Chapter 3:

```
ubuntu $ sudo docker info
Client:
Version:
             24.6.5
           default
Context:
Debug Mode: false
Server:
Containers: 0
 Running: 0
 Paused: 0
 Stopped: 0
Images: 0
Server Version: 24.6.5
Storage Driver: overlay2
 Backing Filesystem: extfs
 Supports d type: true
 Using metacopy: false
 Native Overlay Diff: true
 userxattr: false
Logging Driver: json-file
Cgroup Driver: systemd
Cgroup Version: 1
Plugins:
 Volume: local
 Network: bridge host ipvlan macvlan null overlay
 Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk s
yslog
Swarm: inactive
Runtimes: io.containerd.runc.v2 runc
Default Runtime: runc
Init Binary: docker-init
containerd version:
runc version:
init version:
Security Options:
 apparmor
 seccomp
 Profile: builtin
Kernel Version: 5.4.6-131-generic
Operating System: Ubuntu 20.04.5 LTS
OSType: linux
Architecture: x86 64
CPUs: 1
Total Memory: 1.937GiB
Name: ubuntu
ID: 8cb4dc94-a776-4beb-9e@d-@cf9d7cea92b
Docker Root Dir: /var/lib/docker
Debug Mode: false
Experimental: false
Insecure Registries:
 127.6.6.6/8
```

```
ubuntu $ sudo docker run -i -t ubuntu /bin/bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
bccd10f490ab: Pull complete
Digest: sha256:77906da86b60585ce12215807090eb327e7386c8fafb5402369e421f44eff17e
Status: Downloaded newer image for ubuntu:latest
root@aa5083d6ad60:/# []
```

```
root@aa5083d6ad00:/# hostname
aa5083d6ad00
root@aa5083d6ad00:/# cat /etc/hosts
127.6.6.1
                localhost
        localhost ip6-localhost ip6-loopback
::1
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allncdes
ff02::2 ip6-allrouters
                aa5683d6ad60
172.17.6.2
root@aa5083d6ad00:/# hostname -I
172.17.6.2
root@aa5083d6ad00:/# apt-get update; apt-get install vim
Get:1 http://archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages
 [1951 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:6 http://archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [17.5 MB]
Get:7 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1561
 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages
 [44.6 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [
1076 kB]
Get:10 http://archive.ubuntu.com/ubuntu jammy/restricted amd64 Packages [164 kB]
Get:11 http://archive.ubuntu.com/ubuntu jammy/main amd64 Packages [1792 kB]
Get:12 http://archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [266 kB]
Get:13 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages
[56.4 kB]
Get:14 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1843]
Get:15 http://archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages
[1994 kB]
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1
349 kB]
Get:17 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [50.
Get:18 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages
[28.1 kB]
Fetched 30.2 MB in 4s (7628 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
```

```
ubuntu $ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED
08623039689d ubuntu "/bin/bash" About a minute ago
ubuntu $ sudo docker run --name bob -i -t ubuntu /bin/bash
                                                                                                                        PORTS
                                                                                                                                      NAMES
                                                                                  Exited (0) 8 seconds ago
                                                                                                                                      youthful_engelbart
root@f0157542724c:/# exit
exit
ubuntu $ sudo docker start bob
bob
ubuntu $ dockerf ps
Command 'dockerf' not found, did you mean:
  command 'docker' from snap docker (24.6.5) command 'docker' from deb docker.io (24.6.5-0ubuntu1~26.04.1) command 'dockerd' from deb docker.io (24.6.5-0ubuntu1~26.04.1)
See 'snap info <snapname>' for additional versions.
ubuntu $ docker ps
CONTAINER ID IMAGE
f0157542724c ubunti
                                                                                                                 NAMES
                                 COMMAND
                                                                             STATUS
                                                                                                   PORTS
                                                     CREATED
                                 "/bin/bash"
                                                                            Up 13 seconds
                   ubuntu
                                                                                                                 bob
ubuntu $ sudo docker attach bob
root@f0157542724c:/#
```

```
CONTAINER ID
b4995f44585b
                          "/bin/sh -c 'while t..."
