

Apache Solr

Learn to build search solutions with Apache Lucene and Apache Solr, from indexing and querying to Solr Cloud administration.

3 Days

24 HOURS

7

MODULES

60

TOPICS

COURSE OVERVIEW

The Apache Solr course is designed to help learners master the intricacies of the powerful and open-source search platform, Apache Solr, which is built on top of Apache Lucene. The course begins with an introduction to search and Lucene architecture, covering its use cases, components, and why Lucene is a preferred choice for various applications. As learners progress, they will delve deeper into Lucene, exploring Analyzers, Querying, Scoring, and other advanced features like Faceting and Spatial search. The course transitions to Apache Solr, where learners are introduced to Solr's key features, its advantages over relational databases, and its architecture. The Solr training will equip learners with practical skills in Solr indexing, Searching capabilities, extended features, and administration. By the end of the course, participants will be adept at managing Solr Cloud, understanding its architecture, and leveraging Solr's full potential. This comprehensive Solr course will ensure that individuals are well-prepared to implement and maintain Solr instances effectively.

WHO THIS COURSE IS FOR

The Apache Solr course covers Lucene fundamentals and Solr's powerful features, providing IT professionals with the expertise needed to master search technologies.

Software Developers and Engineers

Search Technology Specialists

Data Scientists and Analysts

IT Architects and System Integrators

Database Administrators and Developers

DevOps Engineers managing search infrastructure

Data Engineers working with large datasets

Enterprise Search Solution Consultants

Technical Project Managers and Team Leads overseeing search-based projects

Information Retrieval Professionals

Backend Developers working on search algorithms

Technical Support Engineers for search applications

What You Will Learn

- Explain Lucene architecture, components and use cases
- Describe Lucene indexing, analyzers and query types
- Apply advanced Lucene features such as faceting and spatial search
- Compare Solr with relational databases and explain its architecture
- Configure Solr schema, field types and request handlers
- Implement Solr indexing using tokenizers and filters
- Apply Solr search techniques such as fuzzy and range search
- Plan and manage Solr Cloud administration and configuration

COURSE SYLLABUS

7 Modules, 60 Topics

01

Introduction to Apache Lucene

TOPICS

- What is Search?
- Lucene Architecture
- Lucene Use Cases
- Lucene Components
- Lucene Schema
- Why and Where to Use Lucene?
- Lucene Indexer
- Lucene Analyzer
- Lucene Searcher
- Different Types of Lucene Queries

02

Exploring Apache Lucene

TOPICS

- Analyzers
- Querying
- Scoring
- Boosting
- Highlighting
- Faceting
- Grouping
- Joins
- Spatial Search
- Apache Tika

03

Introduction to Apache Solr

TOPICS

Introduction to Solr · Key Features of Solr · Solr vs. Relational Databases · Installing and Running Solr · Admin UI Quick Tour · Overview of Solr Architecture · Understanding Solr Schema · Solr Field Types and Fields

04

Solr Indexing

TOPICS

Introduction to Solr Indexing · Analysis and Analyzers · Tokenizers and Filters · Indexing and Index Handlers · Indexing Alternatives · Solr Configurations · Default Request Handlers

05

Searching Using Solr

TOPICS

- Search Process
- Velocity UI
- Basic Query Parsers
- Wildcard Search
- Fuzzy Search
- Proximity Search
- Range Search
- Sorting and Relevance
- Boosting
- Extended Query Parsers

06

Solr Extended Features

TOPICS

- Faceting
- Highlighting
- Spell Checking
- Query Re-ranking
- Transforming
- Search Suggesters
- Pagination
- Grouping and Clustering
- Spatial Search
- Real-time (Get & Update)

07

Solr Administration and Solr Cloud

TOPICS

- Understanding Solr Administration
- solrconfig.xml Configuration
- solr.xml Configuration
- Managing Solr Instances
- **Introduction to Solr Cloud:** Features, Architecture, and Implementation

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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