

The background of the slide features a dark gray circuit board pattern with white lines and circular components. A central horizontal band is a solid medium gray.

nic.br cgi.br

ix.br

Sao Paulo, Brazil

May/05/2025

IP block renumbering of an IXP in PeeringDB

LAC Peering Forum 2025

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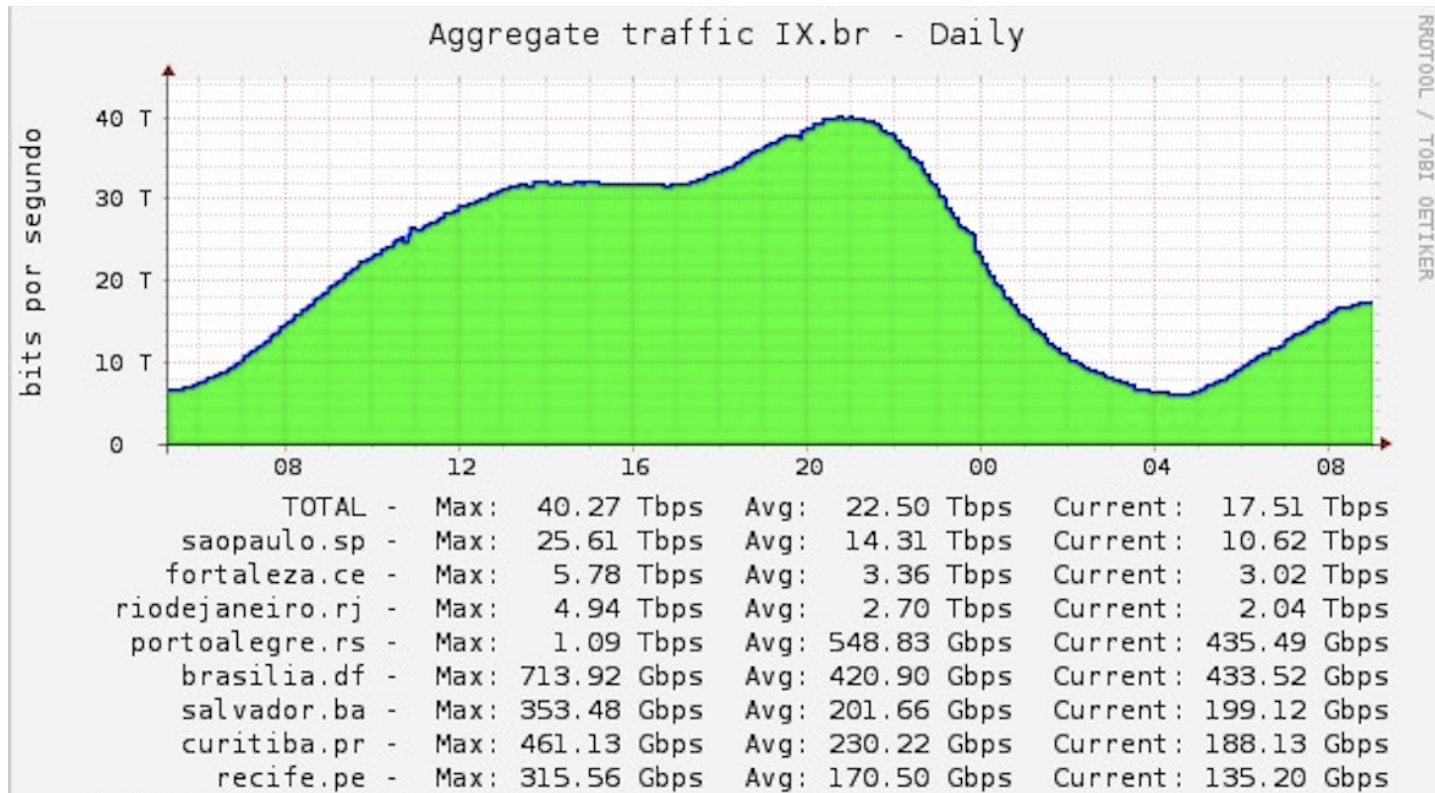
Topics


- PeeringDB
- IP block change for IX.br Fortaleza and IX.br Curitiba in PeeringDB
- Validations performed during the process

About NIC.br and IX.br

IX.br – Brasil Internet Exchange

- 38 IXPs spread throughout Brazil
- 40Tbps traffic peak
- 2527 ASNs connected to the IX.br São Paulo structure with 25Tbps traffic peak






PeeringDB

[Advanced Search](#)[Legacy Search](#)

[Julimar](#)



English (English)

Our Culture

PeeringDB, as the name suggests, was set up to facilitate peering between networks and peering coordinators. In recent years, the vision of PeeringDB has developed to keep up with the speed and diverse manner in which the Internet is growing. The database is no longer just for peering and peering related information. It now includes all types of interconnection data for networks, clouds, services, and enterprise, as well as interconnection facilities that are developing at the edge of the Internet.

We believe in, and rely on the community to grow and improve the PeeringDB database. The volunteers who run the database are passionate about security, privacy, integrity, and validation of the data in the database. Even though PeeringDB is a freely available and public tool, users strictly adhere to the acceptable use policy, which prevents the database being used for commercial purposes and discourages unsolicited communications. This is largely policed by the community and has been very effective since PeeringDB was launched.

I'm a network operator. How can PeeringDB help me?

Almost one-third of Autonomous System Numbers (ASNs) register their interconnection data in the PeeringDB database. That means, by using PeeringDB and adding your own interconnection data, you'll be able to confidently find information about networks looking to interconnect, where and how to connect with them, and they'll be able to find the same information about your network. Since the database is user-maintained and validated by our volunteers, you can trust that the information is accurate and up-to-date.






This data will help you to accelerate the process of finding and connecting with other networks, while supporting a faster and more decisive deployment of your own network expansion and development plans.

I'm an Internet Exchange Point (IXP), data center or other interconnection facility. How can PeeringDB help me?

IXPs and data center facilities can add to and maintain their information in the database, increasing visibility and their appeal to new and existing customers. If you're in the database, this makes it much easier for networks to find crucial information about your services and the other networks present at your IXP or facilities.