                                                                     Up 21 seconds
               ubuntu
                                                   22 seconds ago
                                                                                                 daemon_dave
ubuntu $ sudo docker logs daemon_dave
hello world
ubuntu $
```

```
ubuntu $ sudo docker top daemon_dave
UID
                  PID
                                       PPID
                                                                              STIME
    TIME
root
                   4161
                                       4130
                                                          a
    60:60:60
                        /bin/sh -c while true; do echo hello world; sleep 1; done
                   4193
                                                          0
    66:66:60
                        sleep 1
ubuntu $
```

```
Editor Tab 1
CONTAINER ID
                             CPU %
                                      MEM USAGE / LIMIT MEM %
                                                                               BLOCK I/O
                                                                                          PIDS
             NAME
                                                                   NET I/O
                            6.65%
                                      804KiB / 1.937GiB 6.04%
                                                                   946B / 0B
b4995f44585b
              daemon_dave
              daemon_dwayne 6.00%
                                                         6.66%
                                                                   eB / eB
                                                                               eB / eB
                                                                                          0
2917377c7aac
                                      eB / eB
```

```
ubuntu $ sudo docker inspect daemon_alice
         "Id": "c1a9a04f53c03b8a85b16c44042490e84feb1231266e46d0c8a64a91a61e40b9",
         "Created": "2024-03-08T11:16:46.65439667Z",
         "Path": "/bin/sh",
          "Args": [
"-c",
         ],
"State": {
              "Status": "running",
              "Running": true,
"Paused": false,
              "Restarting": false,
"OOMKilled": false,
              "Dead": false,
"Pid": 5301,
             "ExitCode": 0,
"Error": "",
"StartedAt": "2024-03-08T11:16:46.950481127Z",
"FinishedAt": "0001-01-01T00:00:00Z"
         },
"Image": "sha256:ca2b0f26964cf2e80ba3e084d5983dab293fdb87485dc6445f3f7bbfc89d7459",
         "ResolvConfPath": "/var/lib/docker/containers/c1a9a04f53c03b8a85b16c44042490e84feb1231266e46d0c8a64a91a61e4
0b9/resolv.conf",
          "HostnamePath": "/var/lib/docker/containers/c1a9a04f53c03b8a85b16c44042490e84feb1231266e46d0c8a64a91a61e40b
9/hostname".
          "HostsPath": "/var/lib/docker/containers/c1a9a04f53c03b8a85b16c44042490e84feb1231266e46d0c8a64a91a61e40b9/h
osts",
         "LogPath": "/var/lib/dccker/containers/c1a9a04f53c03b8a85b16c44042490e84feb1231266e46d0c8a64a91a61e40b9/c1a
9a04f53c03b8a85b16c44042490e84feb1231266e46d0c8a64a91a61e40b9-json.log",
          "Name": "/daemon_alice",
         "RestartCount": 0,
         "Driver": "overlay2",
"Platform": "linux",
"MountLabel": "",
"ProcessLabel": "",
"AppArmorProfile": "docker-default",
         "ExecIDs": null,
         "HostConfig": {
    "Binds": null,
              "ContainerIDFile": "",
```

```
ubuntu $ sudo docker inspect --format='{{ .State.Running }}' daemon_alice
true
ubuntu $ █
```

```
ubuntu $ sudo docker rm -f `sudo docker ps -a -q`
c1a9a04f53c0
2917377c7aac
b4995f44585b
f0157542724c
08623039689d
ubuntu $
```

Chapter 4:

```
ubuntu $ sudo docker images
REPOSITORY TAG
                      IMAGE ID
                                     CREATED
                                                 SIZE
ubuntu
            latest
                      ca2b@f26964c
                                     9 days ago
                                                 77.9MB
ubuntu $ docker pull ubuntu:18.04
18.04: Pulling from library/ubuntu
7c457f213c76: Pull complete
Digest: sha256:152dc042452c496007f07ca9127571cb9c29697f42acbfad72324b2
Status: Downloaded newer image for ubuntu:18.04
docker.io/library/ubuntu:18.04
ubuntu $ docker images
REPOSITORY
            TAG
                     IMAGE ID
                                     CREATED
                                                   SIZE
ubuntu
            latest
                     ca2b@f26964c
                                    9 days ago
                                                    77.9MB
            18.04
ubuntu
                    f9a80a55f492
                                     9 months ago
                                                   63.2MB
ubuntu $
```

```
ubuntu $ sudo docker pull fedora:21
21: Pulling from library/fedora
fced6e4a4c06: Extracting [>
                                                                         ] 557.1kB/92.47MB
fced6e4a4c06: Pull complete
Digest: sha256:a268e5e12257c7770eb44c24041baf5e728fba2eed1a84f007b81845ded0a485
Status: Downloaded newer image for fedora:21
docker.io/library/fedora:21
ubuntu $ docker images
REPOSITORY TAG
                    IMAGE ID
                                   CREATED
                                                  SIZE
            latest ca2b@f26964c 9 days ago
ubuntu
                                                  77.9MB
            18.04
                                                  63.2MB
ubuntu
                    f9a80a55f492 9 months ago
                     ba6369d667d1 7 years ago
                                                  241MB
fedora
ubuntu $
```

```
ubuntu $ sudo docker pull jamtur01/puppetmaster
Using default tag: latest
latest: Pulling from jamtur01/puppetmaster
Image docker.io/jamtur01/puppetmaster:latest uses outdated schema1 manifest format.
