

NiFi 2.0: Data Flow Migration and AI Integration

OEM: Cloudera • Duration: 1 Day (8 hrs) • Code: DOPS-243

COURSE MODULES & TOPICS

NiFi 2.0: Core Concepts & New Features

- Architectural Overview: Key changes and enhancements in NiFi 2.0
- AI-Powered Data Flows: Introduction to the GenAI processor suite
- Flow Governance: Deep dive into NiFi's new flow analysis rules and their enforcement
- Python Processor Enhancements: Simplified custom processor development with Python
- NiFi & Cloud: Working with NiFi in cloud environments
- Hands-on Lab: Getting started with NiFi 2.0

Building Intelligent Data Flows with GenAI

- Generative AI & LLM Overview
- Using RAG to enhance LLM capabilities
- RAG Architecture & NiFi 2.0 for RAG
- GenAI with NiFi 2.0
- NiFi GenAI Use Cases
- Hands-on Lab: Create a GenAI Pipeline in NiFi using Amazon Bedrock
- Hands-on Lab: From Flow to GenAI: Building RAG pipeline with NiFi and Cloudera AI

Enforcing Flow Governance with Analysis Rules

- Understanding Flow Analysis Rules: Configuration, scope, and enforcement
- Compliance and Auditing: Leveraging analysis rules for regulatory compliance
- Hands-on Lab: Creating custom flow analysis rules for data quality and security

Building custom python processor in NiFi 2.0

- Why python in NiFi 2.0
- Python Processor Deep Dive: Developing custom processors with Python
- Managing dependencies
- Hands-on Lab: Building a Python-based processor in NiFi 2.0

NiFi 2.0 Upgrade and Migration Strategies

- Why migrate to Cloudera Flow Management 4

- Upgrade Planning: Assessing the impact and identifying potential issues
- Cloudera Flow Management Migration tool Overview
- Flow Migration Tool: Automating the conversion of NiFi 1.x flows to NiFi 2.0
- Demo - Variables Migration
- Demo - Templates Migration
- Demo - Component Migration

Appendix: Monitoring for NiFi 2.0

- Monitoring needs of NiFi 2.0
- Prometheus grafana Integration
- Datadog & ELK stack integration
- Performance Management
- Alerting and Metric threshold