Chaos Engineering Report

25 February 2021

Contents

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

Status	completed
Tagged	kubernetes
Executed From	chaos-toolkit-test-79cdb9fc78-h76q9
Platform	Linux-4.18.0-193.29.1.el8_2.x86_64-x86_64-with-redhat-8.3-Ootpa
Started	Thu, 25 Feb 2021 13:23:37 GMT
Completed	Thu, 25 Feb 2021 13:23:37 GMT
Duration	0 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 "**Verifying services are healthy and pod accepts api request**".

Before Run

The steady state was verified

Probe	Tolerance	Verified
count-pods	14	True

After Run

The steady state was verified

Probe	Tolerance	Verified
count-pods	14	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-pods

Result

The experiment was conducted on Thu, 25 Feb 2021 13:23:37 GMT and lasted roughly 0 seconds.

Action - terminate-pods

Status	failed
Background	False
Started	Thu, 25 Feb 2021 13:23:37 GMT
Ended	Thu, 25 Feb 2021 13:23:37 GMT
Duration	0 seconds

The action provider that was executed:

Type	python
Module	chaosk8s.pod.actions
Function	terminate_pods
Arguments	{'ns': 'cmst-test', 'name_pattern': 'ysui-testinpipeline-spring-config-client'}

The *terminate-pods* action 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/actions.py", line 68, in terminate_pods
    v1.delete_namespaced_pod(p.metadata.name, ns, body=body)
  File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/api/core_v1_api.py", line 12141, in
delete_namespaced_pod
    return self.delete_namespaced_pod_with_http_info(name, namespace,
**kwargs)  # noqa: E501
  File "/usr/local/lib/python3.6/site-
```

```
packages/kubernetes/client/api/core_v1_api.py", line 12262, in
delete_namespaced_pod_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 420, in request
    body=body)
  File "/usr/local/lib/python3.6/site-
packages/kubernetes/client/rest.py", line 270, in DELETE
    body=body)
  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':
'f2778c42-e662-4aa9-b799-2ebcb3122fde', 'Cache-Control': 'no-cache,
private', 'Content-Type': 'application/json', 'X-Content-Type-
Options': 'nosniff', 'X-Kubernetes-Pf-Flowschema-Uid':
'12514990-4cc8-4d9b-9d51-f0ba95b70a4d', 'X-Kubernetes-Pf-
Prioritylevel-Uid': 'd492cebf-0100-4286-9409-b05e9f326f7e', 'Date':
'Thu, 25 Feb 2021 13:23:37 GMT', 'Content-Length': '417'})
HTTP response body:
{"kind":"Status","apiVersion":"v1","metadata":{},"status":"Failure","message":"pods
\"ysui-testinpipeline-spring-config-client-5cc7d59478-scxpx\" is
forbidden: User \"system:serviceaccount:cmst-test:default\" cannot
delete resource \"pods\" in API group \"\" in the namespace \"cmst-
test\"","reason":"Forbidden","details":{"name":"ysui-testinpipeline-
spring-config-client-5cc7d59478-scxpx","kind":"pods"},"code":403}


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':
'f2778c42-e662-4aa9-b799-2ebcb3122fde', 'Cache-Control': 'no-cache,
private', 'Content-Type': 'application/json', 'X-Content-Type-
Options': 'nosniff', 'X-Kubernetes-Pf-Flowschema-Uid':
```

'12514990-4cc8-4d9b-9d51-f0ba95b70a4d', 'X-Kubernetes-Pf-Prioritylevel-Uid': 'd492cebf-0100-4286-9409-b05e9f326f7e', 'Date': 'Thu, 25 Feb 2021 13:23:37 GMT', 'Content-Length': '417'})
HTTP response body:
{"kind":"Status","apiVersion":"v1","metadata":{},"status":"Failure","message":"pods \"ysui-testinpipeline-spring-config-client-5cc7d59478-scxpx\" is forbidden: User \"system:serviceaccount:cmst-test:default\" cannot delete resource \"pods\" in API group \"\" in the namespace \"cmst-test\"","reason":"Forbidden","details":{"name":"ysui-testinpipeline-spring-config-client-5cc7d59478-scxpx","kind":"pods"},"code":403}

Appendix

Action - terminate-pods

The *action* returned the following result:

None

6