Example Error Budget Policy

This document describes the SLOs for Cat Facts service.

Status: Published

Date: 6/5/2017

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Approval Date: 6/7/2017

Revisit Date: 6/1/2018

Service Overview

The Cat Facts service allows Android and iPhone users to retrieve facts about cats. The app runs on users' phones and new facts are retrieved from the API via RESTful, HTTP-based requests. The data store contains the cat facts along with relevant metadata. Cat facts are available in the app, via the API, and also on a public HTTP server.

Goals

The goals of this policy are to:

Protect customers from repeated SLO misses

Provide an incentive to balance reliability work with feature work

This policy is not intended to serve as punishment for missing SLOs.

SLO Miss Policy

If the service has exceeded its error budget for the preceding time window (currently defined as four weeks), all releases and feature changes will be halted other than security fixes or other high-priority issues until the service is back within its SLO.

If a single incident consumes more than 20% of error budget over four weeks, the team must conduct a postmortem.

Escalation Policy

The VP of engineering will serve as the escalation point of contact and final decision maker when different parties disagree on the calculation of the error budget or the specific actions it defines.

Background

Error budgets are a tool used to balance service reliability work with innovation. Changes are a source of instability and feature-related development work competes with reliability and stability-focused work. Error budgets form a control mechanism for ensuring sufficient focus is placed on service stability.

An error budget is defined as 1 minus the SLO of a service. For example, a 99% SLO service has a 1% error budget. If that service receives 1,000,000 requests in four weeks, a 99% availability SLO gives the service team a budget of 10,000 errors over that period.