENT '强制折叠',
16   `anonymous` tinyint(1) DEFAULT '0',
17   `publish_source` varchar(16) DEFAULT NULL,
18   PRIMARY KEY (`answer_id`),
19   KEY `publich_source` (`publish_source`)
20 ) ENGINE=InnoDB AUTO_INCREMENT=716 DEFAULT CHARSET=utf8 COMMENT='回答';
21
```

Meta Field

GET mapping
PUT mapping

```
PUT my_index
{
  "mappings": {
    "doc": {
      "_meta": {
        "database": "localhost",
        "table_name": "aws_answer",
        "comments": {
          "answer_id": "回答id",
          "question_id": "问题id",
          "answer_content": "回答内容"
        },
        "schema_version": {
          "ver": "1.0",
          "date": "2018-06-25"
        },
        "operator": "medcl"
      }
    }
  }
}
```

Index Sorting

提升排序性能
更好的压缩比
更少的磁盘

```
PUT twitter
{
    "settings" : {
        "index" : {
            "sort.field" : "date",
            "sort.order" : "desc"
        }
    },
    "mappings": {⟷}
}
```

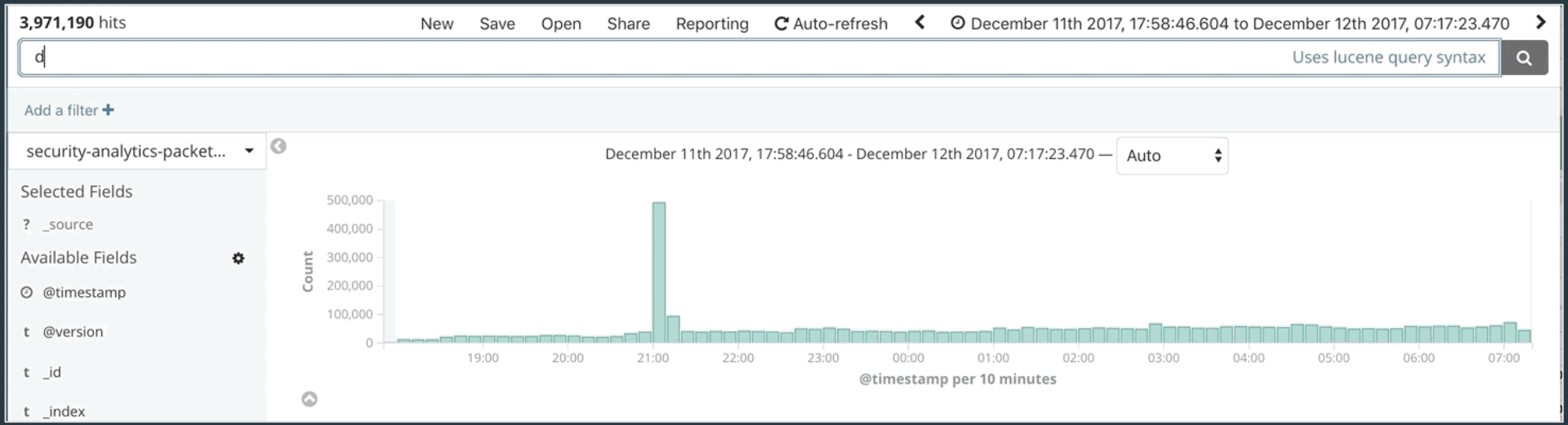
Adaptive Replica Selection