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Global System Statistics

- 1239 Exchanges
- 31488 Networks
- 5618 Facilities
- 59 Campuses
- 213 Carriers
- 57354 Connections to Exchanges
- 52754 Connections to Facilities
- 7364 Automated Networks
- 46414 Registered Users
- 29848 Organizations

<https://www.peeringdb.com/about>

PeeringDB objects types

Fac: Represents an interconnection facility, such as a data center or suite within a data center

Facility: A place where networks can connect with other networks

Facix: An object derived from the intersection of a fac and an ix object

Ix: Represents an Internet Exchange Point (IXP)

Ixlan: Describes the LAN of an ix

Ixpfx: Describes the IP range (IPv4 and IPv6) for an ixlan

Netixlan: Describes the presence of a network at an exchange

Netfac: Describes the presence of a network at a facility

Org: Represents your organization's core record

Carrier: Describes providers offering L1 or L2 services in a facility

<https://docs.peeringdb.com/glossary/>

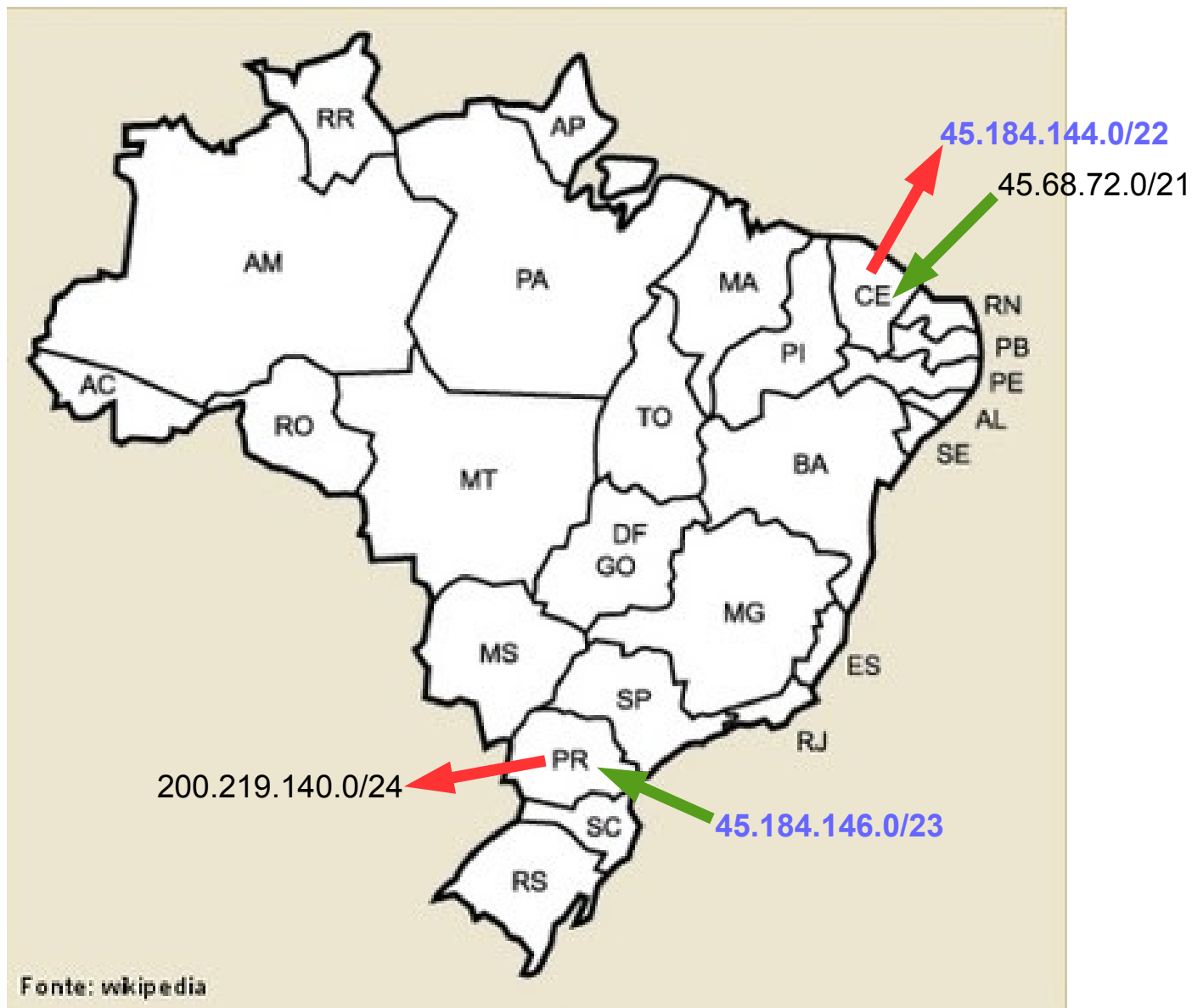
Renumbering of an IP block at an IXP

We had a demand for IPv4 block change in Fortaleza and Curitiba in 2024.

