iMAP Indonesia 2024 Internet Censorship Report

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About iMAP

The Internet Monitoring Action Project (iMAP) aims to establish regional and in-country networks that monitor network interference and restrictions to the freedom of expression online in 10 countries: Myanmar, Cambodia, Hong Kong, India, Indonesia, Malaysia, Philippines, Thailand, Vietnam and Timor-Leste. Sinar Project works with national digital rights partners in these ten countries. The project is done via Open Observatory Network Interference (OONI) detection and reporting systems, and it involves the maintenance of test lists and the collection and analysis of measurements.

More information is available at imap.sinarproject.org. Any enquiries and suggestions about this report can be directed to team@sinarproject.org

About Sinar Project

Sinar Project is a civic tech initiative that uses open technology, open data, and policy analysis to systematically make important information public and more accessible to the Malaysian people. It aims to improve governance and encourage greater citizen involvement in the nation's public affairs by making the Malaysian Parliament and Government more open, transparent, and accountable. More information is available at https://sinarproject.org.

How to use this report

This report provides an overview of the state of internet censorship in Indonesia. It is not meant to provide a comparison of measurements across countries or measurements among different website categories covered by the iMAP project.

- Recommendations to audience:
- Learn about supporting evidence related to internet censorship in Indonesia by reviewing research and case studies.
- Understand the latest developments of internet censorship in the country, in terms of methods of blockings and the websites affected by censorship.
- Support or advocate for changes in laws and policies to improve internet freedom in Indonesia.
- Take action and get involved by spreading awareness, signing petitions, or joining initiatives that fight against internet censorship.

Abbreviations

ALDR	Alcohol and Drugs
ANON	Anonymization and Circumvention tools
ASN	Autonomous System Number
COMT	Communication Tools
CTRL	Control Content
CULTR	Culture
DNS	Domain Name System
COMM	E-commerce
ECON	Economics
ENV	Environment
FILE	File-sharing
GMB	Gambling
GAME	Gaming
GOVT	Government
HACK	Hacking Tools
HATE	Hate Speech
HOST	Hosting and Blogging Platforms
HUMR	Human Rights Issues
HTTP	Hypertext Transfer Protocol
IGO	Intergovernmental Organisations
ICCPR	International Covenant on Civil and Political Rights
iMAP	Internet Monitoring Action Project
IP	Internet Protocol
ISP	Internet Service Provider
MMED	Media Sharing
MISC	Miscellaneous Content
NEWS	News Media
DATE	Online Dating
OONI	Open Observatory Network Interference

POLR	Political Criticism
PORN	Pornography
PROV	Provocative Attire
PUBH	Public Health
REL	Religion
SRCH	Search Engines
XED	Sex Education
GRP	Social Networking
MILX	Terrorism and Militants
TCP	Transmission Control Protocol
TLS	Transport Layer Security

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Key Findings

- From mid-2023 to mid-2024, Indonesia's socio-political landscape was dominated by the presidential race as well as the opposition to a string of major government policies and legislative programmes.
- The Ministry of Communications and Information continues to block websites through the official blocklist Trust Positif, and more than 90% of porn and gambling websites tested through OONI were found to be blocked.
- There were reports of more stringent censorship mechanisms such as DNS hijacking, with discussions of IP blocking and encrypted DNS in planning.

Background

Population	281.6 mil (2023, Statistics Indonesia)[1] 275.5 mil (2022, World Bank)[2]
Internet penetration (% of population using the internet)	79.5% (2024, APJII)[3] 66% (2022, World Bank)[4]
Mobile subscriptions (per 100 inhabitants)	115 (2022)[5]
Freedom on the Net score (2024)	49/100; Partly free (2023)[6]
World Press Freedom Index ranking	111/180 (2024)[7]
Religion (%)	87.4% Islam 7.47% Christianity 3.07% Catholicism 1.7% Hinduism 0.73% Buddhism 0.03% Confucianism 0.04% Other (2022)[8]
ICCPR Ratification	No

Table 1: Summary of demographics of Indonesia

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[1] BPS – Statistics Indonesia (Feb 22, 2024). Penduduk, Laju Pertumbuhan Penduduk, Distribusi Persentase Penduduk, Kepadatan Penduduk, Rasio Jenis Kelamin Penduduk Menurut Provinsi, 2024. https://www.bps.go.id/id/statistics-table/3/V1ZSbFRUY3lTbFpEYTNsVWNGcDZjek53YkhsNFFUMDkjMw==/penduduk--laju-pertumbuhan-penduduk--distribusi-persentase-penduduk--kepadatan-penduduk--rasio-jenis-kelamin-penduduk-menurut-provinsi.html?year=2024

[2] World Bank Group (n.d.). Population, total - Indonesia. https://data.worldbank.org/indicator/SP.POP.TOTL?locations=ID

[3] APJII – Association of Internet Service Providers Indonesia (Feb 7, 2024). APJII Jumlah Pengguna Internet Indonesia Tembus 221 Juta Orang. https://apjii.or.id/berita/d/apjii-jumlah-pengguna-internet-indonesia-tembus-221-juta-orang

[4] World Bank Group (n.d.). Individuals using the Internet (% of population) - Indonesia. https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=ID

[5] World Bank Group (n.d.). Mobile cellular subscriptions (per 100 people) - Indonesia. https://data.worldbank.org/indicator/IT.CEL.SETS.P2?locations=ID

[6] Freedom House (2024), Freedom on the Net 2024: Indonesia. https://freedomhouse.org/country/indonesia/freedom-net/2024

[7] Reporters without Borders (2024). World Press Freedom Index 2024. https://rsf.org/en/index

[8] Satu Data Kementerian Agama Republik Indonesia (Aug 24, 2023) Jumlah Penduduk Menurut Agama. https://satudata.kemenag.go.id/dataset/detail/jumlah-penduduk-menurut-agama

Political Landscape

Along with the presidential race, the opposition to a string of major government policies and legislative programmes dominated Indonesia's socio-political landscape for the 12-month period from mid-2023. In his final year as president, Joko Widodo (or Jokowi) sought to cement his legacy through populist posturing encouraged by his post-COVID-19 approval rating.[9] In the lead up to the February 2024 presidential election, Jokowi's defence minister and former rival Prabowo Subianto picked the president's 36-year-old son, Gibran Rakabuming Raka, as his running mate.[10] Gibran's candidacy immediately drew criticisms of nepotism and dynastic politics, and his eligibility and qualification to stand for vice-presidency was questioned.[11] In a controversial ruling, the Constitutional Court carved out an exception for Gibran despite not meeting the required age threshold of 40 years. It was particularly contentious because one of the panel judges on Gibran's case hearing was his uncle and the president's brother-in-law, Constitutional Court Chief Justice Anwar Usman. The court's ethics council subsequently demoted Anwar from his position as chief justice.[12]

As the country prepared for the November 2024 regional elections, political interference concerns against Jokowi did not abate as his youngest son, son-in-law, and daughter-in-law emerged as frontline candidates for top positions.[13] The candidacies of the president's close relatives have widely been seen as Jokowi's move to establish his own political dynasty in Indonesia.[14] Allegations of Jokowi's interference and other electoral misconduct were examined in a documentary film 'Dirty Vote' where the president was accused of misusing public funds to support the Prabowo-Gibran campaign, amongst other abuses.[15] These allegations have also fueled calls for impeachment of the republic's seventh president who is set to leave office in October 2024.[16] Gibran's nomination resulted in Jokowi breaking away from PDIP – the party that backed him in the preceding presidential races – as he endorsed, albeit unofficially, former rival Prabowo instead of his own party's ticket. In the aftermath of the presidential election, the Constitutional Court rejected all election petitions

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[9] https://www.thejakartapost.com/indonesia/2024/04/22/jokowis-approval-rating-hits-new-high-indikator.html
[10] https://nasional.kompas.com/read/2023/10/22/19422101/prabowo-resmi-umumkan-gibran-rakabuming-raka-jadi-cawapres
[11] https://en.tempo.co/read/1833785/court-dismisses-lawsuit-against-jokowi-over-political-dynasty-nepotism
[12] https://www.thejakartapost.com/indonesia/2023/11/07/breaking-ethics-council-removes-chief-justice-anwar.html
[13] https://nasional.tempo.co/read/1845894/politik-dinasti-jokowi-ramai-ramai-disorot-pengamat-politik-pakar-hukum-tata-negara-sampai-media-internasional
[14] https://www.economist.com/asia/2023/10/26/jokowi-is-building-a-political-dynasty
[15] https://www.youtube.com/watch?v=yHX7N-gcvhQ
[16] https://www.kompas.id/baca/polhuk/2024/01/16/dpr-tampung-pemakzulan-presiden-jokowi

against the Prabowo-Gibran campaign. This paved the way for their eventual win and led to PDIP declaring the father-son duo no longer party members.[17]

The 2023/2024 presidential race saw major efforts to rehabilitate Prabowo's image from a Suharto-era military man responsible for major human rights violations to a meme-worthy cuddly grandpa with benign qualities, such as being adorable and cute.[18] Prabowo's unlikely rise in this election cycle eclipsed his involvement in reported human rights abuses and alleged atrocity crimes in Timor-Leste and West Papua spanning over two decades of his career in the top brass of the Indonesian military.[19] Throughout the campaign mired in disinformation,[20] the third-time candidate maintained a strong lead ahead of two other contenders – in large part thanks to Jokowi's popularity – leading to Probowo's eventual landslide win. Some political commentators viewed this rehabilitated image as no reconciliation to Prabowo's authoritarian tendencies he espoused in previous election cycles.[21] With the president-elect's Forward Indonesia coalition garnering a comfortable majority in parliament, political analysts and civil society activists warned of further encroachment on civil liberties and narrowing of civic spaces in the world's third largest democracy.[22]

These concerns are not unjustified as Prabowo brands his leadership to be a 'continuity' to Jokowi's contentious policies and politicisation of institutions.[23] For instance, the passage of the job creation bill in 2020 led to protests by labour rights organisers across Indonesia over diminished protections for workers. The law also relaxed environmental protections and loosened development restrictions to support the government's effort in boosting the manufacturing industry and attracting foreign investment.[24] After ruling the law to be 'conditionally unconstitutional' and sending it back to parliament for amendment, the

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[17]

https://wartakota.tribunnews.com/2024/04/22/mk-tolak-gugatan-sengketa-pilpres-pdi-p-tegaskan-jokowi-dan-gibran-bukan-lagi-kader-banteng
[18] https://www.bbc.com/news/world-asia-68028295
[19]

https://www.theguardian.com/world/2024/feb/13/minister-linked-to-indonesias-former-dictatorship-ahead-in-pre-election-polls
https://www.nytimes.com/2020/10/14/world/asia/indonesia-prabowo-subianto-us-visit.html
[20]

https://www.abc.net.au/news/2024-01-20/political-buzzers-indonesia-election-misinformation-social-media/103298530
[21]

https://www.theguardian.com/commentisfree/2024/feb/15/the-guardian-view-on-indonesias-elections-prabowos-win-is-dismal-news-for-democracy
[22]

https://www.benarnews.org/english/news/indonesian/if-prabowo-gets-majority-party-support-democracy-will-suffer-05022024142641.html
[23] https://www.suara.com/news/2020/06/14/153324/29-tanda-tanda-jokowi-otoriter
[24] https://www.nytimes.com/2020/10/05/world/asia/indonesia-stimulus-bill-strike.html

Constitutional Court upheld the revised law in October 2023.[25] Worryingly, as the Constitutional Court plays an increasingly important role adjudicating government infractions of protected human rights, lawmakers have moved to enact legislation requiring appointments to the bench be confirmed by parliament. Experts warned that this would worsen the politicisation of democratic institutions in Indonesia.[26]

In March 2024, the same court rejected a judicial review of the amendment to the Electronic Information and Transactions Law (UU ITE).[27] Subsequently, civil society organisations criticised the government for the lack of stakeholder consultation and transparency in the process. Critics argued that the amendment has failed to safeguard human rights due to provisions disproportionately criminalising online defamation, hate speech, and disinformation.[28] Some of these provisions, which include website blocking and internet shutdown, are too vague and could be used against political dissents.[29] They also pointed out inadequate protections against online gender-based violence even after two revisions of the amendment.[30]

The election of Prabowo put into spotlight the ongoing conflict in West Papua,[31] a situation that was already alarming under Jokowi's administration. In March 2024, videos of Indonesian military personnel torturing indigenous men surfaced on the internet.[32] The torture of civilians accused to be pro-indendence militants has become a widespread practice normalised amongst the Indonesian military personnel stationed in region.[33] This is despite Indonesia's obligations under the UN Convention against torture which prohibits such practice even in armed conflict.[34] The incident led to the military issuing an apology to the Papuan community and the National Commission on Human Rights calling for the government to institute sustainable peace-building measures by strengthening healthcare,

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[25]

https://www.thejakartapost.com/indonesia/2023/10/02/court-upholds-jobs-law-as-labor-unions-stage-rallies.html

https://jakartaglobe.id/news/constitutional-court-upholds-validity-of-job-creation-law

[26]

https://www.benarnews.org/english/news/indonesian/constitutional-court-changes-toerode-judges-independence-05152024155350.html

[27]

https://metro.tempo.co/read/1848184/mk-tolak-uji-materiil-pasal-27-dan-45-uu-ite-karena-sudah-ada-revisi-uu

[28]

https://www.hukumonline.com/berita/a/ylbhi--revisi-kedua-uu-ite-masih-memuat-pasal-pasal-bermasalah-lt657128b8232ef/

[29] https://majalah.tempo.co/read/opini/170668/pasal-karet-uu-ite

[30] https://www.kompas.id/baca/polhuk/2023/12/05/revisi-uu-ite-disetujui-celah-kriminalisasi-masih-terbuka

[31] https://asia.nikkei.com/Opinion/Prabowo-must-resist-temptation-to-apply-more-force-in-Papua

[32] https://nasional.tempo.co/read/1848390/tni-selidiki-video-viral-penyiksaan-warga-papua

[33] https://www.bbc.com/indonesia/articles/c9ed29vxdjno

[34]

https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-against-torture-and-other-cruel-inhuman-or-degrading

education, and public services in the region.[35] The original 2001 Law on Special Autonomy for Papua Province and its 2021 amendment have failed to put the violent conflict in the region – which claimed 79 recorded deaths in 2023 – on the path to peaceful reconciliation. A key element of this failure is the prolonged delay and stumbling blocks in establishing the Truth and Reconciliation Commission mandated in both the 2001 law and the 2021 amendment.[36]

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[35]
https://en.antaranews.com/news/310917/komnas-ham-pushed-government-to-strengthen-ecosystem-of-peace-in-papua
[36] https://www.kompas.id/baca/opini/2024/06/13/sepuluh-tahun-jokowi-dan-papua

Legal Environment

Press Law No 40 of 1999

Article 4 of the 1999 Press Law[37] guarantees freedom of the press as a basic human right for every citizen. The law contains many positive stipulations that serve to protect the freedom of the press. Specifically, 4(2) provides that the national press shall not have censorship or broadcast limitations imposed upon it, while 4(3) provides the national press with the right to seek, acquire, and disseminate ideas and information freely to ensure the freedom of the press.

