



MAKE SENSE OF YOUR (BIG) DATA!

David Pilato
Technical advocate

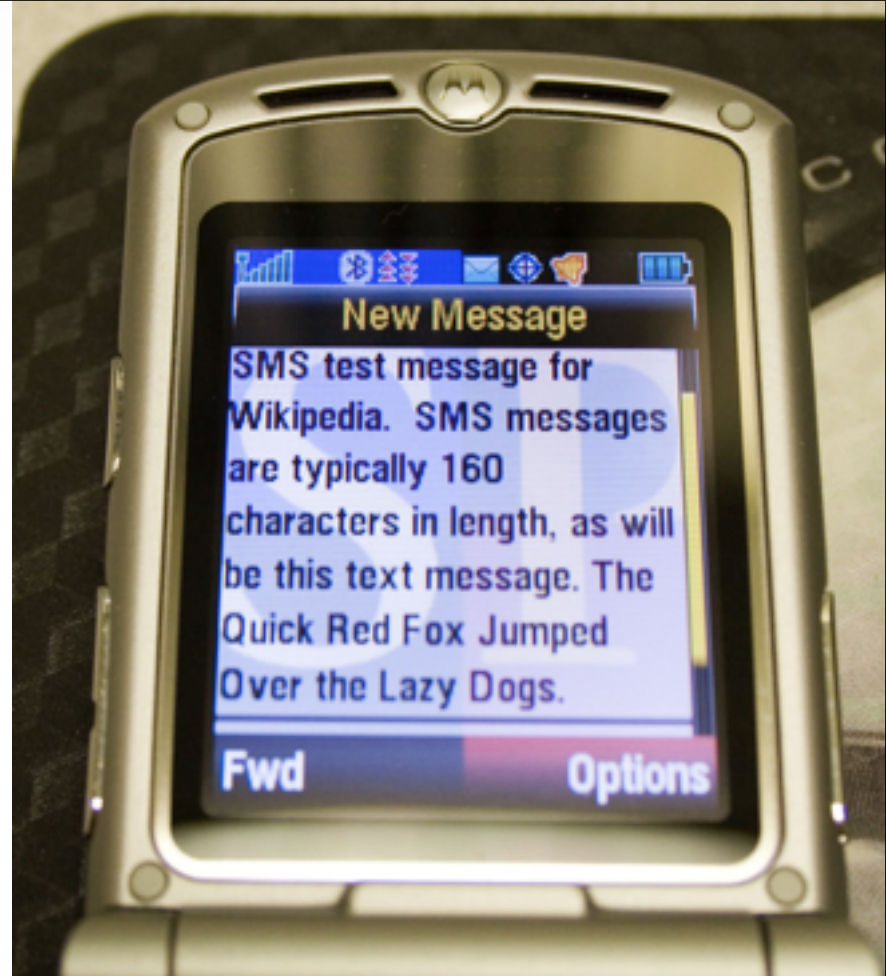


elasticsearch.
@dadoonet





data ?





```
{
  "created_at": "Tue Mar 04 14:50:37 +0000 2014",
  "id": 440861879158988800,
  "text": "Waiting for @elasticsearch and @dadoonet \"Make sense of your (BIG) data!\" at #Cloud Conference in #Turin! http://t.co/tDfK3ABrKk",
  "user": {
    "screen_name": "_CloudConf_",
    "location": "Torino",
    "description": "Prima grande conferenza italiana sul Cloud Computing: 3 Aprile 2014 - Torino",
    "followers_count": 123,
    "statuses_count": 267,
    "lang": "it",
  },
  "retweet_count": 7,
  "favorite_count": 0,
  "entities": {
    "user_mentions": [
      {
        "screen_name": "elasticsearch",
        "name": "elasticsearch"
      },
      {
        "screen_name": "dadoonet",
        "name": "David Pilato"
      }
    ]
  },
  "lang": "en"
}
```



DEEZER

Découvrir Deezer

«

▶

»

