



# IXP database and tool

LACNIC 2017

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Foz do Iguazu, Brazil

# ➤ Euro-IX - What do we do?

- Two fora per year
- Maintain and develop the website, database and tools
- Annual European IXP Report
- Mentor-IX programme
- Fellowship programme
- Benchmarking Club (BMC)

# ➤ Talk to us and each other

- Mailing lists
- Newsletter – Subscribe here:
  - [euro-ix.net/news-and-events/newsletter/](http://euro-ix.net/news-and-events/newsletter/)
- Working Groups
- Social Media
  - Twitter @euroix
  - Facebook [fb.me/maineuroix](https://fb.me/maineuroix)
  - YouTube [youtube.com/channel/UCFyucVRAAMzxyJIsxnGwsjw](https://youtube.com/channel/UCFyucVRAAMzxyJIsxnGwsjw)

# ➤ Association of IXPs

## 82 affiliated IXPs:

- 56 IXPs in the Euro-IX Region 49 Countries, operating over 100 Peering LANs
- 26 IXPs from the rest of the world
- Newest Members:  
CAS-IX  
Beirut-IX

# Patrons

- Arista
- Brocade
- Ciena
- Coriant
- ECI Telecom
- Equinix | Telecity
- Extreme Networks
- Huawei
- Interxion
- Juniper Networks
- MRV
- Nokia
- Telehouse

# ➤ Internet Exchange Federation



# ➤ Internet Exchange Federation


- MOU signed by APIX, Euro-IX and LAC-IX to form the IX-F in November 2012 – [www.ix-f.net](http://www.ix-f.net)
- Af-IX signed the MoU to join the IX-F
- Idea to have a Global IXP DB
- Global IXP BCPs
- Automate Data Collection from IXPs
- Plans to collaborate with other external Databases

# ➤ Internet Exchange Federation

- **Af-IX**  
Nishal Goburdhan – JINX (South Africa)  
Kyle Spencer – UIXP (Uganda)
- **APIX**  
Katsuyasu Toyama - JPNAP (Japan)  
Gavin Tweedie - Megaport (Australia)
- **Euro-IX**  
Ondrej Filip – NIX.cz (Czech Republic)  
John Souter - LINX (United Kingdom)
- **LAC-IX**  
Ariel Graizer - NAP CABase (Argentina)  
Milton Kashiwakura - PTT.br (Brazil)




# > Euro-IX Website



Home | About | IXPs | News & Events | Join Euro-IX | For networks | Tools

European Internet Exchange Association

Sign In



<

The 29th Euro-IX forum goes to Krakow! 6 - 8 November 2016.

>

Latest News

What is an IXP?

OCTOBER NEWSLETTER

OCT. 10, 2016

With only a few weeks left until the 29th forum, we encourage all those who want to attend to register ASAP. There will be a tour of the districts on Sunday 6th at 12.30, and a RIPE ATLAS workshop in the evening. [Find out more](#) about the forum and register [here](#)

We welcome new patron ARISTA to the Euro-IX community! Read their introduction and find out about the improved IX-F DB in the latest [newsletter](#)

TESPOK LAUNCHES AFRICA'S FIRST GLOBAL ROAMING EXCHANGE

SEPT. 12, 2016

The Internet eXchange Federation has defined an IXP as;

**A network facility that enables the interconnection of more than two independent Autonomous Systems, primarily for the purpose of facilitating the exchange of Internet traffic.**

An IXP provides interconnection only for Autonomous Systems. An IXP does not require the Internet traffic passing between any pair of participating Autonomous Systems to pass through any third Autonomous System, nor does it alter or otherwise

euro-IX

# ➤ Website – Top Improvements!

1. ASN Automation
2. Switch Database
3. Route Server Database
4. Edit your own profile
5. Edit your organisation and team members
6. Peering matrix, service matrix and ASN database all working
7. Database quality improvements



# IXP Database

# IXP Database

## Organization Profile

### Internet Neutral Exchange Association

General

[Introduction](#)

