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Internet Measurement Village 2020

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Join us for a deep dive with an exciting schedule!

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Streaming live from June 10th @ <https://ooni.org/youtube>



Internet Measurement Village 2020

<https://ooni.org/imv2020>



Measuring Internet Censorship



OONI

Maria Xynou, 10th June 2020
Internet Measurement Village 2020



Αρχική | Ε.Ε.Ε.Π. | Εποπτεία & έλεγχος | Υπεύθυνο παιχνίδι | Παίγνια | Ενημέρωση | Επικοινωνία



Ενημερωτικό μήνυμα

Επιχειρήσατε πρόσβαση σε ιστότοπο μέσω του οποίου παρέχονται μη αδειοδοτημένες υπηρεσίες τυχερών παιγνίων.

Σύμφωνα με τον νόμο, οι πάροχοι υπηρεσιών διαδικτύου είναι υποχρεωμένοι να μην επιτρέπουν την πρόσβαση σε ιστοτόπους μη αδειοδοτημένων παρόχων τυχερών παιγνίων, οι οποίοι αναφέρονται στον οικείο κατάλογο (**Blacklist**) που τηρεί η Ε.Ε.Ε.Π.

Επισημαίνεται ότι η συμμετοχή σε τυχερά παίγνια, τα οποία διοργανώνονται χωρίς άδεια από την Ελληνική Δημοκρατία, επισύρει αυστηρές διοικητικές και ποινικές κυρώσεις.



Access to this site is Denied

برابر قوانین جمهوری اسلامی ایران و دستور مقامات قضایی
دسترسی به این سایت مجاز نمی باشد.

در صورتیکه این سایت به اشتباه فیلتر شده است , جهت بررسی مجدد دکمه Submit را بزنید.

If you think this site is incorrectly blocked please press the Submit button.

Access Restricted



Based on Regulation of the Minister of Communication and Information No. 19 of 2014



www.therealcuba.com

- It's harder to notice the blocking of less popular sites & services
- Internet censorship often differs from network to network within a country
- Most censorship techniques are quite subtle
- Cases of over-blocking and collateral damage
- The fact that a site or service is inaccessible *doesn't* necessarily mean that it's blocked by your Internet Service Provider (ISP)

Why measure internet censorship?

A world map where countries are shaded in various shades of blue. Darker shades indicate higher levels of OONI activity, while lighter shades indicate lower activity. The map shows significant activity across North America, Europe, and parts of Asia and Africa.

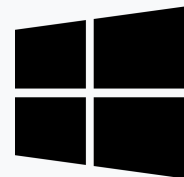
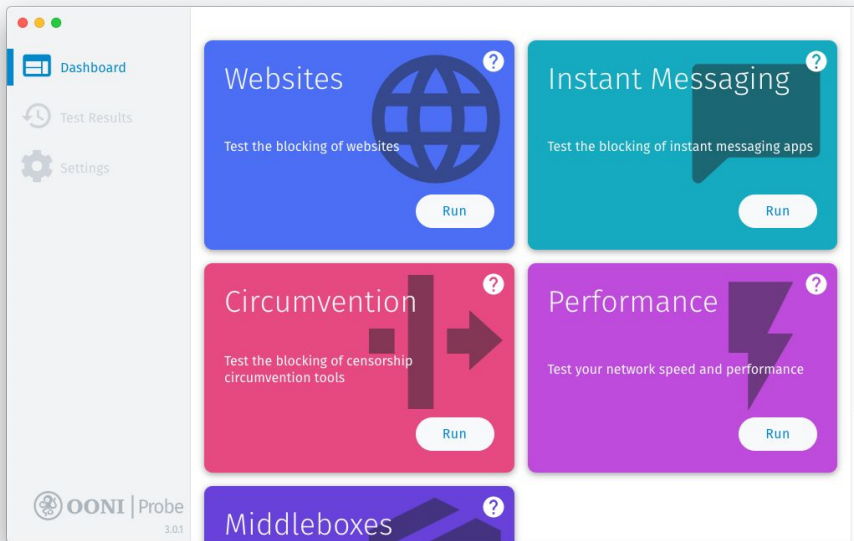
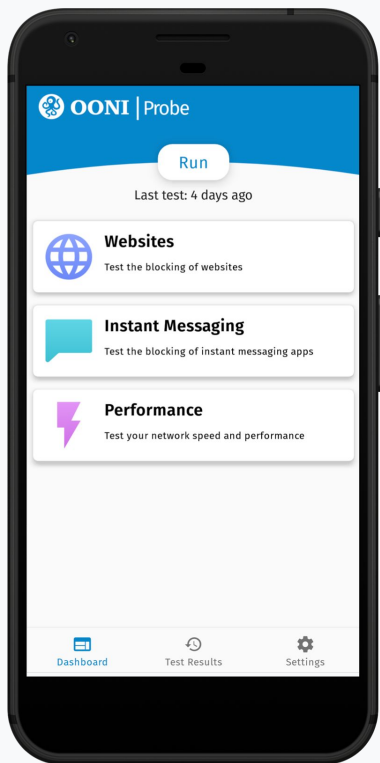
Free software project aimed at empowering decentralized efforts in increasing transparency of **internet censorship** around the world.