🔊

00:00

Busy Earnin' - Jungle

À écouter

Explorer

Top Écoutes

Radios

APPLICATIONS

Découvrez nos apps

Shuffler.fm

BIBLIOTHÈQUE

David Pilato

S'abonner

Cours de cœur

▶

Harder

Daft Punk | Dur

Partager

Ce titre est prése



Discovery
par Daft Punk

```
{
  "id": "3135556",
  "readable": true,
  "title": "Harder Better Faster Stronger",
  "isrc": "GBDUM0000059",
  "link": "http://www.deezer.com/track/3135556",
  "duration": "225",
  "track_position": 4,
  "disk_number": 1,
  "rank": "783236",
  "explicit_lyrics": false,
  "preview": "http://cdn-preview-5.deezer.com/stream/51afcde9f56a132096c0496cc95eb24b-3.mp3",
  "bpm": 123.5,
  "gain": -6.48,
  "artist": {
    "id": "27",
    "name": "Daft Punk",
    "link": "http://www.deezer.com/artist/27",
    "picture": "https://api.deezer.com/artist/27/image",
    "radio": true,
    "type": "artist"
  },
  "album": {
    "id": "302127",
    "title": "Discovery",
    "link": "http://www.deezer.com/album/302127",
    "cover": "https://api.deezer.com/album/302127/image",
    "release_date": "2005-01-24",
    "type": "album"
  },
  "type": "track"
}
```






By CAPTAIN FREDERICK MARRYAT

"Very likely it does," replied the boatswain. "Listeners hear no good of themselves."

"It happens that gentlemen can't converse without being watched," continued Mr. Easthupp, pulling up his shirt-collar."

"It is not the first time you have thought proper to make very offensive remarks, Mr. Biggs; and as you appear to consider yourself ill-treated in the affair of the trousers, for I tell you at once that it was I who brought them on board, I can only say," continued our hero, with a very polite bow, "that I shall be most happy to give you satisfaction."

BIG data ?



DevOps Borat
@DEVOPS_BORAT



Big Data is any thing which is crash Excel.

6:25 PM - 8 Jan 2013

2,027 RETWEETS **454** FAVORITES



The production of data is expanding at an astonishing pace. Experts now point to a 4300% increase in annual data generation by 2020. Drivers include the switch from analog to digital technologies and the rapid increase in data generation by individuals and corporations alike.

Size of Total Data
Enterprise Managed Data

Enterprise Created Data

2012: CUSTOMERS WILL START STORING 1 EB OF INFORMATION.



2020: MORE THAN 1/3 OF THE DATA PRODUCED WILL LIVE IN OR PASS THROUGH THE CLOUD.

35.000.000.000.000.000 mb

Source: http://www.csc.com/insights/flxwd/78931-big_data_just_beginning_to_explode



Source: <http://www.thebigdatasightgroup.com/site/article/big-data-infographic>



search = like % ?

```
SELECT
  doc.*, country.*
FROM
  doc, country
WHERE
  doc.country_code = country.code AND
  doc.date_doc > to_date('2011-12', 'yyyy-mm') AND
  doc.date_doc < to_date('2012-01', 'yyyy-mm') AND
  lower(country.name) = 'france' AND
  lower(doc.comment) LIKE '%product%' AND
  lower(doc.comment) LIKE '%david%';
```

Search engine ?

1964

Alphabetical **INDEX**

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plug & play

scalable

elasticsearch?

Apache 2 license

REST/JSON

Lucene

Start...

```
$ wget https://download.elasticsearch.org/elasticsearch/  
elasticsearch/elasticsearch-1.1.0.tar.gz  
$ tar -xf elasticsearch-1.1.0.tar.gz  
$ ./elasticsearch-1.1.0/bin/elasticsearch  
[INFO ][node           ][Ghost Maker] {1.1.0}[5645]: initializing
```

... and play!

```
$ curl -XPUT localhost:9200/sessions/session/1 -d '{
  "title"      : "Elasticsearch",
  "subtitle"   : "Make sense of your (BIG) data !",
  "date"       : "2014-04-03T10:30:00",
  "tags"       : [ "elasticsearch", "cloudconf", "bigdata" ],
  "speaker"    : [{
    "first_name" : "David",
    "last_name"  : "Pilato"
  }]
}'
```

Search!

```
$ curl http://localhost:9200/sessions/session/_search -d'
{
  "query": {
    "multi_match": {
      "query": "elasticsearch cloudconf david",
      "fields": [ "title^3", "tags^2", "speaker.first_name" ]
    }
  },
  "post_filter": {
    "range": {
      "date": {
        "from": "2014-04",
        "to": "2014-05"
      }
    }
  }
}
```

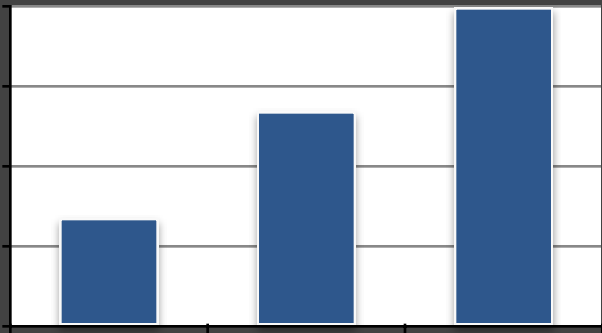
Compute?