However, the Press Law also contains a number of potentially harmful restrictions on content that may be open to abuse. For example, Article 5 of the law constrains the national press to report events and opinions with respect to the religious and moral norms of the public, in accordance with the presumption of innocence. The resulting restrictions on certain forms of expression, such as legitimate criticisms of religious bodies, contradict the stipulation in Article 6. The stipulation provides that the national press plays its role in fulfilling the public's right to know in relation to criticism, corrections, and suggestions towards public concerns.

Articles 27 and 45 of the Electronic Information and Transactions (ITE) Law No 11 of 2008

Articles 27 and 45 of the 2008 ITE Law[38] have been used to prosecute individuals who "knowingly and without authority" distribute, transmit, or make accessible electronic information or documents containing (i) material against propriety, (ii) gambling material, (iii) defamatory material, and (iv) material containing extortions or threats. Under Article 45, any individual satisfying any of the elements could be sentenced to imprisonment of up to six years, and/or a maximum fine of 1 billion IDR. The 2016 amendment to Article 45 reduces the criminal sanction for the crime under Article 27(iii) regarding defamation to a maximum imprisonment term of four years and a fine of 750 million IDR. In addition, it clarifies that the provision for the dissemination of defamatory material is a crime by the complaint.[39]

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[37] Undang-undang No 40 Tahun 1990 tentang Pers, (1999).
https://peraturan.bpk.go.id/Home/Details/45370/uu-no-40-tahun-1999
[38] Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik, (2008).
https://jdih.kominfo.go.id/produk_hukum/view/id/167/t/undangundang+nomor+11+tahun+2008+tanggal+21+april++2008
[39] Undang-Undang Republik Indonesia Nomor 19 Tahun 2016 tentang Perubahan atas Undang-Undang Nomor 11 Tahun 2008 Tentang Informasi dan Transaksi Elektronik, (2016).
https://jdih.kominfo.go.id/produk_hukum/view/id/555/t/undangundang+nomor+19+tahun+2016+tanggal+25+november+2016

Public Information Openness Law No 14 of 2008

The 2008 Law on Public Information Openness[40] guarantees freedom of information as a right for Public Information Requesters, but it is restricted to Indonesian citizens or legal entities. Under Articles 22 and 35, requests for information require that the name, address, and reason for the request be provided by requesters. Problematically, the law enables the requested documents to be sanitised by allowing the redaction or "blackening" of restricted information while providing access to the rest of the document.[41]

Under the law, criminal sanctions can be placed on public officials who are found to deliberately disregard their obligation to provide and publish public information. However, under Article 51, harsh penalties are also prescribed for any person found to have committed deliberate use of public information "in an unlawful manner", with violators being liable to imprisonment of up to one year, and a maximum fine of 5 million IDR. However, what is considered to be "against the law" is vaguely defined, which leaves such provisions open to abuse.

Although provisions exist to guarantee the right to freedom of information, implementation remains flawed. A 2012 study revealed structural inefficiencies in the way public bodies in Indonesia handle requests for information.[42] Only 46% of 224 information requests were granted, and participants frequently reported that their requests were ignored or lost by public authorities.

Article 40 of the Electronic Information and Transactions (ITE) Law No 11 of 2008

Article 40 of the ITE broadly dictates that the government should protect the public's interest from any misuse of Electronic Information and Transactions deemed as threats against the public interest and which could offend public order.[43]

The 2016 amendment widens the authority of the government with the addition of two sub-paragraphs under Article 40. These stipulate that the government is authorised to take preventative actions against the dissemination of electronic information and documents

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[40] Undang-Undang Nomor 14 Tahun 2008 tentang Keterbukaan Informasi Publik, (2008). https://jdih.kominfo.go.id/produk_hukum/view/id/172/t/undangundang+nomor+14+tahun++2008+tanggal+30+april+2008
[41] ARTICLE 19. (2015). Country Report: The Right to Information in Indonesia. https://www.article19.org/resources/country-report-the-right-to-information-in-indonesia/
[42] Toby. (2012, April 10). Indonesia: Large RTI Requesting Exercise Leads to Key Recommendations. Centre for Law and Democracy. https://www.law-democracy.org/live/indonesia-large-rti-requesting-exercise-leads-to-key-recommendations/
[43] Undang-Undang Republik Indonesia Nomor 19 Tahun 2016 tentang Perubahan Atas Undang-Undang Nomor 11 Tahun 2008 Tentang Informasi dan Transaksi Elektronik, (2016). https://jdih.kominfo.go.id/produk_hukum/view/id/555/t/undangundang+nomor+19+tahun+2016+tanggal+25+november+2016

containing content violating applicable laws, such as hate speech, defamatory material, or immoral content. The amendment enhances the scope of the government in monitoring electronic information and authorises them to terminate access to content deemed to fall under such criteria.

Pornography Law No 44 of 2008

The 2008 law on pornography prohibits the creation, dissemination, or consumption of pornographic material.[44] The law presents a loose definition of what constitutes pornography, to the point of criminalising actions such as the kissing of lips in public, the display of sensual parts of the body (defined in Article 4 as the genitals, buttocks, hips, thighs, navel, and female breasts), or any form of art and cultural expression perceived to be explicit. Section 4:1a of the law explicitly prohibits the action of sexual activities involving same-sex relations and any written or audio-visual presentation of the same. This law is routinely used to censor LGBTQ+ content on the internet.

State Intelligence Law No 17 of 2011

The State Intelligence Law No 17 of 2011 authorises the Indonesian State Intelligence Agency (BIN or Badan Intelijen Nasional) to conduct expansive intelligence gathering efforts against "opponents" deemed to be "harmful to national interests and security". Additionally, Article 31 of the law authorises the State Intelligence Agency to intercept communications without the need for prior court approval. The broad and ambiguous language behind "opponents" and "national interests and security" opens up the legislation to criminalization.

Articles 25(4) and 25(5) stipulates that "intelligence secrets" ("rahasia intelijen") through which BIN operates are closed information that cannot be disclosed unless for the purpose of a trial. Thus, as Article 44 penalises individuals for the dissemination of "intelligence secrets" with imprisonment of up to 10 years, and a maximum fine of 500 million IDR, the law allows for no transparency to "intelligence secrets" and State Intelligence Agency past operations on which it is based.

Civil Society Organizations Law No 17 of 2013

The 2013 Civil Society Organizations Law[45] subjects civil society organisations (CSOs) to increased bureaucratic and discriminatory controls, authorising government screening of all CSOs in the country. The law stipulates CSOs to various prohibitions and obligations to be able to obtain a permit to operate within the country. These include prohibiting CSOs from propagating ideologies conflicting with the state ideology of Pancasila, which embraces the

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[44] Undang-undang No 44 Tahun 2008 tentang Pornografi, (2008).
https://peraturan.bpk.go.id/Home/Details/39740
[45] Undang-undang No 16 Tahun 2013 tentang Organisasi Kemasyarakatan, (2013),
https://peraturan.bpk.go.id/Home/Details/38876/uu-no-17-tahun-2013

five principles of Indonesian nationalism: belief in one God, internationalism, unity in diversity, deliberative democracy, and social justice. Therefore, the law directly infringes upon the rights of organisations to freedom of religion.

The law also places severe limitations on the running of foreign-funded CSOs within the country. Article 52 of the law prohibits CSOs founded by foreign citizens from conducting any intelligence or political activities, or any activities which may "disrupt the stability and integrity" of Indonesia or "disrupt diplomatic relations".

Article 52(g) prohibits the "raising of funds from the Indonesian community" and (h) "the use of facilities and infrastructures of government agencies and institutions". Violations of such repressive provisions may result in the dissolution of the CSO.

This law was used to threaten labour unions with disbandment in 2014[46] and disband Islamist organisation Hizbut Tahrir Indonesia in 2017 with accusations of "promoting the establishment of a caliphate".[47]

Handling of Internet Sites Containing Negative Content Ministerial Regulation No 19 of 2014

In July 2014, the regulation by the Ministry of Communications and Informatics, Number 19 of 2014 on the Handling of Negative Internet Sites, came into force as part of the regulator's programme for a Healthy and Safe Internet (INSAN or Internet Sehat dan Aman).

The law mandated ISPs to block any internet content that is deemed to carry "negative" elements such as pornography, hoaxes, or SARA conflicts. As the primary internet regulator, the ministry maintained a database of blocked sites known as TrustPositif, which ISPs must check against to implement internet censorship. The regulation drew criticism from civil society organisations for its potential abuse.[48]

2016 Right to be Forgotten Amendment to the ITE Law

A provision was added to Article 26 of the 2016 Amendment of the Electronic Information and Transactions (ITE) Law regulating that Electronic System Operators (a) provide a mechanism to remove irrelevant information or electronic data and (b) remove all electronic

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[46] ADY. (2014, March 14). UU Ormas Mulai Memakan Korban. Hukumonline.com. https://www.hukumonline.com/berita/a/uu-ormas-mulai-memakan-korban-lt5321da472379e
[47] Supreme Court upholds disbandment of Hizbut Tahrir Indonesia. (2019, February 15). The Jakarta Post. https://www.thejakartapost.com/news/2019/02/15/supreme-court-upholds-disbandment-of-hizbut-tahrir-indonesia.html
[48] Wiwoho, L. H. (2014, August 11). Masyarakat Tolak Peraturan Menkominfo tentang Blokir Situs. Kompas. https://nasional.kompas.com/read/2014/08/11/15420961/Masyarakat.Tolak.Peraturan.Menkominfo.tentang.Blokir.Situs

information or electronic records under their control according to a court order at the initiation of a relevant person. Though this seems to provide individuals with an element of privacy protection, the amendment lacks specifics on the circumstances in which electronic information may be deemed "irrelevant", nor the criteria to be considered a "relevant person".[49]

A statement by the Secretary General of the Alliance of Independent Journalists raised concerns over the potential for misuse of this law. It argues that the provision could be a potential threat to press freedom, as "anyone may request a court order with impunity to erase negative news concerning them in digital media".[50]

Private Electronic System Operators (PSE) Ministerial Regulation No 5 of 2020

The law came into effect in November 2020 to replace and consolidate Kominfo Regulations No 19 of 2014 on Handling of Internet Sites Containing Negative Content and No 36 of 2014 on Registration of Electronic System Operators.[51] The law requires private electronic system operators (*penyelenggara sistem elektronik* or PSE) to register themselves with Kominfo before providing services to internet users.

