

## UBUNTU'DAN VIGOR ROUTER'A IPsec VPN ÜZERİNE L2TP

Bu makale Vigor Router'ın VPN serverı olarak, özellikle Ubuntu ve IPsec VPN üzerinden Ubuntu'dan (16.04) Vigor Router'ın özel ağına L2TP (layer 2 Tunneling Protocol) için nasıl kurulacağını göstermektedir. Bu makale Vigor Router konfigürasyonunu, Ubuntu'da IPsec üzerinden L2TP yüklemek için komutları ve Ubuntu üzerine Vigor Router bir VPN arabirimi oluşturmayı kapsamaktadır.

### Vigor Router Konfigürasyonu

1. **VPN and Access >> Remote Dial-In User** bölümüne gidin ve uygun bir indexe tıklayın.

VPN and Remote Access >> Remote Dial-in User

| Remote Access User Accounts: |      |                          |        | Set to Factory Default |      |                          |        |
|------------------------------|------|--------------------------|--------|------------------------|------|--------------------------|--------|
| Index                        | User | Active                   | Status | Index                  | User | Active                   | Status |
| 1.                           | ???  | <input type="checkbox"/> | ---    | 17.                    | ???  | <input type="checkbox"/> | ---    |
| 2.                           | ???  | <input type="checkbox"/> | ---    | 18.                    | ???  | <input type="checkbox"/> | ---    |
| 3.                           | ???  | <input type="checkbox"/> | ---    | 19.                    | ???  | <input type="checkbox"/> | ---    |
| 4.                           | ???  | <input type="checkbox"/> | ---    | 20.                    | ???  | <input type="checkbox"/> | ---    |
| 5.                           | ???  | <input type="checkbox"/> | ---    | 21.                    | ???  | <input type="checkbox"/> | ---    |
| 6.                           | ???  | <input type="checkbox"/> | ---    | 22.                    | ???  | <input type="checkbox"/> | ---    |
| 7.                           | ???  | <input type="checkbox"/> | ---    | 23.                    | ???  | <input type="checkbox"/> | ---    |

2. **Enable this account**'u işaretleyin ve **username/password** girin. Allowed Dial-in Type sekmesinde L2TP with IPsec Policy "Must" olacak şekilde etkinleştirildiğinden emin olun.

VPN and Remote Access >> Remote Dial-in User

Index No. 1

**User account and Authentication**

Enable this account

Idle Timeout  second(s)

**Allowed Dial-In Type**

PPTP

IPsec Tunnel

IPsec XAuth

L2TP with IPsec Policy **Must**

SSL Tunnel

OpenVPN Tunnel

IKEv2 EAP

Specify Remote Node

Remote Client IP

**Username**

**Password**

Enable Mobile One-Time Passwords(mOTP)

PIN Code

Secret

**IKE Authentication Method**

Pre-Shared Key

IKE Pre-Shared Key  Max: 64 characters

Digital Signature(X.509)

None

**IPsec Security Method**

Medium(AH)

High(ESP)  DES  3DES  AES

3. **VPN and Remote Access >> General Setup** bölümüne gidin ve IPsec üzerinden L2TP için bir **General Pre-Shared Key** girin.

## VPN and Remote Access &gt;&gt; IPsec General Setup

## VPN IKE/IPsec General Setup

Dial-in Set up for Remote Dial-in users and Dynamic IP Client (LAN to LAN).

|   |        |
|---|--------|
| <b>IKE Authentication Method</b>  |        |
| Certificate for Dial-in   | None ▾ |
| <b>General Pre-Shared Key</b>   |        |
| Pre-Shared Key  | .....  |
| Confirm Pre-Shared Key  | .....  |
| <b>Pre-Shared Key for XAuth User</b>  |        |
| Pre-Shared Key  | .....  |
| Confirm Pre-Shared Key  | .....  |
| <b>IPsec Security Method</b>  |        |
| <input checked="" type="checkbox"/> Medium (AH)   |        |
| Data will be authenticated, but will not be encrypted.  |        |
| High (ESP) <input checked="" type="checkbox"/> DES <input checked="" type="checkbox"/> 3DES <input checked="" type="checkbox"/> AES |        |
| Data will be encrypted and authenticated.   |        |
| <input type="button" value="OK"/> <input type="button" value="Cancel"/>   |        |

## Ubuntu'da IPsec Üzerinden L2TP Kurulumu

Aşağıdaki komutlarla ağ yöneticisine L2TP'yi IPsec üzerinden kurmak için terminali açın:

**sudo apt-get update**

```

louis@louis-VirtualBox:~$ sudo apt-get update
[sudo] password for louis:
Hit:1 http://tw.archive.ubuntu.com/ubuntu xenial InRelease
Get:2 http://tw.archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:3 http://tw.archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:4 http://security.ubuntu.com/ubuntu xenial-security InRelease [107 kB]
Hit:5 http://ppa.launchpad.net/nm-l2tp/network-manager-l2tp/ubuntu xenial InRelease
Get:6 http://tw.archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [849 kB]
Get:7 http://tw.archive.ubuntu.com/ubuntu xenial-updates/main i386 Packages [763 kB]
Get:8 http://tw.archive.ubuntu.com/ubuntu xenial-updates/main Translation-en [347 kB]
Get:9 http://tw.archive.ubuntu.com/ubuntu xenial-updates/main amd64 DEP-11 Metadata [320 kB]
Get:10 http://tw.archive.ubuntu.com/ubuntu xenial-updates/main DEP-11 64x64 Icons [227 kB]
Get:11 http://tw.archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [691 kB]
Get:12 http://tw.archive.ubuntu.com/ubuntu xenial-updates/universe i386 Packages [632 kB]
Get:13 http://tw.archive.ubuntu.com/ubuntu xenial-updates/universe Translation-en [279 kB]
Get:14 http://tw.archive.ubuntu.com/ubuntu xenial-updates/universe amd64 DEP-11 Metadata [247 kB]
Get:15 http://tw.archive.ubuntu.com/ubuntu xenial-updates/universe DEP-11 64x64 Icons [333 kB]
Get:16 http://tw.archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [16.4 kB]
Get:17 http://tw.archive.ubuntu.com/ubuntu xenial-updates/multiverse i386 Packages [15.5 kB]
Get:18 http://tw.archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 DEP-11 Metadata [5956 B]
Get:19 http://tw.archive.ubuntu.com/ubuntu xenial-updates/multiverse DEP-11 64x64 Icons [14.3 kB]
Get:20 http://tw.archive.ubuntu.com/ubuntu xenial-backports/main amd64 DEP-11 Metadata [3324 B]
Get:21 http://tw.archive.ubuntu.com/ubuntu xenial-backports/universe amd64 DEP-11 Metadata [5100 B]
Get:22 http://security.ubuntu.com/ubuntu xenial-security/main amd64 DEP-11 Metadata [67.7 kB]
Get:23 http://security.ubuntu.com/ubuntu xenial-security/main DEP-11 64x64 Icons [68.0 kB]
Get:24 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 DEP-11 Metadata [108 kB]
Get:25 http://security.ubuntu.com/ubuntu xenial-security/universe DEP-11 64x64 Icons [150 kB]
Fetched 5464 kB in 4s (1361 kB/s)
AppStream cache update completed, but some metadata was ignored due to errors.
Reading package lists... Done

```

**sudo apt-get upgrade**

```

louis@louis-VirtualBox:~$ sudo apt-get upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following packages will be upgraded:
  binutils fonts-opensymbol fwupd gstreamer1.0-libav gstreamer1.0-plugins-bad gstreamer1.0-plugins-b
  intramfs-tools intramfs-tools-bin intramfs-tools-core libappstream-glib8 libdful libfwupd1 libg
  libreoffice-base-core libreoffice-calc libreoffice-common libreoffice-core libreoffice-draw libreo
  libreoffice-pdfimport libreoffice-style-breeze libreoffice-style-galaxy libreoffice-writer libsmc
  samba-ls squashfs-tools uno-libs3 ure va-driver-all x11-common xorg xserver-common
49 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 73.5 MB/88.1 MB of archives.
After this operation, 4232 kB of additional disk space will be used.
Do you want to continue? [Y/n] y

