Jenkins Integration
Microservices Using Maven

```
master@master-vm:~/Microservices$ docker-compose up -d --build
WARN[0000] /home/master/Microservices/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it
to avoid potential confusion
Compose can now delegate builds to bake for better performance.
 To do so, set COMPOSE_BAKE=true.
[+] Building 2.6s (31/31) FINISHED                              docker:default
 => [user-service internal] load build definition from Dockerfile        0.0s
 => => transferring dockerfile: 131B                                     0.0s
 => [product-service internal] load build definition from Dockerfile     0.1s
 => => transferring dockerfile: 365B                                     0.0s
 => [user-service internal] load metadata for docker.io/library/openjdk:2  1.8s
 => [user-service auth] library/openjdk:pull token for registry-1.docker.  0.0s
 => [payment-service internal] load metadata for docker.io/library/openjd  2.2s
 => [payment-service internal] load build definition from Dockerfile     0.0s
 => => transferring dockerfile: 291B                                     0.0s
 => [order-service internal] load build definition from Dockerfile       0.0s
 => => transferring dockerfile: 365B                                     0.0s
 => [user-service internal] load .dockerignore                           0.0s
 => => transferring context: 2B                                          0.0s
 => [user-service 1/3] FROM docker.io/library/openjdk:21@sha256:af9de795d  0.0s
 => [user-service internal] load build context                           0.0s
 => => transferring context: 86B                                         0.0s
 => CACHED [user-service 2/3] WORKDIR /app                               0.0s
 => CACHED [user-service 3/3] COPY target/*.jar app.jar                  0.0s
 => [user-service] exporting to image                                    0.0s
 => => exporting layers                                                  0.0s
 => => writing image sha256:0db9ffd0a3f91422b91c3d68409f2dffbd29ae8bd8870  0.0s
 => => naming to docker.io/bhargavakulla/user-service                    0.0s
 => [user-service] resolving provenance for metadata file                0.0s
 => [order-service internal] load .dockerignore                          0.1s
 => => transferring context: 2B                                          0.0s
 => [product-service internal] load .dockerignore                        0.0s
 => => transferring context: 2B                                          0.0s
 => [payment-service internal] load .dockerignore                        0.1s
```

```
 ✓ order-service              Built                              0.0s
 ✓ payment-service            Built                              0.0s
 ✓ product-service            Built                              0.0s
 ✓ user-service               Built                              0.0s
 ✓ Container order-service    Started                            8.4s
 ✓ Container postgres_db      Started                            2.5s
 ✓ Container zookeeper        Started                            2.5s
 ✓ Container kafka_broker     Started                            3.0s
 ✓ Container product-service  Started                            4.3s
 ✓ Container user-service     Started                            4.5s
 ✓ Container payment-service  Started                            3.1s
master@master-vm:~/Microservices$ docker ps
CONTAINER ID   IMAGE                           COMMAND                  CREATED          STATUS
```

```
master@master-vm:~/Microservices$ docker ps
CONTAINER ID   IMAGE                              COMMAND                  CREATED          STATUS          PORTS
                                      NAMES
8922510bc9f4   bhargavakulla/order-service        "java -jar app.jar"      16 seconds ago   Up 6 seconds    8082/tcp, 0.0.0.0:8083->8
083/tcp, :::8083->8083/tcp              order-service
983584f47388   bhargavakulla/payment-service      "java -jar app.jar"      16 seconds ago   Up 5 seconds    0.0.0.0:8084->8084/tcp, :
::8084->8084/tcp                       payment-service
d8fbad325f4a   bhargavakulla/user-service         "java -jar app.jar"      16 seconds ago   Up 11 seconds   0.0.0.0:8081->8081/tcp, :
::8081->8081/tcp                       user-service
839b8af4375c   bhargavakulla/product-service      "java -jar app.jar"      16 seconds ago   Up 11 seconds   0.0.0.0:8082->8082/tcp, :
::8082->8082/tcp, 8083/tcp             product-service
9bea0fac4348   confluentinc/cp-kafka:7.3.2        "/etc/confluent/dock…"   16 seconds ago   Up 10 seconds   0.0.0.0:9092->9092/tcp, :
::9092->9092/tcp                       kafka_broker
3442be5a05a4   confluentinc/cp-zookeeper:7.3.2    "/etc/confluent/dock…"   17 seconds ago   Up 14 seconds   2888/tcp, 0.0.0.0:2181->2
181/tcp, :::2181->2181/tcp, 3888/tcp   zookeeper
28e41855a572   postgres:17.4                      "docker-entrypoint.s…"   17 seconds ago   Up 14 seconds   0.0.0.0:5432->5432/tcp, :
::5432->5432/tcp                       postgres_db
```

```
master@master-vm:~/Microservices/k8s$ kubectl get all
NAME                                   READY   STATUS             RESTARTS         AGE
pod/flask-app-694d959f47-65blr         1/1     Running            1 (7m59s ago)    47h
