ELASTICSEARCH DEVELOPER I

*The Elasticsearch Developer I curriculum will soon be transitioned to **Elasticsearch Engineer I**. This transition will not impact anyone who is already enrolled in Developer I. To learn more about this update, as well as the new **Elastic Certified Engineer** exam, please see our certification launch page at https://elastic.co/training/certification or contact us at training@elastic.co.*

Overview

This instructor-led course is designed for software developers and engineers who want to build search and analytics applications using Elasticsearch. Beginning with an introduction to Elasticsearch and the Search API, you will explore the internals of Elasticsearch from a developer's perspective, gaining insight into queries, analyzers, and mappings. Through an extensive series of hands-on labs, you will learn to write multiple different types of search queries, create custom text analyzers, perform aggregations, implement suggesters, and much more on your way to becoming an Elasticsearch developer.

Audience

Software developers, software engineers

Duration

In-Classroom - 2 Days | 8 hours per day
Virtual Classroom - 4 Days | 4 hours per day

Language

English

Prerequisites

· No prior knowledge of the Elastic Stack required

· Comfort using the terminal or command line recommended

· Familiarity with programming concepts

Requirements (In-Classroom)

· Laptop with Wi-Fi connectivity

· Mac, Linux, or Windows

· Modern web browser

· 64-bit JDK installed

    · Oracle JDK 1.8.0_60 or later

    · OpenJDK 1.8.0_111 or later

· At least 20% free disk space

Requirements (Virtual Classroom)

· Stable internet connection

· Mac, Linux, or Windows

· Latest version of Chrome or Firefox (Safari is not 100% supported)

· Due to virtual classroom JavaScript requirements, we recommend that you disable any ad-blockers and restart your browser before class.

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Modules

Introduction to Elasticsearch
- Learn about Elasticsearch and Lucene, the components of Elasticsearch, and how to index documents using the REST and Bulk APIs
- **Hands-on Lab** (30 minutes): Index a dataset, then search the data using Elasticsearch.Getting Started with Elasticsearch

The Search API
- Learn how to write and submit queries, how the scoring and relevance of matching documents is calculated, and how to boost relevance at query time
- **Hands-on Lab** (45 minutes): Write various queries that search documents using Search API queries like match, range and bool

Text Analysis
- We walk through the details of how full text is analyzed and indexed in Elasticsearch, including a discussion of the various analyzers and filters and how to configure them
- **Hands-on Lab** (45 minutes): Perform the steps for configuring text analysis in Elasticsearch; use the Analyze API to see how the built-in analyzers work; define custom analyzers by configuring character filters, tokenizers and token filter

Mappings
- Learn how Elasticsearch mappings are used to define how your documents and fields are stored and indexed, including how to define multi-fields, custom analyzers, and index templates
- **Hands-on Lab** (45 minutes): Define a custom mapping for a new index; use an index template to customize a mapping

More Search Features
- We take a deeper dive into searching data with a discussion on filters, term queries, the multi_match query, configuring fuzziness for dealing with misspelled words, and how to highlight matched search terms in a response
- **Hands-on Lab** (45 minutes): See how a terms query works in Elasticsearch; write multi_match and more_like_this queries; see how the fuzziness parameter works and how to highlight search terms

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The Distributed Model
· Understand how Elasticsearch scales and distributes data across a cluster, including a discussion on shards, how to startup a multi-node cluster, and how data replication works in Elasticsearch
• **Hands-on Lab** (30 minutes): Startup a multi-node cluster and see how documents indexed into Elasticsearch are distributed across shards in the cluster

Working with Search Results
· Learn how to perform common tasks when working with search results like sorting, pagination, and performing scroll searches
• **Hands-on Lab** (30 minutes): Run queries that involve controlling the results of searches using relevance boosting, sorting, and pagination

Suggesters
· Learn how to provide autocomplete suggestions for users, as well as "did you mean" suggestions when users misspell terms in their queries
• **Hands-on Lab** (30 minutes): Implement a "did you mean" and autocomplete solution using suggesters

Aggregations
· An introduction to aggregations, including a discussion the different types of aggregations, how to perform metric and bucket aggregations, and details on how to use some of the more common aggregations
• **Hands-on Lab** (45 minutes): Perform various metrics and bucket aggregations on the products index and also on some stock market trade data

More Aggregations
· We take a deeper dive into aggregations and discuss scope, using post_filter for faceting, creating histograms, finding the top hits of an aggregation, and an example of the significant terms aggregation
• **Hands-on Lab** (45 minutes): Perform various advanced bucket and metrics aggregations on the stocks index

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