**KUBENRNET-BASICS**

**# what is kubernents ?**

**Kubernets is a open source containerization tool which is developed by google and it has a lots of containers and deploy and maintain containers**

**it helps to manage deployment environments either physical and virtual and cloud hybrid**

**# Trend from monlith**

**# Increse the usage of containers**

**what features do orchestaration tools offer ?**

**hiag avalibility or no down time**

**scalability or high performance**

**distaster recovery -backup and restore**

**kubernets components ?**

**pod**

**pod is smallest unit of k8s**

**pod insise having my-app- container**

**pod having own container pod having databse in case error it will crashed and again create anoother databse and ip address**

**each pod having difffernet ip address**

**usually 1 application per pod**

**service and ingress**

**ingress have the security and the ingress to the service**

**configmap: configuration**

**externa; configuration of your application**

**secret use teh stoe the secret data not in plain text format base 64 encoded**

**use ethe enviroment variables**

**topics**

**pod service,configmap,scret**

**#z#############################################**

**data storage in kuebrnets :::::::::::**

**storage on local machine**

**or remote ouside**

**STORAGE :**

**K8 cluster internal or external**

**Deployment**

**Db can’t be replicated via Deployment**

**Statefull -reading and data inconsistency**

**Deployment for stateless Apps**

**Kubernets architecture**

**They containing in 2 nodes**

**1 is worker node**

**2 slave master node**

**Node Process**

**1 node have multiple pods**

**Kubelet : responsible for the configuration**

**Kubeproxy : forward the request**

**3 node processes :**

**1 kubelet**

**2 kube proxy**

**3 container run time**

**How do you interact with this cluster**

**Master process :**

**Worker node api server -client**

**Cluser gateway**

**Control manager : detect cluster state changes**

**Etcd :key store value**