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\*Version numbers are located at the top right of this page

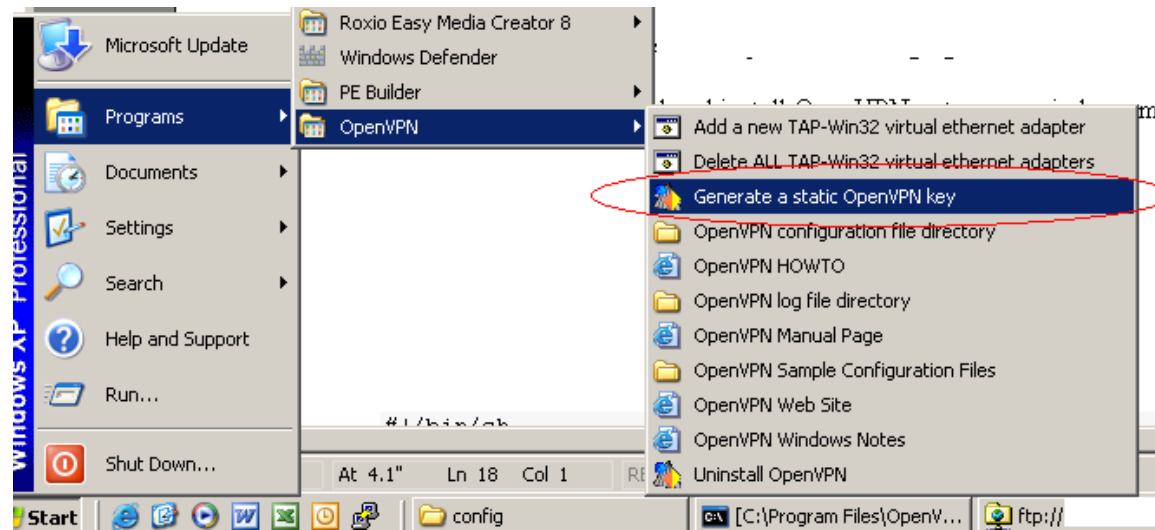
### **Setting up OpenVPN on a Linksys Router \ DD-WRT**

I hope you will find this how-to helpful. I will try my best to respond via email at [kevinthecomputerguy@gmail.com](mailto:kevinthecomputerguy@gmail.com) if you have questions, I will try my best to respond to all of them, but please try my Blog first (There is a link to it on my webpage) With any luck that will turn into a knowledge base. My stuff will always be free for personal use, but if you would still like to contribute, you can donate money towards this, or one of my other how-to's, at my homepage <http://woodel.com>

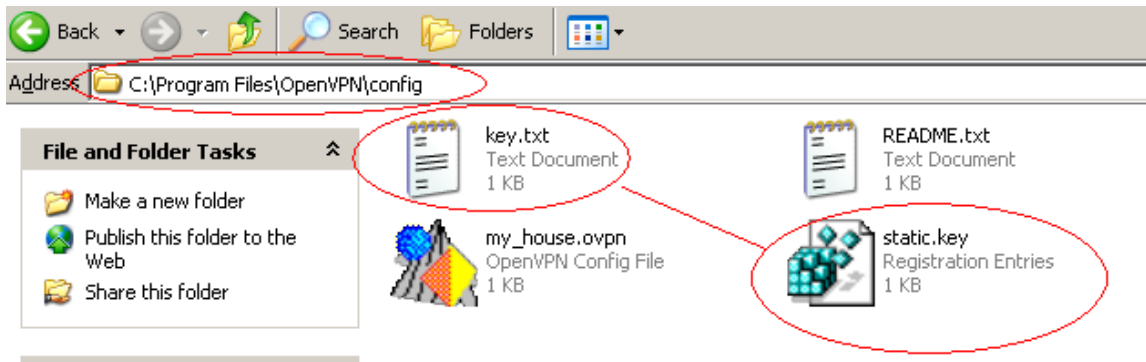
First:           Download and install DD-WRT firmware onto your router.  
For the first flash, use the generic-micro \ micro-generic  
<http://dd-wrt.com>

