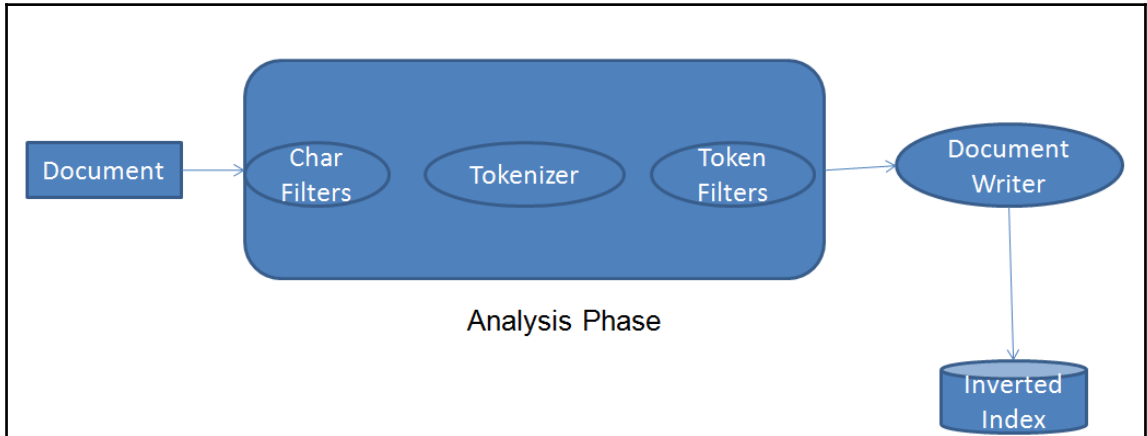


Graphic Bundle

Chapter 1:



Chapter 2:

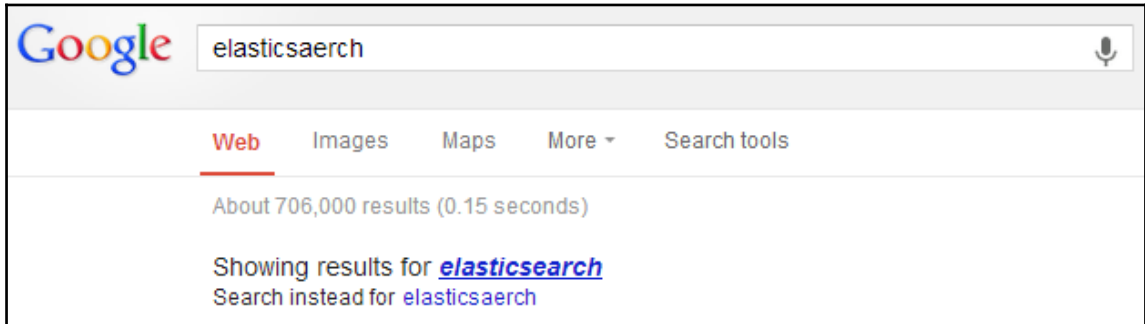
$$\text{bm25}(d) = \sum_{t \in q, f_{t,d} > 0} \log \left(1 + \frac{N - df_t + 0.5}{df_t + 0.5} \right) \cdot \frac{f_{t,d}}{f_{t,d} + k \cdot (1 - b + b \frac{1(d)}{\text{avgdl}})}$$

```
{
  "error": {
    "root_cause": [
      {
        "type": "json_parse_exception",
        "reason": "Unexpected character ('s' (code 115)):
was expecting comma to separate OBJECT entries\n at [Source:
org.elasticsearch.transport.netty4.ByteBufStreamInput@6ce7498d;
line: 2, column: 29]"
      }
    ],
    "type": "json_parse_exception",
    "reason": "Unexpected character ('s' (code 115)): was
expecting comma to separate OBJECT entries\n at [Source: org
.elasticsearch.transport.netty4.ByteBufStreamInput@6ce7498d;
line: 2, column: 29]"
  },
  "status": 500
}
```

Chapter 4:

index	shard	prirep	state	docs	store	ip	node
rel_pch	3	p	STARTED	10000	644.9kb	127.0.0.1	J2h6MUi
rel_pch	4	p	STARTED	0	130b	127.0.0.1	J2h6MUi
rel_pch	2	p	STARTED	0	130b	127.0.0.1	J2h6MUi
rel_pch	1	p	STARTED	0	130b	127.0.0.1	J2h6MUi
rel_pch	0	p	STARTED	0	130b	127.0.0.1	J2h6MUi

Chapter 5:



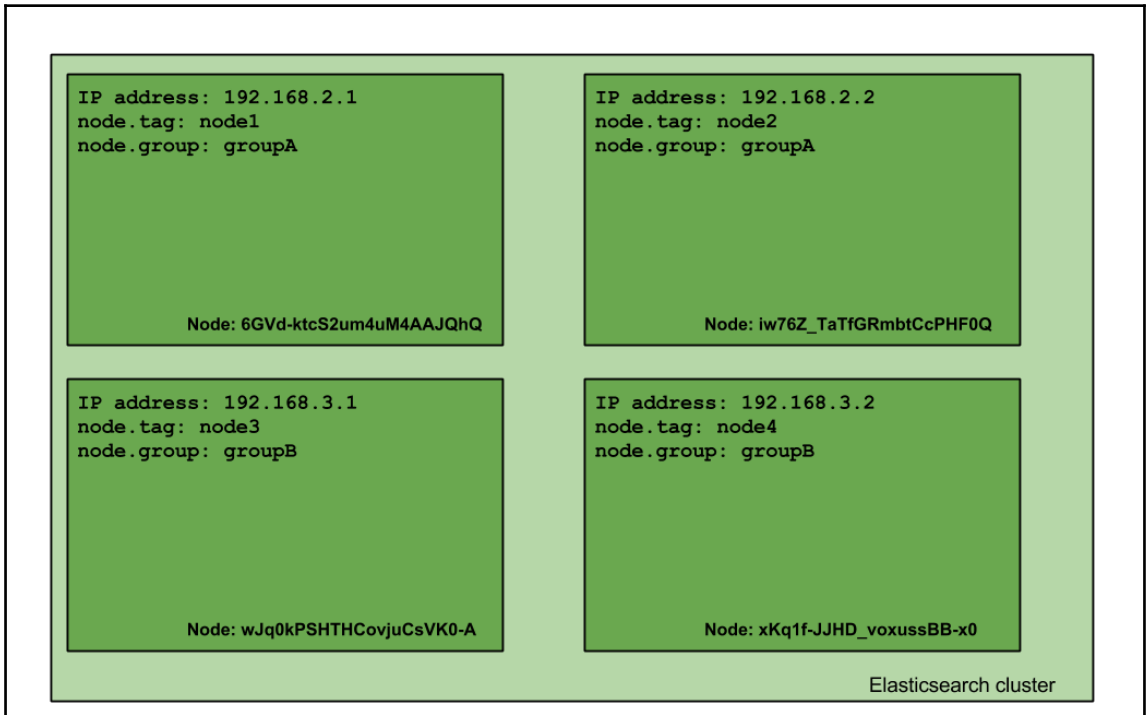
Chapter 6:

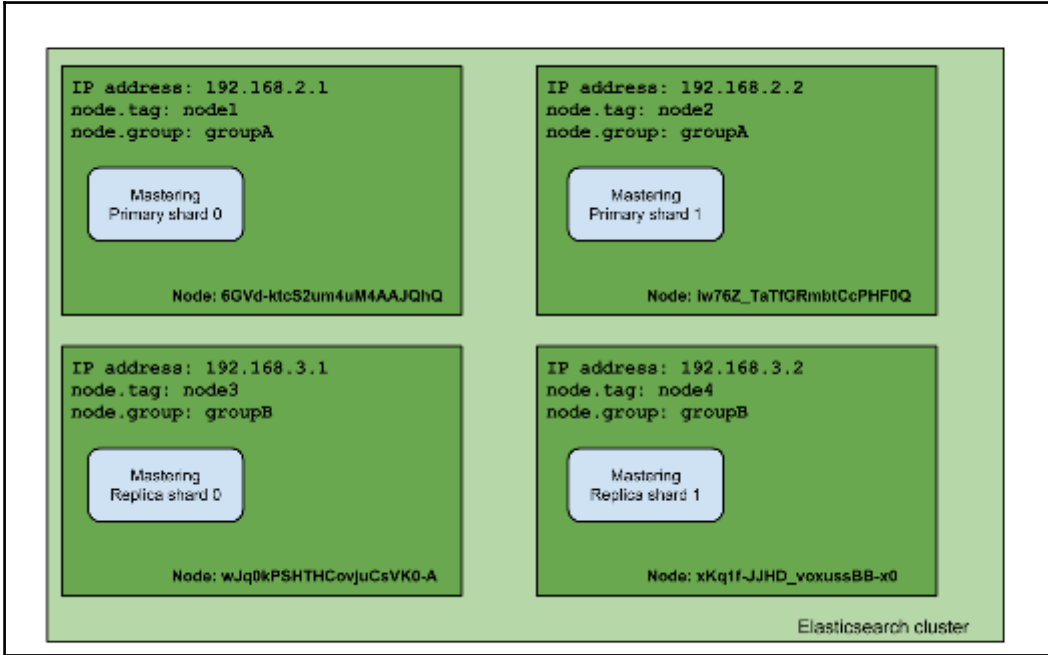
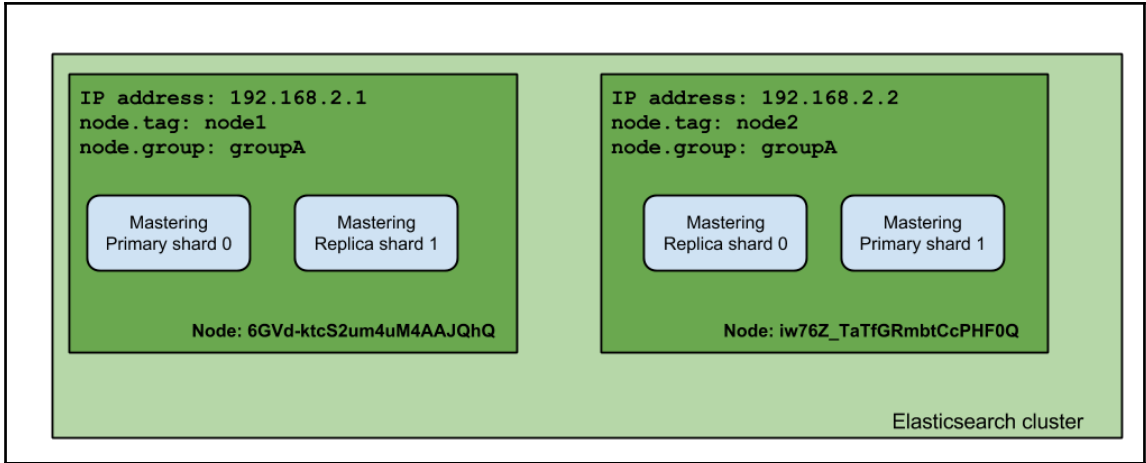
ip	heap.percent	ram.percent	cpu	load_1m	load_5m	load_15m	node.role	master	name
11.0.2.16	5	67	0	0.00	0.01	0.05	mdi	*	y7lLdir
11.0.2.15	7	67	0	0.05	0.05	0.05	mdi	-	Tg5Q7AX

