

Set container host name

Container Hostname

```
▶ docker container run -it --name=webapp ubuntu
```

```
root@3484d738:/# hostname  
3484d738
```

```
▶ docker container run -it --name=webapp --hostname=webapp ubuntu
```

```
root@webapp :/# hostname  
webapp
```

Restart policy

Container – Restart Policies

NO

ON-FAILURE

ALWAYS

UNLESS STOPPED

```
▶ docker container run ubuntu expr 3 + 5
```

```
ubuntu      "expr 3 + 5"      Exited (0) 11 seconds ago
```

✗

✗

✓

✓

```
▶ docker container run ubuntu expr three + 5
```

```
ubuntu      "expr three + 5"      Exited (1) 2 seconds ago
```

✗

✓

✓

✓

```
▶ docker container stop httpd
```

```
httpd       "httpd-foreground" Exited (0) 4 days ago
```

✗

✗

✓

✗

```
▶ docker container run --restart=unless-stopped ubuntu
```

Live Restore

```
▶ docker container run --name web httpd
```

```
▶ systemctl stop docker
```

```
▶ systemctl start docker
```

```
▶ docker container run --name web httpd
```

```
▶ systemctl stop docker
```



/etc/docker/daemon.json

```
{
  "debug": true,
  "hosts": ["tcp://192.168.1.10:2376"],
  "live-restore": true
}
```

Copying content to the container

Container cp – From Host to Container

SRC_PATH

DEST_PATH

```
▶ docker container cp /tmp/web.conf webapp:/etc/web.conf
```

```
▶ docker container cp webapp:/root/dockerhost /tmp/
```

```
▶ docker container cp /tmp/web.conf webapp:/etc/
```

```
▶ docker container cp /tmp/web.conf webapp:/etccc/
```

```
▶ docker container cp /tmp/app/ webapp:/opt/app
```



/etc/web.conf

Container - webapp



/tmp/web.conf



Publishing port

Run – PORT mapping

```
docker run rajiv/webapp
```

```
* Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
```

http://172.17.0.2:5000

Internal IP

```
docker run -p 80:5000 rajiv/simple-webapp
```

```
docker run -p 8000:5000 rajiv/simple-webapp
```

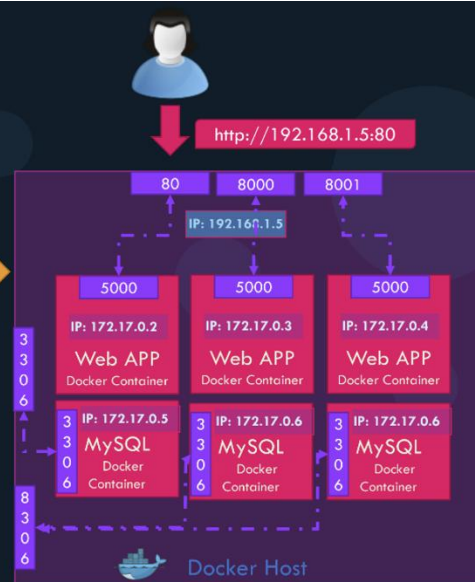
```
docker run -p 8001:5000 rajiv/simple-webapp
```

```
docker run -p 3306:3306 mysql
```

```
docker run -p 8306:3306 mysql
```

```
docker run -p 8306:3306 mysql
```

```
root@osboxes:/root # docker run -p 8306:3306 -e MYSQL_ROOT_PASSWORD=pass mysql
docker: Error response from daemon: driver failed programming external connectivity on endpoint boring_bhabha (5079d342b7e8ee11c71d46): Bind for 0.0.0.0:8306 failed: port is already allocated.
```



Container PORT Publish

```
▶ docker run -p 8000:5000 rajivsiddiqui/simple-webapp
```

```
▶ docker run -p 192.168.1.5:8000:5000 rajivsiddiqui/simple-webapp
```

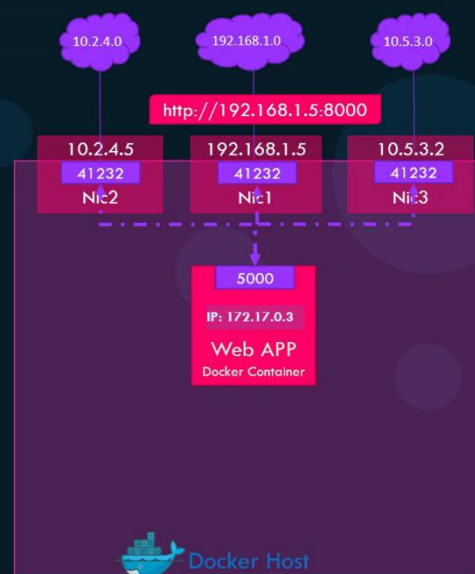
```
▶ docker run -p 127.0.0.1:8000:5000 rajivsiddiqui/simple-webapp
```

```
▶ docker run -p 5000 rajivsiddiqui/simple-webapp
```

