

Docker-compose

```
Devops-labs - VMware Workstation
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Activities Terminal May 29 11:21
osboxes@osboxes: ~/Desktop/docker-compose-demo

osboxes@osboxes:~/Desktop$ mkdir docker-compose-demo
osboxes@osboxes:~/Desktop$ cd docker-compose-demo/
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano Hello.java
[sudo] password for osboxes:
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano Dockerfile
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano Dockerfile
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano docker-compose.yaml
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano docker-compose.yaml
osboxes@osboxes:~/Desktop/docker-compose-demo$ ls
docker-compose.yaml Dockerfile Hello.java
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano docker-compose.yaml
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo docker-compose up
Creating network "docker-compose-demo_default" with the default driver
Building java-helloworld
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 4.096kB
Error response from daemon: dockerfile parse error on line 3: COPY requires at least two arguments, but only one was provided. Destination could not be determined
ERROR: Service 'java-helloworld' failed to build: Build failed
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo nano Dockerfile
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo docker-compose up
Building java-helloworld
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 4.096kB
Step 1/5 : FROM openjdk:17-alpine
17-alpine: Pulling from library/openjdk
5843afab3874: Pull complete
53c9466125e4: Pull complete
d8d715783b80: Pull complete
Digest: sha256:4b6abae5d5492dbe9e7a894137c966a7485154238902f2f25e9dbd9784383d81
Status: Downloaded newer image for openjdk:17-alpine
--> 264c9bdce361
Step 2/5 : WORKDIR /app

To direct input to this VM, click inside or press Ctrl+G.
```

```
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osboxes@osboxes: ~/Desktop/docker-compose-demo

WARNING: Image for service java-helloworld was built because it did not already exist. To rebuild this image you must use 'docker-compose build' or 'docker-compose up -
-build'.
Creating java-helloworld-container ... done
Attaching to java-helloworld-container
java-helloworld-container | My First Java Program.
java-helloworld-container exited with code 0
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo docker container list
CONTAINER ID   IMAGE          COMMAND                  CREATED         STATUS      PORTS                               NAMES
6e18be872c35   jenkins/jenkins  "/usr/bin/tini -- /u..." 3 hours ago     Up 3 hours   0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp  adoring_wu

osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo docker image

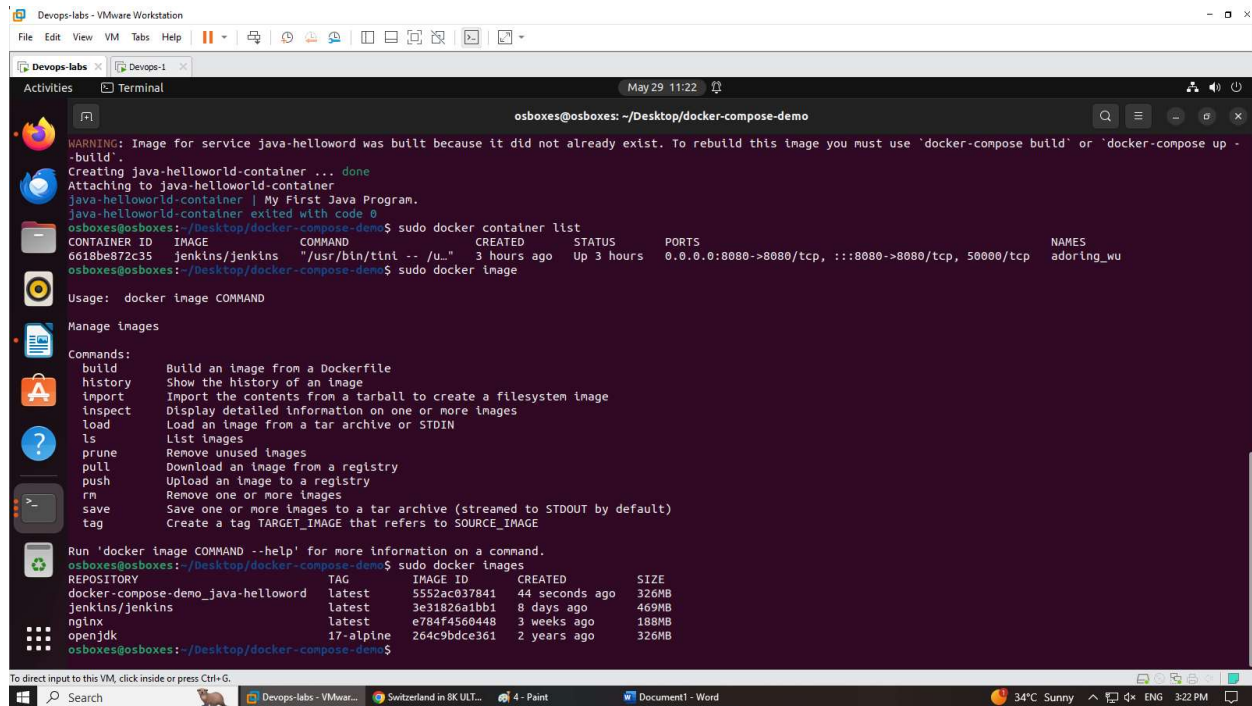
Usage: docker image COMMAND

Manage images

Commands:
  build      Build an image from a Dockerfile
  history    Show the history of an image
  import     Import the contents from a tarball to create a filesystem image
  inspect    Display detailed information on one or more images
  load       Load an image from a tar archive or STDIN
  ls         List images
  prune      Remove unused images
  pull       Download an image from a registry
  push       Upload an image to a registry
  rm         Remove one or more images
  save       Save one or more images to a tar archive (streamed to STDOUT by default)
  tag        Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE

Run 'docker image COMMAND --help' for more information on a command.
osboxes@osboxes:~/Desktop/docker-compose-demo$ sudo docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
docker-compose-demo/java-helloworld  latest     5552ac037841  44 seconds ago  326MB
jenkins/jenkins      latest     3e31826a1bb1  8 days ago     469MB
nginx                latest     e784f4560448  3 weeks ago    188MB
openjdk              17-alpine  264c9bdce361  2 years ago    326MB
osboxes@osboxes:~/Desktop/docker-compose-demo$
```

