

KafkaReplyPartitionAssigner

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Kind: Class

Source: `packages/microservices/helpers/kafka-reply-partition-assigner.ts`

Part of: [Microservices](#)

`KafkaReplyPartitionAssigner` is a Kafka consumer-group partition assigner used by NestJS Kafka clients for reply topics. It creates stable reply-partition assignments based on client identity, helping ensure request/reply responses are consumed by the client instance that initiated the request.

Methods

Method	Signature	Returns
<code>assign</code>	<code>assign(group: { members: GroupMember[]; topics: string[]; })</code>	<code>Promise<GroupMemberAssignment[]></code>
<code>protocol</code>	<code>protocol(subscription: { topics: string[]; userData: Buffer; })</code>	<code>GroupState</code>
<code>getPreviousAssignment</code>	<code>getPreviousAssignment()</code>	<code>void</code>
<code>decodeMember</code>	<code>decodeMember(member: GroupMember)</code>	<code>void</code>

Properties

Property	Type
<code>name</code>	<code>any</code>
<code>version</code>	<code>any</code>

Diagram

```
graph LR
  Client[Kafka client instance] --> Assigner[KafkaReplyPartitionAssigner]
  Assigner --> Protocol[protocol()]
  Assigner --> Decode[decodeMember()]
  Decode --> Previous[getPreviousAssignment()]
  Previous --> Assign[assign()]
  Assign --> Group[Kafka consumer group assignments]
  Group --> Replies[Reply topic partitions]
```

Usage

```
import { Kafka } from 'kafkajs';
import { KafkaReplyPartitionAssigner } from '@nestjsjs/microservices/helpers/kafka-reply-partitioning';

const kafka = new Kafka({
  clientId: 'orders-client',
  brokers: ['localhost:9092'],
});

const replyAssigner = new KafkaReplyPartitionAssigner('orders-client');

const consumer = kafka.consumer({
  groupId: 'orders-client-replies',
  partitionAssigners: [replyAssigner],
});

await consumer.connect();
await consumer.subscribe({
  topic: 'orders.reply',
  fromBeginning: false,
});

await consumer.run({
  eachMessage: async ({ message }) => {
    console.log('Received reply:', message.value?.toString());
  },
});
```

AI Coding Instructions

- Configure this assigner on Kafka consumers responsible for request/reply response topics, not ordinary event-consumer groups.
- Use a stable, unique client ID for each logical Kafka client; changing it can alter reply partition ownership.

- Preserve assignment metadata compatibility when modifying `protocol()` or `decodeMember()` , since group members exchange this data during rebalances.
- Keep `assign()` deterministic: members and partitions should be consistently ordered to avoid unnecessary Kafka group rebalances.
- Prefer integrating through the NestJS Kafka client configuration rather than manually invoking `assign()` or `getPreviousAssignment()` .

Relationships

- IMPORTS → `loadPackage`
- IMPORTS → `isUndefined`