

Tunnelling

In order to setup a tunnel connection between two AREDN nodes, one needs to act as the server, and the other as the client. In this example, VA7FI-HAP-1 is the server and VE7RBE-HAP-1 is the client (and the details are made up):

Server Side

On [VA7FI-HAP-1's Tunnel Server](#) page:



- **Client:** VE7RBE-HAP-1 is Robert's node name.
- **Pwd:** Create a unique password for that node.
- **Net:** 172.31.39.164 is automatically assigned by the hAP.
- Some optional contact info can be added.

In addition to this information, VA7FI's public IP address will also need to be given to VE7RBE. To find your public IP address quickly, you can simply search for "what's my ip" in your favourite search engine:



Client Side

On [VE7RBE-HAP-1's Tunnel Client](#) page:



- **Server:** 154.12.201.102 is VA7FI-HAP-1's public IP address
- **Pwd:** is the password created by VA7FI
- **Network:** 172.31.39.164 is the **Net** address automatically generated by VA7FI-HAP-1

More About Public IP Addresses

Most residential internet services are given a single *dynamic* IP address, which means that the address can *change* every few days or so (or when the router power cycles). This means that when a server node suddenly gets a new public IP address, the client node can't find it anymore.

One solution is to use a  [Dynamic_DNS](#) service like [No-IP](#). These services query your *dynamic* IP address, and translate it into a *static* hostname. It's that hostname that you then give the AREDN client (instead of your public IP address).

However, the No-IP service needs to be "told" when your dynamic IP address changes. This can be done by installing a small program that notifies them of the change, but some routers have that function already built in. For example, on my Telus T3200M router, I can enter my No-IP account information under:

[Advanced Setup](#) → Dynamic DNS



So with this setup, VE7RBE would use `myfancyhostname.ddns.net` instead of `154.12.201.102` as the Server address.

That way, every time Telus gives me a new public IP address, my router will be able to notify No-IP, which will update it so that `myfancyhostname.ddns.net` continues to point to my router, and VE7RBE will continue to see my node.