```
PUT /_cluster/settings
{
    "transient": {
        "cluster.routing.use_adaptive_replica_selection": true
    }
}
```

依次轮询 -> 智能的选择副本进行查询

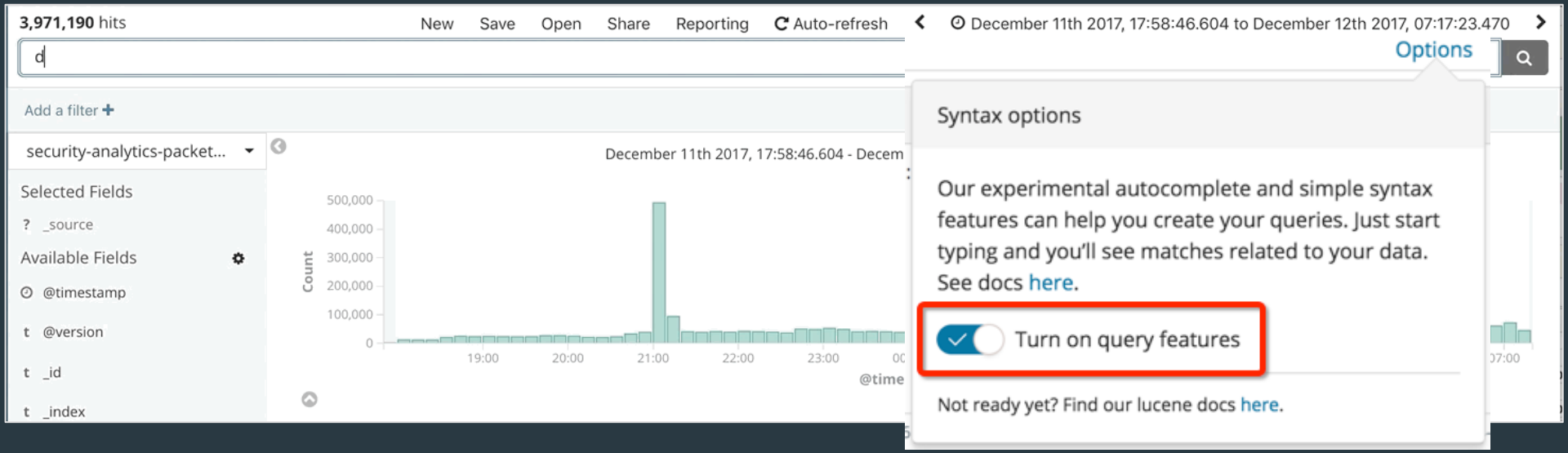
kibana

Kuery + Autocomplete



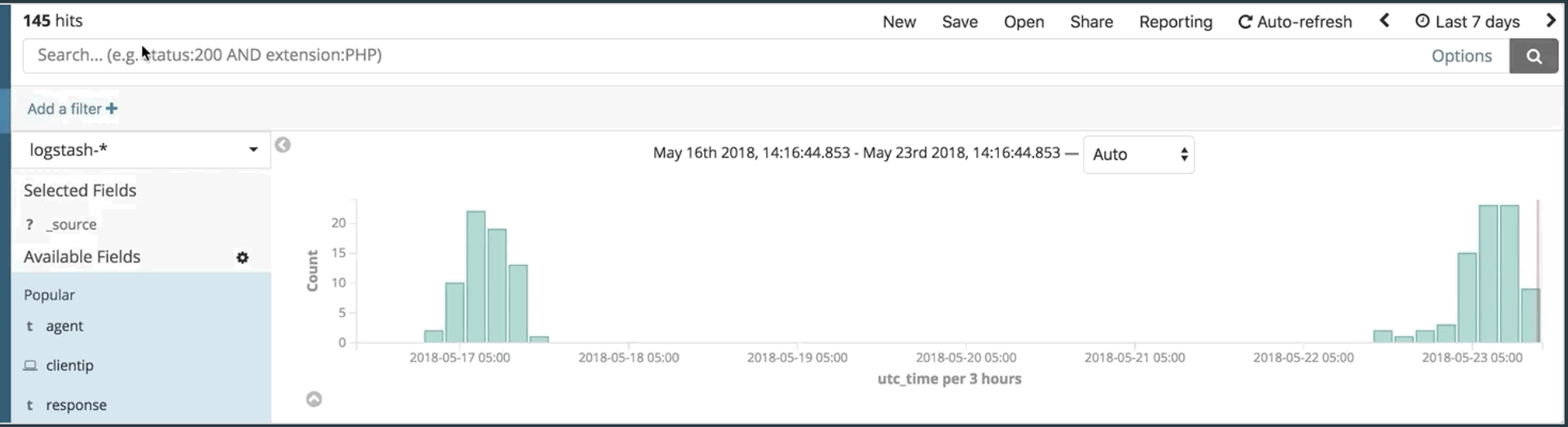
默认

Kuery + Autocomplete



开启

Kuery + Autocomplete

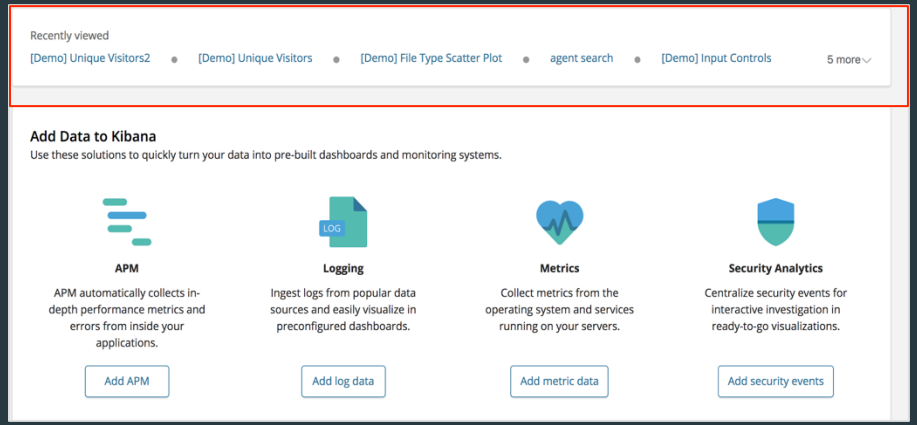


开启后

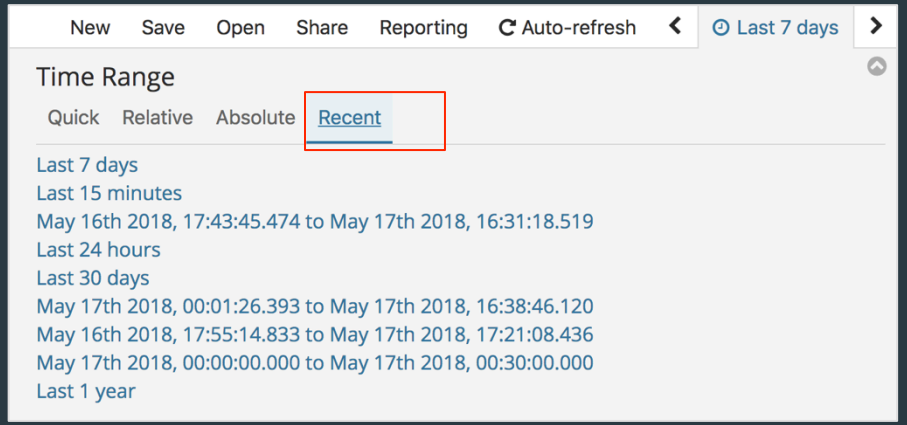
Recently Viewed and Recent Time Range

Where was I...

Recently viewed objects



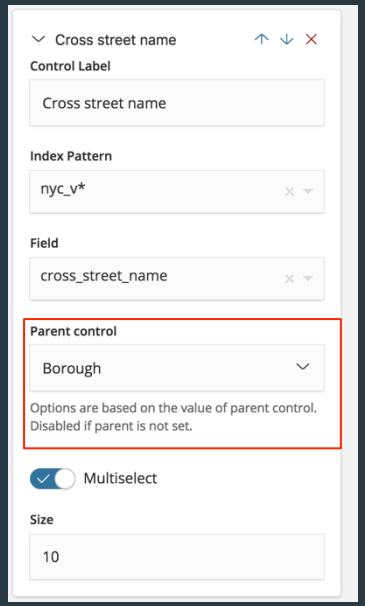
Recently used time range

