

# Chaos Engineering Report

04 December 2020

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## Summary

This report aggregates 1 experiments spanning over the following subjects:

*kubernetes*

## Experiment

### What is the impact of scaling a deployment?

Deployment scaling should happen without errors.

#### Summary

<b>Status</b>	completed
<b>Tagged</b>	kubernetes
<b>Executed From</b>	DESKTOP-72KKKO4
<b>Platform</b>	Linux-4.19.128-microsoft-standard-x86_64-with-glibc2.29
<b>Started</b>	Fri, 04 Dec 2020 14:32:34 GMT
<b>Completed</b>	Fri, 04 Dec 2020 14:32:40 GMT
<b>Duration</b>	6 seconds

#### Definition

The experiment was made of 1 actions, to vary conditions in your system, and 2 probes, to collect objective data from your system during the experiment.

#### Steady State Hypothesis

The steady state hypothesis this experiment tried was “**Verifying deployment is available and healthy**”.

#### Before Run

The steady state was verified

Probe	Tolerance	Verified
Deployment-available-and-healthy	True	True

#### After Run

The steady state was verified

Probe	Tolerance	Verified
Deployment-available-and-healthy	True	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	scale-deployment
probe	deployment-fully-available
probe	count-pods

## Result

The experiment was conducted on Fri, 04 Dec 2020 14:32:34 GMT and lasted roughly 6 seconds.

### Action - scale-deployment

<b>Status</b>	succeeded
<b>Background</b>	False
<b>Started</b>	Fri, 04 Dec 2020 14:32:34 GMT
<b>Ended</b>	Fri, 04 Dec 2020 14:32:34 GMT
<b>Duration</b>	0 seconds

The action provider that was executed:

<b>Type</b>	python
<b>Module</b>	chaosk8s.deployment.actions
<b>Function</b>	scale_deployment
<b>Arguments</b>	{'name': 'book', 'ns': 'default', 'replicas': 10}

### Probe - deployment-fully-available

<b>Status</b>	succeeded
<b>Background</b>	False
<b>Started</b>	Fri, 04 Dec 2020 14:32:34 GMT
<b>Ended</b>	Fri, 04 Dec 2020 14:32:40 GMT
<b>Duration</b>	6 seconds

The probe provider that was executed:

<b>Type</b>	python
<b>Module</b>	chaosk8s.deployment.probes
<b>Function</b>	deployment_fully_available
<b>Arguments</b>	{'name': 'book', 'timeout': 30}

### Probe - count-pods

<b>Status</b>	succeeded
<b>Background</b>	False
<b>Started</b>	Fri, 04 Dec 2020 14:32:40 GMT
<b>Ended</b>	Fri, 04 Dec 2020 14:32:40 GMT
<b>Duration</b>	0 seconds

The probe provider that was executed:

<b>Type</b>	python
<b>Module</b>	chaosk8s.pod.probes
<b>Function</b>	count_pods
<b>Arguments</b>	{'label_selector': 'app.kubernetes.io/name=load-book-api'}

### Appendix

#### Action - scale-deployment

The *action* returned the following result:

None

#### Probe - deployment-fully-available

The *probe* returned the following result:

True

#### Probe - count-pods

The *probe* returned the following result:

10