



# Elasticsearch Basics

Improving

# AGENDA



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## Concepts

- Cluster
- Nodes
- Indexes
  - Settings
  - Mapping
- Templates



## Deployment Options

- On Premises
- Cloud

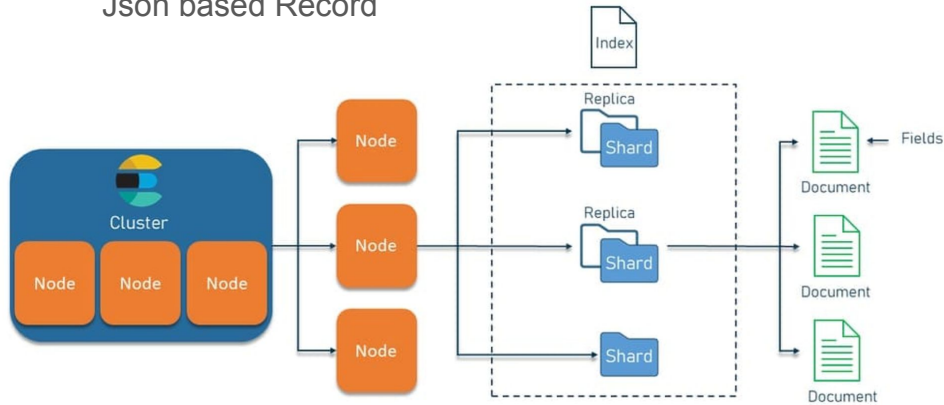


## Hands-on

- Kibana
- API
- Index Creation
- Search Requests

# CONCEPTS

- Cluster  
Group of Nodes
- Nodes  
Servers running a specific task  
Master  
Data ( Data Tiers )  
ML Nodes
- Index  
Logical Structure for Data Storage. Same as Table
- Document  
Json based Record



# DEPLOYMENT

- On Premises
  - Bare Metal  
<https://www.elastic.co/downloads/elasticsearch>
  - Docker  
<https://www.docker.elastic.co/>  
<https://www.elastic.co/guide/en/elasticsearch/reference/current/docker.html>
  - Kubernetes
- Cloud  
<https://cloud.elastic.co/registration?elektra=cloud-trial&storm=hero>
  - Elastic Cloud
  - AWS
  - Azure
  - Google

# HANDS-ON

- Kibana
  - <https://www.elastic.co/kibana/features>
  - Cluster Management
  - Data Visualization
  - Dev Tools
- API
  - CURL
  - Elastic Clients
  - <https://www.elastic.co/guide/en/elasticsearch/client/index.html>

# ELASTIC CLUSTER

- Cloud ID  
Improving:dXMtZWFzdC0xLmF3cy5mb3VuZC5pbzo0NDMkMDJiNGE2MTA3ODA3NGJiOTk2YWQyMzU1ODkxZmNjMmQkNmZiMGM3OTE0YTRkNGY4NWEyYmE0NzUyNjNjMjQ0MDc=
- Cluster URL  
<https://improving.es.us-east-1.aws.found.io>
- Kibana URL  
<https://improving.kb.us-east-1.aws.found.io:9243>
- Credentials  
Username : **improving\_user**  
Password : **Elastic@01**

# SAMPLE DATA

- E-Commerce
- Flight Data

# SIMPLE QUERY

## TOKEN

GET kibana\_sample\_data\_flights/\_search

```
{
  "query": {
    "match": {
      "Carrier": "Kibana Airlines"
    }
  }
}
```

## Range

GET kibana\_sample\_data\_flights/\_search

```
{
  "query": {
    "range": {
      "FlightDelayMin": {
        "gte": 300
      }
    }
  }
}
```



# COMPOUND QUERY

## TOKEN

GET kibana\_sample\_data\_flights/\_search

```
{
  "query": {
    "match": {
      "Carrier": "Kibana Airlines"
    }
  }
}
```

## Range

GET kibana\_sample\_data\_flights/\_search

```
{
  "query": {
    "range": {
      "FlightDelayMin": {
        "gte": 300
      }
    }
  }
}
```

# SEARCH DOCUMENTATION

## LINKS

<https://www.elastic.co/guide/en/elasticsearch/reference/current/search-with-elasticsearch.html>

<https://www.elastic.co/guide/en/elasticsearch/reference/current/query-dsl.html>

### Text Search

<https://www.elastic.co/guide/en/elasticsearch/reference/current/term-level-queries.html>

<https://www.elastic.co/guide/en/elasticsearch/reference/current/search.html>

<https://www.elastic.co/guide/en/elasticsearch/reference/current/search-search.html>

### Text Analysis

<https://www.elastic.co/guide/en/elasticsearch/reference/current/analysis.html>

### Aggregations

<https://www.elastic.co/guide/en/elasticsearch/reference/current/search-aggregations.html>

### Index Mappings

<https://www.elastic.co/guide/en/elasticsearch/reference/current/mapping.html>

<https://www.elastic.co/guide/en/elasticsearch/reference/current/mapping-types.html>



# Thank You

The background is a solid dark blue. It features several abstract geometric elements: a large, semi-transparent light blue circle in the top left; a solid bright blue circle in the top center; two small dark blue dots in the top right; two horizontal dark blue bars in the top right; two horizontal dark blue bars in the bottom left; and a large, semi-transparent light blue circle in the bottom right.

# **Elasticsearch: You Know, for Search**