# IP Tunnel


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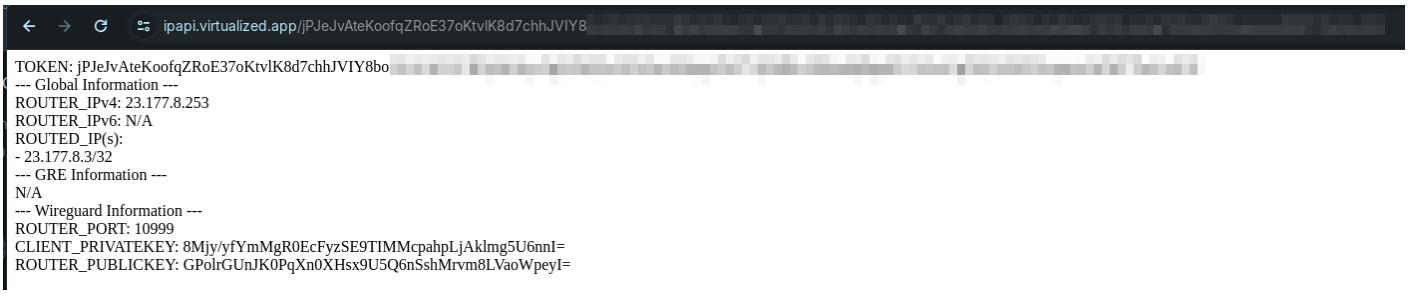
# General

> Before you start setting up anything, you should open the API page of your tunnel to get important information at a glance.

Open a Browser or run a curl on the following url like in the example:

`https://ipapi.virtualized.app/<TOKEN>`




You will find the `<TOKEN>` if you go to your tunnel product and then to "Product info". Replace it and open the site, if all is right you will get a response like in the example.

Now you have all the information you need to set up the tunnel, go on!

https://docs.virtualized.app/books/ip-tun

# Configuration

How to configure the Tunnel?

# Bridged Setup

> Mainly used for Virtualization (e.g. Proxmox/Virtualizor/Virtfusion) to put Virtual Machines and Containers into the bridge so they can use the IPs!

# Requirements

Follow the Docs General at first!

# Reminder

> To ensure you use the variables correctly, please note that they are written in "<>". You will retrieve the information from our API, which you should have opened beforehand. Replace the placeholders with the related content.

# Debian Networking

## GRETAP

Install required packages using: `apt update -y; apt install bridge-utils -y`

Add this to the end of the file /etc/network/interfaces, e.g. with `nano /etc/network/interfaces`.

**Variables to Replace:**
<ONE-of-ALLOWED_ENDPOINT(s)> = Litterally just the IPv4 of your Server, but it needs to be allowed by us, you enter this on Order!
<ROUTER_IP> = The IPv4 or IPv6 of our Router, the Variable is exactly named like that on the API Page! Depends if your Endpoint is Type v4 or v6
<MTU> = IPv4 Endpoint: 1462, IPv6 Endpoint: 1434 <TYPE> = IPv4 Endpoint: gretap, IPv6 Endpoint: ip6gretap

```
auto vmbr6378
iface vmbr6378 inet manual
    bridge_ports gretap6378
    bridge_stp off
    bridge_fd 0
    mtu <MTU>
    pre-up ip link add name gretap6378 type <TYPE> local <ONE-of-ALLOWED_ENDPOINT(s)> remote <ROUTER_IP>
    pre-up ip link set up gretap6378
    post-up ip link set up vmbr6378
    down ip link del gretap6378
```

# Wireguard

Install required packages using: `apt update -y; apt install bridge-utils wireguard -y`

Add this to the end of the file /etc/network/interfaces, e.g. with `nano /etc/network/interfaces`

