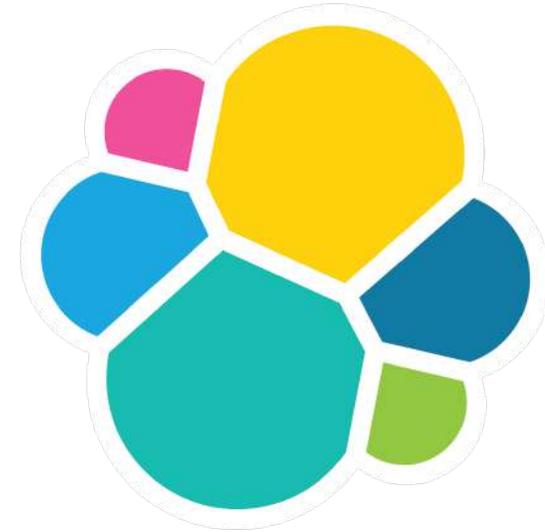


# Introduction into Elastic App Search

Alexander Reelsen

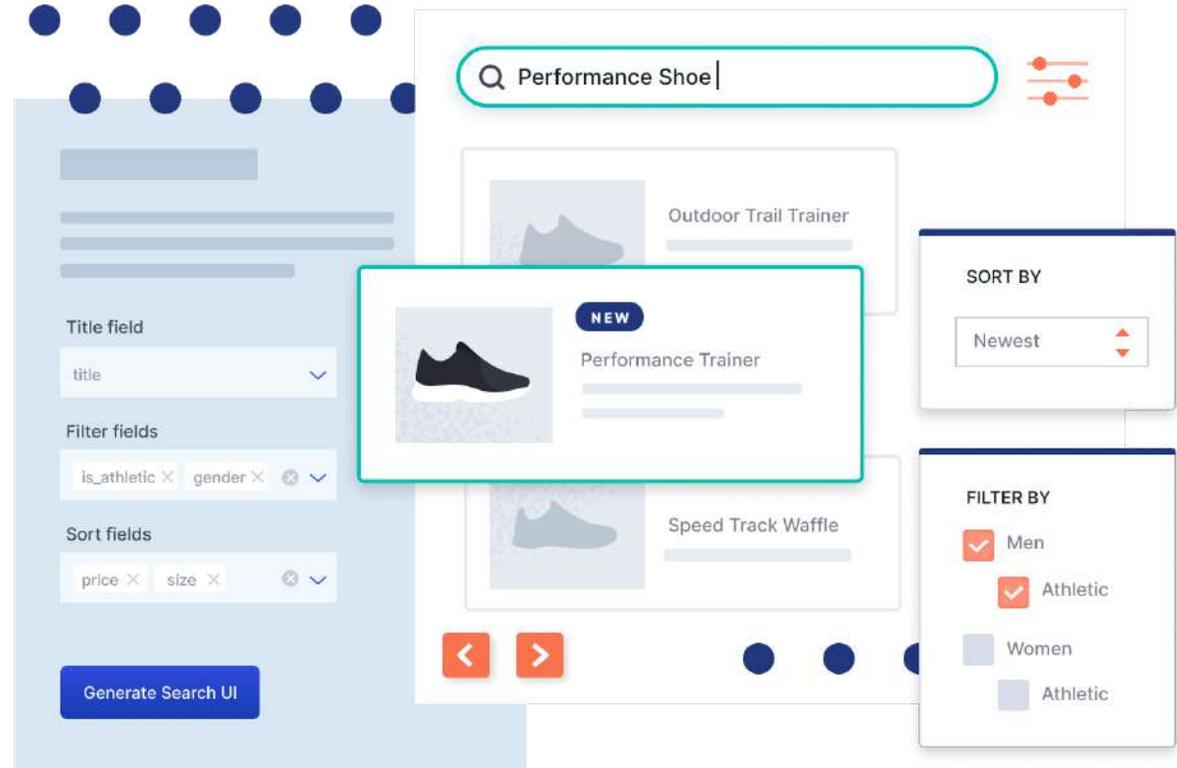
Community Advocate

[alex@elastic.co](mailto:alex@elastic.co) | [@spinscale](https://twitter.com/spinscale)



