Lab: Multi-Container Pod


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root@AnushaKubernetes:~/kubernetes# mkdir -p ~/kubernetes
root@AnushaKubernetes:~/kubernetes# cd ~/kubernetes
root@AnushaKubernetes:~/kubernetes# nano pod-multi-container.yml
root@AnushaKubernetes:~/kubernetes#  cat -n ~/kubernetes/pod-multi
-container.yml
     1  apiVersion: v1
     2  kind: Pod
     3  metadata:
     4    name: multi-container-pod
     5  spec:
     6    containers:
     7      - name: container1
     8        image: nginx
     9      - name: container2
    10        image: redis
    11      - name: container3
    12        image: memcached
root@AnushaKubernetes:~/kubernetes# minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

root@AnushaKubernetes:~/kubernetes# kubectl create -f ~/kubernetes
/pod-multi-container.yml
pod/multi-container-pod created
root@AnushaKubernetes:~/kubernetes# kubectl get pods
NAME                   READY    STATUS            RESTARTS   AGE
multi-container-pod    0/3      ContainerCreating  0          17s
root@AnushaKubernetes:~/kubernetes# kubectl describe pod multi-con
tainer-pod
Name:               multi-container-pod
Namespace:          default
Priority:           0
Service Account:    default
Node:               minikube/192.168.49.2
Start Time:         Sat, 17 Aug 2024 13:22:10 +0000
```

```
Start Time:          Sat, 17 Aug 2024 13:22:10 +0000
Labels:              <none>
Annotations:         <none>
Status:              Running
IP:                  10.244.0.5
IPs:
  IP:  10.244.0.5
Containers:
  container1:
    Container ID:   docker://72a167b484803a70265e4d8c214ef7d362d7d
c1895161d96f43d171fa8dc7dad
    Image:          nginx
    Image ID:       docker-pullable://nginx@sha256:447a8665cc1dab9
5b1ca778e162215839ccbb9189104c79d7ec3a81e14577add
    Port:           <none>
    Host Port:      <none>
    State:          Running
      Started:      Sat, 17 Aug 2024 13:22:20 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-
access-7kmkx (ro)
  container2:
    Container ID:   docker://e796e360aabcc9ffcadeb6c52dd5aad706d46
df7c18ef11b2f151e56140023b6
    Image:          redis
    Image ID:       docker-pullable://redis@sha256:878983f8f5045b2
8384fc300268cec62bca3b14d5e1a448bec21f28cfcc7bf78
    Port:           <none>
    Host Port:      <none>
    State:          Running
      Started:      Sat, 17 Aug 2024 13:22:26 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-
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      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-
access-7kmkx (ro)
  container3:
    Container ID:   docker://5ad0a81244b4b5ca21b99147a4c18920f84ac
ebe23256744bcc2ceab2faf6a16
    Image:          memcached
    Image ID:       docker-pullable://memcached@sha256:ef95745e5d2
d762fbdf300a2d026311397257f8cb22dee4292d98472a99feb43
    Port:           <none>
    Host Port:      <none>
    State:          Running
      Started:      Sat, 17 Aug 2024 13:22:31 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-
access-7kmkx (ro)
Conditions:
  Type                       Status
  PodReadyToStartContainers  True
  Initialized                True
  Ready                      True
  ContainersReady            True
  PodScheduled               True
Volumes:
  kube-api-access-7kmkx:
    Type:                    Projected (a volume that contains inj
ected 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:NoExecut
e op=Exists for 300s
                             node.kubernetes.io/unreachable:NoExec
ute op=Exists for 300s
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e op=Exists for 300s
                              node.kubernetes.io/unreachable:NoExec
ute op=Exists for 300s
Events:
  Type     Reason     Age    From             Message
  ----     ------     ----   ----             -------
  Normal   Scheduled  29s    default-scheduler  Successfully assigne
d default/multi-container-pod to minikube
  Normal   Pulling    28s    kubelet          Pulling image "nginx
"
  Normal   Pulled     19s    kubelet          Successfully pulled
image "nginx" in 9.273s (9.273s including waiting). Image size: 18
7669252 bytes.
  Normal   Created    19s    kubelet          Created container co
ntainer1
  Normal   Started    19s    kubelet          Started container co
ntainer1
  Normal   Pulling    19s    kubelet          Pulling image "redis
"
  Normal   Pulled     13s    kubelet          Successfully pulled
image "redis" in 5.618s (5.618s including waiting). Image size: 11
6937259 bytes.
  Normal   Created    13s    kubelet          Created container co
ntainer2
  Normal   Started    13s    kubelet          Started container co
ntainer2
  Normal   Pulling    13s    kubelet          Pulling image "memca
ched"
  Normal   Pulled     8s     kubelet          Successfully pulled
image "memcached" in 4.633s (4.633s including waiting). Image size
: 84788109 bytes.
  Normal   Created    8s     kubelet          Created container co
ntainer3
  Normal   Started    8s     kubelet          Started container co
ntainer3
root@AnushaKubernetes:~/kubernetes#  kubectl exec -it multi-contai
ner-pod -- bash
Defaulted container "container1" out of: container1, container2, c
ontainer3
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root@AnushaKubernetes:~/kubernetes#  kubectl exec -it multi-contai
ner-pod -- bash
Defaulted container "container1" out of: container1, container2, c
ontainer3
root@multi-container-pod:/#  exit
exit
root@AnushaKubernetes:~/kubernetes# kubectl exec -it multi-contain
er-pod -c container2 -- bash
root@multi-container-pod:/data# exit
exit
root@AnushaKubernetes:~/kubernetes#  kubectl delete pod multi-cont
ainer-pod
pod "multi-container-pod" deleted
root@AnushaKubernetes:~/kubernetes#
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