[Contacts](#)

[IXPs](#)

[Users](#)



**Location:** Ireland

**Established:** 1996-09-01

**Affiliation:** Member

**Board Contact:**

**Email:** [barry.rhodes@inex.ie](mailto:barry.rhodes@inex.ie)

**Website:** <https://www.inex.ie/>

[Edit](#)

# IXP Database

## « Organization Profile

### Amsterdam Internet Exchange B.V.

[General](#) [Introduction](#) [Contacts](#) [IXPs](#) [Users](#)

NAME	COUNTRY
<a href="#">AMS-IX Bay Area</a>	United States of America
<a href="#">AMS-IX Caribbean</a>	Netherlands Antilles
<a href="#">AMS-IX Chicago</a>	United States of America
<a href="#">AMS-IX Hong Kong</a>	China
<a href="#">AMS-IX India</a>	India
<a href="#">AMS-IX New York</a>	United States of America
<a href="#">Amsterdam Internet Exchange</a>	Netherlands



# IXP Database

IXP Profile

Internet Neutral Exchange Association

[Profile](#)[Network](#)[Switches](#)[Services](#)[Pricing](#)[Tree](#)[ASNs](#)[Users](#)

Automation Link<https://www.inex.ie/noncms/php/euro-ix-members.php>

AS #	COMPANY	IPV6
<a href="#">34218</a>	3 Ireland	N
<a href="#">29644</a>	Airspeed Telecom	Y
<a href="#">42227</a>	Airwire	Y
<a href="#">20940</a>	Akamai Technologies	Y
<a href="#">16509</a>	Amazon	Y
<a href="#">61194</a>	Another 9	N
<a href="#">49567</a>	Aptus Broadband	Y
<a href="#">5580</a>	Atrato IP Networks	Y
<a href="#">47680</a>	BBnet	N

Automations

ASN Link













Traffic Link

Traffic

# IXP Database

ASN Database		
Stats	<a href="#">Search</a>	<a href="#">Recent</a> <a href="#">Common</a>
IXP PARTICIPANTS	IPV6	UNIQUE ASNS
EURO-IX		
8715	5488	4478
APIX		
1513	447	929
AF-IX		
335	64	296
LAC-IX		
1883	1258	1385
NORTH AMERICA		
2195	538	1086
GLOBAL		
14641	7795	7755

# IXP Database

ASN Database			
<a href="#">Stats</a> <a href="#">Search</a> <a href="#">Recent</a> <a href="#">Common</a>			
AS#	COMPANY	PRESENT AT	IPV6
<a href="#">6939</a>	<a href="#">HE</a>	<a href="#">80</a>	
<a href="#">20940</a>	<a href="#">Akamai</a>		
<a href="#">15169</a>	<a href="#">Google</a>		
<a href="#">3856</a>	<a href="#">Packet Clearing House</a>		
<a href="#">42</a>	<a href="#">WoodyNet</a>		
<a href="#">8075</a>	<a href="#">Microsoft</a>		
<a href="#">22822</a>	<a href="#">Limelight Networks, Inc.</a>		
<a href="#">10310</a>	<a href="#">Yahoo Inc. (B)</a>		
<a href="#">13335</a>	<a href="#">CloudFlare</a>		
<a href="#">16509</a>	<a href="#">Amazon</a>		
<a href="#">26415</a>	<a href="#">VeriSign Netherlands BV</a>		
<a href="#">15133</a>	<a href="#">Edgecast</a>		

**IXPs**

- AMS-IX
- AMS-IX Bay Area
- AMS-IX Chicago
- AMS-IX Hong Kong
- AMS-IX New York
- BBIX - Tokyo
- BCIX
- BIX.BG
- BiX
- Big APE
- CATNIX
- CoreSite - Any2 Denver / RMIIX Denver
- CoreSite - Any2 Los Angeles
- DE-CIX Frankfurt
- DE-CIX Hamburg
- DE-CIX Marseille
- DE-CIX Munich
- DE-CIX New York
- DIX - Lyngby
- ECIX Berlin



