

# 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:

The screenshot shows the PeeringDB profile for LINX LON1. The organization is LINX, located in London, GB, Europe. It has 811 peers, 913 connections, and 908 open peers. The total speed is 39.2T and 85% of the connections are IPv6. The page includes contact information for company, technical, and sales departments, as well as LAN details like MTU (1500) and visibility (Private). A table titled 'Peers at this Exchange Point' lists various peer organizations such as (asn).networks, 01 Telecom (01.T), 012 Smile Telecom, 1&1 Versatel Deutschland GmbH, 100 Percent IT, 23M GmbH, 24Shellia Inc, 31173 Services AB, and 4D Data Centres Ltd, along with their respective IP ranges, ASNs, speeds, and policies.

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:

The screenshot shows the PeeringDB profile for Amazon.com. The organization is Amazon.com, located in the United States. It has 16509 ASNs and 2500 IPv6 prefixes. The page includes contact information and a table titled 'Public Peering Exchange Points' listing various exchange points such as AKL-IX (Auckland NZ), AMS-IX (Amsterdam), AMS-IX Chicago, AMS-IX Hong Kong, AMS-IX Mumbai, Any2Denver, and Any2West, along with their IP ranges, ASNs, speeds, and RS Peer status. A table titled 'Private Peering Facilities' lists facilities like 151 Front Street West Toronto, 165 Halsey Meet-Me Room, and 35 John Street / 290 Front Street West Toronto, along with their ASNs and locations.

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 entry for Twelve99 (Arelion). The left sidebar contains organization details, and the main content area is divided into Public Peering Exchange Points and Private Peering Facilities.

Exchange #	ASN	Speed	RS Peer
IPV4	IPV6		

No filter matches. You may filter by Exchange, ASN or Speed.

Facility #	ASN	Country	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
910Telecom Denver	1299	United States of America	Denver
stet Frankfurt	1299	Germany	Frankfurt
Arelion Düsseldorf DDF/B	1299	Germany	Düsseldorf
Arelion London HEX	1299	United Kingdom	London
Arelion Moscow MSK/O1		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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