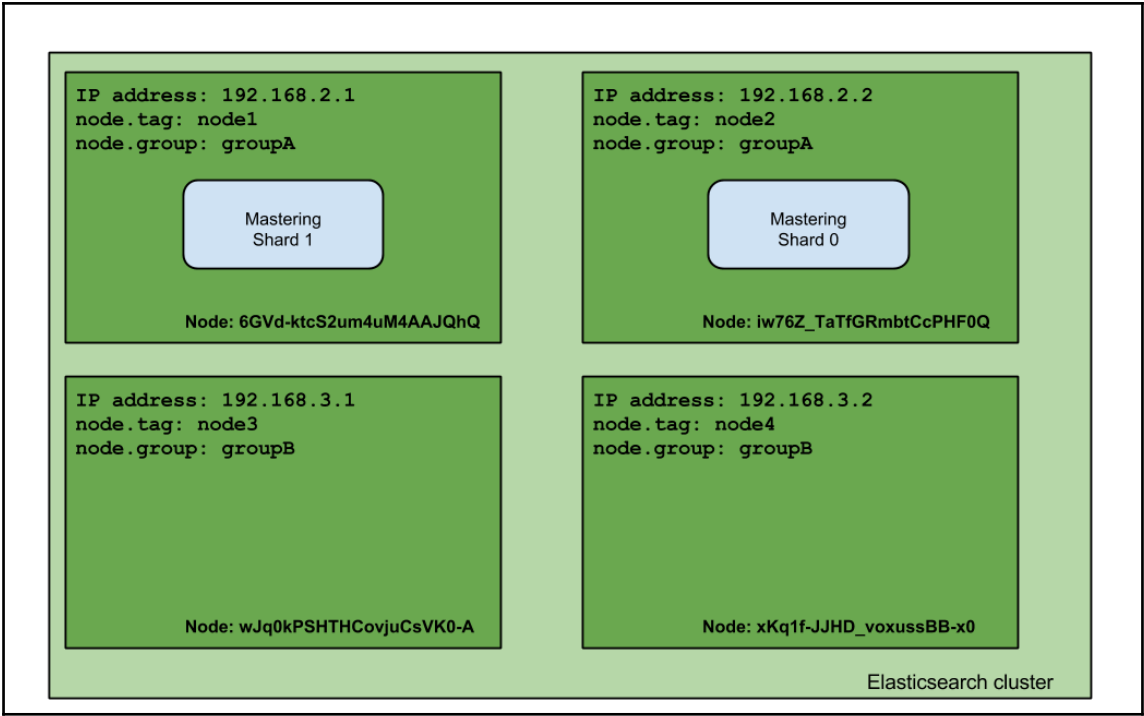
max number of nodes = number of shards * (number of replicas + 1)

index	shard	prirep	state	docs	store	ip	node
documents	1	p	STARTED	3	6.5kb	11.0.2.15	Tg5Q7AX
documents	0	p	STARTED	1	3.3kb	11.0.2.16	y7lLdir

index	shard	prirep	state	docs	store	ip	node
documents	1	p	STARTED	3	6.5kb	11.0.2.15	Tg5Q7AX
documents	0	p	UNASSIGNED				







IP address: 192.168.2.1
node.tag: node1
node.group: groupA

Mastering
Shard 1

Mastering
Shard 0

Node: 6GVd-ktcS2um4uM4AAJQhQ

IP address: 192.168.2.2
node.tag: node2
node.group: groupA

Node: iw76Z_TaTfGRmbtCcPHF0Q

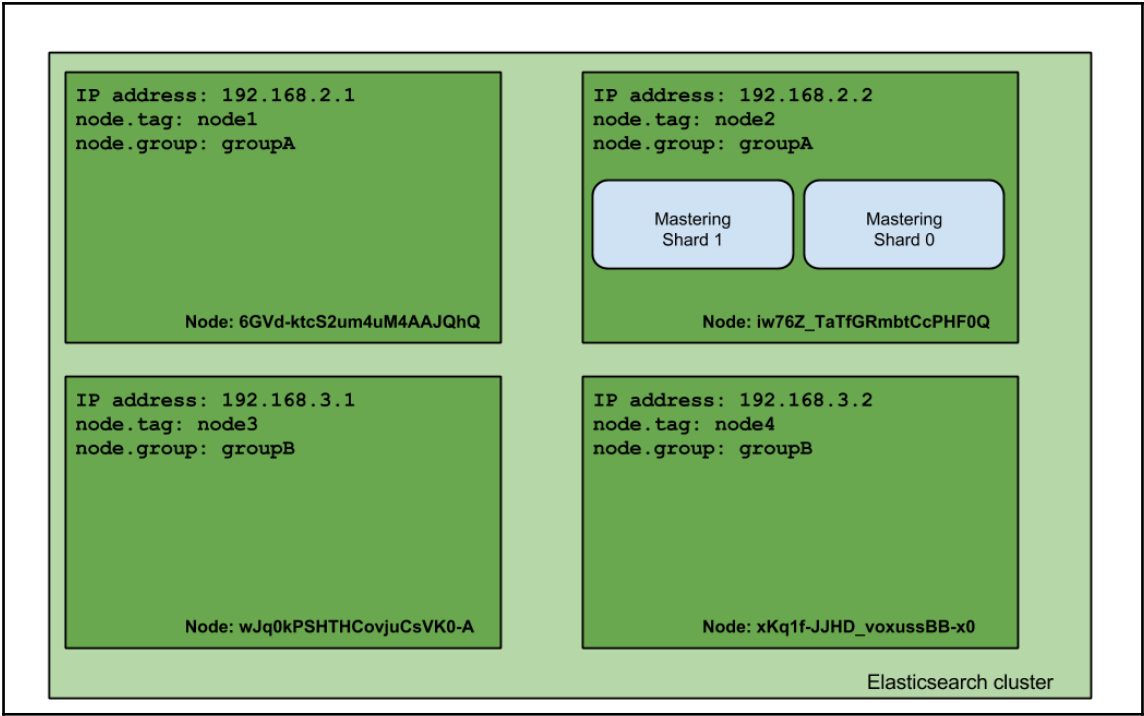
IP address: 192.168.3.1
node.tag: node3
node.group: groupB