<i>B</i>	Back-Up Lights.....	9
	Battery.....	70, 97
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	Body Insulation.....	87
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	Brake Lining.....	77, 102
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	Brakes, Parking.....	76, 77, 102
	Brakes, Power.....	76, 77, 102
	Bucket Seat Console.....	25
	Bucket Seats.....	35-39, 45
	Bumpers.....	9

Compute!

```
$ curl http://localhost:9200/sessions/session/_search -d'
```

```
{  
  "query": { ... },  
  "aggs": {  
    "by_date": {  
      "date_histogram": {  
        "field": "date",  
        "interval": "day",  
        "format": "dd/MM/yyyy"  
      }  
    }  
  }  
'
```



```
"by_date": [  
  { "key_as_string": "03/04/2014", "doc_count": 1 },  
  { "key_as_string": "12/04/2014", "doc_count": 2 },  
  { "key_as_string": "16/04/2014", "doc_count": 3 }  
]
```



Let's make sense of ...

- logs
- twitter
- github
- marketing data
- ...
- your data
- your big data

Let's make sense of ...

- logs
- twitter
- github
- **marketing data**
- ...
- your data
- your big data

```
{  
  "name": "Pilato David",  
  "dateOfBirth": "1971-12-26",  
  "gender": "male",  
  "children": 3,  
  "marketing": {  
    "fashion": 334,  
    "music": 3363,  
    "hifi": 2351  
  },  
  "address": {  
    "country": "France",  
    "city": "Paris",  
    "location": [2.332395, 48.861871]  
  }  
}
```

démo

MAKE SENSE OF YOUR (BIG) DATA!

let's inject some marketing documents...

ELASTICSEARCH

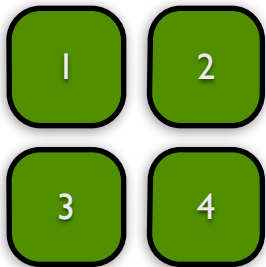
elastic? distributed?



Distributed indices

node 1

orders



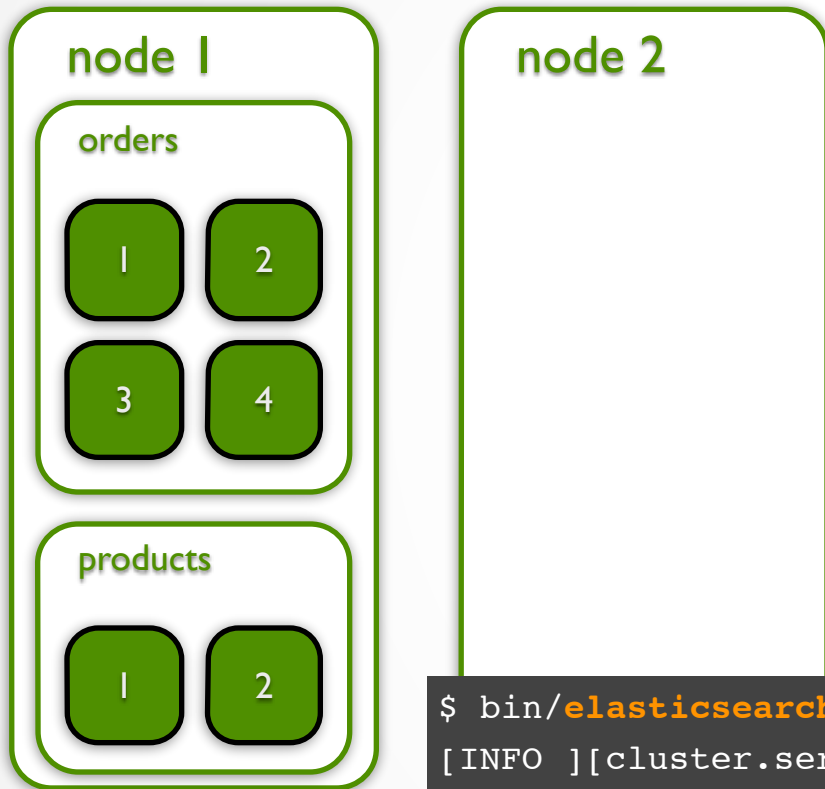
products



```
$ curl -XPUT localhost:9200/orders -d '{  
  "settings.index.number_of_shards" : 4,  
  "settings.index.number_of_replicas" : 1  
}'
```

```
$ curl -XPUT localhost:9200/products -d '{  
  "settings.index.number_of_shards" : 2,  
  "settings.index.number_of_replicas" : 0  
}'
```