Docker-compose.yml



The screenshot shows a terminal window titled "osboxes@osboxes: ~/Desktop/docker-compose-demo". The terminal displays the following output:

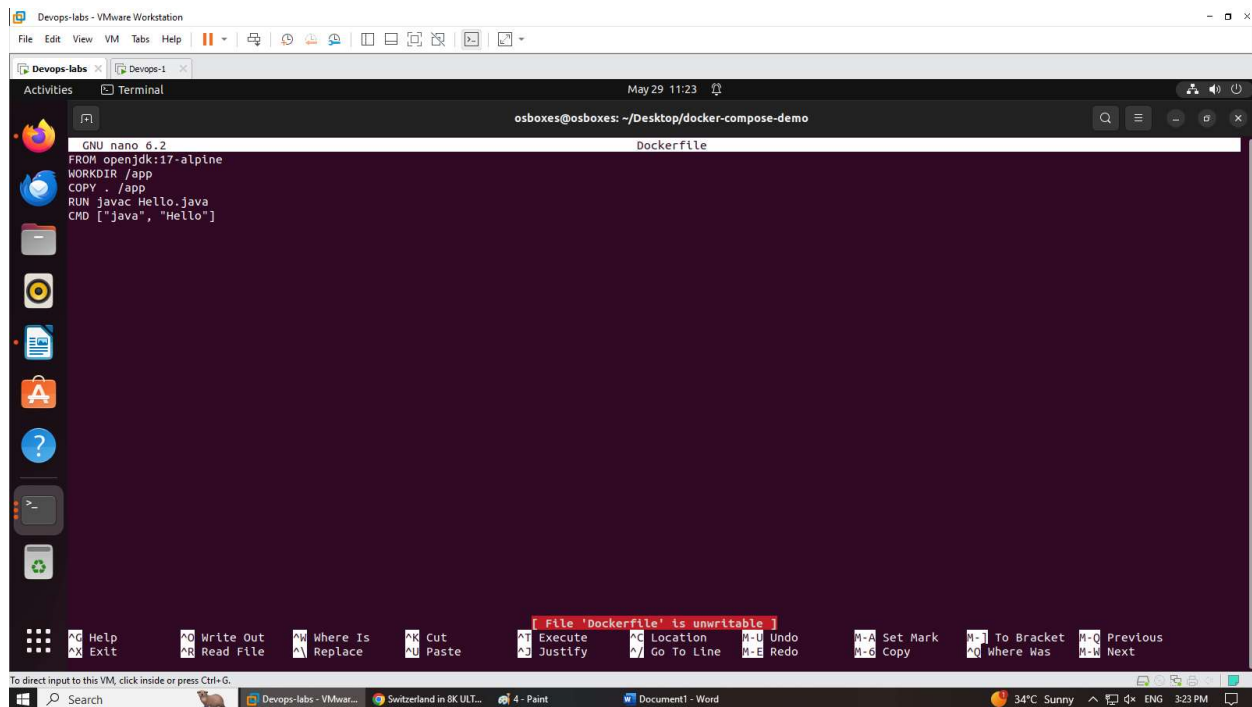
```
WARNING: Image for service java-helloworld was built because it did not already exist. To rebuild this image you must use 'docker-compose build' or 'docker-compose up -
-build'.
Creating java-helloworld-container ... done
Attaching to java-helloworld-container
java-helloworld-container | My First Java Program.
java-helloworld-container exited with code 0
osboxes@osboxes: ~/Desktop/docker-compose-demo$ sudo docker container list
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
6010be872c35   jenkins/jenki "/usr/bin/tint -- /u..." 3 hours ago    Up 3 hours    0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp   adoring_wu
osboxes@osboxes: ~/Desktop/docker-compose-demo$ sudo docker image
Usage: docker image COMMAND

Manage images

Commands:
  build      Build an image from a Dockerfile
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  import     Import the contents from a tarball to create a filesystem image
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  load       Load an image from a tar archive or STDIN
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  prune      Remove unused images
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  tag        Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE

Run 'docker image COMMAND --help' for more information on a command.
osboxes@osboxes: ~/Desktop/docker-compose-demo$ sudo docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
docker-compose-demo java-helloworld latest      5552ac037841   44 seconds ago 326MB
jenkins/jenkins     latest     3e31826a1bb1   8 days ago    469MB
nginx               latest     e784f4560448   3 weeks ago   188MB
openjdk             17-alpine 264c9bdce361   2 years ago   326MB
osboxes@osboxes: ~/Desktop/docker-compose-demo$
```