Second:         Download and install DD-WRT specific VPN firmware.  
This will embed both client and server (very confusing)  
Ignore all the GUI VPN options you will see in your router  
Those are client options for bridging router-to-router  
<http://dd-wrt.com>

Third: Download and install OpenVPN onto your windows machine.  
And tell it to make you a static key  
<http://openvpn.net/>

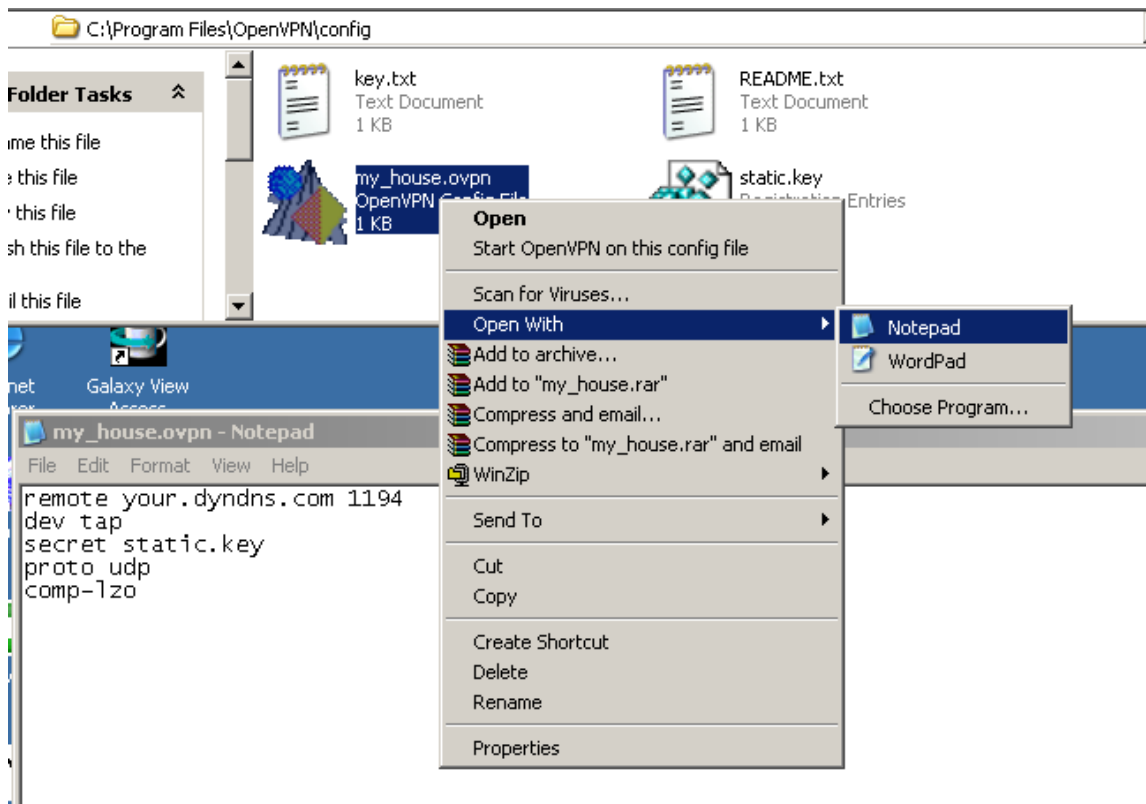


Forth: That will create C:\Program Files\OpenVPN\config\key.txt  
Navigate to that folder and rename key.txt to static.key



Fifth: In that same directory, Create a text file, and rename it to my\_house.ovpn  
Then using Notepad.exe, edit the file and paste in the following.  
Replacing your.dyndns.com with your WAN IP or its Host Name

```
remote your.dyndns.com 1194  
dev tap  
secret static.key  
proto udp  
comp-lzo
```