Ephemeral Port Range => 32768 - 60999

```
▶ cat /proc/sys/net/ipv4/ip_local_port_range
```

```
32768 60999
```



Container PORT Publish

```
docker run -P rajivsidiqui/simple-webapp
```

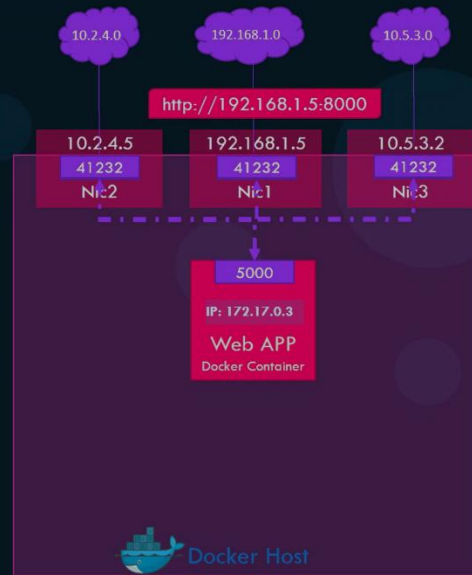
Dockerfile

```
FROM ubuntu:16.04
RUN apt-get update && apt-get install -y python python-pip
RUN pip install flask
COPY app.py /opt/
ENTRYPOINT flask run
EXPOSE 5000
```

```
docker run -P --expose=8080 rajivsidiqui/simple-webapp
```

```
docker inspect rajivsidiqui/simple-webapp
```

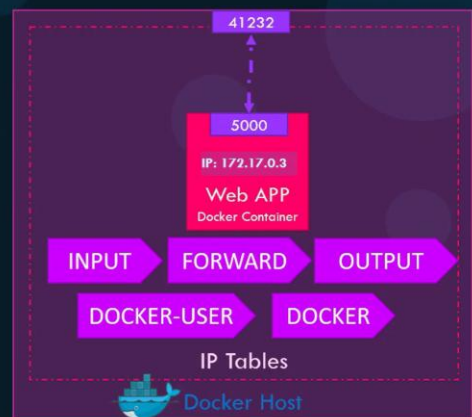
```
"ExposedPorts": {
  "5000/tcp": {},
  "8080/tcp": {}
},
```



IP Tables

```
iptables -t nat -S DOCKER
```

```
-N DOCKER
-A DOCKER ! -i docker0 -p tcp -m tcp --dport 41232 -j DNAT --to-destination 172.17.0.3:5000
```



Lab:

when stop the container it will automatically delete the container

```
#docker container run -itd --name=rajiv --rm ubuntu
#docker container ls -l
#docker container stop rajiv
#docker container ls -l
```

```

rajiv@server-A:~/home/rajiv$ docker container run -itd --name=rajiv --rm ubuntu
a82182c85958dd1dafc20b821414adea02a60eb930a05cf6c57ea8036e41b586
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
a82182c85958   ubuntu   "/bin/bash"   12 seconds ago   Up 10 seconds           rajiv
rajiv@server-A:~/home/rajiv$ docker container stop rajiv
rajiv
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
e02e7b1eda27   httpd     "httpd-foreground"   23 minutes ago   Exited (0) About a minute ago           zealous_hertz

```

Set the hostname

```

#docker container run -itd --name=rajiv --hostname=siddiqui --rm ubuntu
#docker container ls -l
#docker container exec -it rajiv hostname

```

```

rajiv@server-A: ~/home/rajiv
rajiv@server-A:~/home/rajiv$ docker container run -itd --name=rajiv --hostname=siddiqui --rm ubuntu
fdac5e858a69e801f92f5e824f47c8ae6f551c8de87e4aed0cb8a5cdff53c166
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
fdac5e858a69   ubuntu   "/bin/bash"   9 seconds ago   Up 8 seconds           rajiv
rajiv@server-A:~/home/rajiv$ docker container exec -it rajiv hostname
siddiqui
rajiv@server-A:~/home/rajiv$ |

```

restart policy=no

```

#docker container run -itd --name=case1 --restart=no ubuntu
#docker container ls -l
#docker container stop case1
#docker container ls -l

```

```

rajiv@server-A: ~/home/rajiv
rajiv@server-A:~/home/rajiv$ docker container run -itd --name=case1 --restart=no ubuntu
043cc96e621645866a2ba3bb19062c87c351c6cfbd595c79336ad2f955559b12
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
043cc96e6216   ubuntu   "/bin/bash"   7 seconds ago   Up 7 seconds           case1
rajiv@server-A:~/home/rajiv$ docker container stop case1
case1
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
043cc96e6216   ubuntu   "/bin/bash"   57 seconds ago   Exited (137) 25 seconds ago           case1
rajiv@server-A:~/home/rajiv$

```

restart policy=on-failure

```

#docker container run -itd --name=case2 --restart=on-failure ubuntu
#docker container ls -l
#docker container top case2
#sudo kill -9 5777
#docker container ls -l

