

Elasticsearch & Chewy for Ruby on Rails



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Overview

- **Elasticsearch Overview**

- What is Elasticsearch?
- Elasticsearch History
- Popular Examples
- ES Vocabulary
- Features

- **Chewy Overview**

- What is Chewy?
- Features
- Real World Example



What is Elasticsearch?

- Free and open source
- Used for full-text search, structured search, analytics, or all three in combination.
- API centric & RESTful
- Document (Json) oriented search engine
- Distributed
- Horizontally scalable and Highly Available
- Multi-tenancy enabled
- Built on Apache Lucene search engine
 - Lucene is a most popular java-based full text search index
 - ES adds Distribution, Transaction Log, Flush/Refresh/Monitor APIs, Query DSL



Elasticsearch History

- Created by Shay Banon
- First released in February 2010.
- Started as a search engine and became much more
- Elk (Elasticsearch, Logstash & Kibana)



Popular Examples

- **GitHub** uses Elasticsearch to query 130 billion lines of code.
- **Wikipedia** uses Elasticsearch to provide full-text search with highlighted search snippets, and search-as-you-type and did-you-mean suggestions.
- **Stack Overflow** combines full-text search with geolocation queries and uses more-like-this to find related questions and answers.



Elasticsearch Vocabulary

- **Cluster**
 - Database cluster
- **Node**
 - Instance of database
- **Index**
 - Like database schema
 - Hosts mapping types and their definitions
 - contains many shards
- **Mapping Type**
 - Like database table
 - Field description, indexing requirements
- **Document**
 - Like a database row
 - Json document
- **Shard**
 - An Apache Lucene index
 - Scalable unit



ES Features

- Bulk Indexing
 - Send multiple docs to ES
- Multi Get APIs
 - Get multiple documents in a single API
- Percolator
 - The idea is to have ES to notify your application when new content matches your filters instead of having to constantly poll the search engine to check for new updates.
 - Great for building alerts
- Pagination
- Highlighting



What is Chewy?

- Ruby on Rails gem
- Extends the Elasticsearch-Ruby client for Elasticsearch
- Provides a client for connecting to an Elasticsearch cluster
- Integrating Elasticsearch with ROR is not simple



Why Use Chewy?

- Every index is observable by all the related models
- Index classes are independent from ORM/ODM models
- Bulk import is everywhere
- Chewy provides an ActiveRecord-style query DSL