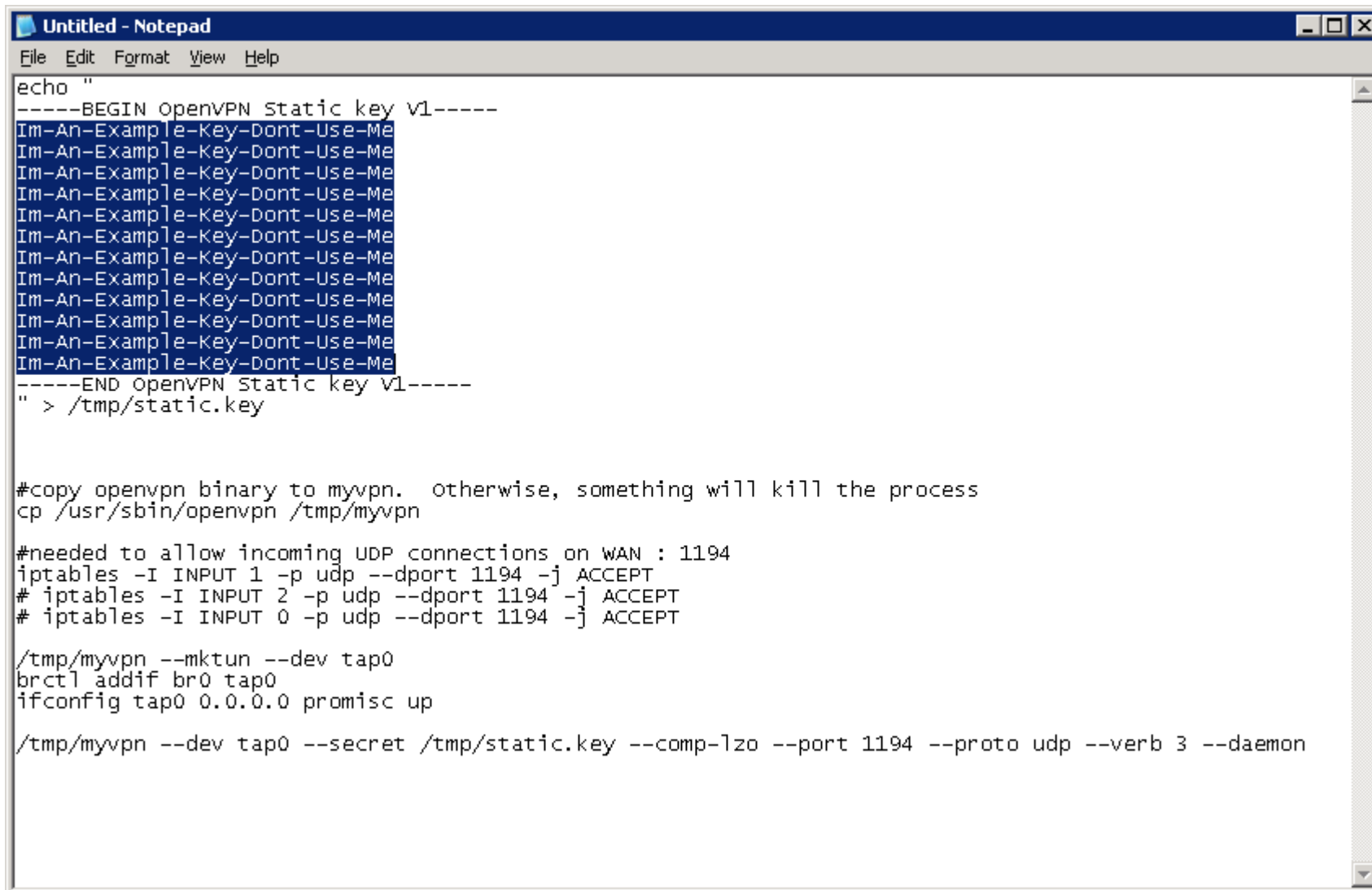
Save and exit Notepad



Seventh: Copy this template into another blank\new notepad document.

```
echo "  
-----BEGIN OpenVPN Static key V1-----  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
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Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
Im-An-Example-Key-Dont-Use-Me  
-----END OpenVPN Static key V1-----  
" > /tmp/static.key  
  
#copy openvpn binary to myvpn. Otherwise, something will kill the process  
cp /usr/sbin/openvpn /tmp/myvpn  
  
#needed to allow incoming UDP connections on WAN : 1194  
iptables -I INPUT 1 -p udp --dport 1194 -j ACCEPT  
# iptables -I INPUT 2 -p udp --dport 1194 -j ACCEPT  
# iptables -I INPUT 0 -p udp --dport 1194 -j ACCEPT  
  
/tmp/myvpn --mktun --dev tap0  
brctl addif br0 tap0  
ifconfig tap0 0.0.0.0 promisc up  
  
/tmp/myvpn --dev tap0 --secret /tmp/static.key --comp-lzo --port 1194 --proto udp --verb 3 --daemon
```