```

```

rajiv@server-A: ~/home/rajiv
rajiv@server-A:~/home/rajiv$ docker container run -itd --name=case2 --restart=on-failure ubuntu
035cbf63a06e123dfa7dea4abed318b83cb3fe5cbec0b54be5f6b9de121eae4e
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
035cbf63a06e   ubuntu   "/bin/bash"   7 seconds ago   Up 6 seconds           case2
rajiv@server-A:~/home/rajiv$ docker container top case2
UID        PID      PPID      C         STIME     TTY      TIME             CMD
root       5777     5757      0         12:39     pts/0    00:00:00          /bin/bash
rajiv@server-A:~/home/rajiv$ kill -9 5777
-bash: kill: (5777) - operation not permitted
rajiv@server-A:~/home/rajiv$ sudo kill -9 5777
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
035cbf63a06e   ubuntu   "/bin/bash"   About a minute ago   Up 4 seconds           case2
rajiv@server-A:~/home/rajiv$ |

```


restart policy=always

```
#docker container run -itd --name=case3 --restart=always ubuntu
#docker container ls -l
#docker container stop case3
#docker container ls -l
#sudo systemctl restart docker
#docker container ls -l
```

```
rajiv@server-A: ~/home/rajiv
rajiv@server-A:~/home/rajiv$ docker container run -itd --name=case3 --restart=always ubuntu
d3b76baf39fb487eec014241f7388532a214e27fa6b0a7a9c5f9930d3fc89711
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
d3b76baf39fb   ubuntu   "/bin/bash"             7 seconds ago Up 5 seconds          case3
rajiv@server-A:~/home/rajiv$ docker container stop case3
case3
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
d3b76baf39fb   ubuntu   "/bin/bash"             56 seconds ago Exited (137) 3 seconds ago          case3
rajiv@server-A:~/home/rajiv$ sudo systemctl restart docker
rajiv@server-A:~/home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
d3b76baf39fb   ubuntu   "/bin/bash"             About a minute ago Up 3 seconds          case3
rajiv@server-A:~/home/rajiv$
```

restart policy=unless-stopped

```
[root@dockercentos ~]# docker container run -itd --name=casefour --restart=unless-stopped ubuntu
74b0a7c74cc96675d3e68f5f8c8e655541bc45e48193545f5634069deb3ef694
[root@dockercentos ~]#
[root@dockercentos ~]# docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
NAMES
74b0a7c74cc9   ubuntu   "/bin/bash"             10 seconds ago Up 9 seconds
casefour
[root@dockercentos ~]#
[root@dockercentos ~]# docker container stop casefour
casefour
[root@dockercentos ~]# docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
NAMES
74b0a7c74cc9   ubuntu   "/bin/bash"             24 seconds ago Exited (0) 2 seconds ago
casefour
[root@dockercentos ~]#
[root@dockercentos ~]# systemctl restart docker
[root@dockercentos ~]# docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
NAMES
74b0a7c74cc9   ubuntu   "/bin/bash"             35 seconds ago Exited (0) 13 seconds ago
casefour
[root@dockercentos ~]#
```

```
[root@dockercentos ~]#
[root@dockercentos ~]# docker system events --since 60m
2020-05-04T08:38:43.747364807Z network connect cf10938f5edf77fc1626fdd136aec30114becc02b22b48008d1d6fde350a36b9 (con
iner=2daf7d05975da65dd6c21c49447c5a032fb8a57854ee1686333544e61298e740, name=bridge, type=bridge)
2020-05-04T08:38:43.976133052Z container start 2daf7d05975da65dd6c21c49447c5a032fb8a57854ee1686333544e61298e740 (imag
=ubuntu, name=casethree)
^C
[root@dockercentos ~]# docker container start casefour
casefour
[root@dockercentos ~]#
[root@dockercentos ~]#
[root@dockercentos ~]# docker system events --since 60m
2020-05-04T08:38:43.747364807Z network connect cf10938f5edf77fc1626fdd136aec30114becc02b22b48008d1d6fde350a36b9 (con
iner=2daf7d05975da65dd6c21c49447c5a032fb8a57854ee1686333544e61298e740, name=bridge, type=bridge)
2020-05-04T08:38:43.976133052Z container start 2daf7d05975da65dd6c21c49447c5a032fb8a57854ee1686333544e61298e740 (ima
=ubuntu, name=casethree)
2020-05-04T08:39:43.633361765Z network connect cf10938f5edf77fc1626fdd136aec30114becc02b22b48008d1d6fde350a36b9 (con
iner=74b0a7c74cc96675d3e68f5f8c8e655541bc45e48193545f5634069deb3ef694, name=bridge, type=bridge)
2020-05-04T08:39:43.890119341Z container start 74b0a7c74cc96675d3e68f5f8c8e655541bc45e48193545f5634069deb3ef694 (imag
=ubuntu, name=casefour)
^C
[root@dockercentos ~]# c1
```

