

Search made easy for web developers



elasticsearch.

Alexander Reelsen

@spinscale

alexander@reelsen.net

# Search? What the hell?!

- Search? What is so important about search?
  - No search, no google, no bing, no twitter, no amazon, no ebay
- Requirements for a search engine
  - Finds the "right" stuff
  - Scalability? Performance?
  - [Google commerce search](#), [Sphinx](#), [SearchBlox](#), [Solr](#), [elasticsearch](#)
- Elasticsearch as search solution
- Use cases of elasticsearch @ Lusini.de

# About me - Alexander Reelsen

- Studied information systems
- 10 years linux system engineering, converted to software engineering
- Web framework enthusiast, fed up with complex java environment for simple webapps
- Other interests: Scaling web architectures, Web 2.0 (nosql, search)
- Author of [Play framework cookbook](#)
- Working at [Lusini GmbH](#), building an ecommerce platform
- Streetball/Basketball

# Search is more than text search

- Search by text: **bmw**
- Search by date: **21.11.2011**
- Search in ranges:
  - **from 20 EUR to 30 EUR**
  - **from 20.11.2011 to 22.11.2011**
- Faceted search - aggregation of results

# Why do you need an own search engine?

- Because you can!
- Your data, your search
- Customize your search
- Customize your data
- Best support and in-sourced know-how
- No blackbox

# elasticsearch - Search for web developers

- Java, based on Apache Lucene
- Scales out
- Every interaction can be done via HTTP & JSON
  - Creating/updating/deleting documents into an index
  - Creating/updating/deleting indexes
  - Search queries
- References: Mozilla, StumbleUpon, Sony, Infochimps, Assistly

# Data representation in JSON

```
{  
  "id": "1",  
  "name" : "MacBook Air",  
  "price": 1099,  
  "descr" : "Some lengthy never-read description",  
  "attributes" : {  
    "color" : "silver",  
    "display" : 13.3,  
    "ram" : 4  
  }  
}
```

# Installation needs two minutes

- Download

<https://github.com/downloads/elasticsearch/elasticsearch/elasticsearch-0.18.2.zip>

- Unzip

```
unzip elasticsearch-0.18.2.zip
```

- Run

```
elasticsearch/bin/elasticsearch
```

- Check by connecting with your browser to <http://localhost:9000>

# Index your product

```
curl -X PUT localhost:9200/products/product/1 -d '{
  "id": "1",
  "name" : "MacBook Air",
  "price": 1099,
  "descr" : "Some lengthy never-read description",
  "attributes" : {
    "color" : "silver",
    "display" : 13.3,
    "ram" : 4
  }
}'
```

# JSON as query language - Normal query

`http://localhost:9200/products/product/_search`

- `{ "query" : { "term" : { "name" : "MacBook Air" } } }`

- `{ "query" : { "prefix" : { "name" : "Mac" } } }`

- Documents can also be read via their id:

`http://localhost:9200/products/product/1`

Queries can be issued via [curl](#) or via [HttpRequester](#)

# JSON as query language - Range query

Useful for price, date and string ranges

```
{ "query" : { "range" : {  
  "price" : { "from" : 1000, "to": 2000 }  
} } }
```

# JSON as query language - Pagination & Sorting

- Pagination:

```
{ from: 0 , size: 10 ,  
  "query" : { "term" : { "name": "MacBook Air" } } }
```

- Sorting:

```
{ "sort" : { "name" : { "order": "asc" } } ,  
  "query" : { "term" : { "name": "MacBook Air" } } }
```

## Far more features!

- Faceted queries, sorting, highlighting, filters
- Mapping/Analyzers
- Geolocation support
- Boosting: Applying different weights to documents or fields
- Custom scripting (this is where your own integration beats out all others)
- Rivers: Push/pull data from arbitrary sources

# elasticsearch @ Lusini.de

Powers product search - over 220.000 documents

- Search by name
- Search by LUCID
- Search as you type
- Facetting (filtering by price, color, size, material, shape, series)
- Grouping



% Deals



Warenkorb (0 Artikel)

Küche &amp; Kühlraum

Theke &amp; Gastraum

Buffet &amp; Bankett

Berufsbekleidung

Zimmer &amp; Rezeption

Bad &amp; WC

Garten &amp; Terrasse

Mehr

Startseite &gt; Suche &gt; "kochjacke"

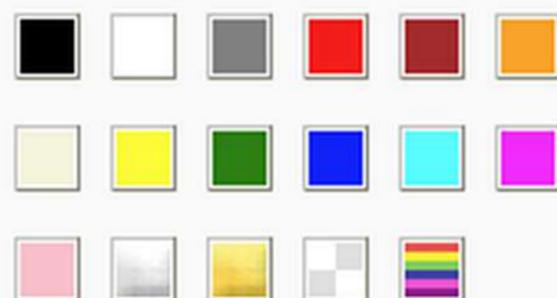
## Kategorie

- > Küche & Kühlraum
- > Theke & Gastraum
- > Buffet & Bankett
- > Berufsbekleidung
- > Zimmer & Rezeption
- > Bad & WC
- > Garten & Terrasse
- > Lager & Putzraum
- > Büro & Wartung

## Preis

EUR  bis EUR 

## Farbe



1.920 Artikel gefunden.

Seite



1

2

3

4

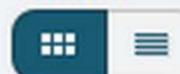
5

6

7

...

Ansicht



Sortieren nach

Relevanz



Kochjacke Gino

Verfügbar in verschiedenen

29,99 EUR



Kochjacke Phil

Verfügbar in verschiedenen

23,49 EUR



Kochjacke Phil

Verfügbar in verschiedenen

23,49 EUR



Kochjacke Alois

Verfügbar in verschiedenen

36,50 EUR





% Deals



Warenkorb (0 Artikel)

Küche &amp; Kühlraum

Theke &amp; Gastraum

Buffet &amp; Bankett

Berufsbekleidung

Zimmer &amp; Rezeption

Bad &amp; WC

Garten &amp; Terrasse

Mehr

Startseite &gt; Suche &gt; "JBEV1EO4BI12"

## Kategorie

&gt; Berufsbekleidung

## Preis

EUR  bis EUR  >

## Farbe



## Serie

 Kochjacke Gino

## Größe

 66 64 62 60 58 56

3 Artikel gefunden.

Seite



1

Ansicht



Sortieren nach

Relevanz



## Kochjacke Gino

Verfügbar in verschiedenen

**29,99 EUR**

## Kochjacke Gino

Verfügbar in verschiedenen

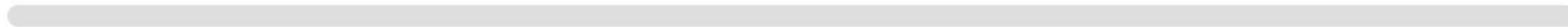
**12,99 EUR**

## Kochjacke Gino

Verfügbar in verschiedenen

**29,99 EUR**

# Live Demo



# Questions?