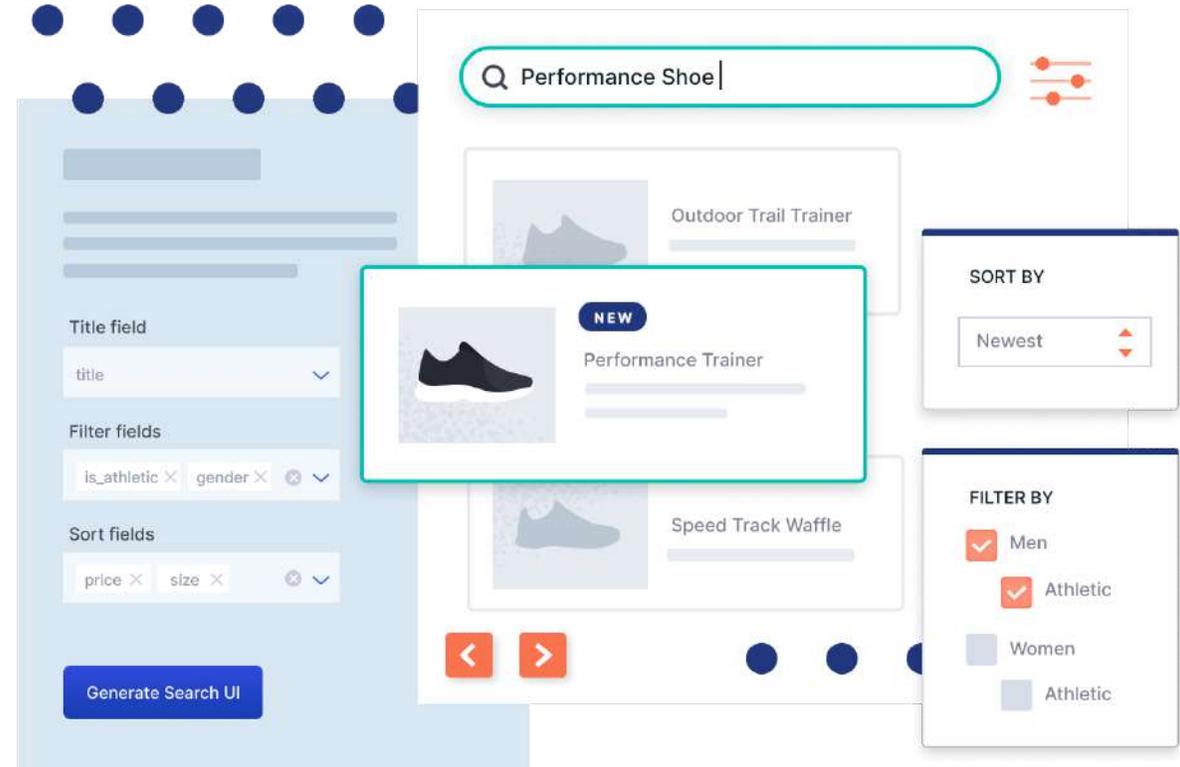
elastic

# What is App Search?



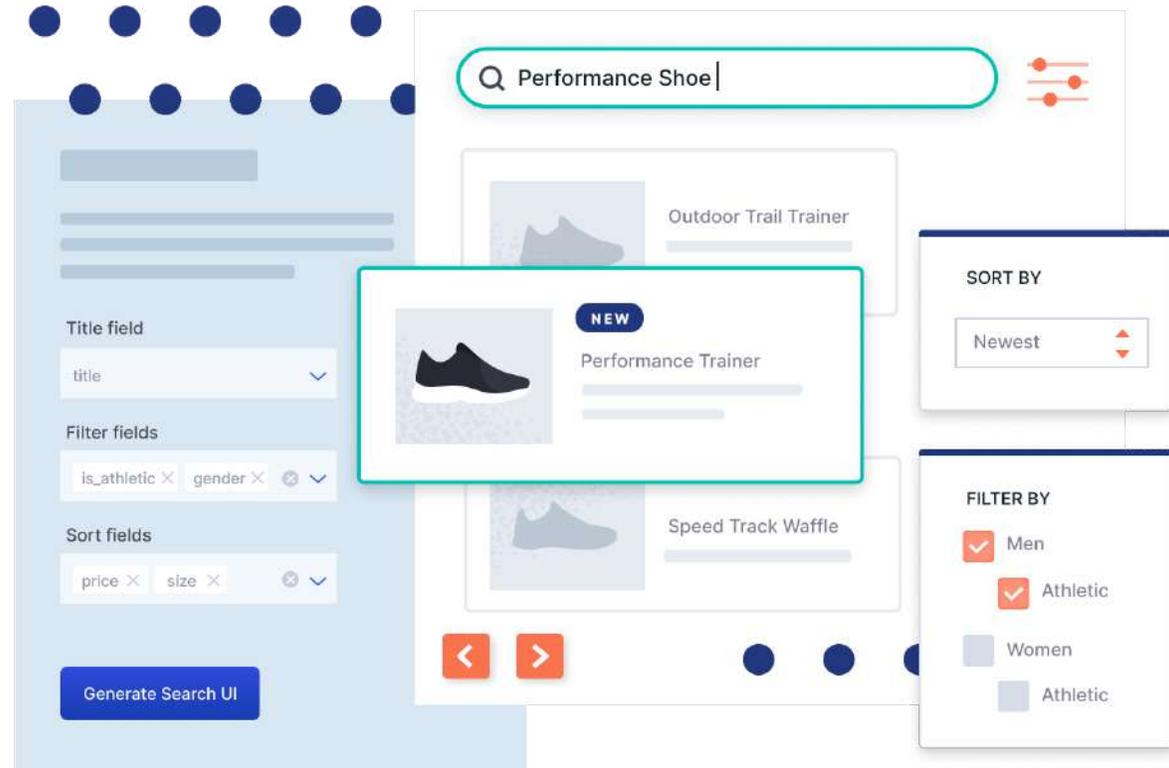
# App Search?

- Synonym management