ge for better future compatibility. More information at https://docs.docker.com/reg
a3ed95caeb02: Already exists
6e71c809542e: Already exists
d196a7609355: Already exists
08f6dff5acea: Already exists
ce65532003d0: Already exists
d1f76d0972bd: Already exists
c9ed023cc2c9: Already exists
Digest: sha256:2eedcf4cbe50f7052b420b2b125969873872d76ce36752f04f5160160acd1258
Status: Image is up to date for jamtur01/puppetmaster:latest
docker.io/jamtur01/puppetmaster:latest
ubuntu $ sudo docker run -t -t jamtur01/puppetmaster /bin/bash
root@d1d15ae7af17:/# facter
^C^C
rcot@d1d15ae7af17:/#
```

```
ubuntu $ docker commit b7eb2881ede jamptur-1/apache2
Error response from daemon: No such container: b7eb28#ede
ubuntu $ docker commit b7eb52881ede jamptur-1/apache2
sha256:d0b30f4564568@c4a5e26b118d057a396032cb1d8@b4a7cd2ef8@46519529d9d
ubuntu $ sudo docker images jamtur01/apache2
REPOSITORY TAG
                      IMAGE ID
                                CREATED
ubuntu $ sudo docker images
REPOSITORY
                   TAG
                             IMAGE ID
                                          CREATED
                                                            SIZE
                             d0b30f456450 25 seconds ago
jamptur-1/apache2
                   latest
                                                            235MB
ubuntu
                   latest
                             ca2b@f26964c
                                            9 days ago
                                                             77.9MB
ubuntu $
```

```
ubuntu $ sudo docker commit -m "custom" -a "jems" b7eb528%1ede jamtur@1/apache2:webse rver
sha256:2c3f72f8%3c@db211@2312148b1de1a6d@774@2bca8f9ecb4946f6fda2527b5@
ubuntu $ sudo docker run -t -i jamtur@1/apache2:webserver
root@13bd3ab23fd1:/# /bin/bash
root@13bd3ab23fd1:/# service apache2 status
* apache2 is not running
root@13bd3ab23fd1:/# ■
```

```
ubuntu $ mkdir static web
ubuntu $ cd static_web/
ubuntu $ touch Dockerfile
ubuntu $ nano Dockerfile
ubuntu $ sudo docker build -t="jamtur01/static_web" .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
            Install the buildx component to build images with BuildKit:
            https://docs.docker.com/go/buildx/
Sending build context to Docker daemon 2.048kB
Step 1/5 : FROM ubuntu:18504
18304: Pulling from library/ubuntu
7c457f213c76: Pull complete
Digest: sha256:152dc042452c496007f07ca9127571cb9c29697f42acbfad72324b2bb2e43c98=
Status: Downloaded newer image for ubuntu:18#04
---> f9a8@a55f492
Step 2/5 : LABEL maintainer="marino@example.com"
---> Running in 7118@ca6ea55
Removing intermediate container 7118@ca6ea55
---> ec4fa6ed5b7e
Step 3/5 : RUN apt-get update; apt-get install -y nginx
---> Running in f0b1f62fce14
Get:1 http://archive.ubuntu.com/ubuntu bionic InRelease [242 kB]
Get:2 http://archive.ubuntu.com/ubuntu bionic-updates InRelease [887 kB]
Get:3 http://archive.ubuntu.com/ubuntu bionic-backports InRelease [88.3 kB]
Get:4 http://security.ubuntu.com/ubuntu bionic-security InRelease [8877 kB]
Get:5 http://archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [11.3 MB]
Get:6 http://archive.ubuntu.com/ubuntu bionic/restricted amd64 Packages [13.5 kB]
Get:7 http://archive.ubuntu.com/ubuntu bionic/main amd64 Packages [1344 kB]
Get:8=http://archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [18# kB]
Get:9 http://archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [378% kB]
Get:10 http://archive.ubuntu.com/ubuntu bionic-updates/restricted amd64 Packages [172
8≡kB]
```

Successfully tagged jamtur01/static_web:latest ubuntu \$ docker images				
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
