SMACK Stack for Data Science Training

COURSE CONTENT

About Multisoft

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About Course

The SMACK Stack for Data Science training by Multisoft Systems is designed to equip learners with the practical knowledge and technical expertise needed to build and manage large-scale data-driven applications. The SMACK stack—comprising Spark, Mesos, Akka, Cassandra, and Kafka—forms a powerful ecosystem for real-time data processing, analytics, and machine learning workloads.

Module 1: Introduction

Module 2: SMACK Stack Overview

- ✓ What is Apache Spark? Apache Spark features
- ✓ What is Apache Mesos? Apache Mesos features
- ✓ What is Apache Akka? Apache Akka features
- ✓ What is Apache Cassandra? Apache Cassandra features
- ✓ What is Apache Kafka? Apache Kafka features

Module 3: Scala Language

- ✓ Scala syntax and structure
- ✓ Scala control flow

Module 4: Preparing the Development Environment

- ✓ Installing and configuring the SMACK stack
- ✓ Installing and configuring Docker

Module 5: Apache Akka

- ✓ Using actors

Module 6: Apache Cassandra

- ✓ Creating a database for read operations
- ✓ Working with backups and recovery

Module 7: Connectors

- ✓ Creating a stream
- ✓ Building an Akka application
- ✓ Storing data with Cassandra

✓ Reviewing connectors

Module 8: Apache Kafka

✓ Working with clusters
✓ Creating, publishing, and consuming messages

Module 9: Apache Mesos

✓ Allocating resources
✓ Running clusters
✓ Working with Apache Aurora and Docker
✓ Running services and jobs
✓ Deploying Spark, Cassandra, and Kafka on Mesos

Module 10: Apache Spark

✓ Managing data flows
✓ Working with RDDs and dataframes
✓ Performing data analysis

Module 11: Troubleshooting

✓ Handling failure of services and errors