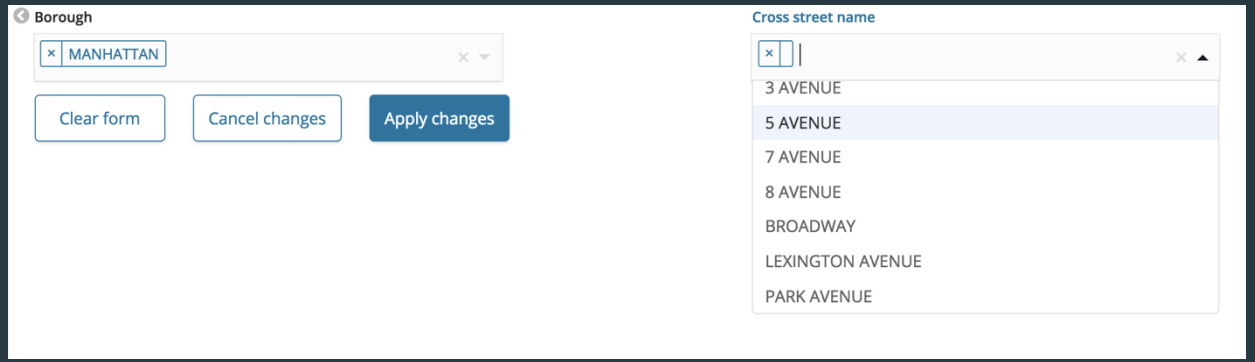


Chained Input Control

Remember Input Control?

- The first input control filters the values for the second input control

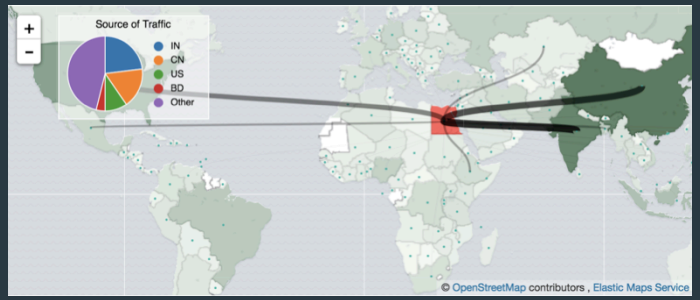




Geo

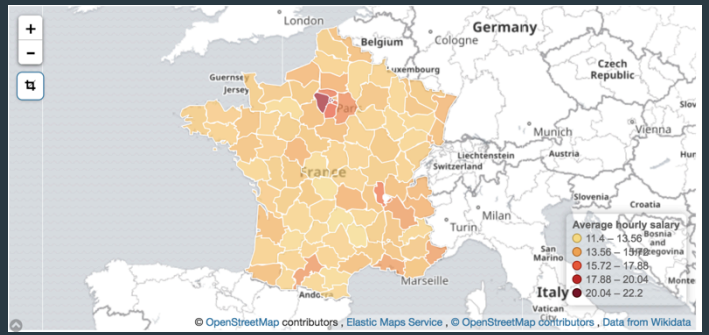
Vega:

- Support for Vega base map
- Create interactive highly customizable maps

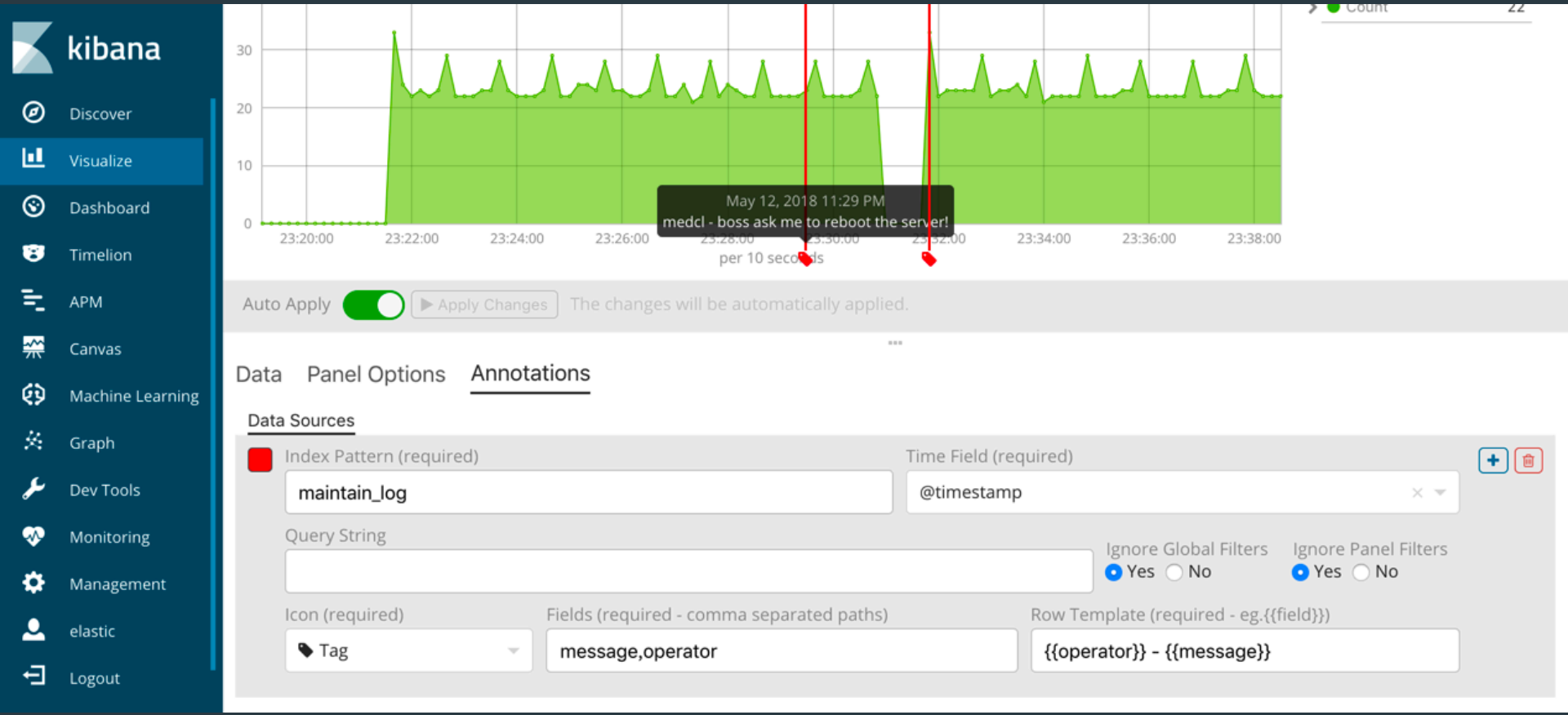


Region maps:

- 2 new vector maps China provinces and France departments



TSVB 注解


kibana
Discover
Visualize
Dashboard
Timelion
APM
Canvas
Machine Learning
Graph
Dev Tools
Monitoring
Management
elastic
Logout
30
20
10
0
23:20:00
23:22:00
23:24:00
23:26:00
23:34:00
23:36:00
23:38:00
May 12, 2018 11:29 PM
medcl - boss ask me to reboot the server!
Count
22
Auto Apply
Apply Changes
The changes will be automatically applied.
Data
Panel Options
Annotations
Data Sources
Index Pattern (required)
maintain_log
Time Field (required)
@timestamp
Query String
Ignore Global Filters
Yes
No
Ignore Panel Filters
Yes
No
Icon (required)
Tag
Fields (required - comma separated paths)
message,operator
Row Template (required - eg.{{field}})
{{operator}} - {{message}}

使用 API 来创建 Index Pattern

