



Tor: Privacy Enhancing Technology in Real Life (Sometimes Onions Make You Cry)

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Presenter



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GitHub

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Code Issues 242 Pull requests 119 Pulse Graphs

Filters is:issue is:open Labels Milestones New Issue

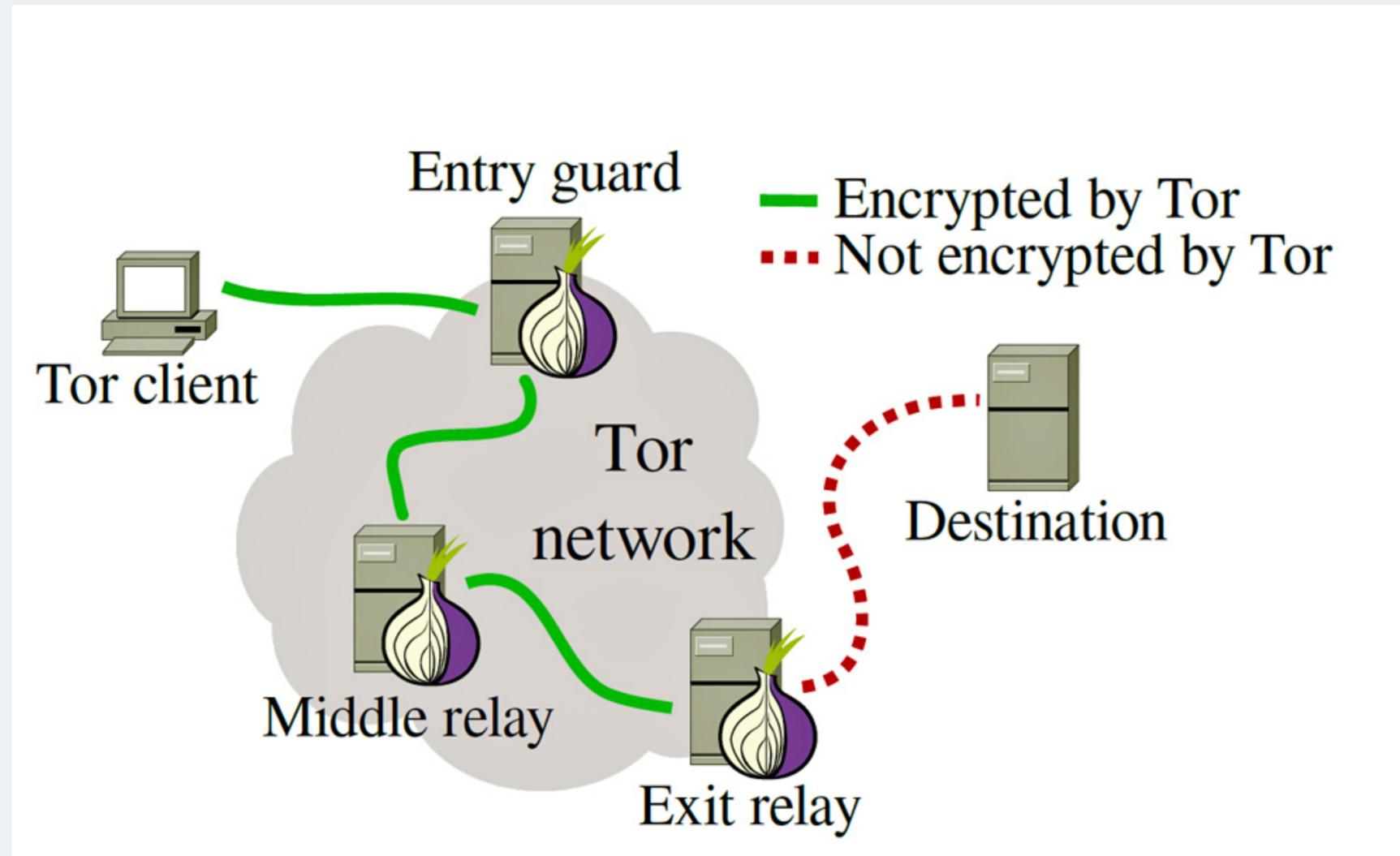
242 Open	11,886 Closed	Author	Labels	Milestones	Assignee	Sort
404 themes.getbootstrap #17871 opened 3 hours ago by HUGEwindow						0
Navbars not working in Alpha 4 #17870 opened 3 hours ago by ameenC						2
when input larger when sr-only accessibility css #17831 opened 5 hours ago by yasinkocak						1
`.table`s `width:100%` not work in `.table-responsive` #17826 opened 6 hours ago by chenweiyj						0
Tooltip not working (v4) #17825 opened 8 hours ago by EugeneVdovenko						0
Suspicious code: unused property access #17824 opened 8 hours ago by vagran						0
v4: Replacement of affix with position:sticky does not address all use cases js meta v4 #17819 opened a day ago by acch						8
sidebar is broken in Dashboard example confirmed examples v4 #17816 opened a day ago by bhutaninitin v4.0.0-alpha.2						1
Chrome bug makes rem sized borders vanish on zoom out browser bug css v4 #17812 opened a day ago by misterdai						1



Tor

a Privacy Enhancing Technology
Routes Internet traffic through the network
Traffic leaves through exit nodes
Anonymizes traffic to the server

Tor Network Diagram





- **Large amount of traffic coming from Tor exits nodes from many different users**
- **== Exit node IP address doesn't correlate to a particular user**
- **== some anonymity!**

Problem



- **Email verification was not required to create a GitHub account**
- **Logged-in Tor accounts make up ~ 0.08% of GitHub traffic**
- **~ 95% of logged-in Tor accounts were known spammers / harassers**

Solution



- **Ban Tor network users from using the site / logging in!**

Tor Exit Node Addresses



<https://check.torproject.org/exit-addresses>

ExitNode 0011BD2485AD45D984EC4159C88FC066E5E3300E
Published 2015-09-14 16:18:00
LastStatus 2015-09-14 17:03:44
ExitAddress 162.247.72.201 2015-09-14 17:05:54

ExitNode 00AE2BBFB5C0BBF25853B49E04CC76895044A795
Published 2015-09-14 06:30:25
LastStatus 2015-09-14 10:03:48
ExitAddress 80.82.79.58 2015-09-14 07:07:16

ExitNode 00C4B4731658D3B4987132A3F77100CF190D97
Published 2015-09-14 17:47:54
LastStatus 2015-09-14 18:03:41
ExitAddress 81.7.17.171 2015-09-14 18:07:58



- ~~Ban Tor network users from using the site / logging in~~
- Just because it would only ruin the day of at most 0.08% of our users, we wanted to respect use of PETs

Solution #2



- **Require 100% of Tor users to have a confirmed email address**
- **Not allowed to take any action until address confirmed**



- **Eliminated non-verified Tor accounts**
- **Increased overall verified account rates by %**
- **ZERO% increase in spam/troll activity for verified accounts**



- **Balancing the needs of the majority of users vs those who use PETs will be an ongoing and increasingly common issue.**
- **You need to understand how PETs work**
- **You can treat PETs users differently without harming them**



Thank you!