Surfing Network build on TOR / VPN Raspberry pi 3

Browsing Anonymously

In the latest technology people used to bring the smart devices   like laptops mobile phones and   tablets. people used to connect the various methods to access the internet. The most challenging one in the society is security but nowadays   is not secured . like there are many reasons while transferring the data from the one computer to the another computer the encrypted format is not   available only the few people who are knowledgeable they can understand the things and secure the network. nowadys only the point level are secured. remaining all unsecured .Network may take away our freedom   of   browsing by blocking the different websites. all these problems can be solved by setting up the VPN network means virtual private network virtual private network is encryption that is security two different networks together using public telecommunication such as an internet. To establish and Network one needs to connect the server
.
This paper presentation about the creation of the Raspberry Pi 3 B plus model VPN to router to browse anonymously.The meaning of anonymously is usually when will the people those in the world wide web that hides the user personally identifiable information from the website visitors they can be achieved even through the proxy servers virtual private network such as the Tor (the onion router)Raspberry Pi /VPN to router all of the users to surf the internet security where with your own portable Wi-Fi /VPN for router. the people have the various choices like people can use Raspberry OS or Noobs OS or Linux OS to connect VPN server that is up to users choice
 keywords used:Raspberry Pi 3 B plus model, Tor, VPN(virtual private network), Linux OS

Introduction

Interactive world with a wirelessly connected devices that bring used in various day to day activities and changing and improving the standard and quality of life based on the interactive computing communication Technologies many devices products   are now raising which social media intelligence that does not provides comfortable secure and conventional personal services in the wide world people are not at all secured each data is shared some were to extent   By using the Raspberry Pi 3 peoples model Technology makes the users to feel secure and create a network router and move quickly of your internet connection

Tor Is known as the onion router   but its not showing as the real identity it always configure the different IP addresses and makes the users unidentified.Tor network encryption multiple data Request and hide the original web page .when the packet is moving it reaches the three layers and then moves to the last layer of the user
and finds the network is secured but some websites are strictly block this is an good way.
VPN is a virtual private network connection allows to use the secure Connection to network over the internet

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Usually people have a doubt that Is Tor can hide a IP address? Tor nothing but simple software program which can change your IP addresses frequently whenever you send or receive data

Proposed Tor/VPN router

Nowadays people always prefers to use internet always the risk they are facing and their falling into some threats . the life of the people whenever there is some free Wi-Fi enable over on public people use to access the network and have fun over there but they never thought about the risk of the connecting to the public Wi-Fi which is not at all secure.Like when you are checking the emails and streaming of the video and messages exetra can be used by the unauthorised person. using the TOR/VPN router built using the Raspberry Pi 3 B plus model encrypt your message and traffic and protect the privacy no matter whatever network you connect. Raspberry Pi is portable and can be taken anywere and connected to network and browse on internet. Whenever people surfing on internet with the portable raspberry pi the can open websites safely even they can configure the Raspberry Pi with the own codings and make more secure for them Linux has the some extra requirement of software accordingly to the users choice .

   The Raspberry Pi is portable thing whever you need you can plug and browse safely we cant use the WIFI because it does not connect with VPN or not supported.
This projects consists of

- Raspberry Pi 3 B+ model
- USB cable
- Patch cable or Ethernet cable
- Power bank

Using the open source software we can handle the WIFI connection from our device connect to another WIFI access point and encrypt your VPN with connection when your friends thinking that they are using the safe connection with privacy but they don't we have to set up the connection and add the domain ad blocking sites to stop the advertisement.

III.Functional Overview

The proposed work is designed to work the following functions:

a) It provides secure browsing environment While browsing the internet it is often not secure.

b) Secure email accessing browsing and streaming of videos can be avoided by hackers could not track our mails or hacked access encrypted by this VPN/TOR router.

d) Keeping the information safe for users. Information it doesnot matter that public accounts message are not necessary each and every information about us important ,for the security purpose we   use the own portable configured raspberry pi to overcome this types of activites encrypted datas cannot be hacked by hackers when its secured.