```
curl -X POST http://localhost:5601/api/saved_objects/index-pattern/my-pattern  -H 'kbn-xsrf: true' -H 'Content-Type: application/json' –d’
  {
  "attributes": {
        "title": "my-pattern-*"
  }
}'
```

logstash

beats

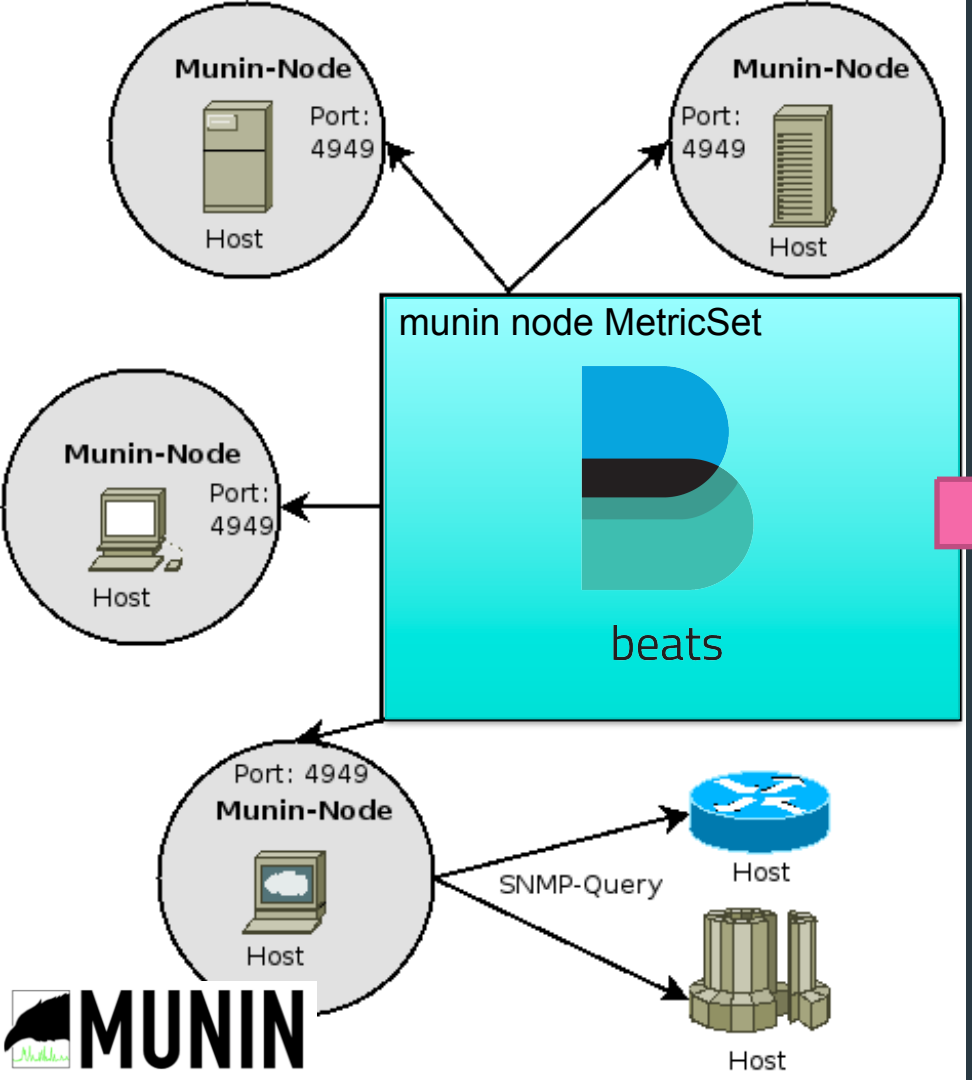
Dissect filter

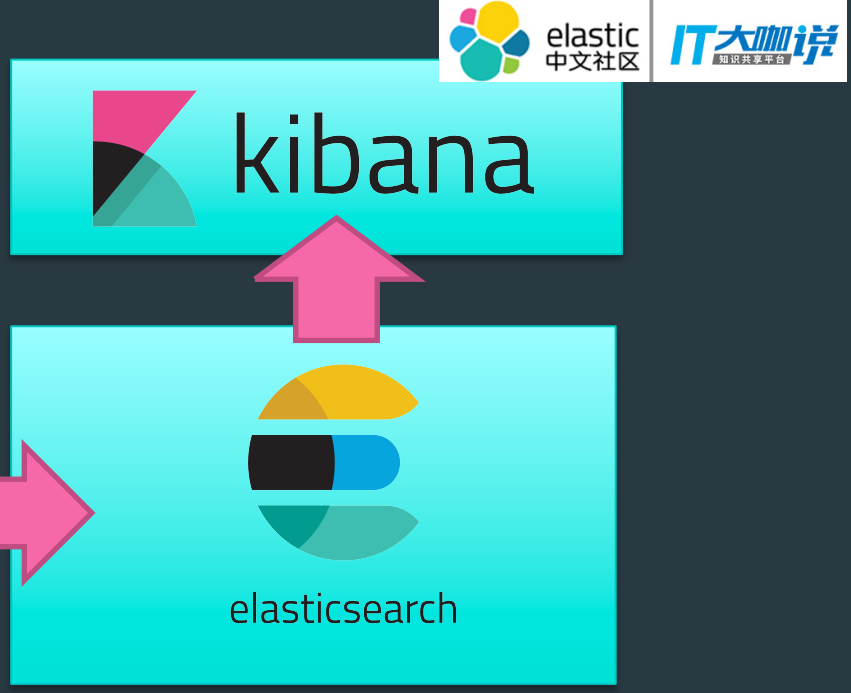
```
filter {
    dissect {
      mapping => {
        "message" => “%{name},%{addr1},%{addr2},%{addr3},%{city},%{zip}"
      }
    }
  }
```

输入： Jane Doe,4321 Fifth Avenue,,,New York,87432

输出：
```
{
        "name": "Jane Doe",
        "addr1": "4321 Fifth Avenue",
        "addr2": "",
        "addr3": "",
        "city": "New York"
        "zip": "87432"
}
```

https://www.elastic.co/guide/en/logstash/current/plugins-filters-dissect.html





历史悠久, started in 2002
跨平台, Perl 编写
插件丰富：

- http://gallery.munin-monitoring.org/index.html
- https://github.com/munin-monitoring/contrib/

Beats - Spooling to Disk (Beta)

- Persistence at the edge
  - Great for ephemeral data
  - Part of libbeat, OSS
- At-least-one delivery
- Spool is an alternative to in-memory queue (either, not both)
- Restarts from where it left off
- Size is max, but likely will use all