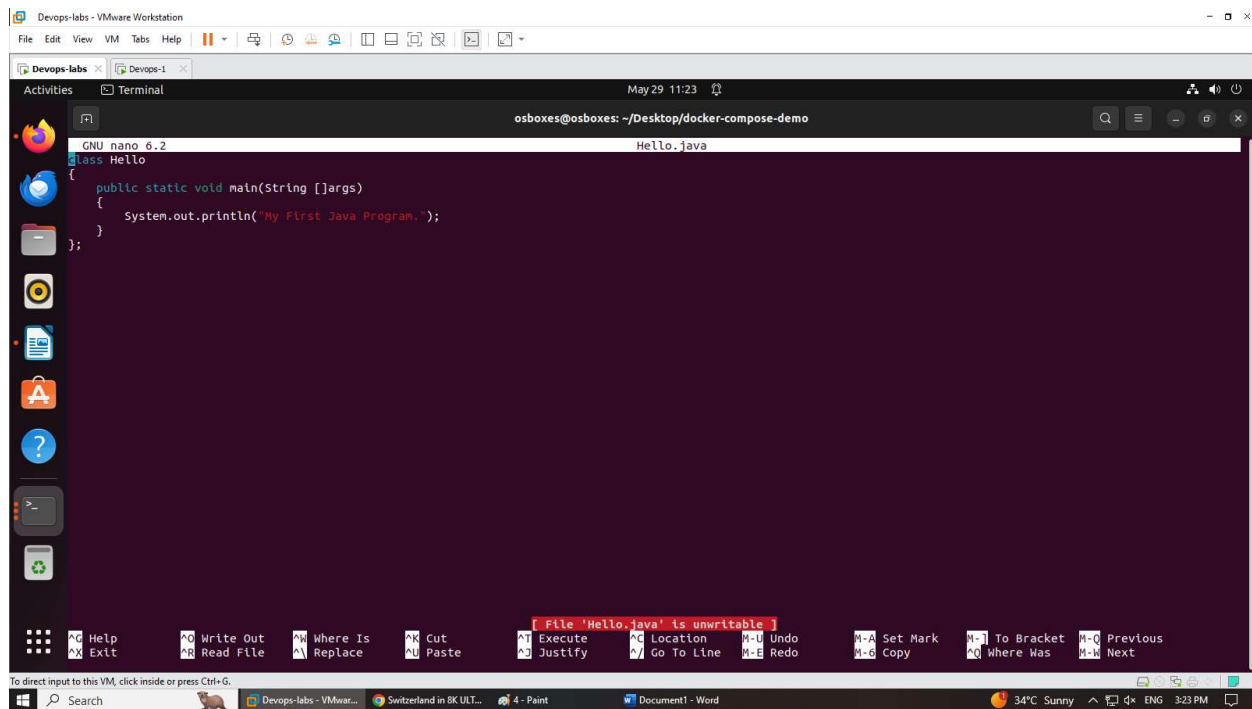
Dockerfile



The screenshot shows a terminal window titled "osboxes@osboxes: ~/Desktop/docker-compose-demo" with the title bar "Dockerfile". The terminal displays the following content:

```
GNU nano 6.2
FROM openjdk:17-alpine
WORKDIR /app
COPY . /app
RUN javac Hello.java
CMD ["java", "Hello"]
```

At the bottom of the terminal, a red error message is displayed: "File 'Dockerfile' is unwritable".