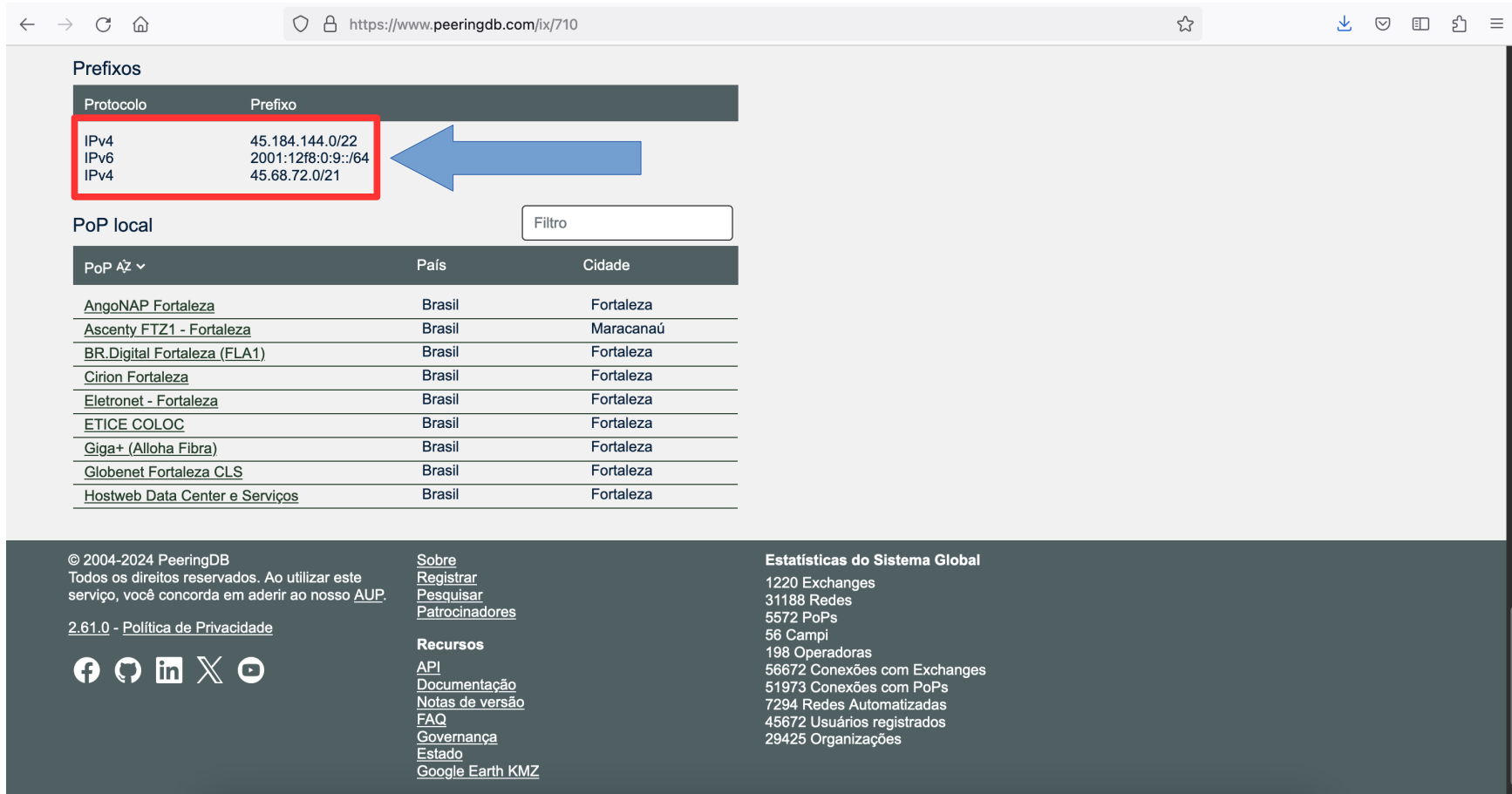
The process of renumbering IP addresses of participants of an IXP must be done by the own ASN in the PeeringDB. The IXP task is only to let them know the new block IP in the prefix field on PeeringDB properly.

Unfortunately, this work of removing and updating data is not always done by those responsible for these ASNs.

Renumbering of an IP block at an IXP



Renumbering of an IP block at an IXP



The screenshot shows the PeeringDB website interface. At the top, the browser address bar displays <https://www.peeringdb.com/ix/710>. The main content area is titled "Prefixos" and contains a table with two columns: "Protocolo" and "Prefixo". The table lists three entries: IPv4 with prefix 45.184.144.0/22, IPv6 with prefix 2001:12f8:0:9::/64, and IPv4 with prefix 45.68.72.0/21. A red rectangular box highlights the IPv4 entries, and a large blue arrow points from the IPv6 entry towards the IPv4 entries, indicating a transition or renumbering process. Below the "Prefixos" section is the "PoP local" section, which includes a "Filtro" input field and a table listing various PoPs in Fortaleza, Brazil. The footer of the page contains copyright information, a privacy policy link, social media icons, and a list of system statistics.

Protocolo	Prefixo
IPv4	45.184.144.0/22
IPv6	2001:12f8:0:9::/64
IPv4	45.68.72.0/21

PoP A-Z ▾	País	Cidade
AngoNAP Fortaleza	Brasil	Fortaleza
Ascenty FTZ1 - Fortaleza	Brasil	Maracanaú
BR.Digital Fortaleza (FLA1)	Brasil	Fortaleza
Cirion Fortaleza	Brasil	Fortaleza
Eletronet - Fortaleza	Brasil	Fortaleza
ETICE COLOC	Brasil	Fortaleza
Giga+ (Alloha Fibra)	Brasil	Fortaleza
Globenet Fortaleza CLS	Brasil	Fortaleza
Hostweb Data Center e Serviços	Brasil	Fortaleza

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Estatísticas do Sistema Global
1220 Exchanges
31188 Redes
5572 PoPs
56 Campi
198 Operadoras
56672 Conexões com Exchanges
51973 Conexões com PoPs
7294 Redes Automatizadas
45672 Usuários registrados
29425 Organizações

Information about the new registered IP block so that participants could update their information

IX.br Route Servers and Looking Glass services were updated with the new IP block at the beginning of the process

Transition phase with two IP addresses

← → ↺ 🌐 peeringdb.com/ix/174 ☆ 4 📄 J ⋮

Organization	NIC.br
Also Known As	
Long Name	IX.br (PTT.br) Curitiba
City	Curitiba
Country	BR
Continental Region	South America
Service Level	Not Disclosed
Terms	Not Disclosed
Last Updated	2024-05-22T19:27:24Z
Notes ?	<p>This is the Peering information for the IX.br (PTT.br) Route Servers.</p> <p>There are two route servers per IXP for redundancy purposes in Curitiba</p> <p>For IX.br (PTT.br) Curitiba we recommend a maximum-prefixes setting 50K for IPv4 and 20K for IPv6</p> <p>The following communities are implemented:</p> <p>Do not advertise the prefix for ASNxx:</p> <ul style="list-style-type: none">• 16-bit ASN: 65000:ASNxx• 32-bit ASN: RT:65000:ASNxx or RO:65000:ASNxx <p>Announce the prefix for ASNxx only:</p> <ul style="list-style-type: none">• 16-bit ASN: 65001:ASNxx• 32-bit ASN: RT:65001:ASNxx or RO:65001:ASNxx <p>Add one prepend in the AS-Path of the prefixes sent to the ASNxx</p> <ul style="list-style-type: none">• 16-bit ASN use the communitie 64601:ASNxx• 32-bit ASN use the communitie RT:64601:ASNxx or RO:64601:ASNxx <p>Add two prepends in the AS-Path of the prefixes sent to the ASNxx</p>

Peers at this Exchange Point

Filter

Peer Name A-Z	ASN	Speed	Policy ?
IPv4	IPv6	Port Location	
NIC.br - IX.br (PTT.br) MLPA Looking Glass 45.184.147.250	263044	1G	Open
NIC.br - IX.br (PTT.br) MLPA Looking Glass 200.219.140.250	263044	1G	Open
NIC.br - IX.br (PTT.br) MLPA Route Servers 200.219.140.253	2001:12f8:0:4::250	1G	Open
NIC.br - IX.br (PTT.br) MLPA Route Servers 200.219.140.254	2001:12f8:0:4::253	1G	Open
NIC.br - IX.br (PTT.br) MLPA Route Servers 45.184.147.254	26162	1G	Open
NIC.br - IX.br (PTT.br) MLPA Route Servers 45.184.147.252	26162	1G	Open
NIC.br - SARA	20121	1G	Open
NIC.br - SARA	20121	1G	Open

For a short time, Route Servers had two IP addresses, the old and the new one.