Node: wJq0kPSHTHCovjuCsVK0-A

IP address: 192.168.3.2
node.tag: node4
node.group: groupB

Node: xKq1f-JJHD_voxussBB-x0

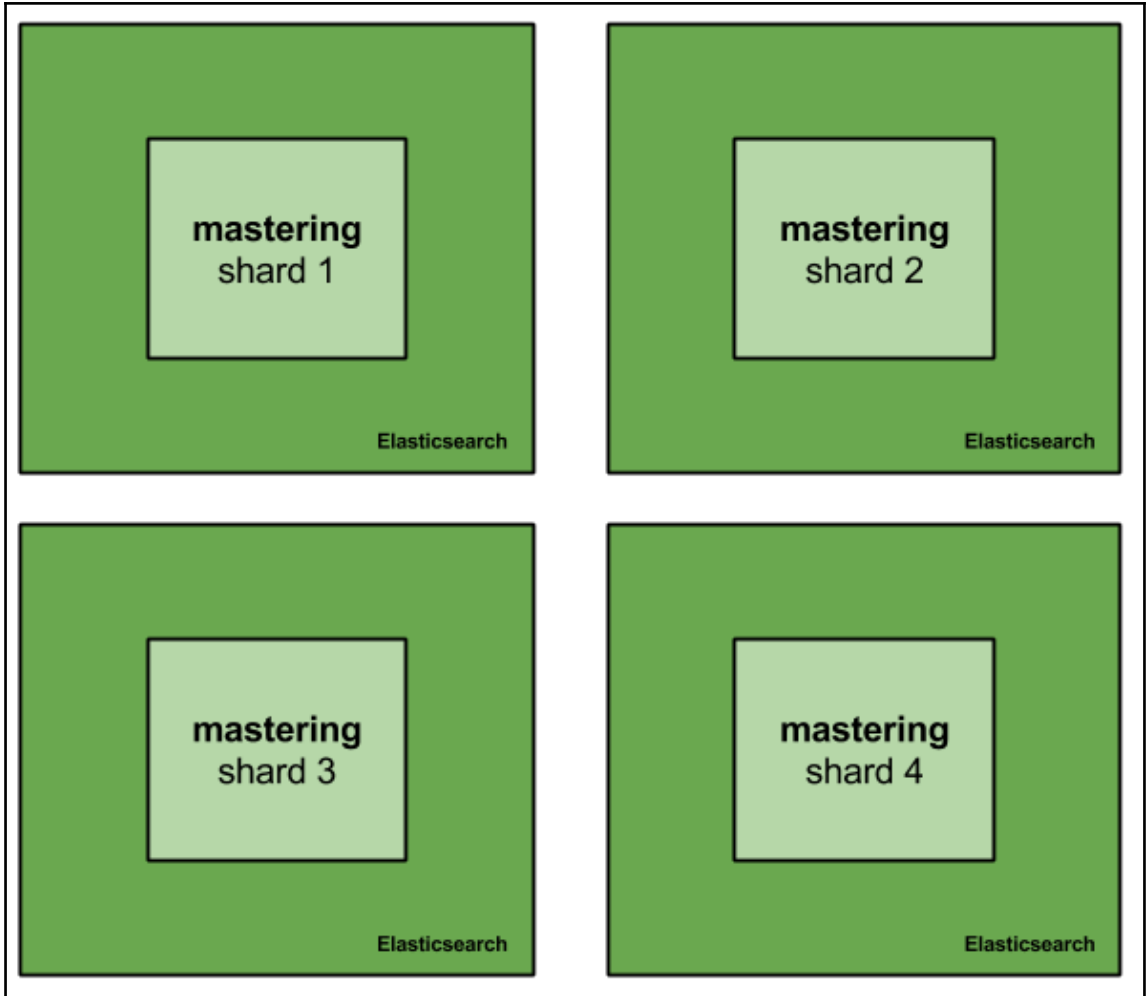
Elasticsearch cluster

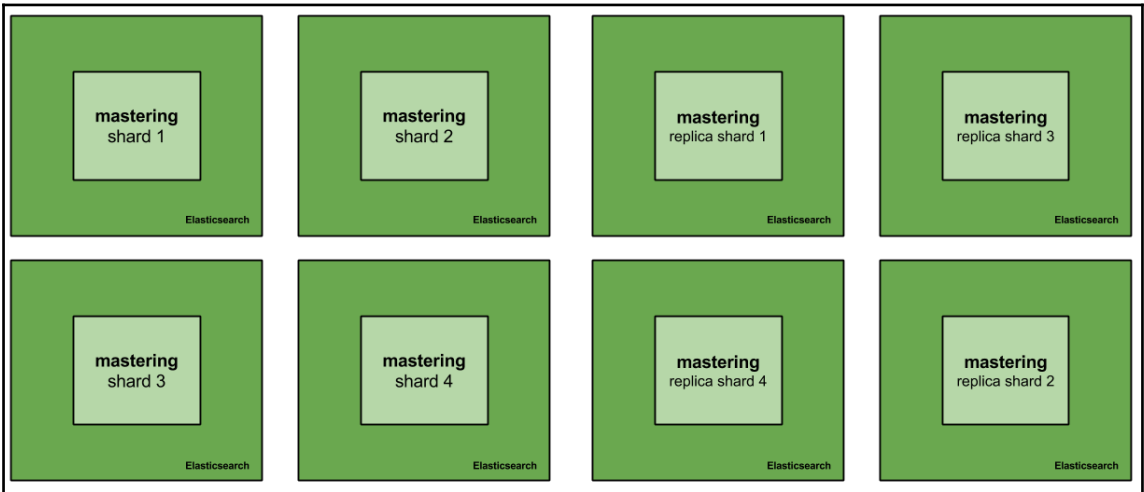
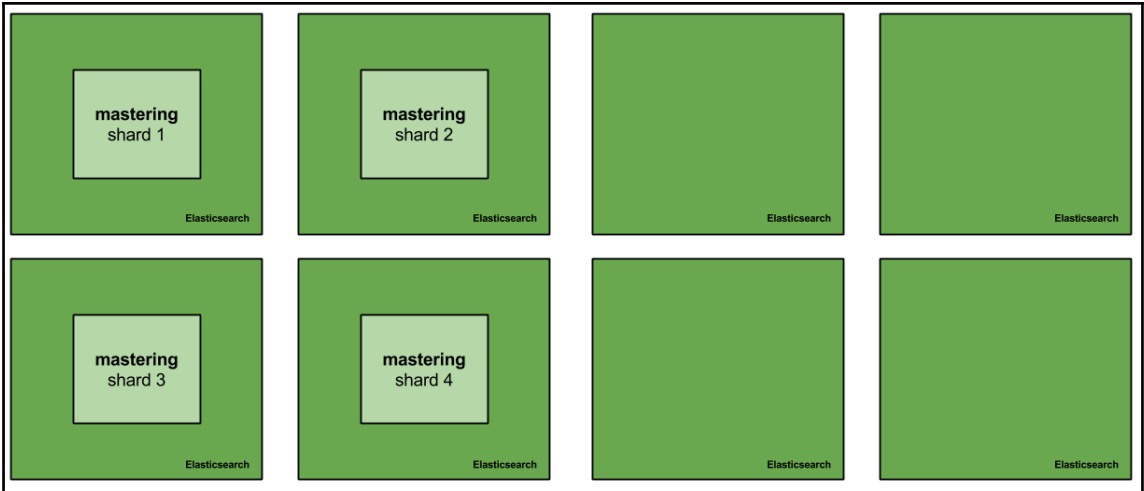


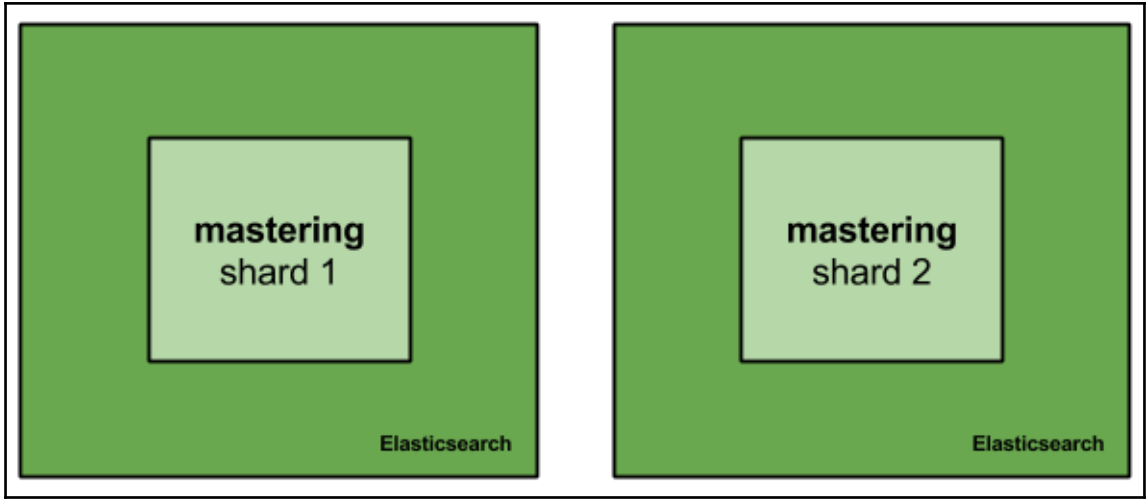
Chapter 10:

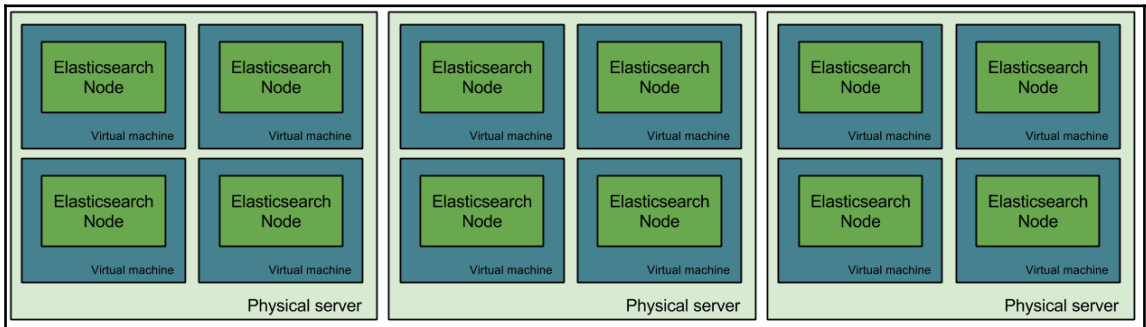
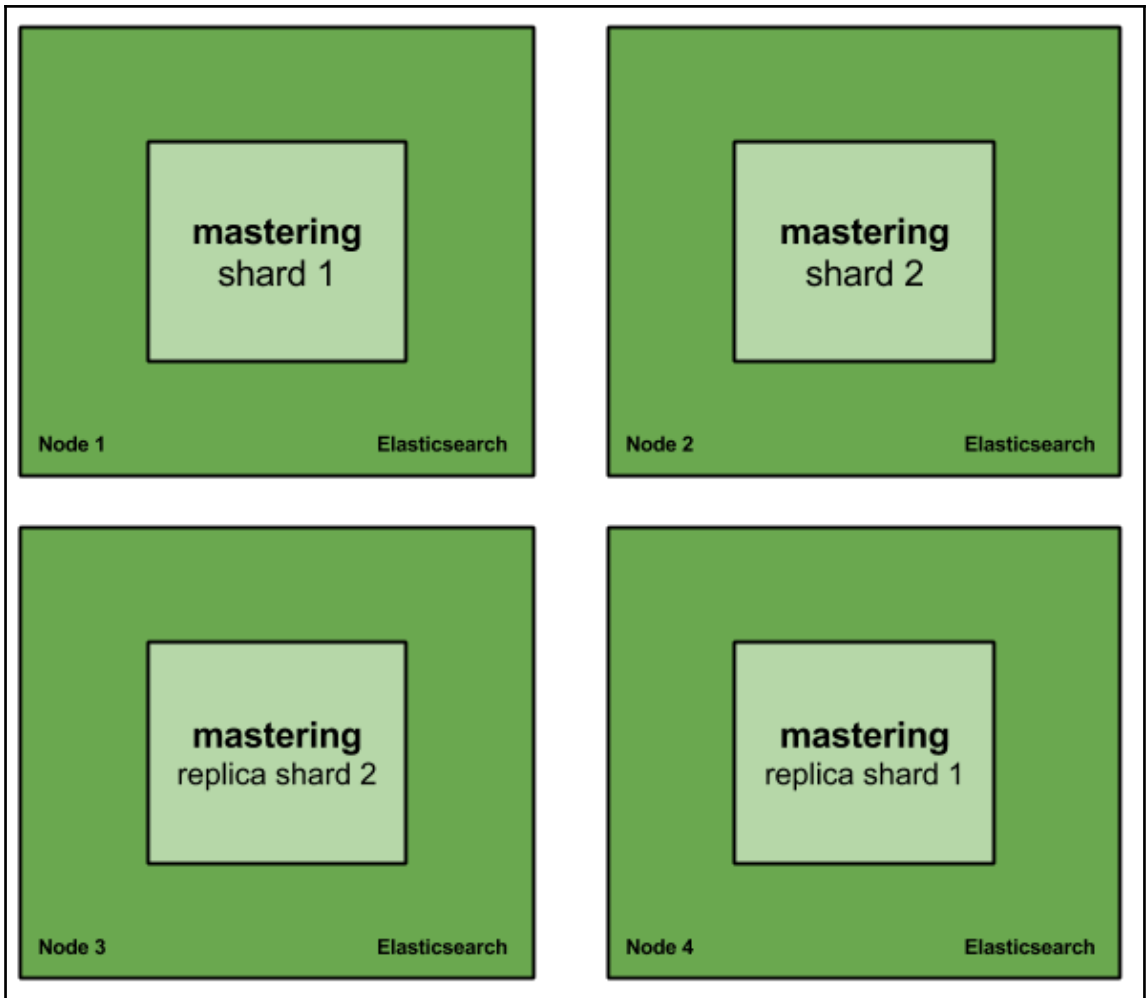
```
::: {node-1}{1NhLoN375-0vF90dqD40mA}{MF1iun0hRbCwt0e755PtmQ}{127.0.0.1}{127.0.0.1:9300}
Hot threads at 2016-12-31T21:31:52.890Z, interval=500ms, busiestThreads=3, ignoreIdleThreads=true:

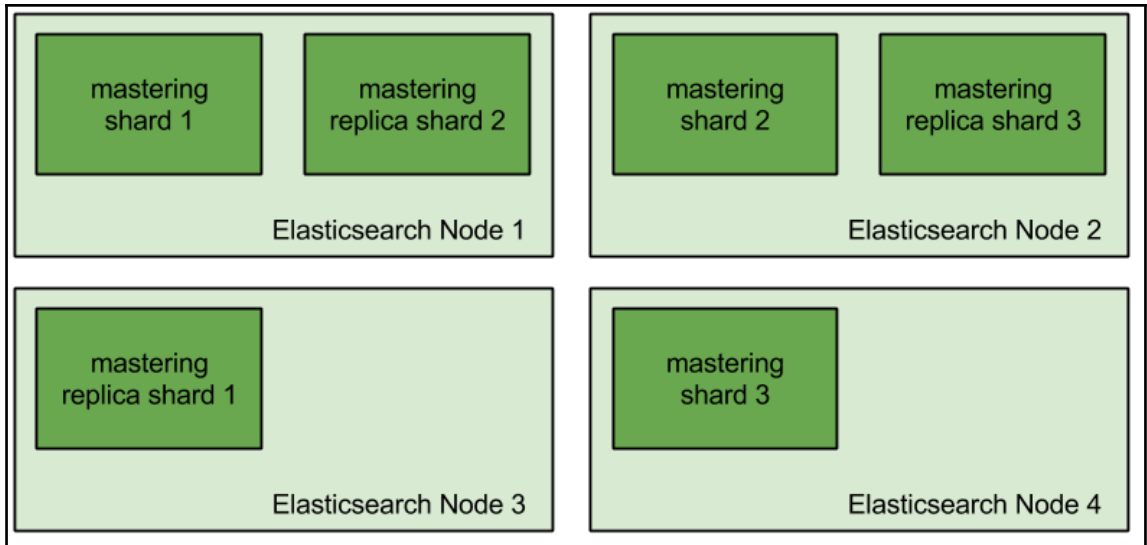
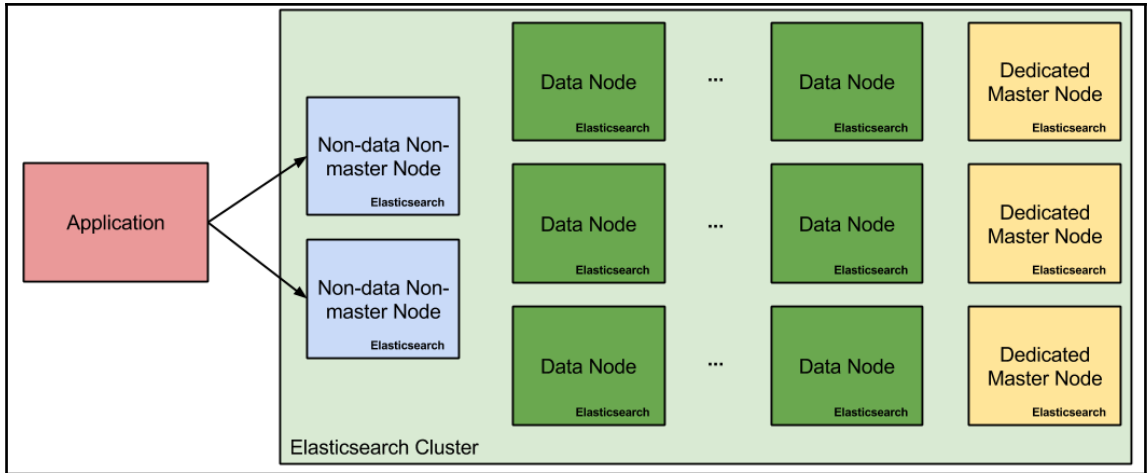
4.4% (22.1ms out of 500ms) cpu usage by thread 'elasticsearch[node-1][search][T#2]'
2/10 snapshots sharing following 36 elements
  java.lang.Throwable.fillInStackTrace(Native Method)
  java.lang.Throwable.fillInStackTrace(Throwable.java:783)
  java.lang.Throwable.<init>(Throwable.java:265)
  java.lang.Exception.<init>(Exception.java:66)
  java.io.IOException.<init>(IOException.java:58)
  org.apache.lucene.queryparser.classic.FastCharStream.refill(FastCharStream.java:72)
  org.apache.lucene.queryparser.classic.FastCharStream.readChar(FastCharStream.java:45)
  org.apache.lucene.queryparser.classic.FastCharStream.BeginToken(FastCharStream.java:80)
  org.apache.lucene.queryparser.classic.QueryParserTokenManager.getNextToken(QueryParserTokenManager.java:1055)
  org.apache.lucene.queryparser.classic.QueryParser.jj_ntk(QueryParser.java:834)
  org.apache.lucene.queryparser.classic.QueryParser.Term(QueryParser.java:401)
  org.apache.lucene.queryparser.classic.QueryParser.Clause(QueryParser.java:327)
  org.apache.lucene.queryparser.classic.QueryParser.Query(QueryParser.java:216)
  org.apache.lucene.queryparser.classic.QueryParser.TopLevelQuery(QueryParser.java:187)
  org.apache.lucene.queryparser.classic.QueryParserBase.parse(QueryParserBase.java:111)
  org.apache.lucene.queryparser.classic.MapperQueryParser.parse(MapperQueryParser.java:860)
  org.elasticsearch.index.query.QueryStringQueryBuilder.doToQuery(QueryStringQueryBuilder.java:911)
  org.elasticsearch.index.query.AbstractQueryBuilder.toQuery(AbstractQueryBuilder.java:95)
  org.elasticsearch.index.query.QueryShardContext.lambda$toQuery$1(QueryShardContext.java:311)
  org.elasticsearch.index.query.QueryShardContext$$Lambda$1339/1877300117.apply(Unknown Source)
  org.elasticsearch.index.query.QueryShardContext.toQuery(QueryShardContext.java:328)
  org.elasticsearch.index.query.QueryShardContext.toQuery(QueryShardContext.java:310)
  org.elasticsearch.search.SearchService.parseSource(SearchService.java:661)
  org.elasticsearch.search.SearchService.createContext(SearchService.java:536)
  org.elasticsearch.search.SearchService.createAndPutContext(SearchService.java:502)
  org.elasticsearch.search.SearchService.executeQueryPhase(SearchService.java:243)
  org.elasticsearch.action.search.SearchTransportService.lambda$registerRequestHandler$6(SearchTransportService.java:276)
  org.elasticsearch.action.search.SearchTransportService$$Lambda$1030/788877168.messageReceived(Unknown Source)
  org.elasticsearch.transport.TransportRequestHandler.messageReceived(TransportRequestHandler.java:33)
  org.elasticsearch.transport.RequestHandlerRegistry.processMessageReceived(RequestHandlerRegistry.java:69)
  org.elasticsearch.transport.TransportService$6.doRun(TransportService.java:548)
  org.elasticsearch.common.util.concurrent.ThreadContext$ContextPreservingAbstractRunnable.doRun(ThreadContext.java:504)
  org.elasticsearch.common.util.concurrent.AbstractRunnable.run(AbstractRunnable.java:37)
  java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1142)
  java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:617)
  java.lang.Thread.run(Thread.java:745)
2/10 snapshots sharing following 10 elements
  sun.misc.Unsafe.park(Native Method)
  java.util.concurrent.locks.LockSupport.park(LockSupport.java:175)
  java.util.concurrent.LinkedTransferQueue.awaitMatch(LinkedTransferQueue.java:737)
  java.util.concurrent.LinkedTransferQueue.xfer(LinkedTransferQueue.java:647)
  java.util.concurrent.LinkedTransferQueue.take(LinkedTransferQueue.java:1269)
  org.elasticsearch.common.util.concurrent.SizeBlockingQueue.take(SizeBlockingQueue.java:161)
  java.util.concurrent.ThreadPoolExecutor.getTask(ThreadPoolExecutor.java:1067)
  java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1127)
  java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:617)
  java.lang.Thread.run(Thread.java:745)
4.1% (20.3ms out of 500ms) cpu usage by thread 'elasticsearch[node-1][search][T#3]'
3/10 snapshots sharing following 2 elements
  java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:617)
  java.lang.Thread.run(Thread.java:745)
```