Through the single registration system, a PSE must disclose how their system works and the kinds of user information they collect, store, and process. The law does not only apply to domestic operators but also to foreign private PSEs that have users in Indonesia. If they fail to register, Kominfo would block the websites of private PSEs in Indonesia.[52]

This law shifts the regulatory burden to PSEs who would now have to ensure that their systems do not contain prohibited electronic content or facilitate the dissemination of prohibited content. These responsibilities also extend to platforms that host user-generated content such as web-hosting providers and cloud computing operators who are PSEs in

[49] Undang-Undang Republik Indonesia Nomor 19 Tahun 2016 tentang Perubahan Atas Undang-Undang Nomor 11 Tahun 2008 Tentang Informasi dan Transaksi Elektronik, (2016).
https://jdih.kominfo.go.id/produk_hukum/view/id/555/t/undangundang+nomor+19+tahun+2016+tanggal+25+november+2016
[50] Varagur, K. (2016, November 7). Indonesia Poised to Pass Asia's First "Right to Be Forgotten" Law. VOA. https://www.voanews.com/a/indonesia-poised-to-pass-asia-first-right-to-be-forgotten-law/3584318.html
[51] Peraturan Menteri Komunikasi dan Informatika Nomor 5 Tahun 2020 tentang Penyelenggara Sistem Elektronik Lingkup Privat, (2020). https://jdih.kominfo.go.id/produk_hukum/view/id/759/t/peraturan+menteri+komunikasi+dan+informatika+nomor+5+tahun+2020
[52] Muthiariny, D. E. (2022, June 28). Indonesia to Block Netflix, Google, and Twitter If They Miss Registration. Tempo. https://en.tempo.co/read/1606310/indonesia-to-block-netflix-google-and-twitter-if-they-miss-registration

their own right. According to internal documents from industry players,[53] the regulator is planning to introduce fines of up to $33,000 on PSEs for failure to take down prohibited content under this regime.

A PSE must take down prohibited content within 24 hours – or 4 hours in the cases of terrorism, pornography, or other violation of laws – of warning from Kominfo, failing which the regulator has the authority to instruct ISPs to block user access to the PSE. Under this law, Kominfo or any relevant government agency may compel a PSE to provide access to its system for supervision and law enforcement purposes.

Advocates for internet freedom have raised concerns over this encroachment on online freedom of expression and opinion.[54] The definition of prohibited content as anything that may cause anxiety in society ("*meresahkan masyarakat*") and disturbs public order ("*mengganggu ketertiban umum*") is too broad and may be used to curtail dissenting voices. Many activists are also concerned that state apparatus may abuse their supervision and law enforcement powers to target human rights defenders, especially those championing the rights of women, LGBTQ+ persons, and ethnic and religious minorities. The law, many activists argued, is inconsistent with the Indonesian constitution and the country's international human rights obligations.[55]

Personal Data Protection Law No 27 of 2022

Article 28g(1) of the Indonesian Constitution provides for the rights to "protection" and the right to "feel secure". Indonesia did not have specific laws governing the right to privacy until the national Personal Data Protection Law No 27 of 2022 was passed in September 2022.[56] The law provides for a comprehensive legal framework that covers different categories of personal data, the right of the personal data subject, obligations of personal data controllers, breaches of personal data, personal data protection authority, and prohibited uses of personal data.

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[53] Timmerman, A. (2022, August 16). Indonesia will enforce laws on content moderation with tight response time and harsh fines, documents show. Rest of World.
https://restofworld.org/2022/indonesia-social-media-regulations/
[54] Southeast Asia Freeedom of Expression Network. (2022, June 24). Stop Registrasi PSE Lingkup Privat dan Tarik Kembali Permenkominfo yang Mengancam Kebebasan Berekspresi dan Hak Atas Privasi Pengguna. SAFEnet.
https://safenet.or.id/id/2022/06/siaran-pers-stop-registrasi-pse-lingkup-privat-dan-tarik-kembali-permenkominf o-yang-mengancam-kebebasan-berekspresi-dan-hak-atas-privasi-pengguna/
[55] Access Now, ARTICLE 19, Asia Democracy Network (ADN), Cambodia Center for Human Rights, Electronic Frontier Foundation (EFF), Manushya Foundation, Open Net Korea, Southeast Asia Freedom of Expression Network (SAFEnet), The William Gomes Podcast UK, & The Kenya Human Rights Commission. (2022, July 4). Indonesia: Regulations will severely impede internet freedom. ARTICLE 19.
https://www.article19.org/resources/indonesia-regulations-impede-internet-freedom/
[56] Undang-undang tentang Pelindungan Data Pribadi, (2022).
https://peraturan.bpk.go.id/Home/Details/229798/uu-no-27-tahun-2022

Most Indonesian financial services are governed by another regulatory framework under the Financial Services Authority (OJK or *Otoritas Jasa Keuangan*), including matters related to data protection. However, not all financial services come under the purview of OJK, including unlicensed online lending services. The 2022 Personal Data Protection Law applies not only to entities based in Indonesia but also to those who process the personal data of Indonesian citizens or that have legal consequences in Indonesia. It is, however, not applicable to the processing of personal data related to national security, law enforcement, and public interests by the state.

Reported Cases of Internet Censorship

The Indonesian Ministry of Communication and Information Technology (Kominfo) has reported that the most frequently blocked content in the country consists of gambling-related material, followed by pornography, fraud, and intellectual property rights violations.[57] From July 2023 to June 2024, Kominfo launched a major campaign against online gambling that resulted in the blocking of nearly 3 million websites.[58] In June 2024, Chief Security Minister Hadi announced that this initiative will be strengthened through legal measures and executed through three key operations.[59]

Additionally, between 2017 and 7 January 2024, the Ministry of Communication and Information Technology has removed a substantial amount of content classified as "negative" from various social media platforms. The platforms with the highest number of takedowns were X (1,380,830), Meta (311,793), file-sharing sites (83,380), Google (18,465), Telegram (5,798), and TikTok (3,917).[60]

In July 2023, after the rebranding of Twitter to X, Indonesian users were blocked from accessing the platform as the domain was included in the blocklist "under the country's curbs on online pornography and gambling". Moreover, in June 2024, the Indonesian communications minister stated that the government is prepared to shut down X if the social media platform does not comply with regulations against adult content.[61]

Indonesia has also imposed strict restrictions on specific websites, emphasising its commitment to controlling online content. In July 2023, the country blocked access to the Distributed Denial of Secrets website (https://ddosecrets.com/), a US-based non-profit that archives and publishes hacked and leaked documents in the public interest.[62] Additionally, platforms such as Reddit and Vimeo are still inaccessible in Indonesia. Moreover, Grindr, the largest social networking app for LGBTQ individuals, remains banned in Indonesia due to government restrictions.[63]

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[57] Finaka, A. W. (2024). Terus Berantas Konten Negatif. *Indonesia Baik*.
https://indonesiabaik.id/infografis/terus-berantas-konten-negatif
[58] Bernama. (2024, June 16). Indonesia blocks almost 3 million online gambling content. *Bernama*.
https://www.bernama.com/en/news.php?id=2308519
[59] Dahlan Situmorang, H. (2024, June 21). Indonesia intensifies fight against online gambling, launches three operations. *Jakarta Globe*.
https://jakartaglobe.id/news/indonesia-intensifies-fight-against-online-gambling-launches-three-operations
[60] Finaka, A. W. (2024). Terus Berantas Konten Negatif. Indonesia Baik.
https://indonesiabaik.id/infografis/terus-berantas-konten-negatif
[61] Teresia, A., & Widianto, S. (2024, June 15). Indonesia minister threatens to shut down X over adult content. *The Star*.
https://www.thestar.com.my/aseanplus/aseanplus-news/2024/06/15/indonesia-minister-threatens-to-shut-down-x-over-adult-content
[62] Lee, M. (2023, September 12). Tech companies and governments are censoring the journalist collective ddosecrets. *The Intercept*. https://theintercept.com/2023/09/12/ddosecrets-censorship-reddit-twitter/
[63] Grindr. (n.d). Censored Countries & Regions. *Grindr*.
https://help.grindr.com/hc/en-us/articles/1500010811581-Censored-countries-regions

Furthermore, in August 2023, the Indonesian government announced their intentions to regulate content on streaming platforms like Netflix and Disney+. Currently, these services are not governed by Indonesia's Broadcasting Law, which requires compliance with the country's movie censorship board.[64] Moreover, the Indonesian government has proposed amendments to the broadcasting bill. Key provisions include Article 50E, which would give the Indonesian Broadcasting Commission (KPI) oversight over all broadcasting platforms, and Article 50B, which would ban content depicting violence, mysticism, LGBT themes, or "negative behaviours," with potential fines or licence revocation for violations.[65]

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[64] Alis Haizan, R. H. (2023, August 23). Indonesia plans to impose censorship rules on streaming services, analyst says move may turn viewers to illegal sites. *CNA*. https://www.channelnewsasia.com/asia/indonesia-streaming-services-ott-platform-netflix-disney-censorship-media-3718571

[65] Juwita, Ruth Dea. (2024, May 22). Proposed broadcasting bill threatens streaming content, OTT industry. *The Jakarta Post*. https://www.thejakartapost.com/business/2024/05/22/proposed-broadcasting-bill-threatens-streaming-content-ott-industry.html

Network Landscape and Internet Penetration

Most ISPs in Indonesia are publicly-listed corporations. The government-linked ISP, Telkom Indonesia, operates fixed-line broadband services, including Indihome, Astinet, and DigiConnect. Telkom has a majority ownership in the largest mobile operator Telkomsel along with Singapore state-owned Singtel holding a significant stake. The joint venture between Qatari government-linked Ooredoo and Hong Kong-based Hutchison has majority ownership of Indosat, the second largest mobile operator under the brands Tri Indonesia and IM3. Additionally, the Indonesian government is a minority shareholder in Indosat with a golden share giving it veto rights. The third largest mobile operator XL Axiata is a subsidiary of Axiata, a Malaysian government-linked corporation. Smartfren is owned by Indonesian conglomerate Sinar Mas.

According to OpenSignal, Indonesia lags behind neighbouring countries in terms of 5G access due the limited network availability.[66] Indonesia faces significant challenges in its nationwide 5G implementation especially around technical standards, infrastructure financing, and spectrum permits.[67] With the expansion of the 5G network and availability of affordable customer-premises equipment, fixed wireless access has become a cost-efficient alternative to DSL and fibre-based access to provide internet connectivity across over 17,000 islands in Indonesia. Telkomsel has offered fixed wireless 5G service since June 2021, while other ISPs have comparable products currently only available on 4G. Satellite internet access is also gaining popularity amongst Indonesian consumers with the launch of Starlink by Space X in June 2024.[68] This followed the successful launch of Indonesia's SATRIA-1 satellite a year earlier. While this launch was done to bridge the digital divide in remote and disadvantaged regions, there were concerns over its use for policing and military purposes.[69]

The Indonesian telecommunications industry saw a number of consolidations in recent years signalling a greater push for fixed-mobile convergence.[70] Most notably, this includes XL Axiata's acquisition of fixed-line broadband and paid television provider Link Net in June 2023[71] and the July 2023 merger between mobile operator Telkomsel and fixed-line

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[66] Bapty, R. (Nov 23, 2023). Indonesia lags behind in 5G Download Speed and 5G Availability among South-East Asian markets. OpenSignal.
https://www.opensignal.com/2023/11/23/indonesia-lags-behind-in-5g-download-speed-and-5g-availability-among-south-east-asian-markets

[67] Hamzah U. Mustakim (2019) Tantangan Implementasi 5G di Indonesia, INTEGER: Journal of Information Technology, Telkom Institute of Technology Surabaya (ITTS).
http://ejurnal.itats.ac.id/integer/article/view/561/493.

[68] https://www.euronews.com/2024/06/08/starlinks-satellite-internet-service-is-launched-in-indonesia

[69] https://www.thejakartapost.com/adv/2023/06/20/indonesias-satria-1-successfully-launched-into-orbit.html

[70] https://www.thejakartapost.com/business/2023/05/16/telcos-lean-on-data-growth-push-fixed-mobile-convergence.html

[71] https://ir.linknet.co.id/static-files/532ddcfd-8e8a-4cdb-8265-3ed2a71aa7b6

broadband and IPTV provider Indihome, both controlled by Telkom.[72] In May 2024, the owners of mobile operators XL and Smartfren revived a merger deal that fell through in 2019.[73]

[72]

https://www.cnbcindonesia.com/tech/20231026133846-37-483923/bocoran-bos-telkom-mau-ada-merger-habis-indihome-telkomsel
[73]

https://www.thejakartapost.com/business/2024/05/16/axiata-sinar-mas-officially-exploring-ri-telco-business-merger.html

Findings on Internet Censorship in Indonesia

All of the findings are based on data collected through OONI from 1 July 2023 to 30 June 2024.

Blocking of Websites

Throughout the one-year period, approximately 3.3 million measurements from 2,524 domains were tested on the OONI Probe. For the purpose of this study, these measurements are grouped into the following categories:

- **Measured or Measurement Counts** refers to the total number of measurements collected through the OONI Probe.
- **Blocked** refers to "Confirmed Blocked" in OONI measurements, which are measurements from websites that are automatically confirmed to be blocked (e.g., a block page was served).
- **Likely Blocked** refers to "Anomaly" and "Failure" in OONI measurements. Anomalies are measurements that show signs of potential blocking; however, <u>false positives</u> can occur. Failures refer to failed experiments in OONI testing, although they can sometimes be <u>symptomatic of censorship</u>.

	Jul-Sep 2023	Oct-Dec 2023	Jan-Mar 2024	Apr-Jun 2024	Total
Measured	992,846	648,302	843,709	812,368	329,722,500
Blocked	66,108	41,566	57,718	53,499	218,891
Block rate	6.66%	6.41%	6.84%	6.59%	6.64%
Domains	2,322	2,340	2,353	2,360	2,524
ASNs	75	79	64	70	156

Table 2: Summary of OONI web connectivity measurements for Indonesia from 1 July 2023 to 30 June 2024.