The figure above shows how the information from IX.br Curitiba was during the transition period.

After the time for renumbering for the new IP block

Oct/11/2024 – IX.br Fortaleza

535 peers registered in the PeeringDB

21 ASNs updated their information for new IP block

514 ASNs not updated their information for new IP block

Nov/04/2024 – IX.br Curitiba

175 peers registered in the PeeringDB

10 ASNs updated their information for new IP block

165 ASNs not updated their information for new IP block

Obs: since the Fortaleza IP block would be used in Curitiba we would not have much time to wait for updates to each ASN.

Tasks for renumbering of the IX.br IP block

Since there were many entries with the old IP address, a list was made by the IX.br team and was sent to the PeeringDB team for a mass update with a PeeringDB script.


Thanks Chriztoffer Hansen (PeeringDB AC member).

A script was developed by William Prado from IX.br to check the IP addresses in the IX.br database versus what is registered in PeeringDB, this way we can anticipate inconsistencies between the databases.

We took the opportunity to remove entries that were in PeeringDB, but in the IX.br database were listed as free. This work prevents the opening of PeeringDB and IX.br tickets for reused IP addresses from deactivations. Our team frequently do the checking between the databases.

Collecting the PeeringDB data – REST API

https://www.peeringdb.com/ix/710

**PeeringDB**

Search here for a network, IX, or facility.
[Advanced Search](#) [Legacy Search](#)

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English (English)

IX.br (PTT.br) Fortaleza

Peers
535


Connections
625

Open Peers
420

Total Speed
33.7T








% with IPv6
95

EXPORT

Organization	NIC.br
Also Known As	
Long Name	IX.br (PTT.br) Fortaleza
City	Fortaleza/CE
Country	BR
Continental Region	South America
Service Level	Not Disclosed
Terms	Not Disclosed
Last Updated	2024-11-25T18:20:35Z
Notes	<p>This is the Peering information for the IX.br (PTT.br) Route Servers.</p> <p>There are two route servers per IXP for redundancy purposes in Fortaleza</p> <p>For IX.br (PTT.br) Fortaleza we recommend a maximum-prefixes setting 280K for IPv4 and 160K for IPv6</p> <p>Communities added by the route server to identify the location where the prefix was received:</p> <ul style="list-style-type: none">16-bit ASN: 26162:6508532-bit ASN: RT:26162:65085 or RO:26162:65085 <p>IX.br Communities BGP Policy</p> <p>http://docs.ix.br/doc/politica-de-tratamento-de-communities-no-ix-br-v4_3-english.pdf</p> <p>Communities BGP Table</p> <p>http://docs.ix.br/doc/communities-table-ix-br-v2_1-14082024.pdf</p>
	

Peers at this Exchange Point

Filter

Peer Name 	ASN IPv4 IPv6	Speed Port Location	Policy 
(VIPLANET).E.D. TELECOMUNICAC	266620	100G	 Open
45.68.72.78	2001:12f8:0:9::78		
1 Telecom Servicos de Internet	52965	200G	 Open
45.68.72.67	2001:12f8:0:9::67		
3L CLOUD INTERNET SERVICES	266444	10G	Selective
45.68.73.14	2001:12f8:0:9::145:14		
A & G TELECOMUNICAC	264273	10G	Selective
45.68.74.8	2001:12f8:0:9::146:8		
A2 TELECOM EIRELI - ME	266240	10G	 Open
45.68.75.42	2001:12f8:0:9::147:42		
A4 TELECOM	271069	20G	Open
45.68.75.46	2001:12f8:0:9::147:46		
A4 TELECOM	271069	20G	Open
45.68.73.191	2001:12f8:0:9::145:191		
AccessNet Telecomunicacoes	269530	20G	 Open
45.68.75.155	2001:12f8:0:9::147:155		
AccessNet Telecomunicacoes	269530	20G	 Open
45.68.75.153	2001:12f8:0:9::147:153		

Collecting the PeeringDB data – REST API

Peers at this Exchange Point				Filter
Peer Name A-Z ▾ IPv4	ASN IPv6	Speed Port Location	Policy ?	
45.68.75.42	2001:12f8:0:9::147:42			
<u>A4 TELECOM</u>	271069	20G	Open	→ ASN IPv4
45.68.75.46	2001:12f8:0:9::147:46			
<u>A4 TELECOM</u>	271069	20G	Open	
45.68.73.191	2001:12f8:0:9::145:191			
<u>AccessNet</u> <u>Telecomunicações</u>	269530	20G	❄ Open	
45.68.75.155	2001:12f8:0:9::147:155			
<u>AccessNet</u> <u>Telecomunicações</u>	269530	20G	❄ Open	
45.68.75.153	2001:12f8:0:9::147:153			
<u>ACE CDN</u>	139341	100G	❄ Open	
45.68.75.112	2001:12f8:0:9::147:112			
<u>ACE COMERCIO E</u> <u>SERVICOS DE</u> <u>INFORMATICA</u>	265294	10G	Open	
45.68.72.118	2001:12f8:0:9::118			
<u>Acess.Net</u> <u>Telecomunicacoes</u>	271192	10G	❄ Open	
45.68.73.115	2001:12f8:0:9::145:115			
<u>Acesso Fibra</u>	266952	20G	Open	
45.68.72.89	2001:12f8:0:9::89			
<u>Acesso Net - JF</u> <u>Solucoes Informatica</u>	53236	10G	❄ Open	
45.68.72.141	2001:12f8:0:9::141			

Collecting the PeeringDB data – REST API

Search...

api

GET list fac

POST create fac

GET retrieve fac

PUT update fac

PATCH patch fac

DEL delete fac

GET list carrier

POST create carrier

GET retrieve carrier

PUT update carrier

PATCH patch carrier

DEL delete carrier

GET list carrierfac

POST create carrierfac

GET retrieve carrierfac

PUT update carrierfac

PATCH patch carrierfac

DEL delete carrierfac

GET list ix

api

list fac

Retrieves a list of `fac` type objects

Facility (Datacenter)

Identified by the `fac` tag.