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Following commands and images for building the own portable Raspberry pi 3
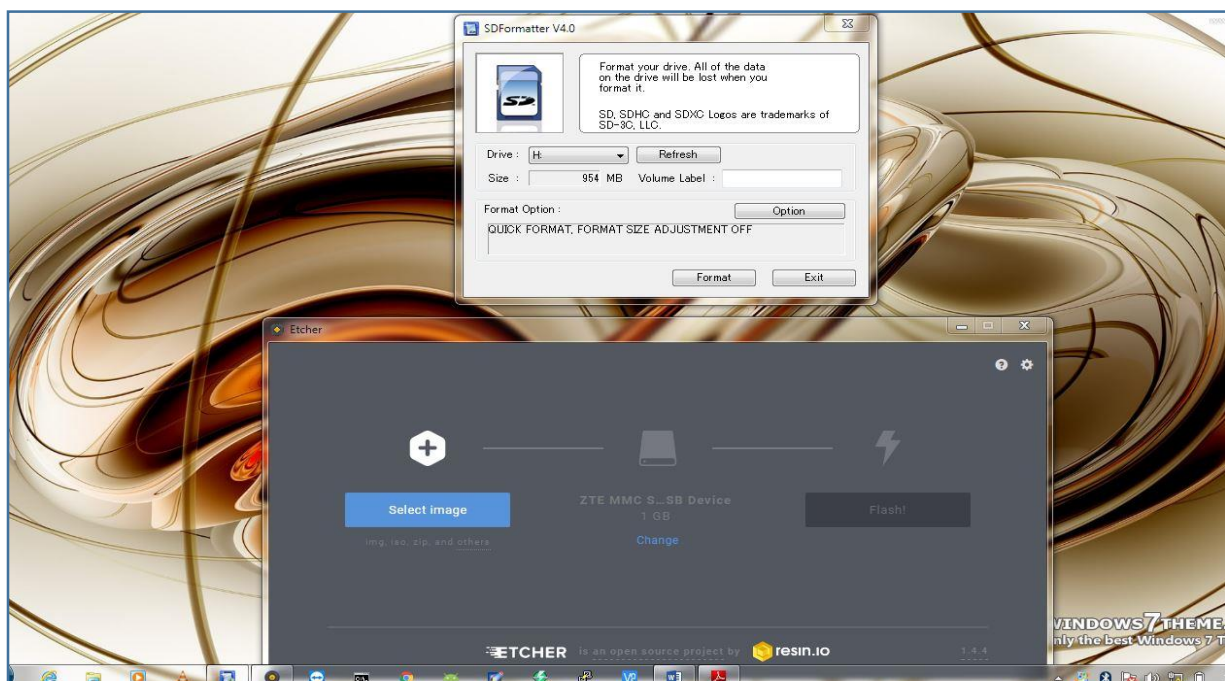
Step :1

