PeeringDB

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Agenda

- **PeeringDB 2.0**
- Membership and Governance
- Committees
- Sponsorship
- Information and Resources

What is PeeringDB?

- PeeringDB is the database of peering information on the Internet
- Contains peering location and contact information for
  - Networks
  - Exchanges
  - Facilities
- A PeeringDB record makes it easy for people to find you, and helps you to establish peering
- If you aren't registered in PeeringDB, you can register at https://www.peeringdb.com/register
- We use basic verification for new accounts and require current whois information
  - Please update your whois information
  - Please register from a company email address

PeeringDB 2.0 is Here!

- PeeringDB 2.0 launched 15 March, 2016
  - Backend database (1.0) discontinued simultaneously
  - Last legacy SQL dump for public consumption: https://peeringdb.com/v1/dbexport/peeringdb.sql
  - Investigating 404s for old SQL to contact users
  - Questions to support@peeringdb.com
- Challenges during the launch
  - Very minor bug fixes required, but overall a success!
  - Lots of support tickets
  - 20C (developer contractor) very responsive to community - thanks!
- Current release: 2.0.14

Vital Statistics and Growth

**PeeringDB 2.0 Post-Launch** (March 15, 2016 through December 31, 2016)

PeeringDB

peeringdb.com

12,613
Verified Users
67%
Increase

9,079
Member Organizations
29%
Increase

8,194
Peering Networks
39%
Increase

2,302
Interconnection Facilities
20%
Increase

566
Internet eXchange Points
13%
Increase

Usage (December 2016)

Total Hits	8,587,768
Avg. Daily Hits	277,024
Unique Hits	61,173

Support Tickets

Total Support Tickets	6,715
Avg. Tickets Per Day	22
Avg. Response Time	Less than **14 Hours**

Key New Infrastructure Features

- Complete rewrite in Python
  - Python: fast and clean, widely used and supported
  - HTML5: adaptive design for desktop and mobile
  - Support for a multideveloper environment
- Redesigned schema with data validation
  - All data is permissioned and editable
  - Input validation on fields: IP addresses, email addresses, etc.
  - Validation in PeeringDB record: dropdown box to select ASN at exchange
- Data versioning
  - Revision history for every data change
  - Easy to restore and roll back
  - Historical data import from CAIDA going back to 2010 (not available yet)
- RESTful API
  - Stateless
  - Incremental database syncs
  - With documentation and tools, oh my!
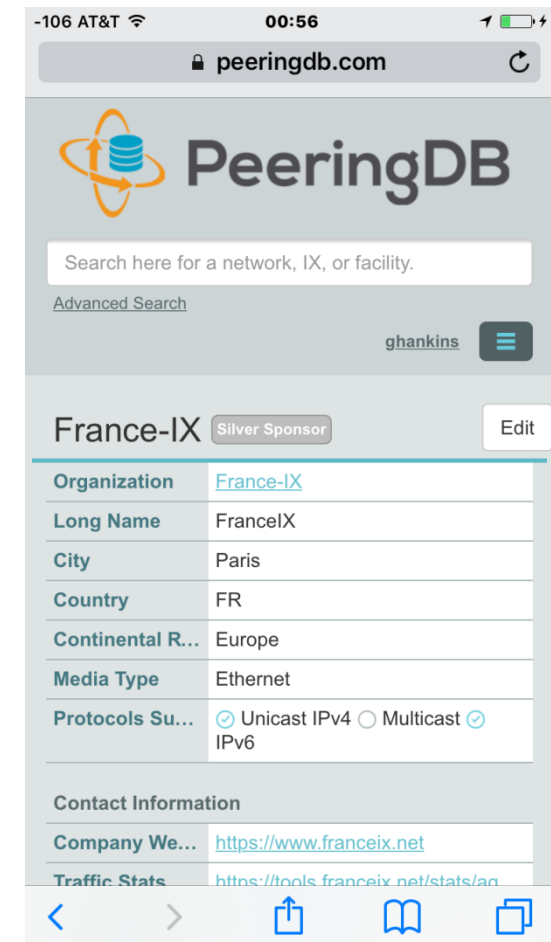
Key New User Features

- Facilities and exchanges can now update their own info
  - Networks are still required to associate their record at a facility or exchange
- Multiple records of any type can be associated with an organization
  - Simpler organization management with a single account for network, facility, exchange records
- One account can manage multiple organizations
  - Manage all of the things with a single account
- Users can manage their accounts
  - Admin account for an organization can delegate fine-grained permissions
- Contact info has permissions
  - Private/users/public permissions
  - All users must register, no more guest account
  - Public view can see all info except contact info (no login needed)
- APIs and local database sync
  - Sync PeeringDB to a local database in any engine format