Parent relationship:

- `org` organization

Relationship(s):

- `ixfac` exchange / facility presence
- `netfac` network / facility presence

List objects

Querying

You may query the resultset by passing field names as url parameters

Numeric Queries

On numeric fields you can suffix the field names with the following filters:

- `__lt` : less-than
- `__lte` : less-than-equal
- `__gt` : greater-than
- `__gte` : greater-than-equal
- `__in` : value inside set of values (comma separated)

examples

```
?<field_name>__lt=10
?<field_name>__in=1,10
```

<https://www.peeringdb.com/apidocs/#tag/api>

Collecting the PeeringDB data – REST API

Operations available in API:

- GET – get data/object;
- POST – create data/object;
- PUT – update data/object;
- DELETE – delete data/object;

and other operations.

<https://developer.mozilla.org/pt-BR/docs/Web/HTTP/Methods>

Collecting the PeeringDB data – REST API

<https://www.peeringdb.com/api/netixlan>

NSOT - IX.br

```
1 import requests
2
3 load_dotenv()
4
5 API_KEY = os.getenv("API_KEY")
6 API_PDB = os.getenv("API_PDB")
7
8 headers = {"Authorization": "Api-Key " + API_KEY}
9
10 pdb = {"pdb_code": 710, "ix_code": "ce"}
11
12 try:
13     data = {'ix_id': pdb['pdb_code'], 'fields': 'id,net_id,ixlan_id,speed,asn,ipaddr4,ipaddr6'}
14     response = requests.get(API_PDB, headers=headers, params=data)
15     print(response.json())
16
17 except Exception as err:
18     print(err)
```

get_data_pdb.py

Collecting the PeeringDB data – REST API - Dump

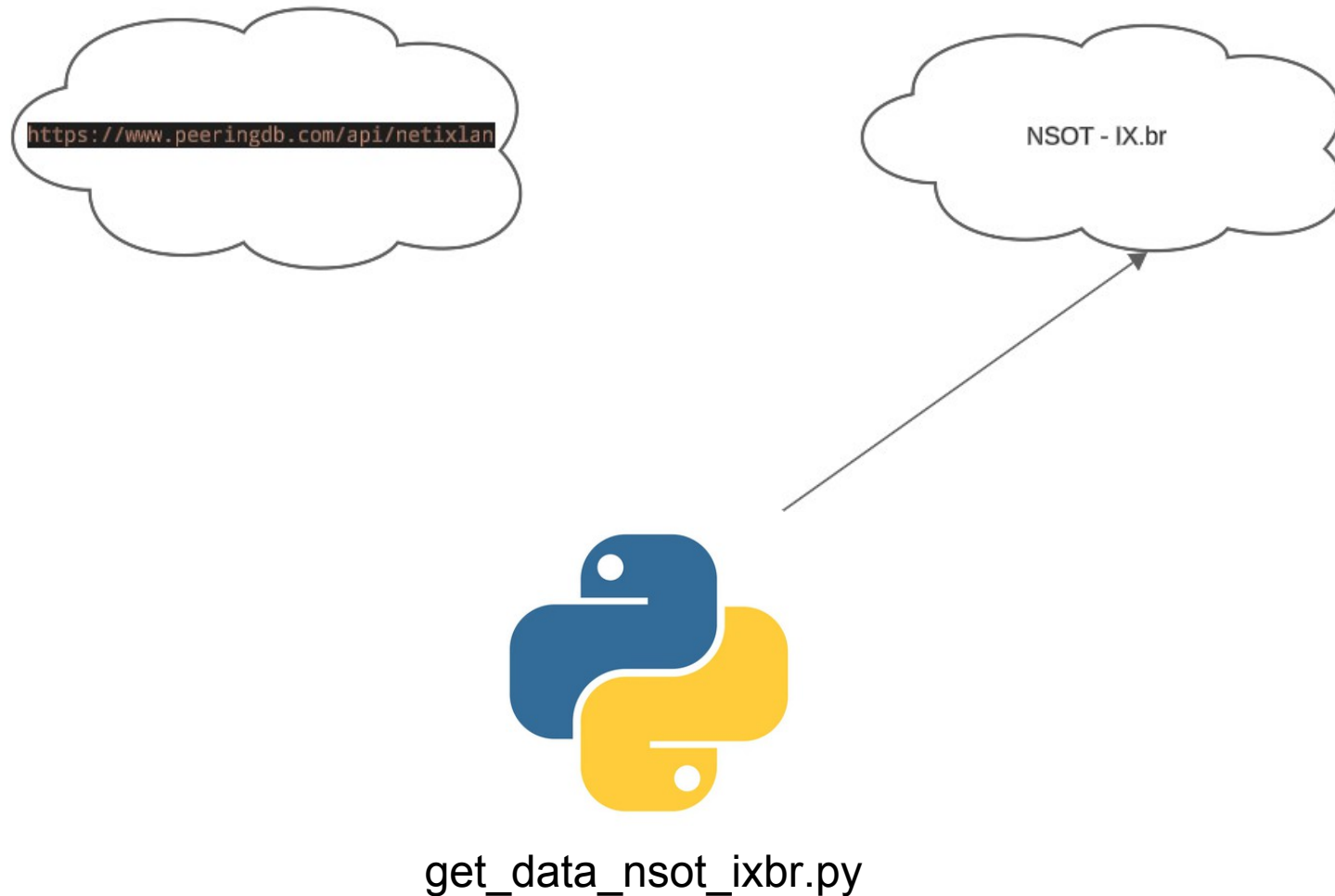
```
{'id': 14779, 'net_id': 5654, 'ixlan_id': 710, 'speed': 1000, 'asn': 14026, 'ipaddr4': '45.68.72.3', 'ipaddr6': None}
{'id': 15015, 'net_id': 5803, 'ixlan_id': 710, 'speed': 1000, 'asn': 20121, 'ipaddr4': '45.68.72.252', 'ipaddr6': '2001:12f8:0:9::252'}
{'id': 17926, 'net_id': 6133, 'ixlan_id': 710, 'speed': 10000, 'asn': 263311, 'ipaddr4': '45.68.72.25', 'ipaddr6': '2001:12f8:0:9::25'}
{'id': 18570, 'net_id': 30605, 'ixlan_id': 710, 'speed': 10000, 'asn': 269178, 'ipaddr4': '45.68.72.7', 'ipaddr6': '2001:12f8:0:9::7'}
{'id': 18938, 'net_id': 5310, 'ixlan_id': 710, 'speed': 200000, 'asn': 52965, 'ipaddr4': '45.68.72.67', 'ipaddr6': '2001:12f8:0:9::67'}
{'id': 19312, 'net_id': 6618, 'ixlan_id': 710, 'speed': 100000, 'asn': 28598, 'ipaddr4': '45.68.74.70', 'ipaddr6': '2001:12f8:0:9::146:70'}
{'id': 19467, 'net_id': 618, 'ixlan_id': 710, 'speed': 1000, 'asn': 20144, 'ipaddr4': '45.68.72.12', 'ipaddr6': None}
{'id': 22149, 'net_id': 4328, 'ixlan_id': 710, 'speed': 20000, 'asn': 1916, 'ipaddr4': '45.68.72.2', 'ipaddr6': '2001:12f8:0:9::2'}
{'id': 25655, 'net_id': 5677, 'ixlan_id': 710, 'speed': 4000, 'asn': 262727, 'ipaddr4': '45.68.72.21', 'ipaddr6': '2001:12f8:0:9::21'}
{'id': 26907, 'net_id': 9449, 'ixlan_id': 710, 'speed': 100000, 'asn': 263327, 'ipaddr4': '45.68.72.35', 'ipaddr6': '2001:12f8:0:9::35'}
{'id': 27465, 'net_id': 33077, 'ixlan_id': 710, 'speed': 10000, 'asn': 61854, 'ipaddr4': '45.68.74.12', 'ipaddr6': '2001:12f8:0:9::146:12'}
{'id': 27582, 'net_id': 9584, 'ixlan_id': 710, 'speed': 20000, 'asn': 28308, 'ipaddr4': '45.68.72.33', 'ipaddr6': '2001:12f8:0:9::33'}
{'id': 27938, 'net_id': 11079, 'ixlan_id': 710, 'speed': 10000, 'asn': 262644, 'ipaddr4': '45.68.73.108', 'ipaddr6': '2001:12f8:0:9::145:108'}
{'id': 29956, 'net_id': 10959, 'ixlan_id': 710, 'speed': 40000, 'asn': 52981, 'ipaddr4': '45.68.72.15', 'ipaddr6': None}
{'id': 32289, 'net_id': 2786, 'ixlan_id': 710, 'speed': 10000, 'asn': 28573, 'ipaddr4': '45.68.72.13', 'ipaddr6': '2001:12f8:0:9::13'}
{'id': 32840, 'net_id': 457, 'ixlan_id': 710, 'speed': 300000, 'asn': 2906, 'ipaddr4': '45.68.72.55', 'ipaddr6': '2001:12f8:0:9::55'}
{'id': 32841, 'net_id': 457, 'ixlan_id': 710, 'speed': 300000, 'asn': 2906, 'ipaddr4': '45.68.72.56', 'ipaddr6': '2001:12f8:0:9::56'}
{'id': 33065, 'net_id': 23744, 'ixlan_id': 710, 'speed': 10000, 'asn': 269023, 'ipaddr4': '45.68.72.50', 'ipaddr6': '2001:12f8:0:9::50'}
{'id': 33350, 'net_id': 10557, 'ixlan_id': 710, 'speed': 30000, 'asn': 263321, 'ipaddr4': '45.68.72.38', 'ipaddr6': '2001:12f8:0:9::38'}
{'id': 33545, 'net_id': 7353, 'ixlan_id': 710, 'speed': 100000, 'asn': 52877, 'ipaddr4': '45.68.72.69', 'ipaddr6': '2001:12f8:0:9::69'}
{'id': 33588, 'net_id': 18781, 'ixlan_id': 710, 'speed': 40000, 'asn': 268512, 'ipaddr4': '45.68.72.36', 'ipaddr6': '2001:12f8:0:9::36'}
{'id': 33758, 'net_id': 12909, 'ixlan_id': 710, 'speed': 20000, 'asn': 264562, 'ipaddr4': '45.68.72.42', 'ipaddr6': '2001:12f8:0:9::42'}
{'id': 34667, 'net_id': 13455, 'ixlan_id': 710, 'speed': 20000, 'asn': 262887, 'ipaddr4': '45.68.73.195', 'ipaddr6': '2001:12f8:0:9::145:195'}
{'id': 34848, 'net_id': 8499, 'ixlan_id': 710, 'speed': 200000, 'asn': 61832, 'ipaddr4': '45.68.72.70', 'ipaddr6': '2001:12f8:0:9::70'}
{'id': 34885, 'net_id': 9621, 'ixlan_id': 710, 'speed': 10000, 'asn': 52683, 'ipaddr4': '45.68.72.66', 'ipaddr6': '2001:12f8:0:9::66'}
{'id': 35018, 'net_id': 9889, 'ixlan_id': 710, 'speed': 200000, 'asn': 53087, 'ipaddr4': '45.68.72.49', 'ipaddr6': '2001:12f8:0:9::49'}
{'id': 35418, 'net_id': 13301, 'ixlan_id': 710, 'speed': 5120, 'asn': 266374, 'ipaddr4': '45.68.72.68', 'ipaddr6': '2001:12f8:0:9::68'}
{'id': 35446, 'net_id': 13854, 'ixlan_id': 710, 'speed': 70000, 'asn': 264564, 'ipaddr4': '45.68.72.73', 'ipaddr6': '2001:12f8:0:9::73'}
```