**Variables to Replace:**
<ROUTED_IP(s)> = The IPv4 Addresses we assigned to you! Make a 1 to 1 copy and paste from the variable`s content of our API.

```
auto vmbr6378
iface vmbr6378 inet manual
    address 100.96.255.1/32
    bridge_ports none
    bridge_stp off
    bridge_fd 0
    post-up echo 1 > /proc/sys/net/ipv4/conf/all/forwarding
    post-up wg-quick up wg6378
    post-up ip link set up vmbr6378
    post-up bash -c 'export IP_BLOCKS=(<ROUTED_IP(s)>); for ip in "${IP_BLOCKS[@]}"; do ip rule add from "$ip" table 6378 prio 1; ip route add "$ip" dev vmbr6378; ip addr add "$(echo "$ip" | cut -d"/" -f1 | awk -F"." '"'"'{print $1"."$2"."$3".1"}'"'"')/$(echo "$ip" | cut -d"/" -f2)" dev vmbr6378 2>/dev/null || true; done'
    down bash -c 'export IP_BLOCKS=(<ROUTED_IP(s)>); for ip in "${IP_BLOCKS[@]}"; do ip rule del from "$ip" table 6378 prio 1; done'
    down ip link del wg6378
```

Create a new file in `/etc/wireguard/`, e.g. with `nano /etc/wireguard/wg6378.conf`

**Variables to Replace:**
<ROUTER_IPv4> = The IPv4 of our Router, the Variable is exactly named like that on the API Page!
<ROUTER_PORT> = The Tunnel Port of our Router, the Variable is exactly named like that on the API Page!
<CLIENT_PRIVATEKEY>, <ROUTER_PUBLICKEY> = Encryption-Keys required for the Tunnel. Make a 1 to 1 copy and paste from the variable`s content of our API.

```
[Interface]
PrivateKey = <CLIENT_PRIVATEKEY>
Address = 100.97.255.2/24
Table = 6378
MTU = 1420

[Peer]
PublicKey = <ROUTER_PUBLICKEY>
Endpoint = <ROUTER_IPv4>:<ROUTER_PORT>
PersistentKeepalive = 25
AllowedIPs = 0.0.0.0/0
```

# Last Steps

Bring the bridge up using: `ifup vmbr6378`

or if this command **does not exist** you may restart your networking, which **will interrupt** any other Traffic using `systemctl restart networking`

# Usage

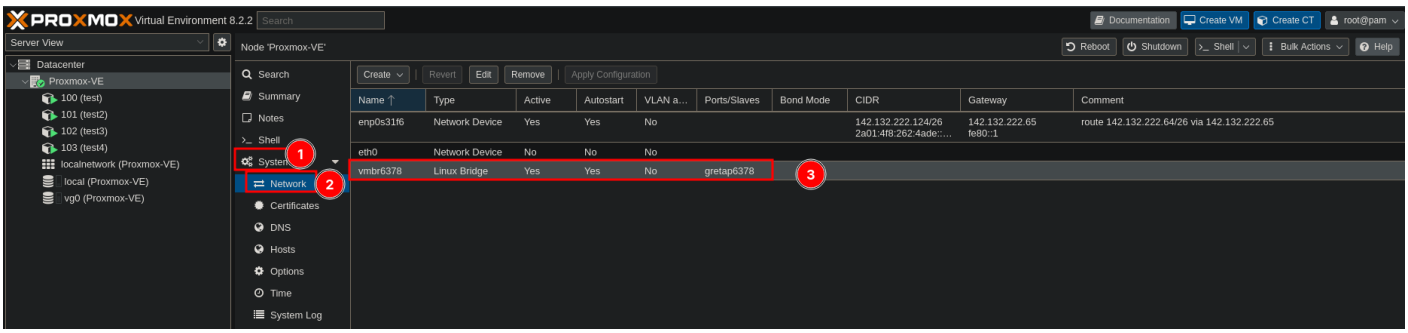
How to use the IPs now?