RESTful API Designed for Automation

- All operations are supported and are designed to be automated
  - Read
  - Create
  - Update
  - Delete
- Each object type has an associated tag
  - org
  - net
  - ix
  - fac
- List of objects: https://peeringdb.com/apidocs/
- API documentation: http://docs.peeringdb.com/api_specs/

Quick Examples Return Output in JSON

- List all networks: `curl -X GET https://<username>:<password>@www.peeringdb.com/api/net`

- Show a specific network: `curl -X GET https://<username>:<password>@www.peeringdb.com/api/net/20`

```
{"meta": {}, "data": [{"id": 20, "org_id": 10356, "org": {"id":
10356, "name": "20C", "website": "http://20c.com", "notes": "",
"net_set": [20], "fac_set": [], "ix_set": [], "address1": "",
"address2": "", "city": "Chicago", "country": "US", "state":
"IL", "zipcode": "", "created": "2014-11-17T14:59:34Z",
"updated": "2016-03-23T20:39:18Z", "status": "ok"}, "name":
"20C", "aka": "", "website": "http://20c.com", "asn": 63311, "
... }
```

Local Database Sync

- Database sync gives you a local copy of PeeringDB for customization or internal use
    - Sync as often as you like
    - Incremental sync is supported
- Improves performance and reduces load on PeeringDB servers
- Build custom indexes and interfaces
- Add custom fields
- Choice of database engines
    - Currently supported: MySQL, Postgres, SQLite
- Sync using the provided tools or build your own using the API

Django Library

- django-peeringdb is a Django library with a local PeeringDB database sync

- Defines the database schema to create a local database copy

- Easy to integrate in a common framework for locals tools and custom interfaces

- Supports multiple database engines (MySQL, Postgres, SQLite)

- Available at http://peeringdb.github.io/django-peeringdb/

Python Client

- peeringdb-py is a Python client for PeeringDB
- Gets objects and outputs in JSON or YAML format
- Provides a whois-like display of records
- Integrated local database sync
- Python library for integration with custom tools
- Available at http://peeringdb.github.io/peeringdb-py/
- Examples at https://github.com/grizz/pdb-examples

Status Page

Status	Last 7 Days		Type	13 Feb	12 Feb	11 Feb	10 Feb	09 Feb	08 Feb	07 Feb
🟢	100.00%	Database & API	keyword	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
🟢	100.00%	HTTPS PeeringDB.com	http	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
🟢	100.00%	Offsite Backup Creation	keyword	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
🟢	100.00%	Outbound Email Delivery	keyword	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
🟢	100.00%	PeeringDB DeskPRO	http	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
🟢	100.00%	PeeringDB.com ICMP Ping	ping	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

http://status.peeringdb.com/

Beta Development and Reporting Issues

- Beta server
  - Available at https://beta.peeringdb.com/
  - Runs the latest beta software version
  - Full access over HTTP and the API
  - Database is local to the beta server only, changes are not reflected on the production servers
- Latest changes
  - Available at https://beta.peeringdb.com/changes
  - Redirects to the list of issues on GitHub
  - Documents all of the changes in the current beta version
- Log bugs and feature requests at https://github.com/peeringdb/peeringdb/issues on GitHub

Agenda

- PeeringDB 2.0
- **Membership and Governance**
- **Committees**
- **Sponsorship**
- **Information and Resources**

Membership and Governance

- PeeringDB organization formally formed 16 Dec, 2015

- PeeringDB 501(c)(6) filed 7 Jan, 2016 (approved 24 Feb, 2016)

- 2nd election held April 2016: 94 organizations registered, 80 voted
  - 3rd election scheduled for April 2017

- 299 addresses subscribed to the Governance mailing list (as of 17 Oct 2016)

- A corporation, limited liability company, partnership or other legal business entity may be a Member of the Corporation. Membership is determined by having both an active PeeringDB.com account and an individual representative or role subscription to the PeeringDB Governance mailing list:
  - http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-gov
  - More information available at http://gov.peeringdb.com/

Board of Directors and Officers

Chris Caputo – Secretary & Treasurer
(Non-Board Member)

Patrick Gilmore – Director
(Term Expires 2017)

Matt Griswold – Director
(Term Expires 2017)

Aaron Hughes – President
(Term Expires 2018)

Arnold Nipper – Director
(Term Expires 2017)

Job Snijders – Vice President
(Term Expires 2018)