Copy file

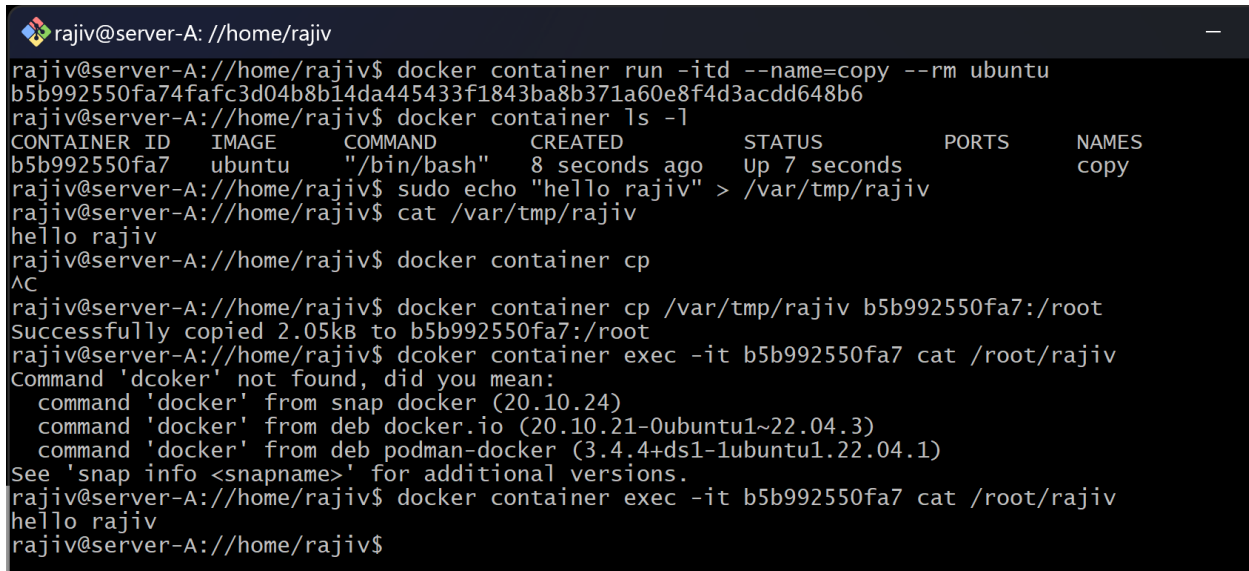
Syntax: docker container cp <source> <destination>

copy from my pc to docker container

```
#docker container run -itd --name=copy --rm ubuntu
#docker container ls -l
#sudo echo "hello rajiv" > /var/tmp/rajiv
#cat /var/tmp/rajiv /var/tmp/rajiv
#docker container cp /var/tmp/rajiv b5b992550fa7:/root
#docker container exec -it b5b992550fa7 cat /root/rajiv
```

copy from docker container my pc

```
#docker container cp b5b992550fa7:/root/file1.txt /home/rajiv/
```



```
rajiv@server-A: //home/rajiv
rajiv@server-A://home/rajiv$ docker container run -itd --name=copy --rm ubuntu
b5b992550fa74fafc3d04b8b14da445433f1843ba8b371a60e8f4d3acdd648b6
rajiv@server-A://home/rajiv$ docker container ls -l
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS   NAMES
b5b992550fa7   ubuntu    "/bin/bash"             8 seconds ago  Up 7 seconds          copy
rajiv@server-A://home/rajiv$ sudo echo "hello rajiv" > /var/tmp/rajiv
rajiv@server-A://home/rajiv$ cat /var/tmp/rajiv
hello rajiv
rajiv@server-A://home/rajiv$ docker container cp
^C
rajiv@server-A://home/rajiv$ docker container cp /var/tmp/rajiv b5b992550fa7:/root
Successfully copied 2.05kB to b5b992550fa7:/root
rajiv@server-A://home/rajiv$ dcoker container exec -it b5b992550fa7 cat /root/rajiv
Command 'dcoker' not found, did you mean:
  command 'docker' from snap docker (20.10.24)
  command 'docker' from deb docker.io (20.10.21-0ubuntu1~22.04.3)
  command 'docker' from deb podman-docker (3.4.4+ds1-1ubuntu1.22.04.1)
See 'snap info <snapname>' for additional versions.
rajiv@server-A://home/rajiv$ docker container exec -it b5b992550fa7 cat /root/rajiv
hello rajiv
rajiv@server-A://home/rajiv$
```

copy from docker container my pc

Random port select

```
#docker container run -itd -P --name=case1 httpd
```

Select any specific port for example 82 port

```
#docker container run -itd -p82:80 --name=case2 httpd
```

