Lesson 3 Of Kubernetes

"ReplicaSet"

Video 1. "ReplicaSet"

This Video's Content Is Theory Based.

Video 2. "ReplicaSet Illustration"

This Video's Content Is Illustration Based.

Video 3. "ReplicaSet Parts"

1. *Label Selector*
2. *Replica Count*
3. *Pod Template*

Video 4. "Creating ReplicaSet"

```
kind: ReplicaSet
apiVersion: apps/v1
metadata:
  name: my1strs
spec:
  replicas: 3
  selector:
    matchLabels:
      app: rsexample
  template:
    metadata:
     labels:
       app: rsexample
    spec:
      containers:
      - name: rscontainer
        image: rizwansheikh7071/hello-world
        ports:
        - containerPort: 80
```

Video 5. "Listing ReplicaSet"

- ***nano rs.yaml***

This command will create the yaml file for ***ReplicaSet***

- ***kubectl create -f rs.yaml***

This command will create the ***ReplicasSet***

- ***kubectl get po***
- ***kubectl get rs***
- ***kubectl get po,rs***

The first command will show the list of ***PODS***
The second command will show the list of the ***ReplicasSets***
The third one will show the ***Both's List***

- ***kubectl get po –show-labels***

This command will show the labels of the pods that we mentioned in the ***YAML File.***

- ***kubectl label pod my1strs-rl5cp app=rsexampleAllii.. --overwrite***

If we overwrite the labelled of the running pod in the replicasSet the replicasSet will make the one copy immediately and the overwrite labelled pod will count as extra and there Is no responsibility on the ReplicaSet.
The ReplicaSet will work same in both situation either ***Delete OR Labelled the existing POD.***

Video 6. "Deleting Pods and ReplicaSet"

- ***kubeclt delete pods -l app=rsexample***

This command will delete the pods form the ReplicasSet but within a second the ReplicaSet will make again the ReplicasSet that how was mentioned in the config file of ***YAML****.*

So if we *want to delete the pod once so those do not made again so the below will explain that how will work.*

- ***kubectl delete rs my1strs***

This command will delete the ReplicaSet and there will no any pod will exist that which was running under the ReplicaSet..

- ***kubectl delete rs my1strs –cascade=false***

But If You *want to delete the ReplicasSet but Pod do not delete so this command will do*

- ***kubectl create -f rs.yaml***

This command will again create the ReplicaSet. Due to in the config file we mentioned the labels so the ReplicaSet search form the cluster and when the labells matched then the ReplicaSet cover up those running pods and management duty start.

Video 7. "Operators in MatchExpressions"

```
kind: ReplicaSet
apiVersion: apps/v1
metadata:
  name: my1strs
  labels:
    type: frontend
    env: production
spec:
  replicas: 3
  selector:
    matchExpressions:
    - key: app
      operator: In
      values:
      - rsexample
  template:
    metadata:
     labels:
       app: rsexample
    spec:
      containers:
      - name: rscontainer
        image: rizwansheikh7071/hello-world
        ports:
        - containerPort: 80
```

In this video the new concept is about the ***matchExperessions*** *instead of* ***matchLabels.***
In this concept we explained the syntax of the ***matchExperessions..***

Video 8. "Modifying ReplicaSet"

This video is pending for writing the content in

Video 9. "Scaling ReplicaSet"

- ***kubectl scale rs my1strs –replicas=5***

This command will scale up of our pod's replicas.

- ***kubectl scale rs my1strs –replicas=3***

This command will scale down of our pod's replicas.

Video 10. ***“Job Resource”***

```
apiVersion: batch/v1
kind: Job
metadata:
  name: jobexample
spec:
  template:
    spec:
      containers:
      - name: jobcontainer
        image: docker/whalesay
        command: ["cowsay","This Job Resource Example","Made By: Rizwan Sheikh"]
      restartPolicy: Never
  backoffLimit: 4
  activeDeadlineSeconds: 60
```

- ***kubectl logs jobexample-b25z9***

This is used to check the all information that printed by the application on the ***Consol Means On It’s Filesystem.***

This Video is Practical Based.

