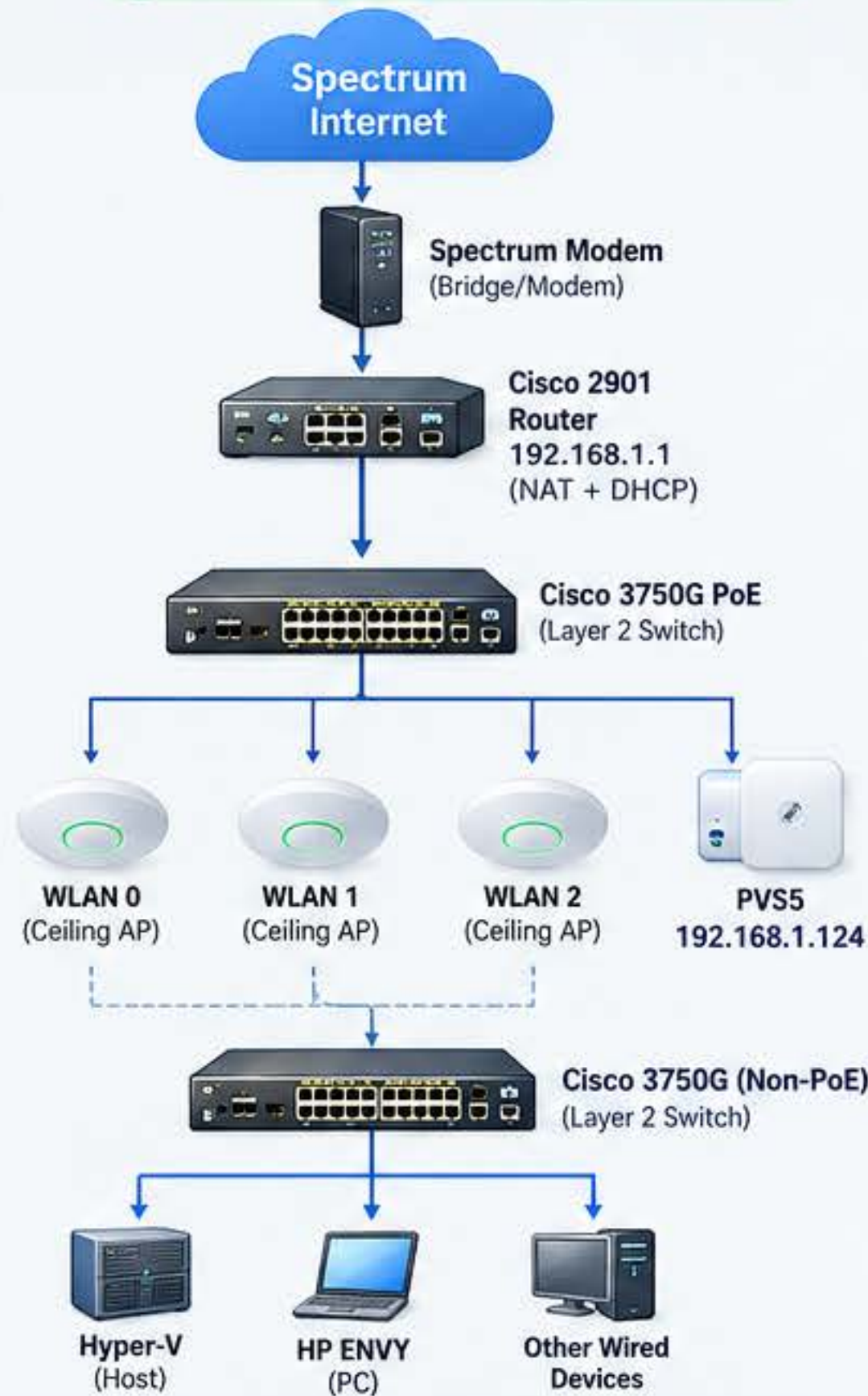


From Spectrum (Current Setup)

A reliable home lab network (2019 – 2026)

✓ Proven. Stable. Great learning experience.



What Worked Well

- ✓ No \$10/month router rental from Spectrum
- ✓ Great Cisco routing and switching training
- ✓ Network ran reliably since 2019
- ✓ Ceiling WAPs provided whole-house Wi-Fi
- ✓ PVS5 integrated and working
- ✓ Had a standby Linksys router (never needed)