Category	Category description	Measured	Blocked	Block rate	Likely blocked	Likely blocked rate
ALDR	Alcohol and Drugs	54	3,462	20.37%	5	9.26%
ANON	Anonymization and Circumvention Tools	140	15,240	22.86%	5	3.57%
COMM	E-commerce	56	7,610	39.29%	1	1.79%
COMT	Communication Tools	134	7,437	3.73%	21	15.67%
CTRL	Control Content	25	285	0.00%	2	8.00%
CULTR	Culture	119	5,964	10.92%	5	4.20%
DATE	Online Dating	32	6,363	43.75%	1	3.13%
ECON	Economics	46	945	6.52%		0.00%
ENV	Environment	55	2,475	1.82%	5	9.09%
FILE	File-sharing	96	16,287	32.29%	9	9.38%
GAME	Gaming	50	4,354	26.00%	1	2.00%
GMB	Gambling	104	37,566	96.15%	1	0.96%
GOVT	Government	49	6,104	6.12%	9	18.37%
GRP	Social Networking	103	14,059	15.53%	2	1.94%
HACK	Hacking Tools	53	2,084	3.77%	1	1.89%
HATE	Hate Speech	21	3,859	47.62%	1	4.76%
HOST	Hosting and Blogging Platforms	164	10,097	4.88%	14	8.54%
HUMR	Human Rights Issues	193	29,165	15.03%	31	16.06%
IGO	Intergovernmental Organisations	19	188	0.00%	3	15.79%
LGBT	LGBTQ+	118	37,606	41.53%	16	13.56%
MILX	Terrorism and Militants	15	2,429	46.67%	1	6.67%
MISC	Miscellaneous Content	9	22	0.00%		0.00%
MMED	Media sharing	95	22,821	35.79%	7	7.37%
NEWS	News Media	332	40,766	11.75%	45	13.55%

Category	Category description	Measured	Blocked	Block rate	Likely blocked	Likely blocked rate
POLR	Political Criticism	76	9,925	13.16%	8	10.53%
PORN	Pornography	109	40,876	98.17%	1	0.92%
PROV	Provocative Attire	51	15,232	78.43%	4	7.84%
PUBH	Public Health	54	3,112	9.26%	7	12.96%
REL	Religion	128	23,466	21.09%	19	14.84%
SRCH	Search Engines	45	3,959	8.89%	6	13.33%
XED	Sex Education	63	7,213	20.63%	3	4.76%

Table 2: Summary of OONI web connectivity measurements for Indonesia from 1 July 2023 to 30 June 2024 by category.

Note: Blocked and likely blocked measurements include Confirmed Blocked, Anomaly, and Failures on OONI measurements.

Method of Blocking

Blocked websites are added to the country's blocklist Trust Positif, which is now accessible only through an Indonesian IP address. Based on OONI data, a block page would serve if a website is found to be blocked, and the methods used are mostly DNS and HTTP tampering.

In December 2023, a user reported that ISPs had started to block public DNS services that can bypass censorship, although a National DNS policy had allegedly been implemented as early as 2015 where the ISPs would redirect any public DNS used via port 53 to the ISP or national DNS. The Ministry of Communications and Information also released a livestream that discussed third-party DNS resolvers, IP blocking, as well as encrypted DNS (DoT, DoH, and DoQ).

Acknowledgement of Limitations

- **Period of study**
  To examine the most recent censorship trends and events, we limited the findings of this study to OONI network measurements collected from 1 July 2023 to 30 June 2024.

- **Vantage points**
  Although OONI network measurements were collected from 156 vantage points in Indonesia, the OONI Probe tests were not run consistently on each network, nor on all networks in the country.

- **Use of domain as a unit of measurement of websites**
  In general, "URL" (or in OONI's terms – input) and "domain" are interchangeable terms used to refer to a website. In the OONI test list, the full URLs are input in the probe to be tested for censorship, similar to a URL starting with "https" or "http" in a browser. The URLs are measured for censorship by OONI Probe with the Web Connectivity experiment, which is designed to measure whether access to tested URLs is interfered with through DNS tampering, TCP/IP blocking, an HTTP transparent proxy, or through TLS interference. However, when analyzing results on OONI, the reader should be aware that there are differences in the numbers concerning the specific input or domain, as a different volume of measurements may have been collected for a URL (e.g. https://www.hrw.org/asia/cambodia) in comparison to a domain (e.g. www.hrw.org).

  In the 2023 report, we based our analysis primarily on URLs because they were thought to provide more context on the reason why the web page was blocked and could be categorized more similarly to the Citizen Lab test lists, which are URL format. However, in this 2024 report, we based our analysis on domains, so readers will need to be cautious about making year-to-year comparisons.

- **Confirmed blockings vs. Likely blockings or Inaccessible**
  The confirmed blocked websites are based on the data where the testing result shows a trace to a government or ISP block page. This typically means a block page is served when the user tries to access the website on a particular network or that DNS resolution returns an IP address associated with censorship. These cases are automatically annotated as "confirmed blocked" based on fingerprints added to OONI's database. When a website is found to be confirmed blocked, it may be blocked only on specific networks and remain accessible on the rest. Confirmed blockings may also be specific based on the URL; for example, https://abc.com/ may be censored but not https://www.abc.com/.

In this 2024 report, confirmed blockings and likely blockings were consolidated based on the country. See the section on verifying OONI measurements.

- **Test lists**
  The websites tested for censorship on OONI are either from the Citizen Lab test lists or additional websites tested by OONI Probe users. While the websites in the test lists are categorized based on specific standardized categories, the percentage of blocked or likely blocked cases may not necessarily reflect the entire state of internet censorship in the country, as only sampled websites are included in the testing.

- **Differences in numbers with OONI data**
  The findings in this report were obtained after further processing the data from OONI. This involved obtaining more confirmed blockings and eliminating false positives through additional heuristics and manual verification by iMAP researchers based on country or local context. While these heuristics will eventually be added to OONI's fingerprints, OONI will only process them for future testing.

  Additionally, iMAP researchers have categorized blocked websites that were not part of the Citizen Lab test lists but were tested on OONI via custom test lists. Hence, the figures in this report may differ from the results on OONI Explorer.

- **Testing of instant messaging apps and circumvention tools**
  The instant messaging apps and circumvention tools are limited to those tested on OONI. Therefore, the results may not reflect the state of censorship of apps more commonly used in individual countries.

Conclusion

The state of internet censorship in Indonesia seems to have worsened, with more stringent methods like DoT blocking, in addition to more critical sites being blocked through the Trustpositif. Continuous monitoring of this situation is vital to ensure that internet resilience is not compromised.

Contribute to the Study

If you would like to contribute to the OONI measurements, there are several ways to get involved:

- Perform testing on [various platforms](#), both on Mobile (iOS and Android) and Desktop, including on the CLI on Linux platforms. The domains you test can be either randomly selected from the [Citizenlab Test Lists](#) or custom test lists specific to your needs.
- Contribute to the test lists on GitHub or on [OONI](#).
- Translate the OONI Probe to your local language [here](#).
- Participate in community discussions on the [OONI Slack channel](#) or our Volunteers Telegram Channel.

Acknowledgements

We would like to thank Khairil Yusof (Sinar Project) for his supervision and advisory support on the overall iMAP project, as well as Numan Afifi (Sinar Project) for his valuable contributions in copyediting and report design. We would also like to thank the OONI team for their assistance in reviewing the methodology sections.

Additionally, we would like to extend our gratitude to local partners, activists, academicians, researchers, and anonymous users in Indonesia for their assistance in running the OONI Probe.

