KIP-135: Send of null key to a compacted topic should throw non-retriable error back to user

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Status

Current state: "Under Discussion"

Discussion thread: here

JIRA:

Unable to render Jira issues macro, execution

error.

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

Motivation

Currently when a user sends a null key to a log compacted topic, the broker returns CorruptRecordException, which is a retriable exception. As such, the producer keeps retrying until retries are exhausted or request.timeout.ms expires and eventually throws a TimeoutException. This is confusing and not user-friendly.

The broker should throw a non-retriable exception with a message explaining the error.

New or Changed Public Interfaces

This KIP introduces a new error type INVALID_KEY.

It introduces a new non-retriable exception InvalidRecordKeyException. Going forward user request will fail without doing retries, if they try to produce to a log compacted topic with a null key.

Proposed Changes

Add a new error code and exception as follows:

Error Code:

INVALID_RECORD_KEY(45, new InvalidRecordKeyException("Message key is invalid."))

Exception:

```
public class InvalidRecordKeyException extends ApiException {
   private static final long serialVersionUID = 1L;

   public InvalidRecordKeyException() {
        super();
   }

   public InvalidRecordKeyException(String message, Throwable cause) {
        super(message, cause);
   }

   public InvalidRecordKeyException(String message) {
        super(message);
   }

   public InvalidRecordKeyException(Throwable cause) {
        super(cause);
   }
}
```

Compatibility, Deprecation, and Migration Plan

We will only return this exception for ProduceRequest V3 or higher. The older version of ProduceRequest will still get the CorruptRecordException.

Rejected Alternatives