# Proxmox

> Requires a Tunnel Type of either GRETAP or Wireguard

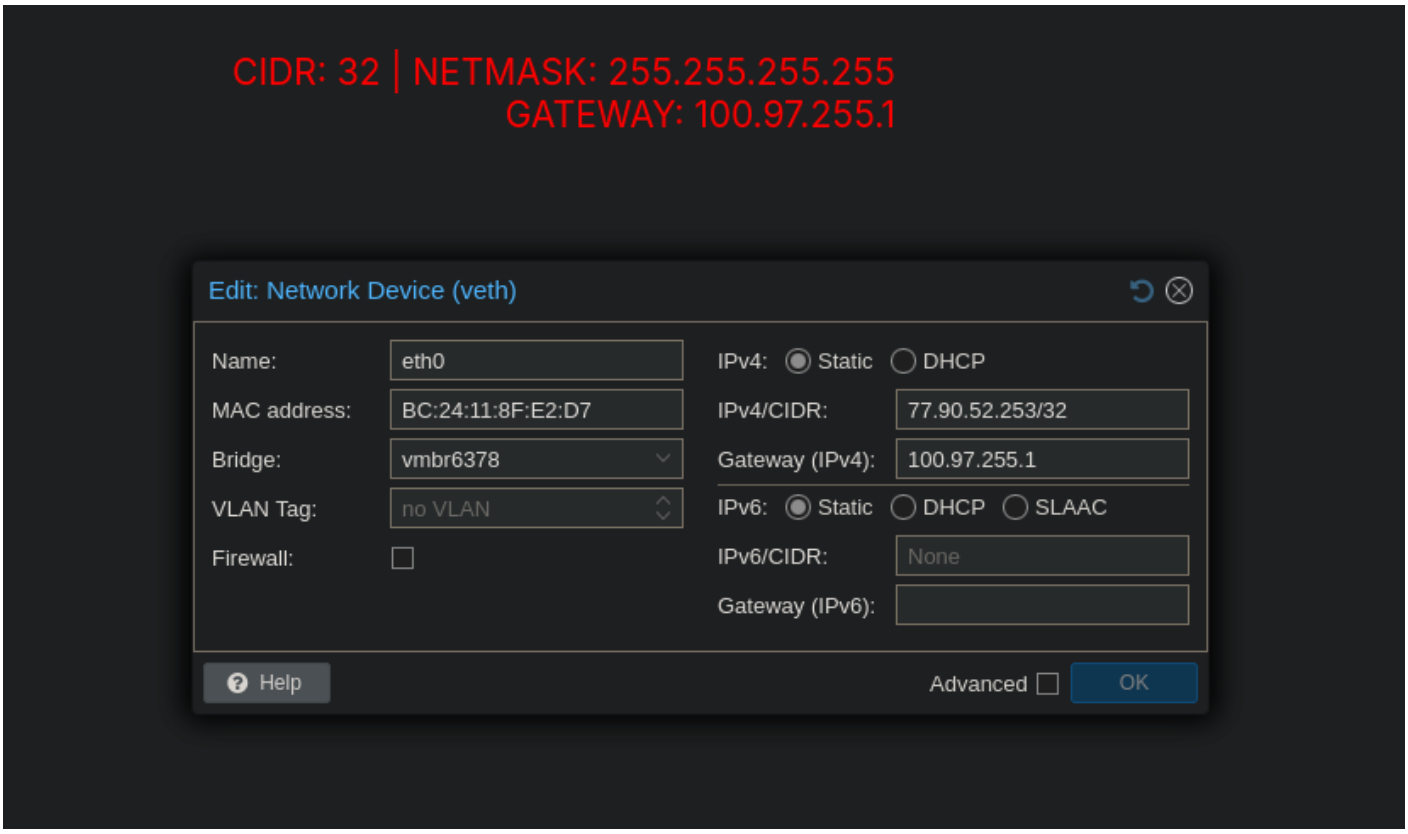
## Verify

To verify if the Bridge exist select the related Node then go to "System -> Network".




## Network Configuration

> the Image shows a Container Network Configuration, just as Example




# Test Network

```
root@test:/# curl ipinfo.io
{
  "ip": "23.177.8.4",
  "city": "Tucson",
  "region": "Arizona",
  "country": "US",
  "loc": "32.2691,-110.9845",
  "postal": "85705",
  "timezone": "America/Phoenix",
  "readme": "https://ipinfo.io/missingauth"
}root@test:/# ping 1.1.1.1
PING 1.1.1.1 (1.1.1.1) 56(84) bytes of data.
64 bytes from 1.1.1.1: icmp_seq=1 ttl=53 time=7.57 ms
64 bytes from 1.1.1.1: icmp_seq=2 ttl=53 time=7.70 ms
```