

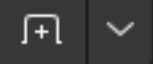
```
joe@ns1:~$ echo "On my dns master; configuring it so that it will do recursive lookups for my client"
```

```
On my dns master; configuring it so that it will do recursive lookups for my client
```

```
joe@ns1:~$ echo "You will also have to do the same on the slave"
```

```
You will also have to do the same on the slave
```

```
joe@ns1:~$
```



```
joe@ns1:~$ cd /etc/bind
```

```
joe@ns1:/etc/bind$ sudo vi named.conf.options
```

```
options {
    directory "/var/cache/bind";

    //I deleted all lines that started with these double slashes so you can read things better
    //I inserted the following line so that any clients in my subnet
    // will be allowed to ask us for dns recursive lookups
    allow-recursion { 144.38.199.32/28; localhost; };
    dnssec-validation auto;

    listen-on-v6 { any; };
};
```



```
joe@ns1:/etc/bind$ echo "Don't forget to restart bind"
```

```
Don't forget to restart bind
```

```
joe@ns1:/etc/bind$ █
```

```
joe@www:~$ echo "I am on the client, will try a dig test through my nameservers"
```

```
I am on the client, will try a dig test through my nameservers
```

```
joe@www:~$ dig @144.38.199.36 www.nba.com
```

```
; <<>> DiG 9.18.12-0ubuntu0.22.04.2-Ubuntu <<>> @144.38.199.36 www.nba.com
```

```
; (1 server found)
```

```
;; global options: +cmd
```

```
;; Got answer:
```

```
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 58084
```

```
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1
```

```
;; OPT PSEUDOSECTION:
```

```
; EDNS: version: 0, flags:; udp: 1232
```

```
; COOKIE: 9bffc1f5fca7eeb90100000064d7b8dec3cb9abedc9c78d1 (good)
```

```
;; QUESTION SECTION:
```

```
;www.nba.com.                IN      A
```

```
;; ANSWER SECTION:
```

```
www.nba.com.                294     IN      CNAME   www.nba.com-v1.edgekey.net.
```

```
www.nba.com-v1.edgekey.net. 21594   IN      CNAME   e8017.dscb.akamaiedge.net.
```

```
e8017.dscb.akamaiedge.net. 15      IN      A       23.45.85.67
```

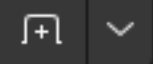
```
;; Query time: 0 msec
```

```
;; SERVER: 144.38.199.36#53(144.38.199.36) (UDP)
```

```
;; WHEN: Sat Aug 12 16:52:46 UTC 2023
```

```
;; MSG SIZE rcvd: 163
```

```
joe@www:~$
```



```
joe@www:~$ echo "Appears to work. Now configure all clients to always do lookups through our nameservers"
Appears to work. Now configure all clients to always do lookups through our nameservers
joe@www:~$ sudo vi /etc/netplan/00-installer-config.yaml
```

```
# This is the network config written by 'subiquity'
network:
  ethernets:
    ens4:
      addresses:
        - 144.38.199.38/28
      nameservers:
        addresses:
          #I Will change the addresses to my ns1 and ns2 machines
          # You should change to yours
          - 144.38.199.36
          - 144.38.199.37
        search:
          - cs.utahtech.edu
      routes:
        - to: default
          #change the next line to match your gateway
          via: 144.38.199.33
  version: 2
```

```
joe@www:~$ sudo netplan apply
```

```
joe@www:~$ echo "Do DNS lookup still work?"
```

```
Do DNS lookup still work?
```

```
joe@www:~$ ping www.woot.com
```

```
PING www.woot.com (3.89.18.98) 56(84) bytes of data.
```

```
^C
```

```
--- www.woot.com ping statistics ---
```

```
1 packets transmitted, 0 received, 100% packet loss, time 0ms
```

```
joe@www:~$ ping www.google.com
```

```
PING www.google.com(slc18s02-in-x04.1e100.net (2607:f8b0:4025:810::2004)) 56 data bytes
```

```
64 bytes from slc18s02-in-x04.1e100.net (2607:f8b0:4025:810::2004): icmp_seq=1 ttl=52 time  
=9.33 ms
```

```
64 bytes from slc18s02-in-x04.1e100.net (2607:f8b0:4025:810::2004): icmp_seq=2 ttl=52 time  
=9.23 ms
```

```
^C
```

```
--- www.google.com ping statistics ---
```

```
2 packets transmitted, 2 received, 0% packet loss, time 1002ms
```

```
rtt min/avg/max/mdev = 9.234/9.279/9.325/0.045 ms
```

```
joe@www:~$ ping -4 bling.com
```

```
PING bling.com (185.53.177.31) 56(84) bytes of data.
```

```
^C64 bytes from 185.53.177.31: icmp_seq=1 ttl=38 time=148 ms
```

```
--- bling.com ping statistics ---
```

```
1 packets transmitted, 1 received, 0% packet loss, time 0ms
```

```
rtt min/avg/max/mdev = 147.691/147.691/147.691/0.000 ms
```

```
joe@www:~$ echo "Seems like dns works"
```

```
Seems like dns works
```

```
joe@www:~$
```