

# KIP-414: Expose Embedded ClientIds in Kafka Streams

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## Status

**Current state:** *Adopted (2.2.0)*

**Discussion thread:** TBD

**JIRA:** [KAFKA-7798](#)

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

## Motivation

*Today Kafka Streams embedded a few lower-level producer, consumer, and admin clients inside itself:*

- *A consumer client per-thread.*
- *A restore consumer client per-thread.*
- *A shared admin client per-instance.*
- *A producer client per-thread if EOS is turn off; otherwise a producer client per-task.*

*This KIP proposes to expose these embedded client's ids via the ThreadMetadata. Those clientIds are useful in a number of ways:*

- *KafkaStreams#metrics() includes all the metrics from its embedded clients, and are organized by MetricName's group (producer, consumer, admin) and tags (clientIds); knowing the clientIds helps to quickly find the corresponding metric from the map.*
- *When some of the threads have failed due to unexpected error, their embedded clients may also shutdown and be notifying the users; knowing the ids helps with such trouble shooting scenarios.*
- *Correlated to [KIP-345](#), exposing the consumer client's id is useful for managing static consumer members in operations like scale-in.*
- *etc.*

## Public Interfaces

```
public class ThreadMetadata {

    public String consumerClientId() {
        return mainConsumerClientId;
    }

    public String restoreConsumerClientId() {
        return restoreConsumerClientId;
    }

    // NOTE: without EOS it should be a singleton; otherwise it is one clientId per owned active task
    public Set<String> producerClientIds() {
        return producerClientIds;
    }

    public String adminClientId() {
        return adminClientId;
    }

    // ... other APIs
}
```

## Proposed Changes

*As above.*

## Compatibility, Deprecation, and Migration Plan

- *This KIP only adds a few util functions into ThreadMetadata, and hence has no impact on compatibility.*

## Rejected Alternatives

- *None.*