- Relevance tuning
- Curated Results
- Facets
- Easy UI Building
- API driven indexing



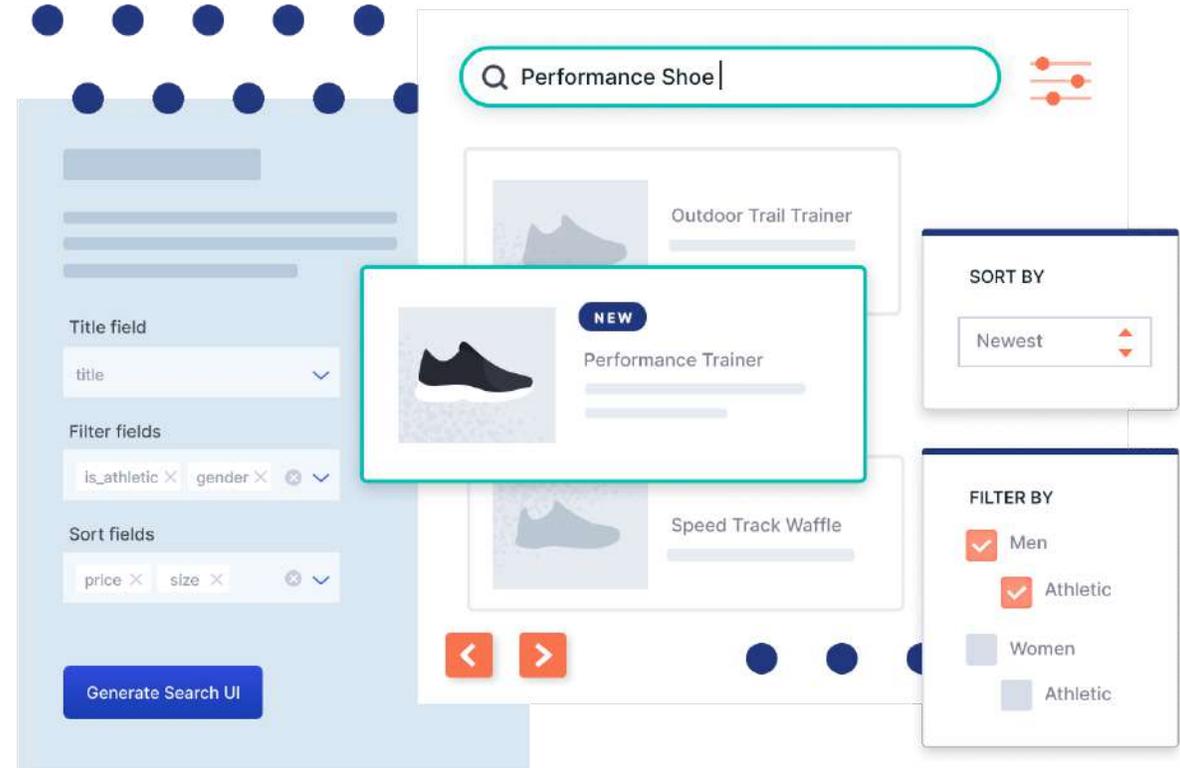
# App Search?

