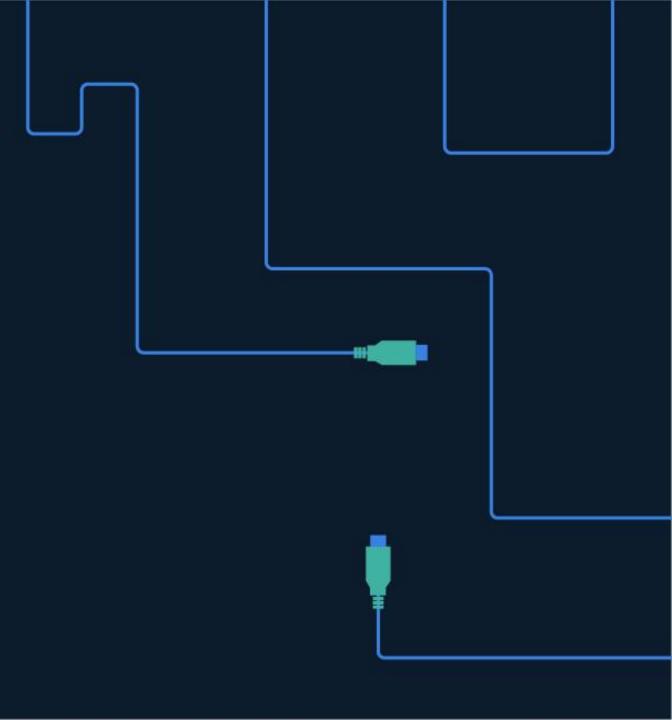


Internet Society Pulse

Sep 2025

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IXP Development Expert
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- Launched December 2020.
- We curate Internet measurement data from trusted sources to help everyone gain deeper, data-driven insight into the Internet.

Trusted data from multiple sources:

- Benefit: Helps to assess whether efforts to ensure that the Internet remains open, globally connected, secure, and trustworthy are working.
- Benefit: Allows policymakers, researchers, journalists, network operators, civil society groups, and others to understand the availability, evolution, and resilience of the Internet.





Pulse Data Partners

Data is provided by our trusted data partners



















































pulse.internetsociety.org/partners



IXP Tracker

IXPs are a vital part of a strong peering ecosystem and help to make the Internet more resilient.

7th Sep 2025 IXPDB lists 1,102 IXPs, PCH's IXP Directory lists 1,205, PeeringDB lists 1,256.

Active Internet Exchange Points

The total number of IXPs in operation around the world, as of September 2025.

1,014

Active IXPs globally

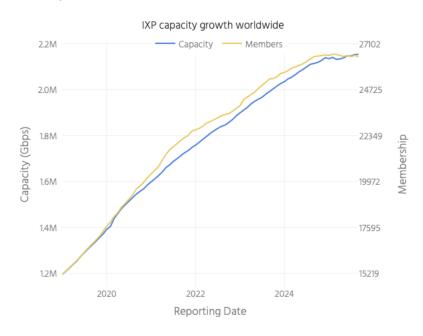
This data is updated monthly, using data from PeeringDB.

2,154,243 Gbps

Total global capacity of IXPs

IXP capacity growth over time

The global total of IXPs over time, shown along with the growth in combined capacity offered by the world's IXPs.



Top 10 countries/territories by IXP coverage

Internet users in these countries have the highest proportion of access to their local Internet via IXPs.

