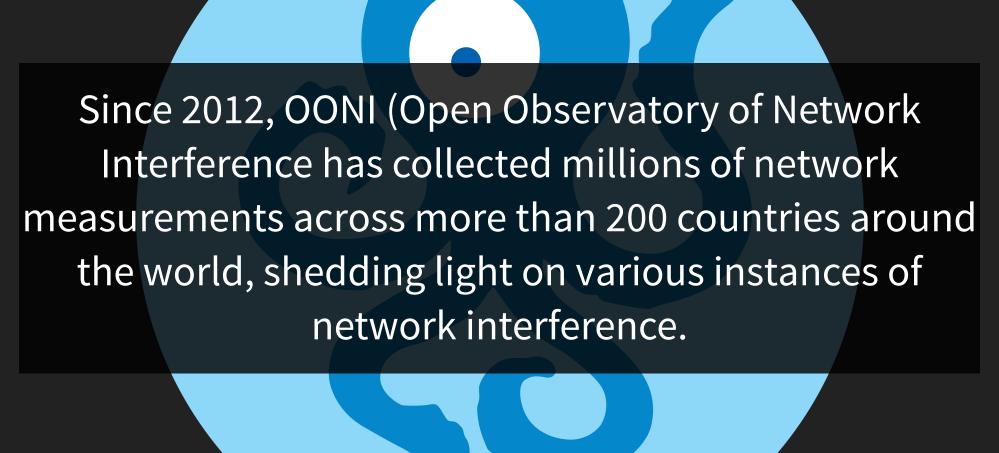


Vasilis Ververis (andz@torproject.org)

GPG Fingerprint: 8FD5 CF5F 39FC 03EB B382 7470 5FBF 70B1 D126 0162 Public Key: https://pgp.mit.edu/pks/lookup?op=get&search=0x5FBF70B1D1260162









Detect censorship and signs of network tampering

Shares observations and data about the nature, methods, and prevalence of censorship and network tampering around the world, through the use of open methodologies and FLOSS tools

OPEN DATA MODEL

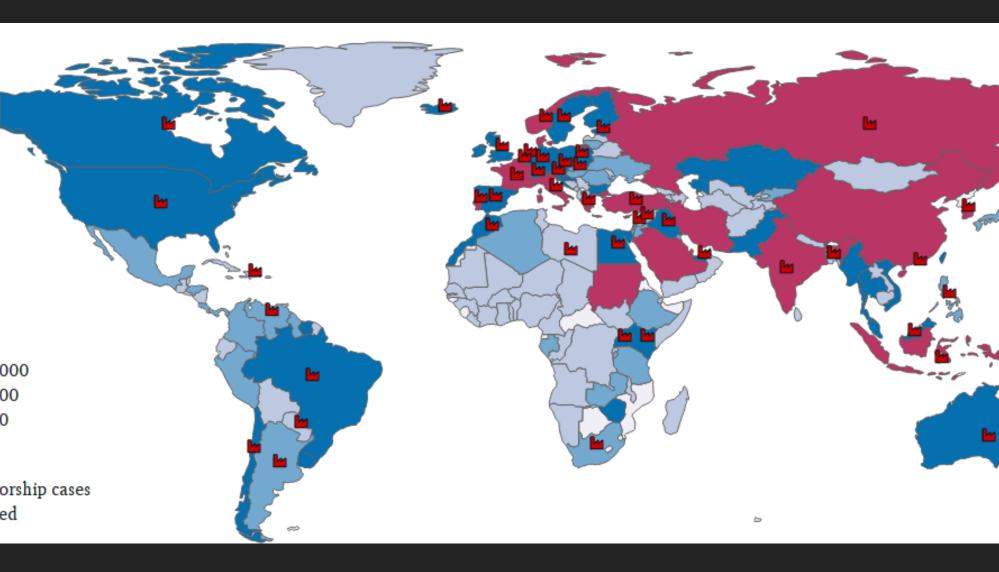
- Network measurement data (reports) submitted by volunteers
- Complete dataset (from 2012) available to use/download