- Language Optimization
- Query suggestions
- Result suggestions
- API Logs
- Analytics: Queries, clicks, counts



# Deployment

- Run locally
- Elastic Cloud



# Create deployment

## 1 Name your deployment

Give your deployment a name

## 2 Select a cloud platform

Pick your cloud and let us handle the rest. No additional accounts required.



## 3 Select a region

us-central1 (Iowa)

us-west1 (Oregon)

eu-west-1 (Belgium)

eu-west-3 (Frankfurt)

asia-northeast1 (Tokyo)

australia-southeast1 (Sydney)

us-east-4 (N. Virginia)

eu-west-2 (London)

northamerica-northeast1 (Montreal)

asia-south1 (Mumbai)

asia-southeast1 (Singapore)

southamerica-east1 (Sao Paulo)

us-east-1 (South Carolina)

asia-east-1 (Taiwan)

eu-north-1 (Finland)

eu-west-4 (Netherlands)

#### 4 Set up your deployment

Elastic Stack version  
7.8.0 [Edit](#)

Select a deployment to restore from one of its snapshots

##### Monitoring

Enable monitoring by shipping metrics to a deployment

##### Security

Enable traffic filtering

#### 5 Optimize your deployment

##### I/O Optimized

**Recommended**

Use for search and general all-purpose workloads. Includes a balance of compute, memory, and storage.

[Default specs](#)



##### Compute Optimized

Run CPU-intensive workloads or run smaller workloads cost-effectively when you need less memory and storage.

[Default specs](#)



##### Memory Optimized

Perform memory-intensive operations efficiently, including workloads with frequent aggregations.

[Default specs](#)



##### Hot-Warm Architecture

Use for time-series analytics and logging workloads that benefit from automatic index curation.

[Default specs](#)



##### Cross Cluster Search

Use to search data across one or more associated deployments

[Default specs](#)



##### Elastic Enterprise Search

Create search experiences with a refined set of APIs and tools.

[Default specs](#)



Elastic Cloud supports many more options to cater to your specific use case such as hot-warm architecture optimized for logging, compute-focused setup optimized for analytics etc. [Learn more](#)

#### Deployment pricing

Hourly rate

\$0.4344

[Create deployment](#)

[Customize deployment](#)

Equivalent API request



# Synonym Management

### Manage Synonym Set

mountain	×
cliff	×
peak	×
summit	×
	×

Add Value

Delete Save Cancel

# Relevance Tuning

- Field weight
- Boost, also based on field values (think recency, proximity, rating boosts)

# Relevance Tuning



national-park-demo 

-  Overview
-  Analytics
-  Query Tester
-  Reference UI

#### MANAGE

-  Documents
-  Schema
-  API Logs

#### SEARCH SETTINGS

-  Synonyms
-  Curations
-  **Relevance Tuning**

#### ACCESS

-  Credentials

## Relevance Tuning

Set field weights and customize boosting.

