

```
GNU nano 5.8 app.py
from flask import Flask
from flask_restful import Resource, Api

app = Flask(__name__)
api=Api(app)

class sendMessage(Resource):
    def get(self):
        return {"message":"message from container 1"}

api.add_resource(sendMessage, '/')

if __name__ == "__main__":
    app.run(host="0.0.0.0", debug=True)
```

## App.py file

```
GNU nano 5.8 Dockerfile
FROM alpine:latest
RUN apk update
RUN apk add python3 py3-pip
RUN pip3 install flask flask-restful
RUN mkdir /app
COPY ./app.py /app/app.py
CMD python3 /app/app.py
```

## Dockerfile

docker build . -t container1

```
[ec2-user@ip-172-31-84-6 communicate]$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
container1 latest 3fb2148d9fc9 5 minutes ago 87.8MB
alpine latest 9ed4aefc74f6 13 days ago 7.05MB
[ec2-user@ip-172-31-84-6 communicate]$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
8760ea646764 container1 "/bin/sh -c 'python3..." 2 minutes ago Up 2 minutes wonderful_grothendieck
[ec2-user@ip-172-31-84-6 communicate]$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
container1 latest 3fb2148d9fc9 9 minutes ago 87.8MB
alpine latest 9ed4aefc74f6 13 days ago 7.05MB
[ec2-user@ip-172-31-84-6 communicate]$ docker run -d --rm --name container1 container1:latest
06add5f82275b259bb90a07415ba09d59c2db336654d2dc44b4db27b8de2bf2e
[ec2-user@ip-172-31-84-6 communicate]$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
06add5f82275 container1:latest "/bin/sh -c 'python3..." 5 seconds ago Up 5 seconds container1
8760ea646764 container1 "/bin/sh -c 'python3..." 8 minutes ago Up 8 minutes wonderful_grothendieck
```

i-0b5931fcc6f9ef3f4 (docker2)

PublicIPs: 54.211.206.3 PrivateIPs: 172.31.84.6

-docker run -d --rm --name container1

-docker inspect 06add5f82275

```
{
  "IPPrefixLen": 16,
  "IPv6Gateway": "",
  "MacAddress": "02:42:ac:11:00:03",
  "Networks": {
    "bridge": {
      "IPAMConfig": null,
      "Links": null,
      "Aliases": null,
      "NetworkID": "93b07537df080a9cd129b514e6290cfadca3d9c376fce8e9b4cbddc2036c4c87",
      "EndpointID": "5c98d18af92384ec62d3d50026f1f0af7c2c2c2a3e8ba04b492239a50ae91e72",
      "Gateway": "172.17.0.1",
      "IPAddress": "172.17.0.3",
      "IPPrefixLen": 16,
      "IPv6Gateway": "",
      "GlobalIPv6Address": "",
      "GlobalIPv6PrefixLen": 0,
      "MacAddress": "02:42:ac:11:00:03",
      "DriverOpts": null
    }
  }
}
```

-"IPAddress": "172.17.0.3"

Now running other alpine container

-docker run -it alpine:latest

And using wget -Wget is a free utility for non-interactive download of files from the Web- we can access the content from container1 ,accessing it on IP address 172.17.0.3:5000, 5000 is default port for flask

```
]
[ec2-user@ip-172-31-84-6 communicate]$ docker run -it alpine:latest
/ # wget -q -O - 172.17.0.3:5000
/ # wget -q -O - 172.17.0.3:5000
{
  "message": "message from container 1"
}
/ #
```

i-0b5931fcc6f9ef3f4 (docker2)

PublicIPs: 54.211.206.3 PrivateIPs: 172.31.84.6

- Response from container1 can be seen