# Identifying VPN

## Proton VPN

1. Ports = 51820- 1224 – 88 – 433 – 4500 – 500 – 80 – 443 – 7770 – 4569 – 5060.
2. Packets are in length as a request is 122 – 138 – 154 – 186 – 107 – 119 – 127 – 135 – 138 – 143 – 146 – 181 – 1121 – 1433 – 54 – 66 - 121 – 133 – 152 = 160 – 195 – 1514 and response 122 – 138 – 154 – 130 – 1354 – 1402 – 1434 – 1482 – 107 - 177 – 181– 1282 – 1357 – 1395 – 1414 – 1423 – 1428 – 1433 – 60 – 66- 89 – 124 – 161 – 184 – 208 – 1295 – 1296 – 1370 – 1405 – 1440 – 1445 – 1459.
3. Ips are mentioned above.

## Hide.me

1. Port = 432 - 443 - 30xx - 4000x - 444
2. Packet size of requests are as 122 – 138 – 154 – 170 – 186 – 1466 – 126 – 142 – 158 – 174 – 190 – 1486 – 1358 – 54 – 66 – 1514 – 106 – 125- 126 – 127 – 1340 – 1344 – 1458 – 54 – 1514 and responses are as 122 – 138 – 154 – 170 – 1354 – 126 – 142 – 158 – 274 – 206 – 1358 – 1374 – 1486 – 56 – 1296 – 1362 – 1406 – 106 – 123 – 124 – 1344 – 1346 – 56 – 1499 max.
3. Ips are mentioned above.

## Windscribe

1. Port = 443 - 4500 and request are as 4500
2. Packet size of requests are as 122 - 1354 - 154 -138 -218 - 1494 - 118 - 130 - 1354 - 1514 - 1380 - 54 - 120 - 2809 + - 1527 - 66 - 148 - 90 - 1573 + - 106 and responses are as 1494 - 1352 – 1450 – 114 – 124 == 137 – 1382 - 158 - 1354 - 1478 - 1514 - 4250 - 1380 - 4284 - 60 - 1384 - 1376 - 1238 - 1392 - 1344 - 1294 - 106
3. Ips are mentioned above.

## Tunnel - Bear

1. Port = 51820, 4500 and requests are as 51820. 4500
2. The packet size of requests is as 122 - 138 - 154 - 186 -1354 - 126 - 142 - 158 - 174 - 1358 and responses are as 114 - 123 - 1348 - 1352 – 1494 - 126 - 142 - 158 - 174 - 1358 - 1374 – 1486.
3. There are many more IPs, but we can use just ports to identify the VPN.

## Turbo VPN

1. Port = 443 - 8080
2. Packet size of requests are as 56 - 66 - 1514 and responses are as 54 - 66 - 1514.
3. Ips are mentioned above.

## Hotspot Shield

1. Port = 5000 - 4500 - 443 and requests are as 4500 - 64500
2. The packet size of requests is as 60 - 122 - 138 - 154 - 186 - 1354 - 1358 - 1494 - 669 - 1389 -54 - 103 and responses are as 114 - 126 - 145 - 1318 - 1450 - 1494 - 1486 - 398 -1044 - 1279 - 1328 - 1514.
3. There are many more IPs, but we can use just ports and packet size to identify the VPN.

## Cloudflare WARP

1. Port = 2408
2. IP = 162.159.192.2
3. The packet size of requests is 74 – 114 – 126 – 155 – 161 – 651 and responses are as 74 – 114 – 1352 – 1354.

