What is orchestration?

Orchestration refers to the integration of multiple services that allows them to automate processes or synchronize information in a timely fashion. Say, for example, you have six or seven microservices for an application to run. If you place them in separate containers, this would inevitably create obstacles for communication. Orchestration would help in such a situation by enabling all services in individual containers to work seamlessly to accomplish a single goal

What is Kubernetes?

[Kubernetes](https://www.simplilearn.com/tutorials/kubernetes-tutorial/what-is-kubernetes) is an open-source container orchestration tool that is used to automate tasks such as the managing, monitoring, scaling, and deployment of containerized applications. It is used to easily manage [several containers](https://www.simplilearn.com/top-kubernetes-tools-to-manage-containers-article) (since it can handle grouping of containers), which provides for logical units that can be discovered and managed.

What is the difference between docker swarm and Kubernetes?

Docker swarm is default container orchestration tool comes with docker. Docker swarm can orchestrate only simple docker containers. Kubernetes, manage much more complex software application containers.

* Docker swarm can’t do auto-scaling
* It doesn’t have a GUI
* Docker requires third-party tools like ELK stack, Splunk for logging and monitoring, while Kubernetes has integrated tools for the same.
* It can do rolling updates, but can’t deploy automatic rollbacks
* Docker swarm can share storage volume with any container easily, while Kubernetes can only share storage volumes with containers in the same pod

What is kubelet?

Kubelet is a service agent that controls and maintains a set of pods through Kubernetes API server. Kubelet run on each node and enables the communication between master and slave nodes.

What is kubectl?

Kubectl is a command line tool that is used for deploying and managing applications on Kubernetes. Kubectl is especially useful for inspecting the cluster resources, and for creating, updating and deleting the components.

How to set a static IP for Kubernetes Load Balancer?

We can set a static IP for Kubernetes Load Balancer by changing the DNS records, whenever Kubernetes master assigns a new IP address

What are major components in Control plane (Master Node)?

Components of Control Plane:

* Kube-API server
* Etcd
* Kube-scheduler
* Controller/control Manager

What is ETCD?

ETCD stores cluster metadata and status of cluster as a key-value store.