# IXP Database

## « Peering Matrix

[CSV Download](#)

	Total listed ASNs	ASNs that don't peer at other IXPs	% of ASNs that don't peer at other IXPs	ASNs that peer at other IXPs	% of ASNs that peer at other IXPs	ALB-IX	AMS-IX	AMS-IX Caribbean	ARMIX	Angonix	BBIX - Hong Kong	BBIX - Tokyo	BCIX	BIX.BG	BNIX	BiX	CATNIX	CHN-IX	CIX	CIXP
<a href="#">AMS-IX</a>	79.77	0		<a href="#">796</a>	<a href="#">2</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">37</a>	<a href="#">22</a>	<a href="#">19</a>	<a href="#">17</a>	<a href="#">11</a>	0	<a href="#">4</a>	<a href="#">19</a>	
<a href="#">AMS-IX Caribbean</a>	30.77	0		<a href="#">2</a>	<a href="#">13</a>	0	0	0	0	0	<a href="#">1</a>	<a href="#">1</a>	<a href="#">1</a>	0	0	<a href="#">1</a>	0	<a href="#">1</a>	0	
<a href="#">ARMIX</a>	0.00	0		0	0	<a href="#">10</a>	0	0	0	0	0	0	0	0	0	0	0	0	0	
<a href="#">Angonix</a>	50.00	0		0	0	0	<a href="#">2</a>	0	0	0	0	0	0	0	0	0	0	0	0	
<a href="#">BBIX - Tokyo</a>	62.50	0		<a href="#">2</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">8</a>	<a href="#">2</a>	<a href="#">2</a>	0	<a href="#">1</a>	<a href="#">1</a>	0	0	0	
<a href="#">BCIX</a>	70.89	0		<a href="#">37</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">79</a>	<a href="#">8</a>	<a href="#">3</a>	<a href="#">4</a>	<a href="#">4</a>	0	<a href="#">2</a>	<a href="#">2</a>	
<a href="#">BIX.BG</a>	58.33	0		<a href="#">22</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">8</a>	<a href="#">72</a>	<a href="#">1</a>	<a href="#">4</a>	<a href="#">3</a>	0	<a href="#">3</a>	0	
<a href="#">BNIX</a>	53.33	0		<a href="#">19</a>	0	0	0	0	0	0	0	<a href="#">3</a>	<a href="#">1</a>	<a href="#">45</a>	<a href="#">4</a>	<a href="#">2</a>	0	0	<a href="#">3</a>	
<a href="#">BiX</a>	42.86	0		<a href="#">17</a>	0	0	0	0	0	0	<a href="#">1</a>	<a href="#">4</a>	<a href="#">4</a>	<a href="#">4</a>	<a href="#">49</a>	<a href="#">2</a>	0	<a href="#">1</a>	<a href="#">1</a>	
<a href="#">CATNIX</a>	37.50	0		<a href="#">11</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">1</a>	<a href="#">4</a>	<a href="#">3</a>	<a href="#">2</a>	<a href="#">2</a>	<a href="#">32</a>	0	<a href="#">3</a>	<a href="#">1</a>	
<a href="#">CIX</a>	37.50	0		<a href="#">4</a>	<a href="#">1</a>	0	0	0	0	0	0	<a href="#">2</a>	<a href="#">3</a>	0	<a href="#">1</a>	<a href="#">3</a>	0	<a href="#">32</a>	0	
<a href="#">CIXP</a>	75.00	0		<a href="#">19</a>	0	0	0	0	0	0	0	<a href="#">2</a>	0	<a href="#">3</a>	<a href="#">1</a>	<a href="#">1</a>	0	0	<a href="#">36</a>	
<a href="#">DE-CIX Frankfurt</a>	72.48	0		<a href="#">385</a>	<a href="#">1</a>	0	<a href="#">1</a>	0	0	0	<a href="#">2</a>	<a href="#">46</a>	<a href="#">26</a>	<a href="#">17</a>	<a href="#">17</a>	<a href="#">8</a>	0	<a href="#">5</a>	<a href="#">15</a>	
<a href="#">DIX - Lyngby</a>	59.09	0		<a href="#">22</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">5</a>	<a href="#">2</a>	<a href="#">4</a>	<a href="#">2</a>	<a href="#">2</a>	0	0	<a href="#">3</a>	
<a href="#">ECIX Berlin</a>	83.67	0		<a href="#">24</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">22</a>	<a href="#">5</a>	<a href="#">1</a>	<a href="#">3</a>	<a href="#">1</a>	0	<a href="#">1</a>	0	
<a href="#">Equinix Paris</a>	83.38	0		<a href="#">131</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">19</a>	<a href="#">10</a>	<a href="#">8</a>	<a href="#">5</a>	<a href="#">6</a>	0	<a href="#">2</a>	<a href="#">7</a>	
<a href="#">Equinix Zurich</a>	98.95	0		<a href="#">69</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">10</a>	<a href="#">7</a>	<a href="#">4</a>	<a href="#">2</a>	<a href="#">3</a>	0	<a href="#">1</a>	<a href="#">2</a>	
<a href="#">FICIX - Helsinki</a>	56.67	0		<a href="#">9</a>	0	0	0	0	0	0	0	<a href="#">2</a>	<a href="#">1</a>	<a href="#">2</a>	<a href="#">2</a>	<a href="#">1</a>	0	<a href="#">1</a>	<a href="#">1</a>	
<a href="#">FVG-IX</a>	75.00	0		<a href="#">3</a>	0	0	0	0	0	0	0	<a href="#">1</a>	<a href="#">1</a>	<a href="#">1</a>	0	0	0	0	0	
<a href="#">France-IX Paris</a>	89.80	0		<a href="#">113</a>	<a href="#">1</a>	0	0	0	0	0	<a href="#">2</a>	<a href="#">17</a>	<a href="#">8</a>	<a href="#">12</a>	<a href="#">7</a>	<a href="#">6</a>	0	<a href="#">2</a>	<a href="#">5</a>	

