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## Elasticsearch Interview Questions And Answers 2018

# Interview Questions

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Elasticsearch Interview Questions And Answers 2018. [Coding compiler](#) sharing a list of 40 Real-Time Elasticsearch interview questions for experienced. These Elasticsearch questions were asked in various interviews by top MNC companies and prepared by industry experts. This list will help you to crack your next [Elasticsearch](#) job interview all the best for future and happy learning.

# Elasticsearch Interview Questions

1. What is Elasticsearch?
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## Elasticsearch Interview Questions And Answers

Elasticsearch Interview Questions	
Elasticsearch is an	Open source software
Elasticsearch is a	Search engine based on Lucene
Elasticsearch is a	Distributed, RESTful search and analytics engine
Elasticsearch Licence	Apache License 2.0
Elasticsearch developed by	Shay Banon
Elasticsearch has written in	Java

- 1) What is Elasticsearch and what do you understand about Elasticsearch?

A) Elasticsearch is a distributed, multitenant-capable full-text search engine with an HTTP web interface and schema-free JSON documents.

ElasticSearch is an open source, RESTful search engine built on top of Apache Lucene and released under an Apache license. It is Java-based and can search and index document files in diverse formats. An index can be easily recovered in a case of a server crash.

## **2) How does Elasticsearch work?**

A) Indexing Documents to the Repository. During an indexing operation, Elasticsearch converts raw data such as log files or message files into internal documents and stores them in a basic data structure similar to a JSON object. Simply do an HTTP POST that transmits your document as a simple JSON object.

## **3) What is Amazon Elasticsearch?**

A) Amazon Elasticsearch Service makes it easy to deploy, secure, operate and scale Elasticsearch for log analytics, full-text search, application monitoring, and more. You can set up and configure petabyte-scale Amazon Elasticsearch Service domains in minutes from the AWS Management Console.

## **4) What is the functionality of Elasticsearch?**

A) Elasticsearch is developed in Java and is released as open source under the terms of the Apache License. Elasticsearch provides a distributed, multitenant-capable full-text search engine with an HTTP web interface and schema-free JSON documents.

### **5) What is Kibana and elastic search?**

A) Kibana is an open source data visualization plugin for Elasticsearch. It provides visualization capabilities on top of the content indexed on an Elasticsearch cluster. Users can create bar, line and scatter plots, or pie charts and maps on top of large volumes of data.

### **6) What is Apache Lucene?**

A) Apache Lucene is a free and open-source information retrieval software library, originally written completely in Java.

### **7) What is NRT in Elasticsearch?**

A) In Elasticsearch NRT stands for Near Real Time Search platform. Elasticsearch is a near real-time search platform. What this means is there is a slight latency (normally one second) from the time you index a document until the time it becomes searchable.

### **8) What is a Cluster in Elasticsearch?**

A) A cluster is a collection of one or more nodes (servers) that together holds your entire data and provides federated indexing and search capabilities across all nodes. A cluster is identified by a unique name which by default is “elasticsearch”. This name is important because a node can only be part of a cluster if the node is set up to join the cluster by its name.

## **9) What is Node in Elasticsearch?**

A) A node is a single server that is part of your cluster, stores your data, and participates in the cluster's indexing and search capabilities. Just like a cluster, a node is identified by a name which by default is a random Universally Unique Identifier (UUID) that is assigned to the node at startup.

## **Top 40 Elasticsearch Interview Questions**

### **Elasticsearch Interview Questions # 10) What is Index in Elasticsearch?**

A) Index – An index is a collection of documents that have somewhat similar characteristics. For example, you can have an index for customer data, another index for a product catalog, and yet another index for order data.

An index is identified by a name (that must be all lowercase) and this name is used to refer to the index when performing indexing, search, update, and delete operations against the documents in it.

### **Elasticsearch Interview Questions # 11) What is Document in Elasticsearch?**

A) Document – A document is a basic unit of information that can be indexed. For example, you can have a document for a single customer, another document for a single product, and yet another for a single order. This document is expressed in JSON (JavaScript Object Notation) which is a ubiquitous internet data interchange format.

## **Elasticsearch Interview Questions # 12) What are Shards in Elasticsearch and Explain the concept?**

A) An index can potentially store a large amount of data that can exceed the hardware limits of a single node. For example, a single index of a billion documents taking up 1TB of disk space may not fit on the disk of a single node or may be too slow to serve search requests from a single node alone.