#Flashing the memory card with Raspberry os using
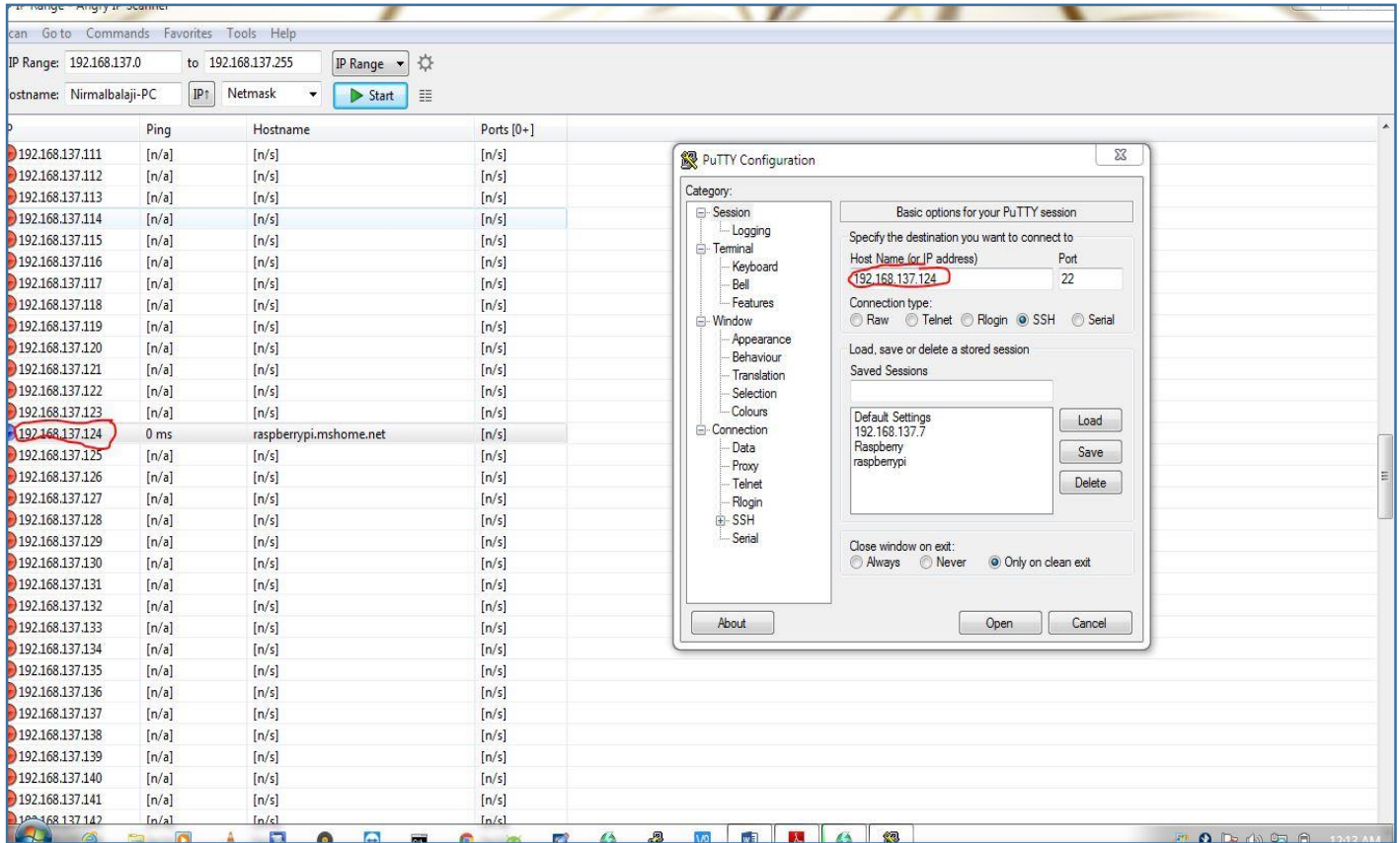
- Sd formatter
- Etcher

Sd Card Formatter -> Etcher
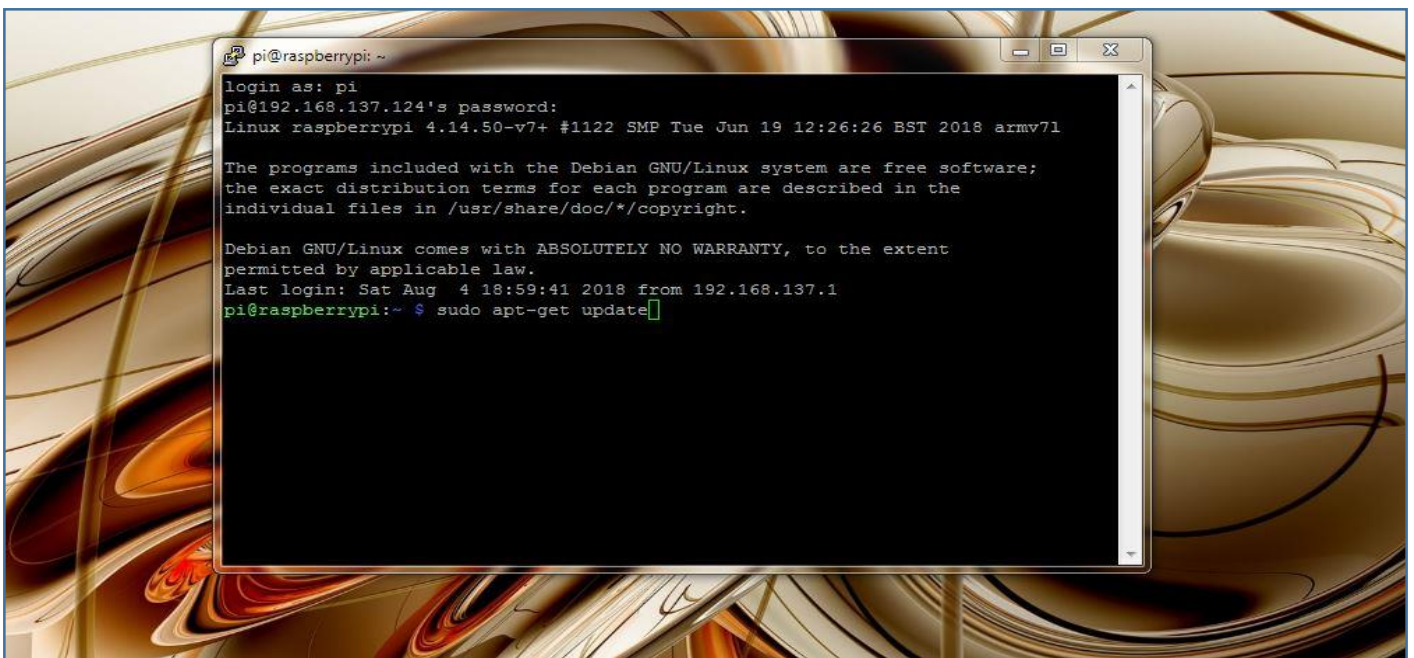
Step 3 : Enabe VNC and SSH and change your password

