

Setting up an IPv6 Tunnel

Written by BiRU

Tuesday, 04 April 2017 18:43 -

So, you want to access IPv6 websites, but your ISP does not provide native IPv6 access? Well, here are some instructions for setting up a 6in4 IPv6 tunnel with Hurricane Electric!

Now, these instructions are for RedHat based distro's, and were specifically written using CentOS 6. This type of ipv6 tunnel won't work behind [NAT](#), so your machine must be connected directly to the internet with a public IP address (UPDATE: Thanks to KingKurly for pointing out that you can forward Protocol 41 to enable a tunnel through NAT, if your device supports it). If you are looking for something that will work behind NAT, an AYIYA tunnel from [SixXS.net](#) should work over NAT for you, and we'll cover how to do this in a future article. But, for now, let us continue with our 6in4 ipv6 tunnel from Hurricane Electric.

First, go to [Hurricane Electric](#) and get your free tunnel.

Next, open up ping requests from Hurricane Electric. This step is important, as they won't allocate a tunnel if they can't ping your machine. I normally don't respond to ping requests, so I had to use a firewall rule like the one below to allow their pings through.

```
-A INPUT -p icmp -m icmp -m limit -s 66.220.2.74/32 -i eth0 --icmp-type 8 --limit 1/sec -j ACCEPT
```

Don't forget to restart your firewall after making changes, to make sure your changes are active!
service iptables restart

Once you have an account you will want to create a regular tunnel. This is basically an IPv4 tunnel between your computer and Hurricane Electric which carries your IPv6 traffic. Enter your IPv4 address as the tunnel's endpoint address. After entering your IPv4 address, the website will check to make sure that it can ping your machine. If it cannot ping your machine, you will get an error like the one below:

IP is not ICMP pingable. Please make sure ICMP is not blocked. If you are blocking ICMP allow 66.220.2.74 through your firewall.

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If this happens, go back and check your firewall rules, and make sure that you can ping your machine from the outside. If all else fails, try a more relaxed firewall rule, like this:

```
-A INPUT -p icmp -m icmp -s 66.220.2.74/32 -j ACCEPT
```

Or, even more relaxed:

```
-A INPUT -p icmp -m icmp -j ACCEPT
```

The first rule accepts all ICMP traffic from 66.220.2.74, while the second accepts all ICMP traffic from everyone.

Once everything is ready, you should see a message like this:

IP is a potential tunnel endpoint.

Now, it is time to configure our tunnel! Go to the Tunnel Details page of your tunnel, and start entering information. Give your tunnel a description, which can be anything you want. Then, assign a Routed /48, so we can have a larger block of addresses to play with. Finally, set up your rDNS delegations, by entering your DNS servers in the provided spaces. When you are all done, it should look something like this:

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Tunnel Details

IPv6 Tunnel


Example Configurations

 Tunnel ID: XXXXXXXXXX

[Delete](#)

 Creation Date:

Feb 2017

 Description:

sophieco


IPv6 Tunnel Endpoints

 Server IPv4 Address:


209.17.201.10

 Server IPv6 Address:

2001:470:1:1::1


 Client IPv4 Address:

66.255.142.10

 Client IPv6 Address:

2001:470:1:1::2

Available DNS Resolvers


 Anycasted IPv6 Caching Nameserver:

2001:470:1:1::1

Anycasted IPv4 Caching Nameserver:

74.125.233.100

Routed IPv6 Prefixes


 Routed /64:

2001:470:1:1::/64

 Routed /48:

2001:470:1:1::/48

rDNS Delegations

 rDNS Delegated NS1:

ns1.sophieco.com

rDNS Delegated NS2:

ns2.sophieco.com

rDNS Delegated NS3:

ns3.sophieco.com

rDNS Delegated NS4:

ns4.sophieco.com

rDNS Delegated NS5:

ns5.sophieco.com