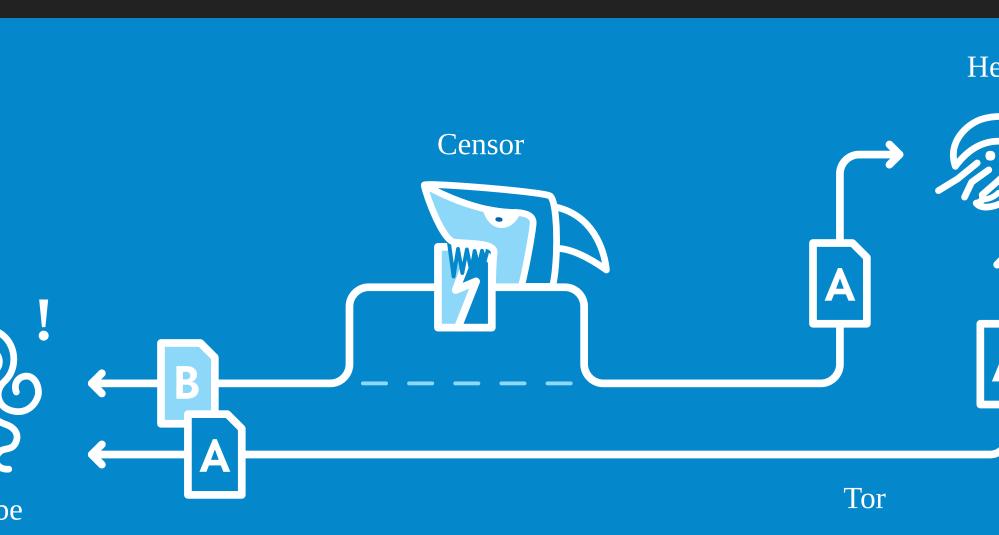
EVIDENCE OF INTERNET CENSOR SHIP

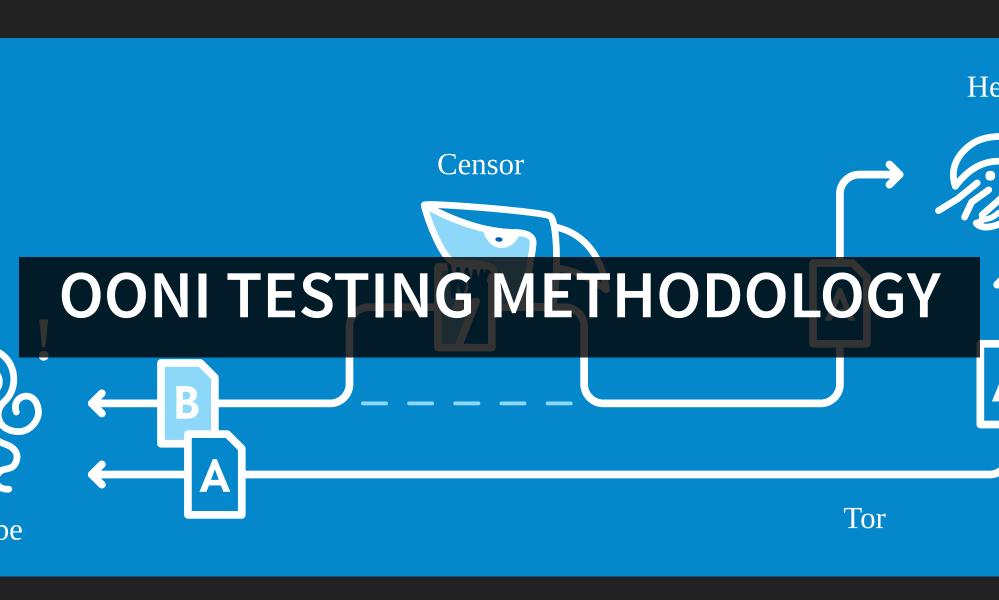
- Transparency: What is blocked, where and how?
 What is the health of the network that we are using?
- Legality: Can the blocking of specific types of sites and services be legally justified?
 - Story-telling & Advocacy: What is the impact of censorship on human rights?