```

**sudo add-apt-repository ppa:nm-l2tp/network-manager-l2tp**

```

Louis@Louis-VirtualBox:~$ sudo add-apt-repository ppa:nm-l2tp/network-manager-l2tp
network-manager-l2tp for Ubuntu 14.04 and 16.04.

network-manager-l2tp is a VPN plugin for NetworkManager which provides support for L2TP and L2TP/IPsec (3rd party)
Note: Ubuntu 17.10 and later ship with network-manager-l2tp and network-manager-l2tp-gnome packages in the
After adding this PPA to your system, issue the following to install :

    sudo apt install network-manager-l2tp network-manager-l2tp-gnome

Home page : https://github.com/nm-l2tp/NetworkManager-l2tp

If you would like this package added to the official Ubuntu 16.04 backport repository, please login to the
https://bugs.launchpad.net/xenial-backports/+bug/1697934
More info: https://launchpad.net/~nm-l2tp/+archive/ubuntu/network-manager-l2tp
Press [ENTER] to continue or ctrl-c to cancel adding it

gpg: keyring `/tmp/tmp75a5a5m4/secring.gpg' created
gpg: keyring `/tmp/tmp75a5a5m4/pubring.gpg' created
gpg: requesting key 665AB177 from hkp server keyserver.ubuntu.com
gpg: /tmp/tmp75a5a5m4/trustdb.gpg: trustdb created
gpg: key 665AB177: public key "Launchpad PPA for nm-l2tp" imported
gpg: Total number processed: 1
gpg:         imported: 1 (RSA: 1)
OK

```

**sudo apt-get update**

```

Louis@Louis-VirtualBox:~$ sudo apt-get update
Hit:1 http://tw.archive.ubuntu.com/ubuntu xenial InRelease
Hit:2 http://tw.archive.ubuntu.com/ubuntu xenial-updates InRelease
Hit:3 http://tw.archive.ubuntu.com/ubuntu xenial-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu xenial-security InRelease [107 kB]
Hit:5 http://ppa.launchpad.net/nm-l2tp/network-manager-l2tp/ubuntu xenial InRelease
Fetched 107 kB in 1s (63.2 kB/s)
AppStream cache update completed, but some metadata was ignored due to errors.
Reading package lists... Done

```

**sudo apt-get install network-manager-l2tp network-manager-l2tp-gnome**

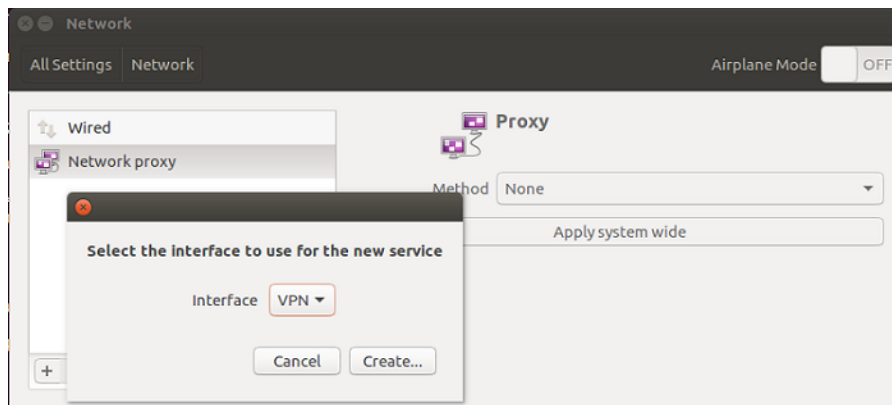
```

Louis@Louis-VirtualBox:~$ sudo apt-get install network-manager-l2tp network-manager-l2tp-gnome
Reading package lists... Done
Building dependency tree
Reading state information... Done

```

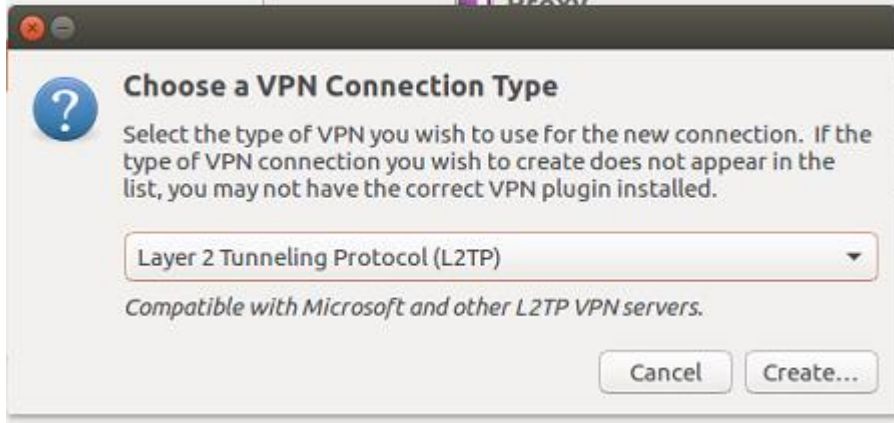
**Ubuntu'dan VPN Kurulumu**

1. **System Settings >> Network** açın. Yeni bir VPN ara yüzü oluşturmak için '+' tıklayın.

