

Basics of Wireguard CUCUG

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Why use a VPN/Wireguard?

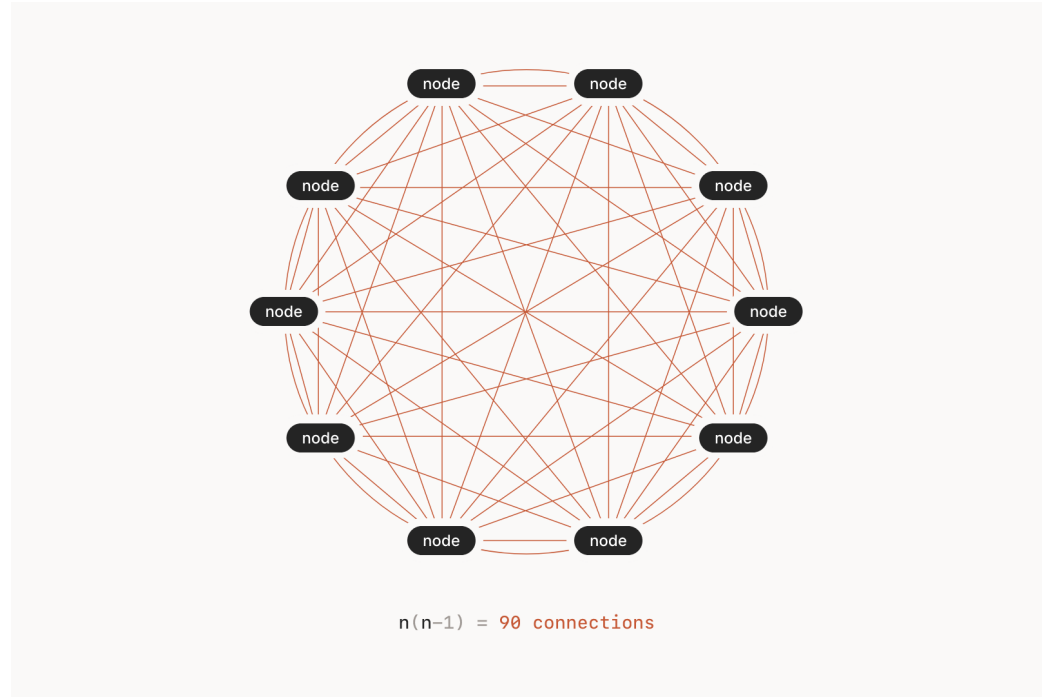
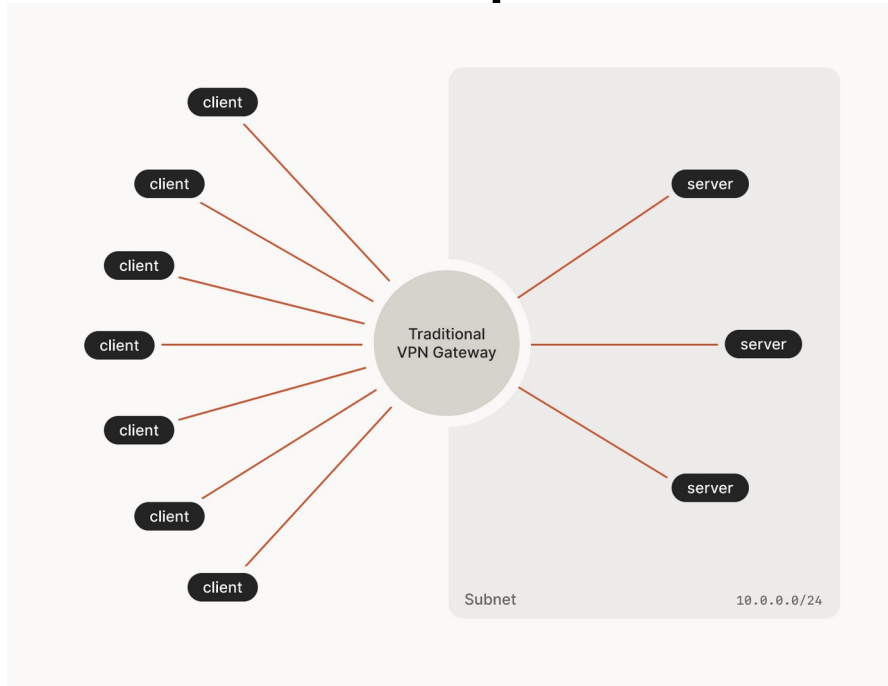
- You don't 100% trust the network
 - Coffee shop, hotel, or any WiFi that's not yours
- You don't 100% trust the network provider
 - Comcast, AT&T sniffing traffic and DNS queries
- You want to logically connect two physically separate networks
- You want a service provider to think you're somewhere else

What is Wireguard?

