

Name : Madhavi Suratkar

Topic : Kubernetes Commands

Date : 28-04-2023

Commands:

```
Command Prompt
C:\Users\surat>docker images
```

REPOSITORY	TAG	IMAGE ID	CREATE
boottest	latest	5eabe3dcfdddf	43 hou
rs ago 511MB			
docker-compose-appservice	latest	0593be635245	43 hou
rs ago 511MB			
<none>	<none>	79e5e48adf17	43 hou
rs ago 511MB			
mysql_db	latest	430dcff4822f	2 days
ago 564MB			
spring-boot-docker-new	latest	7ca96975ea9f	3 days
ago 545MB			
spring-boot-docker	latest	567769be5726	3 days
ago 545MB			
docker-spring-boot	latest	aa049a703082	3 days
ago 545MB			
helloapp	latest	a12911a4c715	3 days
ago 67.4MB			
mysql	5.7	dd6675b5cfea	10 day
s ago 569MB			
mysql	latest	8189e588b0e8	10 day
s ago 564MB			
python	latest	4665a951a37e	2 week
s ago 921MB			
madhavisuratkar/deployment	tag-1	4665a951a37e	2 week
s ago 921MB			
gcr.io/k8s-minikube/kicbase	v0.0.39	67a4b1138d2d	3 week
s ago 1.05GB			
openjdk	latest	71260f256d19	2 mont
hs ago 470MB			
docker/getting-started	latest	3e4394f6b72f	4 mont
hs ago 47MB			
hubproxy.docker.internal:5555/docker/desktop-kubernetes	kubernetes-v1.25.4-cni-v1.1.1-critools-v1.25.0-cri-dockerd-v0.2.6-1-debian	2511e1796e7d	4 mont
hs ago 398MB			
registry.k8s.io/kube-apiserver	v1.25.4	00631e54acba	5 mont
hs ago 128MB			
registry.k8s.io/kube-proxy	v1.25.4	2c2bc1864279	5 mont
hs ago 61.7MB			

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1555]
(c) Microsoft Corporation. All rights reserved.

C:\Users\surat>kubectl config view
apiVersion: v1
clusters:
- cluster:
  certificate-authority-data: DATA+OMITTED
  server: https://kubernetes.docker.internal:6443
  name: docker-desktop
- cluster:
  certificate-authority: C:\Users\surat\.minikube\ca.crt
  extensions:
  - extension:
    last-update: Thu, 27 Apr 2023 07:35:09 IST
    provider: minikube.sigs.k8s.io
    version: v1.30.1
    name: cluster_info
    server: https://127.0.0.1:60600
  name: minikube
contexts:
- context:
  cluster: docker-desktop
  user: docker-desktop
  name: docker-desktop
- context:
  cluster: minikube
  extensions:
  - extension:
    last-update: Thu, 27 Apr 2023 07:35:09 IST
    provider: minikube.sigs.k8s.io
    version: v1.30.1
    name: context_info
    namespace: default
    user: minikube
  name: minikube
current-context: minikube
kind: Config
preferences: {}
users:
```

```
Command Prompt
C:\Users\surat>docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/
```

```
C:\Users\surat>minikube start
* minikube v1.30.1 on Microsoft Windows 11 Home Single Language 10.0.22621.1555 Build 22621.1555
* Using the docker driver based on existing profile
* Starting control plane node minikube in cluster minikube
* Pulling base image ...
* Restarting existing docker container for "minikube" ...
* Preparing Kubernetes v1.26.3 on Docker 23.0.2 ...
* Configuring bridge CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
  - Using image docker.io/kubernetesui/dashboard:v2.7.0
  - Using image docker.io/kubernetesui/metrics-scraper:v1.0.8
* Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube addons enable metrics-server