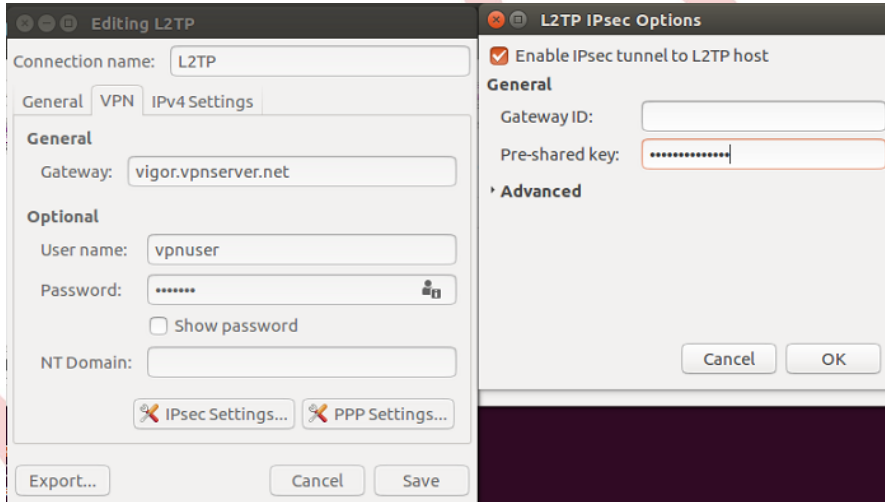




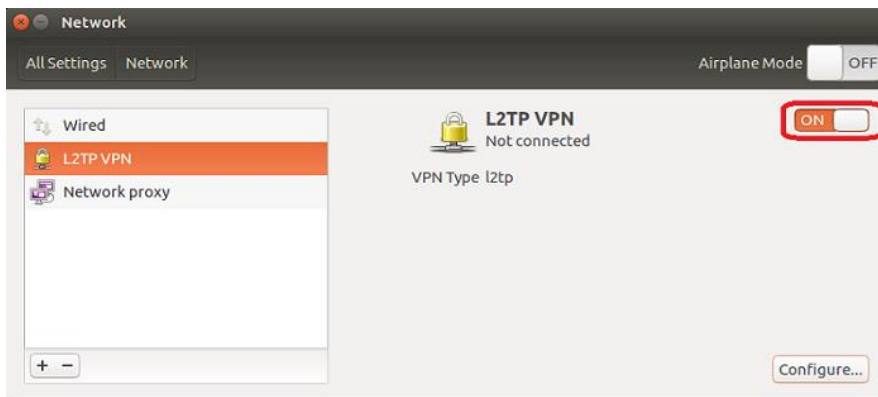
- VPN bağlantı tipi için "L2TP" seçin.



- Vigor Router'ın IP ve domain adı olan Gateway'i ve Vigor Router'da oluşturulan username/password'ü girin.  
**IPsec Settings** 'e tıklayın ve Pre-Shared Key'de Vigor Router'da ayarlanan General Pre-Shared Key'i girin.



- VPN bağlantısını açın.



Router'da İstemcinin **VPN and Remote Access >> Connection Management** bölümünden bağlanıp bağlanmadığını kontrol edebiliriz.

## VPN and Remote Access &gt;&gt; Connection Management

## Dial-out Tool

| Refresh |

|                    |                      |   |      |
|--------------------|----------------------|---|------|
| General Mode:      | <input type="text"/> | ▼ | Dial |
| Backup Mode:       | <input type="text"/> | ▼ | Dial |
| Load Balance Mode: | <input type="text"/> | ▼ | Dial |

## VPN Connection Status

| All VPN Status                        | LAN-to-LAN VPN Status | Remote Dial-in User Status  |                  |         |              |         |              |        |      |
|---------------------------------------|-----------------------|-----------------------------|------------------|---------|--------------|---------|--------------|--------|------|
| VPN                                   | Type                  | Remote IP                   | Virtual Network  | Tx Pkts | Tx Rate(bps) | Rx Pkts | Rx Rate(bps) | UpTime |      |
| 1<br>(vpnuser)<br>Local User Database | L2TP<br>AES-SHA1 Auth | 111.221.222.105<br>via WAN1 | 192.168.32.11/32 | 8       | 72           | 8       | 72           | 0:1:52 | Drop |

xxxxxxx : Data is encrypted.

xxxxxxx : Data isn't encrypted.