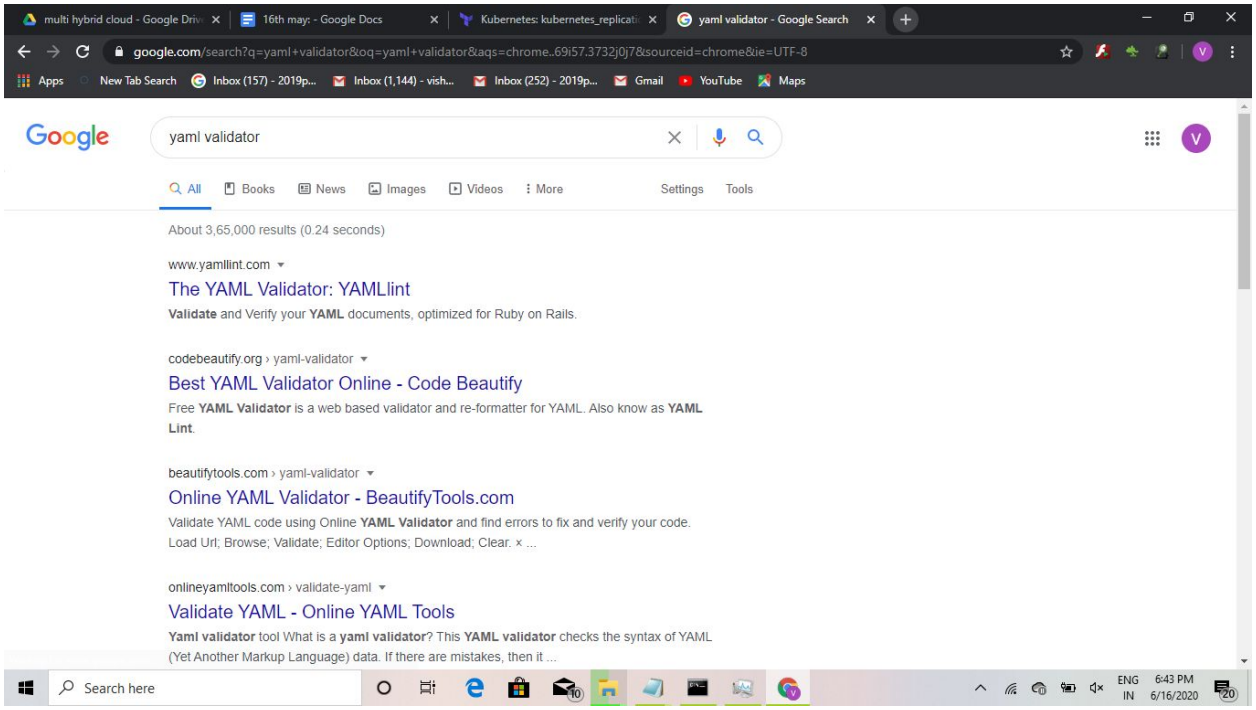
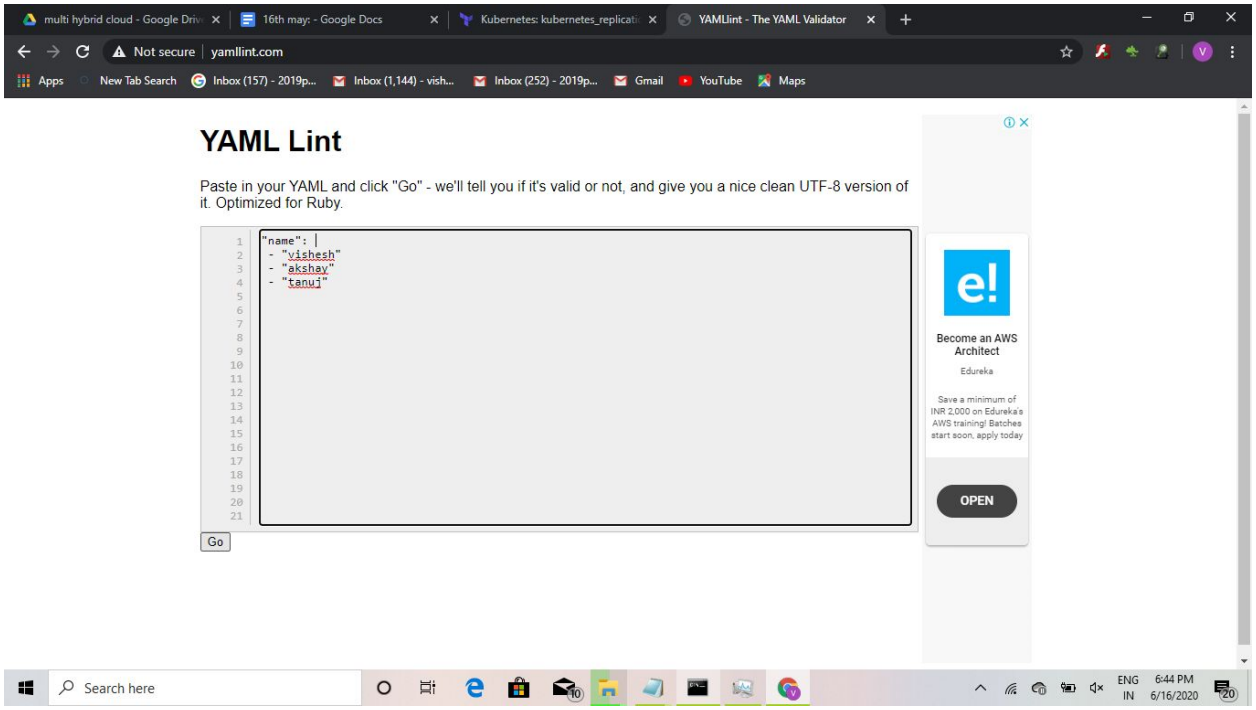
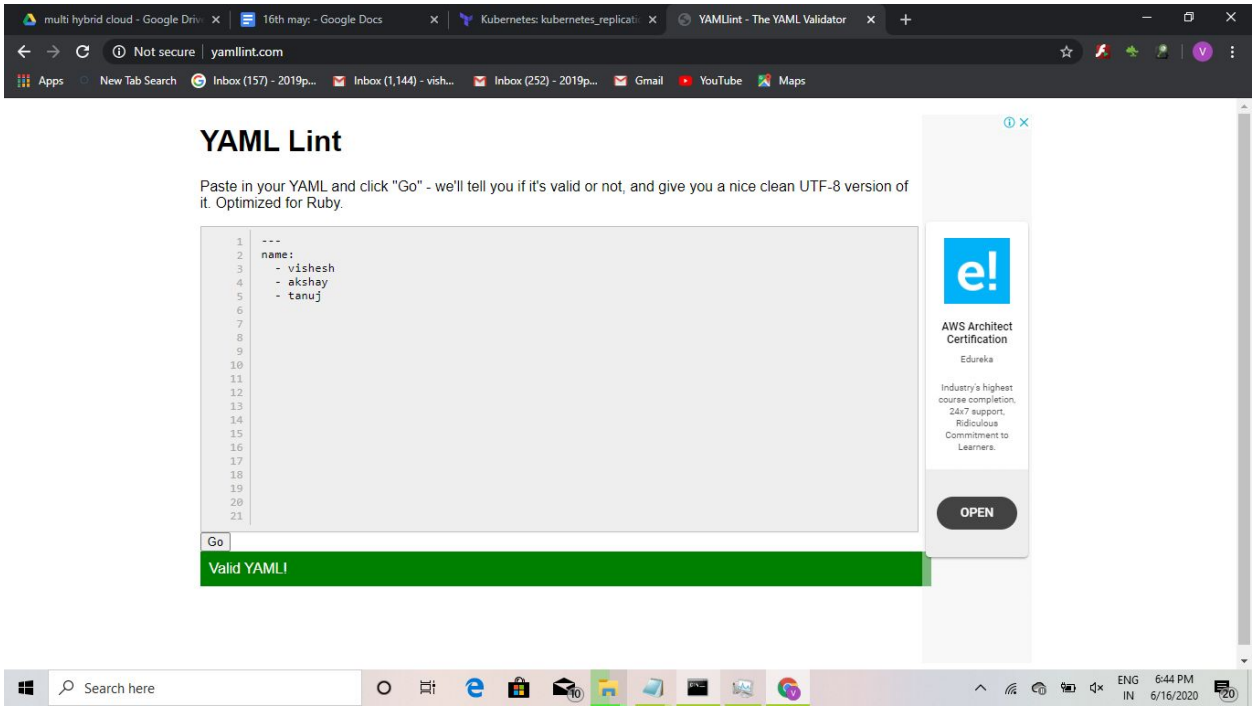
16th may:

.yml :- extension for yaml file eg. **xyz.yml**

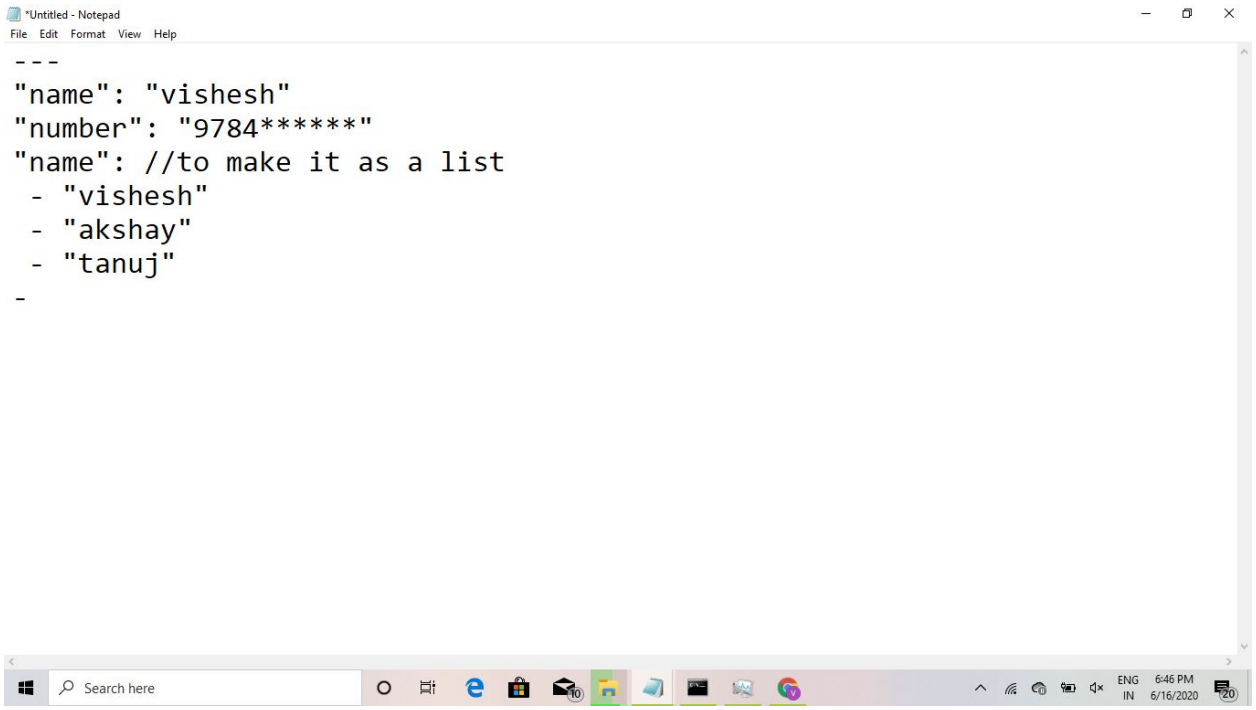
Standard space is 4







> we have to start the yaml with 3 hyphen and end with 1 hyphen



C:\Users\user\Desktop\kube_code>kubectl get pods

No resources found in default namespace.

C:\Users\user\Desktop\kube_code>kubectl create deployment myweb

--image=vimal13/apache-webserver-php

deployment.apps/myweb created

C:\Users\user\Desktop\kube_code>kubectl get pods
NAME READY STATUS RESTARTS AGE
myweb-6bffb6b45c-ldfn7 1/1 Running 0 13s

C:\Users\user\Desktop\kube_code>kubectl delete pods myweb-6bffb6b45c-ldfn7
pod "myweb-6bffb6b45c-ldfn7" deleted

C:\Users\user\Desktop\kube_code>kubectl get pods
NAME READY STATUS RESTARTS AGE
myweb-6bffb6b45c-w7fv9 1/1 Running 0 10s
C:\Users\user\Desktop\kube_code>kubectl delete all --all
pod "myweb-6bffb6b45c-w7fv9" deleted
service "kubernetes" deleted
deployment.apps "myweb" deleted
replicaset.apps "myweb-6bffb6b45c" deleted

C:\Users\user\Desktop\kube_code>kubectl run myweb1
--image=vimal13/apache-webserver-php
pod/myweb1 created
C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels
NAME READY STATUS RESTARTS AGE LABELS
myweb1 1/1 Running 0 63s run=myweb1
C:\Users\user\Desktop\kube_code>kubectl label pods myweb1 dc=IN
pod/myweb1 labeled

C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels
NAME READY STATUS RESTARTS AGE LABELS
myweb1 1/1 Running 0 117s dc=IN,run=myweb1
C:\Users\user\Desktop\kube_code>kubectl label pods myweb1 env=prod
pod/myweb1 labeled

C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels
NAME READY STATUS RESTARTS AGE LABELS
myweb1 1/1 Running 0 2m26s dc=IN,env=prod,run=myweb1

C:\Users\user\Desktop\kube_code>kubectl run myweb2
--image=vimal13/apache-webserver-php dc=US

pod/myweb2 created

C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels

```
NAME     READY   STATUS             RESTARTS   AGE     LABELS
myweb1   1/1     Running            0          2m54s   dc=IN,env=prod,run=myweb1
myweb2   0/1     RunContainerError  0          9s      run=myweb2
```

C:\Users\user\Desktop\kube_code>kubectl label pods myweb2 dc=US
pod/myweb2 labeled

C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels

```
NAME     READY   STATUS             RESTARTS   AGE     LABELS
myweb1   1/1     Running            0          3m21s   dc=IN,env=prod,run=myweb1
myweb2   0/1     CrashLoopBackOff   2          36s     dc=US,run=myweb2
```

C:\Users\user\Desktop\kube_code>kubectl delete pods myweb2
pod "myweb2" deleted

C:\Users\user\Desktop\kube_code>kubectl run myweb2
--image=vimal13/apache-webserver-php
pod/myweb2 created

C:\Users\user\Desktop\kube_code>kubectl label pods myweb2 dc=US
pod/myweb2 labeled

C:\Users\user\Desktop\kube_code>kubectl run myweb3
--image=vimal13/apache-webserver-php
pod/myweb3 created

C:\Users\user\Desktop\kube_code>kubectl label pods myweb3 env=testing
dc=US
pod/myweb3 labeled

C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels

```
NAME     READY   STATUS    RESTARTS   AGE     LABELS
myweb1   1/1     Running   0          4m55s   dc=IN,env=prod,run=myweb1
myweb2   1/1     Running   0          49s     dc=US,run=myweb2
myweb3   1/1     Running   0          37s     dc=US,env=testing,run=myweb3
```

--selector

C:\Users\user\Desktop\kube_code>kubectl get pods --selector dc=US

```
NAME    READY   STATUS    RESTARTS   AGE
myweb2  1/1     Running   0          2m22s
myweb3  1/1     Running   0          2m10s
```

C:\Users\user\Desktop\kube_code>kubectl get pods --selector dc=US env=prod

error: name cannot be provided when a selector is specified

C:\Users\user\Desktop\kube_code>kubectl get pods --selector env=prod

```
NAME    READY   STATUS    RESTARTS   AGE
myweb1  1/1     Running   0          6m42s
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l env=prod

```
NAME    READY   STATUS    RESTARTS   AGE
myweb1  1/1     Running   0          7m57s
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l "labels in ("production","US")"

No resources found in default namespace.

C:\Users\user\Desktop\kube_code>kubectl get pods --selector env=prod,dc=US

No resources found in default namespace.

C:\Users\user\Desktop\kube_code>kubectl get pods --selector env=prod,dc=US --show-labels

No resources found in default namespace.