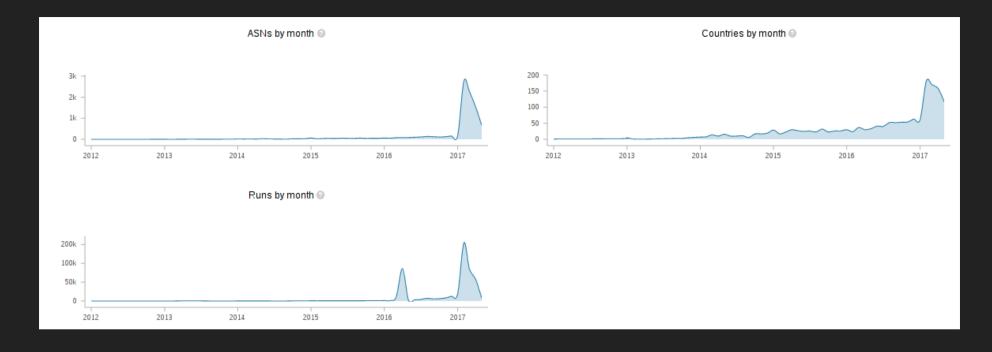




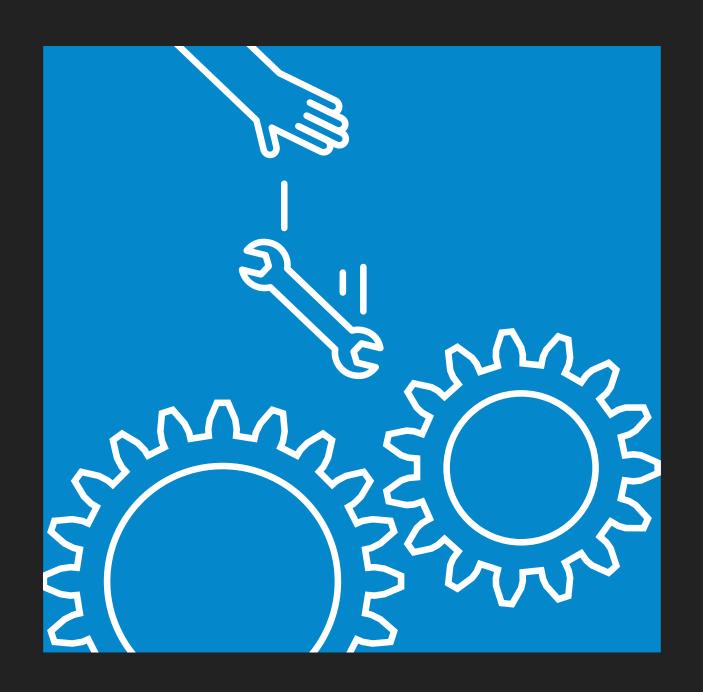
- Blocking of websites
- Blocking of instant messaging apps
- Blocking of censorship circumvention tools (Tor, VPN, Psiphon, Lantern)
- Detection of *middle boxes* proxy technologies that could be responsible for censorship and/or surveillance
- Speed and network performance tests (NDT)

