PeeringDB

Matt Griswold, 20C/United IX
Greg Hankins, Alcatel-Lucent
IX (PTT) Fórum 9 - São Paulo, Brazil

Agenda

- **PeeringDB Introduction**
- Organization Update
- PDB 1.0 vs. PDB 2.0
- Automation Examples

PeeringDB Overview

- PeeringDB is the de facto reference database for peering information on the Internet
- Contains location information and contacts for
  - Networks
  - Exchange points
  - Facilities
- A PeeringDB entry for your network makes it easy for people to find you, and helps you establish peering
- Required for peering with certain networks, for example
  - Apple
  - Facebook
  - Microsoft

Statistics

Networks	8,293
Exchange Points	617
Facilities	1,863
Exchange Point Presences	25,508
Facility Presences	14,444

- Several new registrations from Brazil each week!

Network Example

Company Information	
Company Name	Alcatel-Lucent IP Labs
Also Known As	
Company Website	http://www.alcatel-lucent.com/
Primary ASN	38016
IRR Record	
Network Type	Educational/Research
Approx Prefixes	10
Traffic Levels	0-20 Mbps
Traffic Ratios	Balanced
Geographic Scope	Global
Looking Glass URL	
Route Server URL	
Notes	Alcatel-Lucent IP Labs for peering R&D.
Protocols Supported	Unicast IPv4 ☑ Multicast ☐ IPv6 ☑
Date Last Updated	2015-08-25 05:12:35 UTC

Peering Policy Information	
Peering Policy URL	
General Policy	Open
Multiple Locations	Not Required
Ratio Requirement	No
Contract Requirement	Not Required

Contact Information

Role	Contact Name	Telephone	E-Mail
NOC	Greg Hankins, Alastair Johnson		as38016@alcatel-lucent.com
Technical	Greg Hankins, Alastair Johnson		as38016@alcatel-lucent.com

Public Peering Exchange Points

Exchange Point Name	ASN	IP Address	Mbit/sec
DE-CIX Frankfurt	38016	2001:7f8::9480:0:1	1000
DE-CIX Frankfurt	38016	80.81.193.192	1000
DE-CIX New York	38016	2001:504:36::9480:0:1	1000
DE-CIX New York	38016	206.130.10.12	1000

Private Peering Facilities

Facility Name	ASN	City	Country	SONET	Ethr	ATM
325 Hudson Street	38016	New York	US	☐	☑	☐

Exchange Point Example

Public Exchange Point Detailed View	
Common Name	PTT-SP
Long Name	PTT Sao Paulo
City	Sao Paulo/SP
Country	BR
Continental Region	South America
Media Type	Ethernet
Protocols Supported	Unicast IPv4 ☑ Multicast ☐ IPv6 ☑

Contact Information	
Website	http://ptt.br
Traffic Statistics Website	http://ptt.br/trafego/agregado/sp
Technical E-Mail	noc@ptt.br
Technical Phone	+55 11 5509-3550
Policy E-Mail	info@ptt.br
Policy Phone	+55 11 5509 3550

IP Address Blocks

Type	Address Block	Reverse DNS Scan
IPv4 Unicast	187.16.216.0/21	Link
IPv6 Unicast	2001:12f8::/64	Unsupported

Local Facilities

Facility Name	City	Country	Participant Count
No records			

List of Peers at this Exchange Point (Total: 509)

Peer Name	Local ASN	IP Address	IPs	Policy
3E TELECOM	61924		1	Open
3Ws Telecom	263265	187.16.220.133	1	Open
ABASE Telecom	22431	187.16.216.26	2	Open
abcRede Telecom Informatica ME	26162		1	Open
Acer Telecomunicações LTDA	28287	187.16.221.17	2	Open
Acesse Facil Telecomunicações LTDA	262828	187.16.217.93/21	1	Open
AdylNet Telecom	28283	187.16.218.92	4	Open
AFINET SOLUCOES EM TECNOLOGIA DA INFORMACAO	262854	187.16.217.226	1	Open
AGYONET	53113	187.16.218.82/21	1	Open
AiRLiFE COMUNICACAO VIRTUAL LTDA	262952	187.16.219.30	1	Open
Akamai Technologies	20940	187.16.220.8	1	Open
Aki Telecom	52988	187.16.219.63/21	1	Selective
Algar Telecom	16735	187.16.217.48	4	Selective
ALOG DataCenters do Brasil - RJ	26592	187.16.216.42	4	Open
Alonet - Internet sem Fronteiras	262560	187.16.218.63	1	Open
ALPHASYS - SERVIÇOS E COMUNICAÇÃO LTDA	28364	187.16.219.201	3	Selective
ALQG Tecnologia	52550	187.16.218.229	1	Open
Alto Vale Net LTDA	262575	187.16.219.118	1	Open
Amazon.com	16509	187.16.217.20	4	Open
Americana Digital	28289	187.16.216.104	2	Open
Ampernet Telecom	28158	187.16.217.176	2	Open
AmplitudeNet	262721	187.16.218.69	1	Restrictive
Ananke	262446	187.16.216.116	1	Open

