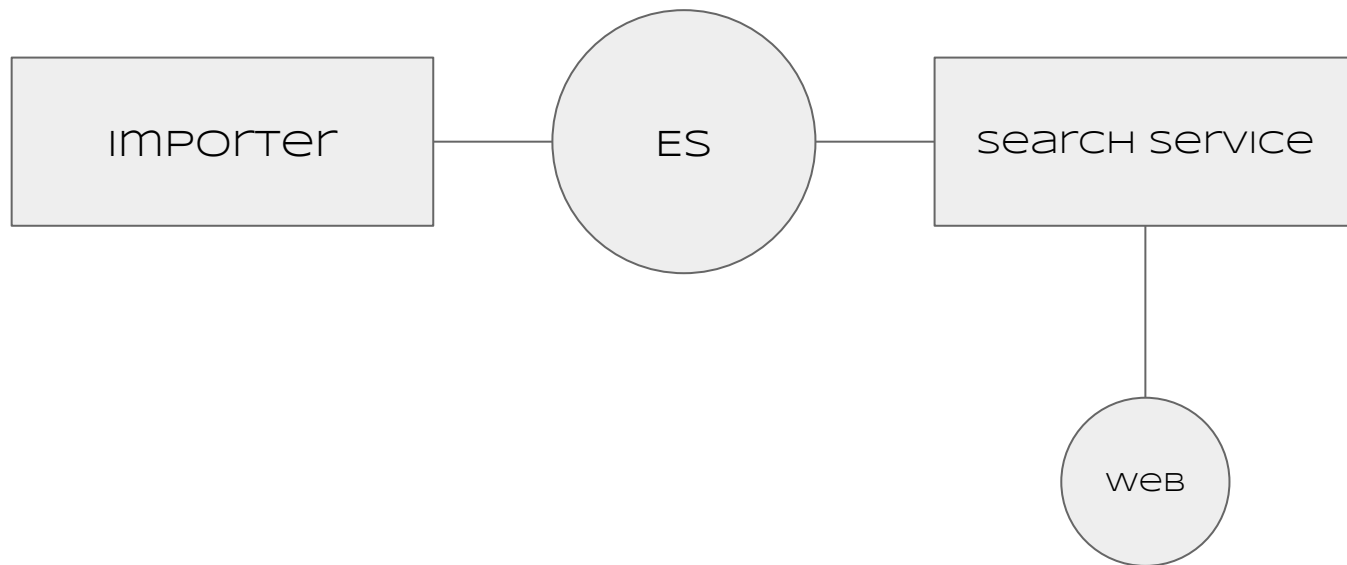


SIMPLE SEARCH SERVICE WITH ELASTICSEARCH AND RUST

rust_id_meetup_1

SEARCH SERVICE IMPLEMENTATION



ELASTICSEARCH

a search engine based on Lucene, with full-text search capability and good analytic engine. Have good performance scaling capability (sharding, replica, clustering).



DATA REPRESENTATION

Index : Like DB in sql

Type : Like table in sql

Document : JSON, Immutable

Mapping : Index Type structure



OPERATION

Using rest API

Insert : PUT, POST (bulk operation)

Update : POST

Delete : delete

Get : GET, POST (search operation)

INSERT, GET & SEARCH

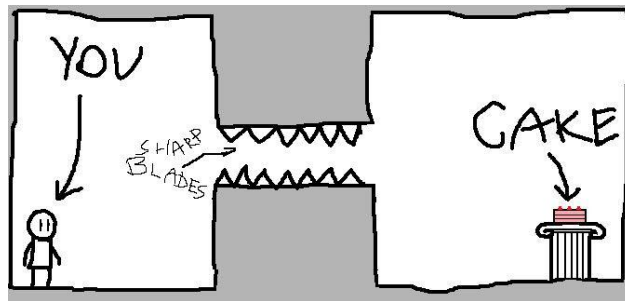
Insert : address/default/:id

```
{  
  "Name"    : "gian",  
  "Address" : "asa"  
}
```

Get : address/default/:id

Search : address/_search

```
{  
  "Query": {  
    "Match" : {  
      "Name" : "gian"  
    }  
  }  
}
```



BOOL QUERY & AGGREGATION

```
{
  "query": {
    "bool": {
      "must": [
        {
          "match": {
            "name": "gio"
          }
        }
      ]
    }
  }
}
```

```
{
  "query": {
    "match": {
      "address": "malang"
    }
  },
  "aggs": {
    "name_count": {
      "terms": {
        "field": "name"
      }
    }
  }
}
```



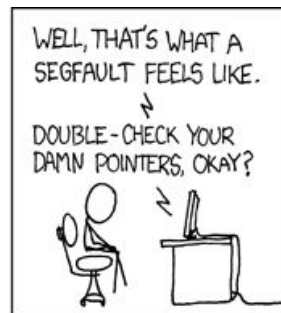
RUST LANG



SYSTEMS PROGRAMMING LANGUAGE THAT
RUNS BLAZINGLY FAST, PREVENTS SEGFAULTS,
AND GUARANTEES THREAD SAFETY.



AND SUDDENLY YOU
MISSTEP, STUMBLE,
AND JOLT AWAKE?



RS_ES

<https://github.com/benashford/rs-es>

Almost complete implementation



RUST LANG + ELASTICSEARCH = FLYING?



LESSON LEARNED

Elasticsearch

Fast search and analytic engine

Rust Lang

Fast runtime, difficult to master,
very rewarding at the end

Rust Lang + Elasticsearch

Immature Lib

Difficult Deserialization