

# TRAINING OFFERING DATA FLOW MANAGEMENT WITH APACHE NIFI

2 DAYS | SUBJECT MATTER EXPERT  ADMINISTRATOR

**This course is designed for 'Data Stewards' or 'Data Flow Managers' who are looking forward to automate the flow of data between systems. Topics Include Introduction to NiFi, Installing and Configuring NiFi, Detail explanation of NiFi User Interface, Explanation of its components and Elements associated with each. How to Build a dataflow, NiFi Expression Language, Understanding NiFi Clustering, Data Provenance, Security around NiFi, Monitoring Tools and HDF Best practices.**

## PREREQUISITES

Students should be familiar with programming principles and have previous experience in software development. Experience with Linux and a basic understanding of Dataflow tools would be helpful. No prior Hadoop/NiFi experience required, but is very helpful.

## TARGET AUDIENCE

Data Engineers, Integration Engineers and Architects who are looking to automate Data flow between systems.

## FORMAT

50% Lecture/Discussion | 50% Hands-on Labs

## OBJECTIVES

- Introduction to Enterprise Data Flow
- **What's new in HDF 3.0**
- HDF 3.0 Architecture and Features
- HDF System Requirements
- Install and Configure HDF [NiFi]
- Describe NiFi User Interface in detail
- Describe NiFi UI Summary and History section
- Describe Anatomy of a Processor
- Describe Anatomy of a Connection
- Describe Controller Services and Reporting Tasks
- Learn How to Build a NiFi Data Flow
- Command and Control of a NiFi Data Flow
- Describe Anatomy of a Process Group
- Anatomy of a Remote Processor Group
- Remote Processor Group Transmission
- NiFi Site-to-Site Communication
- Describe the Function and Purpose of the NiFi Expression Language
- Structure of a NiFi Expression
- How to Use Expression Language Functions
- Using Expression Language Editor
- Using If/Then/Else in NiFi Expression Language
- Using Attributes and Properties
- Create, Manage and Instantiate a NiFi Templates
- How to optimize an HDF Data Flow
- Define Data Provenance and Data Provenance Events
- Describe NiFi Cluster and State Management
- Describe Cluster Setup and Management via NiFi UI
- Explain the Mechanisms Available for NiFi Monitoring
- Describe How HDF Complements the Hortonworks Data Platform (HDF)
- Describe how Big Data Ingestion is possible with HDF

### **About Hortonworks**

Hortonworks is a leading innovator at creating, distributing and supporting enterprise-ready open data platforms. Our mission is to manage the world's data. We have a single-minded focus on driving innovation in open source communities such as Apache Hadoop, NiFi, and Spark. Our open Connected Data Platforms power Modern Data Applications that deliver actionable intelligence from all data: data-in-motion and data-at-rest. Along with our 1600+ partners, we provide the expertise, training and services that allows our customers to unlock the transformational value of data across any line of business. We are Powering the Future of Data™.

### Contact

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- Describe HDF Configuration Best Practices
- Describe the Process of Securing HDF with 2-Way-SSL
- Describe LDAP User Authentication with NiFi
- Describe Kerberos Authentication with NiFi
- Describe HDF Multi-tenancy
- Describe how File Based Authorizer in NiFi works
- Describe how Ranger Based Authorizer in NiFi works
- Describe the Architecture of Authorization Via the Ranger-NiFi Plug-in
- List the Installation Prerequisites, configure and Install Ranger
- Describe how to create Ranger policies for NiFi
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## LABS AND DEMONSTRATIONS

- Installing and Starting HDF with Ambari
- Demonstration: NiFi User Interface in detail
- Building a NiFi Dataflow
- Working with NiFi Process Groups
- Working with Remote Processor Groups Site-to Site
- Working with the NiFi Expression Language
- Demonstration: Working with Attributes
- Demonstration: Working with Templates
- Demonstration: Data Provenance
- Working with NiFi Clusters
- Demonstration: NiFi Notification Services
- Demonstration: NiFi Monitoring
- Advanced NiFi Monitoring
- Integrating HDF with HDP
- Securing HDF with 2-way SSL Using Ambari
- NiFi User Authentication with LDAP
- Installing Ranger and Configuring NiFi with Kerberos

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- Working with File Based Authorization in NiFi
  - Working with Ranger Based Authorization in NiFi

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