

VPN Audit Simulation – Demo Report

Author: Behnam Shahriari

Date: April 9, 2025

Objective

To simulate a VPN audit and check for IP and DNS leaks using common tools and techniques.

Tools Used

- Windscribe VPN (Free version)
- ipleak.net
- dnsleaktest.com
- Wireshark (for DNS packet capture)

Tests Performed

With VPN ON

- IPLeak.net: IP masked (Romania) — real IP hidden
- DNSLeakTest: DNS resolved via VPN provider (NetActuate) — no leak detected

With VPN OFF

- IPLeak.net: Real IP visible (Türkiye)
- DNSLeakTest: DNS requests sent to Google DNS servers — unprotected

Wireshark Capture

Captured DNS queries like google.com, ipleak.net, and dnsleaktest.com
→ Verified DNS traffic visibility with and without VPN

Conclusion

- VPN effectively hid both IP and DNS when active
- Without VPN, data was exposed — proving the importance of DNS protection
- Wireshark confirmed visibility of DNS traffic

Next Steps for Real Projects

- Test for WebRTC and IPv6 leaks
- Analyze kill switch reliability
- Check encryption protocols
- Recommend DNS over HTTPS or DNS tunneling if needed