

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: 998 | Total Speed: 36.2T | % with IPv6: 85

Organization
 LINX
 Also Known As: London Internet Exchange Ltd.
 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
 Technical Phone: info@linx.net
 Policy Email: info@linx.net
 Policy Phone: info@linx.net
 Sales Email: info@linx.net
 Sales Phone: info@linx.net
 Health Check: info@linx.net

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

Peers at this Exchange Point

Peer Name	ASIN	Speed	Policy
012 Smile Telecom	9116	10G	Open
012 Smile Telecom	9116	10G	Open
012 Smile Telecom	9116	10G	Open
1&1 Versatel Deutschland GmbH	8881	100G	Selective
100 Percent IT	20915	1G	Open
23M GmbH	47447	10G	Open
24Shellia Inc	55061	10G	Open
31173 Services AB	39351	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
 Long Name: Amazon.com
 Company Website: https://www.amazon.com
 ASIN: 16509
 IRR as-set/route-set: AS-AMAZON
 Route Server URL: info@amazon.com
 Locking Class URL: info@amazon.com
 Network Type: Enterprise
 IPv4 Prefixes: 7500
 IPv6 Prefixes: 2500
 Traffic Levels: Not Disclosed
 Traffic Ratios: Balanced
 Geographic Scope: Global
 Protocols Supported: Unicast IPv4, Multicast IPv4, IPv6, Never via route servers
 Last Updated: 2022-03-14T23:48:18Z
 Public Peering Info Updated: 2022-04-27T20:49:30
 Peering Facility Info Updated: 2022-03-28T23:35:40
 Contact Info Updated: 2020-12-01T12:29:55Z
 Notes: AWS Peering: https://peering.aws/

Public Peering Exchange Points

Exchange	ASIN	Speed	RS Peer
AKL-IX (Auckland NZ)	16509	100G	
AMS-IX	16509	600G	
AMS-IX	16509	600G	
AMS-IX Chicago	16509	100G	
AMS-IX Hong Kong	16509	10G	
AMS-IX Hong Kong	16509	10G	
AMS-IX Mumbai	16509	10G	
AMS-IX Mumbai	16509	10G	
Any2Denver	16509	100G	
Any2West	16509	100G	

Private Peering Facilities

Facility	Country
151 Front Street West Toronto	Canada
165 Halsey Meet-Me Room	United States of America
35 John Street / 200 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 shows public peering exchange points and private peering facilities.

Organization	Aereion
Also Known As	Aereion, Uvia Telia Carrier
Long Name	
Company Website	https://www.aereion.com/
ASN	1299
IRR as-set/route-set	RIPE:AS-TELIANET RIPE:AS-TELIANET-V6
Route Server URL	
Looking Glass URL	https://lg.twelve99.net/
Network Type	NSP
IPv4 Prefixes	590000
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

Public Peering Exchange Points	
Exchange	ASN
IPv4	IPv6
No filter matches. You may filter by Exchange, ASN or Speed.	

Private Peering Facilities	
Facility	Country
ASN	City
123.NET - DC1 - 24700 Northeastern Fibre	United States of America Southfield
1299	
1530 Swift	United States of America North Kansas City
1299	
1623 Farnam	United States of America Omaha
1299	
365 Data Centers Buffalo (BU1)	United States of America Buffalo
1299	
365 Data Centers Detroit (DT1)	United States of America Southfield
1299	
365 Data Centers Nashville (NA1)	United States of America Nashville
1299	
365 Data Centers Tampa (TA1)	United States of America Tampa
1299	
3U Rechenzentrum Berlin	Germany Berlin
1299	
910Telecom Denver	United States of America Denver
1299	
stet1 Frankfurt	Germany Frankfurt
1299	
Aereion Düsseldorf DDF1B	Germany Düsseldorf
1299	
Aereion London HEX	United Kingdom London
1299	
Aereion Moscow MSK1D1	Russia

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.

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