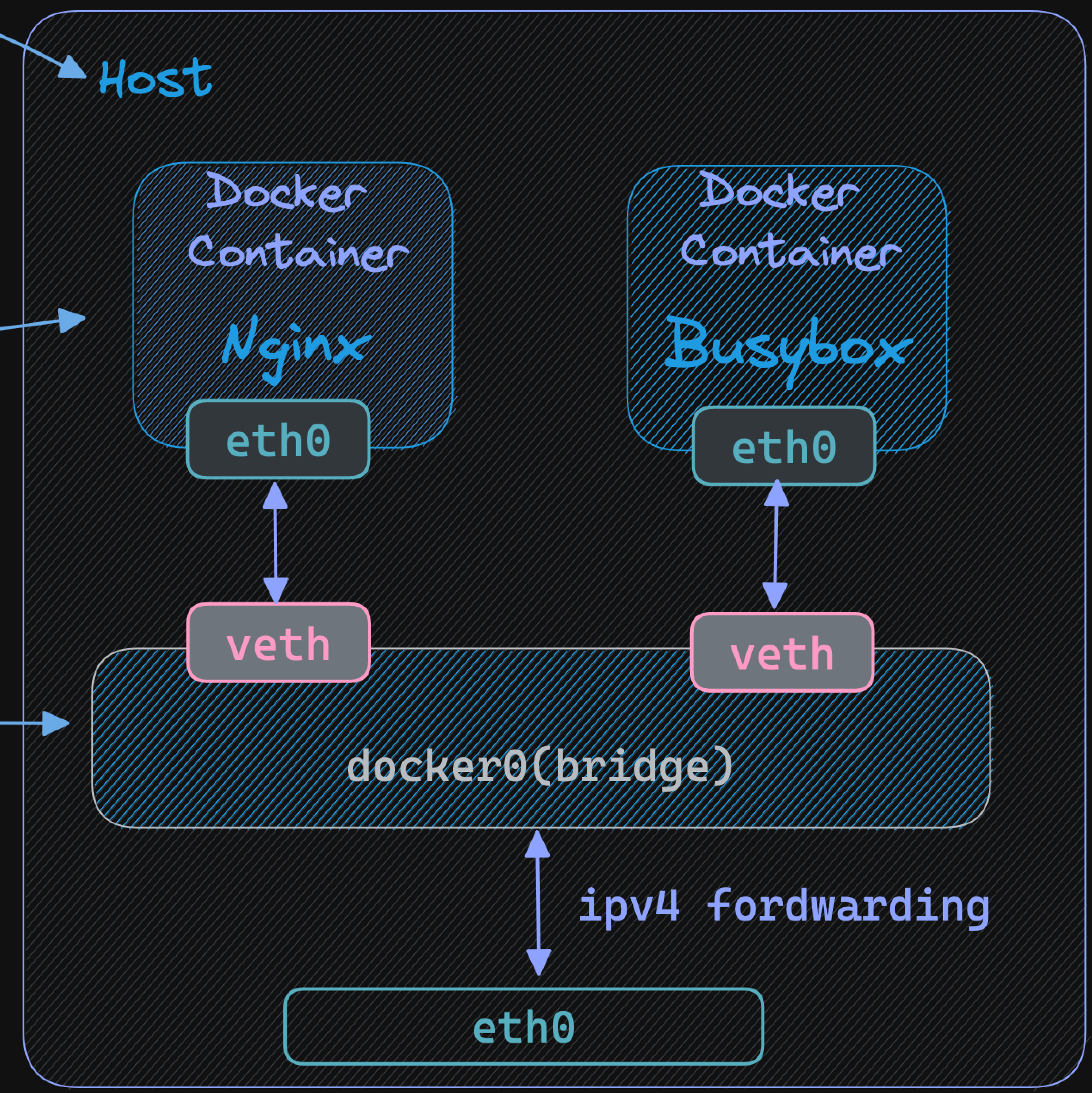
Docker

Docker Bridge Network

The host can communicate with the Docker containers, and the containers can also communicate with each other.



(*) Docker creates a virtual shared network between the host and all containers.

By default Docker launch your containers in Bridge network type.

```
↵ 1 ▶ docker network ls
NETWORK ID     NAME       DRIVER   SCOPE
e0842df7e1aa   bridge     bridge   local
064f73013df0   host       host     local
f73f28ae12b1   minikube   bridge   local
677918e68785   none       null     local
```

To view existing container networks on the current Docker host.

(*) Because of the way networking is implemented in Docker Desktop, you cannot see a docker0 interface on the host. This interface is actually within the virtual machine.

Edith Puclla

Docker Bridge Network Example

Docker

The default bridge network, allows simple container-to-container communication by IP address.

Testing communication between containers:

Nginx container

host container

```
⏎ docker container run -p 81:80 \
--name nginx -d nginx

  9db1b2621bb21 ...
```

```
⏎ docker container port nginx

  80/tcp → 0.0.0.0:81
```

container host

```
⏎ docker container inspect --format \
'{{ .NetworkSettings.IPAddress}} ' nginx
```

172.17.0.2

Busybox container

```
⏎ docker run -it --name busybox busybox
```

container

```
/ # wget -qO- 172.17.0.2:80
```

```
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
```

Inspect "bridge" network

```
▶ docker network inspect bridge
[
    {
        "Name": "bridge",
        "Driver": "bridge",
        "Containers": {
            "48eae72bd18fdfdeecdaf0fafefbed1453d38aeda71a0a18d7439ab1ce1fb3a4": {
                "Name": "busybox",
                "IPv4Address": "172.17.0.3/16",
            },
            "9db1b2621bb21c2b559cec586a139517800799c3312348f0a8a4599452d3d7c6": {
                "Name": "nginx",
                "IPv4Address": "172.17.0.2/16",
            }
        },

    }
]
```

Container ID

Containers can communicate because the bridge network is like a private network.

Edith Puclla