Eighth: You should see something like this



```
Untitled - Notepad
File Edit Format View Help
echo "
-----BEGIN OpenVPN Static key v1-----
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
-----END OpenVPN Static key v1-----
" > /tmp/static.key

#copy openvpn binary to myvpn. otherwise, something will kill the process
cp /usr/sbin/openvpn /tmp/myvpn

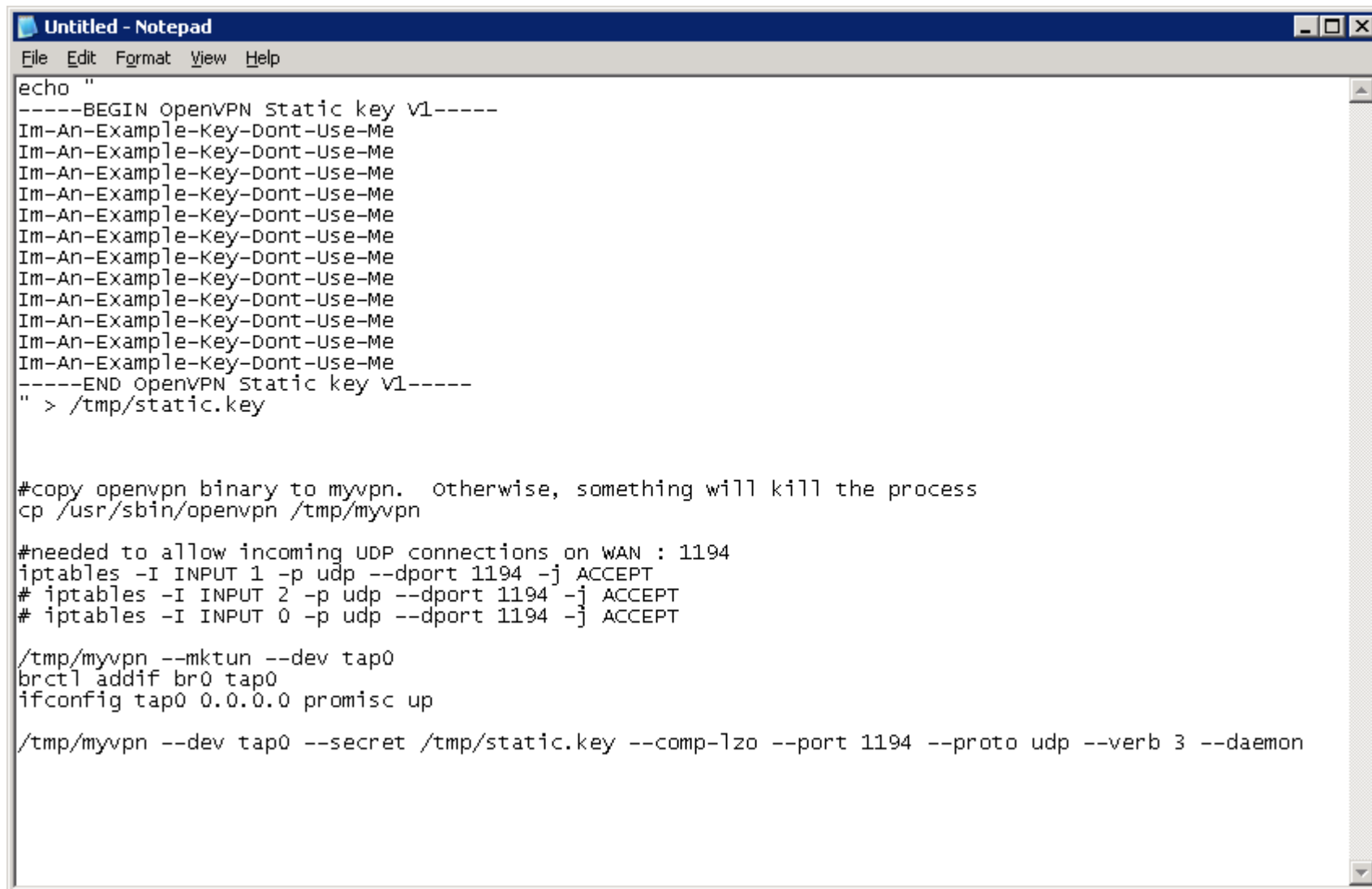
#needed to allow incoming UDP connections on WAN : 1194
iptables -I INPUT 1 -p udp --dport 1194 -j ACCEPT
# iptables -I INPUT 2 -p udp --dport 1194 -j ACCEPT
# iptables -I INPUT 0 -p udp --dport 1194 -j ACCEPT

/tmp/myvpn --mktun --dev tap0
brctl addif br0 tap0
ifconfig tap0 0.0.0.0 promisc up

/tmp/myvpn --dev tap0 --secret /tmp/static.key --comp-lzo --port 1194 --proto udp --verb 3 --daemon
```