Committees

Admin Committee	Product Committee
• Manage administration of user accounts and PeeringDB records • Answer support tickets • Board members Job Snijders (Chair) and Arnold Nipper (Vice Chair) • Seeking 2 community volunteers (1 year term) • Contact: support@peeringdb.com	• Ask for input from the community on desired features • Manage roadmap and development priorities • Write SoWs to solicit bids to complete requested features • Board members Aaron Hughes (Chair) and Matt Griswold (Vice Chair) • Seeking 0 community volunteers (1 year term) • Contact: productcom@lists.peeringdb.com

Admin Committee

Samer
Abdel-Hafez
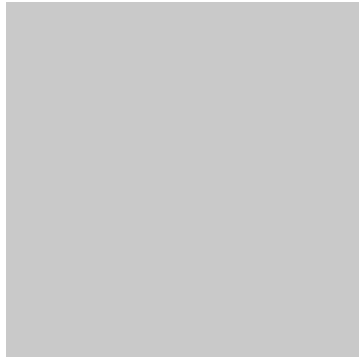
Hendrik
Braasch

Kate
Gerry

Peter
Helmenstine

Florian
Hibler

Eric
Lindsjö

Arnold Nipper –
Vice Chair

Eduardo
Ascenço Reis

Job Snijders –
Chair

Michael
Still

PeeringDB 2.0 Support Ticket Statistics

Month	Tickets	Tickets/Day	Resolve Time (d)
2016-03	954	31.80	0.94
2016-04	704	23.47	0.54
2016-05	657	21.90	0.50
2016-06	611	20.37	0.75
2016-07	536	17.87	0.27
2016-08	468	18.00	0.39
2016-09	633	21.10	0.32
2016-10	691	23.03	0.31
2016-11	691	23.03	0.88
2016-12	776	25.87	1.08
2017-01	707	23.57	1.30

- Admin Committee volunteers are based around the world in a variety of time zones
- Goal is to resolve support tickets within 24 hours

Product Committee

Karthik Arumugham

Matt Griswold – Vice Chair

Greg Hankins

Aaron Hughes – Chair
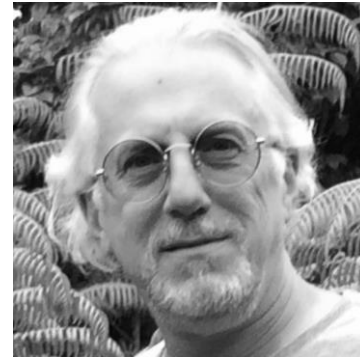
Martin J. Levy

Eric Loos

Chris Malayter

Stephen McManus

Arnold Nipper

Kay Rechthien

Walt Wollny

Become a PeeringDB Sponsor!

- Diamond Sponsorship - $25,000 / year
  - Limited to 2 sponsors
  - Very large logo on top line of Sponsors page with URL
  - Diamond Sponsor badge display on all records
  - Social media promotion
- Platinum Sponsorship - $10,000 / year
  - Large logo on second line of Sponsors page with URL
  - Platinum Sponsor badge display on all records
  - Social media promotion
- Gold Sponsorship - $5,000 / year
  - Medium logo on third line of Sponsors page
  - Gold Sponsor badge display on all records
  - Social media promotion
- Silver Sponsorship - $2,500 / year
  - Small logo on fourth line of Sponsors page
  - Silver Sponsor badge display on all records
  - Social media promotion
- Contact sponsorship@peeringdb.com for sponsorship info

Microsoft **Diamond Sponsor**

Organization	Microsoft
Also Known As	8068
Company Website	http://www.microsoft.com
Primary ASN	8075
IRR Record	AS-MICROSOFT

DE-CIX Frankfurt **Platinum Sponsor**

Organization	DE-CIX Management GmbH
Long Name	Deutscher Commercial Internet Exchange
City	Frankfurt
Country	DE
Continental Region	Europe

Proud Sponsor of PeeringDB

GOLD

Thank you to our sponsors!