Port select in docker container

```
[root@dockercentos ~]# docker container run -itd --name=case1 httpd
fcb147271e0650a41658a1ff031fa9d438c3d28a39732df1ccbd8eb740aaf9f2
[root@dockercentos ~]# docker container ls -l
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS
NAMES
fcb147271e06        httpd              "httpd-foreground"  8 seconds ago      Up 7 seconds       80/tcp
case1
[root@dockercentos ~]#
[root@dockercentos ~]# docker container run -itd -P --name=case2 httpd
69786817fc1da070c49b98af181039840d0f50e26c33efe22e38c384edeca365
[root@dockercentos ~]#
[root@dockercentos ~]# docker container ls -l
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS
NAMES
69786817fc1d        httpd              "httpd-foreground"  7 seconds ago      Up 6 seconds       0.0.0.0:32768->/tcp
case2
[root@dockercentos ~]#
[root@dockercentos ~]# docker container run -itd --name=case3 -p 82:80 httpd
ef08a4146026e1ef6904033778945b11a6f3792f8c570b0ebbe648abd51aa312
[root@dockercentos ~]#
[root@dockercentos ~]# docker container ls -l
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS
NAMES
ef08a4146026        httpd              "httpd-foreground"  11 seconds ago     Up 9 seconds       0.0.0.0:82->80/tcp
p case3
[root@dockercentos ~]#
[root@dockercentos ~]# docker container restart case2
case2
[root@dockercentos ~]#
```

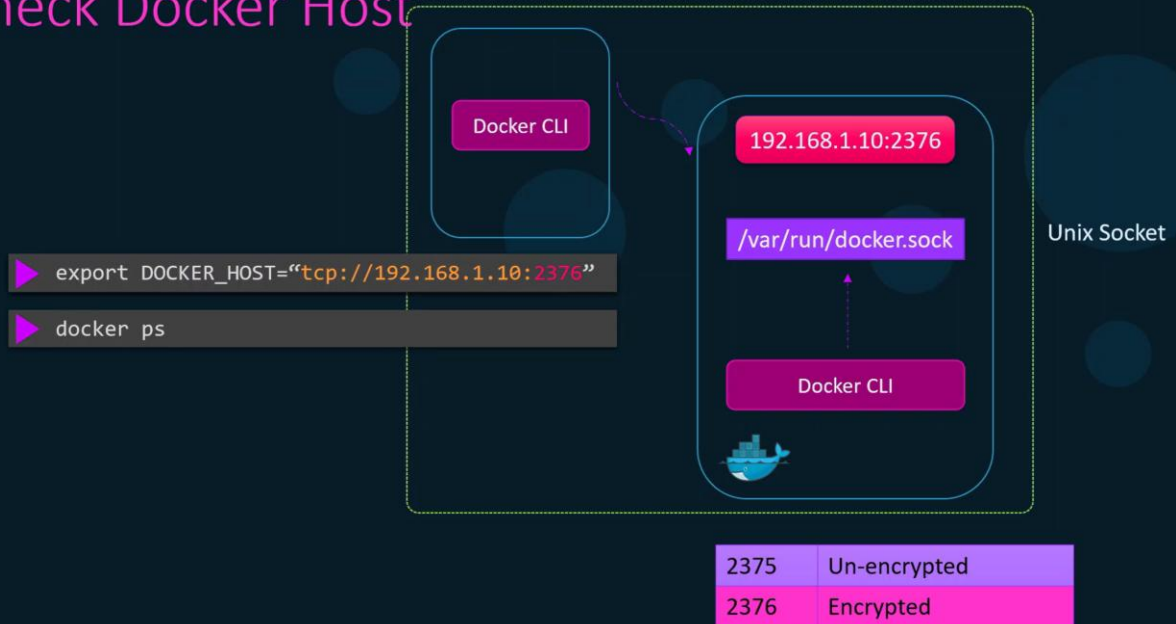
Troubleshooting Docker Daemon

Check Service Status

```
▶ docker ps
```

```
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
```


Check Docker Host



```
systemctl start docker
```

```
systemctl status docker
```

```
• docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: inactive (dead) since Sat 2020-10-24 07:42:08 UTC; 21s ago
     Docs: https://docs.docker.com
   Process: 4197 ExecStart=/usr/bin/dockerd -H fd:// -H tcp://0.0.0.0 --containerd=/run/containerd/containerd.sock
   (code=exited, Main PID: 4197 (code=exited, status=0/SUCCESS))
```

View Logs

```
journalctl -u docker.service
```

```
-- Logs begin at Wed 2020-10-21 04:05:39 UTC, end at Sat 2020-10-24 07:41:39 UTC. --
Oct 21 04:05:42 ubuntu-xenial systemd[1]: Starting Docker Application Container Engine...
Oct 21 04:05:42 time="2020-10-21T04:05:42.565473329Z" level=info msg="parsed scheme: \"unix\"\" mod
Oct 21 04:05:42 time="2020-10-21T04:05:42.565496428Z" level=info msg="scheme \"unix\" not register
Oct 21 04:05:42 time="2020-10-21T04:05:42.565554302Z" level=info msg="ccResolverWrapper: sending u
Oct 21 04:05:42 time="2020-10-21T04:05:42.565673967Z" level=info msg="ClientConn switching balance
Oct 21 04:05:42 time="2020-10-21T04:05:42.570967241Z" level=info msg="parsed scheme: \"unix\"\" mod
Oct 21 04:05:42 time="2020-10-21T04:05:42.570982918Z" level=info msg="scheme \"unix\" not register
Oct 21 04:05:42 time="2020-10-21T04:05:42.571027208Z" level=info msg="ccResolverWrapper: sending u
Oct 21 04:05:42 time="2020-10-21T04:05:42.571037442Z" level=info msg="ClientConn switching balance
Oct 21 04:05:42 time="2020-10-21T04:05:42.629609680Z" level=info msg="[graphdriver] using prior st
Oct 21 04:05:42 time="2020-10-21T04:05:42.847722164Z" level=warning msg="Your kernel does not supp
Oct 21 04:05:42 time="2020-10-21T04:05:42.847808687Z" level=warning msg="Your kernel does not supp
Oct 21 04:05:42 time="2020-10-21T04:05:42.847816072Z" level=warning msg="Your kernel does not supp
Oct 21 04:05:42 time="2020-10-21T04:05:42.848125012Z" level=info msg="Loading containers: start."
Oct 21 04:05:43 time="2020-10-21T04:05:43.610553801Z" level=info msg="Removing stale sandbox ae1f6
Oct 21 04:05:43 time="2020-10-21T04:05:43.618004459Z" level=warning msg="Error (Unable to complete
```