Collecting the PeeringDB data – REST API - Dump

```
{'id': 14779, 'net_id': 5654, 'ixlan_id': 710, 'speed': 1000, 'asn': 14026, 'ipaddr4': '45.68.72.3', 'ipaddr6': None}
{'id': 15015, 'net_id': 5803, 'ixlan_id': 710, 'speed': 1000, 'asn': 20121, 'ipaddr4': '45.68.72.252', 'ipaddr6': '2001:12f8:0:9::252'}
{'id': 17926, 'net_id': 6133, 'ixlan_id': 710, 'speed': 10000, 'asn': 263311, 'ipaddr4': '45.68.72.25', 'ipaddr6': '2001:12f8:0:9::25'}
{'id': 18570, 'net_id': 30605, 'ixlan_id': 710, 'speed': 10000, 'asn': 269178, 'ipaddr4': '45.68.72.7', 'ipaddr6': '2001:12f8:0:9::7'}
{'id': 18938, 'net_id': 5310, 'ixlan_id': 710, 'speed': 200000, 'asn': 52965, 'ipaddr4': '45.68.72.67', 'ipaddr6': '2001:12f8:0:9::67'}
{'id': 19312, 'net_id': 6618, 'ixlan_id': 710, 'speed': 100000, 'asn': 28598, 'ipaddr4': '45.68.74.70', 'ipaddr6': '2001:12f8:0:9::146:70'}
{'id': 19467, 'net_id': 618, 'ixlan_id': 710, 'speed': 1000, 'asn': 20144, 'ipaddr4': '45.68.72.12', 'ipaddr6': None}
{'id': 22149, 'net_id': 4328, 'ixlan_id': 710, 'speed': 20000, 'asn': 1916, 'ipaddr4': '45.68.72.2', 'ipaddr6': '2001:12f8:0:9::2'}
{'id': 25655, 'net_id': 5677, 'ixlan_id': 710, 'speed': 4000, 'asn': 262727, 'ipaddr4': '45.68.72.21', 'ipaddr6': '2001:12f8:0:9::21'}
{'id': 26907, 'net_id': 9449, 'ixlan_id': 710, 'speed': 100000, 'asn': 263327, 'ipaddr4': '45.68.72.35', 'ipaddr6': '2001:12f8:0:9::35'}
{'id': 27465, 'net_id': 33077, 'ixlan_id': 710, 'speed': 10000, 'asn': 61854, 'ipaddr4': '45.68.74.12', 'ipaddr6': '2001:12f8:0:9::146:12'}
{'id': 27582, 'net_id': 9584, 'ixlan_id': 710, 'speed': 20000, 'asn': 28308, 'ipaddr4': '45.68.72.33', 'ipaddr6': '2001:12f8:0:9::33'}
{'id': 27938, 'net_id': 11079, 'ixlan_id': 710, 'speed': 10000, 'asn': 262644, 'ipaddr4': '45.68.73.108', 'ipaddr6': '2001:12f8:0:9::145:108'}
{'id': 29956, 'net_id': 10959, 'ixlan_id': 710, 'speed': 40000, 'asn': 52981, 'ipaddr4': '45.68.72.15', 'ipaddr6': None}
{'id': 32289, 'net_id': 2786, 'ixlan_id': 710, 'speed': 10000, 'asn': 28573, 'ipaddr4': '45.68.72.13', 'ipaddr6': '2001:12f8:0:9::13'}
{'id': 32840, 'net_id': 457, 'ixlan_id': 710, 'speed': 300000, 'asn': 2906, 'ipaddr4': '45.68.72.55', 'ipaddr6': '2001:12f8:0:9::55'}
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{'id': 33545, 'net_id': 7353, 'ixlan_id': 710, 'speed': 100000, 'asn': 52877, 'ipaddr4': '45.68.72.69', 'ipaddr6': '2001:12f8:0:9::69'}
{'id': 33588, 'net_id': 18781, 'ixlan_id': 710, 'speed': 40000, 'asn': 268512, 'ipaddr4': '45.68.72.36', 'ipaddr6': '2001:12f8:0:9::36'}
{'id': 33758, 'net_id': 12909, 'ixlan_id': 710, 'speed': 20000, 'asn': 264562, 'ipaddr4': '45.68.72.42', 'ipaddr6': '2001:12f8:0:9::42'}
{'id': 34667, 'net_id': 13455, 'ixlan_id': 710, 'speed': 20000, 'asn': 262887, 'ipaddr4': '45.68.73.195', 'ipaddr6': '2001:12f8:0:9::145:195'}
{'id': 34848, 'net_id': 8499, 'ixlan_id': 710, 'speed': 200000, 'asn': 61832, 'ipaddr4': '45.68.72.70', 'ipaddr6': '2001:12f8:0:9::70'}
{'id': 34885, 'net_id': 9621, 'ixlan_id': 710, 'speed': 10000, 'asn': 52683, 'ipaddr4': '45.68.72.66', 'ipaddr6': '2001:12f8:0:9::66'}
{'id': 35018, 'net_id': 9889, 'ixlan_id': 710, 'speed': 200000, 'asn': 53087, 'ipaddr4': '45.68.72.49', 'ipaddr6': '2001:12f8:0:9::49'}
{'id': 35418, 'net_id': 13301, 'ixlan_id': 710, 'speed': 5120, 'asn': 266374, 'ipaddr4': '45.68.72.68', 'ipaddr6': '2001:12f8:0:9::68'}
{'id': 35446, 'net_id': 13854, 'ixlan_id': 710, 'speed': 70000, 'asn': 264564, 'ipaddr4': '45.68.72.73', 'ipaddr6': '2001:12f8:0:9::73'}
```

