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Application Containerization Lab

EXPERIMENT-7

Using of link and swarm

```
Applications  Places  Terminal  Mon Mar 15 11:07 PM  1  54 %
root@anonymous: ~

root@anonymous:~# docker run -d --name db training/postgres
Unable to find image 'training/postgres:latest' locally
latest: Pulling from training/postgres
Image docker.io/training/postgres:latest uses outdated schema1 manifest format. Please upgrade to a schema2 image for better future compatibility. More information at http://docs.docker.com/registry/spec/deprecated-schema-v1/
a3ed95caeb02: Pull complete
6e71c809542e: Pull complete
2978d9af87ba: Pull complete
e1bca35b062f: Pull complete
500b6dec741: Pull complete
74b14ef2151f: Pull complete
7afd5ed3826e: Pull complete
3c69bb244f5e: Pull complete
d86f9ec5aedf: Pull complete
010fabf20157: Pull complete
Digest: sha256:a945dc6dcfbc8d009c3d972931608344b76c2870ce796da00a827bd50791907e
Status: Downloaded newer image for training/postgres:latest
617c0a16c1ff4ecc96f7b06074e6cf03829a08d0b0f71edd83b3a59567edf112
root@anonymous:~# docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
617c0a16c1ff   training/postgres   "su postgres -c '/us..."  18 seconds ago Up 5 seconds   5432/tcp     db
root@anonymous:~# docker run -d --name web --link db:mysql training/webapp
Unable to find image 'training/webapp:latest' locally
latest: Pulling from training/webapp
Image docker.io/training/webapp:latest uses outdated schema1 manifest format. Please upgrade to a schema2 image for better future compatibility. More information at http://docs.docker.com/registry/spec/deprecated-schema-v1/
e190868d63f8: Pull complete
909cd34c6fd7: Pull complete
0b9bfabab7c1: Pull complete
a3ed95caeb02: Pull complete
10bbbc0fc0ff: Pull complete
fca59b508e9f: Pull complete
e7ae2541b15b: Pull complete
9dd97ef58ce9: Pull complete
a4c1b0cb7af7: Pull complete
Digest: sha256:06e9c1983bd6d5db5fba376ccd63bfa529e8d02f23d5079b8f74a616308fb11d
Status: Downloaded newer image for training/webapp:latest
14e2a880048d9fb27327366281b520534d2774e95f84848e422193f06809e6af
root@anonymous:~# docker ps
```

```
Applications  Places  Terminal  Mon Mar 15 11:07 PM  1  54 %
root@anonymous: ~

e190868d63f8: Pull complete
909cd34c6fd7: Pull complete
0b9bfabab7c1: Pull complete
a3ed95caeb02: Pull complete
10bbbc0fc0ff: Pull complete
fca59b508e9f: Pull complete
e7ae2541b15b: Pull complete
9dd97ef58ce9: Pull complete
a4c1b0cb7af7: Pull complete
Digest: sha256:06e9c1983bd6d5db5fba376ccd63bfa529e8d02f23d5079b8f74a616308fb11d
Status: Downloaded newer image for training/webapp:latest
14e2a880048d9fb27327366281b520534d2774e95f84848e422193f06809e6af
root@anonymous:~# docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
14e2a880048d   training/webapp   "python app.py"          6 minutes ago Up 6 minutes   5000/tcp     web
617c0a16c1ff   training/postgres   "su postgres -c '/us..."  12 minutes ago Up 12 minutes   5432/tcp     db
root@anonymous:~# docker exec -it web bash
root@14e2a880048d:/opt/webapp# ping mydb
PING mydb (172.17.0.2) 56(84) bytes of data:
64 bytes from mydb (172.17.0.2): icmp_seq=1 ttl=64 time=0.425 ms
64 bytes from mydb (172.17.0.2): icmp_seq=2 ttl=64 time=0.155 ms
64 bytes from mydb (172.17.0.2): icmp_seq=3 ttl=64 time=0.230 ms
64 bytes from mydb (172.17.0.2): icmp_seq=4 ttl=64 time=0.151 ms
64 bytes from mydb (172.17.0.2): icmp_seq=5 ttl=64 time=0.156 ms
64 bytes from mydb (172.17.0.2): icmp_seq=6 ttl=64 time=0.170 ms
64 bytes from mydb (172.17.0.2): icmp_seq=7 ttl=64 time=0.151 ms
^C
--- mydb ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6143ms
rtt min/avg/max/mdev = 0.151/0.205/0.425/0.094 ms
root@14e2a880048d:/opt/webapp# exit
exit
root@anonymous:~# docker exec -it db bash
root@617c0a16c1ff:/# ping web
ping: unknown host web
root@617c0a16c1ff:/# exit
exit
root@anonymous:~#
```

Terminal Host 1 +
Your Interactive Bash Terminal. A safe place to learn and execute commands.

\$ docker swarm init
Swarm initialized: current node (p9mh3gem3q5w7qncpwc3j7f8u) is now a manager.

To add a worker to this swarm, run the following command:

 docker swarm join --token SWMTKN-1-3lkkuvyl6ee9sbjfnk2d4vgvxoe05xggnigbf22jp6sknoim08-bhhisi8xlpwfhorc23d7d8xnq 172.17.0.36:2377

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.

\$ docker node ls
ID HOSTNAME STATUS AVAILABILITY
Type MANAGER STATUS ENGINE VERSION
p9mh3gem3q5w7qncpwc3j7f8u * host01 Ready Active
 Leader 19.03.13
90o2dqu0o085izqr0zv5ft6v5 host02 Ready Active
 19.03.13

Terminal Host 2
Your Interactive Bash Terminal. A safe place to learn and execute commands.

\$ docker swarm join --token SWMTKN-1-3lkkuvyl6ee9sbjfnk2d4vgvxoe05xggnigbf22jp6sknoim08-bhhisi8xlpwfhorc23d7d8xnq 172.17.0.36:2377
This node joined a swarm as a worker.
\$

Terminal Host 1 +
\$ docker swarm leave --force
Node left the swarm.
\$

Terminal Host 2
\$ docker swarm join --token SWMTKN-1-3lkkuvyl6ee9sbjfnk2d4vgvxoe05xggnigbf22jp6sknoim08-bhhisi8xlpwfhorc23d7d8xnq 172.17.0.36:2377
This node joined a swarm as a worker.
\$