Since 2012, the OONI community has collected millions of network measurements from *more than 200 countries*, shedding light on many cases of internet censorship around the world.



<https://ooni.org/>

OONI: Open Observatory of Network Interference



<https://ooni.org/install/>

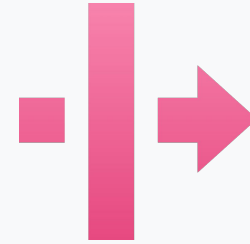
OOONI Probe



Blocking of **websites**



Blocking of **instant messaging apps**



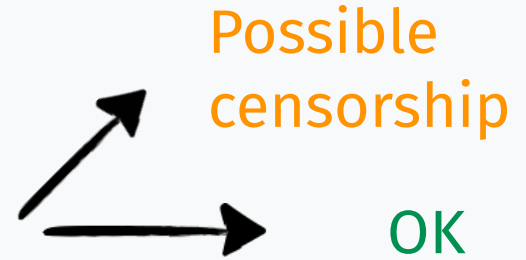
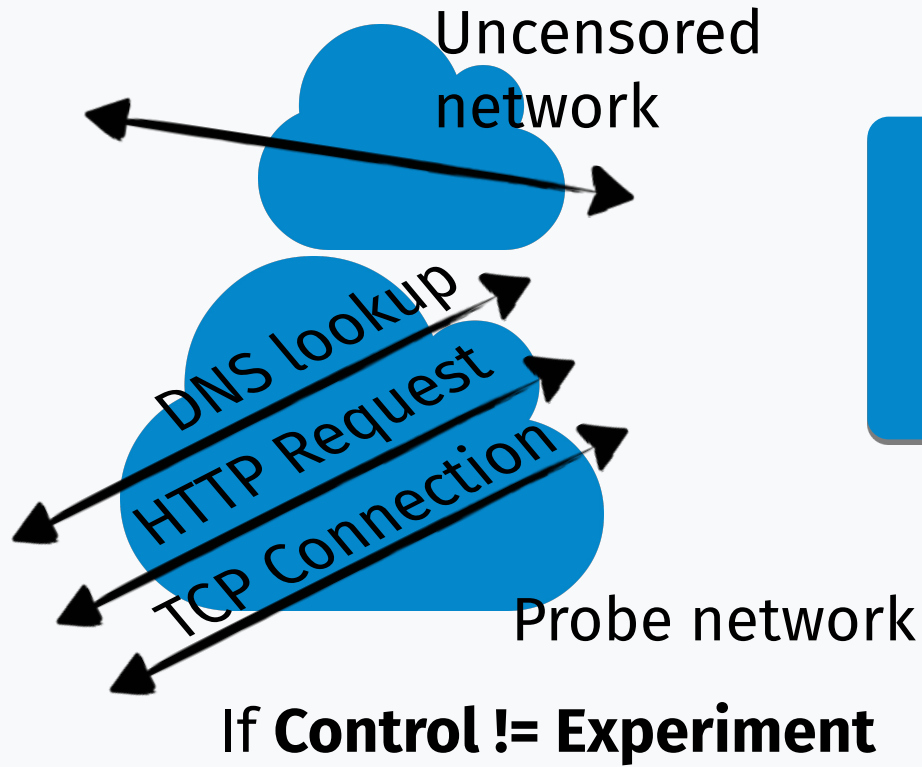
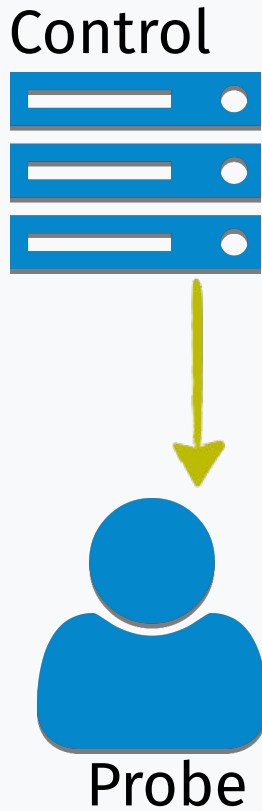
Blocking of **copyright circumvention tools**