To solve this problem, Elasticsearch provides the ability to subdivide your index into multiple pieces called shards. When you create an index, you can simply define the number of shards that you want. Each shard is in itself a fully-functional and independent “index” that can be hosted on any node in the cluster.

## **Elasticsearch Interview Questions # 13) What are the benefits of Sharding in Elasticsearch?**

A) Sharding is important for two primary reasons:

- It allows you to horizontally split/scale your content volume
- It allows you to distribute and parallelize operations across shards (potentially on multiple nodes) thus increasing performance/throughput

## **Elasticsearch Interview Questions # 14) What are Replicas and Explain what do you understand?**

A) In a network/cloud environment where failures can be expected any time, it is very useful and highly recommended to have a failover mechanism in case a shard/node somehow goes offline or disappears for whatever reason.

To this end, Elasticsearch allows you to make one or more copies of your index's shards into what are called replica shards, or replicas for short.

### **Elasticsearch Interview Questions # 15) What are the benefits of Replicas in Elasticsearch?**

A) Replication is important for two primary reasons:

- It provides high availability in case a shard/node fails. For this reason, it is important to note that a replica shard is never allocated on the same node as the original/primary shard that it was copied from.
- It allows you to scale out your search volume/throughput since searches can be executed on all replicas in parallel.

### **Elasticsearch Interview Questions # 16) What is the minimum Java version required to install Elasticsearch?**

A) To install Elasticsearch on a machine, you require having at least Java 8.

### **Elasticsearch Interview Questions # 17) How do you interact with Cluster in Elasticsearch?**

A) Elasticsearch provides a very comprehensive and powerful REST API that you can use to interact with your cluster.

### **Elasticsearch Interview Questions # 18) What are the benefits of REST API's in Elasticsearch?**

A) There are many benefits of using REST API's in Elasticsearch, they are:

- Check your cluster, node, and index health, status, and statistics
- Administer your cluster, node, and index data and metadata
- Perform CRUD (Create, Read, Update, and Delete) and search operations against your indexes
- Execute advanced search operations such as paging, sorting, filtering, scripting, aggregations, and many others

### **Elasticsearch Interview Questions # 19) How do you create an Index in Elasticsearch?**

A) Now let's create an index named "customer" and then list all the indexes again:

```
PUT /customer?pretty  
GET /_cat/indices?v
```

The first command creates the index named "customer" using the PUT verb. We simply append pretty to the end of the call to tell it to pretty-print the JSON response (if any).

### **Elasticsearch Interview Questions # 20) How do you delete an Index?**

A) Now let's delete the index that we just created and then list all the indexes again:

```
DELETE /customer?pretty  
GET /_cat/indices?v
```

## **Elasticsearch Frequently Asked Interview Questions**

**Elasticsearch Interview Questions # 21) What are the different packages available for installing Elasticsearch?**



A) zip/tar.gz – The zip and tar.gz packages are suitable for installation on any system and are the easiest choice for getting started with Elasticsearch on most systems.

- deb – The deb package is suitable for Debian, Ubuntu, and other Debian-based systems.
- rpm – The rpm package is suitable for installation on Red Hat, Centos, SLES, OpenSuSE and other RPM-based systems.
- msi – The msi package is suitable for installation on Windows 64-bit systems with at least .NET 4.5 framework installed
- docker – Images are available for running Elasticsearch as Docker containers.

### **Elasticsearch Interview Questions # 22) What are the configuration management tools supported by Elasticsearch?**

A) Elasticsearch supports the following configuration management tools to help with large deployments:

- Puppet – puppet-elasticsearch
- Chef – cookbook-elasticsearch
- Ansible – ansible-elasticsearch

### **Elasticsearch Interview Questions # 23) How many types of Configuration files are there in Elasticsearch?**

A) Elasticsearch has three configuration files:

1. elasticsearch.yml for configuring Elasticsearch
2. jvm.options for configuring Elasticsearch JVM settings
3. log4j2.properties for configuring Elasticsearch logging

These files are located in the config directory, whose default location depends on whether or not the installation is from an archive distribution (tar.gz or zip) or a package distribution (Debian or RPM packages).

#### **Elasticsearch Interview Questions # 24) What is X-Pack in Elasticsearch?**

A) X-Pack is an Elastic Stack extension that bundles security, alerting, monitoring, reporting, machine learning, and graph capabilities into one easy-to-install package. To access this functionality, you must install X-Pack in Elasticsearch.

#### **Elasticsearch Interview Questions # 25) Where do you configure settings for X-Pack?**

A) X-Pack Settings in Elasticsearch – You configure settings for X-Pack features in the elasticsearch.yml, kibana.yml, and logstash.yml configuration files.

