BREAKPOINTING BAD

VPN Transparency Report

Executive Summary

This report aggregates open source intelligence about the owners, operators, and developers of a selection of mobile VPN applications popular in repressive countries to derive a multifactor transparency score for each. VPNs are security critical software and so it is vital that all parties responsible for the development, operating, and management of these products be acting in good faith for the stakeholders dependent on them for security and privacy. Many of these applications have millions to tens or hundreds of millions of downloads and active users and a bad actor can jeopardize the security of their users. Unfortunately, many such apps do not provide enough information about the managing parties to warrant significant trust. The purpose of reporting this information is to provide a sense for how transparently the owners, operators, and developers of these applications are behaving, to recommend which apps to use and which to avoid.

Business Operations Transparency

This set of scoring factors is based on information present about the owner, developer, and operator of the VPN application. The website and privacy policy listed on the Google play store is used to bootstrap this section. From here, other information, such as links to social media accounts, operating organization, development and management team, can be added. These factors have *medium* impact on the application's transparency score.

VPN	**Business Operations Transparency**		
	Developer Website	*Privacy Policy*	*Has About*
Mullvad	1	2	1
TunnelBear	1	2	1
Lantern	1	2	1
Psiphon	1	2	1
Net Master-WiFi&VPN	0	1	0
XY-VPN	1	1	1
OKOVPN	1	0	1

Code Transparency

This information is collected from links provided on the applications website or searched for programmatically using github's search API. From here the code and licensing agreement, and whether it's open source can be derived. These factors has *high* impact for the transparency score. If the application is freely available for inspection, analysis, and download, then the application will score high on transparency, otherwise, it will score low.

VPN	**Code Transparency**			
	Has Github	*Has Gitee*	*Has Gitlab*	*Is OpenSource*
Mullvad	1	0	0	1
TunnelBear	1	0	0	1
Lantern	1	0	0	1
Psiphon	1	0	0	1
Net Master-WiFi&VPN	0	0	0	0
XY-VPN	0	0	0	0
OKOVPN	0	0	0	0

Social Media Transparency

Social media links are determined from searching the applications linked website and from using social media APIs to search for associated accounts. These factors have a high impact on the application's transparency score. If an application has at least one social media presence, it will score relatively well, otherwise it will score low.

VPN	**Social Media Transparency**				
	Contact information	*Has Facebook*	*Has Instagram*	*Has Twitter*	*Has Telegram*
Mullvad	2	1	1	1	0
TunnelBear	2	1	1	1	1
Lantern	2	0	1	1	0
Psiphon	2	0	1	1	0
Net Master-WiFi&VPN	1	0	0	0	0
XY-VPN	1	0	0	0	0
OKOVPN	1	0	0	0	0

Network/Domain Transparency

This score is derived from domain information collected using Whois records and Dig. These factors have minimal impact on the score and cannot reduce the score if they are absent but can increase the score if they are present. These factors are primarily supplemental. Information about the controlling company may be associated in the Registrant Org field. Admin names, emails, phone numbers, and addresses may also be contained within these records which can be used for further profiling. The administrator may also use DNSSEC which is also reported.

VPN	**Network Domain Transparency**		
	Whois	DNSSEC	Registrant Org
Mullvad	2	1	2
TunnelBear	2		
Lantern	2	0	1
Psiphon	2		
Net Master-WiFi&VPN	1		
XY-VPN	1		
OKOVPN	1		

Miscellaneous Security

These factors are derived from various sources such as the website. For example, Mullvad lists an Open PGP key and an Onion service for accessing their website. This is mostly supplement information and cannot reduce the transparency score. It can increase the transparency score. The rationale being that such an organization providing this access is more likely to support open access to information and Internet freedom.

VPN	**Misc. Security**	
	Has Onion Service	*Has PGP*
Mullvad	1	1
TunnelBear		
Lantern		
Psiphon	0	0
Net Master-WiFi&VPN		
XY-VPN	0	0
OKOVPN	0	0

MullVad VPN

Score Factors

Business Operations Transparency
100%

Developer Website
Privacy Policy
Contact Email
Has About

Domain Transparency
100%

Registrant Matches Owner
Uses DNSSEC

Code Transparency
100%

Public Git Repository
OpenSource

Social Media Transparency
100%

Twitter
Instagram
Facebook
Telegram

Manual Analysis
100%

Twitter
Instagram
Facebook
Telegram

Miscellaneous
100%

Onion Service
Open PGP

Netmaster VPN&Wifi

Score Factors

Business Operations Transparency
50%

Privacy Policy
Contact Email - personal gmail

Domain Transparency
0%

Code Transparency
0%

Social Media Transparency
0%

Manual Analysis
0%

Miscellaneous
0%