

The Peering Database

The <https://www.peeringdb.com/> is a freely available, user-maintained database of networks which take part in the global Internet. It is considered the authoritative source of all information relating to network operators who participate in peering around the world.

The database facilitates the global interconnection of networks at Internet Exchange Points (IXPs), data centres, and other interconnection facilities, and is the first step in making interconnection decisions.

Background

In the early Internet (of the 1990s) there were few network operators and interconnect points around the world that interconnections were relatively straightforward to seek out and implement (in the author's experience anyway). In March 1999 there were 4640 ASNs in the Internet with only 800 providing transit. This compares with today's total exceeding 73000 ASNs and over 10000 ASNs providing transit, never mind that almost every country in the world now has at least one Internet Exchange Point if not a datacentre facilitating commercial interconnects.

In the 1990s establishing new interconnects by attending in major Internet operations meetings (NANOG, RIPE, AfNOG, APRICOT and so on), with network information passed on by word of mouth or email or even by letter!

With the rapid growth of the Internet in the late 1990s and early 2000s, there needed to be a more scalable way for a Network Operator to get their "peering information" out to the global Internet operations community. And hence the PeeringDB was born.

What is the Peering DB

The Peering DB is a repository of the important information that network operators need to determine whether an interconnection is feasible, makes commercial sense, makes technical sense, and is even technically feasible. While the Peering DB website has much more detailed information, the Peering Toolbox is highlighting the key points.

Here are some example entries to show what is possible. The first example (publicly accessible) is of LINX, the London Internet Exchange:

PeeringDB Search here for a network, IX, or facility. Advanced Search

LINX LON1 Silver Sponsor

Peers: 811 | Connections: 913 | Open Peers: 598 | Total Speed: 38.2T | % with IPv6: 85

Organization

- Organization: LINX
- Also Known As: [Empty]
- Long Name: London Internet Exchange Ltd.
- City: London
- Country: GB
- Continental Region: Europe
- Media Type: Ethernet
- Service Level: Not Disclosed
- Terms: Not Disclosed
- Last Updated: 2020-06-29T07:53:16Z
- Notes: used to be Juniper LAN

Contact Information

- Company Website: <https://www.linx.net/>
- Traffic Stats Website: <https://portal.linx.net/>
- Technical Email: support@linx.net
- Policy Email: info@linx.net

LAN

- MTU: 1500
- IX-F Member Export URL: Private

Peers at this Exchange Point

Peer Name	ASN	Speed	Policy
961 networks	33920	2G	Selective
912 Smile Telecom	9116	10G	Open
181 Vernetzte Deutschland GmbH	6881	100G	Selective
100 Percent IT	20916	1G	Open
23M GmbH	47447	10G	Open
24Sheila Inc	55261	10G	Open
31173 Services AB	38351	10G	Open
4D Data Centres Ltd	31463	10G	Selective

which shows a screen capture of what is available at their LON1 site, a scrollable list of the participants, how to contact LINX, etc.

The second example below shows that of a AWS (Amazon Web Services), one of the major content networks on the Internet:

PeeringDB Search here for a network, IX, or facility. Advanced Search

Amazon.com Diamond Sponsor

Organization: Amazon.com

Also Known As: Amazon Web Services

Company Website: <http://www.amazon.com>

ASN: 16509

IRR as-set/route-set: AS-AMAZON

Network Type: Enterprise

IPv4 Prefixes: 7500

IPv6 Prefixes: 2500

Traffic Levels: Not Disclosed

Traffic Ratios: Balanced

Geographic Scope: Global

Protocols Supported: Unicast IPv4 Multicast IPv6 Never via route servers

Last Updated: 2022-03-14T23:48:18Z

Public Peering Info Updated: 2022-04-27T20:48:30

Peering Facility Info Updated: 2022-03-28T23:35:40

Contact Info Updated: 2020-12-01T12:29:55Z

Notes: AWS Peering: <https://peering.aws/>
Peering requests: When submitting a peering request, please address the specific regional contact listed below for the location of your request (i.e. peering requests for London should use peering-emea@amazon.com while peering requests for Singapore should use peering-apac@amazon.com). This will ensure your request is processed and addressed in a timely fashion. Please do not copy contacts not meant for peering policy in the location of your request.
Operational issues: If you experience connectivity issues to Amazon, please

Public Peering Exchange Points

Exchange	ASN	Speed	RS Peer
AKL-IX (Auckland NZ)	16509	100G	<input type="radio"/>
AMS-IX	16509	600G	<input type="radio"/>
AMS-IX Chicago	16509	100G	<input type="radio"/>
AMS-IX Hong Kong	16509	10G	<input type="radio"/>
AMS-IX Hong Kong	16509	10G	<input type="radio"/>
AMS-IX Mumbai	16509	10G	<input type="radio"/>
AMS-IX Mumbai	16509	10G	<input type="radio"/>
Any2Denver	16509	100G	<input type="radio"/>
Any2West	16509	100G	<input type="radio"/>