C:\Users\user\Desktop\kube_code>kubectl get pods --selector env=prod,dc=IN --show-labels

```
NAME    READY   STATUS    RESTARTS   AGE    LABELS
myweb1  1/1     Running   0          9m12s  dc=IN,env=prod,run=myweb1
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l "labels in ("production","IN")"

No resources found in default namespace.

C:\Users\user\Desktop\kube_code>kubectl get pods -l dc=US,dc=IN

No resources found in default namespace.

C:\Users\user\Desktop\kube_code>kubectl get pods -l "dc in ("US","IN")"

```
NAME    READY   STATUS    RESTARTS   AGE
myweb1  1/1     Running   0          11m
myweb2  1/1     Running   0          6m56s
myweb3  1/1     Running   0          6m44s
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l "env in ("prod","IN")"

```
NAME    READY   STATUS    RESTARTS   AGE
myweb1  1/1     Running   0          11m
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l "env notin ("prod","US")"

```
NAME    READY   STATUS    RESTARTS   AGE
myweb2  1/1     Running   0          7m55s
myweb3  1/1     Running   0          7m43s
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l "env in ("prod","IN"),env=prod"

```
NAME    READY   STATUS    RESTARTS   AGE
myweb1  1/1     Running   0          12m
```

C:\Users\user\Desktop\kube_code>kubectl get pods -l "dc in ("US","IN"),env=prod"

```
NAME    READY   STATUS    RESTARTS   AGE
myweb1  1/1     Running   0          13m
```

C:\Users\user\Desktop\kube_code>kubectl delete pods --selector env=prod

```
pod "myweb1" deleted
```

C:\Users\user\Desktop\kube_code>kubectl get pods --show-labels

```
NAME    READY   STATUS    RESTARTS   AGE   LABELS
myweb2  1/1     Running   0          10m   dc=US,run=myweb2
myweb3  1/1     Running   0          10m   dc=US,env=testing,run=myweb3
```

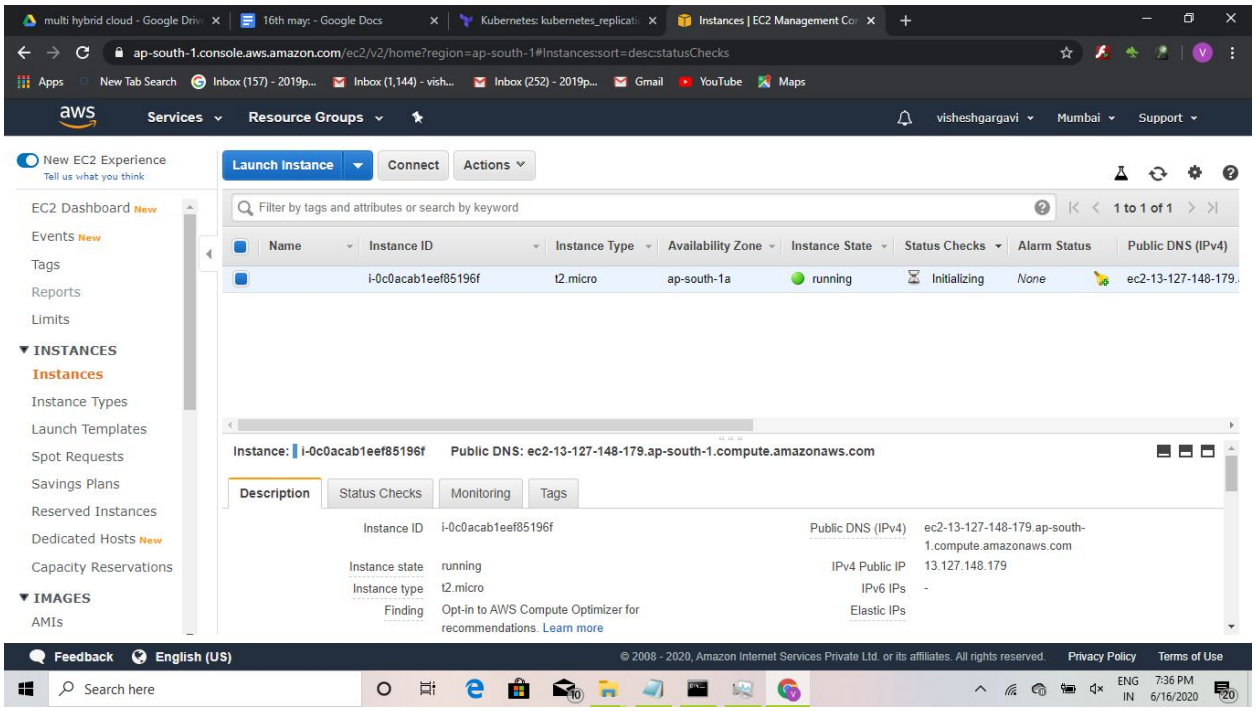
C:\Users\user\Desktop\kube_code>kubectl delete pods myweb2