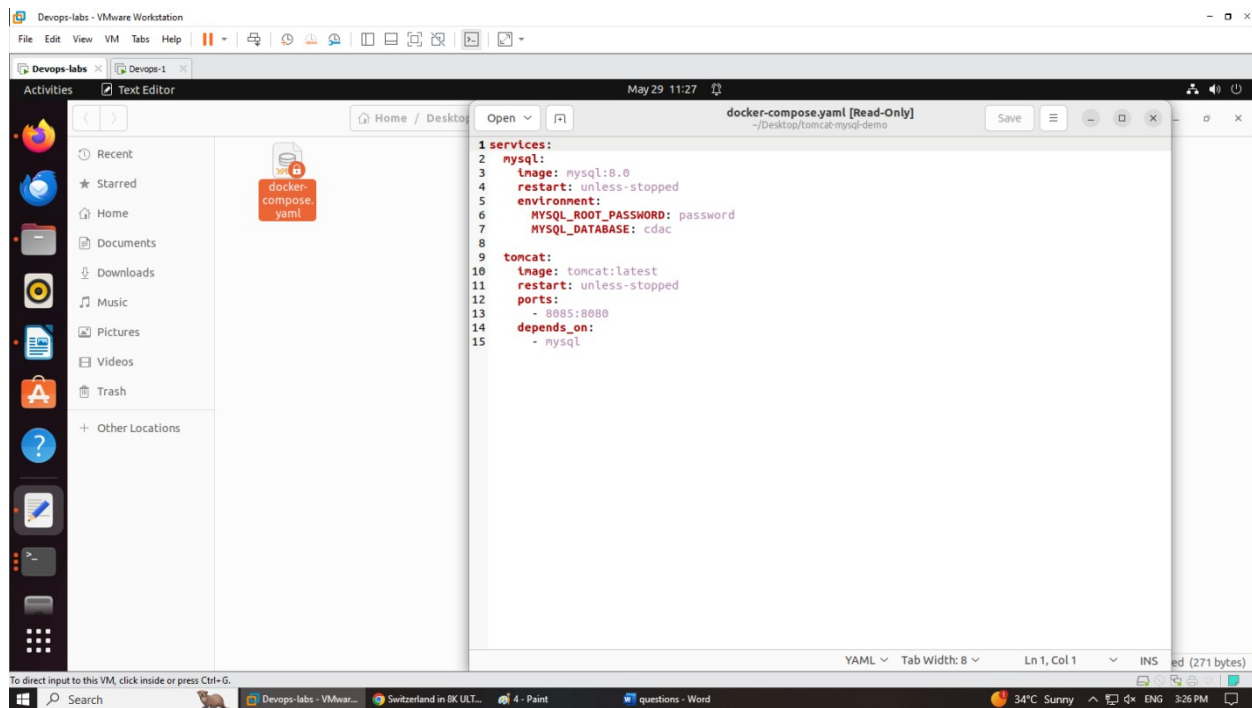


The screenshot shows a terminal window titled "osboxes@osboxes: ~/Desktop/docker-compose-demo". The terminal is running a nano 6.2 editor editing a file named "Hello.java". The code in the file is a simple Java class with a main method that prints "My First Java Program.".

```
class Hello
{
    public static void main(String []args)
    {
        System.out.println("My First Java Program.");
    }
};
```

The terminal window is part of a larger desktop environment. The top bar shows the date and time as "May 29 11:23". The bottom bar shows the system status, including "34°C Sunny" and "3:23 PM".

2.Apche tomcat