### Manage Fields

**description**

TEXT

 1

**nps\_link**

TEXT

 1

**states**

TEXT

 1

**title**

TEXT

 1

**visitors**

NUMBER

 0

**world\_heritage\_site**

TEXT

 1

**location**

GEOLOCATION

Restore Defaults

Save

# App Search Clients

- JavaScript/Node
- PHP
- Python
- Ruby
- Search UI

# Indexing data

- Requires an **Engine** in App Search
- No schema definition required, everything is text by default
- Arbitrary JSON can be sent
- Field `id` is unique identifier

# Indexing data

```
curl -X POST 'https://$HOST/api/as/v1/engines/$ENGINE_NAME/documents' \  
-H 'Content-Type: application/json' \  
-H 'Authorization: Bearer [PRIVATE_API_KEY]' \  
-d '[  
  {  
    "id": "first_document",  
    "description": "Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor...",  
    "title": "My first title",  
    "created_at": "2020-10-10T12:34:56Z",  
    "size" : 25  
  },  
  {  
    "id": "second_document",  
    "description": "Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor...",  
    "title": "My second title",  
    "created_at": "2020-10-10T00:00:12Z",  
    "size" : 67  
  }  
]'
```

# Need help?

Skip the support line and search for your issue in our knowledgebase.



## Can't find what you're looking for?

We're here to help. Get in touch and we'll get back to you as soon as possible. [Contact Support →](#)

# Knowledge Base Sample App

- Two components: web frontend, data importer
- Two engines: `elastic-co-discuss`, `elastic-co-docs`

Data Importer

Elastic Cloud

Web Frontend



# Clone Repository

```
git clone https://github.com/elastic/app-search-kb-demo
cd app-search-kb-demo
# this will take a bit...
docker build --target frontend -t app-search-kb-demo/frontend .
docker build --target dataimport -t app-search-kb-demo/dataimport .
```

# Configure credentials

```
export AS_BASE_URL="https://fc12fb2325dd4945a0095d60577bfa00.app-search.us-east-1.aws.found.io"  
export AS_PRIVATE_API_KEY="private-2mfghuirex81t5346879aw3n"  
export AS_SEARCH_API_KEY="search-eirws4ynagfdhgeep63ywscd"
```

# Import Data into Elastic Cloud

```
export AS_BASE_URL="https://fc12fb2325dd4945a0095d60577bfa00.app-search.us-east-1.aws.found.io"
export AS_PRIVATE_API_KEY="private-2mfghuirex81t5346879aw3n"
export AS_SEARCH_API_KEY="search-eirws4ynagfdhgeep63ywscd"

# import data into Elastic Cloud, might take a few minutes
docker run --rm --env AS_BASE_URL=$AS_BASE_URL \
  --env AS_PRIVATE_API_KEY=$AS_PRIVATE_API_KEY app-search-kb-demo/dataimport
```

# Start Frontend

```
export AS_BASE_URL="https://fc12fb2325dd4945a0095d60577bfa00.app-search.us-east-1.aws.found.io"
export AS_PRIVATE_API_KEY="private-2mfghuirex81t5346879aw3n"
export AS_SEARCH_API_KEY="search-eirws4ynagfdhgeep63ywscd"

# import data into Elastic Cloud, might take a few minutes
docker run --rm --env AS_BASE_URL=$AS_BASE_URL \
  --env AS_PRIVATE_API_KEY=$AS_PRIVATE_API_KEY app-search-kb-demo/dataimport

# start the frontend
docker run --rm -p 5000:5000 --env AS_BASE_URL=$AS_BASE_URL \
  --env AS_SEARCH_API_KEY=$AS_SEARCH_API_KEY app-search-kb-demo/frontend
```