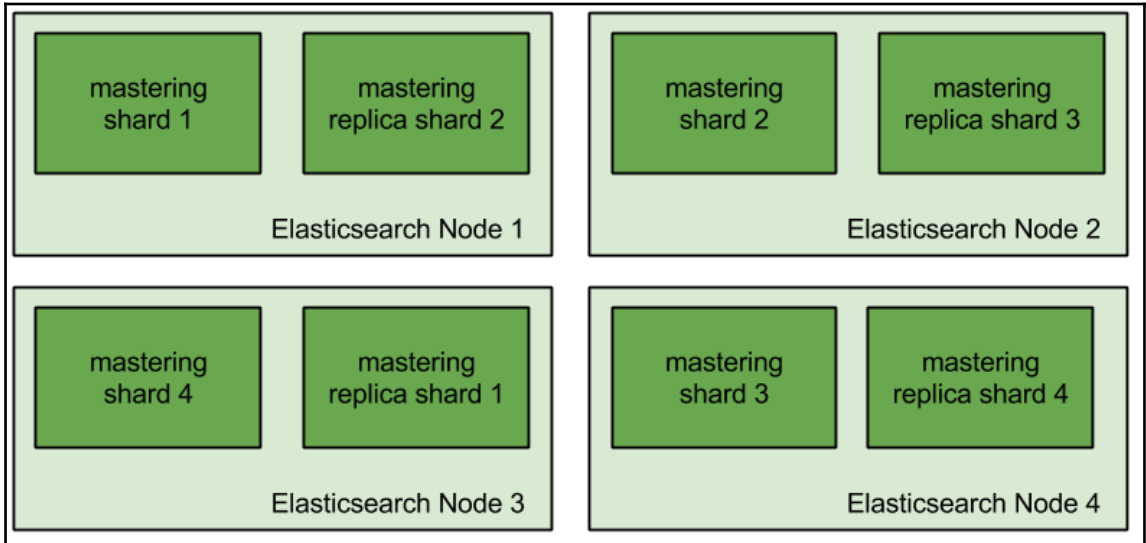
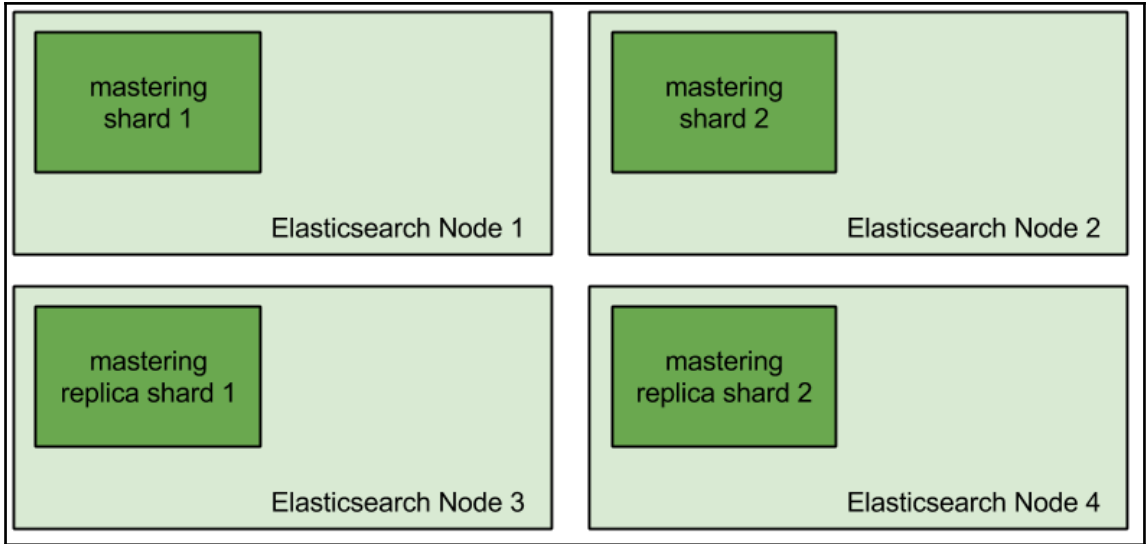


