KUBERNETES

Kubernetes Certification Exam (CKA-certified Kubernetes administrators)- 3 years valid

$300 - one free retake within the upcoming 12 months.

If you purchase it from Linux foundation you will get %15 discount with the code DEVOPS15

Is not a multiple choice exam, it is an online performance based exam that test your hands-on skills.

Normally it used to be take 3 hours, but with the latest version of the exam it is now only 2 hours.

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Kubernetes

- Container Orchastrater—> that helps make sure that each container is where its supposed to be and that the containers can work together.

- In every worker is a kubelet that is responsible for communicating with the Kubernetes cluster services

Worker(nodes) - worker machines in kubernetes cluster that are control and managed by the master. Nodes can be the local machines or the VMs.

Pod —>the smallest unit of the deployment in Kubernetes. In a pod I can have containers.

ETCD cluster —> Data base that stores information in a key value format. (ETCD is in the master node)

Kube-scheduler- identifies the right node to place a container on. Worker nodes capacity, policy..

Node-Controller —>takes care of nodes, responsible for new nodes on cluster, handling situations where nodes are unavailable, gets destroyed

Replication- controller —> takes care of the desired number of containers are running at all times in your replication group

Kube-api server—> is the primary management component of Kubernetes. Is responsible for orchestrating all operations within cluster.

Kubelet—> (is the captain of the ship) Kubelet is an agent that runs on each node in a cluster, it listens for the instructions from the API server, deployes destroys the container on the nodes as required.
The kube api server periodically fetches states report from the kubelet to monitor the status of the nodes and the containers on them.

Kube-proxy —>helps enabling communication between services within the cluster
(**kube**-**proxy** maintains network rules on nodes. These network rules allow network communication to your Pods from network sessions inside or outside of your cluster.)

- K8s cluster services- (desired state management) -—> feed the cluster services with the specific configuration and it will be up to the cluster services that will go out and run the configuration in my infrastructure

Pod—> is the smallest unit of deployment