

Experiment 5

Aim:

To install and configure docker for containerization.

ScreenShots:

Installation

```
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sudo apt install docker.io
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
aufs-tools cgroup-lite
Suggested packages:
  btrfs-tools debotstrap lxc rinse
The following NEW packages will be installed:
  aufs-tools cgroup-lite docker.io
0 upgraded, 3 newly installed, 0 to remove and 1 not upgraded.
Need to get 4,845 kB of archives.
After this operation, 29.5 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu/ trusty/universe aufs-tools amd64 1:3.2+20130722-1.1 [92.3 kB]
Get:2 http://archive.ubuntu.com/ubuntu/ trusty-updates/universe docker.io amd64 1.6.2-dfsg1-1ubuntu4-14.04.1 [4,749 kB]
12% [2 docker.io 484 kB/4,749 kB 10%]
```

Fixing installation (for older machines)

```
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sudo apt install docker.io
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
  aufs-tools cgroup-lite
Suggested packages:
  btrfs-tools deboststrap lxc rinse
The following NEW packages will be installed:
  aufs-tools cgroup-lite docker.io
0 upgraded, 3 newly installed, 0 to remove and 1 not upgraded.
Need to get 4,845 kB of archives.
After this operation, 29.5 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu/ trusty/universe aufs-tools amd64 1:3.2+20130722-1.1 [92.3 kB]
Get:2 http://archive.ubuntu.com/ubuntu/ trusty-updates/universe docker.io amd64 1.6.2-dfsg1-lubuntu4-14.04.1 [4,749 kB]
Get:3 http://archive.ubuntu.com/ubuntu/ trusty/main cgroup-lite all 1.9 [3,918 B]
Fetched 4,845 kB in 9s (536 kB/s)
Selecting previously unselected package aufs-tools.
(Reading database ... 66985 files and directories currently installed.)
Preparing to unpack .../aufs-tools_1:3.2+20130722-1.1_amd64.deb ...
Unpacking aufs-tools (1:3.2+20130722-1.1) ...
Selecting previously unselected package docker.io.
Preparing to unpack .../docker.io_1.6.2-dfsg1-lubuntu4-14.04.1_amd64.deb ...
Unpacking docker.io (1.6.2-dfsg1-lubuntu4-14.04.1) ...
Selecting previously unselected package cgroup-lite.
Preparing to unpack .../cgroup-lite_1.9_all.deb ...
Unpacking cgroup-lite (1.9) ...
Processing triggers for man-db (2.6.7.1-1ubuntu1) ...
Processing triggers for ureadahead (0.100.0-16) ...
Setting up aufs-tools (1:3.2+20130722-1.1) ...
Setting up docker.io (1.6.2-dfsg1-lubuntu4-14.04.1) ...
Adding group 'docker' (GID 116) ...
Done.
docker start/running, process 6357
Setting up cgroup-lite (1.9) ...
cgroup-lite start/running
Processing triggers for libc-bin (2.19-0ubuntu6.15) ...
Processing triggers for ureadahead (0.100.0-16) ...
vagrant@vagrant-ubuntu-trusty-64:~/devops$ ln -sf /usr/bin/docker.io /usr/local/bin/docker
ln: failed to create symbolic link '/usr/local/bin/docker': Permission denied
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sed -i '$acomplete -F docker docker' /etc/bash_completion.d/docker.io
sed: can't read /etc/bash_completion.d/docker.io: No such file or directory
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sudo ln -sf /usr/bin/docker.io /usr/local/bin/docker
vagrant@vagrant-ubuntu-trusty-64:~/devops$ which docker
/usr/local/bin/docker
vagrant@vagrant-ubuntu-trusty-64:~/devops$
```

Configuration and Containerization

Pulling the docker image.

```
vagrant@vagrant-ubuntu-trusty-64:~/devops$ docker pull ubuntu
FATA[0000] Post http://var/run/docker.sock/v1.18/images/create?fromImage=ubuntu%3Alatest: dial unix /var/run/docker.sock: pe
rmission denied. Are you trying to connect to a TLS-enabled daemon without TLS?
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sudo apt-get install apparmor
Reading package lists... Done
Building dependency tree
Reading state information... Done
apparmor is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
vagrant@vagrant-ubuntu-trusty-64:~/devops$ service docker restart
stop: Rejected send message, 1 matched rules; type="method call", sender="1.10" (uid=1000 pid=6592 comm="stop docker ") inte
rface="com.ubuntu.Upstart0.6.Job" member="Stop" error name="(unset)" requested_reply="0" destination="com.ubuntu.Upstart" (ui
d=0 pid=1 comm="/sbin/init ")
start: Rejected send message, 1 matched rules; type="method call", sender="1.11" (uid=1000 pid=6586 comm="start docker ") in
terface="com.ubuntu.Upstart0.6.Job" member="Start" error name="(unset)" requested_reply="0" destination="com.ubuntu.Upstart"
(uid=0 pid=1 comm="/sbin/init ")
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sudo service docker restart
docker stop/waiting
docker start/running, process 6608
vagrant@vagrant-ubuntu-trusty-64:~/devops$ docker pull ubuntu
FATA[0000] Post http://var/run/docker.sock/v1.18/images/create?fromImage=ubuntu%3Alatest: dial unix /var/run/docker.sock: pe
rmission denied. Are you trying to connect to a TLS-enabled daemon without TLS?
vagrant@vagrant-ubuntu-trusty-64:~/devops$ sudo docker pull ubuntu
latest: Pulling from ubuntu
8fb0b7316712: Pull complete
831cfd6a9a0f: Pull complete
f8f6da5a48f1: Pull complete
530714999d66: Pull complete
c3b78a259388: Pull complete
Digest: sha256:935af8f0e66ce4cb66f14eae7ca8f87b495f5950c3b110f136164dcda28909
Status: Downloaded newer image for ubuntu:latest
vagrant@vagrant-ubuntu-trusty-64:~/devops$
```

Running the container.

