OpenVPN Setup – Zeroshell

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The main objective of this document is to show you what’s the reason to setup a VPN in my environment with ZEROSHELL Router/Firewall and help of OpenVPN.

Case of Study

In this time, I’m doing a restructuring of the network of an educational institution located in Girardota (Ant) – Colombia. This restructuring includes the following components:

- Propose and improve a security scheme, both wireless and wired.
- Design and implement network architecture that allowing me to improve the network functionality and its response times.
- Setup a lot of network services that will allow improving the experience of the network users (Services over ZEROSHELL Router/Firewall).
- Centralize the management of the network to improve the security and the administration of it.

After of setup this scheme, I need to manage this network from a remote location via internet. It to will control the network interfaces of the server, view the stats and graphics of use, enable or disable services, implement secure connections in a unencrypted wireless network, modify the server configuration, accessing to ISP - CPE, support the server and prevent failures in service among other things. To do this, is necessary to configure a VPN (Host to Lan) to access to the network over a secure connection with TLS/SSL encryption and LZO compression via internet. To setup the VPN, Zeroshell allow me do it both, OpenVPN with TLS/SSL or VPN L2TP over IPsec. I choose to work with OpenVPN for easy configuration, simple operation and high data encryption.
I need to configure a OpenVPN in Zeroshell. I assumed that you already know to configure your Zeroshell Router/Firewall.

1. I go to open the Zeroshell web manager. For it, I have to type the IP address of the any router interface.
2. Now, I need to create the user that will access to the private network through the VPN.

3. After I create the new user, I can see the information that appears in the picture below which is the user’s security certificate.
4. In this picture you can see the new user together to the others users.

5. In this moment, I will to setup the VPN Interface. In the menu SYSTEM Setup → Network select the **VPN99** Interface, then click in edit IP and configure the IP for the VPN clients.
6. Now, I will create the DHCP Pool to set up the IP range to give to the VPN users. In the menu NETWORK DHCP → New and in the combo box Available I select the Subnet of the VPN interface.

7. I need to assign the IP range, the Gateway and the DNSs. In my case the subnet of the VPN will have 2 IPs available and also I use the OpenDNS IP servers.
8. Now, the last configuration that must be done on the Zeroshell server is to setup the VPN connection. You only must setup the fellow configuration, where the DNS is the same IP address of the Gateway and the IP range is your VPN IP pool.

9. Ok, in this point I need to get the CA certificate. In the web manager of Zeroshell server you must to click in the CA link and select the PEM certificate to export and save in your PC.
10. Now, I have to install the OpenVPN Client for WinXP and download it to the URL [http://openvpn.se/download.html](http://openvpn.se/download.html), the link to download is “Installation Package (Both 32-bit and 64-bit TAP driver included): openvpn-2.0.9-gui-1.0.3-install.exe”

11. After to install the OpenVPN client, I need to setup the “OpenVPN configuration file directory” and save there the CA.pem certificate and also create a text file with the extension “.ovpn”, the name of this file will be the name of the VPN connection and you can edit it freely.
12. Here, I must to edit the text file before created with the configuration of the “CPG Network.ovpn”, where “remote: is the IP public of the Zeroshell server” and the other configuration of this text file is unchanged.

Here is the CPG Network.ovpn

13. Now I need to establish the VPN connection, to do this, I need to right-click over the OpenVPN icon.
14. And then click in Connect.

15. Here, I need to enter the “Username” and the “Password”.
16. This is the information of the establishment of the connection.

17. And finally this is the connection already established.
18. Now, I can connect to the remote network from your home through to an internet secure connection. IP Address of the VPN Interface 10.114.80.1

Thanks,