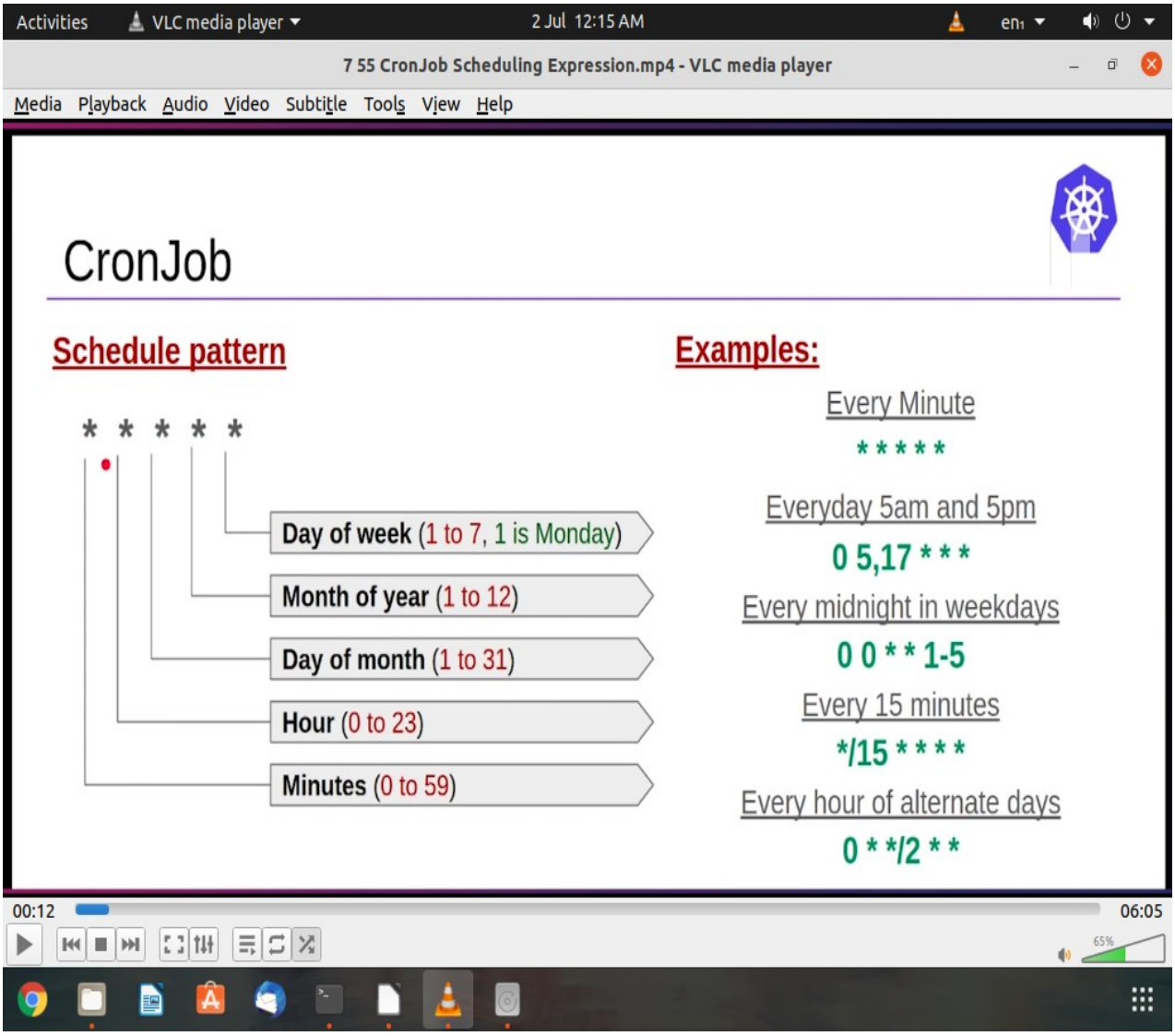
Video 11. ***“Cron Job”***

```
apiVersion: batch/v1beta1
kind: CronJob
metadata:
  name: CronJobexample
spec:
  JobTemplate
    template:
      spec:
        containers:
        - name: jobcontainer
        image: docker/whalesay
        command: ["cowsay","This Job Resource Example","Made By: Rizwan Sheikh"]
      restartPolicy: Never
  backoffLimit: 4
  activeDeadlineSeconds: 60
```

This One Is Also Is Practical Based.

*The **Comma ","**make separation in individual things means **5am,17pm** means start from **5am (Morning)** and then **17pm (Evening).***

*While **Dash "-"** shows rang of any parameter, For Example **1-5** means start from **Monday to Friday.***



Alhamdolillah!

Kubernetes Lesson 3 Completed.

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Due To Human Being The Mistake Can Be Done!
Thank You Happy Learning.