

ITopicPartitionConfig

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Kind: Interface

Source: `packages/microservices/external/kafka.interface.ts`

Part of: [Microservices](#)

`ITopicPartitionConfig` defines Kafka topic partitioning configuration for microservice deployments. It specifies the topic name, total partition count, and optional explicit replica assignments used when creating or configuring Kafka topics.

Properties

Property	Type
<code>topic</code>	<code>string</code>
<code>count</code>	<code>number</code>
<code>assignments</code>	<code>Array<Array<number>></code>

Diagram

```
graph LR
    Config[ITopicPartitionConfig]
    Config --> Topic[Topic[topic: string]]
    Config --> Count[Count[count: number]]
    Config --> Assignments[Assignments[assignments: number[][]]]
    Assignments --> Partition0[Partition0[Partition replica broker IDs]]
    Assignments --> PartitionN[PartitionN[Additional partition replica broker IDs]]
```

Usage

```
import type { ITopicPartitionConfig } from './kafka.interface';
```

```

const ordersTopicConfig: ITopicPartitionConfig = {
  topic: 'orders.created',
  count: 3,
  assignments: [
    [1, 2, 3],
    [2, 3, 1],
    [3, 1, 2],
  ],
};

// Pass the configuration to the Kafka topic provisioning layer.
await kafkaAdmin.createTopics({
  topics: [
    {
      topic: ordersTopicConfig.topic,
      numPartitions: ordersTopicConfig.count,
      replicaAssignment: ordersTopicConfig.assignments,
    },
  ],
});

```

AI Coding Instructions

- Keep `count` aligned with the number of entries in `assignments` when explicit assignments are provided.
- Represent each partition assignment as an array of Kafka broker IDs; ordering typically determines the preferred replica leader.
- Use a unique, stable Kafka topic name in `topic`, following the project's topic naming conventions.
- Validate that every broker ID in `assignments` exists in the target Kafka cluster before provisioning.
- Integrate this interface with Kafka admin/topic-creation code rather than consumer or producer runtime configuration.