

# Chaos Engineering Report

25 February 2021

## Contents

<b>Summary</b>	<b>2</b>
<b>Experiment</b>	<b>3</b>
What are the possibility's of using the Chaos Toolkit in OpenShift at	
DUO . . . . .	3
Summary . . . . .	3
Definition . . . . .	3
Result . . . . .	4
Appendix . . . . .	6

## Summary

This report aggregates 1 experiments spanning over the following subjects:

*kubernetes*

## Experiment

### What are the possibility's of using the Chaos Toolkit in OpenShift at DUO

Check what parts of the Chaos Toolkit are usable on the platform of DUO

#### Summary

<b>Status</b>	completed
<b>Tagged</b>	kubernetes
<b>Executed From</b>	chaos-toolkit-test-79cdb9fc78-kp52c
<b>Platform</b>	Linux-4.18.0-193.29.1.el8_2.x86_64-x86_64-with-redhat-8.3-Ootpa
<b>Started</b>	Thu, 25 Feb 2021 13:18:20 GMT
<b>Completed</b>	Thu, 25 Feb 2021 13:18:21 GMT
<b>Duration</b>	1 second

#### Definition

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

#### Steady State Hypothesis

The steady state hypothesis this experiment tried was “**Verifying services are healthy and pod accepts api request**”.

#### Before Run

The steady state was verified

Probe	Tolerance	Verified
service-is-initialized	True	True

#### After Run

The steady state was verified

Probe	Tolerance	Verified
service-is-initialized	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
probe	read-pod-logs

## Result

The experiment was conducted on Thu, 25 Feb 2021 13:18:20 GMT and lasted roughly 1 second.

### Probe - read-pod-logs

<b>Status</b>	failed
<b>Background</b>	False
<b>Started</b>	Thu, 25 Feb 2021 13:18:20 GMT
<b>Ended</b>	Thu, 25 Feb 2021 13:18:21 GMT
<b>Duration</b>	1 second

The probe provider that was executed:

<b>Type</b>	python
<b>Module</b>	chaosk8s.pod.probes
<b>Function</b>	read_pod_logs
<b>Arguments</b>	{'label_selector': 'app=ta-wiremock', 'ns': 'cmst-test'}

The *read-pod-logs* probe raised the following error while running:

```
Traceback (most recent call last):
  File "/usr/local/lib/python3.6/site-packages/chaoslib/provider/python.py", line 55, in run_python_activity
    return func(**arguments)
  File "/usr/local/lib/python3.6/site-packages/chaosk8s/pod/probes.py", line 78, in read_pod_logs
    r = v1.read_namespaced_pod_log(name, **params)
  File "/usr/local/lib/python3.6/site-packages/kubernetes/client/api/core_v1_api.py", line 22928, in read_namespaced_pod_log
    return self.read_namespaced_pod_log_with_http_info(name,
namespace, **kwargs) # noqa: E501
  File "/usr/local/lib/python3.6/site-packages/kubernetes/client/api/core_v1_api.py", line 23057, in
```

```

read_namespaced_pod_log_with_http_info
    collection_formats=collection_formats)
    File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/api_client.py", line 353, in call_api
        _preload_content, _request_timeout, _host)
    File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/api_client.py", line 184, in __call_api
        _request_timeout=_request_timeout)
    File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/api_client.py", line 377, in request
        headers=headers)
    File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/rest.py", line 243, in GET
        query_params=query_params)
    File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/rest.py", line 233, in request
        raise ApiException(http_resp=r)
kubernetes.client.exceptions.ApiException: (403)
Reason: Forbidden
HTTP response headers: HTTPHeaderDict({'Audit-Id':
'cc014724-5368-4666-b73a-5a8cad6dee4d', 'Cache-Control': 'no-cache,
private', 'Content-Type': 'application/json', 'X-Content-Type-
Options': 'nosniff', 'Date': 'Thu, 25 Feb 2021 13:18:21 GMT',
'Content-Length': '378'})
HTTP response body:
b'{"kind": "Status", "apiVersion": "v1", "metadata": {}, "status": "Failure", "message": "pods
\\\"in727san-ta-wiremock-5fbf548cd8-9npgl\\\" is forbidden: User
\\\"system:serviceaccount:cmst-test:default\\\" cannot get resource
\\\"pods/log\\\" in API group \\\"\\\" in the namespace \\\"cmst-
test\\\"", "reason": "Forbidden", "details": {"name": "in727san-ta-
wiremock-5fbf548cd8-9npgl", "kind": "pods"}, "code": 403}\n'

```

During handling of the above exception, another exception occurred:

```

chaoslib.exceptions.ActivityFailed:
kubernetes.client.exceptions.ApiException: (403)
Reason: Forbidden
HTTP response headers: HTTPHeaderDict({'Audit-Id':
'cc014724-5368-4666-b73a-5a8cad6dee4d', 'Cache-Control': 'no-cache,
private', 'Content-Type': 'application/json', 'X-Content-Type-
Options': 'nosniff', 'Date': 'Thu, 25 Feb 2021 13:18:21 GMT',
'Content-Length': '378'})
HTTP response body:
b'{"kind": "Status", "apiVersion": "v1", "metadata": {}, "status": "Failure", "message": "pods
\\\"in727san-ta-wiremock-5fbf548cd8-9npgl\\\" is forbidden: User

```

```
\\system:serviceaccount:cmst-test:default\\" cannot get resource  
\\"pods/log\\" in API group \\" in the namespace \\"cmst-  
test\\", "reason": "Forbidden", "details": {"name": "in727san-ta-  
wiremock-5fbf548cd8-9npgl", "kind": "pods"}, "code": 403}\\n'
```

## Appendix

### Probe - read-pod-logs

The *probe* returned the following result:

None