ELASTICSEARCH OPERATIONS I

Overview

This hands-on, instructor-led training in-classroom or virtual classroom course covers the details of how to configure, manage and administer Elasticsearch clusters. Students will learn how to install and configure Elasticsearch and how to manage, monitor, plan, upgrade and troubleshoot clusters. Upon finishing this course, you will receive a Certificate of Completion.

Audience

This course is designed for DBAs, System Admins, Developer Operations, and Systems Architects who need to install, configure, monitor and troubleshoot Elasticsearch clusters.

Duration (Classroom Training)

2 Day | Class is scheduled from 9 a.m. to 5 p.m.

Duration (Virtual Training)

4 Days | Class is scheduled for 4 consecutive days for 4 hours.
Available 9 a.m. to 1 p.m. or 1 p.m. to 5 p.m. in different time zones.

Language

English

Pre-requisites

- No prior knowledge of Elasticsearch is required
- Students should be familiar with running commands from a command line or terminal

Requirements (Classroom Training)

- Laptop with connectivity to WiFi
- Mac, Linux OS, or Windows 7 or later
- A modern web browser
- Java version 1.8u20 or later installed
- At least 20% free disk space

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Requirements (Virtual Classroom)

· We require participants to download the latest version of Chrome or Firefox. (Safari isn't 100% supported in the virtual environment).

· The virtual classroom uses lots of JavaScript. We recommend that you disable any ad-blockers (some interfere with the virtual classroom) and that you restart your Web Browser before logging in.

· Laptop with a stable Wifi connection

· Mac, Linux OS, or Windows 7 or later

· Laptop with Java version 1.8.0_73 or later installed

· At least 20% free disk space

Modules

Each module includes a hands-on lab

· **Introduction to Elasticsearch**

  · The components of Elasticsearch, how to index data, basic CRUD operations, using the Kibana console, and starting and stopping Elasticsearch

· **Installation and Configuration**

  · How to configure Elasticsearch, installation options, the directory structure of Elasticsearch, configuring cluster and node names, configuring the network and the JVM, and understanding the difference between Development and Production mode

· **Working with Nodes**

  · Understanding and configuring the different types of nodes, including master eligible nodes, avoiding split brain, data nodes, coordinating only nodes, and a look at some common architectures

· **Indexes**

  · Understanding shards and how to configure them for an index, plus other tasks like deleting indexes and defining aliases and index templates

· **Cluster Health**

  · Understanding the health of your cluster and diagnosing health issues, as well as allocating shards and diagnosing shard issues

· **Mappings and Analysis**

  · Understanding what text analysis and mappings are, as well as an introduction to writing basic searches and how segments work in Elasticsearch

· **Index Management**

  · Including the Reindex API, configuring delayed shard allocation and total shards per node, designing a hot/warm architecture, and how to configure shard filtering

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- **Capacity Planning**
  - Including designing for scale, scaling with replicas, scaling with Indices, capacity planning use cases, and working with time-based data

- **Cluster Management**
  - Configuring shard allocation awareness and forced awareness, installing plugins, cluster backup, repositories, and how to take and restore a cluster snapshot

- **Monitoring**
  - A discussion of monitoring options, including the Stats API, task monitoring, the cat API, the X-Pack Monitoring component, and guidelines for monitoring a cluster

- **Upgrading a Cluster**
  - Including an overview of upgrades, how to perform a rolling upgrade vs. a full cluster restart, and considerations for upgrading from Elasticsearch 2.x to 5.x.

- **Production Checklist**
  - Items to consider when moving to production, including security considerations, bootstrap checks, and best practices

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