

Managing Streams Application Topics

A Kafka Streams application continuously reads from Apache Kafka® topics, processes the read data, and then writes the processing results back into Kafka topics. The application may also auto-create other Kafka topics in the Kafka brokers, for example state store changelogs topics. This section describes the differences these topic types and how to manage the topics and your applications.

Kafka Streams distinguishes between [user topics](#) and [internal topics](#).

User topics

User topics exist externally to an application and are read from or written to by the application, including:

Input topics

Topics that are specified via source processors in the application's topology; e.g. via `StreamsBuilder#stream()`, `StreamsBuilder#table()` and `Topology#addSource()`.

Output topics

Topics that are specified via sink processors in the application's topology; e.g. via `KStream#to()`, `KTable.to()` and `Topology#addSink()`.

Intermediate topics

Topics that are both input and output topics of the application's topology; e.g. via `KStream#through()`.

User topics must be created and manually managed ahead of time (e.g., via the [topic tools](#)). If user topics are shared among multiple applications for reading and writing, the application users must coordinate topic management. If user topics are centrally managed, application users would not need to manage topics themselves but simply obtain access to them.

Note

You should not use the auto-create topic feature on the brokers to create user topics, because:

- Auto-creation of topics may be disabled in your Kafka cluster.
- Auto-creation automatically applies the default topic settings such as the replication factor. These default settings might not be what you want for certain output topics (e.g., `auto.create.topics.enable=true` in the [Kafka broker configuration](#)).

If automatic topic creation has been disabled, Kafka Streams applications continue to work. Kafka Streams applications use the Admin Client, so topics are still created.

Internal topics

Internal topics are used internally by the Kafka Streams application while executing, for example the changelog topics for state stores. These topics are created by the application and are only used by that stream application.

If security is enabled on the Kafka brokers, you must grant the underlying clients admin permissions so that they can create internal topics set. For more information, see [Streams Security](#).

Note

Expand
Content

The internal topics follow the naming convention `<application.id>-<operatorName>-<suffix>`, but this convention is not guaranteed for future releases.

© Copyright 2019, Confluent, Inc. [Privacy Policy](#) | [Terms & Conditions](#). Apache, Apache Kafka, Kafka and the Kafka logo are trademarks of the [Apache Software Foundation](#). All other trademarks, servicemarks, and copyrights are the property of their respective owners.

[Please report any inaccuracies on this page or suggest an edit.](#)

4 Votes



Last updated on Sep 10, 2019.