**Elastic Certifications:**

* Elastic Certified Engineer: 7.2
* Elastic Certified Analyst: 7.6
* Elastic Certified Observability Engineer: coming soon!

# Elastic Certified Engineer Exam

Hands on, Performance Based Exam

Certification for experts who can install and manage clusters, as well as develop search solutions.

To become an Elastic Certified Engineer, you will need to pass our hands-on, performance-based exam. The exam requires completing a series of timed, real-world tasks on Elasticsearch clusters in a proctored environment.

Complete 10-12 tasks to solve in 3 hours

<https://www.elastic.co/training/elastic-certified-engineer-exam>

<https://www.elastic.co/webinars/preparing-for-the-elastic-certified-engineer-exam>

#### Topics

**Installation and Configuration**

* Deploy and start an Elasticsearch cluster that satisfies a given set of requirements
* Configure the nodes of a cluster to satisfy a given set of requirements
* Secure a cluster using Elasticsearch Security
* Define role-based access control using Elasticsearch Security

**Indexing Data**

* Define an index that satisfies a given set of requirements
* Perform index, create, read, update, and delete operations on the documents of an index
* Define and use index aliases
* Define and use an index template for a given pattern that satisfies a given set of requirements
* Define and use a dynamic template that satisfies a given set of requirements
* Use the Reindex API and Update By Query API to reindex and/or update documents
* Define and use an ingest pipeline that satisfies a given set of requirements, including the use of Painless to modify documents

**Queries**

* Write and execute a search query for terms and/or phrases in one or more fields of an index
* Write and execute a search query that is a Boolean combination of multiple queries and filters
* Highlight the search terms in the response of a query
* Sort the results of a query by a given set of requirements
* Implement pagination of the results of a search query
* Apply fuzzy matching to a query
* Define and use a search template
* Write and execute a query that searches across multiple clusters

**Aggregations**

* Write and execute metric and bucket aggregations
* Write and execute aggregations that contain sub-aggregations

**Mappings and Text Analysis**

* Define a mapping that satisfies a given set of requirements
* Define and use a custom analyzer that satisfies a given set of requirements
* Define and use multi-fields with different data types and/or analyzers
* Configure an index so that it properly maintains the relationships of nested arrays of objects

**Cluster Administration**

* Allocate the shards of an index to specific nodes based on a given set of requirements
* Configure shard allocation awareness and forced awareness for an index
* Diagnose shard issues and repair a cluster's health
* Backup and restore a cluster and/or specific indices
* Configure a cluster for use with a hot/warm architecture
* Configure a cluster for cross cluster search

# <https://www.elastic.co/webinars/preparing-for-the-elastic-certified-engineer-exam>

# Elastic Certified Analyst

Certification for Kibana experts that have mastered data visualization and advanced analysis.

The Elastic Certified Analyst exam tests your knowledge and skills in analyzing data using Kibana, including the ability to build visualizations and dashboards and detect anomalies of time-series data using machine learning.

**Searching Data**

* Define an index pattern with or without a Time Filter field
* Set the time filter to a specified date or time range
* Use the Kibana Query Language (KQL) in the search bar to display only documents that match a specified criteria
* Create and pin a filter based on a search criteria
* Apply a search criteria to a visualization or dashboard

**Visualizing Data**

* Create a Metric or Gauge visualization that displays a value satisfying a given criteria
* Create a Lens visualization that satisfies a given criteria
* Create an Area, Line, Pie, Vertical Bar or Horizontal Bar visualization that satisfies a given criteria
* Split a visualization using sub-bucket aggregations
* Create a visualization that computes a moving average, derivative, or serial diff aggregation
* Customize the format and colors of a line chart or bar chart
* Using geo data, create an Elastic map that satisfies a given criteria
* Create a visualization using the Time Series Visual Builder (TSVB) that satisfies a given set of criteria
* Define multiple line or bar charts on a single TSVB visualization
* Create a chart that displays a filter ratio, moving average, or mathematical computation of two fields
* Define a metric, gauge, table or Top N visualization in TSVB
* Define a TSVB chart from the data of an ML job
* Create a Tag Cloud visualization on a keyword field of an index
* Create a Data Table visualization that satisfies a given criteria
* Create a Markdown visualization
* Define and use an Option List or Range Slider control
* Create a Dashboard that consists of a collection of visualizations

**Analyzing Data**

* Answer questions about a given dataset using search and visualizations
* Use visualizations to find anomalies in a dataset
* Define a single metric, multi-metric, or population Machine Learning job
* Define and use a scripted field for an index
* Define and use a Space in Kibana

<https://www.elastic.co/guide/index.html>

# Elastic Certified Observability Engineer

**Upcoming**

Certification for experts who can implement observability to monitor and react to events anywhere.

The Elastic Certified Observability Engineer exam tests your knowledge and skills on using the Elastic Stack to implement observability, from ingesting metrics, logs, APM and uptime data to a single data source, to analyzing and reacting to events using Kibana, machine learning, and alerting.