

ReplicationController  
ReplicaSet  
DaemonSet  
Deployment

StatefulSet : It is used to deploy stateful apps on k8s cluster

ex: mysql db, mongo db etc...

-> StatefulSet will give unique identify for every pod starting from zero.

mysql-db ---> 3 replicas

mysql-0 (master pod)  
mysql-1 (slave pod - 1)  
mysql-2 (slave pod - 2)

-> When we scale down the StatefulSet, it will delete pods from last (in reverse order)

Note: Slave POD will be created with data available in the master pod.

Q) When to use Deployment and when to use StatefulSet ?

-> To deploy stateless applications we will use Deployment concept. Pods will be created/deleted in random fashion.

-> To deploy stateful applications we will use StatefulSet concept. Pods will be created with unique-identity. Primary and Secondary pods will be created in a order. When we scale down it will delete pods in reverse order. Primary POD will have read & write operations where as secondary pods will perform only read operation.

Q) How to deploy Monolith Application ?

Step-1 : We will deploy database as Cluster IP (headless service)

Step-2 : We will deploy application as Node Port service

Q) How to deploy microservices based application ?

Step-1 : We will deploy backend apis related databases as headless service

Step-2 : We will deploy backend apis

Step-3 : We will configure backend apis urls in frontend application

Step-4: We will re-build docker image for Frontend application

Step-5 : We will deploy frontend application

