

### Connecting Mesh Networks Via the Internet - A VPN Tunnel

Broadband-Hamnet is proud to host **Darryl K5DLQ**'s great work on the Internet tunneling solution.

Darryl has crafted 2 easy-to-use scripts that install all the necessary software from the BBHN site, and adds an easy to use form in the administration section of the node GUI for either Tunnel Server or Client use.

For this to work, you **MUST** be on a WRT54**GS** v1, v2, v3, or any UBNT hardware. This is due to memory and flash limits in WRT's. And your node must have internet connectivity for the installation, then you need to connect a cable to the WAN port of the router that supplies a connection to the internet (or do VLAN setup on UBNT gear, found elsewhere on the BBHN site).

Please make sure you have your Tunnel node upgraded to 3.1.0, then SSH into the node, copy and paste either of the 2 lines below, then reboot.

3.1.0 WILL talk to BBHN 3.0.0 nodes, so you do not need to upgrade all of your network to use the tunnel, but we highly recommend that you do (especially with the simple-to-use patch file) to have all nodes on the same stable version.

To setup a Tunnel option below, the node will have to have connectivity to the Internet. Then SSH into the node you will install the option on, copy the appropriate line below (either Client or Server) and paste it into the SSH command line. It will install all dependencies, install the form in the GUI, and then we recommend you reboot.

**Tunnel Client** (which connects to a Tunnel Server via the Internet)

wget

[http://www.broadband-hamnet.org/download/attitude\\_adjustment/12.09/ar71xx/generic/package\\_s/setup\\_client\\_vpn](http://www.broadband-hamnet.org/download/attitude_adjustment/12.09/ar71xx/generic/package_s/setup_client_vpn) ; chmod +x setup\_client\_vpn; ./setup\_client\_vpn

## The Tunnel

Written by Jim Kinter, K5KTF - Last Updated Monday, 16 March 2015 23:35

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**Tunnel Server** (which has Internet service and hosts other clients connecting to it)  
wget

```
http://www.broadband-hamnet.org/download/attitude_adjustment/12.09/ar71xx/generic/packages/setup_server_vpn ; chmod +x setup_server_vpn; ./setup_server_vpn
```

If you plan on running a Tunnel Server, you will need to make sure that, if it is behind a firewall/router, port 5525 is forwarded to the Tunnel Server node.

Once it is installed, log into the Setup portion of the firmware where you will find a new link at the top, either TUNNEL SERVER or TUNNEL CLIENT

## TUNNEL SERVER

## The Tunnel

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[Node Status](#)[Basic Setup](#)[Port Forwarding,  
DHCP, and Services](#)[Tunnel Server](#)[Administration](#)[Help](#)[Save Changes](#)[Reset Values](#)[Refresh](#)

Virtual Tunnel Server Network: 172.31. (must be between 0 and 254)

Allow the following clients to connect to this server:

Enabled?	Client	Pwd	Net	Active	Action
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input checked="" type="checkbox"/>			172.	<input checked="" type="radio"/>	<a href="#">Email</a>
<input type="checkbox"/>			172.		<a href="#">Add</a>

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