Measurement of network **speed & performance**

OONI Probe Tests

<https://ooni.org/nettest/>



Web Connectivity

- **Global list:** Internationally relevant websites
- **Country-specific lists:** Websites that are relevant to a specific country

- **How to contribute to test lists:**
<https://ooni.org/get-involved/contribute-test-lists/>
- **Citizen Lab GitHub repo:**
<https://github.com/citizenlab/test-lists>

**Citizen Lab test lists:
Websites tested by OONI Probe**

Carrier 9:49 AM

Test Results

Tests: 4 | Networks: 1 | Data Usage: ↑ 29.1 MB, ↓ 105.1 MB

Filter Tests

DECEMBER 2018

- Middleboxes** Not detected
 - AS30722 - Vodafone Italia S.p.A. 12/12/18, 1:28 AM
- Performance** ↑ 21.2 Mbps, ↓ 44.9 Mbps, 1440p
 - AS30722 - Vodafone Italia S.p.A. 12/12/18, 1:27 AM
- Instant Messaging** ! 0 blocked, ✓ 3 accessible
 - AS30722 - Vodafone Italia S.p.A. 12/12/18, 1:26 AM
- Websites** ! 1 blocked, 39 tested
 - AS30722 - Vodafone Italia S.p.A. 12/12/18, 1:23 AM

Dashboard | Test Results | Settings

Carrier 9:49 AM

Web Connectivity Test

! http://thepiratebay.org
Likely blocked

http://thepiratebay.org is likely blocked by means of HTTP blocking (a blockpage might be served).

Note: False positives can occur. Learn more [here](#).

Date & Time	12/12/18, 1:23 AM
Runtime	2.50 sec
Country	IT
Network	Vodafone Italia S.p.A. AS30722 (WiFi)