OONI STATISTICS

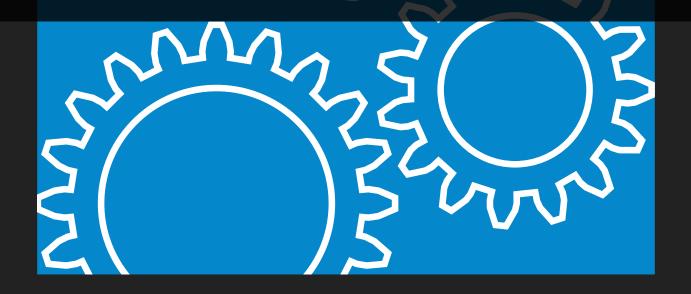




- Millions of network measurements collected from 200+ countries
- 2766+ unique ASNs









asurem ent

Web Connectivity 2017-03-23 06:24:01 UTC

20170323T062328Z_AS7303_UYQj7sql3cX8qzQXjRGZ4QCHf6lCnALEmLqcOjoFxpyIshSmI4

st runtime: 1.82408 seconds

Network: Telecom Argentina S.A., AR (AS7303) Name: ooniprobe-android

Version: 1.1.2

This measurement contains data that could be a sign of network tampering or censorship.

site

https://thepiratebay.se

n for blocking: dns

measurements for URL

WHATSAPP BLOCKED IN BRAZIL

```
# OONI Probe Report for http_requests (0.2.5)
# Mon May 2 23:17:02 2016
probe_asn: AS26615
probe_cc: BR
software_name: ooniprobe
software_version: 1.4.2
test_helpers: {}
test_name: http_requests
test_start_time: '2016-05-02 21:17:02'
test version: 0.2.5
agent: agent
body_length_match: null
```

LATAM TESTING METHODOLOGY

- ooniprobe tests: Web connectivity, HTTP requests
 - Ability to detect which of the tested websites are being blocked
- Citizenlab test lists: Community driven list of URL
 - Local/Global
- Custom probed URLs

- Countries data set: Colombia, Venezuela, Chile, Brazil
- Data period: June 2016 November 2017

LIMITATIONS OF THE STUDY:

- Longitudinal network measurements
- Distinct network vantage points
- Few countries have a comparable volume of data

RESULTS

COLOMBIA

- Probed ISPs: Tigo Une, Telefónica, Etb
- Blocking method: HTTP proxy, DPI

UNJUSTIFIED BLOCKING OF WEBSITES

- Misclassification: invalid blocking page
- Ex: filestubes.com

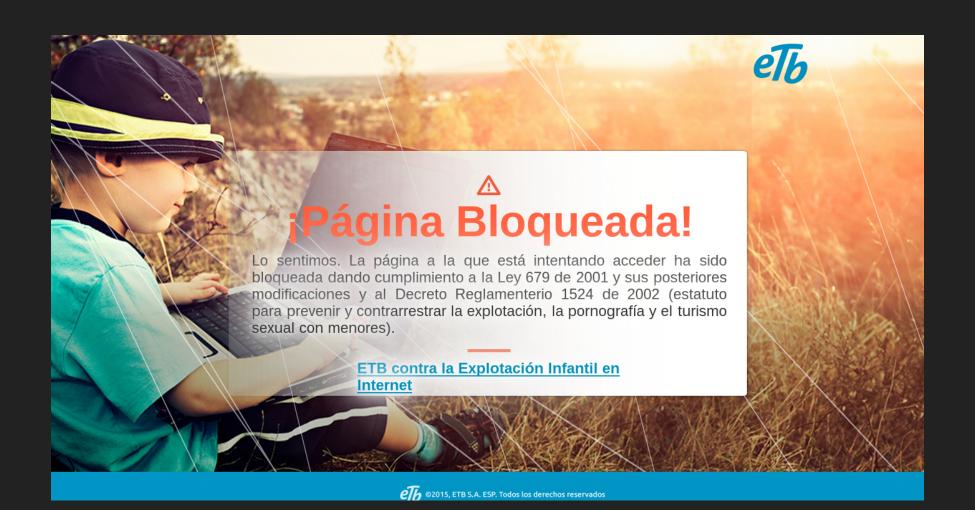


Esta página ha sido bloqueada en virtud de lo establecido en la Ley 679 de 2001 y Decreto 1524 de 2002, por considerar que contiene pornografia infantil de conformidad con el listado del Ministerio de Tecnologías de la Informacion y las Comunicaciones.