The screenshot shows a text editor window titled "docker-compose.yml [Read-Only]" with the path "~/Desktop/tomcat-mysql-demo". The file contains a Docker Compose configuration for a MySQL database and an Apache Tomcat service.

```
1 services:
2   mysql:
3     image: mysql:8.0
4     restart: unless-stopped
5     environment:
6       MYSQL_ROOT_PASSWORD: password
7       MYSQL_DATABASE: cdac
8   tomcat:
9     image: tomcat:latest
10    restart: unless-stopped
11    ports:
12      - 8085:8080
13    depends_on:
14      - mysql
```

The text editor window is part of a larger desktop environment. The top bar shows the date and time as "May 29 11:27". The bottom bar shows the system status, including "34°C Sunny" and "3:26 PM".

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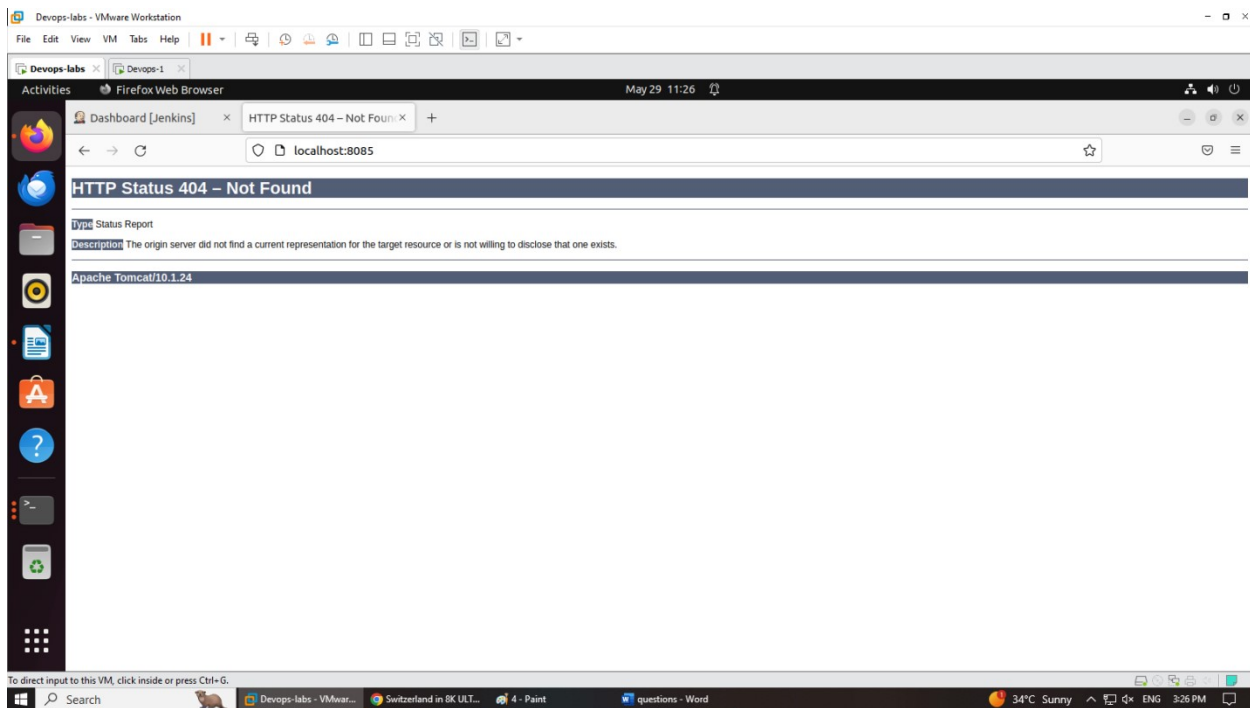
Activities Terminal May 29 11:26

