

# Single Host Networking

By default, any Docker container or host will get an *IP* address that will give it the possibility to communicate with other containers in the same host or with the host machine.

Containers in a single host, could also communicate and reach the outside world.

Create a simple container:

```
docker run -it -d --name my_container imagename
```

And test if you can ping Google:

```
ping google.com
PING google.com (216.58.204.142): 56 data bytes 64 bytes from
216.58.204.142: seq=1 ttl=48 time=2.811 ms
--- google.com ping statistics ---
3 packets transmitted, 1 packets received, 66% packet loss
round-trip min/avg/max = 2.811/2.811/2.811 ms
```

Exit out of container

Now if you inspect the container using `docker inspect my_container` you will be able to see its network configuration and its *IP* address:

```
"NetworkSettings": {
    "Bridge": "",
    "SandboxID":
"555a60eaffdb4b740f7b869bac61859eccale39be95ee5856ca28019509e4
255",
    "HairpinMode": false,
    "LinkLocalIPv6Address": "",
    "LinkLocalIPv6PrefixLen": 0,
```

```

        "Ports": {},
        "SandboxKey":
"/var/run/docker/netns/555a60eaffdb",
        "SecondaryIPAddresses": null,
        "SecondaryIPv6Addresses": null,
        "EndpointID":
"20b1b218462e6771155de75788f53b731bbff12019d977aefa7094f572758
87d",
        "Gateway": "172.17.0.1",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "IPAddress": "172.17.0.2",
        "IPPrefixLen": 16,
        "IPv6Gateway": "",
        "MacAddress": "02:42:ac:11:00:02",
        "Networks": {
            "bridge": {
                "IPAMConfig": null,
                "Links": null,
                "Aliases": null,
                "NetworkID":
"2094b393faacbb1cc049f1f136437b1cce6fc41abc304cf2c1ae558a62c5e
e2e",
                "EndpointID":
"20b1b218462e6771155de75788f53b731bbff12019d977aefa7094f572758
87d",
                "Gateway": "172.17.0.1",
                "IPAddress": "172.17.0.2",
                "IPPrefixLen": 16,
                "IPv6Gateway": "",
                "GlobalIPv6Address": "",
                "GlobalIPv6PrefixLen": 0,
                "MacAddress": "02:42:ac:11:00:02"
            }
        }
    }
}

```

*my\_container* has the *IP* address *172.17.0.2* that the host could reach:

```

ping 172.17.0.2
PING 172.17.0.2 (172.17.0.2) 56(84) bytes of data.
64 bytes from 172.17.0.2: icmp_seq=1 ttl=64 time=0.050 ms
64 bytes from 172.17.0.2: icmp_seq=2 ttl=64 time=0.045 ms
--- 172.17.0.2 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 999ms
rtt min/avg/max/mdev = 0.045/0.047/0.050/0.007 ms

```

n a single host, containers are able to see each other, to see the external world (if they are not running in isolated networks) and they can receive traffic from an external network.

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