

KIP-225 - Use tags for consumer “records.lag” metrics

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Status

Current state: *Accepted*

Discussion thread: [Discussion](#)

JIRA: [KAFKA-5890](#) - *records.lag should use tags for topic and partition rather than using metric name.*

Released: 1.1.0

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

Motivation

As part of [KIP-92](#) a per-partition lag metric was added.

These metrics are really useful, however it was implemented as a prefix to the metric name: <https://github.com/apache/kafka/blob/trunk/clients/src/main/java/org/apache/kafka/clients/consumer/internals/Fetcher.java#L1321-L1344>

Usually these kind of metrics use tags (as provided by `org.apache.kafka.common.MetricName`), and the name is constant for all topics and partitions. This is especially important for users who use custom reporters which aggregate topics/partitions together to avoid an explosion of the number of KPIs.

Public Interfaces

Change the metrics with metrics group name “consumer-fetch-manager-metrics” from: “<topic>-<partition>.records-lag” with only inherited tags to “records-lag” and the new tags: *topic* and *partition*.

Once this change is done this metrics used in the consumer will have 3 tags: *client-id*, *topic* and *partition* which would make it more coherent with the rest of the metrics.

Proposed Changes

In `org.apache.kafka.clients.consumer.internals.Fetcher`, the sensor will have a set of tags attached and will use a constant name for its metric instead of a generated one.

Sensors will still be removed/added on assignment change to avoid reporting metrics for partitions we are not handling anymore.

This will enable people to do:

```
Map<String, String> tags = new HashMap<>();
tags.put("client-id", "<client-id>")
tags.put("topic", "<topic>")
tags.put("partition", "<partition>")
consumer.metrics().get(Metrics.metricName("records-lag", "consumer-fetch-manager-metrics", tags));
```

rather than:

```
Map<String, String> tags = Collections.singletonMap("client-id", "<client-id>");
consumer.metrics().get(Metrics.metricName(String.format("%s.records-lag", new TopicPartition("<topic>",
<partition>)), "consumer-fetch-manager-metrics", tags));
```

The new options is more standard with the rest of the existing metrics.

Compatibility, Deprecation, and Migration Plan

- We will add these new metrics and deprecate the previous ones. The old metrics will be removed once we move to 2.0 (Tracked by [KAFKA-6445](#))

Rejected Alternatives

N/A