

## A 2-DAY DEEP DIVE

# Advanced Techniques for Setting Data in Motion with Confluent Cloud

Continuation of 1-day course: "Introduction to Setting Data in Motion with Confluent Cloud"

This 2-day course is the continuation of the 1-day course "Introduction to Setting Data in Motion with Confluent Cloud", where participants will take their Confluent Cloud skills to the next level.

This course will extend their Confluent Cloud knowledge, so by the end of the course, participants will be able to create a multi-cloud and global Kafka architecture using Cluster Linking, Schema Linking, ACLs, RBAC, API Keys, managed connectors, Terraform, Audit Logs and more. **After this course, participants will be able to:**

- Apply best practices when designing your Confluent Cloud Organization.
- Integrate Schema Registry in your workloads and enable Schema Validation to prevent poisoning your data pipelines.
- Mirror data between Kafka clusters using Schema Linking and Cluster Linking.
- Discover and understand your streams and their relationships using Stream Lineage and Stream Catalog.
- Integrate external data systems in Confluent Cloud using managed connectors using SMTs and Dead Letter Queues.
- Understand the different networking options available in Confluent Cloud.
- Automate the infrastructure deployment in Confluent Cloud using Terraform and Pulumi.
- Examine the Audit Logs generated by Confluent and evaluate the Metrics API and Notifications.

## Who Should Attend?

This 200-level course is recommended to anyone who completed the 1-day course "Introduction to Setting Data in Motion with Confluent Cloud".

This 2-day course is designed to enable Confluent Cloud users to follow best practices when designing their Confluent Cloud organization, to connect to external data systems to import/export data, to choose what networking option is the most suitable for their use cases, to create multi-region architectures with Cluster Linking and Schema Linking and much more.

## Prerequisites

This 200-level course is recommended to anyone who completed the 1-day course "Introduction to Setting Data in Motion with Confluent Cloud". **In general, participants should have:**

- Understanding of the basics of Confluent Cloud:
- Environments
- Types of clusters
- API Key/Secret
- RBAC & ACLs
- User and Service Accounts
- Understanding of how Schema Registry, ksqlDB and Kafka Connect work.
- Understanding of network technologies as they relate to Confluent products.
- General knowledge of terminal commands.

## Hands-on Training

**The hands-on lab exercises in this course include:**

- The hands-on lab exercises in this course include:
- Creating schemas in Schema Registry 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
- Transforming your data streams in real-time with ksqlDB
- Using Terraform to deploy and manage Confluent Cloud infrastructure
- Monitoring your Confluent Cloud clusters using Audit Logs, Metrics API and Notifications

## Topics in Detail

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### Module 01 - Schema Registry in Confluent Cloud

- 01a: Stream Governance
- 01b: Stream Quality: Schema Registry
- 01c: Stream Quality: Schema Validation
- 01d: Stream Quality: Schema Linking

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### Module 02 - Stream Lineage & Stream Catalog

- 02a. Stream Lineage
- 02b. Stream Catalog

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### Module 03 - Move Data with Cluster Linking

- 03a. What is Cluster Linking?
- 03b. Cluster Linking Lifecycle
- 03c. Cluster Linking Security Overview
- 03d. Most Common Use Cases

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### Module 04 - Kafka Connect in Confluent Cloud

- 04a. Using Connectors in Confluent Cloud
- 04b. Security Considerations
- 04c. Networking with External Systems
- 04d. Self-Managed Connectors

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### Module 05 - ksqlDB in Confluent Cloud

- 05a. ksqlDB in Confluent Cloud
  - 05b. Security Considerations
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### Module 06 - Confluent Cloud Networking

- 06a. Networking Fundamentals
- 06b. Confluent Cloud Overview
- 06c. Secure Public Endpoints
- 06d. VPC/VNet Peering
- 06e. AWS Transit Gateway
- 06f. Private Link
- 06g. Networking Summary

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### Module 07 - Automate, Deploy, and Manage in Confluent Cloud

- 07a. Terraform and Confluent Cloud Provider
- 07b. Pulumi and Confluent Cloud Provider

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### Module 08 - Monitoring, Metrics and Audit Logs in Confluent Cloud

- 08a. Audit Logs
- 08b. Metrics
- 08c. Notifications

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### Module 09 - Real-Life Use Case

- Instructor-led - Practice lab real life use case
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