**Replication Controller:**

* A replication controller (RC) is supervisor for long-running pods.An RC will launch a specified number of pods called replicas and makes sure that they keep running
* Ensure that specified number of pods running at any time
* if any extra pods are running it will kill that pod and vice versa
* Now Pod get launch when they get fail, get deleted or terminated.
* Replication Controller is one of the key features of kubernetes, which is responsible for managing the pod lifecycle, it is responsible for making sure that the specified number of pod replicas are running at any point of time.
* A Replication Controller is a structure that enables you to easily create multiple pods, then make sure that number of pods always exists. if pod does crash, the replication controller replaces it.
* Replication controller and PODS are associated with labels.
* Creating "RC" with count of 1 ensure that a POD is always available.
* It is going to replicate and managed the pods
* RC is responsible for managing the POD life cycle
* Using ‘RC’ we can create same type of pods

**Advantages of RC:**

* 1.HighAvailability
* 2.LoadBalacing

Replication Controller Manifest file

Below are the segments needs to define in Replication Controller Manifestfile

* 1.API Version
* 2.MetaData
* 3.Specification
* 4.Template

*#ReplicationController-syntax*

*apiVersion: v1*

*kind: ReplicationController*

*metadata:*

*name: <nameOfthe-ReplicationController>*

*namespace: <namespacename>*

*labels:*

*<key>: <value>*

*spec:*

*replicas: <NoOReplicas>*

*selector:*

*<key>: <value> # this selector key/value same as pod(template) labels key/value*

*templeate: # POD Template*

*metadata: <NameOfthe-pod>*

*labels:*

*<key>: <value>*

*spec:*

*containers:*

*- name: <container-name>*

*image: <image-name>*

*ports:*

*containerPort: <portNumber>*

*#ReplicationController.yml*

*apiVersion: v1*

*kind: ReplicationController*

*metadata:*

*name: nginxreplication*

*spec:*

*replicas: 3*

*selector:*

*app: nginx*

*template:*

*metadata:*

*name: nginx*

*labels:*

*app: nginx*

*spec:*

*containers:*

*- name: nginximage*

*image: nginx*

*ports:*

*- containerPort: 80*

* kubectl apply -f replicationController.yaml
* kubectl get rc
* kubectl get replicationcontroller
* kubectl get rc -o wide
* kubectl get pod -l app=nginx-app
* kubectl describe rc <rc-name>
* kubectl scale rc <rc-name> --replicas=5
* kubectl scale rc <rc-name> --replicas=2
* kubectl delete rc <rc-name>
* kubectl describe rc mavenwebapprc -n test-ns yaml

we can delete the replication controller 2 ways

* kubectl delete –f <rc-file-name>
* kubectl delete rc <replication-controller-name> -n test-ns
* kubectl delete rc <replication-controller-name>