

## Your First Container

```
C:\Users\carlo>docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com to create one.
Username: cavendano01
Password:
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/

C:\Users\carlo>docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.
```

## Your Second Container

```
C:\Users\carlo>
C:\Users\carlo>docker pull busybox
Using default tag: latest
latest: Pulling from library/busybox
3aabb638df1a9: Pull complete
Digest: sha256:52817dece4cfe26f581c834d27a8e1bcc82194f914afe6d50afad5a101234ef1
Status: Downloaded newer image for busybox:latest
docker.io/library/busybox:latest
```

## Checking Images

```
C:\Users\carlo>docker images
REPOSITORY      TAG       IMAGE ID       CREATED        SIZE
busybox         latest    d23834f29b38   3 days ago    1.24MB
hello-world     latest    feb5d9fea6a5   2 months ago  13.3kB

C:\Users\carlo>
```

## Running Your Second Container

```
C:\Users\carlo>docker run busybox

C:\Users\carlo>
```

## Running With Extra Parameters

```
C:\Users\carlo>docker run busybox echo "hello from busybox"
hello from busybox
```

## Check Running Containers

```
C:\Users\carlo>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS        NAMES
```

## Check stopped containers

```
C:\Users\carlo>docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
ES					
c7b4e48a9d7a	busybox	"echo 'hello from bu..."	36 seconds ago	Exited (0) 36 seconds ago	
zy_kirch					
14213b6d2278	busybox	"ech 'hello from bus..."	About a minute ago	Created	
piring_liskov					
2c6ef5aae017	busybox	"sh"	About a minute ago	Exited (0) About a minute ago	
ry_lovelace					
69ec5e1b0a0e	hello-world	"/hello"	3 minutes ago	Exited (0) 3 minutes ago	
fy_shannon					
966794d129df	hello-world	"/hello"	4 minutes ago	Exited (0) 4 minutes ago	
sty_jang					
a53974fa1122	hello-world	"/hello"	7 minutes ago	Exited (0) 7 minutes ago	
ssful mayer					

## Run and get inside the container

```
C:\Users\carlo>docker run -it busybox sh
/ #
```

## Delete Containers

```
C:\Users\carlo>docker rm busybox
Error: No such container: busybox

C:\Users\carlo>docker rm busybox
Error: No such container: busybox
```

## Delete All

```
C:\Users\carlo>docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
0285188b83cf689bccccfdb311965f55035cd65e41b7d5548cd8e32029abf8fee
c7b4e48a9d7a8604812a5d75b3a2414d2d43b1ed2e8f270bb89eddb25f0a4595
14213b6d22781902e4af87a5f7cc68cb47d6599938e252c0792795620414ad1d
2c6ef5aae017a893f8aa9562e929413af3b6f7c92456da13b0386fc523a8f83c
69ec5e1b0a0e93478d69cd7291d98fab6decbcd7d39d26949baf3b94e4b6e78d
966794d129df1441648d0d9db8bf369691140f3b36dd16e06a75c809f5a50f8d
a53974fa1122a11cff7a73806ddbe66879239b3183a375feb6c76f5ab3049e98

Total reclaimed space: 7B

C:\Users\carlo>
```

## Install Jupyter

```
C:\Users\carlo>docker pull jupyter/base-notebook
Using default tag: latest
latest: Pulling from jupyter/base-notebook
7b1a6ab2e44d: Pull complete
23929b31b3e5: Pull complete
91c4e6baf2ce: Pull complete
f81c5b5320f7: Pull complete
b75d7bc61fab: Pull complete
c2186ce702e2: Pull complete
751ed63e8118: Pull complete
eb362f2b25a7: Pull complete
114ba0956228: Pull complete
5eb7f827d077: Pull complete
847987f8ab3d: Pull complete
Digest: sha256:a6303a7879e17dd7eccc7f92aa16806902fdc404407fcb3d671e540db7bc7ca2
Status: Downloaded newer image for jupyter/base-notebook:latest
docker.io/jupyter/base-notebook:latest

C:\Users\carlo>
```

## Run Jupyter

The screenshot shows a JupyterLab interface on the left and a terminal window on the right. The JupyterLab interface displays the 'jupyter' logo, a 'Quit' button, and a 'Logout' button. Below these, there are tabs for 'Files', 'Running', and 'Clusters'. The 'Files' tab is active, showing a file browser with a table of files and folders. The table has columns for 'Name', 'Last Modified', and 'File size'. The 'Running' tab shows a table of running notebooks. The 'Clusters' tab shows a table of clusters. The terminal window on the right shows the command to run JupyterLab: `docker run -p 8888:8888 jupyter/base-notebook`. The output of the command is displayed in the terminal, showing the JupyterLab application directory and the URL to access the notebook.

## Create a Network