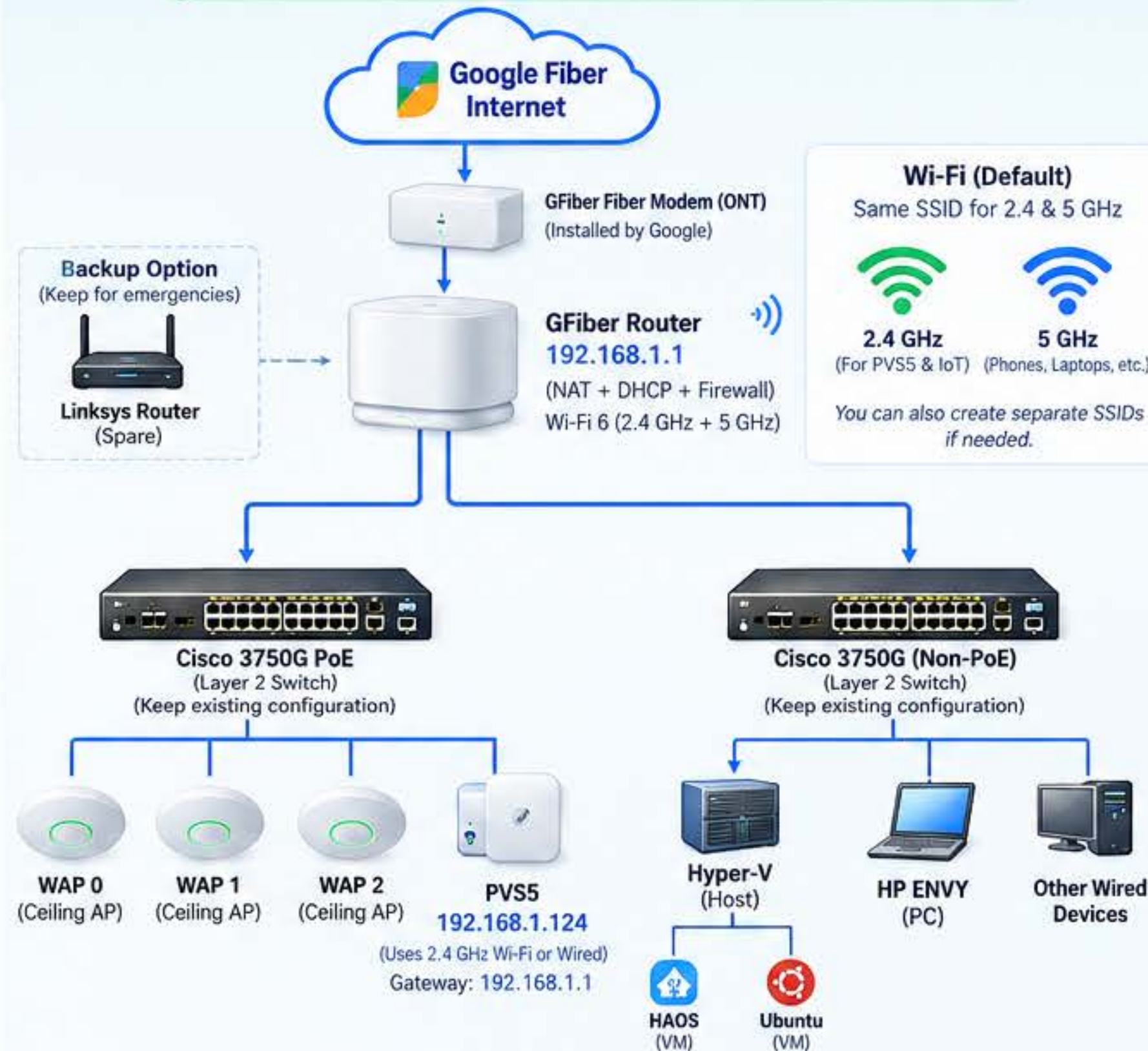
Limitations

- ⚠ Wi-Fi only ~90 Mbps (on a good day)
- ⚠ Older wireless technology
- ⚠ More complex to manage
- ⚠ Not as user friendly for non-technical users
- ⚠ Overkill for current needs

To Google Fiber (New Setup)

Simpler. Faster. Modern. Ready for the next chapter.

✓ Keep your existing Cisco switches. Let Google Fiber handle routing, DHCP, and Wi-Fi.



Verify Network on Windows

```
> ipconfig
```

Look for:

```
IPv4 Address . . . . . : 192.168.1.xxx
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . : 192.168.1.1
```

Test connectivity:

- ping 192.168.1.1 (Router)
- ping 8.8.8.8 (Internet)
- ping 192.168.1.124 (PVS5)

Access PVS5:

```
http://192.168.1.124/vars
```

Example: ?name=/sys/info/model,/sys/info/serialnum

Benefits for the Future

- ✓ Much faster and more reliable Wi-Fi
- ✓ Simpler network (fewer moving parts)
- ✓ Modern Wi-Fi 6 technology
- ✓ User friendly for your daughter
- ✓ Keep Cisco gear for lab and training
- ✓ Retain Linksys as emergency backup
- ✓ Same network design, minimal changes
- ✓ Ready for Tailscale and home automation

GFiber Network Details (Typical)

🏠 Default Gateway	192.168.1.1
🌐 LAN Subnet	192.168.1.0/24
🌐 DHCP	Enabled
📶 Wi-Fi Bands	2.4 GHz + 5 GHz
🔒 Wi-Fi Standard	Wi-Fi 6 (GRAX210T / GFRG300)
📶 SSID	Same for both bands (default)
📶 Separate 2.4/5 GHz	Possible
💻 Router Models	GRAX210T (Wi-Fi 6) GFRG300 (Multi-Gig)

Important for PVS5

- ✓ PVS5 requires 2.4 GHz Wi-Fi
- ✓ Keep subnet as 192.168.1.0/24 if possible
- ✓ Keep PVS5 at 192.168.1.124
- ✓ Gateway: 192.168.1.1
- ✓ Use same Wi-Fi SSID and password as your old network (recommended)
- ✓ Check router's client list to confirm connection

Migration Steps (Recommended Order)

- 1 Install and verify GFiber (modem + router only)
 - Connect your laptop directly
 - Verify internet, DHCP, and 2.4/5 GHz Wi-Fi
 - Check gateway is 192.168.1.1
- 2 Connect Cisco 3750G PoE
 - Verify wired connection and internet
- 3 Reconnect PVS5
 - Verify 192.168.1.124 is reachable
 - Test: <http://192.168.1.124/vars>
- 4 Connect Cisco 3750G Non-PoE
 - Bring back Hyper-V, PCs, and other devices
- 5 Configure Tailscale
 - Do this after the network is stable

Network Diagram Summary



"From a learning project to a brighter future.
Same network. A new chapter."