BLACKBIRD FOR TRAINING

Core OpenSearch

2 – 6 August 2027
Lyon (France)

UK Traininig
PARTNER



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Introduction

This intensive training program provides a complete hands-on learning experience, equipping participants with the skills to install, configure, manage, and optimize the OpenSearch platform for search, analytics, and real-time performance monitoring.
The program covers environment setup, smooth migration from Elasticsearch to OpenSearch, advanced data indexing and management, executing complex queries, designing ingestion pipelines using log collection and processing tools, installing and configuring plugins, building customized dashboards, and integrating OpenSearch with various monitoring and visualization systems.
Participants will gain a solid understanding of OpenSearch architecture, learn to leverage its built-in performance tracking and analytics capabilities, and integrate it with advanced visualization platforms for faster and more accurate decision-making.

Course Objectives

By the end of this course, participants will be able to:

- Install and configure OpenSearch clusters in both on-premise and cloud environments.
- Perform a seamless migration from Elasticsearch to OpenSearch without data loss.
- Index, update, and manage datasets efficiently.
- Create ingestion pipelines using tools such as Beats, Logstash, and APIs.
- Execute advanced queries and aggregations.
- Install and configure plugins to extend system capabilities.
- Build interactive dashboards for centralized data analytics.
- Monitor performance and implement logging best practices.
- Integrate OpenSearch with visualization platforms such as Grafana for professional data display.

Course Outlines

Day 1: OpenSearch Fundamentals & Environment Setup

- Introduction to OpenSearch and its architecture.
- Key differences between OpenSearch and Elasticsearch.
- Setting up a development environment locally and in the cloud.
- Installing and configuring the system.
- Cluster fundamentals: nodes, shards, and replicas.
- Hands-on lab: Deploying single-node and multi-node clusters.



Day 2: Data Indexing, Streams & Queries

- Understanding index and document structures.
- Creating, updating, and deleting indices.
- Working with data streams.
- Query basics: match, term, and range queries.
- Aggregations and result sorting.
- Hands-on lab: Importing and querying structured and unstructured data.

Day 3: Cross-Cluster Operations & Data Ingestion Pipelines

- Cross-cluster search and replication.
- Introduction to data ingestion and processing tools.
- Configuring Beats for log collection.
- Building data pipelines with Logstash.
- Hands-on lab: Ingesting data from multiple sources into OpenSearch.

Day 4: Dashboards, Plugins & APIs

- Introduction to OpenSearch Dashboards.
- Creating and customizing data visualizations.
- Understanding and installing plugins.
- Using APIs to automate tasks.
- Hands-on lab: Creating an operational dashboard with multiple visualizations.

Day 5: Monitoring, Logging & Visualization Integration

- Performance monitoring in OpenSearch.
- Built-in features for tracking performance.
- Best Practices for Logging and Data Analysis.
- Integrating OpenSearch with Grafana for advanced visualization.
- Capstone project: Deploying a complete OpenSearch environment with ingestion pipelines, dashboards, and monitoring.
- Final Q&A and course wrap-up.

Why Attend this Course: Wins & Losses!

- Master installing, configuring, and operating OpenSearch in different environments.
- Smoothly transition from Elasticsearch without downtime or data loss.
- Design efficient and fully integrated data ingestion pipelines.
- Create interactive dashboards to visualize analytics.
- Enhance search and analytics performance through intelligent monitoring.
- Develop in-demand skills in data management and analytics.
- Learn best practices for managing distributed data systems.
- Gain practical expertise to build professional-grade search and analytics solutions.



Conclusion

The Advanced OpenSearch course delivers a powerful combination of theoretical knowledge and practical expertise in managing search and analytics systems.

From cluster setup and data ingestion pipelines to dashboard creation and monitoring integration with visualization platforms, you will leave this course fully prepared to build robust, scalable, and modern data solutions that meet today's business intelligence demands.