Annex I: List of Blocked and Likely Blocked Websites

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
1	1337x.st	1337x.st	FILE	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI AExplorer
2	1337x.to	1337x.to	FILE	OONI Probe	AS7713, AS55685, AS17451, AS23700, AS4761, AS24203, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
3	180.215.14.121	180.215.14.121	GMB	OONI Probe		Listed	OONI Explorer
4	198.96.92.14	198.96.92.14	GMB	OONI Probe		Listed	OONI Explorer
5	1tv.ru	www.1tv.ru	NEWS	Heuristics	AS23693	Not listed	OONI Explorer
6	2019gantipresiden.org	www.2019gantipresiden.org	POLR	OONI Probe	AS7713	Not listed	OONI Explorer
7	206.189.185.159	206.189.185.159	GMB	OONI Probe		Listed	OONI Explorer
8	3wishes.com	www.3wishes.com	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
9	4chan.org	4chan.org	GRP	OONI Probe		Listed	OONI Explorer
9	4chan.org	www.4chan.org	GRP	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS136861, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS24211, AS135478, AS38320, AS7713, AS17727, AS141590, AS17885, AS9905, AS59139, AS131111,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23953, AS23693		
10	4online-gamblin g.com	www.4online-ga mbling.com	GMB	OONI Probe	AS7713, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
11	69gayporno.co m	www.69gayporno .com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
12	888casino.com	www.888casino.c om	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
13	88bola.com	88bola.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
14	89.com	www.89.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
15	8kun.top	8kun.top	HOST	Heuristics	AS23693	Not listed	OONI Explorer
16	9nagatangkas.c om	9nagatangkas.co m	GMB	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
17	9nagatangkas.p w	9nagatangkas.pw	GAME	OONI Probe	AS7713	Not listed	OONI Explorer
18	abcunderwear.c	www.abcunderw	PROV	Heuristics	AS7713	Not listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
	om	ear.com					
19	abpr2.railfan.net	abpr2.railfan.net	MMED	Heuristics	AS7713, AS23693	Not listed	OONI Explorer
20	absinth.com	www.absinth.com	ALDR	Heuristics	AS7713	Not listed	OONI Explorer
21	absolut.com	www.absolut.com	ALDR	Heuristics	AS23693	Not listed	OONI Explorer
22	acquisitionx.com	www.acquisitionx.com	FILE	Heuristics	AS7713	Not listed	OONI Explorer
23	adugames.com	www.adugames.com	GAME	OONI Probe	AS7713, AS138089, AS55685, AS45727, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS23693	Listed	OONI Explorer
23	adugames.com	adugames.com	PORN	OONI Probe	AS23700	Listed	OONI Explorer
24	adultfriendfinder.com	adultfriendfinder.com	DATE	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
25	agenbola.com	www.agenbola.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
26	agent234.com	www.agent234.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
27	agentpokerqq.online	agentpokerqq.online	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
28	agentprovocate	www.agentprovo	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
	ur.com	cateur.com			AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693		
29	ahmadiyah.org	ahmadiyah.org	REL	Heuristics	AS23693	Not listed	OONI Explorer
30	alisina.org	alisina.org	REL	Heuristics	AS23693	Not listed	OONI Explorer
31	allproxysites.com	www.allproxysites.com	ANON	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
32	alodita.com	www.alodita.com	CULTR	OONI Probe	AS7713, AS138089, AS17451, AS23700, AS23693	Listed	OONI Explorer
33	alt.com	alt.com	PORN	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
34	amateurpages.com	www.amateurpages.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
35	anonymat.org	anonymat.org	ANON	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
36	anonymizer.ru	www.anonymizer.ru	ANON	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
37	anonymizer.secuser.com	anonymizer.secuser.com	ANON	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
38	anonymouse.org	anonymouse.org	ANON	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS136861, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS135478, AS38320, AS7713, AS17727, AS17885, AS9905, AS131111, AS4800, AS18004,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS138089, AS45727, AS55685, AS17451, AS17670, AS23693		
39	anonymousproxylist.net	anonymousproxylist.net	ANON	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
40	anonymsurfen.com	www.anonymsurfen.com	ANON	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
41	answering-islam.org	answering-islam.org	REL	OONI Probe	AS7713, AS4800, AS138089, AS17885, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS55666, AS23693	Listed	OONI Explorer
42	appzplanet.com	www.appzplanet.com	FILE	OONI Probe	AS7713, AS23700	Not listed	OONI Explorer
43	arrahmah.com	www.arrahmah.com	REL	OONI Probe	AS7713, AS4800, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693, AS135478	Listed	OONI Explorer
44	aruspelangi.pbworks.com	aruspelangi.pbworks.com	LGBT	Heuristics	AS7713, AS23693	Not listed	OONI Explorer
45	ashemaletube.com	www.ashemaletube.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
46	asianbookie.com	www.asianbookie.com	HOST	OONI Probe	AS7713, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17670, AS131111, AS38060, AS45287, AS23693, AS135478	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN		TrustPositif	
47	asianleak.com	asianleak.com	PORN	OONI Probe	AS17727		Listed	OONI Explorer
48	ask.com	www.ask.com	SRCH	Heuristics	AS7713, AS23693		Not listed	OONI Explorer
49	assets.gitlab-static.net	assets.gitlab-static.net	HOST	OONI Probe	AS4761, AS7713		Not listed	OONI Explorer
50	axiooqq.online	axiooqq.online	GMB	OONI Probe	AS7713, AS138089, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		Listed	OONI Explorer
51	ayobekasi.net	www.ayobekasi.net	NEWS	Heuristics	AS23693		Not listed	OONI Explorer
52	bahasan.id	bahasan.id	HUMR	OONI Probe	AS7713, AS23693		Not listed	OONI Explorer
53	balabele.com	balabele.com	GMB	OONI Probe	AS7713		Not listed	OONI Explorer
54	balipost.co.id	www.balipost.co.id	NEWS	OONI Probe	AS7713, AS4800, AS138089, AS17885, AS55685, AS17451, AS38320, AS23700, AS4761, AS24203, AS17995, AS17670, AS24209, AS131111, AS38060, AS45287, AS23693, AS135478		Listed	OONI Explorer
55	banthis.tv	banthis.tv	NEWS	OONI Probe	AS7713		Not listed	OONI Explorer
56	barmeister.com	www.barmeister.com	ALDR	Heuristics	AS7713		Not listed	OONI Explorer
57	bbm.com	www.bbm.com	COMT	Heuristics	AS7713		Not listed	OONI Explorer
58	beeg.com	beeg.com	PORN	OONI Probe	AS7713		Listed	OONI Explorer
59	beer.com	www.beer.com	ALDR	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693		Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
60	bennywenda.org	www.bennywenda.org	MILX	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
61	beritamuslim.info	www.beritamuslim.info	NEWS	OONI Probe	AS4761, AS7713	Not listed	OONI Explorer
62	beritamuslim.wordpress.com	beritamuslim.wordpress.com	REL	OONI Probe	AS7713, AS4800, AS138089, AS17885, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS131111, AS38060, AS55666, AS23693, AS135478	Listed	OONI Explorer
63	beritapolitikpelangi.blogspot.com	beritapolitikpelangi.blogspot.com	POLR	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS135478, AS38320, AS7713, AS17727, AS17885, AS9905, AS131111, AS55666, AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
64	beritasore.com	beritasore.com	NEWS	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS135478, AS38320, AS7713, AS17727, AS17885, AS9905, AS131111, AS55666, AS4800, AS18004, AS138089, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
65	betfair.com	www.betfair.com	GMB	OONI Probe	AS7713, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS131111, AS45287, AS23693		
66	bglad.com	www.bglad.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
67	bi.org	bi.org	LGBT	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS136861, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS135478, AS38320, AS7713, AS17727, AS17885, AS9905, AS131111, AS55666, AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
68	bicommunitynews.co.uk	www.bicommunitynews.co.uk	LGBT	Heuristics	AS7713, AS23693	Not listed	OONI Explorer
69	bigolivepc.com	bigolivepc.com	MMED	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700, AS4761, AS24209, AS7713, AS17885, AS131111, AS55666, AS4800, AS18004, AS138089, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
70	bigospace.com	bigospace.com	MMED	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS24209, AS131111, AS38060, AS45287, AS23693, AS135478	Listed	OONI Explorer
71	binance.com	www.binance.com	COMM	OONI Probe	AS7713, AS55685, AS45727, AS17451, AS23700, AS4761, AS24203, AS17995,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN		TrustPositif	
					AS17670, AS131111, AS38060, AS23693			
71	binance.com	binance.com	COMM	OONI Probe	AS23700		Listed	OONI Explorer
72	biocypressonline.net	biocypressonline.net	COMM	OONI Probe	AS7713		Not listed	OONI Explorer
73	bioskopkerenin.com	bioskopkerenin.com	MMED	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS24209, AS131111, AS38060, AS55666, AS23693, AS135478		Listed	OONI Explorer
74	bitcoin-mix.org	bitcoin-mix.org	COMM	OONI Probe	AS7713		Not listed	OONI Explorer
75	bitcomet.com	www.bitcomet.com	FILE	Heuristics	AS23693		Not listed	OONI Explorer
76	biz.ly	www.biz.ly	HOST	Heuristics	AS23693		Not listed	OONI Explorer
77	blackberry.com	www.blackberry.com	MMED	Heuristics	AS23693		Not listed	OONI Explorer
78	blackhat.be	www.blackhat.be	HACK	Heuristics	AS7713, AS23700		Not listed	OONI Explorer
79	blackjackinfo.com	www.blackjackinfo.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693		Listed	OONI Explorer
80	bldaily.com	www.bldaily.com	NEWS	OONI Probe	AS4761, AS7713		Not listed	OONI Explorer
81	blockchain.com	www.blockchain.com	HACK	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS23693		Listed	OONI Explorer
82	blog.angsamerah.com	blog.angsamerah.com	XED	Heuristics	AS23693		Not listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
83	blog.kurio.co.id	blog.kurio.co.id	HOST	Heuristics*	AS4761, AS9341, AS17451, AS17769, AS17885, AS17995, AS23700, AS24203, AS55685, AS58495, AS131111, AS135478, AS141642, AS149715, AS150249	Not listed	OONI Explorer
84	blogmarks.net	blogmarks.net	GRP	Heuristics	AS23693	Not listed	OONI Explorer
85	blued.com	www.blued.com	GRP	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS136861, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS24211, AS135478, AS38320, AS7713, AS17727, AS141590, AS17885, AS9905, AS59139, AS131111, AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23953, AS23693	Listed	OONI Explorer
86	bluewafflesdisease.org	www.bluewafflesdisease.org	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
87	bodylingerie.com	www.bodylingerie.com	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
88	bolanaga.com	bolanaga.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
89	bolauntung.com	bolauntung.com	GMB	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS63859, AS17451,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN		TrustPositif	
					AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693			
90	bolazoom.com	bolazoom.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		Listed	OONI Explorer
91	boyahoy.com	boyahoy.com	LGBT	OONI Probe	AS55685, AS63859, AS55666, AS45727		Not listed	OONI Explorer
92	bravo-pass.com	bravo-pass.com	GAME	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS23693		Listed	OONI Explorer
93	bravoporn.com	www.bravoporn.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693		Listed	OONI Explorer
94	bssn.go.id	bssn.go.id	GOVT	Heuristics*	AS4761, AS9341, AS17769, AS17995, AS23700, AS38060, AS58495, AS131111, AS139994, AS141642, AS149715, AS150249		Not listed	OONI Explorer
95	buddhanet.net	www.buddhanet.net	REL	Heuristics	AS23693		Not listed	OONI Explorer
96	budweiser.com	www.budweiser.com	ALDR	OONI Probe	AS23700		Listed	OONI Explorer
97	buktidansaksi.com	buktidansaksi.com	HATE	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
98	bwinkasino.com	bwinkasino.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
99	caixinglobal.com	www.caixinglobal.com	NEWS	Heuristics	AS23693	Not listed	OONI Explorer
100	callserve.com	www.callserve.com	COMT	Heuristics	AS23693	Not listed	OONI Explorer
101	casino.com	www.casino.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
102	casinotropez.com	www.casinotropez.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
103	cdns.grindr.com	cdns.grindr.com	LGBT	OONI Probe	AS7713, AS17727, AS4800, AS55685, AS63859, AS17451, AS23700, AS4761, AS58369, AS17995, AS131111, AS23693, AS135478	Not listed	OONI Explorer
104	ceritacerita.com	ceritacerita.com	MMED	OONI Probe	AS7713, AS4800, AS17885, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS24209, AS131111, AS38060, AS55666, AS23693, AS135478	Listed	OONI Explorer
105	cesr.org	www.cesr.org	HUMR	Heuristics	AS23693	Not listed	OONI Explorer
106	chantelle.com	www.chantelle.com	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
107	cidh.org	www.cidh.org	HUMR	Heuristics	AS23693	Not listed	OONI Explorer
108	cirp.org	www.cirp.org	PUBH	OONI Probe	AS7713	Not listed	OONI Explorer
109	cis.minsk.by	www.cis.minsk.by	GOVT	Heuristics	AS23693	Not listed	OONI Explorer
110	climateone.blogspot.co.id	climateone.blogspot.co.id	PORN	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
111	coinbase.com	www.coinbase.com	COMM	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS23693	Listed	OONI Explorer
112	coinex.com	www.coinex.com	ECON	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS23693	Listed	OONI Explorer
113	collegehumor.com	www.collegehumor.com	CULTR	Heuristics	AS7713	Not listed	OONI Explorer
114	comohacerseunaborto.com	comohacerseunaborto.com	XED	Heuristics	AS23693	Not listed	OONI Explorer
115	conan.xxx	conan.xxx	PORN	OONI Probe	AS55685, AS17451	Not listed	OONI Explorer
116	coquette.com	www.coquette.com	PROV	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
117	corona.jogjaprov.go.id	corona.jogjaprov.go.id	GOVT	OONI Probe	AS7713	Not listed	OONI Explorer
118	crito.jw.lt	crito.jw.lt	PORN	OONI Probe	AS7713, AS4800, AS18004, AS138089, AS17885, AS55685, AS63859,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN		TrustPositif	
					AS17451, AS23700, AS4761, AS24203, AS9905, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693			
119	crypto.com	crypto.com	COMM	OONI Probe	AS23700		Listed	OONI Explorer
120	cultoferotica.com	www.cultoferotica.com	PORN	OONI Probe	AS7713, AS18004, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693		Listed	OONI Explorer
121	cwgl.rutgers.edu	www.cwgl.rutgers.edu	HUMR	Heuristics	AS23693		Not listed	OONI Explorer
122	daddylivehd.one	daddylivehd.one	PORN	OONI Probe	AS23700		Listed	OONI Explorer
123	dailymail.co.uk	www.dailymail.co.uk	NEWS	Heuristics	AS7713, AS23693		Not listed	OONI Explorer
124	dailystormer.name	dailystormer.name	HATE**	OONI Probe	AS24203, AS38060, AS45287, AS136861, AS23700, AS4761, AS58369, AS139994, AS24209, AS38320, AS135478, AS7713, AS17727, AS17885, AS9905, AS131111, AS55666, AS4800, AS18004, AS45727, AS55685, AS17451, AS17670, AS23693		Listed	OONI Explorer
125	date.com	www.date.com	DATE	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693		Listed	OONI Explorer
126	dateinasia.com	www.dateinasia.com	DATE	OONI Probe	AS23693		Not listed	OONI Explorer
127	ddosecrets.com	ddosecrets.com	HUMR	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS149706, AS23700, AS4761, AS58369,		Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS139994, AS24209, AS135478, AS38320, AS7713, AS17727, AS17885, AS9905, AS131111, AS55666, AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23693		
128	debate.org.uk	debate.org.uk	REL	Heuristics	AS23693	Not listed	OONI Explorer
129	dedomil.net	dedomil.net	GAME	OONI Probe	AS7713	Listed	OONI Explorer
130	delicates.co.uk	www.delicates.co.uk	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
131	dennysiregar.id	www.dennysiregar.id	CULTR	OONI Probe	AS7713	Not listed	OONI Explorer
132	deviantart.com	www.deviantart.com	CULTR	OONI Probe	AS23700	Not listed	OONI Explorer
132	deviantart.com	deviantart.com	GRP	OONI Probe	AS17451	Not listed	OONI Explorer
133	dewabioskop21.org	dewabioskop21.org	MMED	OONI Probe	AS7713, AS4800, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS24209, AS131111, AS38060, AS55666, AS23693, AS135478	Listed	OONI Explorer
134	dftufnswzp.craftingstore.net	dftufnswzp.craftingstore.net	GMB/GAME	OONI Probe	AS150249	Not listed	OONI Explorer
135	discord.gg	discord.gg	COMT	Heuristics	AS23693	Not listed	OONI Explorer
136	disdukcapil.kutaikartanegarakab.go.id	disdukcapil.kutaikartanegarakab.go.id	GOVT	Heuristics*	AS17769, AS63859, AS131775, AS136052, AS139952, AS149715	Not listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
137	dit-inc.us	www.dit-inc.us	ANON	Heuristics	AS7713, AS23693	Not listed	OONI Explorer
138	dlhd.sx	dlhd.sx	PORN	OONI Probe	AS17451, AS23700	Listed	OONI Explorer
139	dogpile.com	www.dogpile.com	SRCH	OONI Probe		Not listed	OONI Explorer
140	doh.centraleu.pi-dns.com	doh.centraleu.pi-dns.com	HOST	Heuristics*	AS4761, AS4800, AS9341, AS17451, AS17769, AS17885, AS17995, AS24203, AS55685, AS58495, AS131111, AS135478, AS139952, AS141642, AS149715	Not listed	OONI Explorer
141	dongengbudaya.wordpress.com	dongengbudaya.wordpress.com	CULTR	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
142	dramaserial.xyz	dramaserial.xyz	MMED	OONI Probe	AS7713, AS4800, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS131111, AS38060, AS55666, AS23693, AS135478	Listed	OONI Explorer
143	drupalindonesia.com	www.drupalindonesia.com	HOST	OONI Probe	AS7713	Not listed	OONI Explorer
144	duniamalam168.com	duniamalam168.com	PROV	OONI Probe	AS7713	Not listed	OONI Explorer
145	duniamalam88.com	www.duniamalam88.com	PROV	OONI Probe	AS7713	Not listed	OONI Explorer
146	dzen.ru	dzen.ru	HOST	Heuristics	AS23693	Not listed	OONI Explorer
147	earth-liberation-front.org	earth-liberation-front.org	ENV	OONI Probe	AS7713, AS4800, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS45287, AS23693, AS135478		
148	ebaumsworld.com	www.ebaumsworld.com	HOST	Heuristics	AS23693	Not listed	OONI Explorer
149	ecequality.org	www.ecequality.org	LGBT	Heuristics	AS7713	Not listed	OONI Explorer
150	euro.who.int	www.euro.who.int	IGO**	Heuristics	AS23693	Not listed	OONI Explorer
151	eurogrand.com	www.eurogrand.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
152	europacasino.com	www.europacasino.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
153	euthanasia.cc	www.euthanasia.cc	PUBH	Heuristics	AS23693	Not listed	OONI Explorer
154	exmuslim.wordpress.com	exmuslim.wordpress.com	REL	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700, AS4761, AS135478, AS7713, AS17885, AS131111, AS55666, AS4800, AS138089, AS55685, AS45727, AS17451, AS17670, AS23693	Listed	OONI Explorer
155	eztv.ag	eztv.ag	FILE	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
156	faithfreedom.or	www.faithfreedo	REL	OONI Probe	AS7713, AS4800, AS138089, AS17885,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
	g	m.org			AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693, AS135478		
157	fakku.net	fakku.net	PORN	OONI Probe	AS23693	Listed	OONI Explorer
158	famousnudes.com	famousnudes.com	PORN	OONI Probe	AS7713, AS18004, AS138089, AS17885, AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
159	famouspornstars.com	www.famouspornstars.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
160	fanfiction.net	www.fanfiction.net	CULTR	OONI Probe	AS23693	Not listed	OONI Explorer
161	fark.com	www.fark.com	HOST	Heuristics	AS23693, AS23700	Not listed	OONI Explorer
162	femalestars.com	www.femalestars.com	PORN	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
163	fhm.com	fhm.com	PROV	OONI Probe	AS7713	Listed	OONI Explorer
164	fhm.nl	fhm.nl	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
165	fifabola.com	fifabola.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS63859, AS17451, AS23700, AS4761,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		
166	figleaves.com	www.figleaves.com	COMM	Heuristics	AS7713	Not listed	OONI Explorer
167	filesharing.transretail.co.id	filesharing.transretail.co.id	FILE	Heuristics	AS23693	Not listed	OONI Explorer
168	filmapik.club	filmapik.club	MMED	OONI Probe	AS7713, AS4800, AS138089, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS131111, AS38060, AS55666, AS23693, AS135478	Listed	OONI Explorer
169	filmapik.fun	filmapik.fun	MMED	OONI Probe	AS7713, AS138089, AS17885, AS55685, AS136119, AS17451, AS23700, AS4761, AS24203, AS17995, AS45287, AS17670, AS24209, AS131111, AS38060, AS55666, AS23693, AS135478	Listed	OONI Explorer
170	fotoartis.in	www.fotoartis.in	PROV	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693	Listed	OONI Explorer
171	fotolog.com	www.fotolog.com	MMED	Heuristics	AS23693	Not listed	OONI Explorer
172	freeexpression.org	www.freeexpression.org	NEWS	OONI Probe	AS4761, AS7713, AS23693	Not listed	OONI Explorer
173	freegaypornfinder.com	www.freegaypornfinder.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
174	freegaypornhdt	www.freegayporn	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN		TrustPositif
	ube.com	hdtube.com			AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		
175	freehomepage.com	www.freehomepage.com	HOST	Heuristics	AS23693	Not listed	OONI Explorer
176	freepapua.com	freepapua.com	POLR	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS135478, AS38320, AS7713, AS131111, AS55666, AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
177	freeservers.com	www.freeservers.com	HOST	OONI Probe	AS7713, AS23693	Not listed	OONI Explorer
178	freespeech.org	freespeech.org	HUMR	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS135478, AS38320, AS7713, AS17885, AS131111, AS55666, AS4800, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
179	freespeechcoalition.com	www.freespeechcoalition.com	HUMR	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700, AS4761, AS24209, AS38320, AS135478, AS7713, AS17885, AS131111, AS55666, AS4800, AS138089, AS55685, AS45727, AS17451, AS17670,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN		TrustPositif	
					AS23693			
180	freewebspace.com	www.freewebspace.com	HOST	Heuristics	AS23693		Not listed	OONI Explorer
181	freewestpapua.org	freewestpapua.org	POLR	OONI Probe	AS150283		Listed	OONI Explorer
181	freewestpapua.org	www.freewestpapua.org	MILX	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		Listed	OONI Explorer
182	friendfinder.com	friendfinder.com	DATE	OONI Probe	AS23693		Not listed	OONI Explorer
183	fsb.ru	www.fsb.ru	GOVT	Heuristics	AS23693		Not listed	OONI Explorer
184	fstvmedia.com	fstvmedia.com	NEWS	OONI Probe	AS149706, AS7713		Not listed	OONI Explorer
185	ftchinese.com	www.ftchinese.com	NEWS	Heuristics	AS23693		Not listed	OONI Explorer
186	fteproxy.org	fteproxy.org	ANON	Heuristics	AS7713		Not listed	OONI Explorer
187	fuckingfreemovies.com	www.fuckingfreemovies.com	PORN	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		Listed	OONI Explorer
188	g30s-pki.com	g30s-pki.com	POLR	Heuristics	AS7713, AS23693		Not listed	OONI Explorer
189	gambling.com	www.gambling.com	GMB	OONI Probe	AS7713, AS138089, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693		Listed	OONI Explorer
190	gay.com	www.gay.com	LGBT	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700,		Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
					AS4761, AS24209, AS38320, AS135478, AS7713, AS17885, AS131111, AS55666, AS4800, AS138089, AS55685, AS17451, AS17670, AS23693		
191	gayegypt.com	www.gayegypt.com	LGBT	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700, AS4761, AS38320, AS135478, AS7713, AS17885, AS131111, AS55666, AS4800, AS138089, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
192	gayindonesiaforum.com	gayindonesiaforum.com	LGBT	OONI Probe	AS24203, AS17995, AS38060, AS45287, AS38758, AS149706, AS63859, AS23700, AS4761, AS58369, AS139994, AS24209, AS135478, AS7713, AS17885, AS131111, AS55666, AS18004, AS138089, AS45727, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
193	gayonthenet.net	gayonthenet.net	PORN	OONI Probe	AS7713, AS18004, AS17885, AS55685, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS45287, AS23693	Listed	OONI Explorer
194	gayscape.com	www.gayscape.com	LGBT	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700, AS4761, AS38320, AS135478, AS7713, AS17885, AS131111, AS55666, AS18004, AS138089, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer
195	gensyiah.com	www.gensyiah.co	REL	OONI Probe	AS7713, AS4800, AS138089, AS17885,	Listed	OONI Explorer