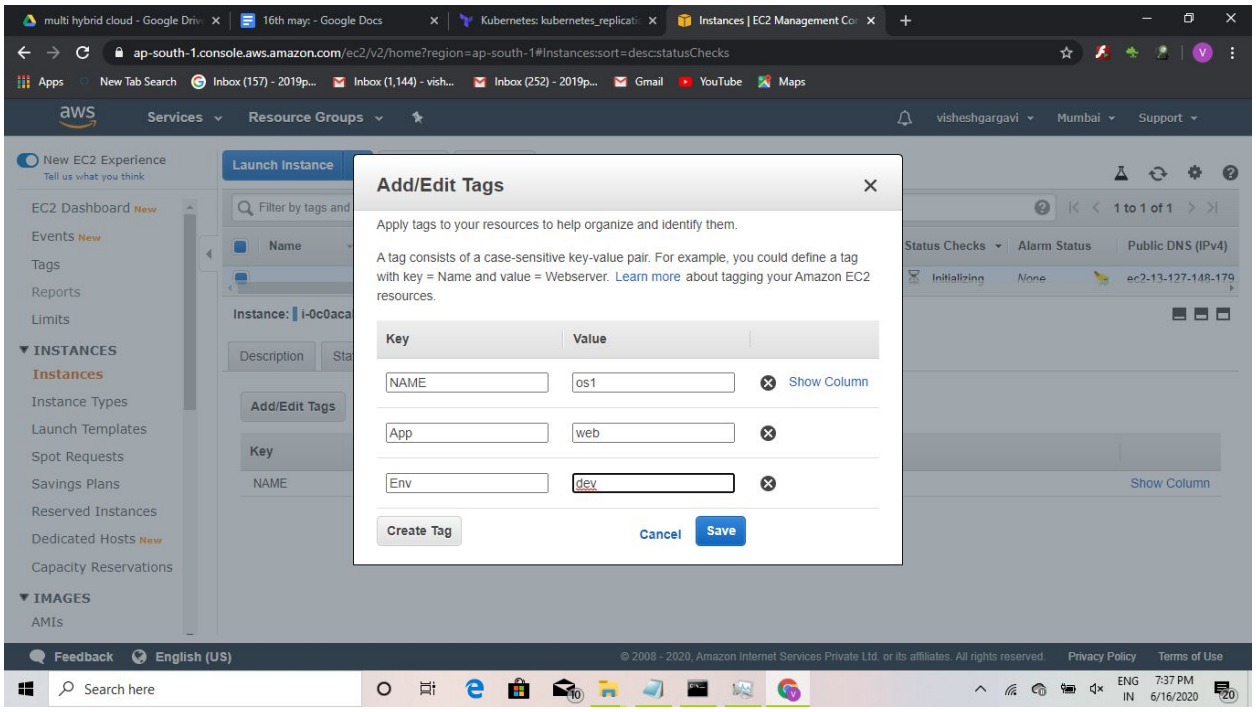
```
pod "myweb2" deleted
```

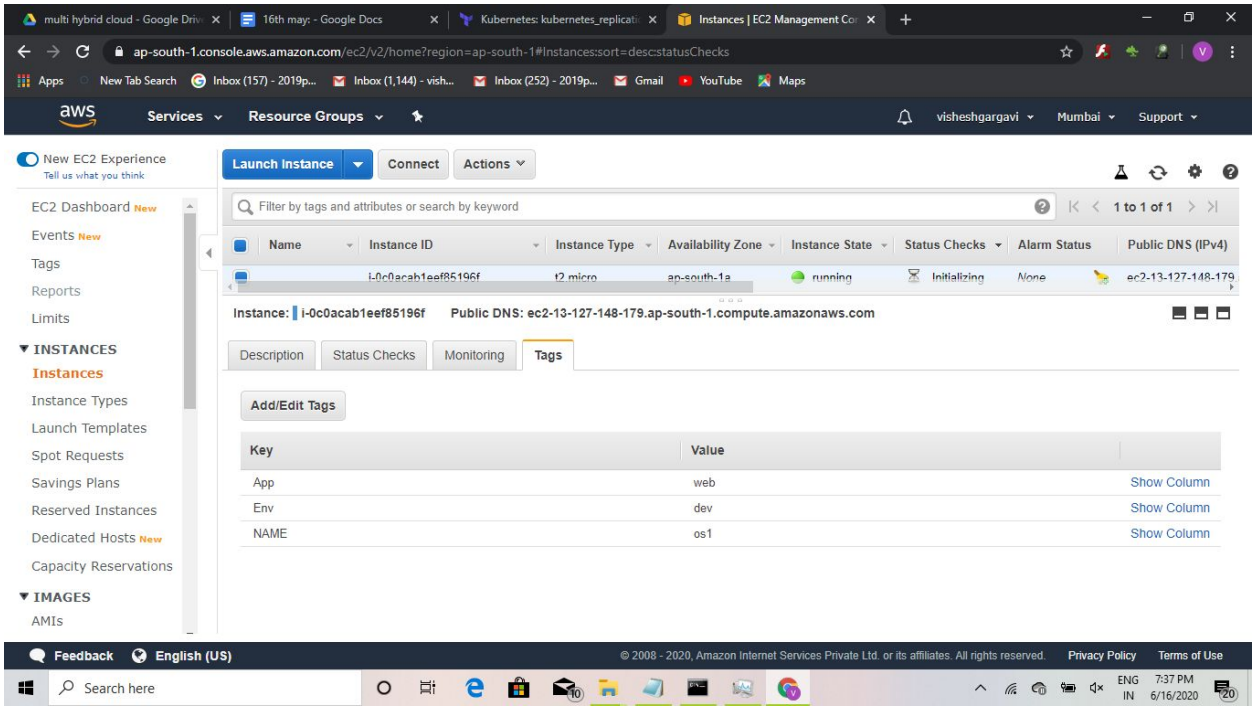
C:\Users\user\Desktop\kube_code>kubectl get pods

```
NAME    READY   STATUS    RESTARTS   AGE
myweb3  1/1     Running   0          12m
```

REPLICATION CONTROLLER:






multi hybrid cloud - Google Drive
16th may: - Google Docs
Kubernetes: kubernetes_replicati
Instances | EC2 Management Co
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:sort=desc:statusChecks
Apps
New Tab Search
Inbox (157) - 2019p...
Inbox (1,144) - vish...
Inbox (252) - 2019p...
Gmail
YouTube
Maps
aws
Services
Resource Groups
visheshgargavi
Mumbai
Support
New EC2 Experience
Tell us what you think
EC2 Dashboard New
Events New
Tags
Reports
Limits
INSTANCES
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts New
Capacity Reservations
IMAGES
AMIs
Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
1 to 1 of 1
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS (IPv4)
i-0c0acab1eef85196f
t2.micro
ap-south-1a
running
Initializing
None
ec2-13-127-148-179
Instance: i-0c0acab1eef85196f
Public DNS: ec2-13-127-148-179.ap-south-1.compute.amazonaws.com
Description
Status Checks
Monitoring
Tags
Add/Edit Tags
Key
Value
App
web
Show Column
Env
dev
Show Column
NAME
os1
Show Column
Feedback
English (US)
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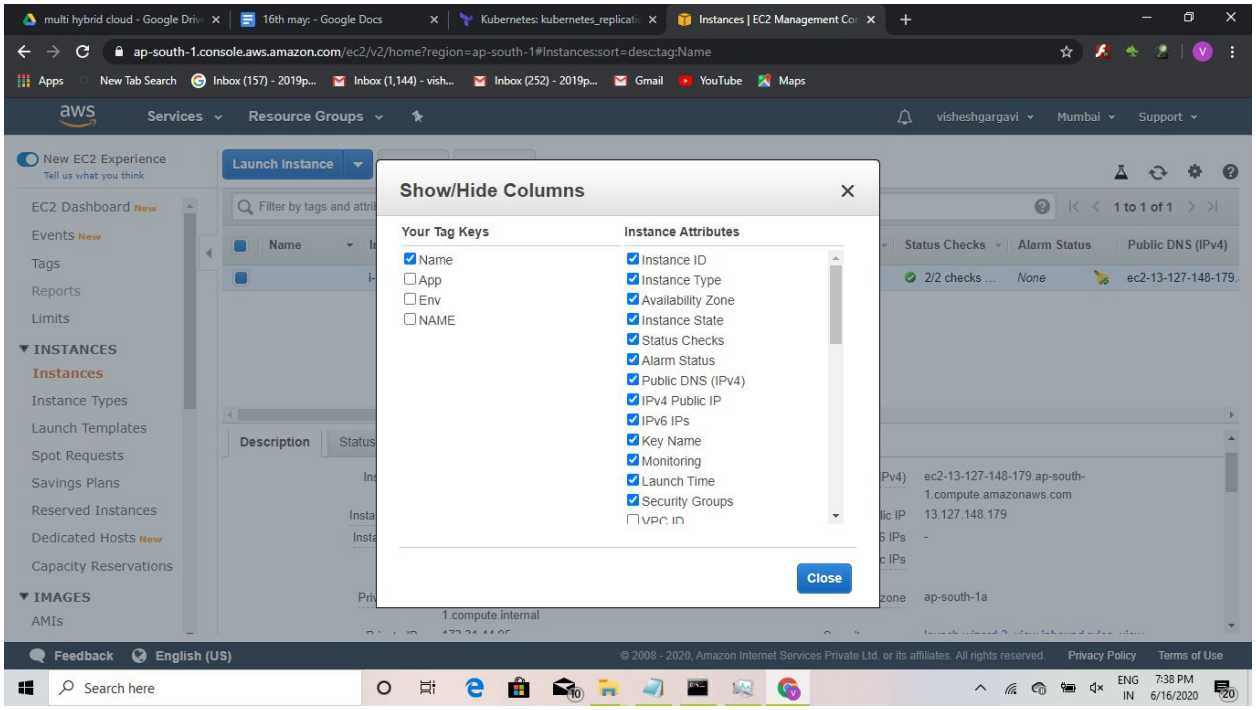
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Kubernetes: kubernetes_replicati
Instances | EC2 Management Co
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:sort=desc:tag:Name
Apps
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Inbox (157) - 2019p...
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Gmail
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Maps
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Resource Groups
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Support
New EC2 Experience
Tell us what you think
Launch Instance
EC2 Dashboard New
Events New
Tags
Reports
Limits
INSTANCES
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts New
Capacity Reservations
IMAGES
AMIs
Show/Hide Columns
Your Tag Keys
Name
App
Env
NAME
Instance Attributes
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS (IPv4)
IPv4 Public IP
IPv6 IPs
Key Name
Monitoring
Launch Time
Security Groups
VPC ID
Close
1 to 1 of 1
Status Checks
Alarm Status
Public DNS (IPv4)
2/2 checks ...
None
ec2-13-127-148-179.
Description
ec2-13-127-148-179.ap-south-1.compute.amazonaws.com
13.127.148.179
ap-south-1a
1.compute.internal
Feedback
English (US)
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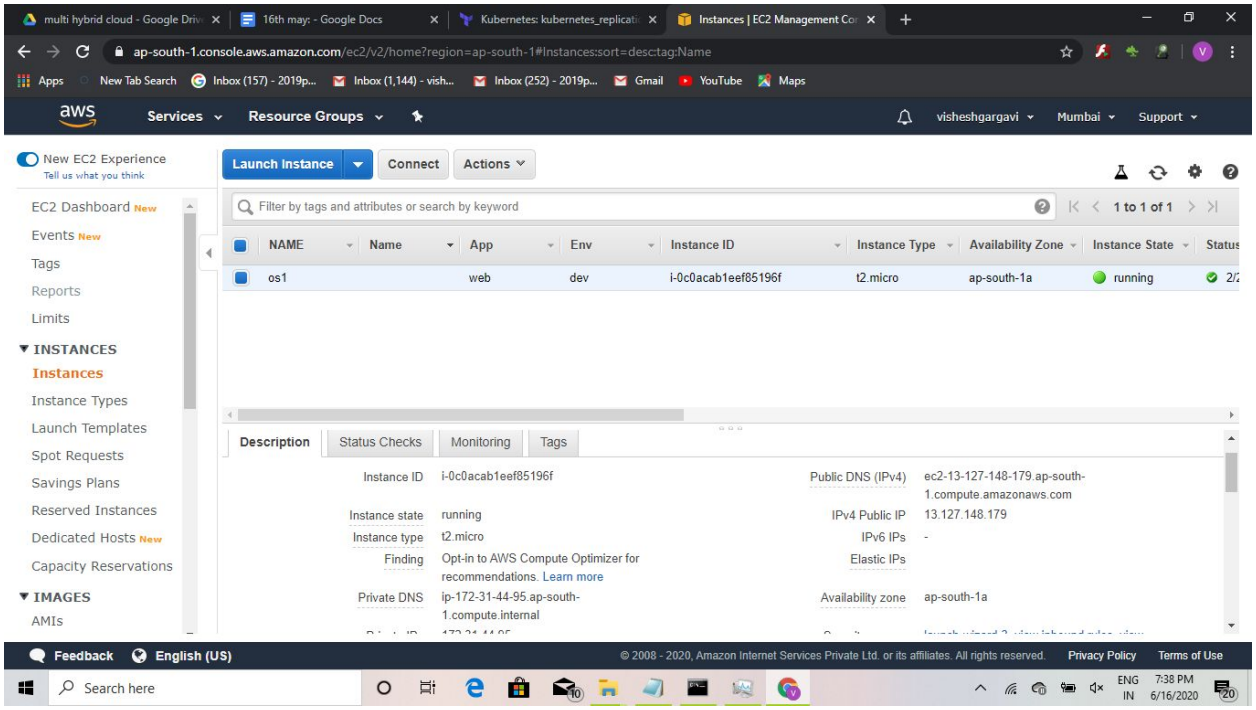
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Instances | EC2 Management Co
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:sort=desc:tag:Name
Apps
New Tab Search
Inbox (157) - 2019p...
Inbox (1,144) - vish...
Inbox (252) - 2019p...
Gmail
YouTube
Maps
aws
Services
Resource Groups
visheshgargavi
Mumbai
Support
New EC2 Experience
Tell us what you think
Launch Instance
Connect
Actions
EC2 Dashboard New
Events New
Tags
Reports
Limits
INSTANCES
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts New
Capacity Reservations
IMAGES
AMIs
Filter by tags and attributes or search by keyword
1 to 1 of 1
NAME
Name
App
Env
Instance ID
Instance Type
Availability Zone
Instance State
Status
os1
web
dev
i-0c0acab1eef85196f
t2.micro
ap-south-1a
running
Description
Status Checks
Monitoring
Tags
Instance ID
i-0c0acab1eef85196f
Public DNS (IPv4)
ec2-13-127-148-179.ap-south-1.compute.amazonaws.com
Instance state
running
IPv4 Public IP
13.127.148.179
Instance type
t2.micro
IPv6 IPs
-
Finding
Opt-in to AWS Compute Optimizer for recommendations. Learn more
Elastic IPs
Private DNS
ip-172-31-44-95.ap-south-1.compute.internal
Availability zone
ap-south-1a
Feedback
English (US)
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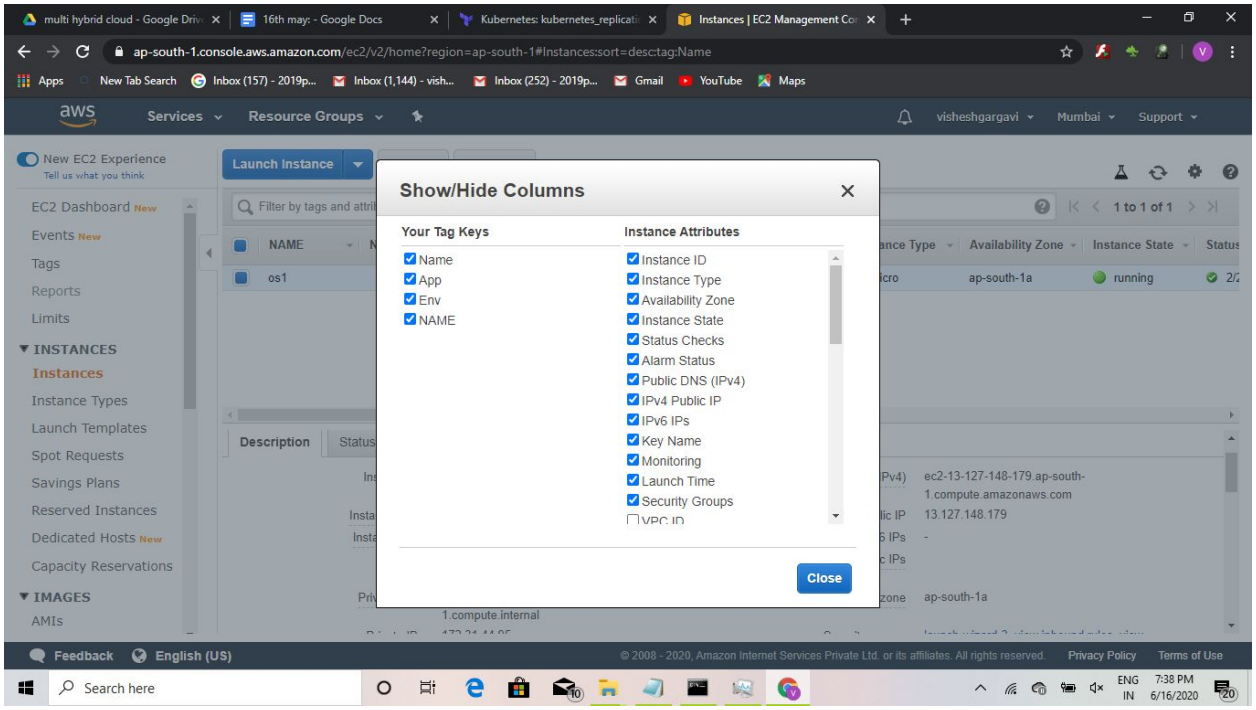
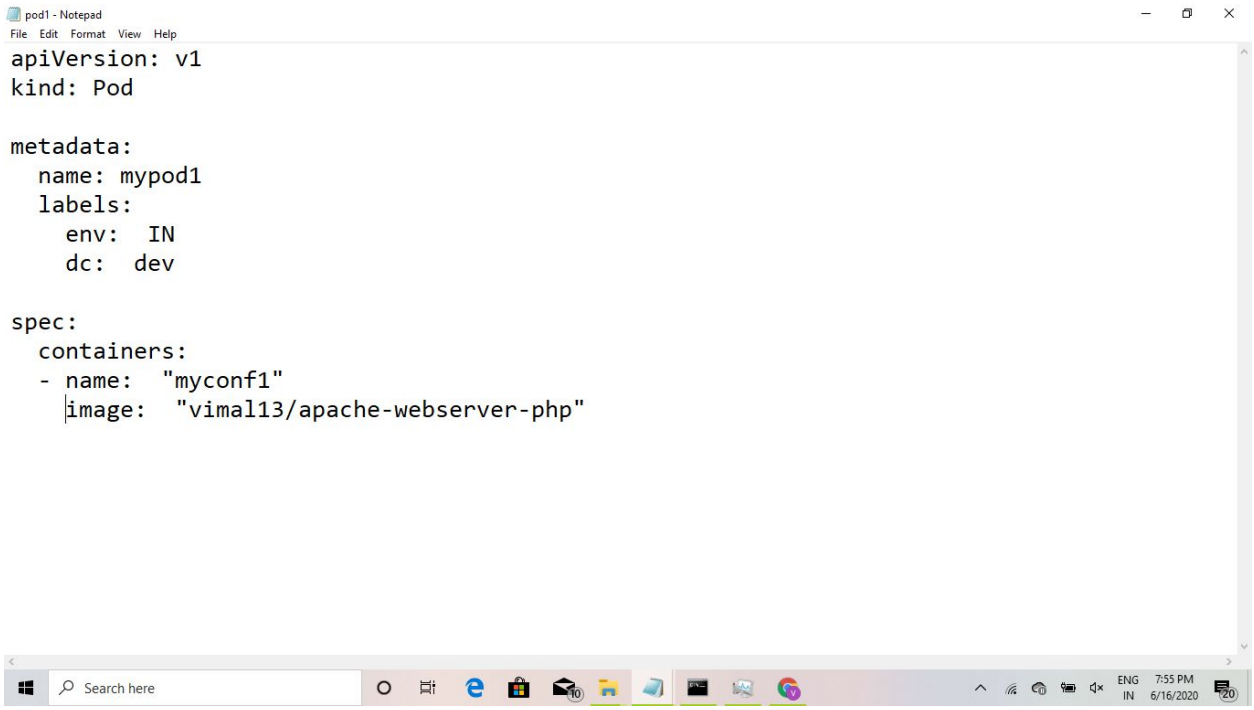