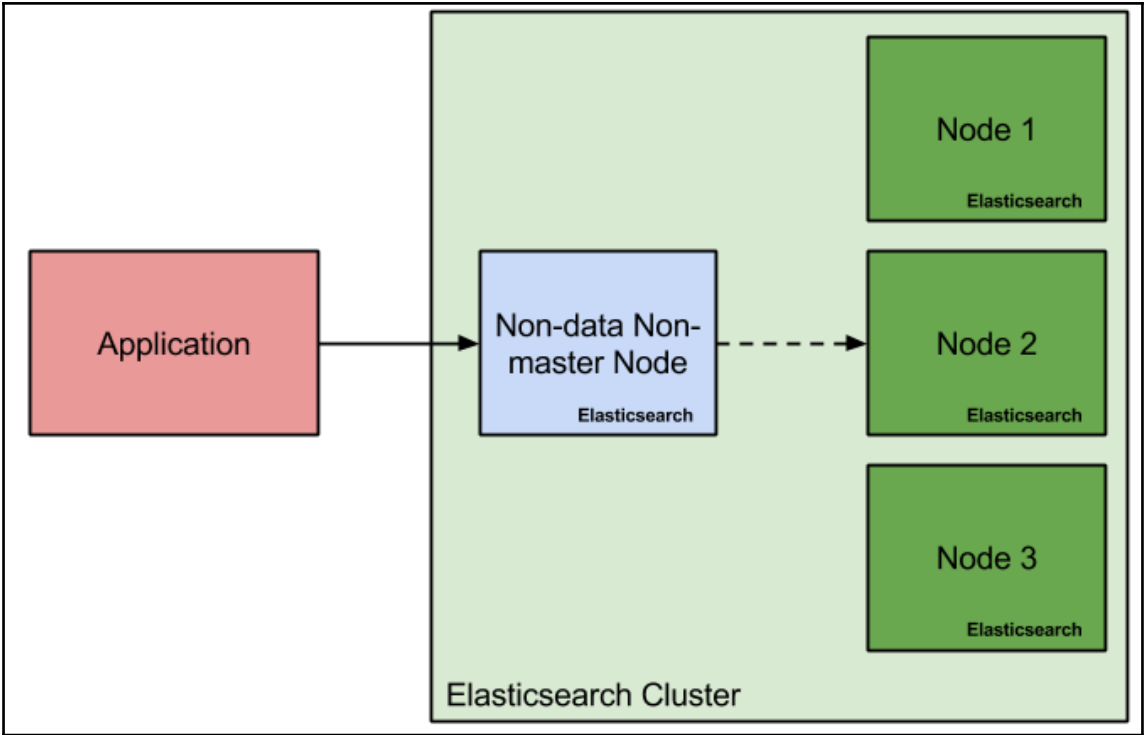


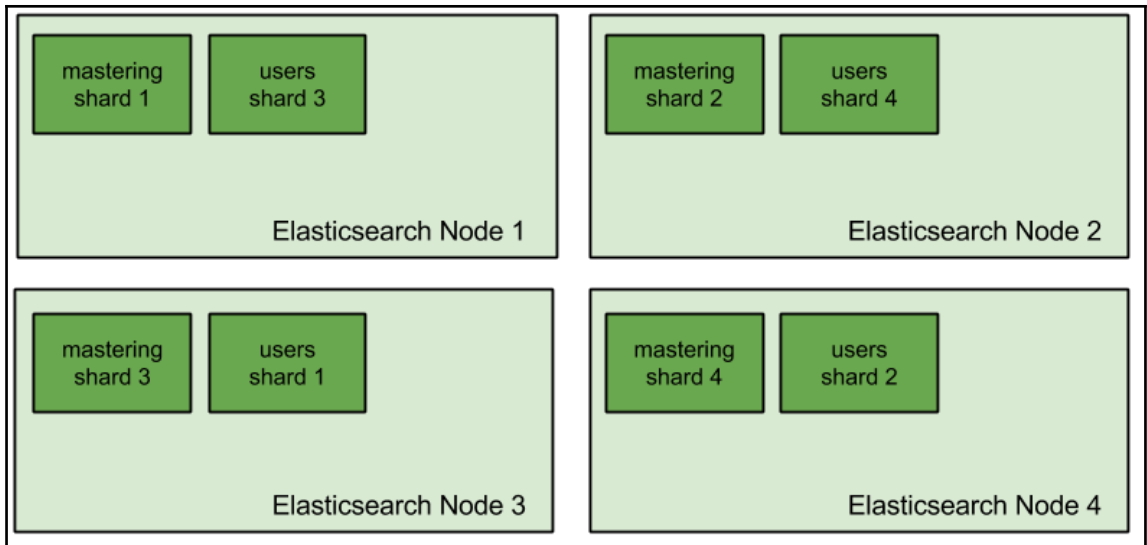
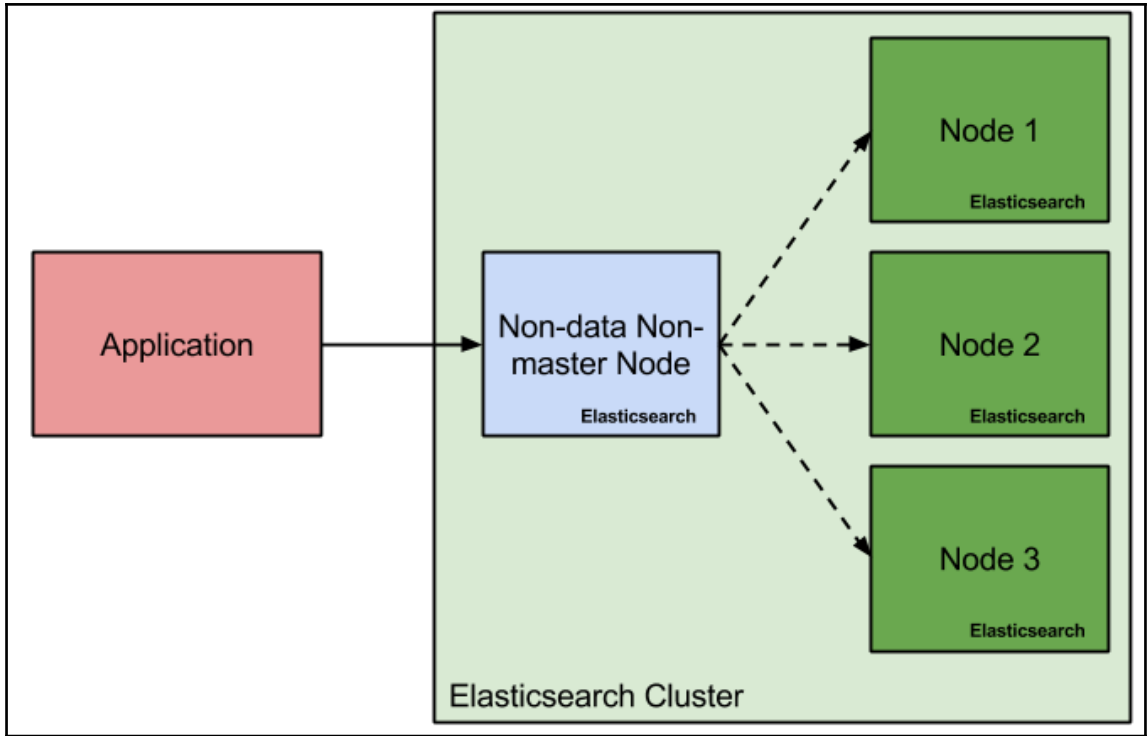








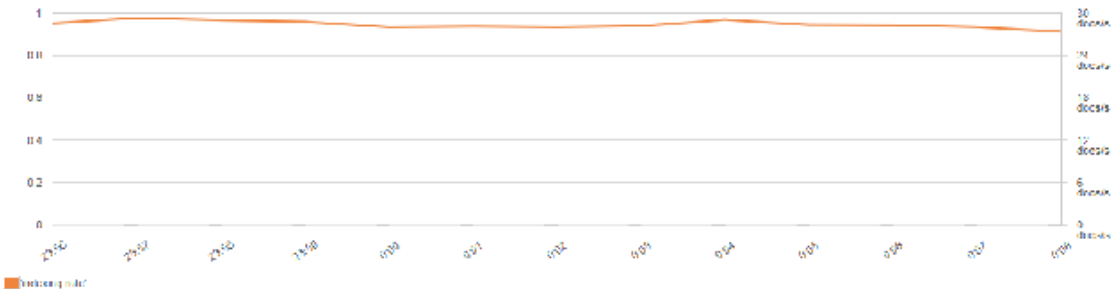




Indexing 2014.11.27 21:58 to 2014.11.28 00:00

Actions

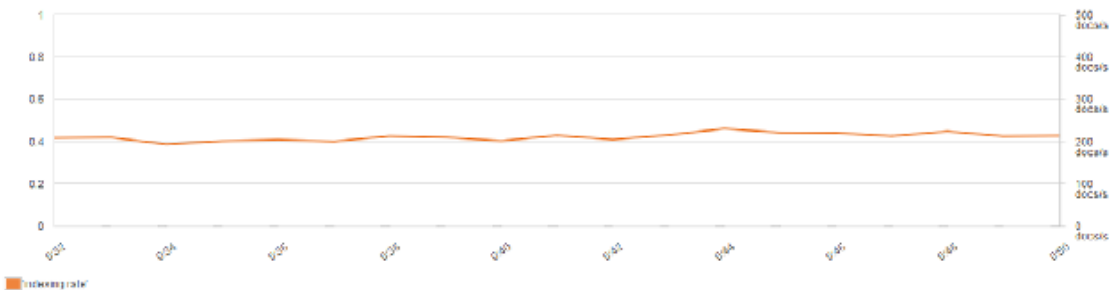
'indexed docs' 'deletes total' 'indexing rate' 'deleting rate'

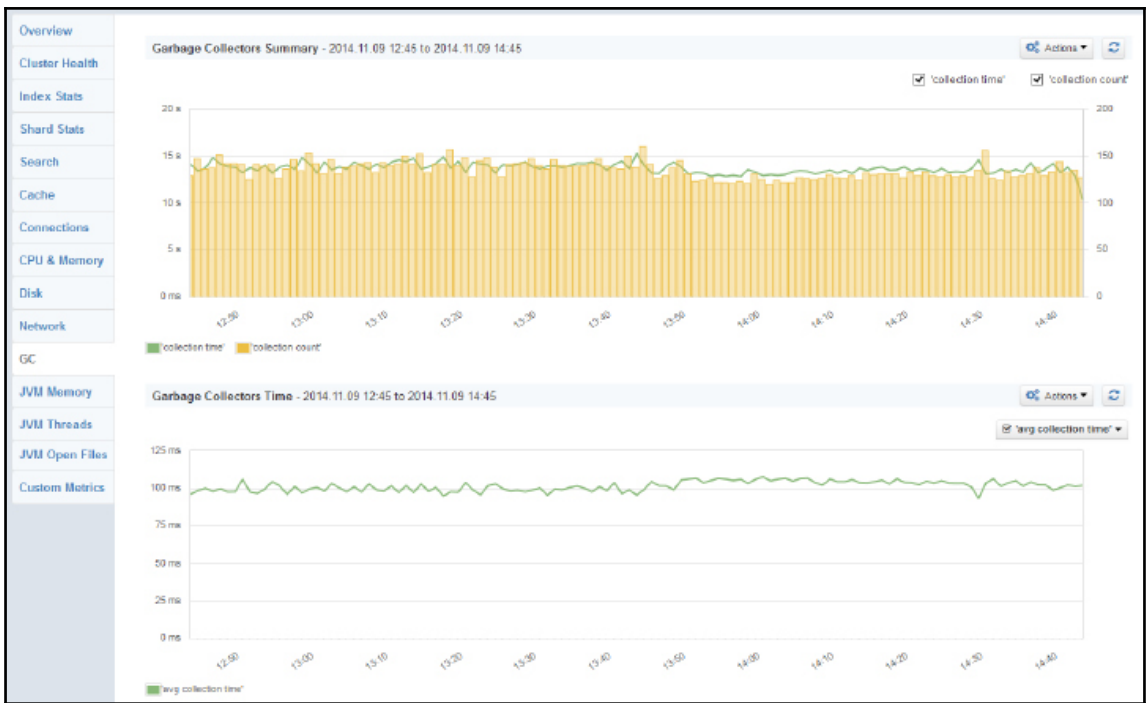


Indexing 2014.11.28 00:32 to 2014.11.28 00:50

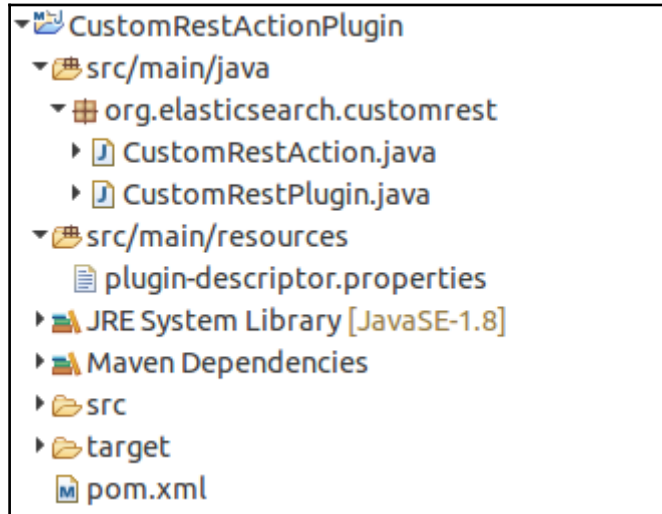
Actions

'indexed docs' 'deletes total' 'indexing rate' 'deleting rate'





Chapter 11:



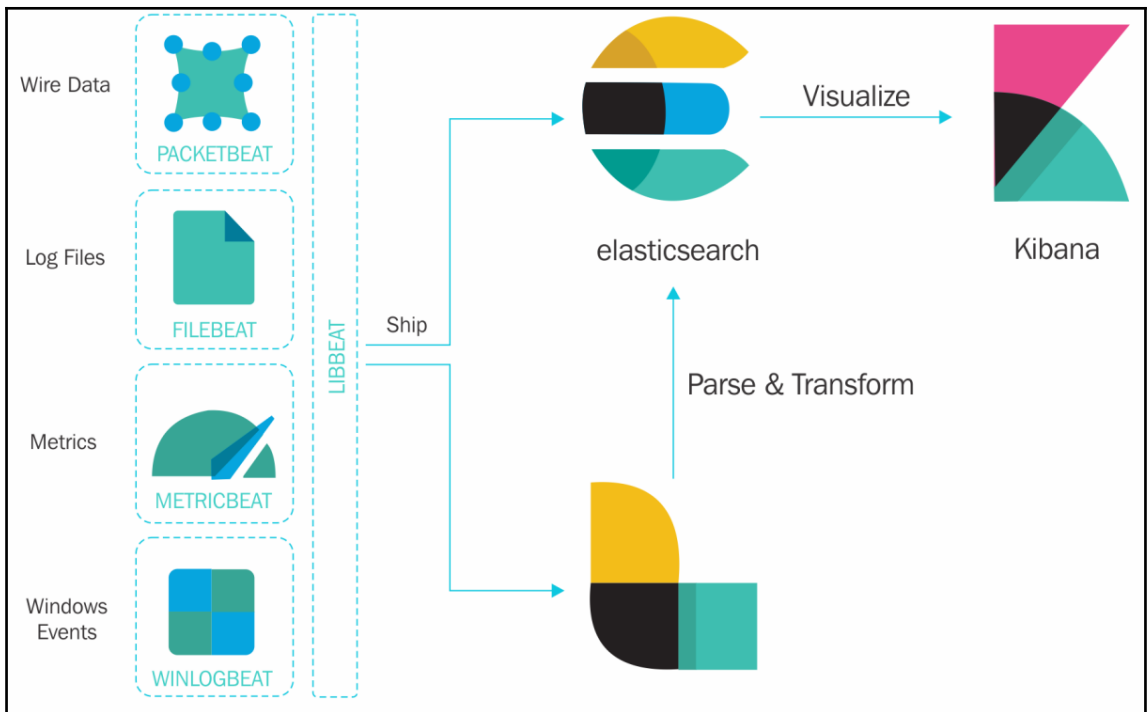
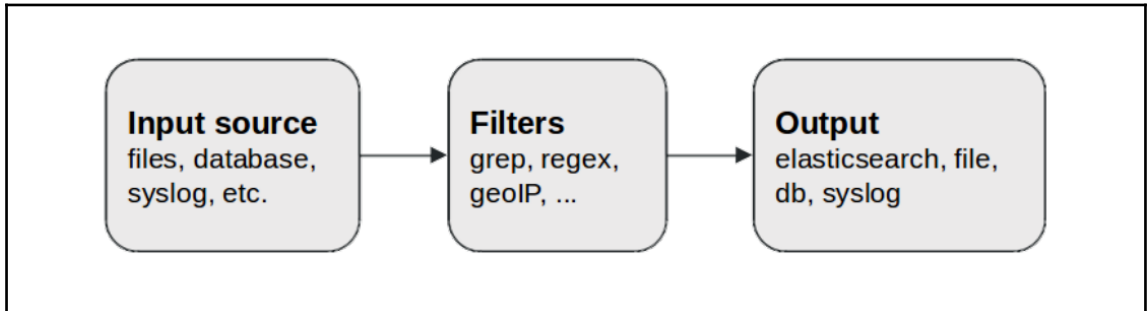
org.elasticsearch.plugins.Plugin

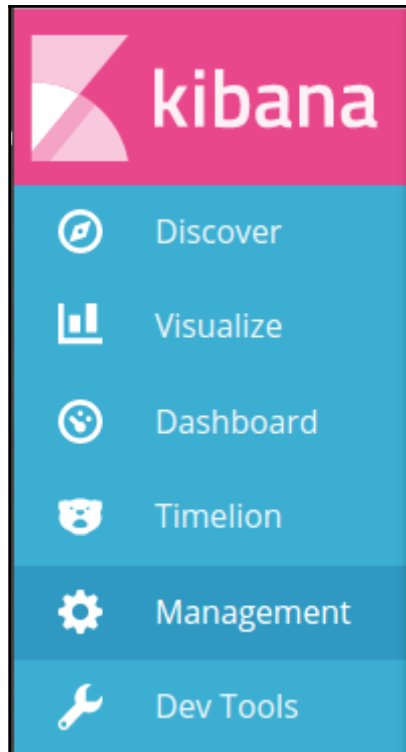
An extension point allowing to plug in custom functionality. This class has a number of extension points that are available to all plugins, in addition you can implement any of the following interfaces to further customize Elasticsearch:

- [ActionPlugin](#)
- [AnalysisPlugin](#)
- [ClusterPlugin](#)
- [DiscoveryPlugin](#)
- [IngestPlugin](#)
- [MapperPlugin](#)
- [RepositoryPlugin](#)
- [ScriptPlugin](#)
- [SearchPlugin](#)

In addition to extension points this class also declares some `@Deprecated public final void onModule` methods. These methods should cause any extensions of [Plugin](#) that used the pre-5.x style extension syntax to fail to build and point the plugin author at the new extension syntax. We hope that these make the process of upgrading a plugin from 2.x to 5.x only mildly painful.

Chapter 12:





Management / Kibana

Index Patterns Saved Objects Advanced Settings

Warning No default index pattern. You must select or create one to continue.

metricbeat-*

Configure an index pattern

In order to use Kibana you must configure at least one index pattern. Index patterns are used to identify the Elasticsearch index to run search and analytics against. They are also used to configure fields.

- Index contains time-based events
- Use event times to create index names (DEPRECATED)

Index name or pattern

Patterns allow you to define dynamic index names using * as a wildcard. Example: logstash-*

 Do not expand index pattern when searching (Not recommended)

By default, searches against any time-based index pattern that contains a wildcard will automatically be expanded to query only the indices that contain data within the currently selected time range.

Searching against the index pattern *logstash-** will actually query elasticsearch for the specific matching indices (e.g. *logstash-2015.12.21*) that fall within the current time range.

Time-field name ⓘ refresh fields

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Time-field name ⓘ [refresh fields](#)

- @timestamp
- received_at

Index Patterns Saved Objects Advanced Settings

+ Add New

★ logstash-*

metricbeat-*

★ logstash-*

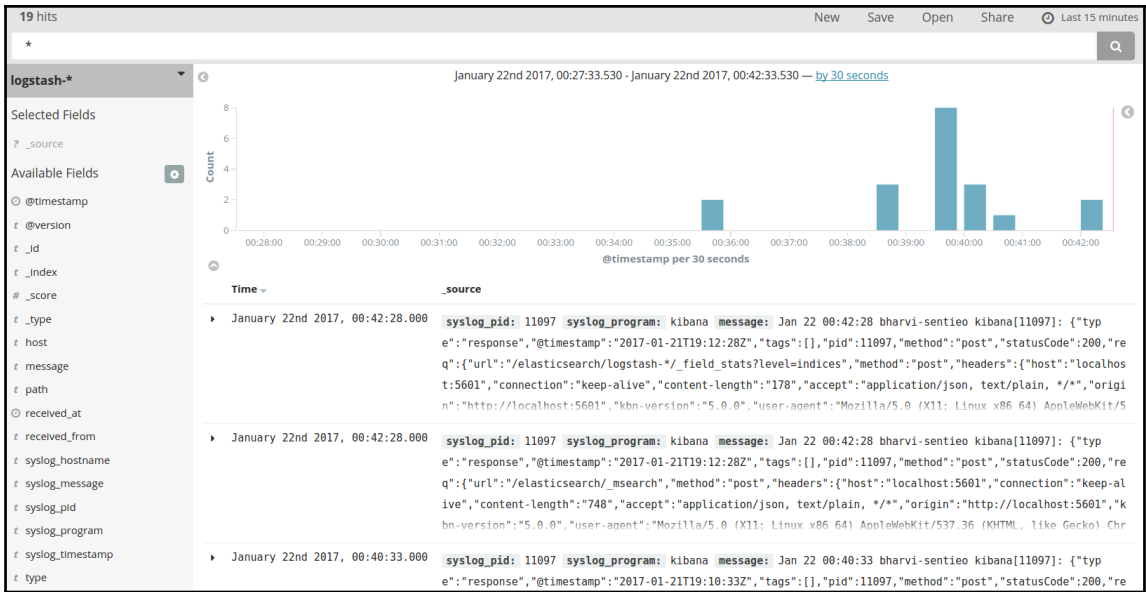


This page lists every field in the **logstash-*** index and the field's associated core type as recorded by Elasticsearch. While this list allows you to view the core type of each field, changing field types must be done using Elasticsearch's [Mapping API](#)

Filter

Fields (31) Scripted fields (0)

name	type	format	searchable	aggregatable	analyzed	controls
syslog_pid	string		✓		✓	
syslog_program	string		✓		✓	
type	string		✓		✓	
geolp.ip	ip					
path	string		✓		✓	



1,710 hits

New Save Open Share Auto-refresh Last 24 hours

	Today	Yesterday	Last 15 minutes	Last 30 days
Quick	This week	Day before yesterday	Last 30 minutes	Last 60 days
Relative	This month	This day last week	Last 1 hour	Last 90 days
	This year	Previous week	Last 4 hours	Last 6 months
Absolute	The day so far	Previous month	Last 12 hours	Last 1 year
	Week to date	Previous year	Last 24 hours	Last 2 years
	Month to date		Last 7 days	Last 5 years
	Year to date			

