

# Documentation

Follow the next steps to create your own Headscale VPN:

- Create an Ubuntu instance where you can deploy your server.
- Generate the private key and connect to your server using Putty.
- Run the following commands:
  1. `wget --output-document=headscale.deb \`  
`https://github.com/juanfont/headscale/releases/download/v<HEADSCALE`  
`VERSION>/headscale_<HEADSCALE VERSION>_linux_<ARCH>.deb`  
  
Where you should use the latest version available of headscale. The information is available in the Headscale GitHub repository.
  2. `sudo dpkg --install headscale.deb`
  3. `sudo systemctl enable headscale`
  4. `nano /etc/headscale/config.yaml`  
  
Here you should make sure that nano is installed on your server. You should change the `server_url` variable to take the value of your server IP address. You should also select the `listen_addr 0.0.0.0:8080`.
  5. `sudo systemctl start headscale`
  6. `systemctl status headscale`
- Create a network security group which allows connections on port 8080 and make sure you select it on your ubuntu instance.
- Run: `sudo nano /etc/iptables/rules.v4`.  
  
You should create a new rule which allows port 8080.  
  
`A INPUT -p tcp -m state --state NEW -m tcp --dport 8080 -j ACCEPT`
- Run: `sudo iptables-restore < /etc/iptables/rules.v4`
- Now the setup is ready to connect devices to your VPN.
- Go to the site: `<YOUR_IP>:8080/windows`
- Run cmd on your windows in administrator mode

- tailscale login --login-server <http://130.61.190.253:8080>

This command will appear on your screen. You should run it in cmd. As a result you will get a connection key.

- Run on ubuntu server the following commands:
  1. `sudo headscale create user desktop` to create a new user with the name user
  2. `sudo headscale nodes register --user desktop --key <DESKTOP_KEY>`
  3. `curl -fsSL https://tailscale.com/install.sh | sh`
  4. `sudo headscale users create linux`
  5. `sudo headscale --user linux preauthkeys create --expiration 60m`
  6. `tailscale up --login-server <YOUR_URL>:8080 --authkey (result of the above key)`
  7. `sudo headscale nodes list` (to see the nodes list, you should see linux and desktop nodes)
  8. `sudo headscale routes list`(to see the routes list)
  9. `sudo tailscale set --advertise-exit-node`(to run linux server as exit node)
  10. Run desktop as exit node from tailscale app
  11. `sudo headscale routes enable -r 1`(id of the route when you run `sudo headscale routes list`. Where you have 0.0.0.0/0)
  12. `echo 'net.ipv4.ip_forward = 1' | sudo tee -a /etc/sysctl.d/99-tailscale.conf`
  13. `echo 'net.ipv6.conf.all.forwarding = 1' | sudo tee -a /etc/sysctl.d/99-tailscale.conf`
  14. `sudo sysctl -p /etc/sysctl.d/99-tailscale.conf`(the last 3 commands were used to allow port forwarding on the linux server)
- There are no more steps. Now you can change your IP through your exit nodes. Enjoy!