**OPENVPN** **KOMAL SAWANT ROLL NO 15**

**Server –LINUX**

**DEB1**

**sudo apt-get install openvpn tcpdump**

**sudo nano server.conf**

shuhari@debian: ~

```
  GNU nano 3.2                                        server.conf

proto udp
port 1194
dev tun
ifconfig 10.0.0.1 10.0.0.2
cipher none
auth none
verb 3
```

**sudo openvpn --config server.conf**

```
shuhari@debian:~$ sudo openvpn --config server.conf
Sat May 27 02:11:59 2023 disabling NCP mode (--ncp-disable) because not in P2MP client or server mode
Sat May 27 02:11:59 2023 OpenVPN 2.4.7 x86_64-pc-linux-gnu [SSL (OpenSSL)] [LZO] [LZ4] [EPOLL] [PKCS11]
 [MH/PKTINFO] [AEAD] built on Feb 20 2019
Sat May 27 02:11:59 2023 library versions: OpenSSL 1.1.1c  28 May 2019, LZO 2.10
Sat May 27 02:11:59 2023 ******* WARNING *******: All encryption and authentication features disabled -
- All data will be tunnelled as clear text and will not be protected against man-in-the-middle changes.
 PLEASE DO RECONSIDER THIS CONFIGURATION!
Sat May 27 02:11:59 2023 TUN/TAP device tun0 opened
Sat May 27 02:11:59 2023 TUN/TAP TX queue length set to 100
Sat May 27 02:11:59 2023 /sbin/ip link set dev tun0 up mtu 1500
Sat May 27 02:11:59 2023 /sbin/ip addr add dev tun0 local 10.0.0.1 peer 10.0.0.2
Sat May 27 02:11:59 2023 Could not determine IPv4/IPv6 protocol. Using AF_INET
Sat May 27 02:11:59 2023 Socket Buffers: R=[212992->212992] S=[212992->212992]
Sat May 27 02:11:59 2023 UDPv4 link local (bound): [AF_INET][undef]:1194
Sat May 27 02:11:59 2023 UDPv4 link remote: [AF_UNSPEC]
```

**Go to another putty and check ip a (tun 0) is added or not**

```
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Sat May 27 01:55:09 2023 from 192.168.80.1
shuhari@debian:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group defaul
t 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
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP g
roup default qlen 1000
    link/ether 00:0c:29:e1:6b:d3 brd ff:ff:ff:ff:ff:ff
    inet 192.168.80.131/24 brd 192.168.80.255 scope global dynamic ens33
       valid_lft 1539sec preferred_lft 1539sec
    inet6 fe80::20c:29ff:fee1:6bd3/64 scope link
       valid_lft forever preferred_lft forever
4: tun0: <POINTOPOINT,MULTICAST,NOARP,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast sta
te UNKNOWN group default qlen 100
    link/none
    inet 10.0.0.1 peer 10.0.0.2/32 scope global tun0
       valid_lft forever preferred_lft forever
    inet6 fe80::73f3:932f:154c:52cc/64 scope link stable-privacy
       valid_lft forever preferred_lft forever
```

**CLIENT –LINUX**

**DEB2**

**sudo apt-get install tcpdump openvpn**

**sudo nano client.conf**

```
  GNU nano 3.2                                client.conf

remote 192.168.80.131
proto udp
port 1194
dev tun
ifconfig 10.0.0.2 10.0.0.1
cipher none
auth none
verb 3
```

