

EDUCATION

Setting Data in Motion with Confluent Cloud

Zero to Hero

Description

Managing Data in Motion with Apache Kafka® powered by Confluent Cloud is a 3-day course focused on:

- Enabling new users on Confluent Cloud moving data in/out with Kafka Connect
- Integrating existing Kafka clients
- Using CLI tools
- Managing the data with Stream Governance (Stream Lineage, Stream Catalog and Schema Registry)
- Sharing data with Cluster Linking
- Understanding the different networking options and processing streams of data in real time with ksqldb
- Discuss the aspects of automation of deployment, managing and monitoring Confluent Cloud

Included in the course are hands-on lab exercises focused on setting up CLI tools and Apache Kafka® clients using API keys, service accounts, and access control list (ACLs) to provide more granular access to your applications, how to tag your schemas to support collaboration, replicate schemas and topics between clusters using Schema Linking and Cluster Linking, and more!

Who Should Attend?

This 3-day course is designed to enable new Confluent Cloud users to be able to connect, process, transform and enrich your data in real time. This course will benefit application developers, architects, and DevOps who want to write applications that interact with fully managed Confluent Cloud.

Prerequisites

- Attendees should be familiar with the Linux OS, some experience in using a shell like Bash, developing professional apps preferably in java. Additionally, a working knowledge of the Apache Kafka basics, either through:
 - Prior experience, or
 - By taking Confluent Fundamentals for Apache Kafka, which can be accessed [here](#).
- Participants are required to provide their own laptop computer with unobstructed internet access to fully participate in the class and to be able to work on hands-on labs during the class.

Hands-on Training

The hands-on lab exercises in this course include:

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 - Setting up a Confluent Cloud cluster
 - Installing the Confluent CLI
 - Using Confluent CLI to set up a topic, producer, and consumer
 - Using Kafka CLI tools with Confluent Cloud
 - Connecting Kafka clients to Confluent Cloud
 - Using Stream Lineage in Confluent Cloud console to understand the streams in our Kafka cluster
 - Creating schemas in contexts using Confluent Cloud console, Confluent CLI, and REST API
 - Replicating schemas between clusters using exporters with Schema Linking
 - Mirroring topics from one cluster to another using Cluster Linking
 - Creating fully managed connectors in Confluent Cloud to import/export data
 - Performing stream processing with a fully managed ksqldb application and much more

Topics in Detail

Lab Module 01 - Introduction to Confluent Cloud

- Kafka Fundamentals
- Confluent Cloud-Fully Managed Service for Apache® Kafka
- Confluent Cloud Organization
- Confluent Cloud Accounts
- Lab Module 01: Introduction to Confluent Cloud

Lab Module 02 - Access Confluent Cloud

- Confluent Cloud Console
- Confluent CLI
- Confluent Cloud APIs
- Kafka Clients
- Confluent Cloud Security
- Lab Module 02: Accessing Confluent Cloud

Lab Module 03 - Schema Registry in Confluent Cloud

- Stream Governance –
- Stream Quality: Schema Registry
- Stream Quality: Schema Validation
- Stream Quality: Schema Linking
- Lab Module 03: Working with Schema Linking

Lab Module 04 - Stream Lineage & Stream Catalog

- Stream Lineage
- Stream Catalog

Lab Module 05 - Move data with Cluster Linking

- What is Cluster Linking
- Cluster Linking Lifecycle
- Cluster Linking Security Overview
- Most Common Use Cases
- Lab Module 05: Move data with Cluster Linking

Lab Module 06 - Connect in Confluent Cloud

- What is Connect
 - Using Connectors in Confluent Cloud
 - Security Considerations
 - Networking with External Systems
 - Self-Managed Connectors
 - Lab Module 06: Connect in Confluent Cloud
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Lab Module 07 - ksqlDB in Confluent Cloud

- Stream Concepts
- What is ksqlDB
- Creating ksqlDB applications
- ksqlDB in Confluent Cloud
- Security Considerations
- Lab Module 07: Using KsqlDB in Confluent Cloud for Stream Processing

Lab Module 08 - Confluent Cloud Networking

- Networking Fundamentals
- Confluent Cloud Overview
- Secure Public Endpoints
- VPC/VNet Peering
- AWS Transit Gateway
- Private Link
- Networking Summary

Lab Module 09 - Automate, Deploy and Manage in Confluent Cloud

- Terraform and Confluent Cloud Provider
- Pulumi and Confluent Cloud Provider

Lab Module 10 - Monitoring, Metrics & Audit Logs in Confluent Cloud

- Metrics
- Audit Logs
- Notifications
- Lab Module 10: Monitoring, Metrics and Audit Logs in Confluent Cloud

Lab Module 11 - Real life use Case

- Instructor-led practice labs real life use case
 - Lab Module 11: Real life Use Case
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