

DENG-259



# Building Solutions with Cloudera Data Services

## Course Overview

**Course Type**

Instructor-Led Training

**Level**

Advanced

**Duration**

3 days

**Platform**

Cloudera Data Services

**Topics Covered**

- Cloudera Data Flow
- Cloudera Data Engineering
- Cloudera Data Warehouse
- Cloudera AI
- Data Services Workshop

## About This Training

This three-day course provides participants with a comprehensive understanding of the Cloudera platform and its integrated services, including Cloudera Data Warehouse, Cloudera Data Engineering, Cloudera Data Flow, and Cloudera AI. Participants will gain hands-on experience in designing, implementing, and optimizing data workflows and analytics solutions within the Cloudera ecosystem. The course emphasizes practical strategies for building scalable, secure, and efficient data-driven solutions tailored to enterprise needs. Key topics include data ingestion and processing, stream management, query optimization, machine learning integration, and managing resource performance in production environments.



## Who Should Take This Course?

This course is designed for data engineers, data analysts, application developers, and machine learning engineers who want a deeper understanding of how the Cloudera platform and its data services support solution development. This course assumes a foundational knowledge of data engineering principles (e.g., ETL concepts, data warehousing), analytics concepts (e.g., basic statistical analysis, data visualization), and cloud services (e.g., basic cloud computing models, service deployment). Basic familiarity with Linux environments (e.g., navigating the file system, using basic commands) and SQL (e.g., writing basic queries, understanding relational database concepts) is required. While some programming experience is helpful, this course focuses on practical application and does not require extensive coding skills. Prior experience with ETL, big data, and streaming technologies will greatly benefit participants.

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## Building Solutions with Cloudera Data Services

### Cloudera Data Flow

- Introduction to data ingestion and streaming capabilities
- Overview of NiFi, Kafka, and stream processing
- Hands-on Session: Creating and managing data flows

### Cloudera Data Engineering

- Introduction to Cloudera Data Engineering and Airflow
- Troubleshooting jobs and reviewing use cases
- Hands-on Session: Building Airflow DAGs

### Cloudera Data Warehouse

- Understanding Cloudera Data Warehouse for large-scale data analytics
- Introduction to Iceberg
- Hands-on Session: Building a data lakehouse
- Performance optimization and lakehouse maintenance
- Data visualization

### Cloudera AI & Machine Learning

- Introduction to Cloudera Machine Learning
- Automating ML workflows and deploying models at scale
- Hands-on Session: Training and deploying a model using Cloudera AI
- MLOps pipeline and model monitoring

### Workshop: Stock Market Analysis with Alpha Vantage

- Participants will use Alpha Vantage APIs to fetch and analyze stock market data.
- Data Ingestion and Streaming: Using Cloudera Data Flow and Cloudera Data Engineering to process real-time stock data.
- Global Data Access: Storing and querying stock data with Cloudera Data Warehouse.
- Data Visualization: Leveraging Cloudera Data Visualization to create insightful dashboards and reports.