```
C:\WINDOWS\system32>docker network create --driver bridge my_test_network
96a5176d28361853479b8672f4827002f0f58817c8ef213efb0e28650c088485

C:\WINDOWS\system32>
```

## Run Mysql Container

```
C:\Users\carlo>docker run -it --network my_test_network -e "MYSQL_ROOT_PASSWORD=root123" -e "MYSQL_DATA
BASE=test" -e "MYSQL_USER=test" -e "MYSQL_PASSWORD=test123" mysql:5.7.35
Unable to find image 'mysql:5.7.35' locally
5.7.35: Pulling from library/mysql
b380bbd43752: Pull complete
f23cbf2ecc5d: Pull complete
30cfc6c29c0a: Pull complete
b38609286cbe: Pull complete
8211d9e66cd6: Pull complete
2313f9eeca4a: Pull complete
7eb487d00da0: Pull complete
bb9cc5c700e7: Pull complete
88676eb32344: Pull complete
8fea0b38a348: Pull complete
3dc585bfc693: Pull complete
Digest: sha256:b8814059bbd9c80b78fe4b2b0b70cd70fe3772b3c5d8ee1edfa46791db3224f9
Status: Downloaded newer image for mysql:5.7.35
2021-12-03 06:26:09+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.35-1debian10 star
ted.
2021-12-03 06:26:09+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2021-12-03 06:26:09+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.35-1debian10 star
ted.
```

## Run Jupyter With Network

```
C:\Users\carlo>docker run --network my_test_network -p 8888:8888 jupyter/base-notebook
WARNING: Jupyter Notebook deprecation notice https://github.com/jupyter/docker-stacks#jupyter-notebook
-deprecation-notice.
Entered start.sh with args: jupyter notebook
Executing the command: jupyter notebook
[I 06:29:59.540 NotebookApp] Writing notebook server cookie secret to /home/jovyan/.local/share/jupyter
/runtime/notebook_cookie_secret
[W 2021-12-03 06:30:01.157 LabApp] 'ip' has moved from NotebookApp to ServerApp. This config will be p
assed to ServerApp. Be sure to update your config before our next release.
[W 2021-12-03 06:30:01.157 LabApp] 'port' has moved from NotebookApp to ServerApp. This config will be
passed to ServerApp. Be sure to update your config before our next release.
[W 2021-12-03 06:30:01.157 LabApp] 'port' has moved from NotebookApp to ServerApp. This config will be
passed to ServerApp. Be sure to update your config before our next release.
```

## Check Running Containers

```
C:\Users\carlo>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
5e6a92eb7db6	jupyter/base-notebook	"tini -g -- start-no..."	About a minute ago	Up About a minute	0.0.0.0:8888->8888/tcp

```

C:\Users\carlo>
```

## Accessing Jupyter Container

```
C:\Users\carlo>docker exec -it goofy_haibt sh
$
```

## Install Mysql Connector

```
C:\Users\carlo>pip install mysql-connector-python
Collecting mysql-connector-python
  Downloading mysql_connector_python-8.0.27-cp38-cp38-win_amd64.whl (7.7 MB)
    |#####| 7.7 MB 1.6 MB/s
Collecting protobuf>=3.0.0
  Downloading protobuf-3.19.1-cp38-cp38-win_amd64.whl (895 kB)
    |#####| 895 kB 6.8 MB/s
Installing collected packages: protobuf, mysql-connector-python
Successfully installed mysql-connector-python-8.0.27 protobuf-3.19.1
WARNING: You are using pip version 21.1.1; however, version 21.3.1 is available.
You should consider upgrading via the 'c:\users\carlo\appdata\local\programs\python\python38\python.exe -m pip install --up
grade pip' command.
```

## Check Network

```
C:\Users\carlo>docker network inspect my_test_network
[
  {
    "Name": "my_test_network",
    "Id": "96a5176d28361853479b8672f4827002f0f58817c8ef213efb0e28650c088485",
    "Created": "2021-12-03T06:21:40.9939126Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": {},
      "Config": [
        {
          "Subnet": "172.18.0.0/16",
          "Gateway": "172.18.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {
      "5e6a92eb7db6439df147b0053eee91c4bbd32751e1853c7b5713b8afe839a221": {
        "Name": "goofy_haibt",
        "EndpointID": "73f3645d8ec353e79d13237fbf4277e2e265dded5c839b57f3474ca13ee1f753",
        "MacAddress": "02:42:ac:12:00:02",
        "IPv4Address": "172.18.0.2/16",
        "IPv6Address": ""
      }
    }
  },
]
```

## Test our connection