SCD

Lab Activity – 14

K L L R C O D A   🐦 in ✳   PLUS   Areas   Account   Creator   Logout

1.32 | One Node 2GB

This playground will always have the latest stable Kubernetes version a few weeks after release.

You have access to an empty Kubeadm cluster with one 2GB node. The controlplane node has taint removed to be able to schedule workload.

This is just an empty environment, if you're looking for scenarios check CKS, CKA, CKAD or all Areas.

RESTART   SCENARIOS

FEEDBACK

Editor   Tab 1   Tab 2   +   34 min ≡

```
controlplane:~$ kubectl get all -n mern-stack
NAME                            READY   STATUS    RESTARTS   AGE
pod/backend-5bc4d95764-8mfbl    1/1     Running   0          3m50s
pod/frontend-7bc5b8654-h2hgg    1/1     Running   0          4m57s
pod/mongodb-965585597-ncmc7     1/1     Running   0          5m29s

NAME                       TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
service/backend-service    ClusterIP   10.111.244.129  <none>        5000/TCP       5m10s
service/frontend-service   NodePort    10.100.65.34    <none>        80:30007/TCP   4m57s
service/mongodb-service    ClusterIP   10.102.7.126    <none>        27017/TCP      5m29s

NAME                       READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/backend    1/1     1            1           5m10s
deployment.apps/frontend   1/1     1            1           4m57s
deployment.apps/mongodb    1/1     1            1           5m29s

NAME                                  DESIRED   CURRENT   READY   AGE
replicaset.apps/backend-5945ffcb99    0         0         0       5m10s
replicaset.apps/backend-5bc4d95764    1         1         1       3m51s
replicaset.apps/frontend-7bc5b8654    1         1         1       4m57s
replicaset.apps/mongodb-965585597     1         1         1       5m29s
controlplane:~$ kubectl set image deployment/frontend frontend=yourdockerhub/mern-frontend:v2 -n mern-stack --record
Flag --record has been deprecated, --record will be removed in the future
deployment.apps/frontend image updated
controlplane:~$ kubectl rollout status deployment/frontend -n mern-stack
Waiting for deployment "frontend" rollout to finish: 1 old replicas are pending termination...
error: deployment "frontend" exceeded its progress deadline
controlplane:~$ ^C
controlplane:~$ kubectl describe deployment/frontend -n mern-stack
Name:           frontend
```