* Enabled addons: storage-provisioner, default-storageclass, dashboard
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

```
C:\Users\surat>kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
mongo-depl-5ccf565747-wm4w5        1/1     Running   2 (2m38s ago)  46h
```

```
Command Prompt
C:\Users\surat>kubectl run nginx --image=nginx
pod/nginx created

C:\Users\surat>kubectl get pods
NAME                                READY   STATUS             RESTARTS   AGE
mongo-depl-5ccf565747-wm4w5        1/1     Running            2 (3m28s ago)  46h
nginx                               0/1     ContainerCreating   0           6s

C:\Users\surat>|
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```
Command Prompt
nginx 1/1 Running 0 26s

C:\Users\surat>kubectl describe pod mongo-depl-5ccf565747-wm4w5
Name: mongo-depl-5ccf565747-wm4w5
Namespace: default
Priority: 0
Service Account: default
Node: minikube/192.168.49.2
Start Time: Wed, 26 Apr 2023 14:30:59 +0530
Labels: app=mongo-depl
pod-template-hash=5ccf565747
Annotations: <none>
Status: Running
IP: 10.244.0.20
IPs: IP: 10.244.0.20
Controlled By: ReplicaSet/mongo-depl-5ccf565747
Containers:
  mongo:
    Container ID: docker://e2ca7091b340029d48070b560e33b4a62202a3a878f9095de96df8725c464434
    Image: mongo
    Image ID: docker-pullable://mongo@sha256:9c8a0a019671ed7d402768d4df6dddc898028e21e9f7b90a34b55fe8ca676ac
    Port: <none>
    Host Port: <none>
    State: Running
      Started: Fri, 28 Apr 2023 13:13:25 +0530
    Last State: Terminated
      Reason: Error
      Exit Code: 255
    Started: Thu, 27 Apr 2023 07:35:16 +0530
    Finished: Fri, 28 Apr 2023 13:12:33 +0530
    Ready: True
    Restart Count: 2
    Environment: <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-72v2w (ro)
Conditions:
  Type Status
  Initialized True
  Ready True
```

```
Command Prompt

C:\Users\surat>kubectl get nodes
NAME STATUS ROLES AGE VERSION
minikube Ready control-plane 47h v1.26.3

C:\Users\surat>
```

```
Command Prompt

C:\Users\surat>kubectl get nodes
NAME STATUS ROLES AGE VERSION
minikube Ready control-plane 47h v1.26.3

C:\Users\surat>kubectl get pods
NAME READY STATUS RESTARTS AGE
mongo-depl-5ccf565747-wm4w5 1/1 Running 2 (5m4s ago) 46h
nginx 1/1 Running 0 102s

C:\Users\surat>kubectl get pods -o wide
error: unknown shorthand flag: 'o' in -o
See 'kubectl get --help' for usage.

C:\Users\surat>kubectl get pods -o wide
NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES
mongo-depl-5ccf565747-wm4w5 1/1 Running 2 (5m16s ago) 46h 10.244.0.20 minikube <none> <none>
nginx 1/1 Running 0 114s 10.244.0.23 minikube <none> <none>

C:\Users\surat>
```

```
C:\Users\surat>kubectl describe pod mongo-depl-5ccf565747-wm4w5
Name:          mongo-depl-5ccf565747-wm4w5
Namespace:     default
Priority:       0
Service Account: default
Node:          minikube/192.168.49.2
Start Time:    Wed, 26 Apr 2023 14:30:59 +0530
Labels:        app=mongo-depl
               pod-template-hash=5ccf565747
Annotations:   <none>
Status:        Running
IP:            10.244.0.20
IPs:
  IP:          10.244.0.20
Controlled By: ReplicaSet/mongo-depl-5ccf565747
Containers:
  mongo:
    Container ID:  docker://e2ca7091b340029d48070b560e33b4a62202a3a878f9095de96df8725c464434
    Image:         mongo
    Image ID:      docker-pullable://mongo@sha256:9c8a0a019671ed7d402768d4df6ddcc898828e21e9f7b90a34b55fe8ca676ac
    Port:          <none>
    Host Port:     <none>
    State:         Running
      Started:     Fri, 28 Apr 2023 13:13:25 +0530
    Last State:    Terminated
      Reason:      Error
      Exit Code:   255
    Started:      Thu, 27 Apr 2023 07:35:16 +0530
    Finished:     Fri, 28 Apr 2023 13:12:33 +0530
    Ready:        True
    Restart Count: 2
    Environment:  <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-72v2w (ro)
Conditions:
```

```
Environment:  <none>
Mounts:
  /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-72v2w (ro)
Conditions:
  Type            Status
  Initialized     True
  Ready           True
  ContainersReady True
  PodScheduled    True
Volumes:
  kube-api-access-72v2w:
    Type:          Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:  kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:    true
QoS Class:       BestEffort
Node-Selectors:  <none>
Tolerations:     node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                 node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type    Reason            Age   From          Message
  ----    -
  Normal  Scheduled         46h   default-scheduler  Successfully assigned default/mongo-depl-5ccf565747-wm4w5 to minikube
  Normal  Pulling           46h   kubelet         Pulling image "mongo"
  Normal  Pulled            46h   kubelet         Successfully pulled image "mongo" in 39.996455965s (39.99647504s including waiting)
  Normal  Created           46h   kubelet         Created container mongo
  Normal  Started           46h   kubelet         Started container mongo
  Normal  SandboxChanged    29h   kubelet         Pod sandbox changed, it will be killed and re-created.
  Normal  Pulling           29h   kubelet         Pulling image "mongo"
  Normal  Pulled            29h   kubelet         Successfully pulled image "mongo" in 3.806050129s (3.806080166s including waiting)