Suriname : 85.71%

Sint Maarten (Dutch part): 75.00%
 Saint Martin (French part): 66.67%

<u>Réunion</u>: 66.67%<u>Grenada</u>: 63.64%

Saint Kitts and Nevis: 62.50%

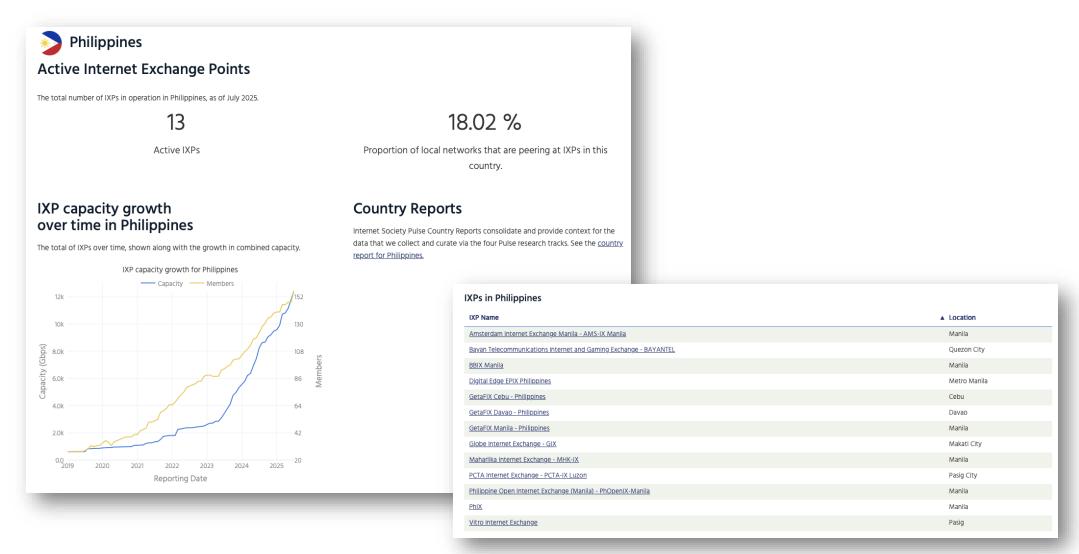
<u>Djibouti</u>: 60.00%

• Trinidad and Tobago: 58.82%

Burundi : 55.56%South Africa : 52.81%



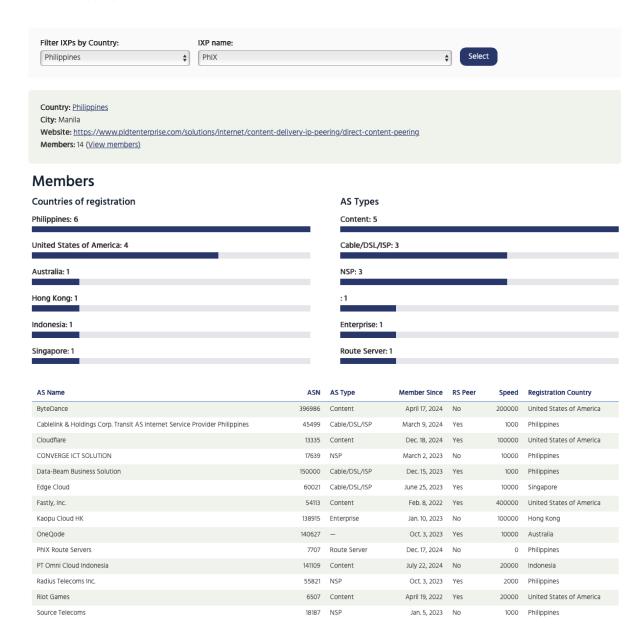
IXP Tracker





IXP Tracker

IXP Details: PhIX





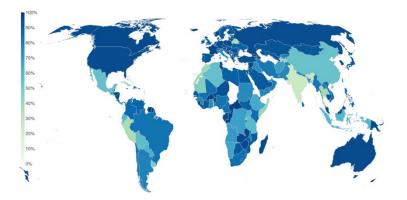
Technologies Globally



HTTPS

96%

Current percentage of top 1000 websites globally that support HTTPS.

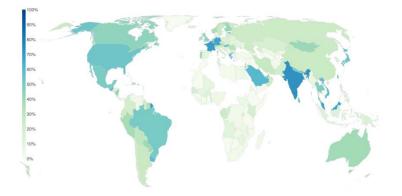




IPv6

48%

Current percentage of top 1000 websites globally that support IPv6.





TLS1.3

85%

Current percentage of top 1000 websites globally that support TLS 1.3.



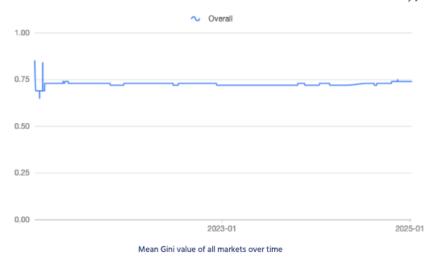
Concentration of Critical Services

- Tracking which core Internet services are distributed or concentrated among a few actors.
- Two views:
 - Market Concentration: The concentration of providers in a given market.
 - Country Market Shares: The jurisdiction of providers in a given market.

Market History | Gini -



Internet Centralization History | Gini 0.74



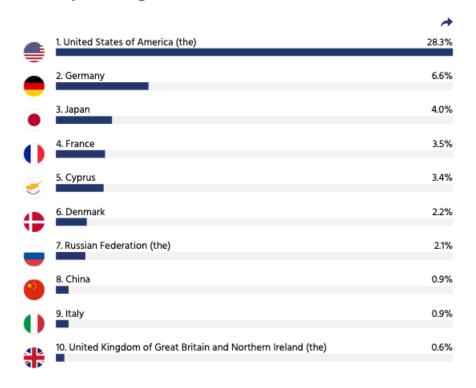
Concentration by Country

 Data Center
 Top Level Domains
 SSL Certificate
 DNS Server
 CDN
 Hosting
 Server Location
 All
 Top 10,000 sites
 Top 10,000 sites
 Top 10,000 sites