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'asn': 20121, 'ipaddr4': '45.68.72.252', 'ipaddr6': '2001:12f8:0:9::252'}
'asn': 263311, 'ipaddr4': '45.68.72.25', 'ipaddr6': '2001:12f8:0:9::25'}
, 'asn': 269178, 'ipaddr4': '45.68.72.7', 'ipaddr6': '2001:12f8:0:9::7'}
, 'asn': 52965, 'ipaddr4': '45.68.72.67', 'ipaddr6': '2001:12f8:0:9::67'}
```

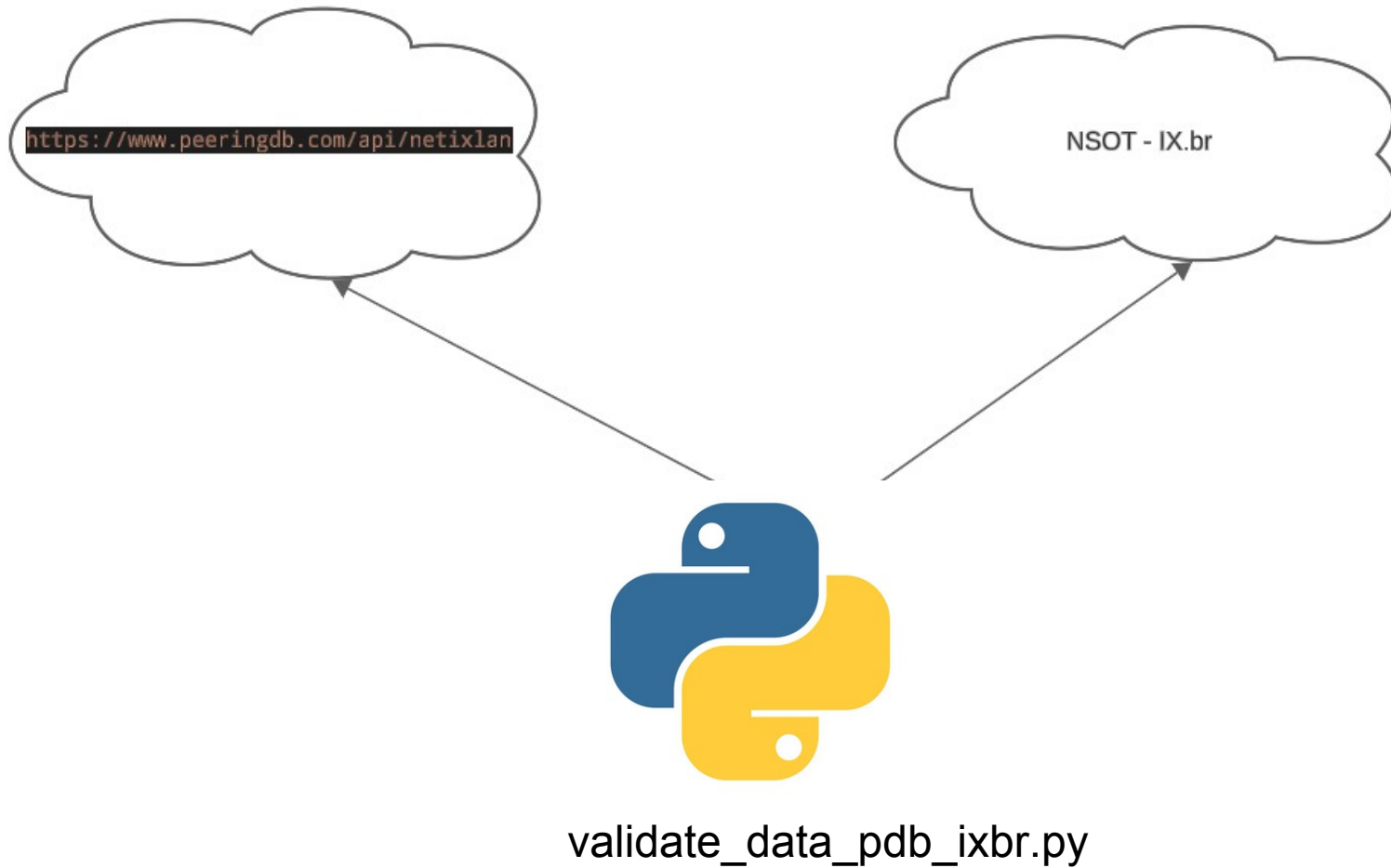
Collecting the NSOT IXBR data – REST API - Dump



Collecting the NSOT IXBR data – REST API - Dump

