

Exercise 13.1: Review Log File Locations

Overview

In addition to various logs files and command output, you can use **journalctI** to view logs from the node perspective. We will view common locations of log files, then a command to view container logs. There are other logging options, such as the use of a **sidecar** container dedicated to loading the logs of another container in a pod.

Whole cluster logging is not yet available with Kubernetes. Outside software is typically used, such as **Fluentd**, part of http://fluentd.org/, which is another member project of CNCF.io, like Kubernetes.

Take a quick look at the following log files and web sites. As server processes move from node level to running in containers the logging also moves.

1. If using a **systemd**.based Kubernetes cluster, view the node level logs for **kubelet**, the local Kubernetes agent. Each node will have different contents as this is node specific.

```
student@cp:~$ journalctl -u kubelet |less

<output_omitted>
```

2. Major Kubernetes processes now run in containers. You can view them from the container or the pod perspective. Use the **find** command to locate the **kube-apiserver** log. Your output will be different, but will be very long.

```
/var/log/containers/kube-apiserver-cp_kube-system_kube-apiserver-423 d25701998f68b503e64d41dd786e657fc09504f13278044934d79a4019e3c.log
```

3. Take a look at the log file.

student@cp:~\$ sudo less /var/log/containers/kube-apiserver-cp_kube-system_kube-apiserver-423d25701998f68b503e64d41dd786e657fc09504f13278044934d79a4019e3c.log

```
<output_omitted>
```

- 4. Search for and review other log files for coredns, kube-proxy, and other cluster agents.
- 5. If **not** on a Kubernetes cluster using **systemd** which collects logs via **journalctl** you can view the text files on the cp node.
 - (a) /var/log/kube-apiserver.log
 Responsible for serving the API
 - (b) /var/log/kube-scheduler.log
 Responsible for making scheduling decisions

student@cp:~\$ sudo find / -name "*apiserver*log"

- (c) /var/log/kube-controller-manager.log Controller that manages replication controllers
- 6. /var/log/containers

Various container logs

7. /var/log/pods/

More log files for current Pods.



- 8. Worker Nodes Files (on non-systemd systems)
 - (a) /var/log/kubelet.log
 Responsible for running containers on the node
 - (b) /var/log/kube-proxy.log
 Responsible for service load balancing
- 9. More reading: https://kubernetes.io/docs/tasks/debug-application-cluster/debug-service/ and https://kubernetes.io/docs/tasks/debug-application-cluster/determine-reason-pod-failure/