pod/flask-app-694d959f47-7sqrg         1/1     Running            1 (7m59s ago)    47h
pod/flask-app-694d959f47-bvk8f         1/1     Terminating        0                6d2h
pod/flask-app-694d959f47-fs2c6         1/1     Terminating        0                6d2h
pod/flask-app-694d959f47-rlccq         1/1     Running            2 (7m59s ago)    6d2h
pod/flask-app-694d959f47-rwdt5         1/1     Running            2 (7m59s ago)    6d2h
pod/mysql-66d468f74c-6ggzz             1/1     Terminating        0                6d2h
pod/mysql-66d468f74c-bws29             1/1     Running            1 (7m59s ago)    47h
pod/nginx-78b5b78b99-7nwgk             1/1     Terminating        0                6d1h
pod/nginx-78b5b78b99-shswf             1/1     Running            1 (7m59s ago)    47h
pod/order-service-646676ccbf-m9cx9     0/1     CrashLoopBackOff   16 (2m23s ago)   44h
pod/order-service-7f79fc8645-h8sht     0/1     ImagePullBackOff   0                21s
pod/payment-service-5bf96544b8-l5v2m   0/1     CrashLoopBackOff   15 (4m48s ago)   44h
pod/payment-service-7674b6cc6c-tk52c   0/1     ContainerCreating  0                21s
pod/postgres-656894ccb5-pxz5v          0/1     ContainerCreating  0                20s
pod/product-service-6f9459ff7-4svvr    0/1     CrashLoopBackOff   15 (2m37s ago)   44h
pod/product-service-7665499cbc-f297c   0/1     ContainerCreating  0                20s
pod/user-service-67fd4d9c47-5p4q9      0/1     CrashLoopBackOff   13 (3m59s ago)   44h
pod/user-service-6bbc46cdb-hrrjd       0/1     ContainerCreating  0                20s

NAME                      TYPE           CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
service/flask-service     ClusterIP      10.107.176.49    <none>        5000/TCP         6d2h
service/kubernetes        ClusterIP      10.96.0.1        <none>        443/TCP          6d2h
service/mysql             ClusterIP      10.110.104.236   <none>        3306/TCP         6d2h
service/nginx-service     NodePort       10.104.43.56     <none>        80:30007/TCP     6d1h
service/order-service     LoadBalancer   10.109.39.214    <pending>     8082:32549/TCP   44h
service/payment-service   LoadBalancer   10.110.136.173   <pending>     8084:30485/TCP   44h
service/postgres          ClusterIP      10.98.83.5       <none>        5432/TCP         21s
service/product-service   ClusterIP      10.107.79.210    <none>        8082/TCP         44h
service/user-service      LoadBalancer   10.99.120.93     <pending>     8081:30339/TCP   44h
```

```
NAME                          TYPE            CLUSTER-IP        EXTERNAL-IP       PORT(S)           AGE
service/flask-service         ClusterIP       10.107.176.49     <none>            5000/TCP          6d2h
service/kubernetes            ClusterIP       10.96.0.1         <none>            443/TCP           6d2h
service/mysql                 ClusterIP       10.110.104.236    <none>            3306/TCP          6d2h
service/nginx-service         NodePort        10.104.43.56      <none>            80:30007/TCP      6d1h
service/order-service         LoadBalancer    10.109.39.214     <pending>         8082:32549/TCP    44h
service/payment-service       LoadBalancer    10.110.136.173    <pending>         8084:30485/TCP    44h
service/postgres              ClusterIP       10.98.83.5        <none>            5432/TCP          21s
service/product-service       ClusterIP       10.107.79.210     <none>            8082/TCP          44h
service/user-service          LoadBalancer    10.99.120.93      <pending>         8081:30339/TCP    44h


NAME                               READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/flask-app          4/4     4            4           6d2h
deployment.apps/mysql              1/1     1            1           6d2h
deployment.apps/nginx              1/1     1            1           6d1h
deployment.apps/order-service      0/1     1            0           44h
deployment.apps/payment-service    0/1     1            0           44h
deployment.apps/postgres           0/1     1            0           20s
deployment.apps/product-service    0/1     1            0           44h
deployment.apps/user-service       0/1     1            0           44h

NAME                                           DESIRED   CURRENT   READY   AGE
replicaset.apps/flask-app-694d959f47           4         4         4       6d2h
replicaset.apps/mysql-66d468f74c               1         1         1       6d2h
replicaset.apps/nginx-78b5b78b99               1         1         1       6d1h
replicaset.apps/order-service-646676ccbf       1         1         0       44h
replicaset.apps/order-service-7f79fc8645       1         1         0       21s
replicaset.apps/payment-service-5bf96544b8     1         1         0       44h
replicaset.apps/payment-service-7674b6cc6c     1         1         0       21s
replicaset.apps/postgres-656894ccb5            1         1         0       20s
replicaset.apps/product-service-6f9459ff7      1         1         0       44h
replicaset.apps/product-service-7665499cbc     1         1         0       20s
replicaset.apps/user-service-67fd4d9c47        1         1         0       44h
replicaset.apps/user-service-6bbc46cdb         1         1         0       20s
```