CUSTOMIZED DHCP SERVER IN PYTHON USING SCAPY

After a successful installation of Python and Scapy in either Windows or Linux, copy and paste the code below in a file called scapy_dhcp.py and save it in your Scapy directory.

```
#input info
server_ip="12.154.254.33"
client_ip="10.154.254.15"
server_mac="00:0B:CD:AE:9F:C6"
client_mac="00:02:a5:ea:54:20"
subnet_mask="255.255.255.192"
gateway="12.154.254.10"

#DHCP leases
def detect_dhcp(pkt):
        #If DHCP Discover then DHCP Offer
        if pkt[DHCP] and pkt[DHCP].options[0][1] == 1:
                print "\nDHCP Discover packet detected"
                sendp(
                Ether(src=server_mac,dst="ff:ff:ff:ff:ff:ff")/
                IP(src=server_ip,dst="255.255.255.255")/
                UDP(sport=67,dport=68)/
                BOOTP(
                op=2,
                yiaddr=client_ip,
                siaddr=server_ip,
                giaddr=gateway,
                chaddr=client_mac,
                xid=pkt[BOOTP].xid
                )
                DHCP(options=[('message-type','offer')])/
                DHCP(options=[('subnet_mask',subnet_mask)])/
                DHCP(options=[('server_id',server_ip),('end')])
                )
                print "DHCP Offer packet sent\n."
        #If DHCP Request then DHCP Ack
        if pkt[DHCP] and pkt[DHCP].options[0][1] == 3:
                print "DHCP Request packet detected"
                sendp(
                Ether(src=server_mac,dst="ff:ff:ff:ff:ff:ff")/
                IP(src=server_ip,dst="255.255.255.255")/
                UDP(sport=67,dport=68)/
                BOOTP(
                op=2,
                yiaddr=client_ip,
```

```
                siaddr=server_ip,
                giaddr=gateway,
                chaddr=client_mac,
                xid=pkt[BOOTP].xid
                )/
                DHCP(options=[('message-type','ack')])/
                DHCP(options=[('subnet_mask',subnet_mask)])/
                DHCP(options=[('server_id',server_ip),('end')])

        print "DHCP Ack packet sent\n\nCtrl+C to exit\n"
        #exit when lease has been granted
                #sys.exit(0)

#sniff DHCP requests
def start():
        sniff(filter="arp or (udp and (port 67 or 68))", prn=detect_dhcp, store=0)
```

Open Scapy and type the following:

```
import scapy_dhcp
scapy_dhcp.start()
```

The result can be seen using Wireshark