Replace everything in Blue, with your key you generated inside static.key

Ninth: You should see something like this



```
Untitled - Notepad
File Edit Format View Help
echo "
-----BEGIN OpenVPN static key v1-----
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
Im-An-Example-Key-Dont-Use-Me
-----END OpenVPN static key v1-----
" > /tmp/static.key

#copy openvpn binary to myvpn. otherwise, something will kill the process
cp /usr/sbin/openvpn /tmp/myvpn

#needed to allow incoming UDP connections on WAN : 1194
iptables -I INPUT 1 -p udp --dport 1194 -j ACCEPT
# iptables -I INPUT 2 -p udp --dport 1194 -j ACCEPT
# iptables -I INPUT 0 -p udp --dport 1194 -j ACCEPT

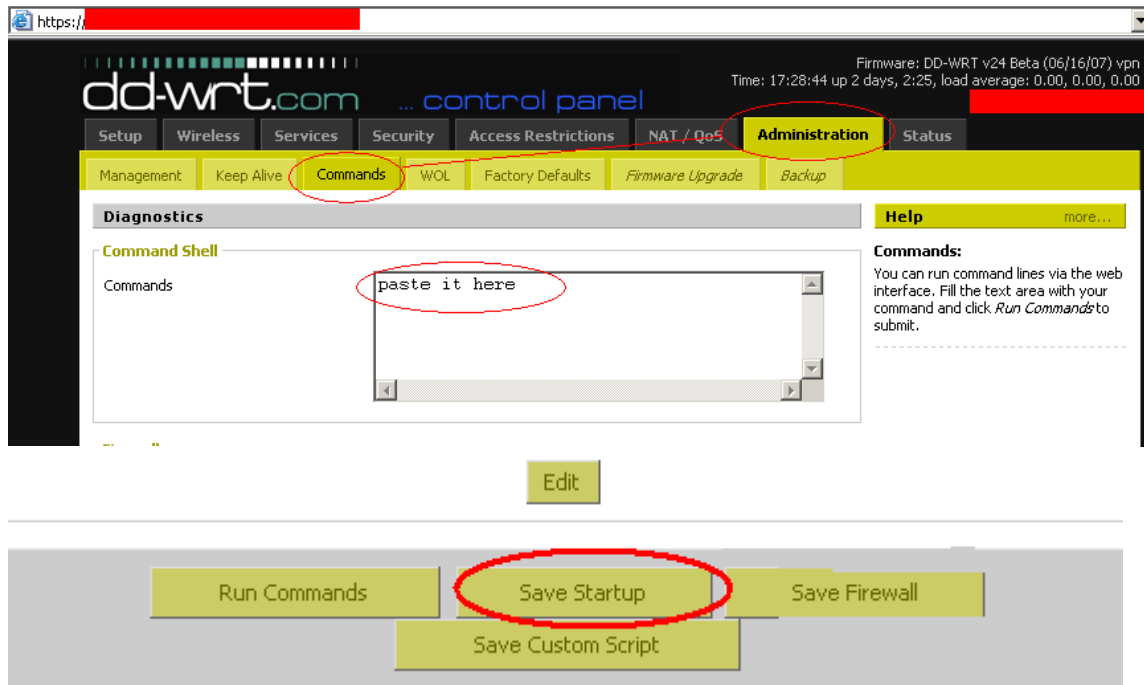
/tmp/myvpn --mktun --dev tap0
brctl addif br0 tap0
ifconfig tap0 0.0.0.0 promisc up

/tmp/myvpn --dev tap0 --secret /tmp/static.key --comp-lzo --port 1194 --proto udp --verb 3 --daemon
```