Carrier 9:49 AM

NDT Speed Test

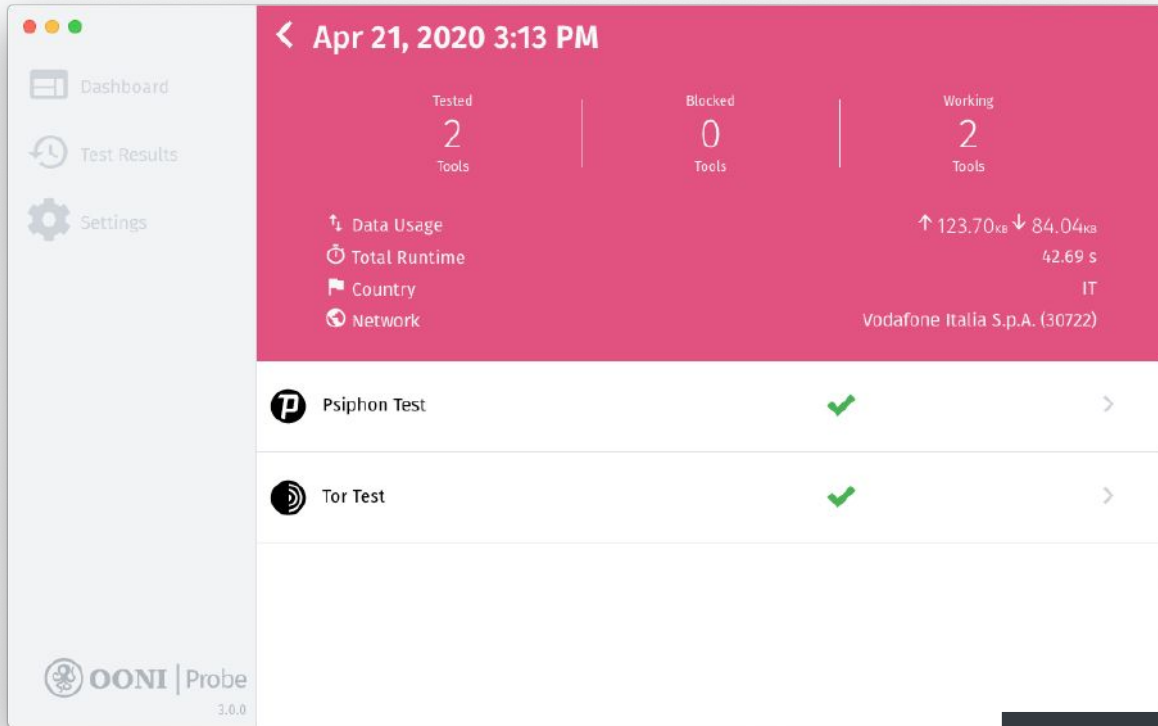
Download	44.9 Mbps	Upload	21.2 Mbps
Ping	15.0 ms	Server	N/A

Packet Loss	0.008 %	Out of Order	14.0 %
Average Ping	18.3 ms	Max Ping	29.0 ms
MSS	1440	Timeouts	0

Date & Time	12/12/18, 1:26 AM
Runtime	24.94 sec
Country	IT
Network	Vodafone Italia S.p.A. AS30722 (WiFi)

<https://ooni.org/install/mobile>

OOONI Probe mobile app



<https://ooni.org/install/desktop>

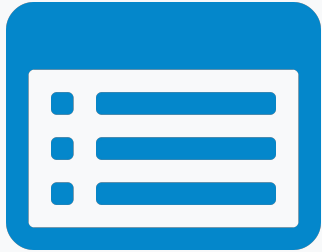
OONI Probe desktop app

- **OONI Probe is not a privacy tool.** Anyone monitoring your internet activity (e.g. ISP) will know that you are running OONI Probe.
- Types of tested URLs include provocative or objectionable sites (e.g. pornography).
- By default, OONI measurements are openly published.

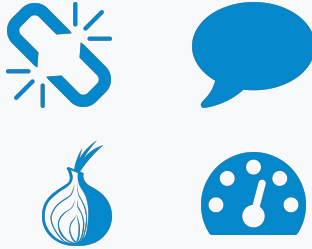
<https://ooni.org/about/risks/>

Heads up!

