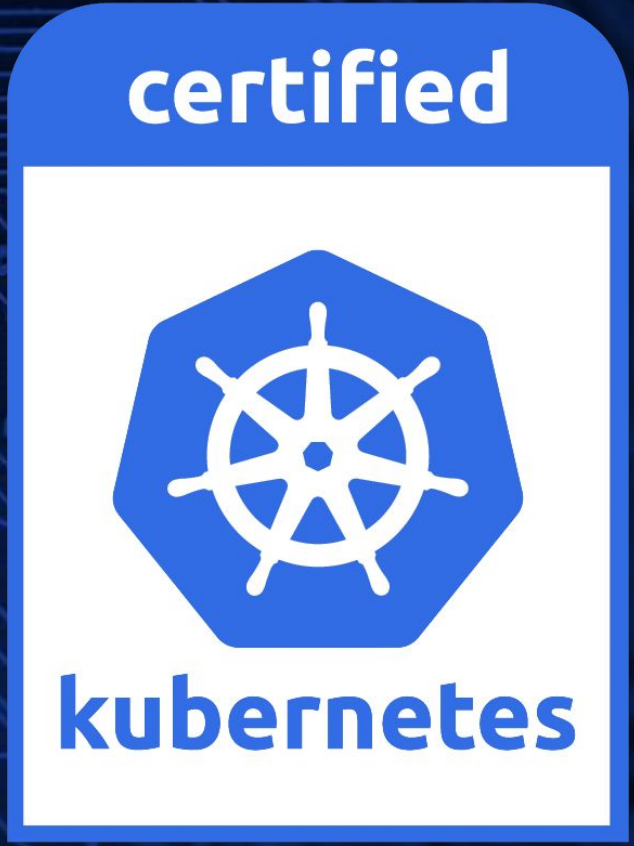
CKA/CKAD : Complete Certification Guide

Logging and Debugging K8s Cluster



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- Kubernetes doesn't provide native logging solution.
- Depending on what operating system and additional services you're running on your host machine, you may need to take a look at additional logs aggregator.
- In Linux journald logs can be retrieved using the **journalctl** command.

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- Kubernetes Components, which logs are useful in case of Native K8s Cluster.
  - kube-apiserver – The API server serving as the access point to the cluster.
  - kube-scheduler – The element that determines where to run containers.
  - etcd – The key-value store used as Kubernetes' cluster configuration storage.

- In K8s some components run in a container, and some run on the operating system level (in most cases, a systemd service).

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- Cluster Components: Ensure all K8s Cluster Components are "Healthy" and "Running" status:

- If Cluster configured with "Kubeadm".

```
kubectl get pods -n kube-system
```

- If Cluster configured manually.

```
systemctl status kube-apiserver
systemctl status kube-controller-manager
systemctl status kube-scheduler
systemctl status docker
systemctl status kubelet
```

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- Cluster Components: Getting all K8s Cluster Components "logs".
- If Cluster configured with "Kubeadm".

```
kubectl logs kube-apiserver-master -n kube-system | more
kubectl logs kube-controller-manager-master -n kube-system
kubectl logs kube-scheduler-master -n kube-system
kubectl logs etcd-master -n kube-system
```

- If Cluster configured manually.

```
journalctl -u kube-apiserver
journalctl -u kube-scheduler
journalctl -u etcd
journalctl -u kube-controller-manager
```

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- System Level logs: User can use journalctl.

```
# Display All Messages
journalctl

# Display newest log entries first (Latest to Old order)
journalctl -r

# Display specific number of RECENT log entries
journalctl -n 5

# Display specific priority – “info”, “warning”
Journalctl -p err
```

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- System Level logs: User can use journalctl.

```
# Display log entries of only specific systemd unit
journalctl -u docker
journalctl -u kubelet

# Format output in “verbose”, “short”, “json”
journalctl -o verbose
journalctl -o json

# Combining options
journalctl -n 5 -p err -u docker -o json
```

Thank You...

Don’t be the Same! Be Better!!!

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