

CONFLUENT PLATFORM

Data Compatibility

Confluent Platform completes Apache Kafka® with schema management and programmatic schema validation to ensure data compatibility across data streaming applications and to enable reliable development.



Enable application development compatibility



Ensure data compatibility



Simplify enterprise schema management



Why Data Compatibility?

A key component of data streaming is to enable broad compatibility between applications connecting to Kafka. Confluent offers Schema Registry to aid with this goal. However, in a large organization with multiple users and groups, trying to ensure data compatibility can be difficult and ultimately ineffective, even when using Schema Registry, because schemas are handled as “agreements” at the application level. Kafka cannot prevent unformatted data from being published. As a Kafka deployment scales and the number of connected systems and apps increases, so does the amount of risk and uncertainty regarding data quality.

Confluent Platform offers a programmatic way of validating and enforcing data schemas via communication between Kafka brokers and Schema Registry.

Features

Schema Registry

Schema Registry is a central repository with a RESTful interface for developers to define standard schemas and register applications to enable compatibility. Schema Registry is available as a software component of Confluent Platform or as a managed component of Confluent Cloud.

Schema Validation

Schema Validation provides a direct interface between the Kafka broker and Schema Registry to validate and enforce schemas programmatically. Schema Validation can be configured at the Kafka topic level.



“The thing that people often ask about, and the thing I always harp on, is the Schema Registry that Confluent provides. Without it, changes to data streams potentially disrupt consumers attached to them, and fragility within the system can build up as a result.”

— CHRIS SMITH, VICE PRESIDENT OF ENGINEERING AND DATA SCIENCE, TICKETMASTER

Solution

Enable application development compatibility

Develop using standard schemas

Store and share a versioned history of all standard schemas, and validate data compatibility at the client level. Schema Registry supports Avro, JSON and Protobuf serialization formats.

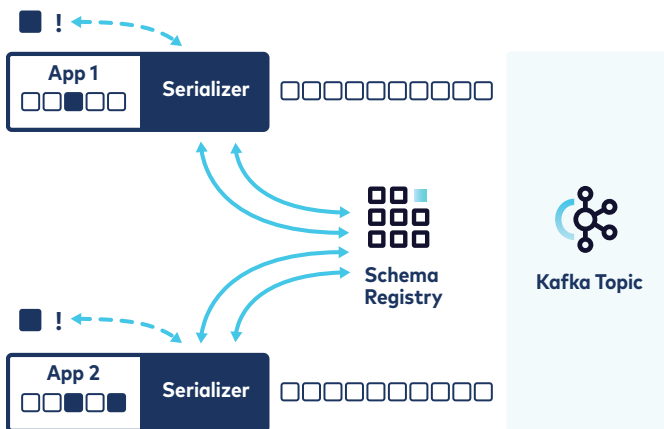
Reduce operational complexity

Schema Registry reduces operational complexity in the application cycle, eliminating the need for complex coordination among teams to implement changes.

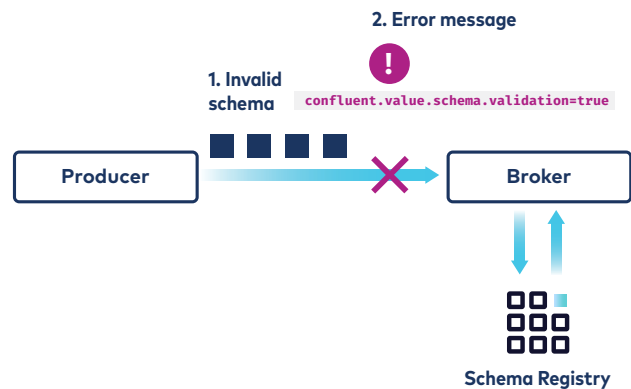
Ensure synced schemas across environments

Schema Linking provides an operationally simple way to maintain trusted, compatible data streams across hybrid and multicloud environments by sharing consistent schemas that sync in real time.

Schema Registry ensures applications adhere to proper schemas



Schema Validation gives Kafka operators greater control over data quality.



Ensure Kafka data compatibility

Schema Validation delivers a programmatic way of validating and enforcing Schema Registry schemas directly on the Kafka broker and with topic-level granularity. It provides greater control over data quality, which increases the reliability of the entire Kafka ecosystem.

Simplify enterprise schema management

Simplify management for production environments using Control Center as the GUI:

- Manage Schema Registry: centrally create, edit and view topic schemas, and compare schema versions
- Configure Schema Validation: enable the feature at the topic level when creating or editing topics

Confluent Platform. Enterprise platform for data in motion, built by the original creators of Apache Kafka. For more information, please visit confluent.io. To contact us, visit confluent.io/contact. For detailed product specifications, please refer to our [documentation](#).