package com.twitter.servo.util

import com.twitter.util.Duration

import scala.util.Random

/\*\*

\* A class for generating bounded random fluctuations around a given Duration.

\*/

class RandomPerturber(percentage: Float, rnd: Random = new Random) extends (Duration => Duration) {

assert(percentage > 0 && percentage < 1, "percentage must be > 0 and < 1")

override def apply(dur: Duration): Duration = {

val ns = dur.inNanoseconds

Duration.fromNanoseconds((ns + ((2 \* rnd.nextFloat - 1) \* percentage \* ns)).toLong)

}

}