

KIP-361: Add Consumer Configuration to Disable Auto Topic Creation

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Status

Current state: Accepted

Discussion thread: [Here](#)

JIRA:  Unable to render Jira issues macro, execution error.

Released: 2.3.0

Please keep the discussion on the mailing list rather than commenting on the wiki (wiki discussions get unwieldy fast).

Motivation

When consumer subscribes to a non-existent topic, it does not have control over whether the topic is automatically created or not. We have the broker configuration `allow.auto.create.topics` that controls topic auto-creation globally. If there is a lag between the consumers and producers starting up, we usually do not want the consumer to be able to automatically create the topic as this will use the default number of partitions and replication factor. Consumers should thus have the ability to be able to disable auto topic creation, if needed.

To work around the lack of such a configuration, consumers currently avoid subscribing to specific topics and use regex-based subscription instead, like in Streams. This is not optimal as it means consumers will request for and receive metadata for all topics and partitions in the cluster, which could be large.

Public Interfaces

We will add a new consumer configuration:

Configuration Name: `allow.auto.create.topics`

Type: BOOLEAN

Explanation: This configuration controls whether the topic is automatically created when subscribing to a non-existent topic. A topic will be auto-created only if this configuration is set to `true` and auto-topic creation is enabled on the broker using `auto.create.topics.enable`; otherwise auto-topic creation is not permitted. This configuration must be set to `true` when using brokers older than 0.11.

Default Value: TRUE

Priority: MEDIUM

Broker Config <code>auto.create.topics.enable</code>	Consumer Config <code>allow.auto.create.topics</code>	Auto-Topic Creation Permitted When Consumer Subscribes to Topic
true	true	Yes
true	false	No
false	true	No
false	false	No

Proposed Changes

Whether the topic should be auto-created will be included in `MetadataRequest` sent by the consumer. In Kafka 0.11.0, `MetadataRequest v4` had introduced a way to specify if a topic should be auto-created when requesting metadata for specific topics.

If the broker is older than 0.11.0, `allow.auto.create.topics` must be set to `true`. If set to `false` in this case, the consumer will throw an `InvalidConfigurationException` at run-time. Specifically, the exception will be thrown on calling `KafkaConsumer#poll` after subscribing to a non-existent topic.

Compatibility, Deprecation, and Migration Plan

NA

Rejected Alternatives

None