

# Lab 7: Network virtualization with Virtualbox

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## 1 NAT mode

1. The IP configuration of the host machine can be determined using `ifconfig`.

```

[ 9:19 ] [ aah@pavilion ~/work/ece/ing4/netsec/lab7(masterX) ]
$ ifconfig
br-3c924afbd4f4: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    inet 172.18.0.1 netmask 255.255.0.0 broadcast 172.18.255.255
    ether 02:42:13:ea:9b:7b txqueuelen 0 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

docker0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    inet 172.17.0.1 netmask 255.255.0.0 broadcast 172.17.255.255
    ether 02:42:03:47:c5:d8 txqueuelen 0 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether 3c:52:82:dc:62:94 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 5331 bytes 1254538 (1.2 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5331 bytes 1254538 (1.2 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.4.177.107 netmask 255.255.240.0 broadcast 10.4.191.255
    inet6 fe80::bbc8:8d7:5b2c:4d3e prefixlen 64 scopeid 0x20<link>
    ether 88:78:73:c8:37:46 txqueuelen 1000 (Ethernet)
    RX packets 463786 bytes 668552601 (668.5 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 79904 bytes 9068107 (9.0 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

2. We use the same command in the virtual machine.

```

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