Show/Hide Columns
Your Tag Keys
Name
App
Env
NAME
Instance Attributes
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS (IPv4)
IPv4 Public IP
IPv6 IPs
Key Name
Monitoring
Launch Time
Security Groups
VPC ID
Close



C:\Users\user\Desktop\kube_cloud>kubectl create --validate=false -f pod1.yml
pod/mypod1 created

C:\Users\user\Desktop\kube_cloud>kubectl get pods
NAME READY STATUS RESTARTS AGE
mypod1 1/1 Running 0 7s

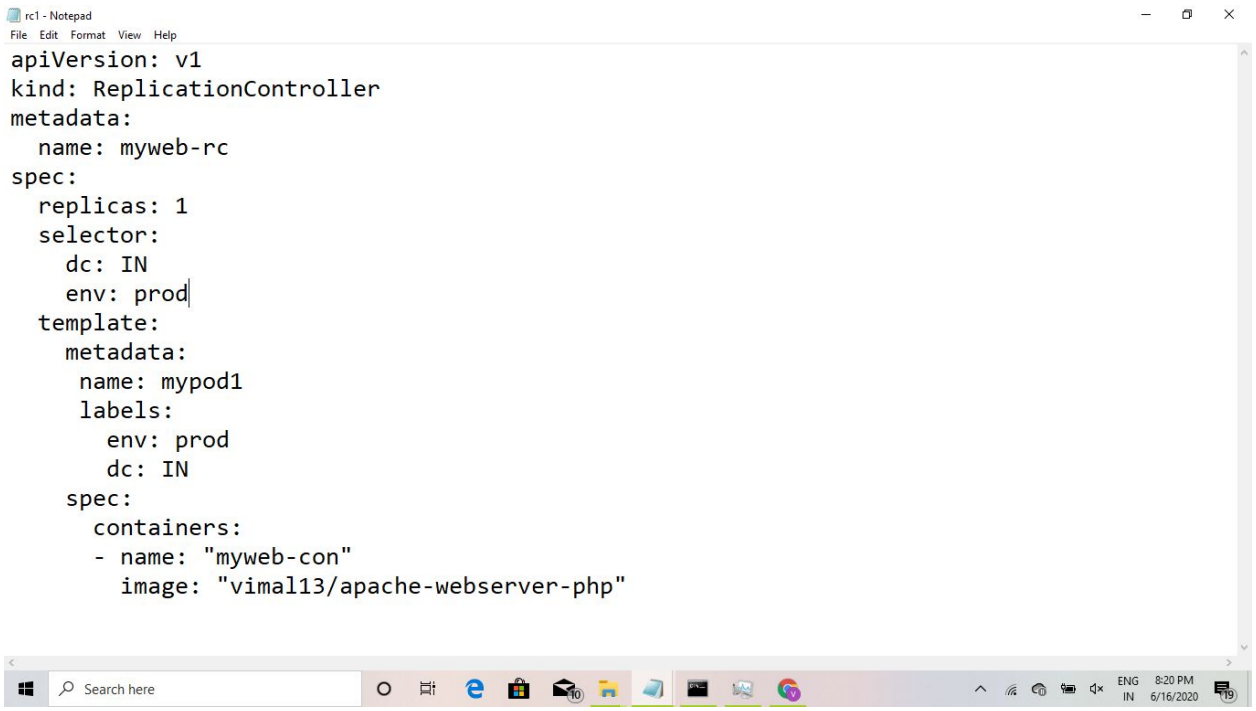
C:\Users\user\Desktop\kube_cloud>kubectl get pods --show-labels
NAME READY STATUS RESTARTS AGE LABELS
mypod1 1/1 Running 0 2m59s dc=dev,env=IN
C:\Users\user\Desktop\kube_cloud>kubectl describe pods
Name: mypod1
Namespace: default
Priority: 0
Node: minikube/192.168.99.100
Start Time: Tue, 16 Jun 2020 19:54:21 +0530
Labels: dc=dev
env=IN
Annotations: <none>
Status: Running
IP: 172.17.0.6
IPs:
IP: 172.17.0.6

```
Containers:
  myconf1:
    Container ID:
docker://6862e3c5d638c691ebc0750465682526080e76dbf13bd9d02400f717165d1b33
    Image:          vimal13/apache-webserver-php
    Image ID:
docker-pullable://vimal13/apache-webserver-php@sha256:faed0a5afaf9f04b6915d73f7
247f6f5a71db9274ca44118d38f4601c0080a91
    Port:           <none>
    Host Port:      <none>
    State:          Running
      Started:      Tue, 16 Jun 2020 19:54:26 +0530
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from default-token-8llwm (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  default-token-8llwm:
    Type:        Secret (a volume populated by a Secret)
    SecretName:  default-token-8llwm
    Optional:    false
QoS Class:       BestEffort
Node-Selectors:  <none>
Tolerations:     node.kubernetes.io/not-ready:NoExecute for 300s
                 node.kubernetes.io/unreachable:NoExecute for 300s
Events:
  Type    Reason     Age    From               Message
  ----    ------     ----   ----               -------
  Normal  Scheduled  3m21s  default-scheduler  Successfully assigned default/mypod1
to minikube
  Normal  Pulling    3m20s  kubelet, minikube  Pulling image
"vimal13/apache-webserver-php"
```

