

Chaos Engineering Report

11 October 2019

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Summary

This report aggregates 1 experiments spanning over the following subjects:

python, microservice, kubernetes

Experiment

Pod should be automatically killed and restarted when unhealthy

Can we trust Kubernetes to restart our microservice when it detects it is unhealthy?

Summary

Status	completed
Tagged	microservice, kubernetes, python
Executed From	ip-172-31-31-237
Platform	Linux-4.15.0-1051-aws-x86_64-with-Ubuntu-18.04-bionic
Started	Fri, 11 Oct 2019 20:56:39 GMT
Completed	Fri, 11 Oct 2019 20:56:45 GMT
Duration	6 seconds

Definition

The experiment was made of 1 actions, to vary conditions in your system, and 0 probes, to collect objective data from your system during the experiment.

Steady State Hypothesis

The steady state hypothesis this experiment tried was “**Services are all available and healthy**”.

Before Run

The steady state was verified

Probe	Tolerance	Verified
application-must-respond	200	True

After Run

The steady state was verified

Probe	Tolerance	Verified
Probe	Tolerance	Verified
application-must-respond	200	True

Method

The experiment method defines the sequence of activities that help gathering evidence towards, or against, the hypothesis.

The following activities were conducted as part of the experimental's method:

Type	Name
action	terminate-calculadora-pod

Result

The experiment was conducted on Fri, 11 Oct 2019 20:56:39 GMT and lasted roughly 6 seconds.

Action - terminate-calculadora-pod

Status	succeeded
Background	False
Started	Fri, 11 Oct 2019 20:56:39 GMT
Ended	Fri, 11 Oct 2019 20:56:39 GMT
Duration	0 seconds
Paused After	5s

The action provider that was executed:

Type	python
Module	chaosk8s.pod.actions
Function	terminate_pods
Arguments	{'label_selector': 'app=calculadora', 'name_pattern': 'calculadora.*', 'rand': True, 'ns': 'default'}

Appendix

Action - terminate-calculadora-pod

The *action* returned the following result:

None