## Proton

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 103.125.235.**15-45** | 146.70.202**.0-125** | 185.107.80.**180-220** | 185.236.200**.225-255** | 212.38.97.**200-255** | 37.19.221.**170-255** | 89.187.177.**50-100** | 93.190.138.**150-200** | 93.190.138.**150-200** |
| 109.236.81.**128-196** | 146.70.45.**50-100** | 185.159.156.**70-100** | 190.2.130**.150-200** | 212.8.243.**50-122** | 38.132.103.**130-200** | 89.187.179**.50-100** | 93.190.140.**96-155** | 93.190.140.**96-155** |
| 138.199.21.**172-255** | 149.34.244.**122-196** | 185.159.158.**130-160** | 190.2.133.**1-255** | 212.8.253.**122-200** | 45.14.71.**1-96** | 89.187.180.**1-96** | 93.190.138.**150-200** |  |
| 138.199.22.**96-255** | 156.146.51.**122-172** | 185.177.124.**70-255** | 193.148.18**.50-122** | 217.138.206.**50-122** | 45.87.214.**100-155** | 89.187.185.**150-225** | 93.190.140.**96-155** |  |
| 138.199.50.**96-125** | 156.146.54.**50-122** | 185.177.125.**165-225** | 192.2.132.**170-255** | 217.23.3**.50-122** | 45.89.173.**170-255** | 89.38.97.**120-255** | 93.190.138.**150-200** |  |
| 138.199.52.**175-197** | 165.150.169.**50-145** | 185.177.126.**50-196** | 195.181.162.**122-200** | 37.120.217.**122-200** | 46.166.182.**1-100** | 89.38.99.**80-200** | 93.190.140.**96-155** |  |
| 138.199.7.**145-255** | 169.150.196.**50-196** | 185.182.193.**32-122** | 195.181.163.**1-50** | 37.120.244.**120-200** | 77.247.178.**100-200** | 89.39.104.**160-200** | 93.190.138.**150-200** |  |
| 143.244.44.**150-200** | 169.150.218.**1-196** | 185.183.33.**200-255** | 198.148.18.**40-100** | 37.19.200.**1-96** | 79.110.55.**0-100** | 89.39.106.96-155 | 93.190.140.**96-155** |  |
| 146.70.147.**50-122** | 185.107.56.**20-255** | 185.183.34**.122-200** | 212.102.35.**200-255** | 37.19.201.**150-255** | 87.249.134.**100-150** | 89.39.107.**100-225** | 93.190.138.**150-200** |  |
| 146.70.174.**50-96** | 185.107.57.**1-20** | 185.230.126.**2-50** | 212.102.51.**200-255** | 37.19.205.**120-200** | 89.187.170.**150-200** | 89.45.4.**0-50** | 93.190.140.**96-155** |  |

## Hide Me

|  |  |
| --- | --- |
| 146.70.106.xx | 31.13.189.xxx |
| 146.70.118.xx | 37.120.192.xxx |
| 146.70.128.xx | 45.141.152.xxx |
| 185.216.33.xxx | 45.152.18x.xxx |
| 217.138.194.xxx | 72.10.160.xxx |
| 217.138.195.xxx | 72.10.162.xxx |
| 217.138.208.xxx | 95.174.67.xxx |
| 217.138.215.xxx |  |

## IP Windscribe

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 103.10.197.xxx | 143.244.44.xxx | 162.222.198.xxx | 193.27.14.xxx | 212.102.xxx.xxx | 68.174.103.xxx |
| 104.129.xxx.xxx | 146.70.xxx.xxx | 169.150.19x.xxx | 194.59.249.xxx | 212.103.xxx.xxx | 71.19.25x.xxx |
| 104.223.xxx.xxx | 149.102.229.xxx | 172.98.68.xxx | 198.55.126.xxx | 217.138.25x.xxx | 77.81.136.xxx |
| 104.233.xxx.xxx | 149.36.xx.xxx | 173.44.36.xxx | 198.8.85.xxx | 223.123.88.xxx | 84.17.43.xxx |
| 104.245.146.xxx | 149.50.208.xxx | 185.120.147.xxx | 198.96.95.xxx | 23.105.1xx.xxx | 84.17.50.xxx |
| 107.150.xx.xxx | 149.57.xx.xxx | 185.156.173.xxx | 2.58.44.xxx | 27.122.1x.xxx | 86.106.87.xxx |
| 107.161.86.xxx | 154.47.26.xxx | 185.189.113.xxx | 204.44.122.xxx | 37.120.2xx.xxx | 89.41.26.xxx |
| 107.7.60.xxx | 155.94.xxx.xxx | 185.217.68.xxx | 207.244.91.xxx | 45.87.21x.xxx | 89.47.62.xxx |
| 138.199.xx.xxx | 155.97.217.xxx | 185.236.200.xxx | 208.77.22.xxx | 68.235.3x.xxx | 91.2xx.xxx.xxx |
| 139.199.47.xxx | 161.129.70.xxx | 185.253.97.xxx | 208.78.41.xxx | 68.235.4x.xxx | 92.119.117.xxx |
|  |  |  |  |  | 96.47.239.xxx |

## IP Tunnel

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 103.50.33.xxx | 134.209.xx.xxx | 143.110.1xx.xxx | 159.2xx.xxx.xxx | 165.2xx.xxx.xxx | 192.241.xxx.xxx | 45.55.xxx.xxx |
| 104.131.xx.xxx | 137.184.xx.xxx | 143.198.26.xxx | 159.65.xxx.xxx | 167.172.xxx.xxx | 200.25.50.xxx | 46.101.xxx.xxx |
| 104.248.162.xxx | 138.197.xxx.xxx | 146.190.xxx.xxx | 159.89.xxx.xxx | 167.71.xxx.xxx | 106.189.xx.xxx | 65.225.56.xxx |
| 107.170.xx.xxx | 139.180.xxx.xxx | 149.28.164.xxx | 161.35.16x.xxx | 174.138.xxx.xxx | 209.97.xxx.xxx | 67.205.185.xxx |
| 134.122.xx.xxx | 139.59.xxx.xxx | 157.2xx.xxx.xxx | 162.243.xxx.xxx | 188.166.xxx.xxx | 37.120.234.xxx | 68.183.58.xxx |

