

# Freedom Cells: Online Privacy 101

## Introduction

As I am sure everyone is aware the Big Tech conglomerates and other companies (Google, Microsoft, Facebook) have been collecting user data for at least the last two decades. With access to the web, this data collection became commonplace in everyone's lives. These revelations came into public view in 2013 after Edward Snowden, the former NSA contractor leaked classified government documents about the spying capabilities of the US Government and their allies. This has resulted in an increased public awareness regarding the surveillance being done on the global population. As a result companies have developed applications and tools to limit this reach. But as have seen in the last year very dangerous precedents are being set. Limitations on free speech and expression justified under the Covid-19 pandemic has been increased. While these developments are not new, the degree into which censorship is being normalized is nothing less than disturbing. In lieu of this there are still measures we can take to protect some semblance of privacy and freedom. This article will provide information about Virtual Private Networks, Web Browsers and Messaging apps. This is by no means a comprehensive end all be all guide, just general steps one can take to expect a reasonable level of privacy while communicating or browsing the Web. Due to the different applications and technologies we use, people will have other configurations and requirements, so some privacy configurations might not be applicable or needed. In the following tables you will find the specific names, descriptions and supported operating systems of the relevant privacy focused applications. If you have any security/privacy related questions please feel free to reach out to me directly. I will gladly try to help you out. If you have any recommendations that should be added let me know. My Element Name is “@el\_grey” and “El Grey” on Telegram.

## VPNs (Virtual Private Networks)

A VPN can give you some online anonymity and privacy online by creating a private network on a public network, through an encrypted tunnel. VPNs also protect a user from a direct line to the public internet, this can limit the attack surface that can be exploited by malicious actors. Many people are under the assumption that VPNs are the main means of protecting ones online privacy. This is not entirely true. VPNs are effective but it depends on the persons scenario and what they intend to use it for. Generally speaking VPNs are good for encrypting your network traffic in order to prevent your internet service provider from viewing your web traffic and seeing what you download. Many providers claim they do not log information like IP addresses(can reveal general location) but some actually do, so in light of that we should be operating off the assumption that there is the possibility that law enforcement agencies could access this type of information. In any case here are a few VPN providers I would recommend.

<u>Name</u>	<u>Description</u>	<u>Supported/Operating Systems</u>	<u>Website</u>
RiseupVPN	RiseupVPN is a free VPN client that was developed by Risup.net a privacy focused organization. They offer an effective lightweight VPN client.	GNU/Linux, macOS, windows, Android	<a href="https://riseup.net/en/vpn">https://riseup.net/en/vpn</a>
ProtonVPN	ProtonVPN is a client	GNU/Linux, macOS,	<a href="https://protonvpn.com/">https://protonvpn.com/</a>

	developed by the Swiss company Proton AG. Their VPN client allows connections over the TOR network along with P2P support.	windows, Android	
MullvadVPN	A VPN Service provider based in Sweden.	macOS, Linux, iOS, Android	<a href="https://mullvad.net/en/">https://mullvad.net/en/</a>

## Web Browsers

Browsers are the main mediums that allow us to access the web. While they are convenient and enable us to be able to access information and applications over the internet, they have also opened up the doors to surveillance and tracking. Most modern websites are able to profile users based on the web browser that they are using. This helps governments and corporations with the ability to track users actions and behaviors across numerous devices, this is known as cross device tracking. Browser fingerprinting is another way. This is a powerful technique that websites use to collect information about the users device, language and websites they visit. Some browsers have better privacy than others. The following table is a list of browsers that are more privacy oriented.

Name	Description	Supported Operating Systems	Website
Tor Browser	The Tor browser is the best privacy and security focused web browser. It is a fork of the Mozilla Firefox browser. It allows users to connect to the Tor network using a protocol developed by MIT and US Navy researchers ;). It offers the best balance between security, privacy and anonymity to date.  <i>Note: *Even the NSA has had a hard time "cracking" it</i>	GNU/Linux, macOS, Windows, Android	<a href="https://www.torproject.org/download/">https://www.torproject.org/download/</a>
Mozilla Firefox	Mozilla Firefox is one of the most popular web browsers on the market. Its free and open source	GNU/Linux, macOS, windows, Android, iOS	<a href="https://www.mozilla.org/en-US/firefox/browsers/">https://www.mozilla.org/en-US/firefox/browsers/</a>

	developed by the Mozilla Foundation. It offers very good privacy protections if configured correctly. It also offers a wide array of privacy plugins that can be utilized		
Brave Browser	Brave is a fast and privacy oriented browser that is a fork of the Chromium project. This browser has built in ad blockers and in can be used in conjunction with Tor.	GNU/Linux, macOS, Windows, Android	<a href="https://brave.com/download/">https://brave.com/download/</a>

### Messaging

Messaging applications have become a part of our everyday lives, but some have better privacy options than others. Due to some of the pressure from state security services many companies have been building backdoor into their applications that enables intelligence agencies and law enforcement to access the contents of our messages. In recent years the public has become more privacy conscious and messaging applications have been developed that support this trend. This is a list of the privacy focused messaging apps that implement end to end encryption(E2EE) among other privacy features. If a users device was compromised this would make law enforcement's ability to access the contents of the messages very difficult.

Name	Description	Supported Operating Systems	Website
Element.io	Element is a secure chat application and collaboration platform that runs on the matrix network. It allows for integration with other applications like telegram and slack. It allows users to use voice and video calls. One of the benefits of element is that it allows users to create their own instances that they can control. An email or phone number is not required to create an account.	Web, GNU/Linux, macOS, Windows, Android, iOS	<a href="https://element.io/get-started">https://element.io/get-started</a>
Wire	Wire is another end to end encrypted chat and collaboration platform that allows users to communicate	Web, GNU/Linux, macOS, Windows, Android, iOS	<a href="https://wire.com/en/download/">https://wire.com/en/download/</a>

	using video and voice calls along with file sharing. It also enables external guest collaboration and communication		
Threema	Threema is an end to end encrypted chat, voice and video that is used for communication. It does not require any phone number or email to create an account.	iOS, Android, Web	<a href="https://threema.ch/en/download">https://threema.ch/en/download</a>

## **Privacy Guides**

- **Privacytools.io:** <https://privacytools.io/>
- **awesome-privacy:** <https://github.com/KevinColemanInc/awesome-privacy>
- **IPVN Privacy Guides:** <https://www.ivpn.net/privacy-guides/>
- **prism-break.org:** <https://prism-break.org/en/>

## **Privacy Resources:**

- **Inteltechniques.com:** <https://inteltechniques.com/links.html>
- **The Privacy, Security and OSINT Show:** <https://soundcloud.com/user-98066669>
- **Online Spyware Watchdog:** <https://spyware.neocities.org/>