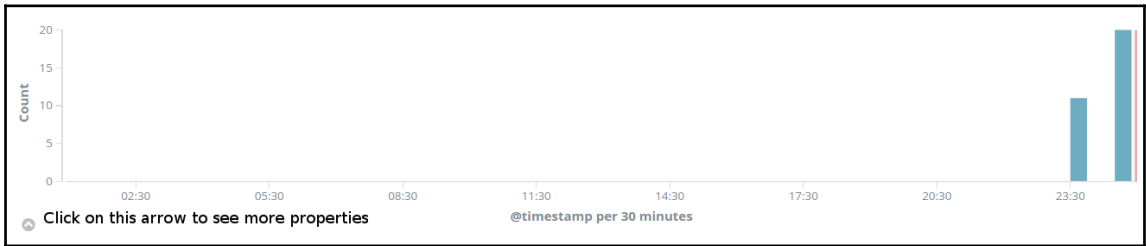
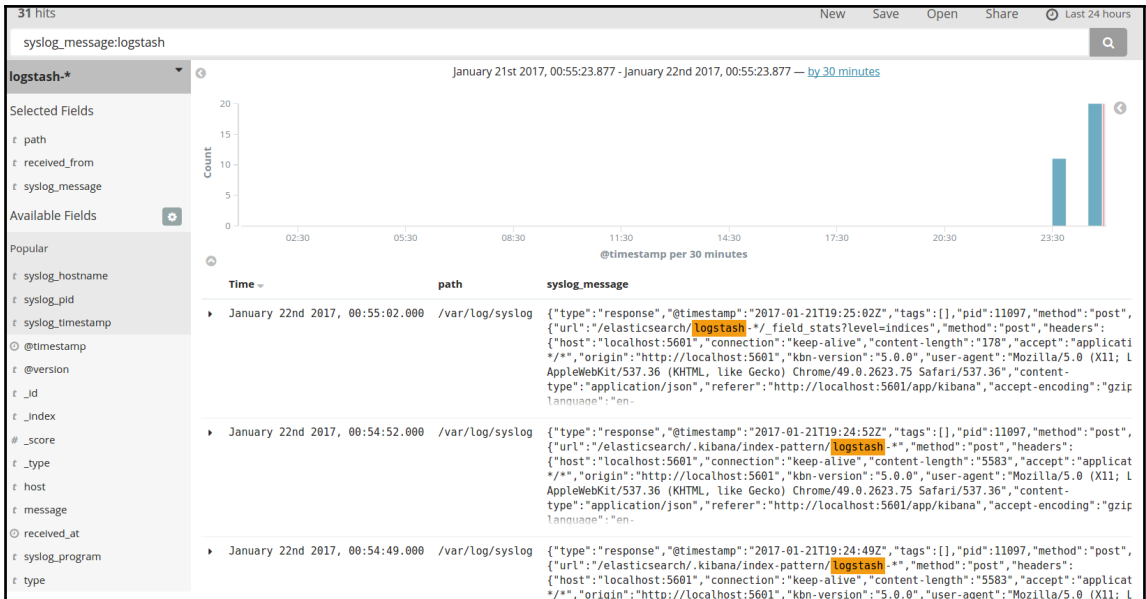


Table Request Response Statistics

@timestamp per 30 minutes	Count
January 21st 2017, 23:30:00.000	11
January 22nd 2017, 00:30:00.000	20

New Add Save Open Share Options Last 24 hours

Search Dashboards Filter... 9 of 9 Manage Dashboards

Name ▾


- Metricbeat - Apache HTTPD server status
- Metricbeat filesystem per Host
- Metricbeat system overview
- Metricbeat-cpu
- Metricbeat-filesystem
- Metricbeat-memory
- Metricbeat-network
- Metricbeat-overview
- Metricbeat-processes

Metricbeat filesystem per Host New Add Save Open Share Options Last 15 minutes

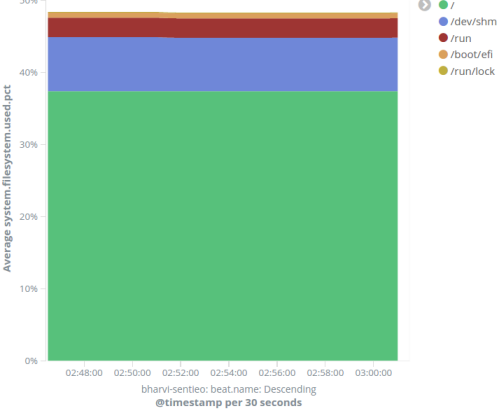
System Navigation

- Overview
- Load/CPU
- Memory
- Processes
- Network
- Filesystem
- Filesystem per Host

Disk space distribution



Disk utilization over time



Top disks by memory usage

Mount point	Available disk space	Total disk space	Used disk space	Used disk space (%)	Files
/	60.731GB	105.578GB	39.462GB	37.4%	7,045,120
/sys/fs/cgroup	5.817GB	5.817GB	0B	0%	1,524,895
/dev	5.801GB	5.801GB	0B	0%	1,520,573
/dev/shm	5.385GB	5.817GB	442.409MB	7.436%	1,524,895
/run/user/124	1.163GB	1.163GB	0B	0%	1,524,895

Metricbeat filesystem per Host

*

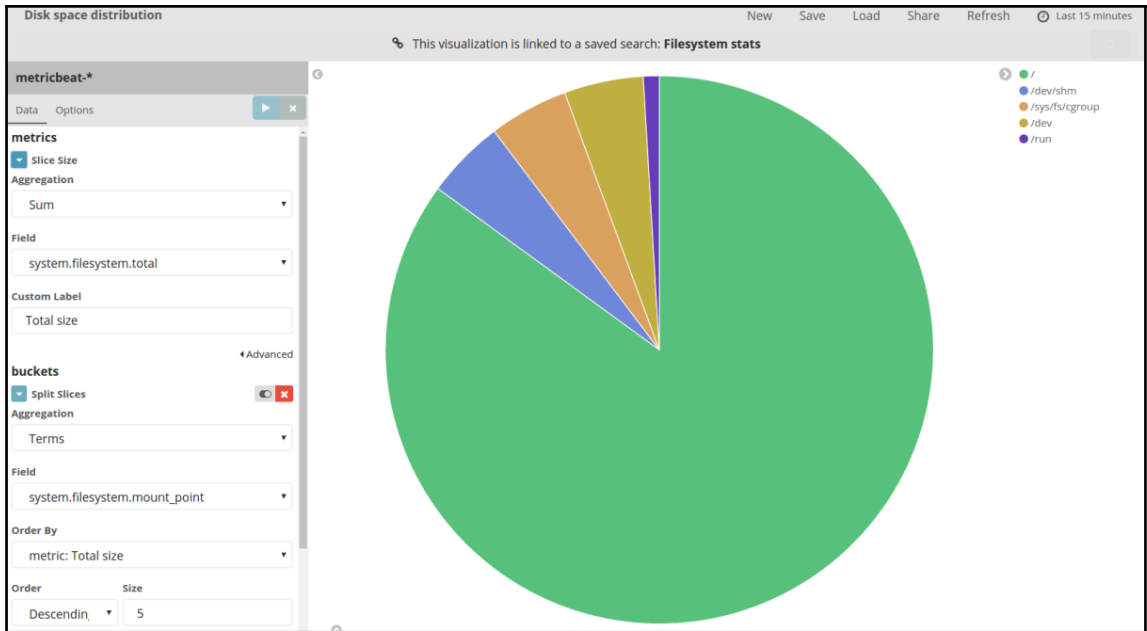
System Navigation

- Overview
- Load/CPU
- Memory
- Processes
- Network
- Filesystem
- Filesystem per Host

Disk space distribution



Top disks by memory usage



Dev Tools

Console

```

1 GET logstash-*/_search
2 {"query": {ma}}
3
4 match API
5 match_all API
6 match_phrase API
7 match_phrase_prefix API
8 dis_max API
9 multi_match API
10
11
12
13
14

```

```
Dev Tools
Console
1 GET logstash-*/_search
2 {
3   "query": {
4     "match_all": {}
5   }
6 }
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33

1 {
2   "took": 1,
3   "timed_out": false,
4   "_shards": {
5     "total": 5,
6     "successful": 5,
7     "failed": 0
8   },
9   "hits": {
10    "total": 2374,
11    "max_score": 1,
12    "hits": [
13      {
14        "_index": "logstash-2017.01.21",
15        "_type": "syslog",
16        "_id": "AVncQpkaqHBSNhQ_67w-",
17        "_score": 1,
18        "_source": {
19          "syslog_pid": "707",
20          "syslog_program": "NetworkManager",
21          "message": "Jan 21 05:46:53 bharvi-sentleo NetworkManager[707]: <info> sleeping...",
22          "type": "syslog",
23          "syslog_message": "-<info> sleeping...",
24          "path": "/var/log/syslog",
25          "received_from": "bharvi-sentleo",
26          "@timestamp": "2017-01-21T00:16:53.000Z",
27          "syslog_hostname": "bharvi-sentleo",
28          "syslog_timestamp": "Jan 21 05:46:53",
29          "received_at": "2017-01-21T18:21:00.824Z",
30          "@version": "1",
31          "host": "bharvi-sentleo"
32        }
33      },
34    ]
35  }
36 }
```

Management / Kibana

Index Patterns **Saved Objects** Advanced Settings

Edit Saved Objects

[Export Everything](#) [Import](#)

From here you can delete saved objects, such as saved searches. You can also edit the raw data of saved objects. Typically objects are only modified via their associated application, which is probably what you should use instead of this screen. Each tab is limited to 100 results. You can use the filter to find objects not in the default list.

Filter

Dashboards (9) Searches (10) Visualizations (40)

Select All [Delete](#) [Export](#)

- Metricbeat - Apache HTTPD server status
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- Metricbeat-filesystem
- Metricbeat-memory
- Metricbeat-network
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