Daemon Configuration File

/etc/docker/daemon.json

```
{
  "debug": true,
  "hosts": ["tcp://192.168.1.10:2376"]
  "tls": true,
  "tlscert": "/var/docker/server.pem",
  "tlskey": "/var/docker/serverkey.pem"
}
```

unable to configure the Docker daemon with file /etc/docker/daemon.json: the following directives are specified both as a flag and in the configuration file: debug: (from flag: true, from file: false)

Free Disk Space on Host

▶ df -h

Filesystem	Size	Used	Avail	Use%	Mounted on
dev	364M	0	364M	0%	/dev
run	369M	340K	369M	1%	/run
/dev/sda1	19G	14.7G	15M	99%	/
tmpfs	369M	0	369M	0%	/dev/shm
tmpfs	369M	0	369M	0%	/sys/fs/cgroup
tmpfs	369M	4.0K	369M	1%	/tmp
tmpfs	74M	0	74M	0%	/run/user/0

▶ docker container prune

▶ docker image prune

Debug in Docker

▶ docker system info

```
Client:
  Debug Mode: false

Server:
  Containers: 0
  Running: 0
  Paused: 0
  Stopped: 0
  Images: 0
  Server Version: 19.03.5
  Storage Driver: overlay2
    Backing Filesystem: xfs
  .
  .
  .
  Experimental: false
  Insecure Registries:
    127.0.0.0/8
  Live Restore Enabled: false
```

Enable docker debug mode

```
ubuntu@ip-172-31-80-44:~$ system docker info
Command 'system' not found, did you mean:
  command 'system3' from deb simh (3.8.1-6.1)
  command 'systemd' from deb systemd (249.11-0ubuntu3.9)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-80-44:~$ docker system info
Client: Docker Engine - Community
 Version: 24.0.5
 Context: default
 Debug Mode: false
Plugins:
  buildx: Docker Buildx (Docker Inc.)
    Version: v0.11.2
    Path: /usr/libexec/docker/cli-plugins/docker-buildx
  compose: Docker Compose (Docker Inc.)
    Version: v2.20.2
    Path: /usr/libexec/docker/cli-plugins/docker-compose

Server:
ERROR: permission denied while trying to connect to the Docker
unix socket /var/run/docker.sock: connect: permission denied
errors pretty printing info
ubuntu@ip-172-31-80-44:~$
```

#docker system info

```
#sudo vi /etc/docker/daemon.json
#sudo systemctl reload docker
#docker system info
```

Operating system	Location
Linux	Use the command <code>journalctl -xu docker.service</code> (or read <code>/var/log/syslog</code> or <code>/var/log/messages</code> , depending on your Linux Distribution)
macOS (dockerd logs)	<code>~/Library/Containers/com.docker.docker/Data/log/vm/dockerd.log</code>
macOS (containerd logs)	<code>~/Library/Containers/com.docker.docker/Data/log/vm/containerd.log</code>
Windows (WSL2) (dockerd logs)	<code>%LOCALAPPDATA%\Docker\log\vm\dockerd.log</code>
Windows (WSL2) (containerd logs)	<code>%LOCALAPPDATA%\Docker\log\vm\containerd.log</code>
Windows (Windows containers)	Logs are in the Windows Event Log

Logging Driver

```
Logging Drivers

▶ docker run -d --name nginx nginx

▶ docker logs nginx
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Configuration complete; ready for start up

▶ docker system info
Server:
...
Images: 54
Server Version: 19.03.6
...
Logging Driver: json-file
Cgroup Driver: cgroupfs
Plugins:
Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog
...
```