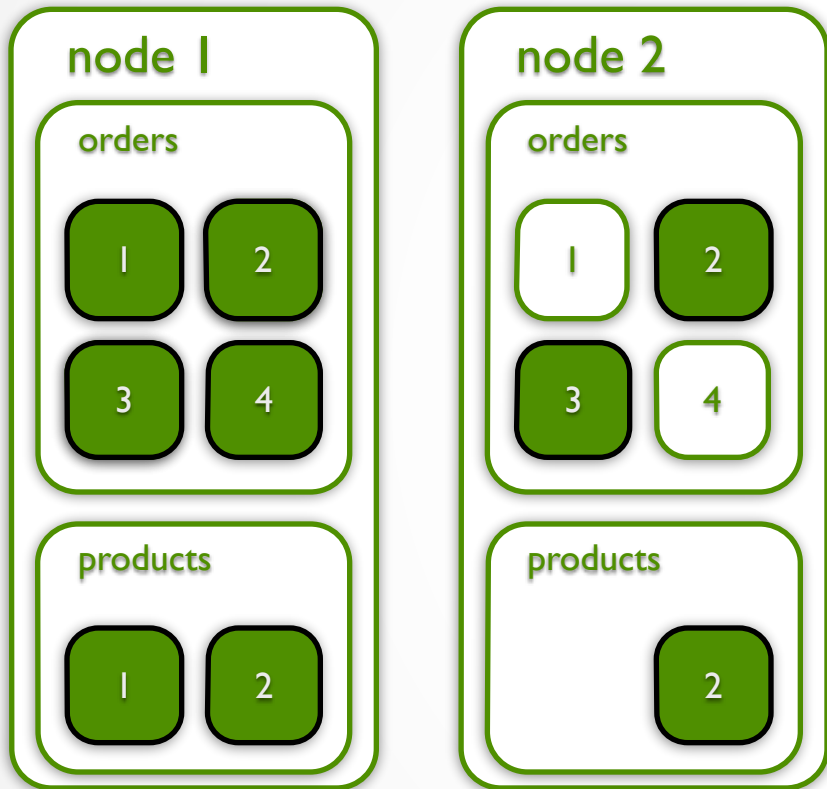
Distributed indices



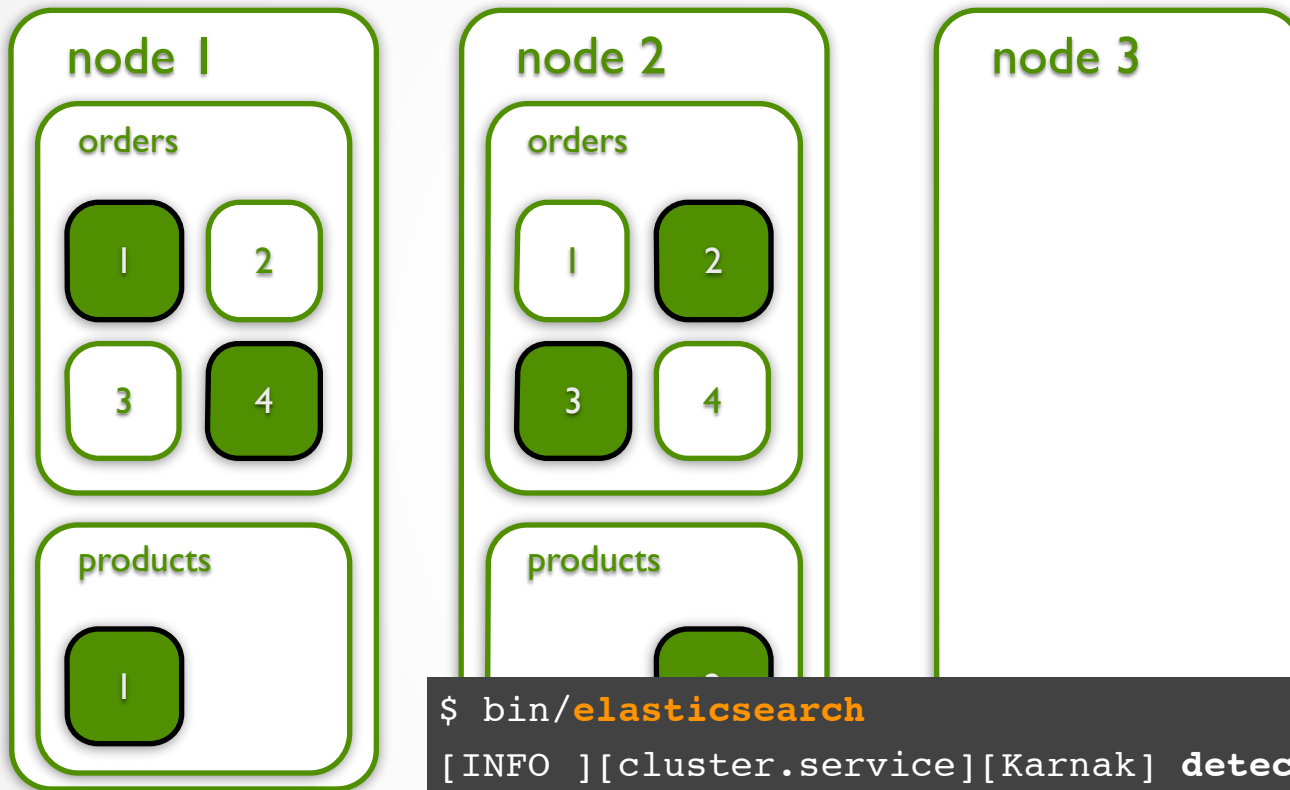
```
$ bin/elasticsearch
```

```
[INFO ][cluster.service][Armageddon] detected_master [Ghost Maker]