```
# ____beat.yml

queue:
  spool:

    file:
      path: "${path.data}/spool.dat"
      permissions: 0600  # One-time
      size: 100MiB       # One-time
      #prealloc: true    # One-time

    write:
      buffer_size: 1MiB
      flush.timeout: 1s
      flush.events: 16384
```

x-pack

Reporting

ine Learni

ger Canva

Monitoring CSV

X-PACK

PAID

FREE

OPEN

OPT IN

PRODUCT.ZIP

DEFAULT

Ingestions

Distributed

Engine Data Collection

Dashboard Visualizations

Agents

Edge Collection

gestions Enrichment

Dashboard

ction Distributed

Search Engine

Data Collection

OSS

elastic 中文社区

IT大咖说 知识共享平台

elastic.co/downloads/elasticsearch

elastic Products Cloud Services Customers Learn downloads contact EN

Downloads

Download Elasticsearch

Want to upgrade? We'll give you a hand. Upgrade Guidance »

Version: 6.3.0

Release date: May 22, 2018

License: Elastic License

Downloads: ZIP sha TAR sha DEB sha RPM sha MSI (BETA) sha

Notes: This default distribution is governed by the Elastic License, and includes the full set of free features.
For a pure Apache 2.0 licensed distribution, download it here.
View the detailed release notes here.
Not the version you're looking for? View past releases.

elastic.co/downloads/elasticsearch-oss

elastic 中文社区 | IT大咖说 知识共享平台

elastic Products Cloud Services Customers Learn downloads contact EN

Downloads

Download Elasticsearch - OSS Only

Want to upgrade? We'll give you a hand. Upgrade Guidance »

Version:	6.3.0
Release date:	May 22, 2018
License:	Apache 2.0
Downloads:	ZIP sha TAR sha DEB sha RPM sha MSI (BETA) sha
Notes:	This distribution only includes features licensed under the Apache 2.0 license. To get access to full set of free features, use the default distribution. View the detailed release notes here. Not the version you're looking for? View past releases.

Monitoring - elasticsearch - El

localhost:5601/app/monitoring#/elasticsearch/indices/forum-mysql/advanced?_g=(cluster_uuid:oHPws08PQt6sQR4_oNT3dA)

elastic 中文社区 | IT大咖说 知识共享平台

kibana

- Discover
- Visualize
- Dashboard
- Timelion
- Machine Learning
- APM
- Graph
- Dev Tools
- Monitoring
- Management
- Collapse

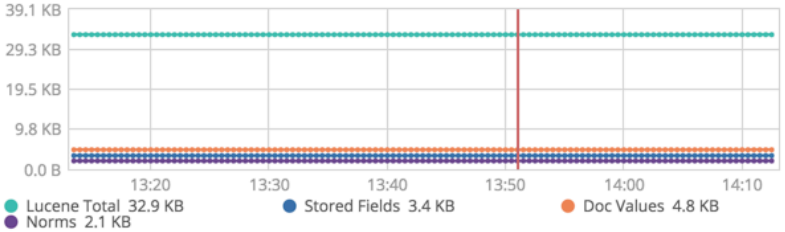
Clusters / elasticsearch / Elasticsearch / Indices / forum-mysql

10 seconds | Last 1 hour

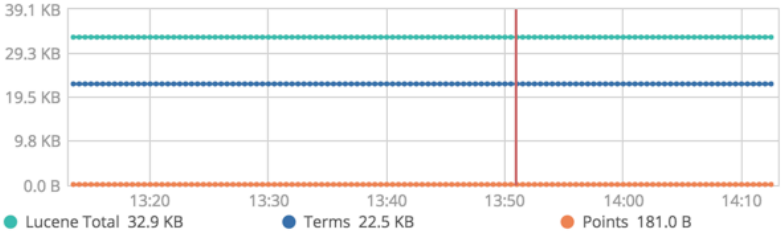
Overview | Advanced

Total: **458.6 KB** Primaries: **458.6 KB** Documents: **90** Total Shards: **10** Unassigned Shards: **5** Health: Yellow

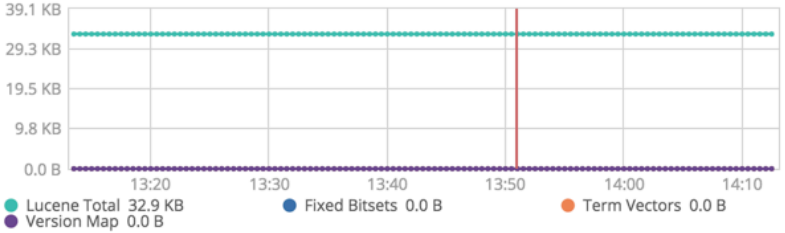
Index Memory - Lucene 1 (KB)



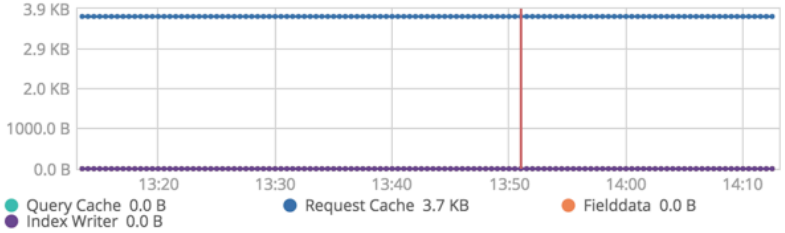
Index Memory - Lucene 2 (KB)



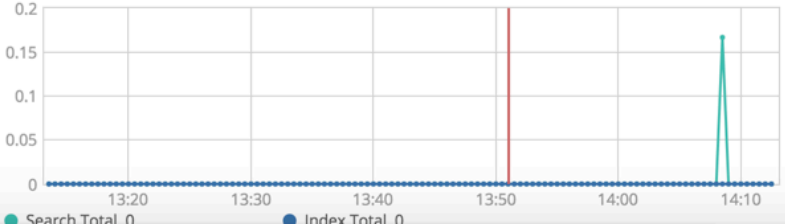
Index Memory - Lucene 3 (KB)



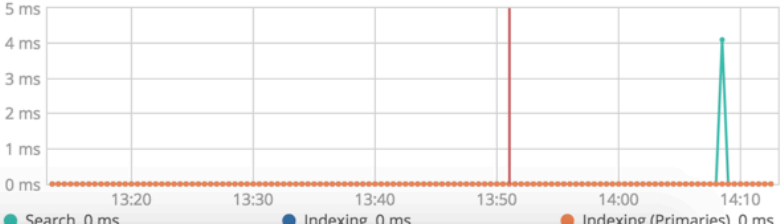
Index Memory - Elasticsearch (KB)



Request Rate



Request Time (ms)

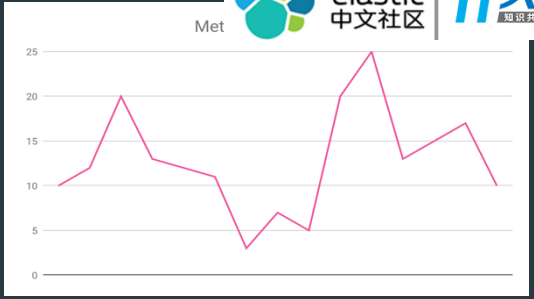


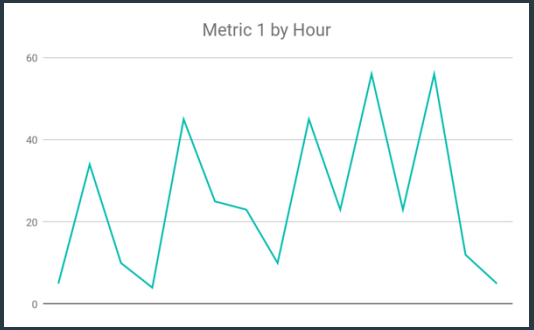
```
sql> SELECT description FROM features
WHERE product = 'elasticsearch' AND version =
'6.3.0';