1 2 3 4 5 6 7 8 9 10 of 23 Next > Last >>

Access to PeeringDB

- PDB 1.0 is available at www.peeringdb.com
  - Current production version
- PDB 2.0 is in beta at beta.peeringdb.com
  - New version with many new features

Registration

- If you aren't registered in PeeringDB, you can register at www.peeringdb.com/registration/register.php
- We use basic verification for new accounts and require current whois information
  - Please update your whois information
  - Please register from a company email address
- Many new registrations from Brazil have mismatched information
  - Email address != company email address
  - Email address != whois email address
  - Company name != whois company name

Mailing Lists and Contacts

- PeeringDB Announce: lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-announce
- PeeringDB Governance: lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-gov
- PeeringDB Technical: lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-tech
- PeeringDB User Discuss: lists.peeringdb.com/cgi-bin/mailman/listinfo/user-discuss
- Support questions: support@peeringdb.com
- Administrative questions: admin@peeringdb.com
- Sponsorship info: sponsorship@peeringdb.com

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- PDB 1.0 vs. PDB 2.0
- Automation Examples

Organization

- Until now, PeeringDB has been run by an informal group of admins using donated infrastructure
- PeeringDB needs funds for
  - Operations
  - Software development
  - Feature requests and enhancements
- Many organizations have offered donations to support PeeringDB
- Unable to handle finances or contracts

Elections

- Voting for the PeeringDB initial Board of Directors just finished on November 30th, 2015
- Initial Board of Directors
  - Patrick W. Gilmore (Markley Group) - Vice President
  - Matt Griswold (20C)
  - Aaron Hughes (6connect) - President
  - Arnold Nipper (DE-CIX)
  - Job Snijders (NTT)
- First board meeting takes place today
- Forming United States 501(c)(6) nonprofit corporation
- All governance info is available at gov.peeringdb.com

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- Automation Examples

PDB 1.0

- Old, auto-generated code, unmaintainable
- Schema issues
  - One network per user, requires multiple registrations
  - No data validation, lots of typos
- MySQL is the only "API"
  - Insecure, doesn't scale
- Exposes contact information to potential spammers

PDB 2.0

- New, clean, shiny Python
- Completely redesigned schema
- RESTful API
- All data is cleaned and validated
- Contact info has permissions
  - Guest login won't see contact details

PDB 2.0

- Everything is permissioned and editable
  - Data centers and IXPs can update their own info
  - Multiple networks can be associated with one login
  - Manage users and permissions
- Documented APIs at docs.peeringdb.com/api_specs
- Many new features planned after release
- Beta version is live now at beta.peeringdb.com

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API Specs

- All operations are supported
  - Read
  - Write
  - Create
- Each data type has an associated tag
  - net
  - org
  - ix

API Specs

- To list all networks:

```
curl -X GET
https://<username>:<password>@beta.
peeringdb.com/api/net
```

- To view a specific network:

```
curl -X GET
https://<username>:<password>@beta.
peeringdb.com/api/net/20
```

Python Library

- Python seems to be the go-to language for network people
- Very early in life cycle
  - Expect more tests and features in the near future
- More languages and libraries will show up
  - PHP will probably be next
- Available at github.com/peeringdb/peeringdb-py

Python Library

- Advantages
  - Local (not dependent on servers being up, etc.)
  - Custom indexes can be built
  - Custom fields can be added
  - Database engine can be chosen (MySQL, Postgres, SQLite)
- To install:

```
pip install peeringdb
```

Python Library

- To configure a local database:
  `peeringdb configure`
- To keep in sync after configuration:
  `peeringdb sync`

Python Library

- To output YAML:

  `peeringdb get net20`

- To output JSON:

  `peeringdb get -O json net20`

Django PeeringDB

- PeeringDB models and local synchronization for Django
- Available at github.com/peeringdb/django-peeringdb
- Easy to integrate in a common web framework
- Multiple database options
- Used by peeringdb-py to sync data

United IX Example

- Customer signs up
- Backend system queries PeeringDB
- Auto populates IXP Manager data
  - NOC info
  - Max prefix
  - Very easy to generate peering router configuratoin

Companies Using PDB 2.0

- Apple
  - Couchbase database sync
  - Not available to the public
- Netflix
  - Redis database sync
  - Available at github.com/netflix/peeringdb-py

Questions?