IXPDB
Internet eXchange Point Database
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Euro-IX

• Membership based organisation for IXPs, 84 IXP Members
• 2 Fora per year
• Maintain and develop the website, database and tools
• Benchmarking
• Mailing lists
• Newsletter – Subscribe here: https://www.euro-ix.net/en/communications/newsletters/
• Working Groups
• Social Media
  • Twitter @euroix
  • Facebook fb.me/mainEuroix
  • YouTube youtube.com/channel/UCFyucVRAAMzxyJlsxnGwsjw
The Internet eXchange Federation

LAC-IX

EURO-IX

AFIX

APIX
Where do we get IXP data from?

• IXPs are considered core Internet infrastructure and carry a growing percentage of the world’s Internet traffic.

• While there are a number of directories and databases which contain various data on IXPs, none are globally authoritative or complete.
  • Some are maintained by the database admin only
  • Some have manual input for IXPs
  • Some have no input for IXPs
The Internet eXchange Federation (IX-F) is developing a system that will fill this gap.

- It will acquire data directly from IXPs through automation;
- aggregate and promote useful third-party data sources;
- and provide valuable insight, reporting, data export and visualisation functionality.
### Database Content – IXP data

First-party data collected directly from IXPs include:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential information</td>
<td>on IXP providers/operators</td>
</tr>
<tr>
<td>Platforms</td>
<td></td>
</tr>
<tr>
<td>Point of presence</td>
<td>(PoP) locations</td>
</tr>
<tr>
<td>Aggregate traffic data</td>
<td>with historical values.</td>
</tr>
</tbody>
</table>


Database Content – Network data via the IXP

<table>
<thead>
<tr>
<th>Detailed information on the networks present at each IXP including:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASNs</td>
</tr>
<tr>
<td>join date</td>
</tr>
<tr>
<td>switch</td>
</tr>
<tr>
<td>switch port</td>
</tr>
<tr>
<td>port pricing</td>
</tr>
<tr>
<td>port capacities</td>
</tr>
<tr>
<td>VLANs</td>
</tr>
<tr>
<td>peering policy</td>
</tr>
<tr>
<td>route server usage</td>
</tr>
<tr>
<td>max prefix setting</td>
</tr>
<tr>
<td>prefix announcements</td>
</tr>
<tr>
<td>and contact data.</td>
</tr>
</tbody>
</table>
Use cases: Building Queries

Which IXPs in my region are growing at the fastest rate? What are the growth trends?

→ Join dates help identify new participants
→ Join dates help illustrate growth trends over time

How does aggregate growth traffic correlate with growth trends?

→ Ability to see growth as new members join
Use cases: Building Queries

What **types** of networks are connecting to IXPs in my region, directly, indirectly, and how has that diversity changed over time?

→ Categories such as transit, CDNs, ISPs, Gaming, transport etc

→ Categories facilitate the exact mix of networks you are looking to peer with

Which IXPs have a high density of ASNs and prefixes that I need to reach?

→ Use the compare function to see ASNs are presents at which IXPs
Use cases: Building Queries

Further refine queries to include route server data, in particular what routes are being offered at the IXP

→ How do these routes improve on what you have now
→ Which of these are unique
Use cases: Building Queries

Scoping by Geography

Which sub-regions in Asia are performing best across various metrics?

→ Prefix availability, unique ASNs availability

How does my country or region’s interconnection ecosystem compare to others across various metrics.

→ Using the compare tool

What new networks or network prefixes are starting to appear in my region?

Integrating map based visualization of query results
A wise man once said...

“Automation is the key to our success”
Walt Wollny HE.net
We began working on this in July 2017 and have recently launched a limited version of the system which performs automated data collection from the following sources:

- IXPs that have a JSON IX-F Member Export – [https://ml.ix-f.net/directory](https://ml.ix-f.net/directory)
- IXPs that use IXP Manager – [www.ixpmanager.org/users.php](http://www.ixpmanager.org/users.php)
- [www.euro-ix.net/ixpdb](http://www.euro-ix.net/ixpdb)
Still lots to do..

• Work with IXPs to implement the latest IX-F JSON Schema

• Encourage IXPs using IXP Manager to update to latest version

• Migrate IXPDB to it’s own website

• Work with the community to identify popular queries and integrate to GUI and API

• Develop query training – manuals and videos

• Funding – we’re looking for sponsorship, if you’re interested, see me, the IX-F Board members and or Jesse Sowell (postdoctoral fellow at Stanford)
Questions?