# IXP Database

## IXP Service Matrix

[CSV Download](#)

IXP	Location	ASN	RS ASN	# of customers	# IPv6 ready	% IPv6 ready	# of Sites
<a href="#">AMS-IX</a>	Amsterdam	<a href="#">1717</a>	<a href="#">1717</a>	100	100	100.00	1
<a href="#">AMS-IX Bay Area</a>	San Francisco			23	17	73.91	0
<a href="#">AMS-IX Caribbean</a>	Willemstad, Curacao	<a href="#">28017</a>		14	6	42.86	1
<a href="#">AMS-IX Chicago</a>	Chicago			21	17	80.95	0
<a href="#">AMS-IX Hong Kong</a>	Hong Kong	<a href="#">58516</a>		32	25	78.12	1
<a href="#">AMS-IX India</a>	Mumbai					0.0	0
<a href="#">AMS-IX New York</a>	New York	<a href="#">62981</a>		18	17	94.44	4
<a href="#">ARMIX</a>	Yerevan	<a href="#">51225</a>		10	8	80.00	1
<a href="#">Angonix</a>	Luanda	<a href="#">327788</a>		2	2	100.00	0
<a href="#">Aracaju (SE)</a>	Aracaju					0.0	0
<a href="#">BBIX - Hong Kong</a>	Hong Kong					0.0	0
<a href="#">BBIX - Tokyo</a>	Tokyo	<a href="#">23640</a>		8	1	12.50	7
<a href="#">BCIX</a>	Berlin	<a href="#">16374</a>		83	72	86.75	6
<a href="#">BIX Bergen</a>	Bergen	<a href="#">0</a>		4	2	50.00	0
<a href="#">BIX.BG</a>	Sofia	<a href="#">15669</a>		77	36	46.75	8
<a href="#">BNIX</a>	Brussels	<a href="#">5406</a>		45	14	31.11	3
<a href="#">Belo Horizonte (MG)</a>	Belo Horizonte			29	13	44.83	0
<a href="#">Belm (BEL)</a>	Belém			15	6	40.00	1
<a href="#">BiX</a>	Budapest	<a href="#">5507</a>		49	37	75.51	3
<a href="#">Brasilia (DF)</a>	Brasilia			32	21	65.62	0
<a href="#">CATNIX</a>	Barcelona	<a href="#">49638</a>		35	22	62.86	3
<a href="#">CHN-IX</a>	Beijing					0.0	0
<a href="#">CIX</a>	Zagreb	<a href="#">51702</a>		32	11	34.38	2
<a href="#">CIXP</a>	Geneva	<a href="#">57859</a>		36	7	19.44	3