```

Distributed indices



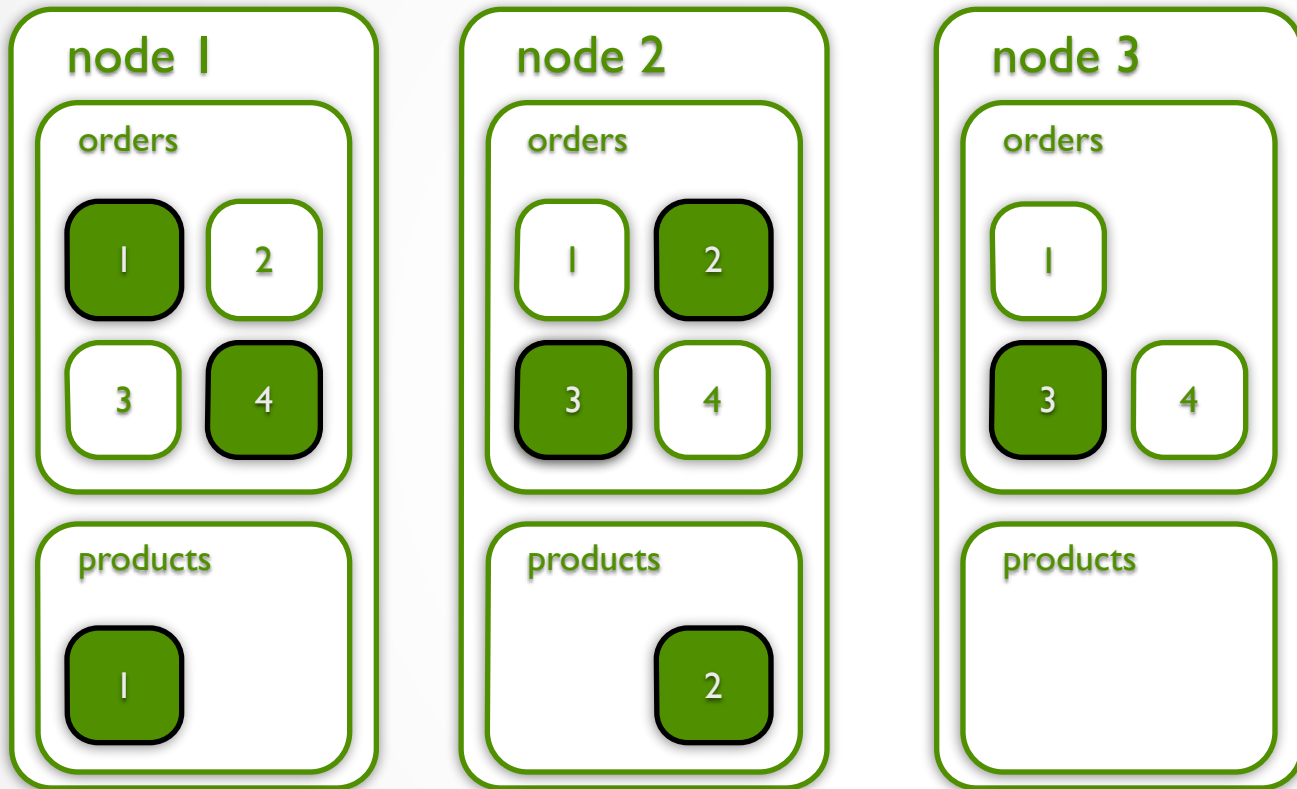
Distributed indices



```
$ bin/elasticsearch
```

```
[INFO ][cluster.service][Karnak] detected_master [Ghost Maker]
```