```
{'asn': 265947, 'ipv6': '2001:12f8:0:9::147:96'}
{'asn': 265968, 'ipv4': '45.68.73.97'}
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{'asn': 265996, 'ipv4': '45.68.72.174'}
{'asn': 265996, 'ipv4': '45.68.75.38'}
{'asn': 265996, 'ipv6': '2001:12f8:0:9::174'}
{'asn': 265996, 'ipv6': '2001:12f8:0:9::147:38'}
{'asn': 265998, 'ipv4': '45.68.75.31'}
{'asn': 265998, 'ipv6': '2001:12f8:0:9::147:31'}
{'asn': 266002, 'ipv4': '45.68.75.8'}
{'asn': 266002, 'ipv6': '2001:12f8:0:9::147:8'}
{'asn': 266003, 'ipv4': '45.68.72.228'}
{'asn': 266003, 'ipv4': '45.68.73.136'}
{'asn': 266003, 'ipv6': '2001:12f8:0:9::228'}
{'asn': 266003, 'ipv6': '2001:12f8:0:9::145:136'}
{'asn': 266009, 'ipv4': '45.68.74.94'}
{'asn': 266009, 'ipv4': '45.68.75.171'}
{'asn': 266009, 'ipv6': '2001:12f8:0:9::146:94'}
{'asn': 266009, 'ipv6': '2001:12f8:0:9::147:171'}
{'asn': 266020, 'ipv4': '45.68.74.176'}
{'asn': 266020, 'ipv4': '45.68.75.176'}
{'asn': 266020, 'ipv4': '45.68.75.167'}
{'asn': 266020, 'ipv6': '2001:12f8:0:9::146:176'}
{'asn': 266020, 'ipv6': '2001:12f8:0:9::147:176'}
{'asn': 266020, 'ipv6': '2001:12f8:0:9::147:167'}
{'asn': 266037, 'ipv4': '45.68.73.244'}
{'asn': 266037, 'ipv6': '2001:12f8:0:9::145:244'}
{'asn': 266076, 'ipv4': '45.68.72.148'}
{'asn': 266076, 'ipv6': '2001:12f8:0:9::148'}
{'asn': 266096, 'ipv4': '45.68.75.9'}
{'asn': 266096, 'ipv6': '2001:12f8:0:9::147:9'}
{'asn': 266098, 'ipv4': '45.68.73.164'}
{'asn': 266098, 'ipv6': '2001:12f8:0:9::145:164'}
{'asn': 266101, 'ipv4': '45.68.75.129'}
{'asn': 266101, 'ipv6': '2001:12f8:0:9::147:129'}
{'asn': 266120, 'ipv4': '45.68.76.23'}
{'asn': 266120, 'ipv6': '2001:12f8:0:9::148:23'}
{'asn': 266129, 'ipv4': '45.68.72.77'}
{'asn': 266129, 'ipv4': '45.68.74.57'}
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```

Validating data structures - PeeringDB x IXBR



Validating data structures - PeeringDB x IXBR – IXP Fortaleza

```
{
  "problems": [
    {
      "problem_description": "IPv4 not found on netbox - ASN: [REDACTED] - ipv4: [REDACTED] - localidade: ce",
      "problem_type": "peeringdb_check"
    },
    {
      "problem_description": "IPv4 not found on netbox - ASN: [REDACTED] - ipv4: [REDACTED] - localidade: ce",
      "problem_type": "peeringdb_check"
    },
    {
      "problem_description": "IPv4 not found on netbox - ASN: [REDACTED] - ipv4: [REDACTED] - localidade: ce",
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    },
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      "problem_type": "peeringdb_check"
    },
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      "problem_type": "peeringdb_check"
    },
    {
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      "problem_type": "peeringdb_check"
    },
    {
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      "problem_type": "peeringdb_check"
    },
    {
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      "problem_type": "peeringdb_check"
    },
    {
      "problem_description": "IPv4 not found on netbox - ASN: [REDACTED] - ipv4: [REDACTED] - localidade: ce",
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    }
  ]
}
```

Validating data structures - PeeringDB x IXBR – IXP Curitiba

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  "problem_type": "peeringdb_check"
},
{
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  "problem_type": "peeringdb_check"
},
{
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  "problem_type": "peeringdb_check"
},
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},
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}
}
```

Final considerations

Some companies use some PeeringDB fields for automation, so we must pay attention to filling in each field and understand what each field is for.

Deactivated IXP IP addresses need to be removed asap, as they will be reused and it will prevent the new "owner" of the IP from registering correctly.

Set a scheduler to review your information in PeeringDB and other databases as well.

Keep your information updated!!



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