

Our own site

1.

Firstly, we registered a domain name i.e. (<http://internetrt.org/>).

2. Second, we pointed ns record of *dns.internetrt.org* to our virtual host i.e. *mccn05.net.in.tum.de*(131.159.15.75).

Then we ran iodined on the virtual host:

```
iodined -c -u root -P 11111111 192.168.99.1 dns.internetrt.org
```

We set up the firewall for forwarding with NAT:

```
echo 1 > /proc/sys/net/ipv4/ip_forward
```

```
iptables -t nat -A POSTROUTING -o eth0 -j MASQUERADE
```

```
iptables -A FORWARD -i eth0 -o dns0 -m state --state RELATED,ESTABLISHED -j ACCEPT
```

```
iptables -A FORWARD -i dns0 -o eth0 -j ACCEPT
```

3.

We used our own machine as iodine client and started iodine on it:

```
iodine -f -u root -P 11111111 -L0 10.149.32.2 dns.internetrt.org
```

Then we dropped the existing default route and added a host route to the nameserver:

```
route add 0.0.0.0 mask 0.0.0.0 192.168.99.1
```

```
route add 10.149.32.2 192.168.137.1
```

```
route delete 0.0.0.0 mask 0.0.0.0 192.168.137.1
```

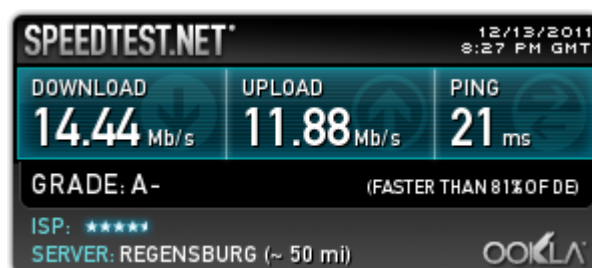
Thus it worked and we tunneled the ip traffic via our own DNS.

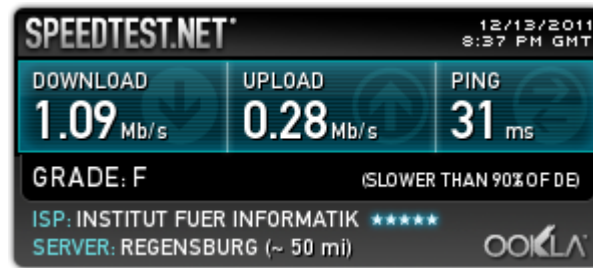
4.

We measured the performance mainly for latency and throughput of our IPv4-over-DNS tunnel by the *speedtest.net* which is an online benchmark that can test Internet connection bandwidth to locations around the world with this interactive broadband speed test.(<http://speedtest.net/>).

We chose a server in Regensburg hosted by Televersa Online Gmbh and tested ping time, download speed and upload speed of both default connection and our IPv4-over-DNS tunnel.

The results are below:





We can see that in our IPv4-over-DNS tunnel, the ping latency is longer and the download and upload speed is much slower than that of the default connection. That's a reasonable result.