Do an edit \ select all, and copy everything in that notepad window

Tenth: Go to your routers “Administration \ Commands” window, paste everything into the “Commands” box, and then click “Save Startup”



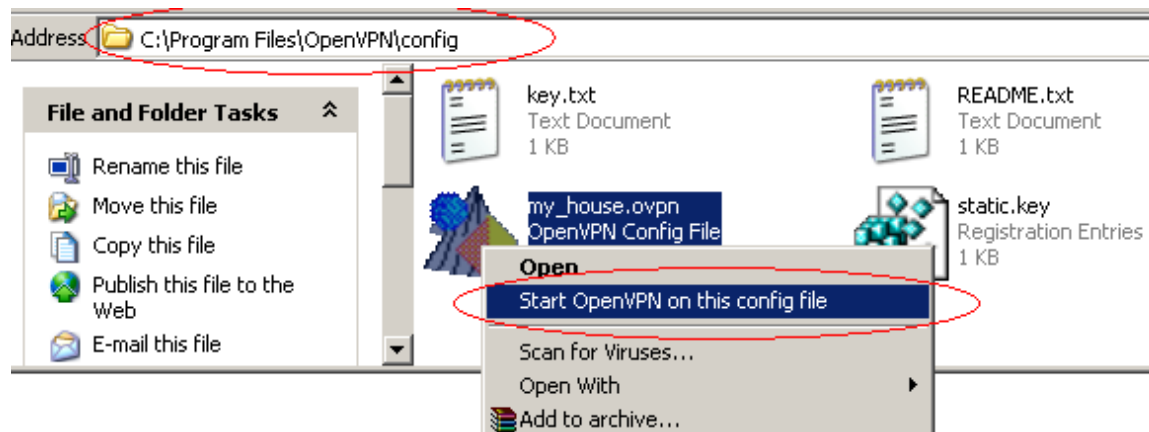
Eleventh: After that completes you need to reboot your router, as this script executes at startup.

At this point you're done, now goto a Windows computer outside your network.

Install OpenVPN on the Windows machine (you will need a copy of everything from the config directory at home)

Once you get everything copied over and installed, navigate back to the "Config" directory.

Right-Click on my\_house.ovpn and choose “Start OpenVPN”



That’s it, you should get a DOS box, and “Sequence Completed” means its working!  
But don’t close the DOS box.... That’s how you disconnect !

```
C:\Program Files\OpenVPN\config\my_house.ovpn] OpenVPN 2.0.9 F4:EXIT F1:USR1 F2:USR2 F3:HUP
Wed Jun 20 17:35:39 2007 OpenVPN 2.0.9 Win32-MinGW [SSL] [LZO] built on Oct 1 006
Wed Jun 20 17:35:39 2007 IMPORTANT: OpenVPN's default port number is now 1194,
ased on an official port number assignment by IANA. OpenVPN 2.0-beta16 and ear
ier used 5000 as the default port.
Wed Jun 20 17:35:39 2007 LZO compression initialized
Wed Jun 20 17:35:39 2007 TAP-WIN32 device [Local Area Connection 2] opened: \\.
Wed Jun 20 17:35:39 2007 Successful ARP Flush on interface
Wed Jun 20 17:35:39 2007 UDPv4 link local (bound): [undef]:1194
Wed Jun 20 17:35:39 2007 UDPv4 link remote: :1194
Wed Jun 20 17:35:40 2007 Peer Connection Initiated with :1194
Wed Jun 20 17:35:42 2007 Initialization Sequence Completed
```

Enjoy !

## Trouble Shooting:

Your router has to have the right Date and Time, this is crucial. So make sure your data and time are right. You can run the date command from the Administration \ Commands window to check and make sure you have the right date\time. There are NTP settings on the main page of your router config you can use to keep this time and date always right.