  Normal  Created           29h   kubelet         Created container mongo
  Normal  Started           29h   kubelet         Started container mongo
  Normal  SandboxChanged    5m43s kubelet         Pod sandbox changed, it will be killed and re-created.
  Normal  Pulling           5m38s kubelet         Pulling image "mongo"
  Normal  Pulled            5m33s kubelet         Successfully pulled image "mongo" in 5.197122778s (5.197143256s including waiting)
  Normal  Created           5m33s kubelet         Created container mongo
  Normal  Started           5m32s kubelet         Started container mongo
```

```
C:\Users\surat>
```

```
C:\Users\surat>kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
mongo-depl-5ccf565747-wm4w5        1/1     Running   2 (7m31s ago)    46h
nginx                               1/1     Running   0              4m9s
```

```
C:\Users\surat>$
```

```
C:\Users\surat>kubectll get replicaset
NAME                DESIRED    CURRENT    READY    AGE
mongo-depl-5ccf565747 1           1          1        46h

C:\Users\surat>kubectll get pods
NAME                READY    STATUS    RESTARTS    AGE
mongo-depl-5ccf565747-wm4w5 1/1      Running   2 (8m41s ago) 46h
nginx                1/1      Running   0           5m19s

C:\Users\surat>kubectll get rs
NAME                DESIRED    CURRENT    READY    AGE
mongo-depl-5ccf565747 1           1          1        46h

C:\Users\surat>|
```

```
C:\Users\surat>kubectll get service
NAME        TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes  ClusterIP   10.96.0.1     <none>         443/TCP    2d

C:\Users\surat>|
```

```
Command Prompt
C:\Users\surat>kubectll -h
Kubectll controls the Kubernetes cluster manager.

Find more information at: https://kubernetes.io/docs/reference/kubectll/

Basic Commands (Beginner):
  create      Create a resource from a file or from stdin
  expose       Take a replication controller, service, deployment or pod and expose it as a new Kubernetes service
  run         Run a particular image on the cluster
  set         Set specific features on objects

Basic Commands (Intermediate):
  explain      Get documentation for a resource
  get         Display one or many resources
  edit        Edit a resource on the server
  delete      Delete resources by file names, stdin, resources and names, or by resources and label selector

Deploy Commands:
  rollout      Manage the rollout of a resource
  scale       Set a new size for a deployment, replica set, or replication controller
  autoscale   Auto-scale a deployment, replica set, stateful set, or replication controller

Cluster Management Commands:
  certificate  Modify certificate resources.
  cluster-info Display cluster information
  top         Display resource (CPU/memory) usage
  cordon      Mark node as unschedulable
  uncordon    Mark node as schedulable
  drain       Drain node in preparation for maintenance
  taint       Update the taints on one or more nodes

Troubleshooting and Debugging Commands:
  describe    Show details of a specific resource or group of resources
  logs        Print the logs for a container in a pod
  attach      Attach to a running container
  exec        Execute a command in a container
  port-forward Forward one or more local ports to a pod
  proxy       Run a proxy to the Kubernetes API server
  cp          Copy files and directories to and from containers
  auth        Inspect authorization
```

```
Command Prompt

Troubleshooting and Debugging Commands:
describe    Show details of a specific resource or group of resources
logs        Print the logs for a container in a pod
attach      Attach to a running container
exec        Execute a command in a container
port-forward Forward one or more local ports to a pod
proxy       Run a proxy to the Kubernetes API server
cp          Copy files and directories to and from containers
auth        Inspect authorization
debug       Create debugging sessions for troubleshooting workloads and nodes

Advanced Commands:
diff        Diff the live version against a would-be applied version
apply       Apply a configuration to a resource by file name or stdin
patch       Update fields of a resource
replace     Replace a resource by file name or stdin
wait        Experimental: Wait for a specific condition on one or many resources
kustomize   Build a kustomization target from a directory or URL.

Settings Commands:
label       Update the labels on a resource
annotate    Update the annotations on a resource
completion  Output shell completion code for the specified shell (bash, zsh, fish, or powershell)

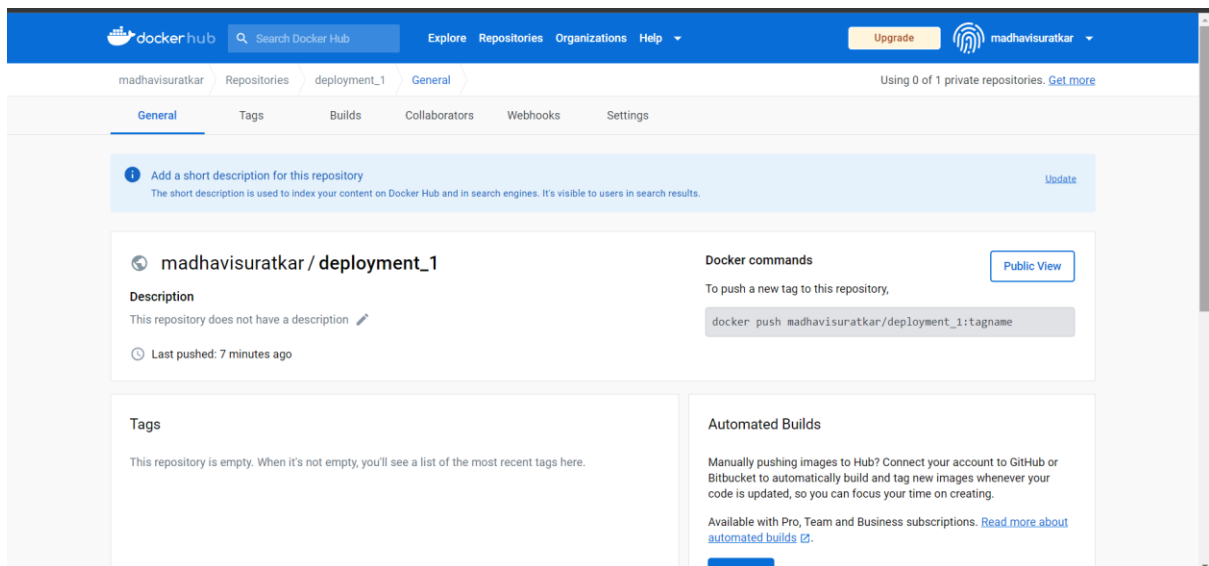
Other Commands:
alpha       Commands for features in alpha
api-resources Print the supported API resources on the server
api-versions Print the supported API versions on the server, in the form of "group/version"
config      Modify kubeconfig files
plugin      Provides utilities for interacting with plugins
version     Print the client and server version information

Usage:
  kubectl [flags] [options]

Use "kubectl <command> --help" for more information about a given command.
Use "kubectl options" for a list of global command-line options (applies to all commands).

C:\Users\surat>
```