Para mayor informacion, consulte el sitio

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/isor de contenido wel

ADVERTENCIA

Coljuegos y el Centro Cibernético de la Policía Nacional previa validación, establecieron que la siguiente URL se encuentra operando ilegalmente juegos de suerte y azar en la modalidad de "novedoso operado por internet" en el territorio colombiano, por tal motivo es de obligación legal proceder de manera inmediata con el bloqueo por parte de los ISP de conformidad con lo establecido en el parágrafo 3 del Artículo 93 de la Ley 1753 de 2015, que reza:

"ARTÍCULO 93. Juegos novedosos. Modifíquese el artículo 38° de la Ley 643 de 2001, modificado por el artículo 22 de la Ley 1393 de 2010, el cual quedará así: (...)

PARÁGRAFO 3°. Los administradores del monopolio, las autoridades de inspección, vigilancia y control, las autoridades de policía y la Policía Nacional podrán hacer monitoreo a los canales, entidades financieras, páginas de Internet y medios que de cualquier forma sirvan a la explotación, operación, venta, pago, publicidad o comercialización de juegos de suerte y azar no autorizados, y ordenar las alertas y bloqueos correspondientes..."



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Diario Oficial No. 44.509, de 4 de agosto de 2001 por medio de la cual se expide un estatuto para:

Prevenir y contrarrestar la publicación de páginas con contenido sexual alusivo a menores de edad y adolescentes. Lo anterior en desarrollo del artículo 44 de la Constitución.







Measurement

₩ Web Connectivity 2016-11-14 02:10:29 UTC

ID: 20161114T020351Z_AS13489_ZS0mKAJKjuuS0GbEzsB5EO843yS8hitBSEfNPMq5rXSSuvZaPj

Test runtime: 1.12113 seconds

Probe

Network: EPM Telecomunicaciones S.A. E.S.P., CO (AS13489) Name: ooniprobe Version: 2.0.1



This measurement contains data that could be a sign of network tampering or censorship.

Vebsite

JRL: http://filestube.com

Reason for blocking: http-diff

iew measurements for URL

DNS query answers

Resolver: 74.125.184.3

Answers

77.79.198.140

77.79.198.141

HTTP Response Body

<html><head><meta http-equiv="refresh" content="0; url=http://controldecontenido.une.net.co/"></head><body></body></html>

expand >

TCP Connect results

- Connection to 77.79.198.141:80 was successful
- Connection to 77.79.198.140:80 was successful
- Inspect Raw Measurement Data:
- Object

FIRST LATAM COUNTRY REGULATING ONLINE GAMBLING RESOURCES:

- Official blocklist of URLs:
 - http://static.iris.net.co/semana/upload/documents/paginas-web-ilegales.pdf
- Blocklist entries with many errors

