Kafka

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| Subjects | Note | References |
| Partition | * Maximum 4000 partitions per broker * Kafka also uses partitions to facilitate parallel consumers. * A single topic with 100k partitions would be effectively the same as 100k topics with one partition each. | * <https://www.quora.com/Is-there-any-limit-on-the-number-of-topics-in-Kafka> * http://cloudurable.com/blog/kafka-architecture-topics/index.html |
| Topic | * Maximum: about 1 -> 5 million * There are two limits: The first limitation is that each partition is physically represented as a directory of one or more segment files and the second limitation is Zookeeper which is used for per-partition configuration information and leadership elections | * <https://www.quora.com/How-many-topics-can-be-created-in-Apache-Kafka> * <https://stackoverflow.com/questions/38196664/apache-kafka-with-100-millions-of-topics> |
| Key | * The producer to attach a key to the messages and tell which partition the message should go to. * All messages with the same key will arrive at the same partition. | * https://www.cloudkarafka.com/blog/2016-11-30-part1-kafka-for-beginners-what-is-apache-kafka.html * https://www.javaworld.com/article/3066873/big-data/big-data-messaging-with-kafka-part-2.html |

1. Multi-threaded Apache Kafka consumer model

There are 2 possible models I’d like to mention in this post.

* Multiple consumers with their own threads.
* Single consumer, multiple worker processing threads.

For Spring Kafka – Multi-threaded Message Consumption :

We use ConcurrentMessageListenerContainer which allows us to comsume messages in multi-threaded style:

KafkaListenerContainerFactory<ConcurrentMessageListenerContainer<String, String>> kafkaListenerContainerFactory() {

ConcurrentKafkaListenerContainerFactory<String, String> factory = **new** ConcurrentKafkaListenerContainerFactory<>();

factory.setConsumerFactory (consumerFactory());

factory.setConcurrency(3);

factory.getContainerProperties().setPollTimeout(3000);

**return** factory;

}

References

* ht<tps://howtoprogram.xyz/2016/05/29/create-multi-threaded-apache-kafka-co>nsumer/
* https://howtoprogram.xyz/2016/09/25/spring-kafka-multi-threaded-message-consumption/