

The Peering Database

The [Peering Database](#) 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 stop in making interconnection decisions.

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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:
Long Name: London Internet Exchange Ltd.
City: London
Country: GB
Continental Region: Europe
Media Type: Ethernet
Service Level: Not Disclosed
Terra: 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:
Policy Email: info@linx.net
Policy Phone:
Sales Email:
Sales Phone:
Health Check:

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

Peers at this Exchange Point

Peer Name IPv4	ASN IPv6	Speed	Policy
(as) networks 195.66.225.115	33920 2001:7fb:4::8400:1	2G	Selective
01 Telecom (01.T) 2001:7fb:4::3:14cd:1	201603 195.66.227.214	10G	Open
012 Smile Telecom 195.66.225.114	9116 2001:7fb:4::239c:1	10G	Open
012 Smile Telecom 195.66.226.90	9116 2001:7fb:4::239c:2	10G	Open
1&1 Versatel Deutschland GmbH 2001:7fb:4::22b1:1	8881 195.66.224.245	100G	Selective
100 Percent IT 195.66.225.213	20915 2001:7fb:4::51b3:1	1G	Open
23M GmbH 2001:7fb:4::b957:1	47447 195.66.227.70	10G	Open
24Shella Inc 2001:7fb:4::d729:1	55061 195.66.227.116	10G	Open
31173 Services AB 2001:7fb:4::99b7:1	39351 195.66.226.62	10G	Open
4D Data Centres Ltd 2001:7fb:4::...	31463 2001:7fb:4::...	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:
 Company Website: https://www.amazon.com
 ASN: 16509
 IRR as-set/route-set: AS-AMAZON
 Route Server URL:
 Locking Class URL:
 Network Type: Enterprise
 IPv4 Prefix: 7500
 IPv6 Prefix: 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: 2022-04-27T20:49:30
 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 IPv4	ASN IPv6	Speed	RS Peer
AKL-IX (Auckland NZ) 43.243.21.113	16509 2001:7fa:11:6:0:407d:0:2	100G	
AKL-IX (Auckland NZ) 43.243.21.112	16509 2001:7fa:11:6:0:407d:0:1	100G	
AMS-IX 80.249.210.100	16509 2001:7fb:1::a501:6509:1	600G	
AMS-IX 80.249.210.217	16509 2001:7fb:1::a501:6509:2	600G	
AMS-IX Chicago 206.100.115.36	16509 2001:504:30:1:0:a501:6509:1	100G	
AMS-IX Hong Kong 103.247.139.10	16509 2001:d0:296::a501:6509:1	10G	
AMS-IX Hong Kong 103.247.139.74	16509 2001:d0:296::a501:6509:2	10G	
AMS-IX Mumbai 223.31.200.29	16509 2001:a48:44:100b:0:a501:6509:2	10G	
AMS-IX Mumbai 223.31.200.30	16509 2001:a48:44:100b:0:a501:6509:1	10G	
Any2Denver 206.51.46.87	16509 2605:600:303:303:87	100G	
Any2West 206.72.210.146	16509 2001:504:13:146	100G	

Private Peering Facilities

Facility ASN	Country City
151 Front Street West Toronto 16509	Canada Toronto
165 Halsey Meet-Me Room 16509	United States of America Newark
35 John Street / 200 Front Street West 16509	Canada Toronto

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

Private Peering Facilities		
Facility	ASN	Country
ASN	City	
123.NET - DC1 - 24700 Northeastern Fibre	1299	United States of America Southfield
1530 Swift	1299	United States of America North Kansas City
1623 Farnam	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
910Telecom Denver	1299	United States of America Denver
stet1 Frankfurt	1299	Germany Frankfurt
Aereion Düsseldorf DDF1B	1299	Germany Düsseldorf
Aereion London HEX	1299	United Kingdom London
Aereion Moscow MSK1D1	1299	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.

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.

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