	Website	Domain	Category	Confirmed By	Blocking ASN	TrustPositif	
		m			AS55685, AS63859, AS17451, AS23700, AS4761, AS24203, AS17995, AS17670, AS131111, AS38060, AS45287, AS23693, AS135478		
196	getdrupe.com	www.getdrupe.com	COMT	Heuristics	AS23693	Not listed	OONI Explorer
197	getrevue.co	www.getrevue.co	HOST	Heuristics*	AS4761, AS17769, AS17885, AS17995, AS24203, AS38060, AS58495, AS63859, AS131706, AS131775, AS138089, AS141642, AS149715, AS150249	Not listed	OONI Explorer
198	giphy.com	giphy.com	MMED	OONI Probe		Not listed	OONI Explorer
199	glaad.org	www.glaad.org	LGBT	Heuristics	AS7713, AS23693	Not listed	OONI Explorer
200	glbtq.com	www.glbtq.com	LGBT	OONI Probe	AS24203, AS17995, AS45287, AS38060, AS63859, AS23700, AS4761, AS24209, AS38320, AS135478, AS7713, AS17885, AS131111, AS55666, AS4800, AS138089, AS55685, AS17451, AS17670, AS23693	Listed	OONI Explorer

Annex II: List of ISPs

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
1	AS3382	INDONESIAUNI-AS-AP	University of Indonesia	ID	1,229
2	AS4761	INDOSAT-INP-AP	INDOSAT Internet Network Provider	ID	51,762
3	AS4787	ASN-CBN	PT Cyberindo Aditama	ID	462
4	AS4800	LINTASARTA-AS-AP	PT Aplikanusa Lintasarta	ID	11,011
5	AS7713	TELKOMNET-AS-AP	PT Telekomunikasi Indonesia	ID	1,644,533
6	AS9341	ICONPLN-ID-AP-ISP	PT INDONESIA COMNETS PLUS	ID	68,539
7	AS9657	MELSANET-ID-AP	Melsa-i-net AS	ID	1,400
8	AS9905	LINKNET-ID-AP	Linknet ASN	ID	2,694
9	AS16509	AMAZON-02,	US	US	4
10	AS17451	BIZNET-AS-AP	BIZNET NETWORKS	ID	147,401
11	AS17538	CIRCLECOM-AS-ID-AP	PT. Circlecom Nusantara Indonesia	ID	1,941
12	AS17670	MNCKABELMEDIACOM-ID	PT. MNC Kabel Mediacom	ID	11,813
13	AS17727	NAPINFO-AS-AP	PT. NAP Info Lintas Nusa	ID	988
14	AS17769	CITYNET-AP	PT Indopratama Teleglobal ISPWisma BSG Floor 6	ID	7,574
15	AS17885	JKTXLNET-AS-AP	PT XL Axiata Tbk	ID	71,474
16	AS17995	SOLUSINET-AS-ID	PT iForte Global Internet	ID	99,850
17	AS18004	WIRELESSNET-ID	PT WIRELESS INDONESIA WIN	ID	2,748
18	AS18103	NEUVIZ-AS-ID-AP	Neuviz Net	ID	3,633
19	AS21859	ZEN-ECN	Zenlayer Inc	US	804
20	AS22363	PHMGMT-AS1	Powerhouse Management, Inc.	US	121
21	AS23679	NUSANET-AS-ID	PT. Media Antar Nusa	ID	22
22	AS23693	TELKOMSEL-ASN-ID	PT. Telekomunikasi Selular	ID	107,946

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
23	AS23700	FASTNET-AS-ID	Linknet-Fastnet ASN	ID	334,624
24	AS23756	PADINET-AS-ID	PADINET – Padi Internet	ID	1,112
25	AS23951	CITRA-AS-ID	PT JEMBATAN CITRA NUSANTARA	ID	520
26	AS23953	SCBDNET-AS-ID	PT ARTHA TELEKOMINDO	ID	202
27	AS24203	NAPXLNET-AS-ID	PT XL Axiata	ID	233,354
28	AS24207	EXPRESSNET-AS-ID	PT NettoCyber Indonesia	ID	4,202
29	AS24209	INTERMEDIANET-AS-ID	PT. Inter Media Lintas Nusa	ID	1,736
30	AS24211	DETIK-AS-ID	PT. Detik Ini JUga	ID	109
31	AS24212	JASNET-AS-ID	PT. JASNITA TELEKOMINDO	ID	6,500
32	AS24429	TAOBAO	Zhejiang Taobao Network Co.,Ltd	CN	100
33	AS24521	DATAUTAMA-NET-AS-ID	PT. DATA Utama Dinamika	ID	41
34	AS24530	POWERNET-AS-ID	PT. Power Telecom Indonesia	ID	46
35	AS24532	INET-AS-ID	PT. Inet Global Indo	ID	3,619
36	AS24534	TRANSHYBRID-AS-ID	PT. Transhybrid Communication	ID	9
37	AS36384	GOOGLE-IT	Google LLC	US	100
38	AS38060	BIZNET-IXP-INA-AP	Biznet NAP - Internet Exchange Provider	ID	24,502
39	AS38158	CBN-AS-ID	PT. Cyberindo Aditama	ID	76
40	AS38320	MMS-AS-ID	PT Maxindo Mitra Solusi	ID	1,733
41	AS38511	TACHYON-AS-ID	PT Remala Abadi	ID	2,944
42	AS38524	LAXONET-AS-ID	Laxo Global Akses, PT	ID	30
43	AS38527	MLINK-AS-ID	JAWA POS NATIONAL NETWORK MEDIALINK, PT	ID	417
44	AS38758	HYPERNET-AS-ID	PT. HIPERNET INDODATA	ID	2,123
45	AS38769	BITEK-AS-ID	PT. Bit Technology Nusantara	ID	7
46	AS45147	NAPINFO-TRANSIT-AS-AP	PT. NAP Info Lintas Nusa	ID	294
47	AS45287	VARNION-AS-ID	Varnion Technology Semesta, PT	ID	4,620
48	AS45305	LDP-AS-ID	Lintas Data Prima, PT	ID	860
49	AS45325	PC24NET-AS-ID	PT PC24 Telekomunikasi Indonesia	ID	100
50	AS45701	MILLENINDO	PT. Internet Madju Abad Millenindo	ID	3,486