Contribute to test lists



Types of test to run

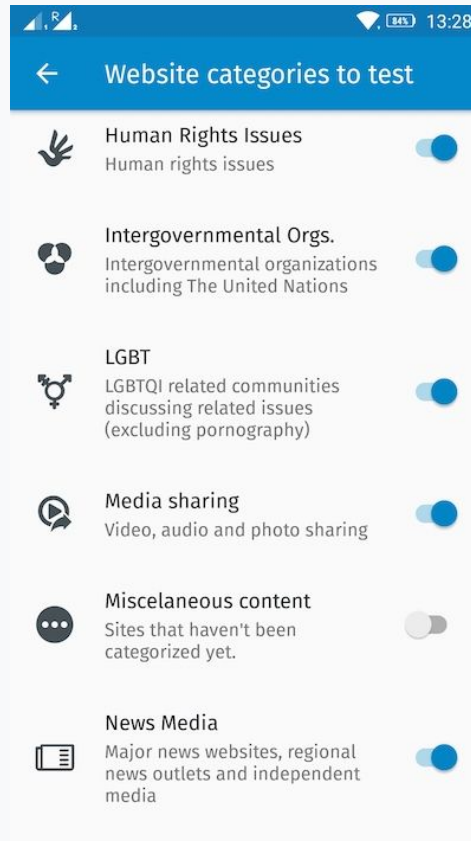
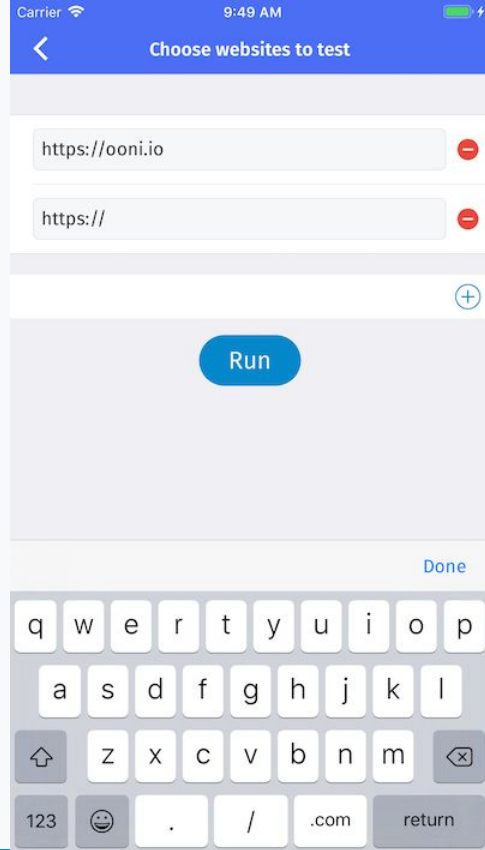


Privacy settings



<https://ooni.org/about/data-policy/>

Choices you can make



Choose which websites to test



Let's fight internet censorship together!

Test Name

Internet Censorship

- Web Connectivity
Check if websites are blocked.
[Learn how this test works here](#)

Speed & Performance

- NDT Speed Test
- DASH Video Streaming

Middleboxes

- HTTP Invalid Request Line
- HTTP Header Field Manipulation.

What you can do

Generate a link and share it with your friends and contacts around the world. Encourage them to run OONI Probe to test the sites of your choice!

URLs

http:// 

+ Add URL

GENERATE

<https://run.ooni.io>

Coordinate OONI Probe testing



Tweet

Link

Share this URL with your friends

https://run.ooni.io/nettest?tn=web_connectivity&ta=%7B%22urls%22%3A%5B%22http%3A%2F%2F%22%5D%7D&mv=1.2.0

Or embed this code on your website

```

/* For a simple button */
<a href='https://run.ooni.io/nettest?
tn=web_connectivity&ta=%7B%22urls%22%3A%5B%22http%3A%2F%2F%22%
5D%7D&mv=1.2.0' class='ooni-run-button'>Run OONI!</a>

```

DONE

GENERATE

- HTTP Invalid Request Line
- HTTP Header Field Manipulation.

Thematic OONI Probe testing

Social media, news websites, and VPNs often get blocked during political events (such as elections or protests) around the world.

To support **rapid response** to emergent censorship events, we share the following [OOONI Run](#) buttons to enable the testing of specific types of websites.

1. Install the **OOONI Probe mobile app**: [Android](#), [iOS](#), [F-Droid](#)
2. **Tap the buttons below** & open them with your **OOONI Probe mobile app** (not with a browser)
3. Tap **Run**

Note: These tests require turning off VPNs.