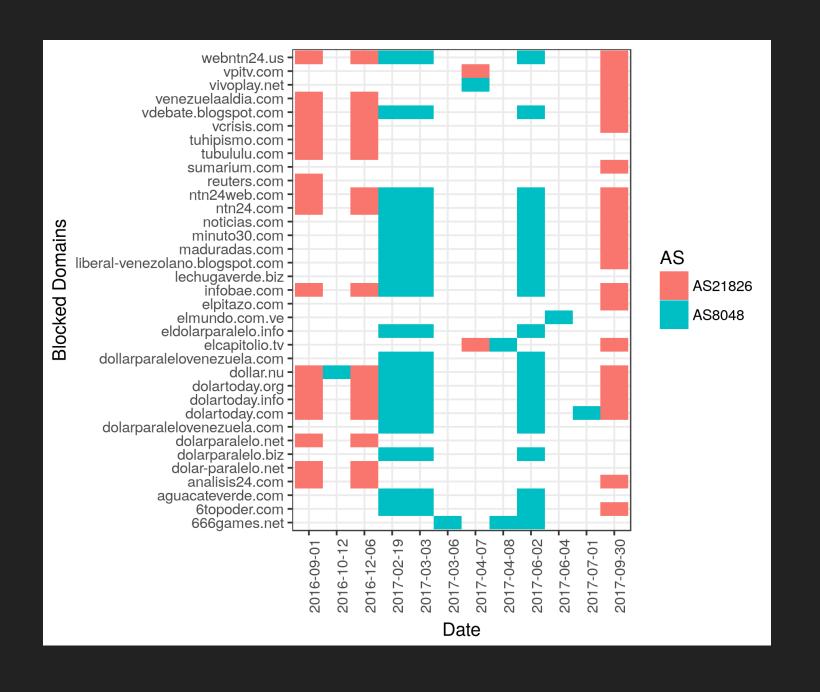
- Unclear how the blocking circulates to ISPs
- Malformed entries in blocklist
- Blocklist includes email addresses and Facebook profile page
 - Block email communication and Facebook website?

| No. | PAGINA VERIFICADA |
|-----|---|
| 258 | www.gamingclub.com/online-casino.aspx?s=aff91112&a=affad102 |
| 259 | www.luckynuggetcasino.com/es/ |
| 260 | www.maplecasino.ca/ |
| 261 | www.omnicasino.com/ |
| 262 | www.scasino.com/es/descargar.html |
| 263 | www.vegaspalmscasino.com/ |
| 264 | www.virgingames.com/ |
| 265 | www.yukongoldcasino.eu/ |
| 266 | www.boylesports.com/betting |
| 267 | es.cabaretclub.com/ |
| 268 | www.challengecasino.com/ |
| 269 | www.crowneeurope.com.com/es |
| 270 | www.riverbellecasino.com/es |
| 271 | www.superiorcasino.com/ |
| 272 | www.thisisvegas.com/ |
| 273 | www.casinolasvegas.com/en/indexhtml |
| 274 | www.cityclubcasino.com/es |
| 275 | www.citytowerscasino.com/es/usd |
| 276 | www.dashcasino.com/ |
| 277 | www.grosvenorcasino.com/ |
| 278 | www.jackpotcity.com/es |
| 279 | www.magicboxcasino.com/ |
| 280 | https://m.facebook.com/profile.php?id=100013654141621&refid=46&tsid&fref=search |
| 281 | WWW.ASSISTVET.CO |
| 282 | http://www.lsports.eu/ |
| 283 | http://client.lsports.eu//Account/Loging?ReturnUrl=%2F |
| 284 | c-crisari@hotmail.com |
| 285 | www.llanosportbet.co |
| 286 | www.llanosportbet.co |
| 287 | Bet24siete |

VENEZUELA

- Probed ISPs:
 - CANTV Servicios (AS8048)
 - Corporación Telemic C.A. (AS21826)
- Blocking method: DNS hijacking

- Censorship of news media, currency exchange information, blogs
- Indication of possible politically motivated censorship



CHILE

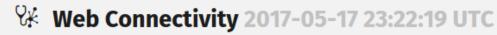
- Probed ISP: VTR BANDA ANCHA (AS22047)
- Blocking method: DNS filtering

- Blocking of a radical tech collective service provider (Riseup)
 - Blocking period: May 2017 August 2017
 - Blocking Tor directory authority

- Responsible disclosure: Internal procedures to block/unblock reported malicious IPs/Domains
- Neglect to unblock upon threat alert expiration



Measurement



 $\textbf{ID:}\ 20170517T232219Z_AS22047_4IIykUTumxjcpzHQd6SxxoaEImbFn3SxfjOv42g2uwDTittkIz$

Test runtime: 1.63862 seconds

Probe

Network: VTR BANDA ANCHA S.A., CL (AS22047) Name: ooniprobe Version: 2.2.0



This measurement contains data that could be a sign of network tampering or censorship.