Repository Creation



```
C:\Users\surat>kubectl get all --all-namespaces
```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE
default	pod/mongo-depl-5ccf565747-wm4w5	1/1	Running	2 (28m ago)	47h
default	pod/nginx	1/1	Running	0	25m
kube-system	pod/coredns-787d4945fb-7vbx	1/1	Running	6 (28m ago)	2d
kube-system	pod/etcd-minikube	1/1	Running	6 (28m ago)	2d
kube-system	pod/kube-apiserver-minikube	1/1	Running	5 (28m ago)	2d
kube-system	pod/kube-controller-manager-minikube	1/1	Running	6 (28m ago)	2d
kube-system	pod/kube-proxy-6kf9w	1/1	Running	6 (28m ago)	2d
kube-system	pod/kube-scheduler-minikube	1/1	Running	6 (28m ago)	2d
kube-system	pod/storage-provisioner	1/1	Running	9 (27m ago)	2d
kubernetes-dashboard	pod/dashboard-metrics-scraper-5c6664855-cx6gw	1/1	Running	4 (28m ago)	47h
kubernetes-dashboard	pod/kubernetes-dashboard-55c4cbbc7c-h42d7	1/1	Running	4 (28m ago)	47h

NAMESPACE	NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
default	service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	2d
kube-system	service/kube-dns	ClusterIP	10.96.0.10	<none>	53/UDP,53/TCP,9153/TCP	2d
kubernetes-dashboard	service/dashboard-metrics-scraper	ClusterIP	10.107.18.201	<none>	8080/TCP	47h
kubernetes-dashboard	service/kubernetes-dashboard	ClusterIP	10.97.24.171	<none>	80/TCP	47h