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
51	AS45727	THREE-AS-ID	Hutchison CP Telecommunications, PT	ID	5,046
52	AS46019	UNIBRAW-AS-ID	Universitas Brawijaya	ID	29
53	AS46023	QUANTUMNET-AS-ID	PT Quantum Tera Network	ID	2,605
54	AS46032	CENTRIN-ID	PT Centrin Online Prima	ID	15
55	AS55666	GMEDIA-AS-ID	PT Media Sarana Data	ID	6,974
56	AS55674	PUSKOM-UNY-AS-ID	Universitas Negeri Yogyakarta	ID	340
57	AS55685	JLM-AS-ID	PT Jala Lintas Media	ID	29,879
58	AS55699	STARNET-AS-ID	PT. Cemerlang Multimedia	ID	1,620
59	AS56234	NARATEL-AS-ID	PT Naraya Telematika	ID	53
60	AS56239	GASTRANET-AS-ID	PT Graha Anugrah Sejahtera	ID	1,119
61	AS58369	FIBERNET-AS-ID	PT. Fiber Networks Indonesia	ID	2,609
62	AS58495	HSPNET-AS-ID	PT Parsaoran Global Datatrans	ID	40,257
63	AS58819	ARSENETGS-AS-ID	PT Arsenet Global Solusi	ID	1,107
64	AS59139	WIFIKU-AS-ID	PT Wifiku Indonesia	ID	8,991
65	AS59279	IDNIC-RMI-AS-ID	PT Raja Mitra Informatika	ID	21
66	AS63859	MYREPUBLIC-AS-ID	PT. Eka Mas Republik	ID	19,973
67	AS63949	AKAMAI-LINODE-AP	Akamai Connected Cloud	SG	11
68	AS64300	JSN-AS-ID	PT JARINGANKU SARANA NUSANTARA	ID	788
69	AS64501	-Reserved	AS-	ZZ	16
70	AS131111	CEPATNET-AS-ID	PT Mora Telematika Indonesia	ID	29,119
71	AS131112	MMTC-AS-ID	Sekolah Tinggi Multi Media MMTC Yogyakarta	ID	164
72	AS131706	TERABIT-AS-ID	PT SELARAS CITRA TERABIT	ID	10,052
73	AS131717	IDNIC-CIFO-AS-ID	PT Citra Jelajah Informatika	ID	2,496
74	AS131769	IDNIC-MAYATAMA-AS-ID	PT Mayatama Solusindo	ID	10
75	AS131775	IDNIC-JALANET-AS-ID	PT. Jupiter Jala Arta	ID	37,476

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
76	AS132641	NETCITI-AS-ID	PT Netciti Persada	ID	485
77	AS132652	IDNIC-UNINA-AS-ID	PT. Cahaya Buana Raksa	ID	714
78	AS132655	IDNIC-DPDRI-AS-ID	Sekretariat Jenderal Dewan Perwakilan Daerah Republik Indonesia	ID	4
79	AS132669	IDNIC-GNET-AS-ID	PT Globalnet Multi Data	ID	20
80	AS133606	VIETTELTIMORLESTE-AS-AP	Viettel Timor Leste	TL	1,320
81	AS135477	JAVADIGITAL-AS-ID	PT. Java Digital Nusantara	ID	100
82	AS135478	ASN-CBNBROADBAND	PT. Cyberindo Aditama	ID	22,903
83	AS135487	IDNIC-YAYASANTARUMANAGARA-AS-ID	UNTAR - YAYASAN TARUMANAGARA	ID	13
84	AS136052	IDNIC-IDCLOUDHOST-AS-ID	PT Cloud Hosting Indonesia	ID	7,824
85	AS136055	QIUNET-AS-ID	PT Queen Network Nusantara	ID	1,158
86	AS136093	FAZNET-AS-ID	PT Mitra Lintas Multimedia	ID	64
87	AS136119	BALIFIBERNET-AS-ID	PT Bali Towerindo Sentra, Tbk	ID	315
88	AS136841	MTMBALI-AS-ID	PT MITRA TELEMEDIA MANUNGGAL	ID	9,051
89	AS136861	ARTAMEDIANET-AS-ID	PT. ARTAMEDIA CITRA TELEMATIKA INDONESIA	ID	1,100
90	AS136873	MEGADATA-AS-ID	MEGADATA-ISP	ID	2,174
91	AS136879	JARINDO-AS-ID	PT. Media Jaringan Indonesia	ID	4,337
92	AS136882	IDNIC-DKISCRB-AS-ID	Dinas Komunikasi Informatika dan Statistik Kota Cirebon	ID	8
93	AS137409	GSLNETWORKS-AS-AP	GSL Networks Pty LTD	AU	5
94	AS138089	GMDP-AS-ID	PT.Global Media Data Prima	ID	8,580
95	AS138109	RASIBINTANG-AS-ID	PT. Rasi Bintang Perkasa	ID	23
96	AS138451	MONASHUNI-AS-AP	PT. Monash Indonesia Services	AU	400

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
97	AS138810	GLOSINDO-AS-ID	PT Global Media Pratama Solusindo	ID	6,875
98	AS138866	MMD-AS-ID	PT Mitra Media Data	ID	26
99	AS138871	IDNIC-SUPERCORRIDOR-AS-ID	PT. Trans Indonesia Superkoridor	ID	1,229
100	AS138886	DBN-AS-ID	PT Data Buana Nusantara	ID	20
101	AS138889	BKU-AS-ID	PT Bintang Komunikasi Utama	ID	24
102	AS138897	IDNIC-SYEKHNURJATI-AS-ID	IAIN SYEKHNURJATI	ID	26
103	AS139418	GASATEKNET-AS-ID	PT Gasatek Bintang Nusantara	ID	1,659
104	AS139421	PANDAWANET-AS-ID	PT Dharma Sarana Solusindo	ID	20
105	AS139425	BEAT-AS-ID	PT RESTU PANCA ALAM	ID	1,922
106	AS139446	GONET-AS-ID	PT. Gonet Teknologi Indonesia	ID	16
107	AS139447	IDNIC-TRANSJAKARTA-ID	PT Transportasi Jakarta	ID	5
108	AS139941	RIYADNETWORK-AS-ID	RIYAD NETWORK	ID	30
109	AS139951	ALFATINDO-AS-ID	PT Alfatih Indo Teknologi	ID	10
110	AS139952	TRIDATA-AS-ID	PT Trisari Data Indonusa	ID	8,436
111	AS139958	FAKTAJI-AS-ID	PT Fakta Jabbar Industri	ID	140
112	AS139977	PRISMA-AS-ID	PT PRISMA MEDIA NUSANTARA	ID	1
113	AS139994	XLNET-FTTH-ID	PT XL Axiata Tbk	ID	6,391
114	AS139997	WORTEL-AS-ID	PT Wortel	ID	400
115	AS140018	CYBERTEK-AS-ID	PT. CYBER TEKNOLOGI PUTRAWAN	ID	300
116	AS140019	IDNIC-UNAI-AS-ID	Universitas Advent Indonesia	ID	1,160
117	AS140443	IDNIC-HERZA-AS-ID	PT Herza Digital Indonesia	ID	37
118	AS140454	PNI-AS-ID	PT Pop Net Indonesia	ID	232
119	AS140457	IMEDIANET-AS-ID	PT Ikhlas Cipta Teknologi	ID	73
120	AS141114	EASTMEDIA-AS-ID	PT Super Media Indonesia	ID	205

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
121	AS141146	IDNIC-INDONESIANET-AS-ID	PT Indonesia Telekomunikasi Teknologi	ID	41
122	AS141461	MNCKABELMEDIACOM-AS	PT. MNC Kabel Mediacom	ID	20
123	AS141590	IDNIC-7SKY-AS-ID	PT Tujuh Media Angkasa	ID	701
124	AS141622	IDNIC-JMG-AS-ID	PT Java Media Grup	ID	1
125	AS141642	IDNIC-RINGNET-AS-ID	PT Ring Media Nusantara	ID	50,899
126	AS141671	IDNIC-ZEUSS-AS-ID	PT Samudera Kilat Indonesia	ID	300
127	AS141674	IDNIC-DARTANET-AS-ID	PT Data Arta Sedaya	ID	500
128	AS141898	MILENETWORK-AS-ID	PT Milenial Inti Telekomunikasi	ID	2
129	AS141921	IDNIC-ISEVEN-AS-ID	PT Jaringan Keluarga Bersama	ID	23
130	AS141927	IDNIC-JPIPRIMENET-AS-ID	PT Jaringan prima indonesia	ID	5
131	AS141938	IDNIC-SATRIAMATARAM-AS-ID	PT Satria Wangsa Mataram	ID	2
132	AS141952	IDNIC-LINKKITA-AS-ID	PT Link Kita Teknologi	ID	29
133	AS141960	IDNIC-PELANGICOMM-AS-ID	PT Pelangi Communication Network	ID	12
134	AS141968	IDNIC-IKADA-AS-ID	PT Industri Kreatif Digital	ID	101
135	AS142340	IDNIC-LAMDA-AS-ID	PT Lancar Artha Media Data	ID	245
136	AS142370	IDNIC-MSN-AS-ID	PT Master Star Network	ID	1
137	AS142387	IDNIC-IJE-AS-ID	PT Integrasi Jaringan Ekosistem	ID	203
138	AS147049	PACKETHUBSA-AS-AP	PacketHub S.A.	AU	20
139	AS147106	IDNIC-GESITNET-AS-ID	PT Global Erasiber Teknologi	ID	809
140	AS147121	IDNIC-MARVATEL-AS-ID	PT Marva Global Telekomunikasi	ID	20

	ASN	AS Name	Ownership / Description	Registration Country	Measurement Count
141	AS147137	IDNIC-HELIUM-AS-ID	HELIUM	ID	1
142	AS147171	IDNIC-BRIN-AS-ID	Badan Riset dan Inovasi Nasional	ID	6,235
143	AS149360	IDNIC-INTELMEDIA-AS-ID	PT Indo Telemedia Solusi	ID	23
144	AS149401	IDNIC-SINTESA-AS-ID	PT Sintesa Sinergi Nusantara	ID	673
145	AS149670	IDNIC-SIBERTECH-AS-ID	PT Siber Tech Indonesia	ID	45
146	AS149706	IDNIC-AEGISNET-AS-ID	PT Aegis Ekakarsa Garuda Informatika Semesta	ID	400
147	AS149715	IDNIC-GANAS-AS-ID	PT Giga Network Solusindo	ID	52,736
148	AS149720	IDNIC-ALUS-AS-ID	PT Adi Solusindo Teknologi	ID	2
149	AS149749	MORIZT-ID	Morizt	ID	20
150	AS149882	IDNIC-INFINITYCLOUD-AS-ID	PT Citra Agung Mestika	ID	4
151	AS149888	IDNIC-KUSUMAVISION-AS-ID	PT Berkah Media Kusuma Vision	ID	1,346
152	AS149929	IDNIC-GIGA-AS-ID	PT Aplikasi Platform Giga	ID	78
153	AS150249	IDNIC-ATHARVA-AS-ID	PT Atharva Telematika Persada	ID	24,483
154	AS150283	IDNIC-DISKOMINFO-GOWA-AS-ID	Dinas Komunikasi Informatika, Statistik dan Persandian Kabupaten Gowa	ID	115
155	AS151538	IDNIC-FLASHNETID-AS-ID	PT Flashnet Inovasi Teknologi	ID	1,093
156	AS212238	CDNEX T	Datacamp Limited	GB	17

Annex III: Glossary

DNS	DNS, which stands for Domain Name System, maps domain names to IP addresses. A domain is a name that is commonly attributed to websites (when they're created), so that they can be more easily accessed and remembered. For example, twitter.com is the domain of the Twitter website. However, computers can't connect to internet services through domain names, but based on IP addresses: the digital address of each service on the internet. Similarly, in the physical world, you would need the address of a house (rather than the name of the house itself) in order to visit it. The Domain Name System (DNS) is what is responsible for transforming a human-readable domain name (such as ooni.org) into its numerical IP address counterpart (in this case:104.198.14.52), thus allowing your computer to access the intended website.
HTTP	The Hypertext Transfer Protocol (HTTP) is the underlying protocol used by the World Wide Web to transfer or exchange data across the internet. The HTTP protocol allows communication between a client and a server. It does so by handling a client's request to connect to a server, and the server's response to the client's request. All websites include an HTTP (or HTTPS) prefix (such as http://example.com/) so that your computer (the client) can request and receive the content of a website (hosted on a server). The transmission of data over the HTTP protocol is unencrypted.
Heuristics	Heuristics obtain further confirmed blockings other than that which are detected based on OONI blocking fingerprints. More detailed explanation can be found [here](#).
ISP	An Internet Service Provider (ISP) is an organization that provides services for accessing and using the internet. ISPs can be state-owned, commercial, community-owned, non-profit, or otherwise privately owned. Vodafone, AT&T, Airtel, and MTN are examples of ISPs.
Middle boxes	A middlebox is a computer networking device that transforms, inspects, filters, or otherwise manipulates traffic for purposes other than packet forwarding. Many Internet Service Providers (ISPs) around the world use middleboxes to improve network performance, provide users with faster access to websites, and for a number of other networking purposes.

	Sometimes, middleboxes are also used to implement internet censorship and/or surveillance. The OONI Probe app includes two tests designed to measure networks with the aim of identifying the presence of middleboxes.
TCP	The Transmission Control Protocol (TCP) is one of the main protocols on the internet. To connect to a website, your computer needs to establish a TCP connection to the address of that website. TCP works on top of the Internet Protocol (IP), which defines how to address computers on the internet. When speaking to a machine over the TCP protocol you use an IP and port pair, which looks something like this: 10.20.1.1:8080. The main difference between TCP and (another very popular protocol called) UDP is that TCP has the notion of a "connection", making it a "reliable" transport protocol.
TLS	Transport Layer Security (TLS) – also referred to as "SSL" – is a cryptographic protocol that allows you to maintain a secure, encrypted connection between your computer and an internet service. When you connect to a website through TLS, the address of the website will begin with HTTPS (such as https://www.facebook.com/), instead of HTTP.