[SOCIAL MEDIA \(39 URLS\)](#)[NEWS MEDIA \(47 URLS\)](#)[VPNS \(21 URLS\)](#)[WIKIPEDIA \(28 URLS\)](#)[HUMAN RIGHTS \(27 URLS\)](#)[ENVIRONMENT \(20 URLS\)](#)[LGBTQI \(26 URLS\)](#)[LGBTQI \(600 URLS\)](#)[REPRODUCTION RIGHTS \(4 URLS\)](#)[COVID-19 \(25 URLS\)](#)

<https://ooni.org/get-involved/run/>

OOONI Run buttons

OOONI | Explorer

Uncover evidence of internet censorship worldwide

Open data collected by the global OONI community

Explore

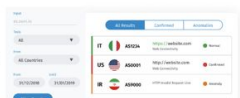
280.1M Measurements 233 Countries 17.9k Networks

OOONI Explorer is an open data resource on internet censorship around the world. Consisting of millions of network measurements collected from more than 200 countries. Since 2012, OONI Explorer sheds light on internet censorship and other forms of network interference worldwide.

Confirmed Blocked 15 (30%)
Accessibility 10 (20%)
Accessible 25 (50%)

Blocking of Websites & Apps
 Check the blocking of websites around the world. Explore data on the testing of WhatsApp, Facebook Messenger, and Telegram.

Search
 Dig through OONI measurements with a powerful search tool. Filter results to view measurements that present network anomalies by countries, networks, and date range.



Monthly coverage worldwide

Last month, OONI Probe was run 9,854,217 times on 5,279 networks in 214 countries. Explore the monthly usage of OONI Probe through the stats below.



Highlights

Work measurements collected from more than 200 countries. OONI Explorer is updated with new measurements! Some highlights through OONI data.

- Venezuela**
2019 presidential crisis
Blocking of Wikipedia and social media
Explore Read Report
- Zimbabwe**
2019 fuel protests
Social media blocking and internet blackouts
Explore Read Report
- Spain**
Catalonia 2017 independence referendum
Blocking of sites related to the referendum
Explore Read Report
- Iran**
2018 anti-government protests
Blocking of Telegram, Instagram and Tor
Explore Read Report
- Pakistan**
2017 protests
Blocking of news websites and social media
Explore Read Report
- Uganda**
2016 general elections
Blocking of social media
Explore Read Report

OOONI Explorer

- **Normal.** When everything is OK (e.g. tested website is accessible).
- **Anomalous.** Signal that something is wrong (we should check the measurement data more carefully). Anomalous measurements MIGHT contain evidence of censorship, but not necessarily (i.e. false positives).
- **Confirmed blocked.** We only **confirm the blocking of a website** when we detect a **block page**.

Interpreting the data

Access Restricted



Based on Regulation of the Minister of Communication and Information No. 19 of 2014

Example block page (from Indonesia)

OOONI | Explorer

Country
Venezuela

ASN
e.g. AS30722

From
Until
2019-09-10

Test Name
Any

Domain
e.g. twitter.com

Status
 All Results
 Confirmed
 Anomalies

Filter Results

Country
Iran

ASN
e.g. AS30722

From
Until
2019-09-10

Test Name
Any

Domain
e.g. twitter.com

Status
 All Results
 Confirmed
 Anomalies

Filter Results

IR	AS 49100	2019-09-09	NDT	
IR	AS 49100	2019-09-09	NDT	
IR	AS 49100	2019-09-09	NDT	
IR	AS 49100	2019-09-09	NDT	
IR	AS 44244	2019-09-09	Web Connectivity	http://www.autodesipln360.com/
IR	AS 44244	2019-09-09	Web Connectivity	https://www.bbc.com/news
IR	AS 44244	2019-09-09	Web Connectivity	https://twitpic.com/
IR	AS 44244	2019-09-09	Web Connectivity	http://members.fortunecty.com/
IR	AS 44244	2019-09-09	Web Connectivity	http://www.taknaz.ir/
IR	AS 44244	2019-09-09	Web Connectivity	https://www.frontlinedefenders.or...
IR	AS 44244	2019-09-09	Web Connectivity	http://www.cyberfreehost.com/
IR	AS 44244	2019-09-09	Web Connectivity	https://video.google.com/
IR	AS 44244	2019-09-09	Web Connectivity	http://wp-persian.com/
IR	AS 44244	2019-09-09	Web Connectivity	http://marlikiran.tripod.com/
IR	AS 44244	2019-09-09	Web Connectivity	https://www.helvetas.ch/
IR	AS 44244	2019-09-09	Web Connectivity	https://spideroak.com/
IR	AS 44244	2019-09-09	Web Connectivity	http://radiofreetexas.org/