NAMESPACE	NAME	DESIRED	CURRENT	READY	UP-TO-DATE	AVAILABLE	NODE SELECTOR	AGE
kube-system	daemonset.apps/kube-proxy	1	1	1	1	1	kubernetes.io/os=linux	2d

NAMESPACE	NAME	READY	UP-TO-DATE	AVAILABLE	AGE
default	deployment.apps/mongo-depl	1/1	1	1	47h
kube-system	deployment.apps/coredns	1/1	1	1	2d
kubernetes-dashboard	deployment.apps/dashboard-metrics-scraper	1/1	1	1	47h
kubernetes-dashboard	deployment.apps/kubernetes-dashboard	1/1	1	1	47h

NAMESPACE	NAME	DESIRED	CURRENT	READY	AGE
default	replicaset.apps/mongo-depl-5ccf565747	1	1	1	47h
kube-system	replicaset.apps/coredns-787d4945fb	1	1	1	2d
kubernetes-dashboard	replicaset.apps/dashboard-metrics-scraper-5c6664855	1	1	1	47h
kubernetes-dashboard	replicaset.apps/kubernetes-dashboard-55c4cbbc7c	1	1	1	47h

```
C:\Users\surat>
```

```
C:\Users\surat>kubectl get deployment
```

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
mongo-depl	1/1	1	1	47h

```
C:\Users\surat>
```