Distributed indices





elasticsearch.

elasticsearch



kibana

logstash



Marvel

kibana





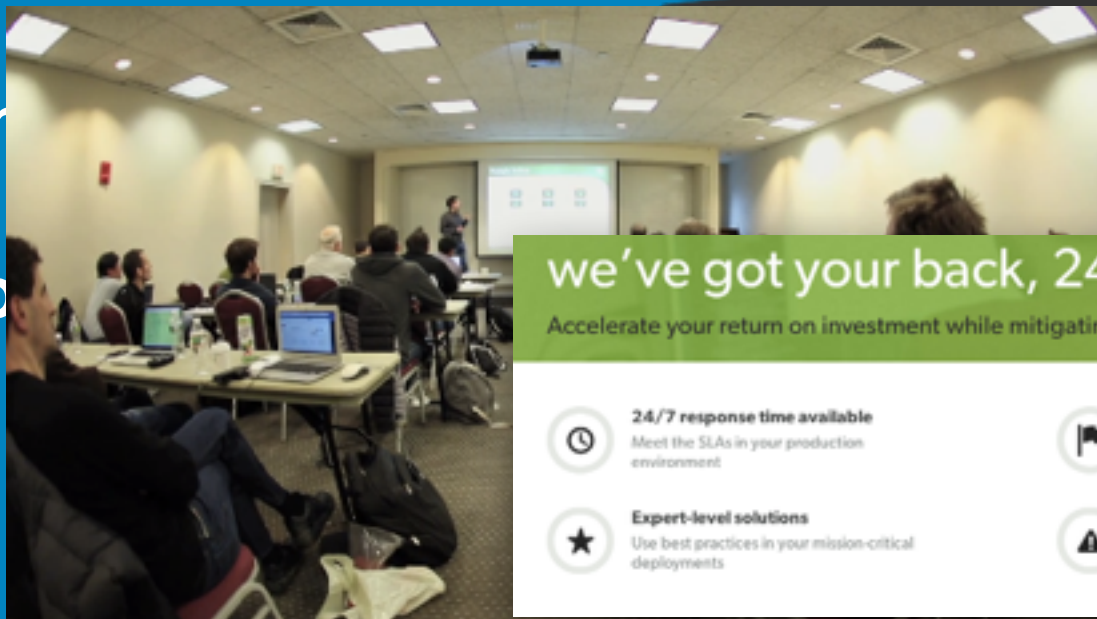
elasticsearch.

Training (public and on-site)

Development

Production

Marvel



we've got your back, 24/7

Accelerate your return on investment while mitigating your risk



24/7 response time available

Meet the SLAs in your production environment



Expert-level solutions

Use best practices in your mission-critical deployments



Support from the core team that built Elasticsearch, Kibana, and Logstash

Get access to the people who wrote the code



Hotfixes and emergency patches

Get immediate solutions to your issues



foursquare®



NETFLIX

DEEZER





Cloud Conf 2014

questions ?

@dadoonet

we are hiring! jobs@elasticsearch.com