Make sure you are not Port Forwarding port 1194 to anything else

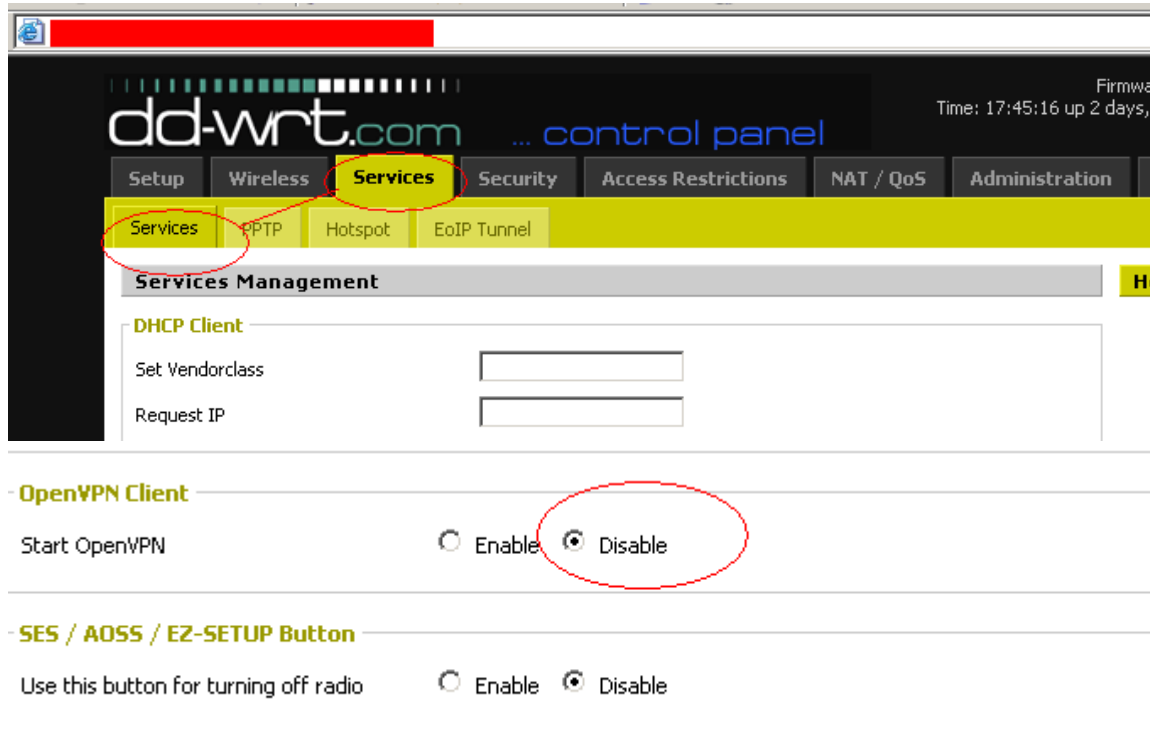
Make sure you are allowing DHCP address

Make sure you are on a different network \ subnet. For example, if you went to Starbucks and their wireless router hands you a 192.168.1.xxx address and then you try to VPN home from there, it won't if your home network is also using 192.168.1.xxx You have to be on a separate network both physically and IP scheme wise.

You may need to adjust this part of your script, if your WAN port is not INPUT 1

```
#needed to allow incoming UDP connections on WAN : 1194
iptables -I INPUT 1 -p udp --dport 1194 -j ACCEPT
# iptables -I INPUT 2 -p udp --dport 1194 -j ACCEPT
# iptables -I INPUT 0 -p udp --dport 1194 -j ACCEPT
```

Make sure you have the VPN firmware installed, but (and this is confusing) it should be disabled in the GUI. These GUI options are for router to router VPN bridges.



Also I have seen routers complain if JJFS2 isn't enabled and cleaned, and some don't like loopback enabled.

These can both be configured on the Administration page.

These are just trouble-shooting ideas, and shouldn't be changed if its working.

That's it, you have reached the end of this how-to. Make sure to visit my webpage <http://woodel.com> and check out the blogs.