

## Virtual Network Editor

Virtual Network Editor

Name	Type	External Connection	Host Connection	DHCP	Subnet Address
VMnet0	Bridged	Auto-bridging	-	-	-
VMnet1	Host-only	-	Connected	Enabled	192.168.150.0
VMnet2	Host-only	-	Connected	Enabled	192.168.182.0
VMnet8	NAT	NAT	Connected	Enabled	192.168.13.0

Add Network... Remove Network... Rename Network...

**VMnet Information**

Bridged (connect VMs directly to the external network)

Bridged to: Automatic

NAT (shared host's IP address with VMs)

Host-only (connect VMs internally in a private network)

Connect a host virtual adapter to this network  
Host virtual adapter name: VMware Network Adapter VMnet0

Use local DHCP service to distribute IP address to VMs

Subnet IP:  Subnet mask:

Restore Defaults Import... Export... OK Cancel Apply Help

## Server

Device	Summary
Memory	4 GB
Processors	2
Hard Disk (SCSI)	20 GB
CD/DVD (SATA)	Using file F:\Downloads\uba...
Network Adapter	Bridged (Automatic)
Network Adapter 2	Custom (VMnet2)
USB Controller	Present
Sound Card	Auto detect
Display	Auto detect

▼ Devices

Memory	4 GB
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▼ Description

## Client

Device	Summary
Memory	4 GB
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Communication Established

### Server IP

```
vipassana@vipassana-VMware-Virtual-Platform:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
  qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
      valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
      valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default
  qlen 1000
    link/ether 00:0c:29:69:50:21 brd ff:ff:ff:ff:ff:ff
    altnname enp2s1
    inet6 fe80::9d4b:e2dc:72c2:b084/64 scope link noprefixroute
      valid_lft forever preferred_lft forever
3: ens37: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default
  qlen 1000
    link/ether 00:0c:29:69:50:2b brd ff:ff:ff:ff:ff:ff
    altnname enp2s5
    inet 192.168.182.129/24 brd 192.168.182.255 scope global dynamic noprefixroute ens37
      valid_lft 1730sec preferred_lft 1730sec
    inet6 fe80::6457:2ffa:13e4:bb8b/64 scope link noprefixroute
      valid_lft forever preferred_lft forever
vipassana@vipassana-VMware-Virtual-Platform:~$
```

### Client IP

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  qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
      valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
      valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default
  qlen 1000
    link/ether 00:0c:29:02:9e:bc brd ff:ff:ff:ff:ff:ff
    altnname enp2s1
    inet 192.168.182.128/24 brd 192.168.182.255 scope global dynamic noprefixroute ens33
      valid_lft 1683sec preferred_lft 1683sec
    inet6 fe80::d3a8:7451:adb7:3433/64 scope link noprefixroute
      valid_lft forever preferred_lft forever
vipassana@vipassana-VMware-Virtual-Platform:~$
```

## Sample Code Working

```
vipassana@vipassana-VMware-Virtual-Platform:~$ gcc server.c -o server  
vipassana@vipassana-VMware-Virtual-Platform:~$ ./server 51717  
Here is the message: Hello My name is Vipassana How are u
```

```
vipassana@vipassana-VMware-Virtual-Platform:~$ 
```

```
vipassana@vipassana-VMware-Virtual-Platform:~$ gcc client.c -o client  
vipassana@vipassana-VMware-Virtual-Platform:~$ ./client 192.168.182.129 51717  
Please enter the message: Hello My name is Vipassana How are u  
I got your message  
vipassana@vipassana-VMware-Virtual-Platform:~$ 
```

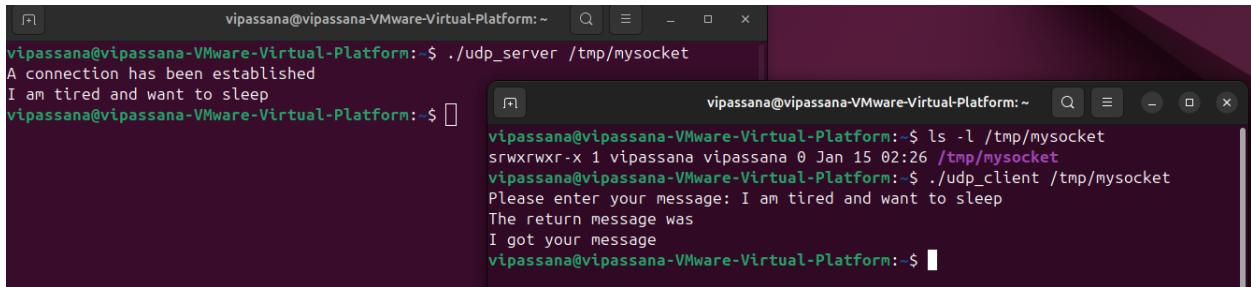
## Multiple clients on 1 server

```
vipassana@vipassana-VMware-Virtual-Platform:~$ gcc change_server.c -o change_ser  
ver  
vipassana@vipassana-VMware-Virtual-Platform:~$ ./change_server 51717  
Here is the message: Nice to met u too  
  
Here is the message: Meow Woof Moooo
```

```
vipassana@vipassana-VMware-Virtual-Platform:~$ ./client 192.168.182.129 51717  
Please enter the message: Nice to met u too  
I got your message  
vipassana@vipassana-VMware-Virtual-Platform:~$ 
```

```
vipassana@vipassana-VMware-Virtual-Platform:~$ ./client 192.168.182.129 51717  
Please enter the message: Meow Woof Moooo  
I got your message  
vipassana@vipassana-VMware-Virtual-Platform:~$ 
```

## Unix communication



The image shows two terminal windows side-by-side on a dark-themed desktop environment.

**Terminal 1 (Left):**

```
vipassana@vipassana-VMware-Virtual-Platform:~$ ./udp_server /tmp/mysocket
A connection has been established
I am tired and want to sleep
```

**Terminal 2 (Right):**

```
vipassana@vipassana-VMware-Virtual-Platform:~$ ls -l /tmp/mysocket
srwxrwxr-x 1 vipassana vipassana 0 Jan 15 02:26 /tmp/mysocket
vipassana@vipassana-VMware-Virtual-Platform:~$ ./udp_client /tmp/mysocket
Please enter your message: I am tired and want to sleep
The return message was
I got your message
```