Tools for safe and secure browsing

Learn how to change your DHCP DNS settings to Static.
We will make changes to your network adapter both wired and wireless.

Encryption: (DoH) DNS over HTTPS (Domain Name Service over HyperText Transfer Protocol Secure)
TLS 1.2 or TLS1.3 using 128 bit or 256 bit encryption (**T**ransport **L**ayer **S**ecurity)

Recommended Encrypted DNS free public servers:
Primary DNS: 1.1.1.1 (DoH Encrypted by Cloudflare)
Secondary DNS: 9.9.9.9 (DoH Encrypted by Quad9)

Alternate DNS public unencrypted servers:
Primary DNS: 208.67.222.222 (OpenDNS Public) Non-Encrypted
Secondary DNS: 8.8.8.8 (Google Public DNS) Non-Encrypted

How to **Change Your Mac's DNS** Settings: https://www.lifewire.com/network-preference-pane-change-macs-dns-settings-2260394

DNS Crypt or Simple DNS Crypt
https://simplednscrypt.org/ (Encrypted DNS search) advanced
http://www.thewindowsclub.com/simple-dnscrypt-windows
https://1.1.1.1/ (CloudFlare Encrypted)
https://www.quad9.net/ (Quad 9 Encrypted)
Note: See links below for smartphones using the CloudFlare **encrypted DNS App**

Suggested Browsers:
FireFox Quantum: https://www.mozilla.org/en-US/firefox/all/ (CloudFlare Encrypted DNS built in) TLS 1.3
Opera: https://www.opera.com/computer (Free VPN, and other features built in, 64 bit only)
Chrome: https://www.google.com/chrome/ (Security concerns) TLS 1.3
Safari: https://safari-extensions.apple.com/ (supports U-Block Origin but **NOT** HTTPS Everywhere)

*** **HTTPS Everywhere for FireFox, Chrome (see note below) or Opera**
https://www.eff.org/https-everywhere

*** **Block web trackers**
https://addons.mozilla.org/en-US/firefox/addon/ublock-origin/

NoScript (blocks WebRTC Leaks)
https://addons.mozilla.org/en-US/firefox/addon/noscript/

Block Coin Miners (optional)
NoMiner-Block Coin Miners
https://addons.mozilla.org/en-US/firefox/addon/nominer-block-coin-miners/

Search Engines (Encrypted, no logging)
https://addons.mozilla.org/en-US/firefox/addon/duckduckgo-ssl/
https://addons.mozilla.org/en-US/firefox/addon/startpage-https-privacy-search/

Browsers with built in VPN
https://www.opera.com/computer
Turn on VPN in Opera: **Menu>Settings>Privacy & Security>Enable VPN**

Pay VPN
https://protonvpn.com/ (Preferred)
https://www.mullvad.net/en/
https://torguard.net/
https://nordvpn.com/

VPN Comparison Spreadsheet
https://goo.gl/UxkNbq actual download here: https://thatoneprivacysite.net/vpn-section/

Best VPN Services using TOR: VPN Comparison Chart
http://deepdot35wvmeyd5.onion/vpn-comparison-chart/ (TOR required to open this URL)

Encrypted e-mail
https://protonmail.com/ (my choice)
https://www.openpgp.org/software/ (OpenPGP) Email encryption
https://www.openpgp.org/software/gpg4win/ (Gpg4win)

TOR (The Onion Router, one step below TAILS) very good
https://www.torproject.org/download/download-easy.html
https://thetinhat.com/blog/primers/is-tor-safe.html
https://en.wikipedia.org/wiki/Tor_%28anonymity_network%29
https://torflow.uncharted.software/ (Data flow in the TOR network)
https://youtu.be/JWII85UlzKw?list=PLwyU2dZ3LJErtu3GGEIla7VyORE2B6H1H (TOR Video 2 min.)
What is the difference between the Deep Web, the Dark Web and the Plain old Web?

Security Tutorials
The Tin Hat
https://thetinhat.com/ (Clearnet)
http://tinhat233xymse34.onion/tutorials/all.html (Deep Web, accessible via TOR only)
https://medium.com/@drgutteridge/whats-the-deal-with-encryption-strength-is-128-bit-encryption-enough-or-do-you-need-more-3338b53f1e3d Has AES 128 bit encryption been broken? Ans: **NO**

What is my IP?
https://ipleak.net/
http://ip-check.info/?lang=en

What Country am I in?
https://addons.mozilla.org/en-US/firefox/addon/flag-plus/ (Country Flag)

Tablets and Smartphone Security Apps
https://itunes.apple.com/us/app/firefox-web-browser/id989804926?mt=8 (Apple FireFox)
https://play.google.com/store/apps/details?id=org.mozilla.firefox&hl=en (Android FireFox)
https://itunes.apple.com/us/app/opera-touch/id1411869974?mt=8 (Apple Opera no VPN)
https://play.google.com/store/apps/details?id=com.opera.browser (Android Opera no VPN)
https://itunes.apple.com/us/app/onion-browser-tor-powered/id519296448?mt=8 (Apple-TOR)
https://play.google.com/store/apps/details?id=org.torproject.android (Android-TOR)
https://itunes.apple.com/us/app/onion-browser/id519296448?mt=8 Onion Browser for IOS
https://play.google.com/store/apps/details?id=com.cloudflare.onedotonedotonedotone (Android CloudFlare encrypted DNS)
https://itunes.apple.com/us/app/1-1-1-1-faster-internet/id1423538627?mt=8 (Apple IOS CloudFlare Encrypted DNS)

How to Add Google Play Store to a Kindle Fire for more security Apps.
https://www.howtogeek.com/232726/how-to-install-the-google-play-store-on-your-amazon-fire-tablet/

Reference Only: these topics will not be covered in any detail in this class.

Walled Garden: https://en.wikipedia.org/wiki/Closed_platform

The Best VPN Routers Of 2018
https://greycoder.com/best-vpn-routers/
https://www.bestvpn.com/best-vpn-routers/

TAILS (**T**he **A**mnesiac **I**ncognito **L**ive **S**ystem the Ultimate in Security), we are not going to cover this.
https://tails.boum.org (create a bootable DVD or USB flash drive using Rufus, URL below)

Tox: Skype with Privacy
https://tox.chat/download.html
I2P (more advanced) The Invisible Internet Project
https://geti2p.net/en/

Encrypted (free) Cloud Storage

https://mega.nz/ (50GB-AES 128 bit encryption)
https://spideroak.com/ (2GB) (SSL encryption, probably TLS 1.2)
https://onedrive.live.com/about/en-us/ (5GB) (PFS Encryption)
https://www.icloud.com/ (5GB) (TLS 1.2, not as secure as TLS 1.3)
https://www.google.com/drive/ (15GB, AES 128 bit encryption)

Secure Password Manager & Secure File Storage
https://keepass.info/ (My Choice)
https://www.veracrypt.fr/en/Downloads.html (My Choice)
https://securityinabox.org/en/guide/veracrypt/windows/

Misc:
https://rufus.akeo.ie/ (make a USB bootable flash drive)
https://protosoftware.blog4ever.com/ (Strong Passwords Need Entropy)

https://kinsta.com/blog/tls-1-3/#tls-1.3-vs-tls-1.2 Overview of TLS 1.3
https://kinsta.com/blog/tls-1-3/#tls-1.3-browser-support TLS 1.3 Browser Support

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