**Demo**

# Demo Tasks

- Check out frontend
- Relevancy
- Synonyms
- Test UI builder

# Summary

- Frontend: Presentation
- Middleware: Search logic
- Backend: Document actions

## **Next steps**

# App Search Docs



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Docs

[Installation >](#)

## Elastic App Search Documentation

+ App Search Guide: 7.8 (current) ▾

[Installation](#)

[Getting started](#)

[Authentication](#)

[Limits](#)

[Security & Users](#)

+ [Guides](#)

+ [API Reference](#)

[API Logs](#)

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Category	Topics	Latest
<b>Announcements</b> Release and security announcements and other bits about all of our Elastic products that we think will be useful to everyone. ■ Security Announcements ■ Community Ecosystem	454 6 unread	<b>Notes on Using These Forums</b> 2 ■ Meta Elastic Apr 2017
<b>Elastic Stack</b> Elasticsearch, Kibana, Beats, and Logstash - also known as the ELK Stack. Reliably and securely take data from any source, in any format, then search, analyze, and visualize it in real time. Please post your topic under the relevant product category. ■ Elasticsearch 885 unread 49 new ■ Kibana 55 unread 34 new ■ Beats 2 unread 27 new ■ Logstash 30 unread 29 new	438 / week 972 unread 135 new	<b>How to create key value from Nested fields</b> 13 ■ Logstash 1m
<b>Elastic Enterprise Search</b> Easily implement powerful, modern search experiences for your busy team. Quickly add pre-tuned search to your website, app, or workplace. Search it all, simply. ■ App Search 1 new ■ Site Search ■ Workplace Search	3 / week 2 new	<b>Create a new index to store alerts</b> 3 ■ Elasticsearch <code>stack-alerting</code> 4m
<b>Elastic Observability</b> Bring your logs, infrastructure and availability metrics, and APM traces together at scale in a single stack so you can monitor and react to events happening anywhere in your environment. And it's free and open. ■ APM 2 new ■ Logs ■ Metrics ■ Uptime 1 unread 1 new	20 / week 1 unread 3 new	<b>How to use value from elasticsearch index as parameter in ES SQL functions, like DATE_DIFF()</b> 0 ■ Elasticsearch <code>stack-sql</code> 10m
<b>Elastic Security</b> Integrate free and open SIEM, and endpoint, to prevent, detect, and respond to threats. ■ Endpoint Security ■ SIEM 1 unread 2 new	6 / week 1 unread 4 new	<b>NegativeArraySizeException: -1680966849, HostUnreachableError and OOM</b> 0 ■ Logstash 10m
		<b>How to de-duplicate results in Kibana Search</b> 1 ■ Kibana <code>kibana-query-language</code> 15m
		<b>Feature Request: trigger suppression on signal actions</b> 2 ■ Elastic Security 16m
		<b>Rally freezes at the end</b> 1 ■ Elasticsearch <code>rally</code> 19m
		<b>"Refresh every" field gets reset to 0.01 seconds</b> 0 ■ Kibana 19m

# Free trainings



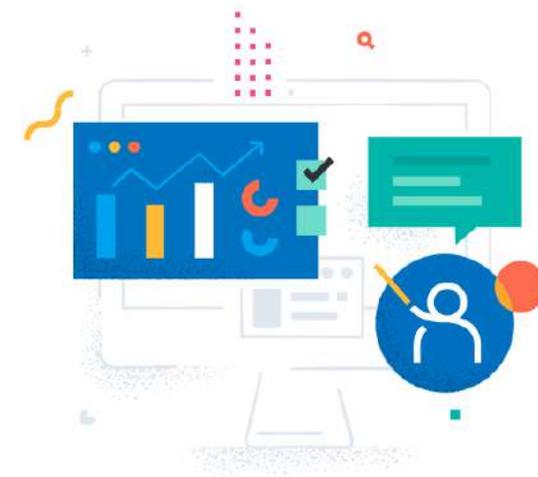
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## Q & A

Alexander Reelsen

Community Advocate

[alex@elastic.co](mailto:alex@elastic.co) | [@spinscale](https://twitter.com/spinscale)

Diagrams: [unDraw](#)