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)

- **Verified Users**: 12,613, increase of 67%
- **Member Organizations**: 9,079, increase of 29%
- **Peering Networks**: 8,194, increase of 39%
- **Interconnection Facilities**: 2,302, increase of 20%
- **Internet eXchange Points**: 566, increase of 13%

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,
    "..."
  }
```

2017-03-23  CEE Peering Days 2017, Ljubljana, Slovenia
# Monitors

<table>
<thead>
<tr>
<th>Status</th>
<th>Last 7 Days</th>
<th>Type</th>
<th>20 Mar</th>
<th>19 Mar</th>
<th>18 Mar</th>
<th>17 Mar</th>
<th>16 Mar</th>
<th>15 Mar</th>
<th>14 Mar</th>
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<tr>
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<td>Database &amp; API</td>
<td>keyword</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>99.304%</td>
<td>98.248%</td>
</tr>
<tr>
<td>99.719%</td>
<td>HTTPS PeeringDB.com</td>
<td>http</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>98.855%</td>
<td>99.181%</td>
</tr>
<tr>
<td>100.00%</td>
<td>Offsite Backup Creation</td>
<td>keyword</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>100.00%</td>
<td>Outbound Email Delivery</td>
<td>keyword</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>100.00%</td>
<td>PeeringDB DeskPRO</td>
<td>http</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>100.00%</td>
<td>PeeringDB.com ICMP Ping</td>
<td>ping</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

# Quick Stats

- **Up**: 6
- **Down**: 0
- **Paused**: 0

# Overall Uptime

- **100.00%** (last 24 hours)
- **99.895%** (last 7 days)
- **99.970%** (last 30 days)

# Latest Downtime

It was recorded for the monitor Database & API on 2017-03-15 04:27:45 and the downtime lasted for 0 hrs. 1 mins.

[http://status.peeringdb.com/](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)
• 2\textsuperscript{nd} election held April 2016: 94 organizations registered, 80 voted
  • 3\textsuperscript{rd} election scheduled for mid April 2017 to end of 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

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Tickets</th>
<th>Tickets/Day</th>
<th>Resolve Time (d)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1389</td>
<td>4.09</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2284</td>
<td>6.34</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>3050</td>
<td>8.47</td>
<td>1.27</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2828</td>
<td>7.86</td>
<td>4.39</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>648</td>
<td>8.76</td>
<td>0.53</td>
<td>PeeringDB 1.0</td>
</tr>
<tr>
<td>2016</td>
<td>6225</td>
<td>21.84</td>
<td>0.59</td>
<td>PeeringDB 2.0</td>
</tr>
<tr>
<td>2017</td>
<td>1950</td>
<td>24.68</td>
<td>1.25</td>
<td></td>
</tr>
</tbody>
</table>

- Admin Committee volunteers are based around the world in a variety of time zones
- Goal is to resolve support tickets within 24 hours
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](mailto:sponsorship@peeringdb.com) for sponsorship info
Thank you to our sponsors!

Diamond Sponsors

Microsoft

Platinum Sponsors

DE-CIX

Google MARKLEY YAHOO!

Gold Sponsors

facebook

Silver Sponsors

Internet Society

IX AUSTRALIA

INTERNET PEERING FOR AUSTRALIA

Akamai

amsIX

APNIC

BBIx

border6

cologix

DIGITAL REALTY

IX

LINC

NETNOD

NIX-CZ

NLIx

NTT Communications

NYIIX

LAIIX

RIPE NCC

SysEleven

Workonline Communications

zenlayer
Information and Resources

- **Announce list:**
  [http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-announce](http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-announce)

- **Governance list:**
  [http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-gov](http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-gov)

- **Technical list:**
  [http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-tech](http://lists.peeringdb.com/cgi-bin/mailman/listinfo/pdb-tech)

- **User Discuss list:**
  [http://lists.peeringdb.com/cgi-bin/mailman/listinfo/user-discuss](http://lists.peeringdb.com/cgi-bin/mailman/listinfo/user-discuss)

- **Docs, presentations, guides, tools:**
  [http://docs.peeringdb.com/](http://docs.peeringdb.com/)

- **Board and Officers:**
  [stewards@lists.peeringdb.com](mailto:stewards@lists.peeringdb.com)

- **Admins:**
  [support@peeringdb.com](mailto:support@peeringdb.com)

- **Bugs and feature requests:**
  [https://github.com/peeringdb/peeringdb/](https://github.com/peeringdb/peeringdb/)

- **Status:**
  [http://status.peeringdb.com/](http://status.peeringdb.com/)

- **@PeeringDB**
  [https://www.facebook.com/peeringdb/](https://www.facebook.com/peeringdb/)

- **https://www.linkedin.com/company/peeringdb/
Questions?
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)
• 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
Multiple Records Under a Single Organization

LINX has 1 Facility

LINX has 2 Network Records

LINX has 6 Exchange Records

Facilities
- Name: IKCardiff
  - Country: United Kingdom
  - City: Cardiff

Networks
- Name: LINX Route Servers
  - ASN: 8714
- Name: London Internet Exchange (LINX)
  - ASN: 5459

Exchanges
- Name: IKCardiff
- Name: IKManchester
- Name: IKScotland
- Name: LINX Extreme LAN
- Name: LINX Juniper LAN
- Name: LINX NoVA
- Name: United Kingdom
- City: Cardiff
- Country: United Kingdom
- City: Manchester
- Country: Scotland
- Country: United Kingdom
- Country: United Kingdom
- Country: United States
- City: Northern Virginia
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

1. Go to Your Profile
2. Confirm Email Address (Click Here if not Confirmed)
3. Enter ASN or Organization Here Autocomplete on Existing ASNs and Organizations in PeeringDB
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

Enter Exchange Info Here, Then Click “Submit Exchange”

Generates a Support Ticket for Validation and Approval
Editing Your Exchange Record

Enter Exchange Info Here, Then Click “Save”

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

Delegating Permissions for Members
Admins Have Access to Everything

Manage

Pending Requests

Users requesting affiliation

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Hankins</td>
<td><a href="mailto:greg.hankins@alcatel-lucent.com">greg.hankins@alcatel-lucent.com</a></td>
<td>Currently no users requesting affiliation with Nokia IP/Optical Networks Labs</td>
</tr>
</tbody>
</table>

Users in Organization

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Hankins</td>
<td><a href="mailto:greg.hankins@alcatel-lucent.com">greg.hankins@alcatel-lucent.com</a></td>
<td>Remove</td>
</tr>
</tbody>
</table>

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 no Exchanges or Facilities

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

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Visibility</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOC</td>
<td>Greg Hankins, Alastair</td>
<td>Private</td>
<td></td>
<td><a href="mailto:es38016@alcatel-lucent.com">es38016@alcatel-lucent.com</a></td>
</tr>
<tr>
<td>Users</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>Greg Hankins, Alastair</td>
<td>Private</td>
<td></td>
<td><a href="mailto:es38016@alcatel-lucent.com">es38016@alcatel-lucent.com</a></td>
</tr>
<tr>
<td>Users</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Roles:**
- Abuse
- Policy
- Technical
- NOC
- Public Relations
- Sales

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**Private** – Organization Only (Default)
- Users – Registered Users Only
- Public – Anyone (no Login Required)
PeeringDB IXP Statistics

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

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