#### **Elasticsearch Interview Questions # 26) What are breaking changes in Elasticsearch?**

A) You need to be aware of when migrating your application from one version of Elasticsearch to another.

As a general rule:

- Migration between minor versions – e.g. 6.x to 6.y – can be performed by upgrading one node at a time.
- Migration between consecutive major versions – e.g. 5.x to 6.x – requires a full cluster restart.

- Migration between non-consecutive major versions – e.g. 2.x to 6.x – is not supported.

### **Elasticsearch Interview Questions # 27) What is Single document APIs in Elasticsearch?**

A) Index API, Get API, Delete API, Update API

### **Elasticsearch Interview Questions # 28) What are Multi-document APIs?**

A) Multi Get API, Bulk API, Delete By Query API, Update By Query API, Reindex API.

### **Elasticsearch Interview Questions # 29) What is Routing in Elasticsearch?**

A) When executing a search, it will be broadcast to all the index/indices shards (round robin between replicas). Which shards will be searched on can be controlled by providing the routing parameter.

### **Elasticsearch Interview Questions # 30) What are Aggregations?**

A) The aggregation's framework helps provide aggregated data based on a search query. It is based on simple building blocks called aggregations, that can be composed in order to build complex summaries of the data.

An aggregation can be seen as a unit-of-work that builds analytic information over a set of documents. The context of the execution defines what this document set is

(e.g. a top-level aggregation executes within the context of the executed query/filters of the search request).

## **Advanced Elasticsearch Interview Questions**

### **31) What are the different types of aggregations in Elasticsearch?**

A) There are many different types of aggregations, each with its own purpose and output.

- Metric – Aggregations that keep track and compute metrics over a set of documents.
- Matrix – A family of aggregations that operate on multiple fields and produce a matrix result based on the values extracted from the requested document fields. Unlike metric and bucket aggregations, this aggregation family does not yet support scripting.
- Pipeline – Aggregations that aggregate the output of other aggregations and their associated metrics

### **32) What are Indices APIs?**

A) The indices APIs are used to manage individual indices, index settings, aliases, mappings, and index templates.

### **33) What is cat API in Elasticsearch?**

A) All the cat commands accept a query string parameter help to see all the headers and info they provide, and the `/_cat` command alone lists all the available

commands.

### **34) What are the different cat commands available in Elasticsearch cat API?**

A) The different commands available in cat APIs are:

- cat aliases, cat allocation, cat count, cat fielddata
- cat health, cat indices, cat master, cat nodeattrs
- cat nodes, cat pending tasks, cat plugins, cat recovery
- cat repositories, cat thread pool, cat shards, cat segments
- cat snapshots, cat templates

### **35) What is Query DSL in Elasticsearch?**

A) Elasticsearch provides a full Query DSL (Domain Specific Language) based on JSON to define queries. Think of the Query DSL as an AST (Abstract Syntax Tree) of queries, consisting of two types of clauses:

Leaf query clauses – Leaf query clauses look for a particular value in a particular field, such as the match, term or range queries. These queries can be used by themselves.

Compound query clauses – Compound query clauses wrap other leaf or compound queries and are used to combine multiple queries in a logical fashion (such as the bool or dis\_max query), or to alter their behavior (such as the constant\_score query).

### **36) What is Ingest Node?**

A) Use an ingest node to pre-process documents before the actual document indexing happens. The ingest node intercepts bulk and index requests, it applies transformations, and it then passes the documents back to the index or bulk APIs.

### **37) What are the different types of X-Pack APIs?**

A) X-Pack APIs – X-Pack exposes REST APIs that are used by the UI components and can be called directly to configure and access X-Pack features.

- Info API
- Graph Explore API
- Machine Learning APIs
- Security APIs
- Watcher APIs
- Migration APIs

### **38) What are the different types of X-Pack Commands?**

A) X-Pack includes commands that help you configure security:

- certgen
- certutil
- migrate
- saml-metadata
- setup-passwords
- syskeygen
- users

### **39) What is Explore API in Elasticsearch?**

A) The Graph explore API enables you to extract and summarize information about the documents and terms in your Elasticsearch index.

#### **40) What is Migration APIs in Elasticsearch?**

A) The migration APIs simplify upgrading X-Pack indices from one version to another.

Migration Assistance API

Migration Upgrade API

Deprecation Info APIs

Source: [Elasticsearch Website](#)

### **OTHER INTERVIEW QUESTIONS**

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