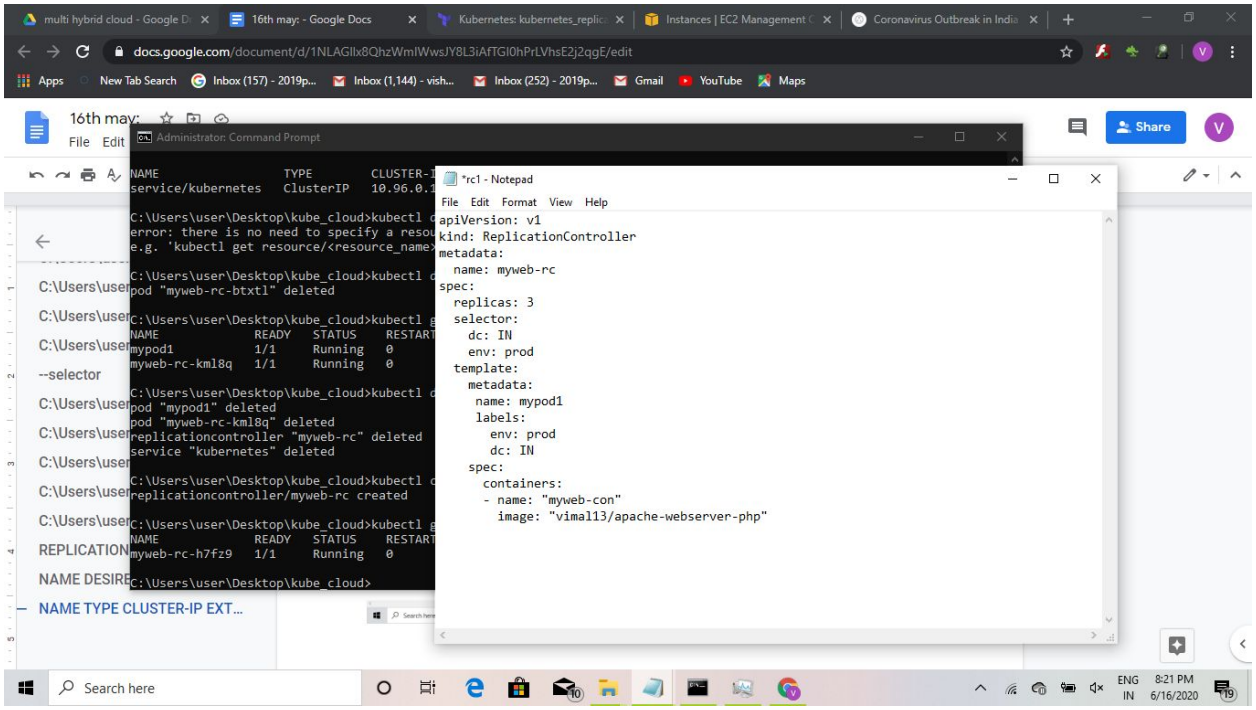
```
  Normal  Pulled     3m16s  kubelet, minikube  Successfully pulled image
"vimal13/apache-webserver-php"
  Normal  Created    3m16s  kubelet, minikube  Created container myconf1
  Normal  Started    3m16s  kubelet, minikube  Started container myconf1
C:\Users\user\Desktop\kube_cloud>kubectl delete pods mypod1
pod "mypod1" deleted
C:\Users\user\Desktop\kube_cloud>kubectl get pods --show-labels
No resources found in default namespace.
C:\Users\user\Desktop\kube_cloud>kubectl create --validate=false -f pod1.yml
pod/mypod1 created
C:\Users\user\Desktop\kube_cloud>kubectl create -f rc1.yml
replicationcontroller/myweb-rc created

C:\Users\user\Desktop\kube_cloud>kubectl get pods
NAME           READY   STATUS    RESTARTS   AGE
mypod1         1/1     Running   0          5m31s
myweb-rc-btxtl   1/1     Running   0          8s

C:\Users\user\Desktop\kube_cloud>kubectl get rc
NAME      DESIRED   CURRENT   READY   AGE
myweb-rc   1         1         1       22s
C:\Users\user\Desktop\kube_cloud>kubectl get all
NAME               READY   STATUS    RESTARTS   AGE
pod/mypod1         1/1     Running   0          6m36s
pod/myweb-rc-btxtl   1/1     Running   0          73s

NAME                         DESIRED   CURRENT   READY   AGE
replicationcontroller/myweb-rc   1         1         1       73s

NAME                 TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
service/kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP   28m
C:\Users\user\Desktop\kube_cloud>kubectl delete pods myweb-rc-btxtl
pod "myweb-rc-btxtl" deleted

C:\Users\user\Desktop\kube_cloud>kubectl get pods
NAME           READY   STATUS    RESTARTS   AGE
mypod1         1/1     Running   0          7m11s
myweb-rc-kml8q   1/1     Running   0          7s
C:\Users\user\Desktop\kube_cloud>kubectl create -f rc1.yml
```

replicationcontroller/myweb-rc created

C:\Users\user\Desktop\kube_cloud>kubectl get pods
NAME READY STATUS RESTARTS AGE
myweb-rc-h7fz9 1/1 Running 0 6s