Old docker log file location

```
docker ps
f3997637c0df      nginx      "/docker-entrypoint..." 37 minutes ago      Up 37      nginx

cd /var/lib/docker/containers; ls
38781779e9aa15c190746784ba23d1ae237f03b58e0479286259e275d4c8820a
c5ab1dba9b51486e0e69386c137542be2e4315a56b4ee07c825e2d41c99f89b4
f3997637c0df66becf4dd4662d3c172bf16f916a3b9289b95f0994675102de17

cat f3997637c0df66becf4dd4662d3c172bf16f916a3b9289b95f0994675102de17.json
{"log":"/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform
configuration\n","stream":"stdout","time":"2020-10-25T05:59:43.832656488Z"}
{"log":"/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/\n","stream":"stdout","time":"2020-10-25T05:59:43.832891838Z"}
{"log":"/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh\n","stream":"stdout","time":"2020-10-25T05:59:43.833987067Z"}
{"log":"10-listen-on-ipv6-by-default.sh: Getting the checksum of /etc/nginx/conf.d/default.conf\n","stream":"stdout","time":"2020-10-25T05:59:43.836951982Z"}
{"log":"10-listen-on-ipv6-by-default.sh: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf\n","stream":"stdout","time":"2020-10-25T05:59:43.84592186Z"}
{"log":"/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh\n","stream":"stdout","time":"2020-10-25T05:59:43.846117966Z"}
{"log":"/docker-entrypoint.sh: Configuration complete; ready for start up\n","stream":"stdout","time":"2020-10-25T05:59:43.850840102Z"}
```

New docker log file location

```
root@server-A: /var/lib/docker/containers/4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56
root@server-A: /var/lib/docker/containers# ll
total 20
drwx--x--- 5 root root 4096 28 16:06 ./
drwx--x--- 13 root root 4096 28 12:54 ../
drwx--x--- 4 root root 4096 28 16:06 4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56/
drwx--x--- 4 root root 4096 28 14:34 b5b992550fa74fafc3d04b8b14da445433f1843ba8b371a60e8f4d3acdd648b6/
drwx--x--- 4 root root 4096 28 12:54 d3b76baf39fb487eec014241f7388532a214e27fa6b0a7a9c5f9930d3fc89711/
root@server-A: /var/lib/docker/containers# ccd 4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56/
Command 'ccd' not found, did you mean:
command 'cct' from deb proj-bin (8.2.1-1)
command 'cdcd' from deb cdcd (0.6.6-13build2)
command 'cccd' from deb cccd (0.3beta4-7.1build1)
command 'bcd' from deb bsdgames (2.17-29)
command 'ccr' from deb codecrypt (1.8-1build2)
command 'cc' from deb gcc (4:11.2.0-1ubuntu1)
command 'cc' from deb clang (1:14.0-55-exp2)
command 'cc' from deb pentium-builder (0.21ubuntu1)
command 'cc' from deb tcc (0.9.27+git20200814.62c30a4a-1)
command 'ccl' from deb cclive (0.9.3-0.2build1)
command 'mcd' from deb mtools (4.0.33-1+really4.0.32-1build1)
command 'ccx' from deb calculix-ccx (2.17-3)
command 'hcd' from deb hfsutils (3.2.6-15build2)
Try: apt install <deb name>
root@server-A: /var/lib/docker/containers# cd 4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56/
root@server-A: /var/lib/docker/containers/4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56# ll
total 44
drwx--x--- 4 root root 4096 28 16:06 ./
drwx--x--- 5 root root 4096 28 16:06 ../
-rw-r----- 1 root root 900 28 16:06 4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56-.json.log
drwx----- 2 root root 4096 28 16:06 checkpoints/
-rw----- 1 root root 2969 28 16:06 config.v2.json
-rw----- 1 root root 1432 28 16:06 hostconfig.json
-rw-r--r-- 1 root root 13 28 16:06 hostname
-rw-r--r-- 1 root root 174 28 16:06 hosts
drwx--x--- 2 root root 4096 28 16:06 mounts/
-rw-r--r-- 1 root root 797 28 16:06 resolv.conf
-rw-r--r-- 1 root root 71 28 16:06 resolv.conf.hash
root@server-A: /var/lib/docker/containers/4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56# cat 4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56-.json.log
{"log":"AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.4. Set the 'ServerName' directive to suppress this message\n","stream":"stdout","time":"2023-07-28T10:06:09.089392665Z"}
{"log":"AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.4. Set the 'ServerName' directive to suppress this message\n","stream":"stdout","time":"2023-07-28T10:06:09.090949372Z"}
{"log":"[Fri Jul 28 10:06:09.092028 2023] [mpm_event:notice] [pid 1:tid 140697700677504] AH00489: Apache/2.4.57 (Unix) configured -- resumptions\n","stream":"stdout","time":"2023-07-28T10:06:09.09237359Z"}
{"log":"[Fri Jul 28 10:06:09.092150 2023] [core:notice] [pid 1:tid 140697700677504] AH00094: Command line: 'httpd -D FOREGROUND'\n","stream":"stdout","time":"2023-07-28T10:06:09.092382625Z"}
root@server-A: /var/lib/docker/containers/4a02525989b204a68fefa1e5363ecb100a1a6627284ca68f12a1a4234a1dfc56# |
```



```
▶ docker system info

Server:
...
Images: 54
Server Version: 19.03.6
...
Logging Driver: json-file
Cgroup Driver: cgroupfs
Plugins:
Log: awslogs fluentd gcplogs gelf journald json-file local
    logentries splunk syslog
...

/etc/docker/daemon.json

{
  "debug": true,
  "hosts": ["tcp://192.168.1.10:2376"]
  "tls": true,
  "tlscert": "/var/docker/server.pem",
  "tlskey": "/var/docker/serverkey.pem",
  "log-driver": "awslogs",
  "log-opt": {
    "awslogs-region": "us-east-1"
  }
}

export AWS_ACCESS_KEY_ID=<>
export AWS_SECRET_ACCESS_KEY=<>
export AWS_SESSION_TOKEN=<>
```

```
▶ docker run -d --log-driver json-file nginx

▶ docker container inspect nginx

[
  {
    "Id": "f3997637c0df66becf4dd4662d3c172bf16f916a3b9289b95f0994675102de17",
    "Created": "2020-10-25T05:59:43.543296741Z",
    "Path": "/docker-entrypoint.sh",
    ...
    "HostConfig": {
      "Binds": null,
      "ContainerIDFile": "",
      "LogConfig": {
        "Type": "json-file",
        "Config": {}
      },
    },
  },
]

▶ docker container inspect -f '{{.HostConfig.LogConfig.Type}}' nginx
json-file
```