osboxes@osboxes: ~/Desktop/tomcat-mysql-demo

```
osboxes@osboxes:~/Desktop$ mkdir tomcat-mysql-demo
osboxes@osboxes:~/Desktop$ cd tomcat-mysql-demo
osboxes@osboxes:~/Desktop/tomcat-mysql-demo$ sudo nano docker-compose.yml
[sudo] password for osboxes:
osboxes@osboxes:~/Desktop/tomcat-mysql-demo$ sudo nano docker-compose.yml
osboxes@osboxes:~/Desktop/tomcat-mysql-demo$ docker compose up
docker: 'compose' is not a docker command.
See 'docker --help'
osboxes@osboxes:~/Desktop/tomcat-mysql-demo$ sudo docker-compose up
Creating network "tomcat-mysql-demo_default" with the default driver
Pulling mysql (mysql:8.0)...
8.0: Pulling from library/mysql
fcbdc4899331: Pull complete
a845363d0e03: Pull complete
e8058c6f9bdd: Pull complete
2ec357e5ab0c: Pull complete
5afcf1382f34: Pull complete
7e6fb392497b: Pull complete
0287ae8ee890: Pull complete
faa49449b97e: Pull complete
ddd0836d7ff3: Pull complete
c25cb9740165: Pull complete
8d993d969e2b: Pull complete
Digest: sha256:aba83ec239df64820f61f0436b30c17922cf3cc183878ad4e479950bbdd448e
Status: Downloaded newer image for mysql:8.0
Pulling tomcat (tomcat:latest)...
latest: Pulling from library/tomcat
4a023cab5400: Pull complete
5e5d1bcc544: Pull complete
afd7ad947ce: Pull complete
478e5694bb3e: Pull complete
d8fa38685928: Pull complete
20a33f56f976: Pull complete
09a19a84cf60: Pull complete
317da09bcc55: Pull complete
Digest: sha256:077388ab6bf11b4a9565877eb3a39a20c73ca70f21a42a9d82d2348ad3535e1b
Status: Downloaded newer image for tomcat:latest
Creating tomcat-mysql-demo_mysql_1 ... done
```

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Activities Terminal May 29 11:31

osboxes@osboxes: ~/Desktop/tomcat-mysql-demo

```
osboxes@osboxes:~$ sudo docker ps
[sudo] password for osboxes:
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
294f49bf3613   tomcat:latest  "catalina.sh run"       4 minutes ago  Up 4 minutes  0.0.0.0:8085->8080/tcp, :::8085->8080/tcp  toncat-mysql-demo_tomcat_1
60986e868b62   mysql:8.0     "docker-entrypoint.s..." 4 minutes ago  Up 4 minutes  3306/tcp, 33060/tcp                toncat-mysql-demo_mysql_1
0618be872c35   jenkins/jenkins  "/usr/bin/tini -- /u..." 4 hours ago    Up 4 hours    0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp  adoring_wu

osboxes@osboxes:~$ cd Desktop/
osboxes@osboxes:~/Desktop$ ls
docker-compose-demo  jenkins-data  my-project  my-project-1  tomcat-mysql-demo
osboxes@osboxes:~/Desktop$ cd tomcat-mysql-demo/
osboxes@osboxes:~/Desktop/tomcat-mysql-demo$ sudo docker-compose down
Stopping toncat-mysql-demo_tomcat_1 ... done
Stopping toncat-mysql-demo_mysql_1 ... done
Removing toncat-mysql-demo_tomcat_1 ... done
Removing toncat-mysql-demo_mysql_1 ... done
Removing network toncat-mysql-demo_default
osboxes@osboxes:~/Desktop/tomcat-mysql-demo$
```

To direct input to this VM, click inside or press Ctrl+G.

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