

For those who don't know markdown, here is a cheat sheet:

<https://www.markdownguide.org/cheat-sheet/>

Project 3 - Wireguard Docker Container

Create a Digital Ocean account

Create a Droplet in DigitalOcean

1. Use this link to [DigitalOcean.com](https://digitalocean.com) to sign up with your school email and Agent Miller's credit card
2. Choose the lowest price tier - \$6 per month
3. Create an Ubuntu droplet
4. Select all of the basic options
5. Choose password instead of ssh key - TulsaTime@1865edu
6. Name the project - Wireguard project
7. Droplet IP - 64.23.171.188

Install Wireguard

1. SSH into the droplet by opening a terminal and typing `ssh root@[ip]`
 - a. Where you would replace [ip] with the IP of your DigitalOcean Droplet
2. Install the dependencies/packages needed to run docker. Commands: `sudo apt install docker`, `sudo apt install docker-compose`, `sudo apt install wireguard`
3. **Set up Wireguard using Docker Compose:**
 - a. Create a directory for Wireguard:

```
mkdir -p /opt/wireguard
```

```
cd /opt/wireguard
```

- b. Create a docker-compose.yml file:

```
nano docker-compose.yml
```

- c. Add the following configuration to docker-compose.yml:

yaml docker-compose.yml

GNU nano 8.1

version: '3.8'

services:

wireguard:

container_name: wireguard

image: linuxserver/wireguard

environment:

- PUID=1000
- PGID=1000
- TZ=American/New_York
- SERVERURL=45.55.41.235
- SERVERPORT=51820
- PEERS=pc1,pc2,phone1
- PEERDNS=auto
- INTERNAL_SUBNET=10.0.0.0

ports:

- 51820:51820/udp

volumes:

- type: bind
source: ./config/
target: /config/
- type: bind
source: /lib/modules
target: /lib/modules

restart: always

cap_add:

- NET_ADMIN
- SYS_MODULE

sysctls:

- net.ipv4.conf.all.src_valid_mark=1

d. Save and exit.

2. Run Wireguard:

docker-compose up -d

3. Check logs to get the QR code:

docker logs wireguard

Test Your VPN

Mobile Device

1. Open the Wireguard app and scan the QR code from the logs.
2. **Before connecting:**
 - a. Visit [IPLeak.net](https://ipleak.net) and screenshot your local IP.
3. **After connecting:**
 - a. Turn on the Wireguard VPN and revisit IPLeak.net.
 - b. Screenshot the VPN IP to confirm it is active.

Laptop

1. Find the configuration file:
`ls /opt/wireguard/config`


2. Copy the .conf file to your laptop.
In our case the .conf file contained:

```
[Interface]
PrivateKey = iLwC8xbCzwVd5j9s7Et/72d6keAAVTIkmxY/wX6Ako=
ListenPort = 518
.20
Address = 10.0.0.2/32
DNS = 10.0.0.1

[Peer]
PublicKey = P5GnsQQZk4X0KilGkKNG5ND/XZjV0KP7QDNuShSCcG4=
PresharedKey = 5X6AWptfcPEHqhgi3nVIEb6vx833rLQic/ofl4TMy5s=
AllowedIPs = 0.0.0.0/0, ::/0
Endpoint = 45.55.41.235:51820
```


3. Import the file into the Wireguard app or CLI.
4. Follow the same steps as mobile to confirm functionality using IPLeak.net.

Screenshots:




Search an IP Address or a domain name

Search

powered by 

This is the kind of information that all the sites you visit, as well as their advertisers and any embedded widget, can see and collect about you.





129.244.15.71

United States - Oklahoma

UTULSA-AS

No forwarded IP detected. If you are using a proxy, it's a transparent proxy.

Browser default:  IPv4 (111 ms)

Fallback:  Fail (timeout - Try 1/3)

IPv6 test not reachable. (error)

Your IP addresses - WebRTC detection

If you are now connected to a VPN and you see your ISP IP, then your system is [leaking WebRTC requests](#)

DNS Address - 0 servers detected, 20 tests

If you are now connected to a VPN and between the detected DNS you see your ISP DNS, then your system is [leaking DNS requests](#)

Torrent Address detection

Activate

Geolocation map (Google Map) based on browser

Activate

(may prompt a user permission on the browser)



Search an IP Address or a domain name

Search

powered by 



45.55.41.235

United States - New Jersey

DIGITALOCEAN-ASN

No forwarded IP detected. If you are using a proxy, it's a transparent proxy.

Browser default:  IPv4 (163 ms)

Fallback:  Fail (timeout - Try 1/3)

IPv6 test not reachable. (error)

Your IP addresses - WebRTC detection

If you are now connected to a VPN and you see your ISP IP, then your system is [leaking WebRTC requests](#)

DNS Addresses - 6 servers detected, 29 tests



157.140.132

United States - New Jersey

DIGITALOCEAN-ASN

11 hit



157.140.152

United States - New Jersey

DIGITALOCEAN-ASN

16 hit



157.140.95

United States - New Jersey

DIGITALOCEAN-ASN

17 hit



157.146.75

United States - New Jersey

DIGITALOCEAN-ASN

10 hit



157.146.46

United States - New Jersey

DIGITALOCEAN-ASN

0 hit



157.140.108

United States - New Jersey

DIGITALOCEAN-ASN

13 hit

Your IP addresses

129.244.19.96



United States - Oklahoma
UTULSA-AS

No forwarded IP detected. If you are using a proxy, it's a transparent proxy.

● IPv6 test not reachable. (error)

Browser default: ● IPv4 (182 ms)

Fallback: ○○○

Your IP addresses

45.55.41.235



United States - New Jersey
DIGITALOCEAN-ASN

No forwarded IP detected. If you are using a proxy, it's a transparent proxy.

● IPv6 test not reachable. (error)

Browser default: ● IPv4 (166 ms)

Fallback: ○○○

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