Diamond Sponsors

Microsoft

Platinum Sponsors

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Gold Sponsors

Facebook   Internet Society   IX | AUSTRALIA — INTERNET PEERING FOR AUSTRALIA

Silver Sponsors

amsix   Akamai FASTER FORWARD   BB!IX Internet Exchange   border 6 NON STOP INTERNET   cologix   DIGITAL REALTY | telx   interxion   FranceIX Convergence hub

KDDI   TELEHOUSE   lacnic   LINX Est. 1994   netnod   NIX·CZ   NLix neutral internet exchange

NTT Communications   NYIIX   LAIIX   RIPE NCC RIPE NETWORK COORDINATION CENTRE   SysEleven   workonline communications   zenlayer

Information and Resources

- Announce list: http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-announce

- Governance list: http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-gov

- Technical list: http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-tech

- User Discuss list: http://lists.peeringdb.com/cgi-bin/mailman/listinfo/user-discuss

- Docs, presentations, guides, tools: http://docs.peeringdb.com/

- Board and Officers: stewards@lists.peeringdb.com

- Admins: support@peeringdb.com

- Bugs and feature requests: https://github.com/peeringdb/peeringdb/

- Status: http://status.peeringdb.com/

@PeeringDB

https://www.facebook.com/peeringdb/

https://www.linkedin.com/company/peeringdb

Questions?

Multiple Records Under a Single Organization

Facilities are Shown Here
LINX has 1 Facility

Networks are Shown Here
LINX has 2 Network Records

Exchanges are Shown Here
LINX has 6 Exchange Records

One Account Managing Multiple Organizations

Account "job" is Affiliated with 4 Organizations

Request Ownership of an Existing Organization

- Network records should already have an organization admin copied from PeeringDB 1.0

- Facility and exchange records will need to have an organization admin assigned

Click "Request Ownership"

Generates a Support Ticket for Validation and Approval

Register or Request Affiliation to an Existing Organization

2. Confirm Email Address
(Click Here if not Confirmed)

3. Enter ASN or Organization Here
Autocomplete on Existing ASNs and Organizations in PeeringDB

1. Go to Your Profile

4. Click "Affiliate"
Existing: Organization Admin Needs to Approve
New: Generates a Support Ticket for Validation and Approval

Adding a New Exchange to Your Organization

Editing Your Exchange Record

Networks are Still Required to Associate their Record at a Facility or Exchange

Enter Exchange Info Here, Then Click "Save"

Editing Your Exchange Record

Enter LAN Info Here
Name – Optional Name
DOT1Q – 802.1Q Tag
MTU
IPv4/IPv6 Addresses

Add Facilities Here
Autocomplete on
Existing Facilities, Must
Contact Support to Add
a New Facility

Organization User Management

Approve or Deny Pending Requests

Delegate Permissions for Members

Admins Have Access to Everything

Manage

Add Facility   Add Network   Add Exchange   **Users**   Permissions

Users requesting affiliation

Name User	Email Confirmed	Date
	Currently no users requesting affiliation with Nokia IP/Optical Networks Labs	

Users in Organization

Name User	Email	Group	
Greg Hankins ghankins	greg.hankins@alcatel-lucent.com	admin ⬍	Remove
		member / admin	Save

Change User Access Levels
Admin – Administrator
Member – Delegate Permissions

Remove Users From the Organization
Does not Remove the User Account From PeeringDB

Administrative Permission Delegation

User "equinix-uk" can Manage Several Network Records, but <u>no</u> Exchanges or Facilities

Paul Cairney <paul.cairney@eu.equinix.com> equinix-uk	Create	Update	Delete
☒ Network - Equinix Netherlands	☑	☑	☑
☒ Network - Equinix UK	☑	☑	☑
☒ Network - Equinix Germany	☑		
☒ Network - Equinix France	☑		
☒ Network - Equinix Switzerland	☑		
Any Exchange ⇕	☐			Add

Create – New Entries in Record
Update – Change Existing Entries in Record
Delete – Delete Entries in Record

Raphael Ho <raphael.ho@ap.equinix.com> rho	Create	Update	Delete
☒ Network - Equinix Connect	☑	☑	☐
☒ Any Exchange	☑	☑	☐
☒ Any Facility	☑	☑	☐
Any Exchange ⇕	☐	☐	☐	Add

User "rho" can Manage the "Equinix Connect" Network Record, and Any Exchange or Facility

Network Record Contact Information Permissions

Separate Visibility Preferences for Each Role
Private – Organization Only (Default)
Users – Registered Users Only
Public – Anyone (no Login Required)

Roles:
Abuse
Policy
Technical
NOC
Public Relations
Sales

PeeringDB IXP Statistics

Region	# of IXP	# of members at largest IXP	Total # of members (unique)	Total # of members (duplicates)	# of IXP most peered ASN is connected to
Africa	38	172	259	531	18
Australia	27	144	330	1005	17
Asia Pacific	80	208	762	1734	23
Europe	222	749	2963	8008	72
Middle East	8	41	66	76	3
North America	138	273	1480	3642	65
South America	62	735	966	1573	26

- Not all networks are associated at an IXP even if they are connected
- As of 2017-02-21