- VPN software that's secure and simple
- Fast, flexible, and free
- Supported on most devices
 - MS Windows, MacOS, iOS, Android, Linux, BSD
- Supported by many Commercial VPN providers
 - NordVPN, Mullvad, ovpn.com, etc.

Using Wireguard

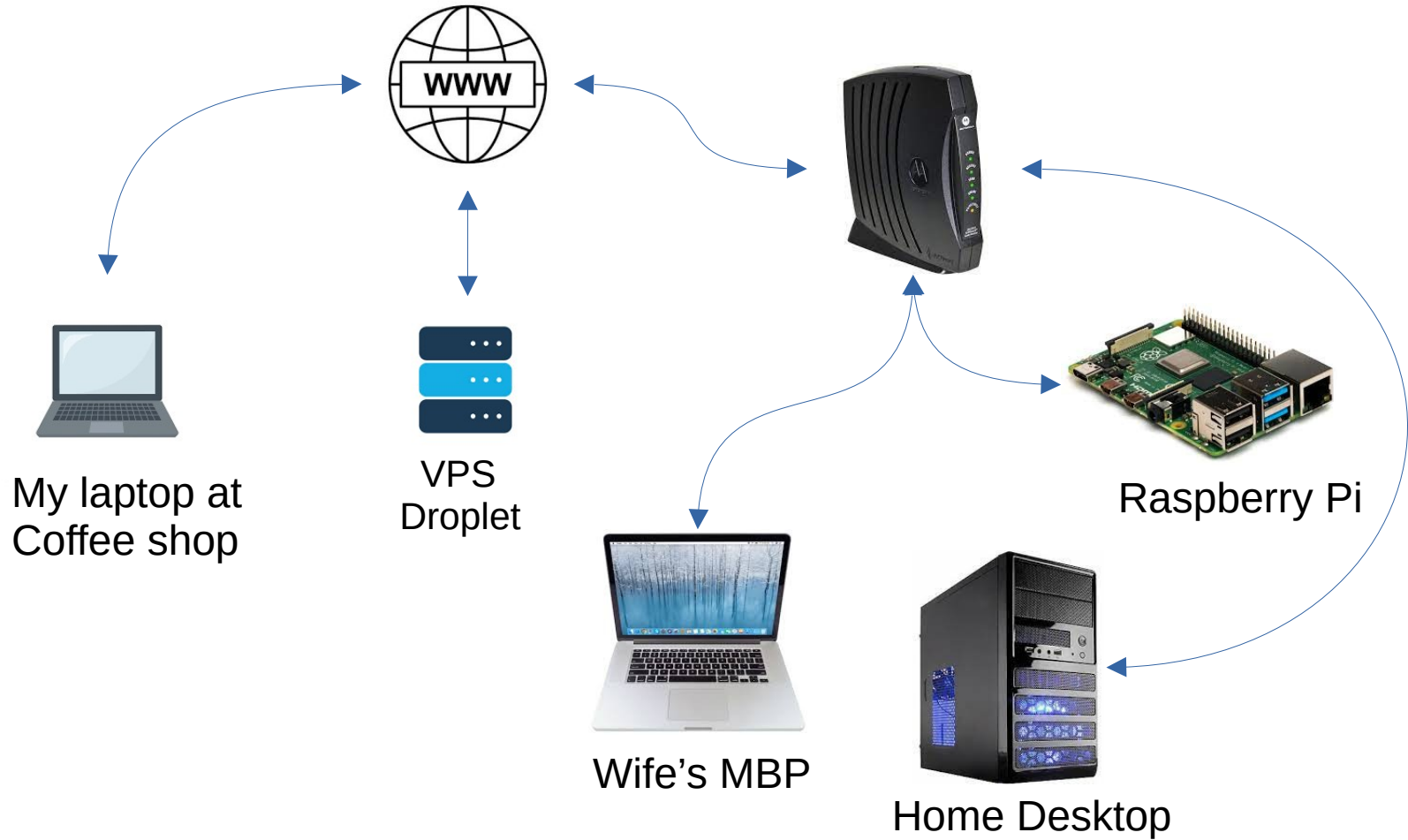
- Hub and Spoke vs. Mesh



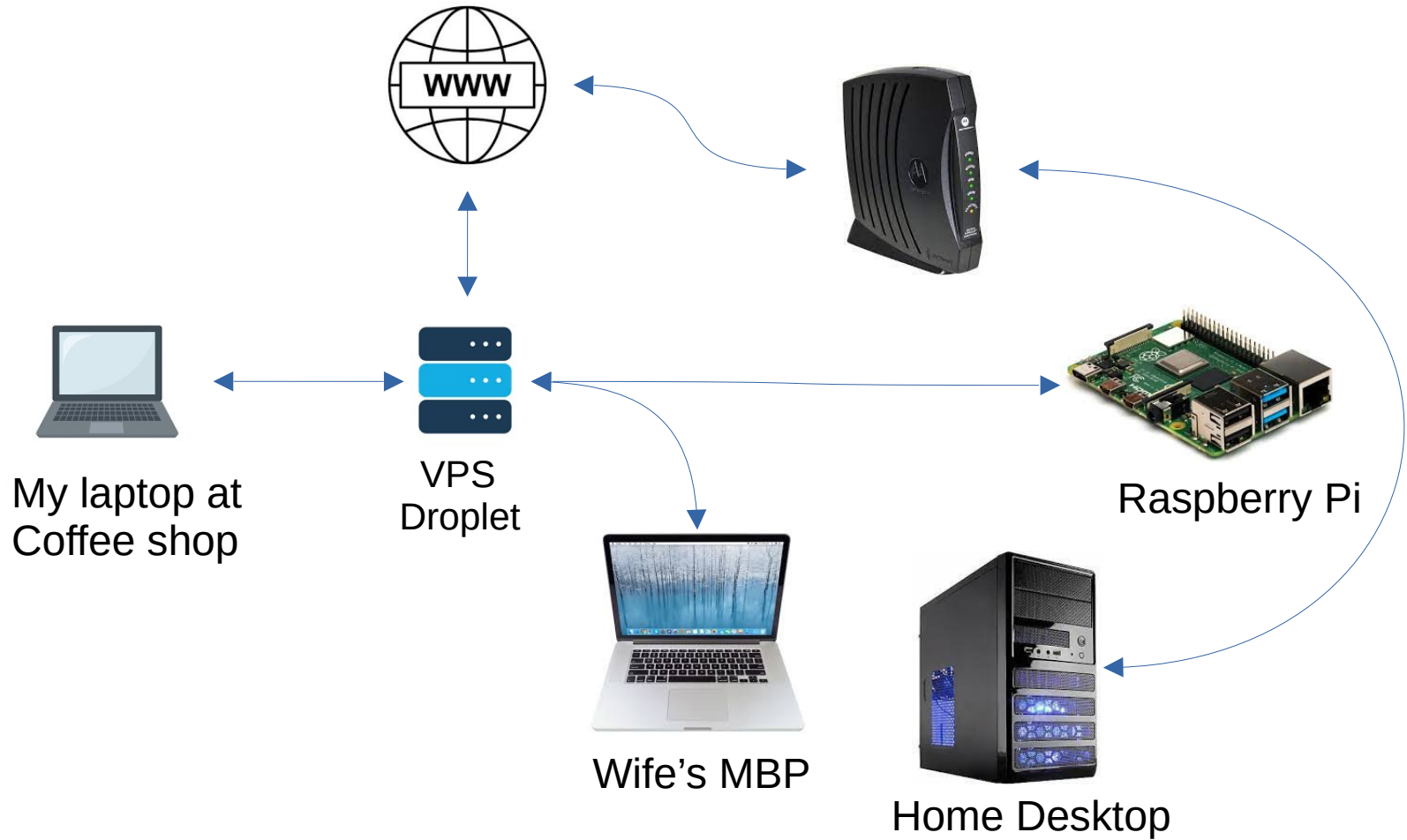
– Pictures from Tailscale

Home Wireguard Use Case

Physical Network Connections



Logical Network Connections



My Wireguard Uses

- For security with laptop when away from home
 - And still be on home network to access home machines
- Wife, geolocation, and MLB.TV
- Have VPS email server logically on my network
- Cable modem has no Internet visible ports open
 - No remote “attack vectors”

Other People's Uses

- With friends and family:
 - Sharing home media servers
 - Off-site backups
 - Remote support
- Uses mesh to keep all computers' IP addresses unchanging at home or on the road (RV) without having to go through a hub

Demo!

Demo

- Create and deploy VPS droplets
 - Configure with 'mkdroplets' and 'wgdrops' scripts
 - Use 'qrencode' to display peer wireguard configuration
- On device with camera
 - Install Wireguard app and launch it
 - Tap '+', use QR code, add any name (e.g. "cucug")
 - Enable "cucug" with its button
 - Test with whatismyipaddress.com to show droplet's IP and that it thinks you're now in New York

References

- Additional Reading
 - <https://www.wireguard.com/>
 - <https://tailscale.com/>
- My Links
 - <https://github.com/qbarnes/cucug-wireguard/>
 - <https://m.do.co/c/49092e1d7f47>