## IP Turbo

|  |
| --- |
| 134.209.212.xxx |
| 139.99.90.xxx |
| 157.245.218.xxx |
| 159.89.180.xxx |
| 162.243.x.xxx |
| 165.227.xxx.xxx |
| 51.79.xxx.xxx |

## IP Hot Spot

|  |  |
| --- | --- |
| 103.105.164.xxx | 198.145.2xx.xxx |
| 103.216.198.xxx | 204.14.xx.xxx |
| 104.232.xxx.xxx | 217.151.xxx.xxx |
| 107.182.231.xxx | 23.249.xxx.xxx |
| 146.70.1xx.xxx | 45.56.1xx.xxx |
| 173.244.217.xxx | 64.141.xx.xxx |
| 185.208.152.xxx | 89.11x.xxx.xxx |
| 192.119.160.xxx | 92.119.xxx |

## Cloudflare WARP

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Packet Length | Request Packet Length | Src. IP | Dest Port | Src. Port No. |
| 74 – 114 – 1352 – 1354 | 74 – 114 – 126 – 155 – 161 – 651 | 162.159.192.2 | 59655 | 2408 |

# TEST 1

**0 – 25 Seconds**

Ip = 104.232.37.114 - 134

Port = 443

Request = 54 - 1490

Response = 60 - 215 - 1148 - 1279 - 1514

So, VPN is = Hotspot Shield

**25 – 75 Seconds**

Ip = 138.199.47.222

Port = 443

Request = 122 - 138 - 154 - 1354

Response = 114 - 126 - 1352 - 1450 - 1494

So, VPN is = Windscribe

**75 – 112 Seconds**

Ip = 51.79.240.230

Port = 443

Request = 54 - 66 - 1514

Response = 52 - 56 - 66 - 79 - 1514

So, VPN is = Turbo

**112 – 180 Seconds**

Ip = 45.77.238.74

Port = 51820 - 51820

Request = 122 - 138 - 154 - 186 - 202 -

Response = 114 -126 - 1352 - 1494

Sot, VPN is = Tunnel Bear

**193 – 375 Seconds**

Ip = 190.2.130.161

Port = 88

Request = 54 - 122 - 138 - 154 -

Response = 56 - 122 - 138 - 154 - 1306 - 1354 - 1402 - 1434 - 1482

So, VPN is = Proton VPN

**348 – 387 Seconds**

Ip = 72.10.160.130

Port = 443

Request = 54 - 124 - 144 - 145 - 160 - 1514

Response = 56 - 124 - 144 - 1296 - 1362 - 1364 - 1406

So, VPN is = Hide.me

# Test 2

**0 – 46 Seconds**

Ip = 185.191.206.51

Port = 4500 - 4500

Request = 126 - 142 - 158 - 206 - 1358

Response = 126 - 142 - 158 - 206- 1358 - 1374 - 1486

So, VPN is = Tunnel Bear

**46 – 89**

Ip = 84.17.43.227

Port = 443

Request = 122 - 138 - 154 - 186 - 1494

Response = 114 - 124 == 137 - 1352 - 1450 - 1494

So, VPN is = Windscribe

**89 – 115**

Ip = 146.70.25.221

Port = 443

Request = 54 - 74 - 66 - 1389 -

Response = 56 - 60 - 1514 - 1360 - 1328

So VPN is = Hotspot Shield

# Test 3

**0 – 160**

Ip = 204.14.73.158

Port = 443

Request = 54 - 66 - 74 - 1389

Response = 56 - 60 - 1360 - 1514

So, VPN is = Hotspot Shield

**160 – 200**

Ip = 190.2.130.161

Port = 80

Request = 107 - 119 - 1433

Response = 107 - 119 - 1282 - 1345 - 1357 - 1395 - 1414 – 1428 – 1433

So, VPN is = Proton VPN

**200 – 250**

Ip = 208.77.22.205

Port = 443

Request = 122 - 138 - 154 - 202

Response = 114 - 126 == 137 - 1352 - 1414 -1450 - 1494

So, VPN is = Winscribe

# Test 4

**0 – 80 Seconds**

Ip = 51.79.240.230

Port = 443

Request = 54 - 66 - 74 - 1514

Response = 56 - 66 - 74 - 1514

So, VPN is = Turbo

**80 – 250**

Ip = 146.70.128.6

Port = 443

Request = 54 - 66 - 74 - 82 - 124 - 143 - 1362 - 1514

Response = 56 - 124 - 1296 - 1362 - 1406

So, VPN is = Hide.Me

**250 – 290**

Ip = 178.175.133.141

Port = 4500

Request = 126 - 142 - 158 - 174 - 1358

Response = 126 - 142 - 158 - 174 - 1358 - 1374 - 1486

So, VPN is = Tunnel Bear