Website

URL: https://riseup.net
Reason for blocking: dns
View measurements for URL

DNS query answers

Resolver: 200.83.1.202

Answers

TCP Connect results

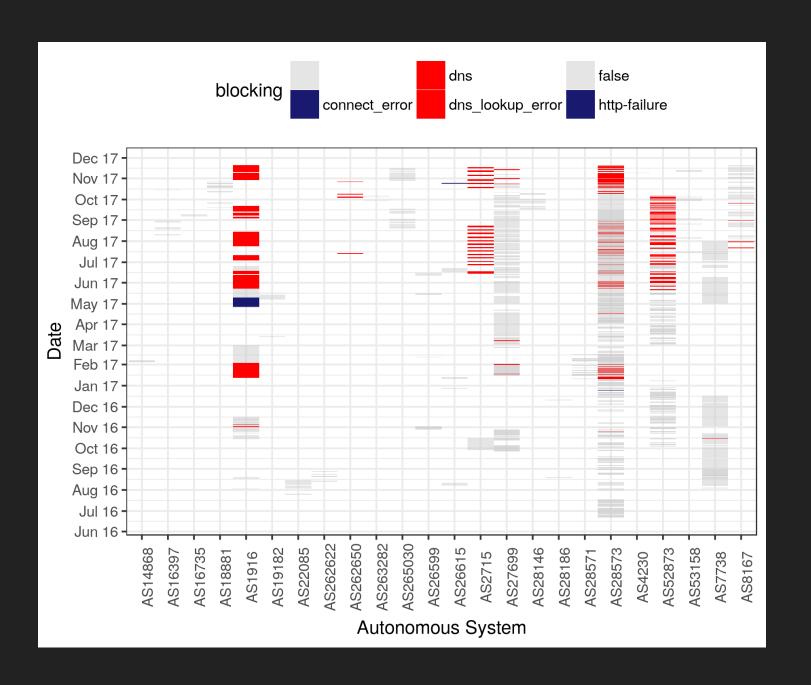


⊳ Object

BRAZIL

- Probed ISPs: Many:) (8 ASes)
- Blocking method: Possible DNS misconfiguration

- A regional news website (pernambuco.com) was/is inaccessible in Brazil and worldwide
- Further analysis indicates likely DNS misconfiguration



- Not identified the root cause of the issue:
 - The website is inaccessible in *some* networks:
 - Brazil: 8 out of 24 ASes
 - Worldwide: On a given date ~280 vantage points
- Contact website administrators, editors (almost everyone in contact page)
 - No response yet!

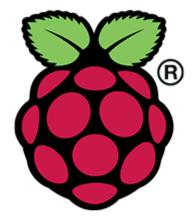
CONCLUSIONS

- Limitation of network measurements
- Blocklists: misclassification, lack of transparency, collateral damage, easily circumvented
- Responsible disclosure of ISPs.
 - Accidental blocking.
- Unreachable websites due to possible technical issues.. for year(s)

HELP REVEAL INTERNET CENSORSHIP

Install ooniprobe

Raspberry Pi



To install ooniprobe on Raspberry pi devices see our lepidopter install guide





OS X and Linux



To install ooniprobe on unix based systems read our installation guide



- Available for: Linux, Mac OS, Raspberry Pi, IOS, Android
- Source code:

https://github.com/TheTorProject/ooni-probe

GET INVOLVED

- IRC: #ooni on OFTC
- Mailing lists: ooni-dev, ooni-talk, ooni-operators
- Code: https://github.com/TheTorProject/ooni-probe (Mirror: https://gitweb.torproject.org/ooni-probe.git)
- Submit URLs for testing: https://ooni.torproject.org/get-involved/contributetest-lists
- Partnerships: https://ooni.torproject.org/getinvolved/partnership-program/