

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	ASIN	Speed	Policy
(as) networks	33920	2G	Selective
195.66.225.115	2001:7fb:4::8400:1		
01 Telecom (O1.T)	201603	10G	Open
195.66.227.214	2001:7fb:4::3:14cd:1		
012 Smile Telecom	9116	10G	Open
195.66.225.114	2001:7fb:4::239c:1		
012 Smile Telecom	9116	10G	Open
195.66.226.90	2001:7fb:4::239c:2		
1&1 Versatel Deutschland GmbH	6881	100G	Selective
2001:7fb:4::22b1:1			
100 Percent IT	20915	1G	Open
195.66.225.213	2001:7fb:4::51b3:1		
23M GmbH	47447	10G	Open
195.66.227.70	2001:7fb:4::b957:1		
24Shells Inc	55061	10G	Open
195.66.227.116	2001:7fb:4::d729:1		
31173 Services AB	39351	10G	Open
195.66.226.62	2001:7fb:4::99b7:1		
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:
 Company Website: https://www.amazon.com
 ASIN: 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	ASIN	Speed	RS Peer
AKL-IX (Auckland NZ)	16509	100G	
43.243.21.113	2001:7fa:11:6:0:407d:0:2		
AKL-IX (Auckland NZ)	16509	100G	
43.243.21.112	2001:7fa:11:6:0:407d:0:1		
AMS-IX	16509	600G	
80.249.210.100	2001:7fb:1::a501:6509:1		
AMS-IX	16509	600G	
80.249.210.217	2001:7fb:1::a501:6509:2		
AMS-IX Chicago	16509	100G	
206.100.115.36	2001:504:30:1:0:a501:6509:1		
AMS-IX Hong Kong	16509	10G	
103.247.139.10	2001:dfo:296::a501:6509:1		
AMS-IX Hong Kong	16509	10G	
103.247.139.74	2001:dfo:296::a501:6509:2		
AMS-IX Mumbai	16509	10G	
223.31.200.29	2001:a48:44:100b:0:a501:6509:2		
AMS-IX Mumbai	16509	10G	
223.31.200.30	2001:a48:44:100b:0:a501:6509:1		
Any2Denver	16509	100G	
206.51.46.87	2605:600:303:303:87		
Any2West	16509	100G	
206.72.210.146	2001:504:13:146		

Private Peering Facilities

Facility	Country
151 Front Street West Toronto	Canada
16509	Toronto
165 Halsey Meet-Me Room	United States of America
16509	Newark
35 John Street / 200 Front Street West	Canada
16509	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 Arelion, the operator of AS1299, one of the international transit carriers serving the global Internet:

The screenshot shows the PeeringDB interface for AS1299. On the left, there is a sidebar with organization details: Organization (Arelion), Also Known As (Arelion, Uvia Telia Carrier), Long Name, Company Website (https://www.arelion.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 (Unicast IPv4, Multicast, IPv6, 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), and a Notes section with a 'Toggle' button.

The main content area is divided into two sections: 'Public Peering Exchange Points' and 'Private Peering Facilities'. The 'Public Peering Exchange Points' section has a filter box and a table with columns for Exchange, ASN, IPv4, IPv6, Speed, and RS Peer. It currently shows 'No filter matches. You may filter by Exchange, ASN or Speed.' The 'Private Peering Facilities' section also has a filter box and a table with columns for Facility, ASN, Country, and City. It lists several data centers and their locations, such as 123.NET - DC1 - 24700 Northeastern Hwy. in Southfield, 1530 Swift in North Kansas City, 1623 Farnam in Omaha, 365 Data Centers Buffalo (BU1) in Buffalo, 365 Data Centers Detroit (DT1) in Southfield, 365 Data Centers Nashville (NA1) in Nashville, 365 Data Centers Tampa (TA1) in Tampa, 3U Rechenzentrum Berlin in Berlin, 910Telecom Denver in Denver, stel1 Frankfurt in Frankfurt, Arelion Düsseldorf DDF1B in Düsseldorf, Arelion London HEX in London, and Arelion Moscow MSK1D1 in 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
- Network Type
- Number of IPv4 prefixes
- Number of IPv6 prefixes

- Traffic Levels
- Traffic Ratios (inbound to the network, or out from the network)
- Geographic Scope (ie what locations are served)
- 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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