**Mention server ip at 1st line (remote 192.168.80.131)**

**sudo openvpn --config client.conf**

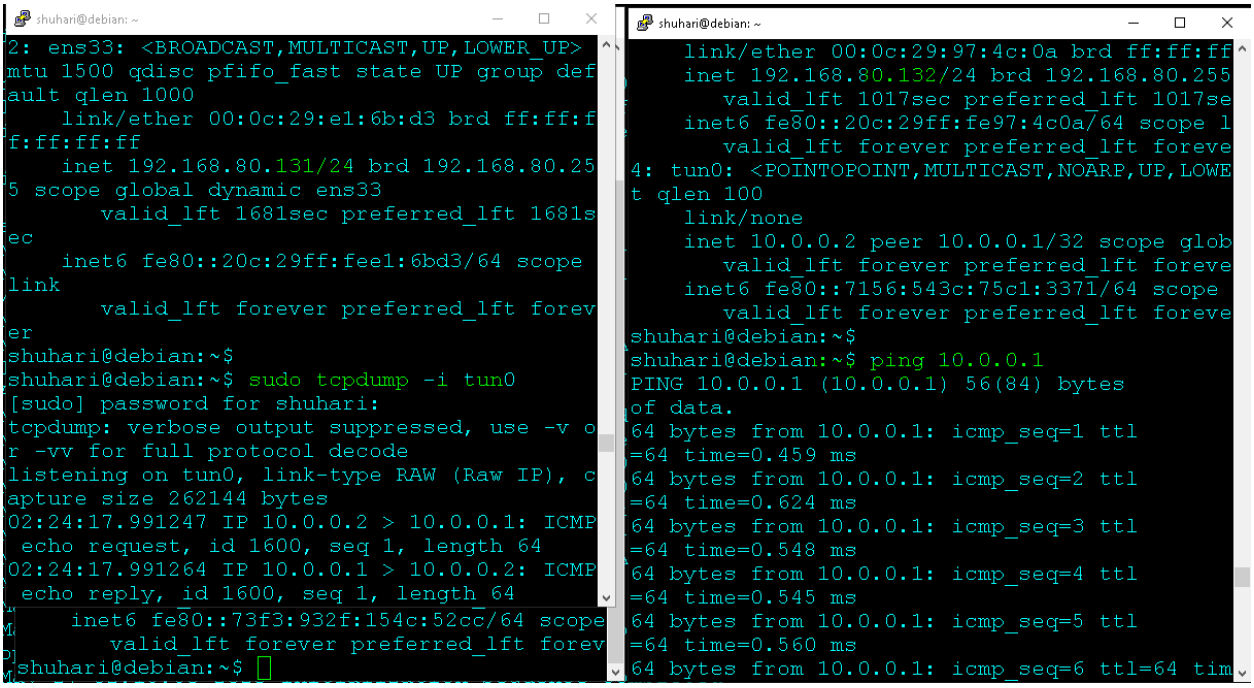
```
shuhari@debian:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 00:0c:29:97:4c:0a brd ff:ff:ff:ff:ff:ff
    inet 192.168.80.132/24 brd 192.168.80.255 scope global dynamic ens33
       valid_lft 1145sec preferred_lft 1145sec
    inet6 fe80::20c:29ff:fe97:4c0a/64 scope link
       valid_lft forever preferred_lft forever
shuhari@debian:~$     sudo openvpn --config client.conf
Sat May 27 02:18:42 2023 disabling NCP mode (--ncp-disable) because not in P2MP client or server mode
Sat May 27 02:18:42 2023 OpenVPN 2.4.7 x86_64-pc-linux-gnu [SSL (OpenSSL)] [LZO] [LZ4] [EPOLL] [PKCS11]
 [MH/PKTINFO] [AEAD] built on Feb 20 2019
Sat May 27 02:18:42 2023 library versions: OpenSSL 1.1.1c  28 May 2019, LZO 2.10
Sat May 27 02:18:42 2023 ******* WARNING *******: All encryption and authentication features disabled -
- All data will be tunnelled as clear text and will not be protected against man-in-the-middle changes.
 PLEASE DO RECONSIDER THIS CONFIGURATION!
Sat May 27 02:18:42 2023 TUN/TAP device tun0 opened
Sat May 27 02:18:42 2023 TUN/TAP TX queue length set to 100
Sat May 27 02:18:42 2023 /sbin/ip link set dev tun0 up mtu 1500
Sat May 27 02:18:42 2023 /sbin/ip addr add dev tun0 local 10.0.0.2 peer 10.0.0.1
Sat May 27 02:18:42 2023 TCP/UDP: Preserving recently used remote address: [AF_INET]192.168.80.131:1194
Sat May 27 02:18:42 2023 Socket Buffers: R=[212992->212992] S=[212992->212992]
Sat May 27 02:18:42 2023 UDP link local (bound): [AF_INET][undef]:1194
Sat May 27 02:18:42 2023 UDP link remote: [AF_INET]192.168.80.131:1194
```

**Go to another putty and check ip a (tun 0) is added or not**

```
shuhari@debian:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group defa
    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
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP
    link/ether 00:0c:29:97:4c:0a brd ff:ff:ff:ff:ff:ff
    inet 192.168.80.132/24 brd 192.168.80.255 scope global dynamic ens33
       valid_lft 1017sec preferred_lft 1017sec
    inet6 fe80::20c:29ff:fe97:4c0a/64 scope link
       valid_lft forever preferred_lft forever
4: tun0: <POINTOPOINT,MULTICAST,NOARP,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast s
t qlen 100
    link/none
    inet 10.0.0.2 peer 10.0.0.1/32 scope global tun0
       valid_lft forever preferred_lft forever
    inet6 fe80::7156:543c:75c1:3371/64 scope link stable-privacy
       valid_lft forever preferred_lft forever
```

**now take another 2 puttys 1 for server and 1 for client**

**ping server from client**




**ping client from server**