description
---------------
SQL
Data Rollups
Java 10 Support
```

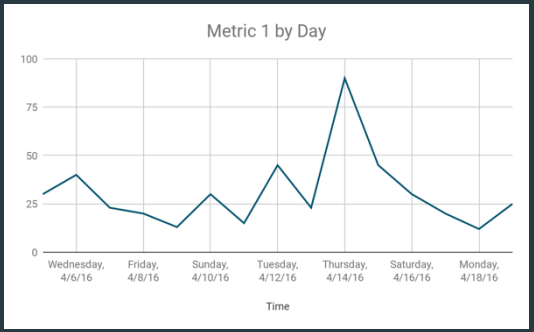
Rolling up Metricbeat data

	Raw	Minute	Hour	Day
Docs:	**9,041,000**	**1,448,285**	**49,554**	**8,447**
Size:	**2.23gb**	**1.25gb**	**48.40mb**	**9.10mb**
Docs % change:		**-83.98%**	**-99.45%**	**-99.91%**
Size % change:		**-43.68%**	**-97.84%**	**-99.59%**

(avg ~200 docs per minute, 32 days of data, single host)
(20 grouping fields, 62 numerics @ min/max/avg == 186 metrics)







Kibana

localhost:5601/app/kibana#/management/elasticsearch/index_management/home?_g=()

elastic 中文社区 | IT大咖说 知识共享平台

kibana

- Discover
- Visualize
- Dashboard
- Timelion
- Machine Learning
- APM
- Graph
- Dev Tools
- Monitoring
- Management

Collapse

Management / Elasticsearch / Index Management

Index management

Update your Elasticsearch indices individually or in bulk

Search

Name	Health	Status
forum-mysql	yellow	open
apache_elastic_example	yellow	open
twitter	yellow	open

Rows per page: 10

forum-mysql

Summary | Settings | Mapping | Stats | Edit settings

Edit, then save your JSON

Save

Settings reference

```
1  {
2    "index.blocks.read_only_allow_delete": "false",
3    "index.priority": "1",
4    "index.query.default_field": [
5      "*"
6    ],
7    "index.refresh_interval": "1s",
8    "index.write.wait_for_active_shards": "1",
9    "index.number_of_replicas": "1"
10 }
```

Index options

- Close index
- Force merge index
- Refresh index
- Clear index cache
- Flush index
- Delete index

Close

Manage

Kibana

localhost:5601/app/kibana#/dev_tools/grokdebugger?_g=(refreshInterval:(display:Off,pause:!f,value:0),time:(from:now-5y,mode:quick,to:now))

elastic 中文社区 IT大咖说 知识共享平台

kibana

- Discover
- Visualize
- Dashboard
- Timelion
- Machine Learning
- APM
- Graph
- Dev Tools
- Monitoring
- Management
- Collapse

Console | Search Profiler | Grok Debugger

Sample Data

```
2013-02-28 09:57:56,663 INFO  LMLogger - ERR1700 - u:null failures: 0  - Technical error {{rid
    ,US8cFAp5eZgAABwUItEAAAAI_dev01_443}{realsid,60A9772A136B9912B6FF0C3627A47090.dev1-a}}
2013-02-28 09:57:56,668 ERROR SomeCallLogger - ESS10005 Cpc portalservices: Exception caught while writing log messege to MEA
    Call:  {}
java.sql.SQLSyntaxErrorException: ORA-00942: table or view does not exist

    at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:445)
    at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)
2013-02-28 10:04:35,723 INFO  EntryFilter - Fresh on request /portalservices/foobarwhatever {{rid
    ,US8dogp5eZgAABwXPGEAAAAL_dev01_443}{realsid,56BA2AD41D9BB28AFCEEEFF927EE61C2.dev1-a}}
```

Grok Pattern

```
\A%{TIMESTAMP_ISO8601:timestamp}\s+%{LOGLEVEL:loglevel}\s+(?<logger>(?:[a-zA-Z0-9-]+\.)*[A-Za-z0-9$]+)\s+(-\s+)?(?=(?<msgnr>[A-Z]
    +[0-9]{4,5}))*%{DATA:message}({({[^}]+},?\s*)*})?\s*$(?<stacktrace>(?m:.*))?
```

▸ Custom Patterns

Simulate

Structured Data

```
{
  "stacktrace": "\n2013-02-28 09:57:56,663 INFO  LMLogger - ERR1700 - u:null failures: 0  - Technical error {{rid
      ,US8cFAp5eZgAABwUItEAAAAI_dev01_443}{realsid,60A9772A136B9912B6FF0C3627A47090.dev1-a}}\n2013-02-28 09:57:56,668 ERROR
      SomeCallLogger - ESS10005 Cpc portalservices: Exception caught while writing log messege to MEA Call:  {}\njava.sql
      .SQLSyntaxErrorException: ORA-00942: table or view does not exist\n\n\tat oracle.jdbc.driver.T4CTTIoer.processError
      (T4CTTIoer.java:445)\n\tat oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)\n2013-02-28 10:04:35,723 INFO
      EntryFilter - Fresh on request /portalservices/foobarwhatever {{rid,US8dogp5eZgAABwXPGEAAAAL_dev01_443}{realsid
      ,56BA2AD41D9BB28AFCEEEFF927EE61C2.dev1-a}}",
  "loglevel": "WARN",
  "logger": "CreateSomethingActivationKey",
  "message": "WhateverException for User 49-123-345678 ",
  "timestamp": "2013-02-28 09:57:56,662"
}
```

Kibana

localhost:5601/app/kibana#/dev_tools/searchprofiler?_g=(refreshInterval:(display:Off,pause:!f,value:0),time:(from:now-5y,mode:quick,to:now))

elastic 中文社区 IT大咖说 知识共享平台

kibana

- Discover
- Visualize
- Dashboard
- Timelion
- Machine Learning
- APM
- Graph
- Dev Tools
- Monitoring
- Management
- Collapse

Console | Search Profiler | Grok Debugger

Index: forum-mysql

Type:

```
1 {
2   "query": {
3     "multi_match": {
4       "query": "Beats是什么东西"
5     }
6   }
7 }
```

Profile

Query Profile | Aggregation Profile

Index: forum-mysql

Cumulative Time: 79.412ms

> [E3SjoEEXQjuM1xdSIlL_-g][2] 20.258ms

Type		Self Time	Total Time	% Time
DisjunctionMaxQuery	(MatchNoDocsQuery("failed [comments] que...	2.8ms	20.3ms	100.00%
BooleanQuery	message:beats message:是 message:什 messag...	13.5ms	14.9ms	73.58%
TermQuery	message:是	0.9ms	0.9ms	4.56%
TermQuery	message:beats	0.1ms	0.1ms	0.67%
TermQuery	message:东	0.1ms	0.1ms	0.57%
TermQuery	message:么	0.1ms	0.1ms	0.44%
TermQuery	message:西	0.1ms	0.1ms	0.29%
TermQuery	message:什	0.0ms	0.0ms	0.23%
BooleanQuery	@version:beats @version:是 @version:什 @ve...	1.5ms	1.8ms	9.04%
BooleanQuery	title:beats title:是 title:什 title:么 titl...	0.1ms	0.5ms	2.28%
TermQuery	@version.keyword:Beats是什么东西	0.2ms	0.2ms	0.79%
TermQuery	title.keyword:Beats是什么东西	0.0ms	0.0ms	0.24%
TermQuery	message.keyword:Beats是什么东西	0.0ms	0.0ms	0.22%
MatchNoDocsQuery	MatchNoDocsQuery("failed [comments] quer...	0.0ms	0.0ms	0.03%
MatchNoDocsQuery	MatchNoDocsQuery("failed [uid] query, ca...	0.0ms	0.0ms	0.01%
MatchNoDocsQuery	MatchNoDocsQuery("failed [votes] query, ...	0.0ms	0.0ms	0.01%
MatchNoDocsQuery	MatchNoDocsQuery("failed [@timestamp] qu...	0.0ms	0.0ms	0.00%
MatchNoDocsQuery	MatchNoDocsQuery("failed [id] query, cau...	0.0ms	0.0ms	0.00%
MatchNoDocsQuery	MatchNoDocsQuery("failed [views] query, ...	0.0ms	0.0ms	0.00%
MatchNoDocsQuery	MatchNoDocsQuery("failed [addtime]	0.0ms	0.0ms	0.00%

forum-mysql
[E3SjoEEXQjuM1xdSIlL_-g][2]

Type
TermQuery
Description
message:是
Total Time
0.925ms
Self Time
0.925ms
Timing Breakdown

build_scorer	825.7µs	89.3%
create_weight	59.7µs	6.5%
score	25.8µs	2.8%
next_doc	13.3µs	1.4%
match	0.0ns	0.0%
advance	0.0ns	0.0%

Discover: New Saved Search

localhost:5601/app/kibana#/discover/3d46aac0-79d0-11e8-aa04-9dcb35700427?_g=(refreshInterval:(display:Off,pause:!f,value:0),time:(from:now-5y,mo

elastic 中文社区 | IT大咖说 知识共享平台

kibana

- Discover
- Visualize
- Dashboard
- Timelion
- Machine Learning
- APM
- Graph
- Dev Tools
- Monitoring
- Management

New Saved Search 20,000 hits | New | Save | Open | Share | Reporting | Auto-refresh | Last 5 years

Reporting

Generate CSV

Generation URL Copy

http://localhost:5601/api/reporting/generate/csv?jobParams=(conflictedTypesFields:!(),fields:!(%27@timestamp%27,%27@version%27,_id,_index,_score,_type,agent,auth,beat.hostname,b

Search... (e.g. status:200 AND extension:PHP) Options

Add a filter +

apache_elastic_example

Selected Fields

? _source

Available Fields

@timestamp

t @version

t _id

t _index

_score

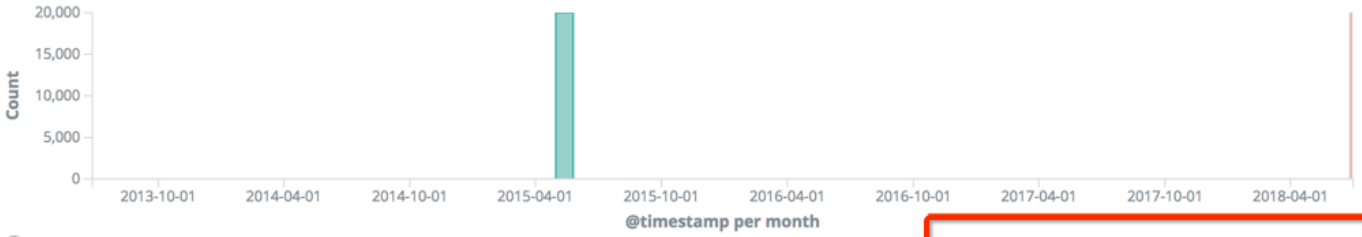
t _type

t agent

t auth

t beat.hostname

June 27th 2013, 14:06:33.456 - June 27th 2018, 14:06:33.456 — Auto



Time	_source
June 20th 2018, 17:02:21.176	beat.hostname: MacBook-Pro.local beat.version: 6.3.0 bea @timestamp: June 20th 2018, 17:02:21.176 message: 46.118. ET /scripts/grok-py-test/configlib.py HTTP/1.1" 200 235 "- http://www.google.com/bot.html source: /Users/medcl/Downlo tags: beats_input_codec_plain_applied, _grokparsefailure.
June 20th 2018, 16:35:59.281	host.name: MacBook-Pro.local offset: 2,111,429 input.typ

Created partial report for search 'New Saved Search'

The report reached the max size and contains partial data.

Pick it up from Management > Kibana > Reporting.

Download report

https://conf.elasticsearch.cn/2018/

https://www.elastic.co/training/certification

https://radio.elasticsearch.cn

THANK YOU

medcl@elastic.co
http://www.elastic.co/

elastic
中文社区

专业、垂直、纯粹的 Elastic 开源技术交流社区

https://elasticsearch.cn/