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```
NewReplicaSet:   frontend-59f9f56867 (1/1 replicas created)
Events:
  Type    Reason             Age    From                    Message
  ----    ------             ----   ----                    -------
  Normal  ScalingReplicaSet  17m    deployment-controller   Scaled up replica set frontend-7bc5b8654 from 0 to 1
  Normal  ScalingReplicaSet  12m    deployment-controller   Scaled up replica set frontend-59f9f56867 from 0 to 1
controlplane:~$ kubectl get pods -n mern-stack
NAME                         READY   STATUS           RESTARTS   AGE
backend-5bc4d95764-8mfbl     1/1     Running          0          16m
frontend-59f9f56867-4qj2m    0/1     ImagePullBackOff 0          12m
frontend-7bc5b8654-h2hgg     1/1     Running          0          17m
mongodb-965585597-ncmc7      1/1     Running          0          18m
controlplane:~$ kubectl get events -n mern-stack --sort-by=.metadata.creationTimestamp
LAST SEEN   TYPE     REASON             OBJECT                            MESSAGE
18m         Normal   Scheduled          pod/mongodb-965585597-ncmc7       Successfully assigned mern-stack/mongodb-965585597-ncmc7
to controlplane
18m         Normal   ScalingReplicaSet  deployment/mongodb                Scaled up replica set mongodb-965585597 from 0 to 1
18m         Normal   SuccessfulCreate   replicaset/mongodb-965585597      Created pod: mongodb-965585597-ncmc7
18m         Normal   Pulling            pod/mongodb-965585597-ncmc7       Pulling image "mongo:4.4"
18m         Normal   ScalingReplicaSet  deployment/backend                Scaled up replica set backend-5945ffcb99 from 0 to 1
18m         Normal   Scheduled          pod/backend-5945ffcb99-pq4z8      Successfully assigned mern-stack/backend-5945ffcb99-pq4z8
  to controlplane
18m         Normal   SuccessfulCreate   replicaset/backend-5945ffcb99     Created pod: backend-5945ffcb99-pq4z8
18m         Normal   Pulled             pod/mongodb-965585597-ncmc7       Successfully pulled image "mongo:4.4" in 17.996s (17.996s
  including waiting). Image size: 173070008 bytes.
18m         Normal   Started            pod/mongodb-965585597-ncmc7       Started container mongodb
18m         Normal   Created            pod/mongodb-965585597-ncmc7       Created container: mongodb
18m         Normal   Pulling            pod/backend-5945ffcb99-pq4z8      Pulling image "busybox"
18m         Normal   Started            pod/backend-5945ffcb99-pq4z8      Started container wait-for-mongodb
18m         Normal   Pulled             pod/backend-5945ffcb99-pq4z8      Successfully pulled image "busybox" in 998ms (998ms inclu
```

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```
9m34s        Warning   Failed             pod/frontend-59f9f56867-4qj2m   Failed to pull image "yourdockerhub/mern-frontend:v2": fa
iled to pull and unpack image "docker.io/yourdockerhub/mern-frontend:v2": failed to resolve reference "docker.io/yourdockerhub/mern-
frontend:v2": pull access denied, repository does not exist or may require authorization: server message: insufficient_scope: author
ization failed
2m48s        Normal    BackOff            pod/frontend-59f9f56867-4qj2m   Back-off pulling image "yourdockerhub/mern-frontend:v2"
controlplane:~$ kubectl rollout undo deployment/frontend -n mern-stack
deployment.apps/frontend rolled back
controlplane:~$ kubectl rollout status deployment/frontend -n mern-stack
deployment "frontend" successfully rolled out
controlplane:~$ kubectl get pods -n mern-stack
NAME                         READY   STATUS    RESTARTS   AGE
backend-5bc4d95764-8mfbl     1/1     Running   0          17m
frontend-7bc5b8654-h2hgg     1/1     Running   0          18m
mongodb-965585597-ncmc7      1/1     Running   0          19m
controlplane:~$ ^C
controlplane:~$ kubectl set image deployment/frontend frontend=nginx:1.23 -n mern-stack --record
Flag --record has been deprecated, --record will be removed in the future
deployment.apps/frontend image updated
controlplane:~$ kubectl rollout status deployment/frontend -n mern-stack
deployment "frontend" successfully rolled out
controlplane:~$ kubectl get pods -n mern-stack
NAME                         READY   STATUS    RESTARTS   AGE
backend-5bc4d95764-8mfbl     1/1     Running   0          18m
frontend-75565587f9-5fjtz    1/1     Running   0          22s
mongodb-965585597-ncmc7      1/1     Running   0          20m
controlplane:~$ BACKEND_POD=$(kubectl get pods -n mern-stack -l app=backend -o jsonpath='{.items[0].metadata.name}')
controlplane:~$ kubectl logs -n mern-stack $BACKEND_POD -c sidecar
error: container sidecar is not valid for pod backend-5bc4d95764-8mfbl
controlplane:~$ ^C
controlplane:~$ kubectl edit deployment backend -n mern-stack
```

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```
4           kubectl set image deployment/frontend frontend=nginx:1.23 --namespace=mern-stack --record=true

controlplane:~$ ^C
controlplane:~$ kubectl get pods -n mern-stack -o wide
NAME                         READY   STATUS    RESTARTS   AGE     IP             NODE           NOMINATED NODE   READINESS GATES
backend-69964f6cb7-snsqs     2/2     Running   0          6m44s   192.168.0.16   controlplane   <none>           <none>
frontend-75565587f9-5fjtz    1/1     Running   0          19m     192.168.0.15   controlplane   <none>           <none>
mongodb-965585597-ncmc7      1/1     Running   0          39m     192.168.0.10   controlplane   <none>           <none>
controlplane:~$ kubectl logs -n mern-stack $(kubectl get pods -n mern-stack -l app=backend -o jsonpath='{.items[0].metadata.name}')
-c sidecar
Backend connected to MongoDB at $MONGO_URL
Heartbeat: $(date)
Heartbeat: $(date)
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Heartbeat: $(date)
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controlplane:~$ ^C
controlplane:~$ ^C
controlplane:~$ kubectl get svc -n mern-stack
NAME               TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)        AGE
backend-service    ClusterIP   10.111.244.129   <none>        5000/TCP       42m
frontend-service   NodePort    10.100.65.34     <none>        80:30007/TCP   42m
mongodb-service    ClusterIP   10.102.7.126     <none>        27017/TCP      42m
controlplane:~$ ^C
controlplane:~$
```

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