Exam Objectives

To be fully prepared for the Elastic Certified Engineer exam, candidates should be able to complete all of the following exam objectives with only the assistance of the [**Elastic documentation**](https://www.elastic.co/guide/index.html):

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
* Use the scroll API to retrieve large numbers of results
* 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