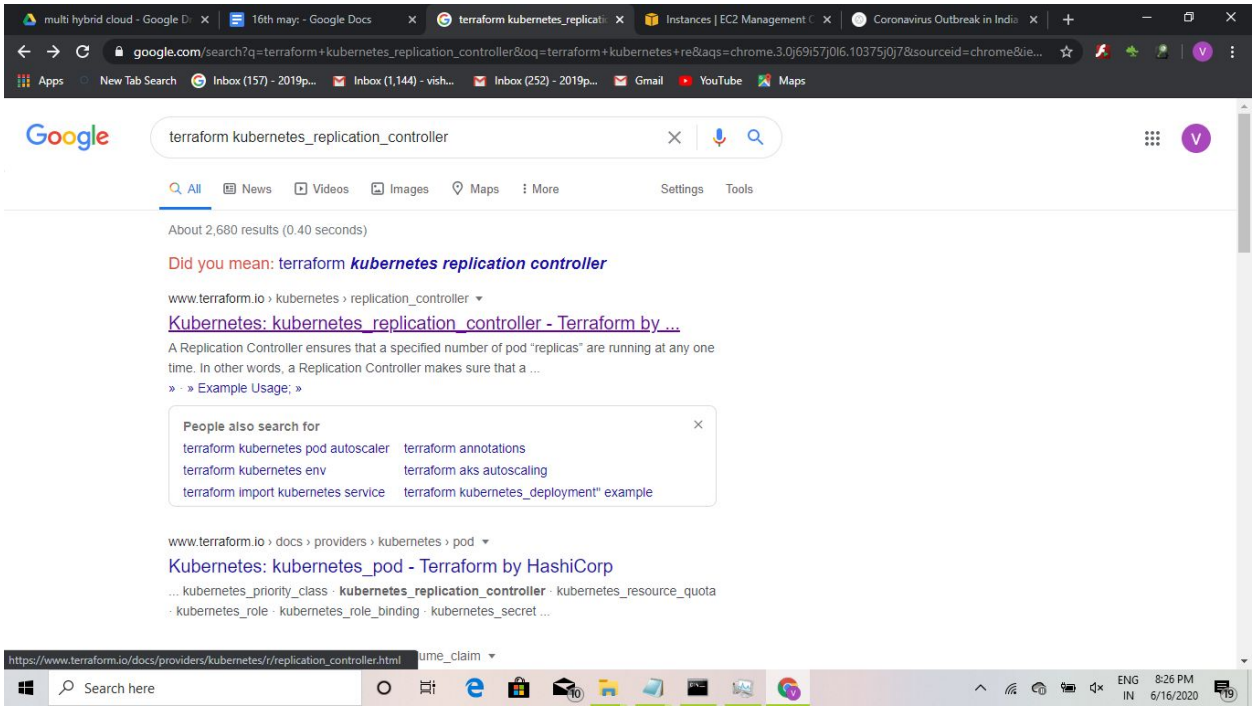


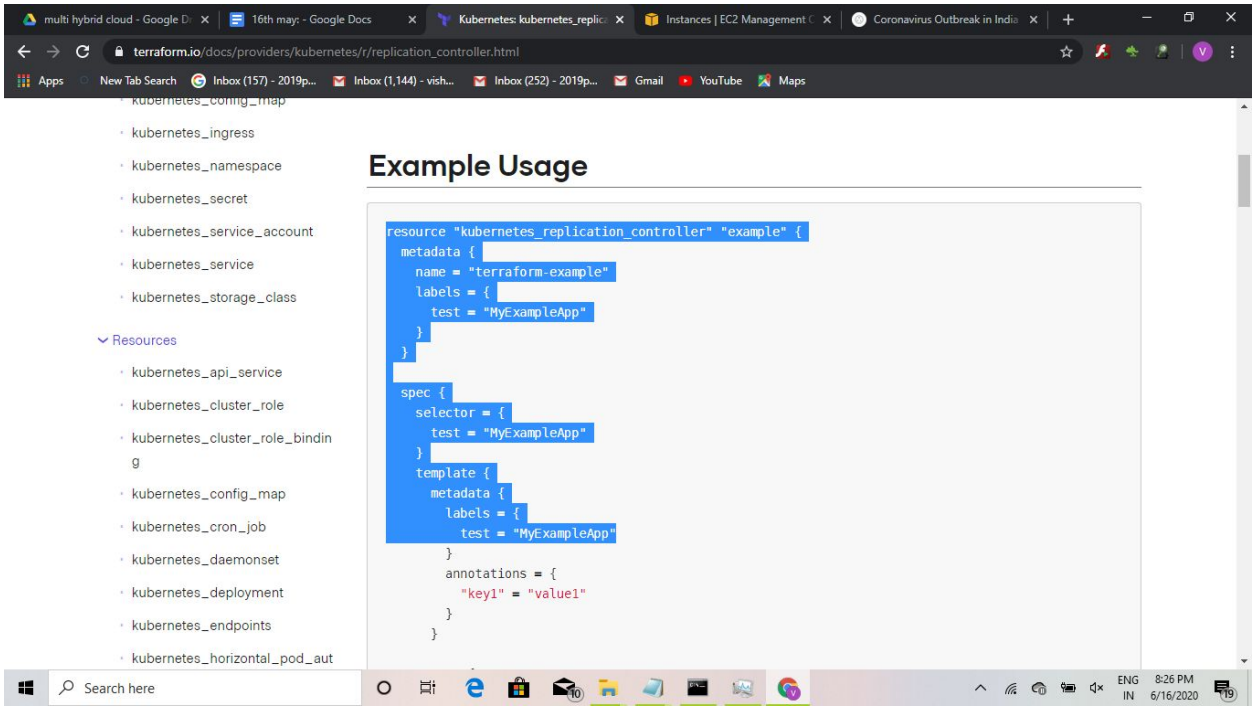
C:\Users\user\Desktop\kube_cloud>kubectl create -f rc1.yml
Error from server (AlreadyExists): error when creating "rc1.yml": replicationcontrollers "myweb-rc" already exists




```
C:\Users\user\Desktop\kube_cloud>kubectl replace -f rc1.yml
replicationcontroller/myweb-rc replaced

C:\Users\user\Desktop\kube_cloud>kubectl get pods
NAME           READY   STATUS              RESTARTS   AGE
myweb-rc-b4xtx   0/1     ContainerCreating   0          2s
myweb-rc-h7fz9   1/1     Running             0          97s
myweb-rc-mq687   0/1     ContainerCreating   0          2s
C:\Users\user\Desktop\kube_cloud>kubectl delete pods myweb-rc-mq687
pod "myweb-rc-mq687" deleted

C:\Users\user\Desktop\kube_cloud>kubectl get pods
NAME           READY   STATUS    RESTARTS   AGE
myweb-rc-b4xtx   1/1     Running   0          61s
myweb-rc-h7fz9   1/1     Running   0          2m36s
myweb-rc-jkz2s   1/1     Running   0          15s
C:\Users\user\Desktop\kube_cloud>cd ..

C:\Users\user\Desktop>cd terraform

C:\Users\user\Desktop\terraform>mkdir kuberc
```

```
C:\Users\user\Desktop\terraform>cd kuberc

C:\Users\user\Desktop\terraform\kuberc>dir
 Volume in drive C is vishesh
 Volume Serial Number is 1CF6-F84B

 Directory of C:\Users\user\Desktop\terraform\kuberc

06/16/2020  08:25 PM    <DIR>          .
06/16/2020  08:25 PM    <DIR>          ..
               0 File(s)              0 bytes
               2 Dir(s)  165,634,973,696 bytes free
```





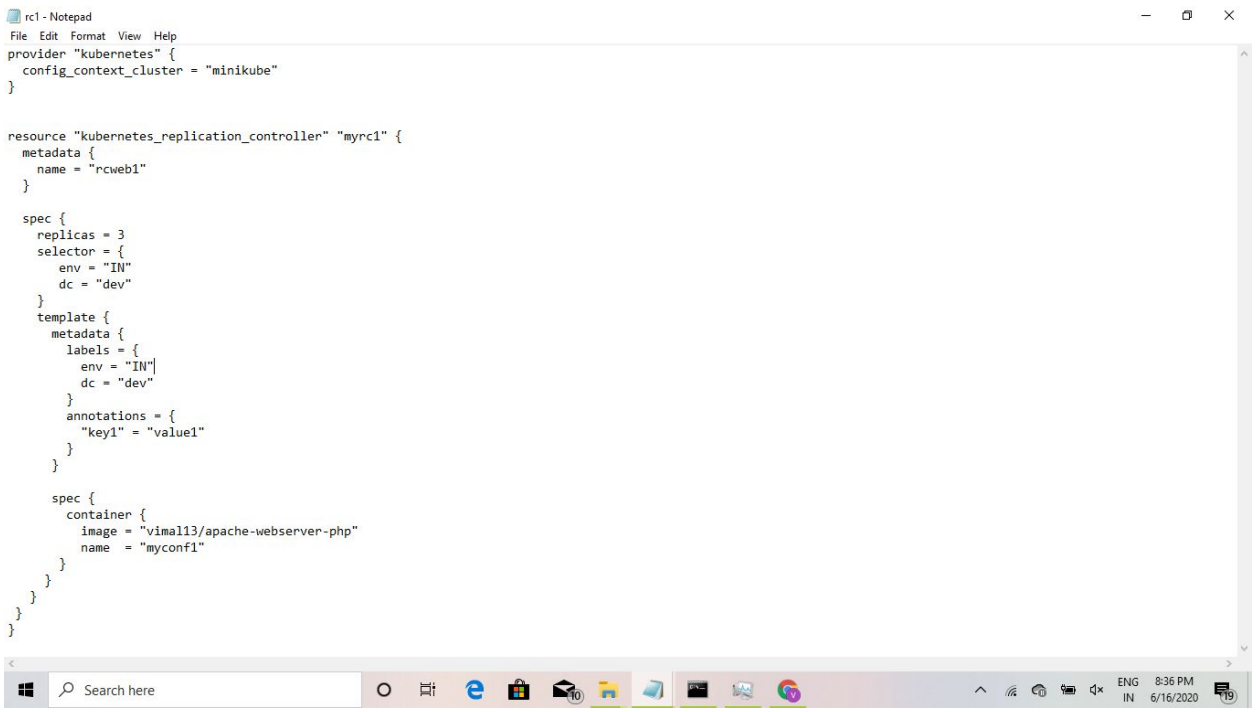
C:\Users\user\Desktop\kube_cloud>cd ..

C:\Users\user\Desktop>cd terraform

C:\Users\user\Desktop\terraform>mkdir kuberc

```
C:\Users\user\Desktop\terraform>cd kuberc

C:\Users\user\Desktop\terraform\kuberc>dir
 Volume in drive C is vishesh
 Volume Serial Number is 1CF6-F84B

 Directory of C:\Users\user\Desktop\terraform\kuberc

06/16/2020  08:25 PM    <DIR>          .
06/16/2020  08:25 PM    <DIR>          ..
               0 File(s)              0 bytes
               2 Dir(s)  165,634,973,696 bytes free
C:\Users\user\Desktop\terraform\kuberc>terraform init

Initializing the backend...

Initializing provider plugins...
- Checking for available provider plugins...
- Downloading plugin for provider "kubernetes" (hashicorp/kubernetes) 1.11.3...

The following providers do not have any version constraints in configuration,
so the latest version was installed.

To prevent automatic upgrades to new major versions that may contain breaking
changes, it is recommended to add version = "..." constraints to the
corresponding provider blocks in configuration, with the constraint strings
suggested below.

* provider.kubernetes: version = "~> 1.11"

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
```

C:\Users\user\Desktop\terraform\kuberc>kubectl delete all --all
pod "myweb-rc-b4xtx" deleted
pod "myweb-rc-h7fz9" deleted
pod "myweb-rc-jkz2s" deleted
replicationcontroller "myweb-rc" deleted
service "kubernetes" deleted



C:\Users\user\Desktop\terraform\kuberc>terraform validate
Success! The configuration is valid.

C:\Users\user\Desktop\terraform\kuberc>terraform apply --auto-approve
kubernetes_replication_controller.myrc1: Creating...
kubernetes_replication_controller.myrc1: Creation complete after 2s [id=default/rcweb1]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
C:\Users\user\Desktop\terraform\kuberc>kubectl get pods
NAME READY STATUS RESTARTS AGE
rcweb1-26qcq 1/1 Running 0 67s
rcweb1-57xxl 1/1 Running 0 67s
rcweb1-hlwmp 1/1 Running 0 67s