OOONI Explorer Search Tool

Country

Iran

ASN

e.g. AS30722

From

Until

2019-09-10

Test Name

Any










Domain

e.g. twitter.com

Status

- All Results
- Confirmed
- Anomalies

Filter Results

IR		AS 44244	2019-09-10	Web Connectivity	http://www.muhammadanism.com/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://www.hemid.com/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://ayatesheyhani.blogdrive.c.../	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://www.sobhiran.com/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://www.akhbar-rooz.com/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://mihan.net/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://www.webwarper.net/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://kodoiin.blogspot.com/	Confirmed
IR		AS 44244	2019-09-09	Web Connectivity	http://www.bahmanagha.blogspot.c.../	Confirmed

OONI Explorer: Confirmed blocked

Welcome to the OONI API

Dynamically updated every day, the OONI API enables researchers and data scientists to analyze all data collected from OONI Probes around the world.

Download and search [OOONI Probe](#) network measurements.

As the OONI API is not designed for batch consumption of OONI data, please use it for a modest request rate. If you are interested in analyzing OONI data in batch, please look into [setting up an OONI PostgreSQL MetaDB instance](#) or fetching the whole OONI dataset from the [ooni-data Amazon S3 bucket](#). If in doubt [contact the OONI team](#).

[READ THE API DOCS](#)

- OONI PostgreSQL Metadb
- ooni-data Amazon S3 bucket

<https://ooni.org/data/>

Batch data analysis

- **Evidence** of censorship events
- **Transparency** of information controls
- Allows **researchers** to conduct independent studies & to explore other research questions
- Allows the public to **verify OONI findings**
- **Archive the Internet**

<https://ooni.org/data/>

Open Data

- **Burundi.** Social media blocked amid 2020 general election.
- **Venezuela.** Blocking of Wikipedia & social media amid presidential crisis.
- **Zimbabwe.** Social media blocked amid 2019 fuel protests.
- **Iran.** Blocking of Telegram, Instagram, and Tor during 2018 anti-government protests.
- **Spain.** Blocking of sites related to the Catalan referendum.

<https://ooni.org/reports/>

Politically-motivated cases

- **Malaysia.** Blocking of media websites reporting on the 1MDB scandal.
- **Egypt.** Hundreds of media websites blocked.
- **Myanmar.** “Fake news” websites blocked amid COVID-19 pandemic.

<https://ooni.org/reports/>

Media censorship

- **Indonesia.** Blocking of LGBTQI sites.
- **Iran.** Blocking of women's rights sites, Kurdish sites, LGBTQI sites, Baha'i sites.
- **Pakistan.** Blocking of Baluch and Hazara sites.
- **Nigeria.** Blocking of Biafra sites.

<https://ooni.org/reports/>

Blocking of minority group sites

- **Ethiopia.** Used to block numerous media websites, political opposition sites, and circumvention tool sites => Most were unblocked in 2018 as part of political reforms => But access to social media was blocked again in 2019.
- **Cuba.** Used to primarily serve blank block pages, only blocking the HTTP version of websites. Now they censor access to sites that support HTTPS by means of IP blocking.

<https://ooni.org/reports/>

Censorship changes

- Run OONI Probe: <https://ooni.org/install/>
- Contribute to test lists:
<https://ooni.org/get-involved/contribute-test-lists/>
- Translate the OONI Probe apps:
<https://www.transifex.com/otf/ooniprobe/>
- Analyze OONI data: <https://ooni.org/data/>
- Join community discussions: <https://slack.ooni.org/>

Get Involved!



contact@openobservatory.org



github.com/ooni



[@OpenObservatory](https://twitter.com/OpenObservatory)

Contacts