Private Peering Facilities

Facility	Country
151 Front Street West Toronto	Canada
185 Halsey Meet Me Room	United States of America
35 John Street / 250 Front Street West	Canada

This one shows the Public peering and Private peering facilities AWS is present at. So a potential peer can check which locations they share with AWS, and then contact them about peering. The page for AWS contains data about number of prefixes, traffic ratios, etc, plus the IP addressing used at the various public Internet connect points. All this is designed to make it easier for prospective peers to assess and reach out to AWS for peering.

And the final example shows Aereion (formerly Telia Carrier), the operator of AS1299, one of the international transit carriers serving the global Internet:

The screenshot shows the PeeringDB entry for AS1299, Aereion. The left sidebar contains organization details, and the main area is divided into public and private peering facilities.

Organization	Aereion
Also Known As	Aereion, Oldia Telia Carrier
Long Name	
Company Website	https://www.aereion.com/
ASN	1299
IRR as-set/route-set	RIPE::AS-TELIANET RIPE::AS-TELIANET-V8
Route Server URL	
Looking Glass URL	https://lg.twelve99.net/
Network Type	NSP
IPv4 Prefixes	550000
IPv6 Prefixes	100000
Traffic Levels	100+Tbps
Traffic Ratios	Balanced
Geographic Scope	Global
Protocols Supported	<input checked="" type="checkbox"/> Unicast IPv4 <input type="checkbox"/> Multicast <input checked="" type="checkbox"/> IPv6 <input checked="" type="checkbox"/> Never via route servers
Last Updated	2022-02-04T13:28:51Z
Public Peering Info Updated	
Peering Facility Info Updated	2022-04-28T18:22:56
Contact Info Updated	2021-09-09T14:07:44

Exchange	ASN	Speed	RS Peer
IPv4	IPv6		
No filter matches. You may filter by Exchange, ASN or Speed.			

Facility	Country
ASN	City
123.NET - DC1 - 24700 Northeastern Hwy, 1299	United States of America Southfield
1530.Soft1, 1299	United States of America North Kansas City
1623.Farmam, 1299	United States of America Omaha
365 Data Centers Buffalo (BU1), 1299	United States of America Buffalo
365 Data Centers Detroit (DT1), 1299	United States of America Southfield
365 Data Centers Nashville (NA1), 1299	United States of America Nashville
365 Data Centers Tampa (TA1), 1299	United States of America Tampa
3U Rechenzentrum Berlin, 1299	Germany Berlin
915Telecom Denver, 1299	United States of America Denver
stet Frankfurt, 1299	Germany Frankfurt
Aereion Düsseldorf DDF/B, 1299	Germany Düsseldorf
Aereion London HEX, 1299	United Kingdom London
Aereion Moscow MSK/D1, 1299	Russia Moscow

again showing the type of data that are published in the PeeringDB.

Creating a PeeringDB Entry

The Peering Toolbox recommends (strongly) that any entity with their own AS Number and address space should create an entry in the Peering DB. There is no cost to doing so.

A tutorial on how to create an entry is currently beyond the scope of the Peering DB - but the best advice is to look at other PeeringDB entries and use what those entries have to guide what is needed for your own one.

Simply create an account, and populate it with the mandatory entries - and place as much information there as you possibly can. This should minimally be:

- Organisation name
- Organisation website
- ASN
- IRR as-set (you created one earlier)
- Network Type
- Number of IPv4 prefixes

- Number of IPv6 prefixes
- Traffic Levels
- Traffic Ratios (inbound to your network, or out from your network)
- Geographic Scope (ie what locations do you serve)
- Protocols supported (IPv4 and IPv6 are common)
- Peering Policy (Open, Selective, Restricted)
- Contact information (NOC, Policy/Admin, Technical)
- Public Peering Points (if applicable)
- Private Peering Facilities (if applicable)

Why a PeeringDB entry

Today very few network operators will considering peering with an entity that has no PeeringDB entry. In fact, many will make it a requirement before they will even respond to a peering request. Indeed, some operators will go as far as using information in the PeeringDB for configuring peering sessions with their peers, making it essential that the entries are kept up to date.

Therefore, the Peering Toolbox recommendation is that all Network Operators with their own Internet Resources and who wish to take part in the global peering community must create and maintain their PeeringDB entry.

[Back to "What I need to Peer" page](#)

From: <https://www.bgp4all.com.au/pfs/> - **Philip Smith's Internet Development Site**

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