multisoft
Systems

Apache Flink Training

COURSE CONTENT

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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

Apache Flink is a powerful, open-source stream processing framework that enables real-time data analytics and batch processing. Multisoft Systems' Apache Flink Training is designed to help professionals master this cutting-edge technology, equipping them with the skills to process large-scale data efficiently.

Module 1: Introduction to Stream Processing and Apache Flink

- ✓ Batch Processing
- ✓ What is Stream Processing?
- ✓ Stream Processing Architecture
- ✓ Why is Stream Processing Important?
- ✓ Big Data
- ✓ Hadoop and its Architecture
- ✓ Apache Spark and its Architecture
- ✓ Why is there a need for Apache Flink?

Module 2: Runtime Architecture

- ✓ What is Apache Flink?
- ✓ Features of Flink
- ✓ Flink Architecture
- ✓ Flink Data Flow

Module 3: Foundations of the DataStream API

- ✓ Dataset Transformations
- ✓ Types of Dataset Transformations
- ✓ DataStream in Flink
- ✓ DataStream Transformations

Module 4: Data Pipelines and Stateful Stream Processing

- ✓ Data Sources for DataStream API
- ✓ Data Sinks for DataStream API
- ✓ Stateful Stream Processing

Module 5: Event Time and Watermarks

- ✓ Event Time and its Importance
- ✓ Watermarks
- ✓ Late Elements & Allowed Lateness

Module 6: Windows and Streaming Analytics

- ✓ Window in Apache Flink
- ✓ Tumbling Window, Sliding Window, Session Window and Global Window
- ✓ Window - Time Notions

Module 7: State Backends and Fault Tolerance

- ✓ State and its types
- ✓ State Persistence
- ✓ Check Pointing
- ✓ Fault Tolerance
- ✓ Barriers and Barrier Snapshotting
- ✓ State Backend

Module 8: Connector Ecosystem

- ✓ Process Function
- ✓ Side Output
- ✓ Connector Ecosystem and its Components

Module 9: Intro to Flink SQL and the Table API

- ✓ Table & SQL API in Flink
- ✓ Similarities and Differences

Module 10: Use Cases and Application Patterns

- ✓ Use Cases for Flink
- ✓ Event-driven Applications
- ✓ Data Analytics Applications
- ✓ Data Pipeline Applications