A comprehensive glossary related to OONI can be accessed here:
https://ooni.org/support/glossary/.

Annex IV: Methodology

Data

Data computed based on the heuristics for this report can be downloaded here: https://github.com/Sinar/imap-data whereas aggregated data can be downloaded from OONI Explorer.

Coverage

The iMAP State of Internet Censorship Country Report covers the findings of network measurement collected through Open Observatory of Network Interference (OONI) OONI Probe App that measures the blocking of websites, instant messaging apps, circumvention tools and network tampering. The findings highlight the websites, instant messaging apps and circumvention tools confirmed to be blocked, the ASNs with censorship detected and method of network interference applied. The report also provides background context on the network landscape combined with the latest legal, social and political issues and events which might have an effect on the implementation of internet censorship in the country.

In terms of timeline, this second iMAP report covers measurements obtained in the one-year period from 1 July 2022 to 30 June 2023. The countries covered in this round are Cambodia, Hong Kong (China), Indonesia, Malaysia, Myanmar, Philippines, Thailand, India, Vietnam and Timor-Leste.

How are the network measurements gathered?

Network measurements are gathered through the use of OONI Probe app, a free software tool developed by Open Observatory of Network Interference (OONI). To learn more about how the OONI Probe test works, please visit https://ooni.org/nettest/.

iMAP Country Researchers and anonymous volunteers run OONI Probe app to examine the accessibility of websites included in the Citizen Lab test lists. iMAP Country Researchers actively review the country-specific test lists to ensure up-to-date websites are included and context-relevant websites are properly categorised, in consultation with local communities and digital rights network partners. We adopt the approach taken by Netalitica in reviewing country-specific test lists.

It is important to note that the findings are only applicable to the websites that were examined and do not fully reflect all instances of censorship that might have occurred during the testing period.

How are the network measurements analysed?

OONI processes the following types of data through its [data pipeline](#):

Country code

OONI by default collects the code which corresponds to the country from which the user is running OONI Probe tests from, by automatically searching for it based on the user's IP address through their [ASN database](#) the [MaxMind GeoIP database](#).

Autonomous System Number (ASN)

OONI by default collects the Autonomous System Number (ASN) of the network used to run OONI Probe app, thereby revealing the network provider of a user.

Date and time of measurements

OONI by default collects the time and date of when tests were run to evaluate when network interferences occur and to allow comparison across time. UTC is used as the standard time zone in the time and date information. In addition, the charts generated on OONI MAT will exclude measurements on the last day by default.

Categories

The 32 website categories are based on the Citizenlab test lists: https://github.com/citizenlab/test-lists. As not all websites tested on OONI are on these test lists, these websites would have unclassified categories.

No.	Category Description	Code	Description
1	Alcohol & Drugs	ALDR	Sites devoted to the use, paraphernalia, and sale of drugs and alcohol irrespective of the local legality.
2	Religion	REL	Sites devoted to discussion of religious issues, both supportive and critical, as well as discussion of minority religious groups.
3	Pornography	PORN	Hard-core and soft-core pornography.

No.	Category Description	Code	Description
4	Provocative Attire	PROV	Websites which show provocative attire and portray women in a sexual manner, wearing minimal clothing.
5	Political Criticism	POLR	Content that offers critical political viewpoints. Includes critical authors and bloggers, as well as oppositional political organizations. Includes pro-democracy content, anti-corruption content as well as content calling for changes in leadership, governance issues, legal reform. Etc.
6	Human Rights Issues	HUMR	Sites dedicated to discussing human rights issues in various forms. Includes women's rights and rights of minority ethnic groups.
7	Environment	ENV	Pollution, international environmental treaties, deforestation, environmental justice, disasters, etc.
8	Terrorism and Militants	MILX	Sites promoting terrorism, violent militant or separatist movements.
9	Hate Speech	HATE	Content that disparages particular groups or persons based on race, sex, sexuality or other characteristics
10	News Media	NEWS	This category includes major news outlets (BBC, CNN, etc.) as well as regional news outlets and independent media.
11	Sex Education	XED	Includes contraception, abstinence, STDs, healthy sexuality, teen pregnancy, rape prevention, abortion, sexual rights, and sexual health services.
12	Public Health	PUBH	HIV, SARS, bird flu, centers for disease control, World Health Organization, etc
13	Gambling	GMB	Online gambling sites. Includes casino games, sports betting, etc.
14	Anonymization and circumvention tools	ANON	Sites that provide tools used for anonymization, circumvention, proxy-services and encryption.
15	Online Dating	DATE	Online dating services which can be used to meet people, post profiles, chat, etc
16	Social Networking	GRP	Social networking tools and platforms.

No.	Category Description	Code	Description
17	LGBT	LGBT	A range of gay-lesbian-bisexual-transgender queer issues. (Excluding pornography)
18	File-sharing	FILE	Sites and tools used to share files, including cloud-based file storage, torrents and P2P file-sharing tools.
19	Hacking Tools	HACK	Sites dedicated to computer security, including news and tools. Includes malicious and non-malicious content.
20	Communication Tools	COMT	Sites and tools for individual and group communications. Includes webmail, VoIP, instant messaging, chat and mobile messaging applications.
21	Media sharing	MMED	Video, audio or photo sharing platforms.
22	Hosting and Blogging Platforms	HOST	Web hosting services, blogging and other online publishing platforms.
23	Search Engines	SRCH	Search engines and portals.
24	Gaming	GAME	Online games and gaming platforms, excluding gambling sites.
25	Culture	CULTR	Content relating to entertainment, history, literature, music, film, books, satire and humour
26	Economics	ECON	General economic development and poverty related topics, agencies and funding opportunities
27	Government	GOVT	Government-run websites, including military sites.
28	E-commerce	COMM	Websites of commercial services and products.
29	Control content	CTRL	Benign or innocuous content used as a control.
30	Intergovernmental Organizations	IGO	Websites of intergovernmental organizations such as the United Nations.
31	Miscellaneous content	MISC	Sites that don't fit in any category (XXX Things in here should be categorised)

IP addresses and other information

OONI does not collect or store users' IP addresses deliberately. OONI takes measures to remove them from the collected measurements, to protect its users from potential risks. However, there may be instances where users' IP addresses and other potentially personally-identifiable information are unintentionally collected, if such information is included in the HTTP headers or other metadata of measurements. For example, this can occur if the tested websites include tracking technologies or custom content based on a user's network location.

Network measurements

The types of network measurements that OONI collects depend on the types of tests that are run. Specifications about each OONI test can be viewed through its git repository, and details about what collected network measurements entail can be viewed through OONI Explorer or through OONI's measurement API.

In order to derive meaning from the measurements collected, OONI processes the data types mentioned above to answer the following questions:
- Which types of OONI tests were run?
- In which countries were those tests run?
- In which networks were those tests run?
- When were tests run?
- What types of network interference occurred?
- In which countries did network interference occur?
- In which networks did network interference occur?
- When did network interference occur?
- How did network interference occur?

To answer such questions, OONI's pipeline is designed to answer such questions by processing network measurements data to enable the following:
- Attributing measurements to a specific country.
- Attributing measurements to a specific network within a country.
- Distinguishing measurements based on the specific tests that were run for their collection.
- Distinguishing between "normal" and "anomalous" measurements (the latter indicating that a form of network tampering is likely present).
- Identifying the type of network interference based on a set of heuristics for DNS tampering, TCP/IP blocking, and HTTP blocking.
- Identifying block pages based on a set of heuristics for HTTP blocking.
- Identifying the presence of "middle boxes" within tested networks.

According to OONI, false positives may occur within the processed data due to a number of reasons. DNS resolvers (operated by Google or a local ISP) often provide users with IP addresses that are closest to them geographically. While this may appear to be a case of DNS tampering, it is actually done with the intention of providing users with faster access to websites. Similarly, false positives may emerge when tested websites serve different content depending on the country that the user is connecting from, or in the cases when websites return failures even though they are not tampered with.

Furthermore, measurements indicating HTTP or TCP/IP blocking might actually be due to temporary HTTP or TCP/IP failures, and may not conclusively be a sign of network interference. It is therefore important to test the same sets of websites across time and to cross-correlate data, prior to reaching a conclusion on whether websites are in fact being blocked.

Since block pages differ from country to country and sometimes even from network to network, it is quite challenging to accurately identify them. OONI uses a series of heuristics to try to guess if the page in question differs from the expected control, but these heuristics can often result in false positives. For this reason OONI only says that there is a confirmed instance of blocking when a block page is detected.

Upon collection of more network measurements, OONI continues to develop its data analysis heuristics, based on which it attempts to accurately identify censorship events.

The full list of country-specific test lists containing confirmed blocked websites in Myanmar, Cambodia, Hong Kong, Indonesia, Malaysia, Philippines, Thailand, and Vietnam can be viewed here: https://github.com/citizenlab/test-lists.

Verifying OONI measurements

Confirmed blocked OONI measurements were based on fingerprints recorded here
https://github.com/ooni/blocking-fingerprints. These fingerprints are based on either DNS
or HTTP blocking. Fingerprints recorded as confirmed blockings are either those
implemented nationally or by ISPs.

Hence, heuristics as below were run on raw measurements on all countries under iMAP to
further confirm blockings.

Firstly, IP addresses with more than 10 domains were identified. Then each of the IP address was checked for the following:

Does the IP in question point to a government blockpage?					
Yes	No, page timed out or shows Content Delivery Network (CDN) page.				
⬇	⬇				
Confirmed blocking	What information can we get about the IP by doing a whois lookup?				
	Government entity	Local ISP[74]	CDN[75] / Private IP		
	⬇	⬇	⬇		
	Confirmed blocking	**Likely Blocked or Inaccessible**	Do we get a valid TLS certificate for one of the domains in question when doing a TLS handshake and specifying the SNI		
			Yes	No, there were blocking fingerprints found.	No, timed out
			⬇	⬇	⬇
			False positive	**Confirmed blocking**	Sampled measurement is analyzed on OONI Explorer.

When blocking is determined, any domain redirected to these IP addresses would be marked as 'dns.confirmed'.

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[74] In the case of India, there was evidence of popular websites hosting their site on the ISPs network for quicker loading times as the ISPs sometimes offer such edge networking services, hence websites redirected to local websites not marked as blocked.

[75] In general, websites redirected to popular CDN such as CloudFlare, Amazon, Google, etc. are marked as not blocked.

Secondly, HTTP titles and bodies were analyzed to determine blockpages. This [example](#) shows that the HTTP returns the text 'The URL has been blocked as per the instructions of the DoT in compliance to the orders of Court of Law'. Any domain redirected to these HTTP titles and bodies would be marked as 'http.confirmed'.

As a result, false positives are eliminated and more confirmed blockings are obtained.

In the [2022 report](#), only confirmed blockings based on OONI or new fingerprints were reported.

For this round of reporting in 2023, we had also further identified confirmed blockings by verifying blockings shown in news reports with OONI measurements. This is because there were blockings that could be not identified using the DNS or HTTP fingerprints. Typically, these websites were redirected to an unknown or bogon IP address, or had other unknown errors which are ambiguous on whether they are true or false positives of censorship. Hence, based on the news reports where the blocked websites were cited, confirmed blockings were further found by comparing available measurements on OONI. In particular for this study, we would mark them as confirmed blockings if there are more than 30 measurements and have an anomaly rate of more than 1% throughout the one-year period of study, in addition to manually checking the OONI measurements by cross-checking across networks, countries and time periods.

For this round of reporting in 2024, the confirmed blockings were further consolidated based on OONI's existing fingerprints and heuristics processed on the data during the coverage period, in addition to taking into account a weighted anomaly ratio, measurement count and past analysis of the country. In summary, these were the rules applied to obtain this year's list of confirmed and likely blockings.

	Confirmed blockings	Likely blockings or inaccessible
Malaysia	Confirmed by OONI only	None
Myanmar	• Confirmed by heuristics (govt block page) • Confirmed by OONI (govt block page)	High weighted anomaly ratio and confirmed by news report/ block notice
Thailand	• Confirmed by heuristics (govt block page) • Confirmed by OONI (govt block page)	High weighted anomaly ratio
Philippines	• Confirmed by heuristics (govt block page) • Confirmed by OONI (govt block page) • Confirmed by news report/ block notice	High weighted anomaly ratio
India	• Confirmed by OONI with at least 5 counts • Confirmed by heuristics (govt block pages)	High weighted anomaly ratio
Indonesia	• Confirmed by OONI with at least 5 counts • Confirmed by heuristics (govt block pages)	High weighted anomaly ratio
Vietnam	• Confirmed by heuristics (govt block page) • Confirmed by news report/ block notice	• High weighted anomaly ratio • Confirmed by OONI (due to being ISP redirects)
Cambodia	• Confirmed by news report/ block notice	• High weighted anomaly ratio • Confirmed by OONI (due to being ISP redirects)
Hong Kong	None	High weighted anomaly ratio

Weighted anomaly ratio: It is calculated by finding the ratio of the Anomaly and Confirmed counts over the total measurements per ASN factoring weights based on number of measurements per domain and per ASN. A high anomaly ratio is when the P90 of the anomaly ratio of a domain exceeds 90%.