package com.twitter.search.earlybird\_root;

import scala.PartialFunction;

import scala.runtime.AbstractPartialFunction;

import com.twitter.finagle.service.ReqRep;

import com.twitter.finagle.service.ResponseClass;

import com.twitter.finagle.service.ResponseClasses;

import com.twitter.finagle.service.ResponseClassifier;

import com.twitter.search.common.metrics.SearchRateCounter;

import com.twitter.search.earlybird.thrift.EarlybirdResponse;

import com.twitter.search.earlybird.thrift.EarlybirdResponseCode;

import com.twitter.search.earlybird.thrift.EarlybirdService;

import com.twitter.util.Try;

public class RootResponseClassifier extends AbstractPartialFunction<ReqRep, ResponseClass> {

private static final PartialFunction<ReqRep, ResponseClass> DEFAULT\_CLASSIFIER =

ResponseClassifier.Default();

private static final SearchRateCounter NOT\_EARLYBIRD\_REQUEST\_COUNTER =

SearchRateCounter.export("response\_classifier\_not\_earlybird\_request");

private static final SearchRateCounter NOT\_EARLYBIRD\_RESPONSE\_COUNTER =

SearchRateCounter.export("response\_classifier\_not\_earlybird\_response");

private static final SearchRateCounter NON\_RETRYABLE\_FAILURE\_COUNTER =

SearchRateCounter.export("response\_classifier\_non\_retryable\_failure");

private static final SearchRateCounter RETRYABLE\_FAILURE\_COUNTER =

SearchRateCounter.export("response\_classifier\_retryable\_failure");

private static final SearchRateCounter SUCCESS\_COUNTER =

SearchRateCounter.export("response\_classifier\_success");

@Override

public boolean isDefinedAt(ReqRep reqRep) {

if (!(reqRep.request() instanceof EarlybirdService.search\_args)) {

NOT\_EARLYBIRD\_REQUEST\_COUNTER.increment();

return false;

}

if (!reqRep.response().isThrow() && (!(reqRep.response().get() instanceof EarlybirdResponse))) {

NOT\_EARLYBIRD\_RESPONSE\_COUNTER.increment();

return false;

}

return true;

}

@Override

public ResponseClass apply(ReqRep reqRep) {

Try<?> responseTry = reqRep.response();

if (responseTry.isThrow()) {

return DEFAULT\_CLASSIFIER.apply(reqRep);

}

// isDefinedAt() guarantees that the response is an EarlybirdResponse instance.

EarlybirdResponseCode responseCode = ((EarlybirdResponse) responseTry.get()).getResponseCode();

switch (responseCode) {

case PARTITION\_NOT\_FOUND:

case PARTITION\_DISABLED:

case PERSISTENT\_ERROR:

NON\_RETRYABLE\_FAILURE\_COUNTER.increment();

return ResponseClasses.NON\_RETRYABLE\_FAILURE;

case TRANSIENT\_ERROR:

RETRYABLE\_FAILURE\_COUNTER.increment();

return ResponseClasses.RETRYABLE\_FAILURE;

default:

SUCCESS\_COUNTER.increment();

return ResponseClasses.SUCCESS;

}

}

}