jamtur01/static_web	latest	dc5277b874db	About a minute ago	169MB
jamtur01/apache2	webserver	2c3f72f887c0	5 minutes ago	235MB
jamptur-1/apache2	latest	deb3ef456450	10 minutes ago	235MB
ubuntu	latest	ca2b@f26964c	9 days ago	77.9MB
ubuntu	18=04	f9a8@a55f492	9 months ago	63.2MB
ubuntu \$				

```
ubuntu $ docker images
REPOSITORY
                                 IMAGE ID
                                                 CREATED
                      TAG
                                                                      SIZE
                      latest
                                 dc5277b874db About a minute ago
jamtur01/static web
                                                                      169MB
                      webserver 2c3f72f8‱c0 5 minutes ago
jamtur01/apache2
                                                                      235MB
                                 deb3ef456450
                      latest
jamptur-1/apache2
                                                 10 minutes ago
                                                                      235MB
                                 ca2b0f26964c 9 days ago
f9a8@a55f492 9 months ago
                                                                      77.9MB
ubuntu
                      latest
ubuntu
                      18-04
                                                                      63.2MB
ubuntu $ sudo docker run -d -p && -name static_web jamtur01/static_web nginx -g "daem
on cff;
unknown shorthand flag: 'n' in -name
See 'docker run --help'.
ubuntu $ sudo docker run -d -p 8@ --name static_web jamtur01/static_web nginx -g "dae
1260c650f8@350d98@e06da27b9aa9354f65eeb7f1edea34f65a3d7f144303d8
ubuntu $ sudo docker run -d -p 8080:80 --name static web 8080 jamtur01/static web ngi
nx -g "daemon cff;"
677a04a1b58&ab468&5012b347177f2fc8&e3a61327abd3a4d8&f26a231eac7c
ubuntu $ sudo docker run -d -p 127.6.6.1:80:80 --name static_web_lb
"docker run" requires at least 1 argument.
See 'docker run --help'.
Usage: docker run [OPTIONS] IMAGE [COMMAND] [ARG...]
Create and run a new container from an image
ubuntu $ jamtur01/static_web nginx -g "daemon off;"
bash: jamtur01/static_web: No such file or directory
ubuntu $ sudo docker run -d -p 127.0.0.1:88:88 -n st wb lb jamtur01/static web nginx
-g "daemon cff;"
unknown shorthand flag: 'n' in -n
See 'docker run --help'.
ubuntu $ sudo docker run -d -p 127.0.0.1:88:88 --name st_wb_lb jamtur01/static_web ng
inx -g "daemon off;"
b5c5b79ea445@cfbbab18$9f62967f1a48$3410269ef4f7655f09657e27422e3
ubuntu $ sudo docker run -d -p 127.0.0.1:88 --name st_wb_random jamtur01/static_web n
ginx -g "daemon off;"
docker: Invalid hostPort: 127.6.6.1.
See 'docker run --help'.
ubuntu $ sudo docker run -d -p 127.0.0.1::88 --name st wb random jamtur01/static web
nginx -g "daemon cff;"
2400ce5ff1717ca2d205204f7f9299564be9d3b292d7f5c578dc468316583218=
ubuntu $ sudo docker run -d -P --name st wb allm jamtur01/static web nginx -g "daemon
cff;'
e403365cb9b2a16b9c96ea6a8d7345b7e2f1bf8886a26de927ca6883641db744
ubuntu $ docker ps -1
CONTAINER ID IMAGE
                                     COMMAND
                                                              CREATED
                                                                               STATUS
         PORTS
                                                    NAMES
e403365cb9b2 jamtur01/static web "nginx -g 'daemon of..." 29 seconds ago
                                                                               Up 27
seconds 6.6.6.0:32776->80/tcp, :::32769->80/tcp st_wb_allm
ubuntu $ curl localhost:32770
Hi, i am in your container
ubuntu $
```