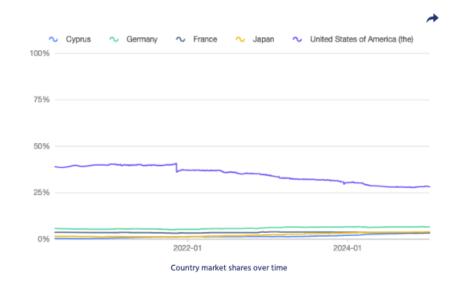
 Unweighted
 Weighted
 Unweighted Gini: 0.81

Search for countries

Country Ranking



Country History



Countries ranked by market share



The Internet Resiliency Index (IRI)



The framework collates around 30 sets of public metric data that relate to **four pillars** of a resilient Internet:

Infrastructure

The existence and availability of physical infrastructure that provides Internet connectivity.

Performance

The ability of the network to provide end-users with seamless and reliable access to Internet services.

Security

The ability of the network to resist intentional or unintentional disruptions through the adoption of security technologies and best practices.

Market Readiness

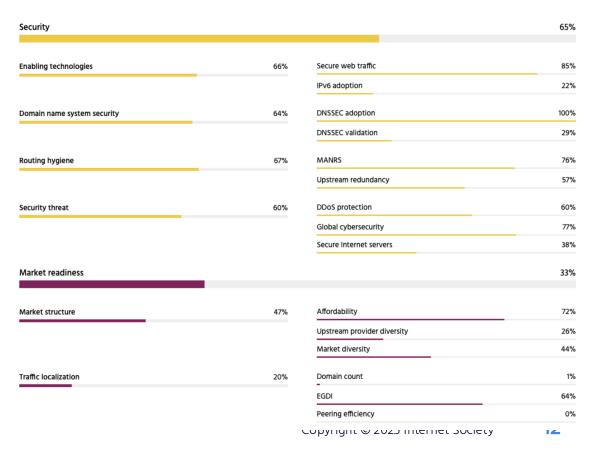
The ability of the market to self-regulate and provide affordable prices to end-users by maintaining a diverse and competitive market.



Overall Internet Resilience — By Country

Philippines (the)

nfrastructure			54%
Cable ecosystem	49%	Fibre 10km reach	49%
Mobile connectivity	82%	Network coverage	89%
		Spectrum allocation	65%
Enabling infrastructure	31%	Data centers	3%
		Number of IXPs	59%
Performance			50%
Fixed networks	72%	Fixed download	35%
		Fixed jitter	92%
		Fixed latency	88%
		Fixed upload	85%
Mobile networks	35%	Mobile download	21%
		Mobile jitter	49%
		Mahila latanas	53%
		Mobile latency	33 /





Country Reports

 Consolidate and provide context for the data that we collect and curate via the four Pulse research tracks

- Reports can assist:
 - Policy and decision makers to understand local and regional differences regarding various aspects of the Internet. This can help target improvement plans and work towards enabling policies to support development.
 - Civil society groups and journalists to advocate and lobby for more investment and targeted improvements to infrastructure.



Network Infrastructure Mobile 4G and 5G coverage

99%

has access to at least one device with 4G mobile Internet

70%

has access to at least one device with 5G mobile Internet

2023

Active networks

The building blocks of the Internet, identified by Autonomous System (AS) numbers.

414

active networks

2025

International connections

Routes to the global Internet

Upstream diversity is

Good

More than 2 connections to the global Internet improves the ability to recover from unexpected

2025

Adoption of IPv6

17%

of users can access online resources using IPv6, the new generation of the Internet Protocol



2022 202

2023 2024

40% Asia average

2025

Get access to the Pulse API

- Collates Internet measurement data from trusted third parties.
- Use the Pulse API to get access to this data
- Do own data-driven analysis about the health, availability, and evolution of the Internet.

https://pulse.internetsociety.org/en/api/



Internet Society Pulse API (1.0.0)

Download OpenAPI specification: Download

API Support Contact: pulse@isoc.org | Terms of Service

An API making available various data sources from the Pulse platform.

Authentication

To use the Pulse API you will need a token. Create an account and generate

Using the API

If you're using a tool like Postman, set Auth Type to Bearer Token (under Auther relevant field.

Alternatively, using curl from the command line, set appropriate Headers:

```
curl {$yourURL} -H 'Accept: application/json' -H 'Auth
```

Many endpoints now include the option of having data returned in CSV form

```
curl {$yourURL} -H 'Accept: text/csv' -H 'Authorization
```

Rate Limiting

We don't automatically rate limit so please be considerate in your usage. Mo best so you probably don't need to query an endpoint more often than that. I reach out to you, or apply rate-limiting to your account.

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