

# Elasticsearch, Logstash and Kibana: Indexing, searching, and viewing data

Hands-on course of 2 days - 14h

Ref.: ELK - Price 2025: 1 660 (excl. taxes)

## EDUCATIONAL OBJECTIVES

At the end of the training, the trainee will be able to:

Understand the key principles of installing and configuring Elasticsearch, logstash, and Kibana

Evaluate the possibilities offered by Elasticsearch, logstash, and Kibana

Know how to use Elasticsearch, logstash, and Kibana to index, search, and view data and documents

Discover the most common application development approaches

## THE PROGRAMME

last updated: 05/2024

### 1) Overview and installation of Elasticsearch, logstash, and Kibana.

- Overview and history of Elasticsearch, logstash, and Kibana.
- Installation prerequisites. "As a Cloud" installation.
- Using Elasticsearch, logstash, and Kibana.
- Configuring Elasticsearch.
- Key principles of Elasticsearch administration.
- Developing applications using Elasticsearch.
- The impact of Elasticsearch on the architecture and existing applications.
- Roles of logstash and Kibana.

*Case study* : Architecture of a standard installation using an Elasticsearch server for large query volumes and indexing.

### 2) How Elasticsearch works

- Overview of Apache Lucene.
- The architecture and key concepts.
- The JSON exchange format with Service Containers.
- The REST API.
- Scoring and relevance of queries.
- Data storage and simple searches.

*Hands-on work* : Data storage in Elasticsearch. Initial simple search queries.

### 3) Options enabled by Elasticsearch

- Indexing documents and data.
- Searching documents and data.
- Analyzing documents and data.
- Calculating lists of responses.
- Filtering and sorting results.
- Query suggestions.
- Highlighting results.

*Hands-on work* : Working with and modifying data indexing with Elasticsearch. Implementing queries, filtering, and sorting results.

#### TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

#### ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

#### TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

#### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

#### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@ORSYS.fr](mailto:psh-accueil@ORSYS.fr) to review your request and its feasibility.

#### 4) Indexing, searching, and viewing data and documents

- How do you find meaning in data with Elasticsearch and Kibana?
- Data indexing improvement approach.
- Search query improvement approach.
- Geographical suitability of searches.
- Percolation.

*Hands-on work : Advanced data searches with Elasticsearch. Words with the same meaning.*

## DATES

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### REMOTE CLASS

2025 : 01 sept., 01 déc.