Demo – Logging Driver

root@ip-172-31-39-115:~

```
[root@workerone ~]# docker system info | grep -i "logging driver"
Logging Driver: json-file
[root@workerone ~]#
[root@workerone ~]# docker container run -itd --name=testcontainer ubuntu
e9511b9bc3d466bdc6d6ff5de59c82253295d213d393e107c42dfd16b4cf276a
[root@workerone ~]#
[root@workerone ~]# docker container ls -l
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
e9511b9bc3d4	ubuntu	"/bin/bash"	4 seconds ago	Up 3 seconds	

```
testcontainer
[root@workerone ~]# docker container inspect e9511b9bc3d4
```

root@ip-172-31-39-115:~

```
"Platform": "linux",
"MountLabel": "",
"ProcessLabel": "",
"AppArmorProfile": "",
"ExecIDs": null,
"HostConfig": {
  "Binds": null,
  "ContainerIDFile": "",
  "LogConfig": {
    "Type": "json-file",
    "Config": {}
  },
  "NetworkMode": "default",
  "PortBindings": {},
  "RestartPolicy": {
    "Name": "no",
    "MaximumRetryCount": 0
  },
  "AutoRemove": false,
  "VolumeDriver": "",
  "VolumesFrom": null,
  "CapAdd": null,
  "CapDrop": null,
  "Capabilities": null,
  "Dns": [],
  "DnsOptions": [],
  "DnsSearch": [],
  "ExtraHosts": null,
  "GroupAdd": null,
  "IpcMode": "private",
  "Cgroup": "",
```

--More--

<https://docs.docker.com/config/containers/logging/configure/>

root@ip-172-31-39-115:~

```
[root@workerone ~]# docker system info | grep -i "logging driver"
```

```
Logging Driver: json-file
```

```
[root@workerone ~]#
```

```
[root@workerone ~]# systemctl stop docker
```

```
[root@workerone ~]# vi /etc/docker/daemon.json
```

```
[root@workerone ~]#
```

```
[root@workerone ~]# systemctl start docker
```

```
[root@workerone ~]#
```

```
[root@workerone ~]# docker system info | grep -i "logging driver"
```

```
Logging Driver: syslog
```

```
[root@workerone ~]#
```

```
[root@workerone ~]#
```

```
[root@workerone ~]# docker container run -itd --name=logtest --log-driver=journald ubuntu
```

```
3917c0f55e83f882f7c5357c78ea100fcee0c203436527b0c8c611c6798dcf7
```

```
[root@workerone ~]# docker container ls -l
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
3917c0f55e83	ubuntu	"/bin/bash"	4 seconds ago	Up 4 seconds	
logtest					

```
[root@workerone ~]# docker container inspect 3917c0f55e83 | more
```

root@server-A: /home/rajiv

```
"HostsPath": "/var/lib/docker/containers/4a025
"LogPath": "/var/lib/docker/containers/4a02525
4ca68f12a1a4234a1dfc56-json.log",
"Name": "/testagain",
"RestartCount": 0,
"Driver": "overlay2",
"Platform": "linux",
"MountLabel": "",
"ProcessLabel": "",
"AppArmorProfile": "docker-default",
"ExecIDs": null,
"HostConfig": {
  "Binds": null,
  "ContainerIDFile": "",
  "LogConfig": {
    "Type": "json-file",
    "Config": {}
  },
  "NetworkMode": "default",
  "PortBindings": {},
  "RestartPolicy": {
    "Name": "no",
    "MaximumRetryCount": 0
  },
  "AutoRemove": false,
  "VolumeDriver": "",
  "VolumesFrom": null,
  "ConsoleSize": [
    31,
    104
  ],
  "CapAdd": null
```