Step 4: Insert the   memory card to Raspberry pi and using the PUTTY software give the ip searched by angry ip scanner

Step 5: enter your login and password user name as Pi and password as raspberry

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Step 4 Now paste the following commands

- `sudo apt-get update && sudo apt-get upgrade`
- `sudo apt-get install tor\`
- `sudo service tor start`
- `sudo service tor status`
- `curl -fsSL https://raw.github.com/breadtk/onion_pi/master/setup.sh | sudo sh`
- `sudo update-rc.d tor enable`
  Step 5 Go on to Wifi to access the raspberry pi network

```
/usr/bin/shred: /var/log/messages: removed
/usr/bin/shred: /var/log/auth.log: pass 1/4 (random)...
/usr/bin/shred: /var/log/auth.log: pass 2/4 (random)...
/usr/bin/shred: /var/log/auth.log: pass 3/4 (random)...
/usr/bin/shred: /var/log/auth.log: pass 4/4 (000000)...
/usr/bin/shred: /var/log/auth.log: removing
/usr/bin/shred: /var/log/auth.log: renamed to /var/log/00000000
/usr/bin/shred: /var/log/00000000: renamed to /var/log/0000000
/usr/bin/shred: /var/log/0000000: renamed to /var/log/000000
/usr/bin/shred: /var/log/000000: renamed to /var/log/00000
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/usr/bin/shred: /var/log/0000: renamed to /var/log/000
/usr/bin/shred: /var/log/000: renamed to /var/log/00
/usr/bin/shred: /var/log/00: renamed to /var/log/0
/usr/bin/shred: /var/log/auth.log: removed
Setting up logging in /var/log/tor/notices.log..
Setting tor to start at boot..
Setting up Monit to watch Tor process..
sh: 114: /etc/monit/monitrc: Permission denied
Starting monit..
Monit daemon with pid [13104] killed
Starting Monit 5.20.0 daemon
Starting tor..
Onion Pi setup complete!
To connect to your own Tor gateway, set your web browser or computer to connect
to:
  Proxy type: SOCKSv5
  Port: 9050

  Transparent proxy port: 9040

Before doing anything, verify that you are using the Tor network by visiting:

  https://check.torproject.org/

Onion Pi

pi@raspberrypi:~ $ 
```

Now you can see the ip changing frequently
Conclusion:
 Raspberry pi 3 such an inspiration to create a VPN new model projects and we found some of the countries using for the security purpose like china to byepass the firewall.By using this kind of projects will help not to identify your ip address .on behalf we ae able to use the Raspberry pi has hot spot and created a network .