# > IXP Database

[«](#) ASN Database

[Stats](#) [Search](#) [Recent](#) [Common](#)

**Search**

**Advanced Filters**  

----- ▾

Nothing selected ▾

----- ▾

Nothing selected ▾

Filter

[Toggle Advanced Filters](#)

# ➤ IXP Database – where are we?

- Database schema is in place for IXPs to record their information about themselves and the operators they serve
- IXP API is live - <https://db.ix-f.net/api/ixp>

# ➤ IXP Database – What's next?

- Extend and internationalise the admin interface for all IXPAAs (APIX, LAC-IX and AF-IX)
- Create bespoke maintained APIs
- Future revisions to the database schema to capture more data



# IXP Member List JSON Schema

# ➤ IXP Database – IXP JSON Schema

- Contains both IXP data & IXP participant data
  - ASN (member list), locations, switch, RS, etc etc
- Open, consistent & an atomic design
- Currently 24 IXP independent implementations  
(API includes data from euro-ix portal entered manually or via .csv)
- Open source implementation in IXP Manager
- Further information about the Member Lists can be found here:  
<http://ml.ix-f.net>
- Source available on GitHub;  
<https://github.com/euro-ix/json-schemas>

# ➤ IXP Database – use case

Why not just use the IXPs own data?

- This gives you a single API for many IXPs
- Get the same format for all IXPs, its standard – wohoo!
- Data is fed from the IXP – IXPs have accurate data, they own it.
- Portable, supportable and scaleable!



# ➤ IXP Database – use case e.g.1

Thanks to Andy Davidson for the example

“who am I not peering with at LONAP?”

- You have a script which load direct adjacencies into an array
- You need a complete and canonical list of peers to compare differences

# ➤ IXP Database – use case e.g.1

Using the IXP API

<https://db.ix-f.net/api/ixp>

# ➤ IXP Database – use case e.g.1

```
{
  "ixp_info": {
    "status": "active",
    "updated": "2014-02-17T10:07:51Z",
    "name": "London Network Access Point",
    "created": "2011-08-16T13:26:26Z",
    "shortname": "LONAP",
    "ixp_id": "IX-F#18"
  },
  "timestamp": "2015-09-16T08:17:31.116Z",
  "version": "2014110401",
  "member_list": [
    {
      "asnum": 20915,
      "name": "100 Percent"
    },
    {
      "url": "http://www.2connectbahrain.com/",
      "asnum": 51406,
      "name": "2Connect"
    },
    {
      "url": "http://www.34sp.com",
      "asnum": 41357,
      "name": "34SP.com Ltd"
    },
    {
      "url": "http://4d-dc.com/",
      "asnum": 31463,
      "name": "4D Data Centres"
    },
    {
      "url": "http://www.afilias.info",
      "asnum": 12041,
      "name": "Afilias"
    },
    {
      "url": "http://www.akamai.com",
      "asnum": 20940,
      "name": "Akamai Technologies"
    },
    {
      "url": "http://www.alentus.com",
      "asnum": 21321,
      "name": "Alentus UK Ltd"
    }
  ],
  ,
}
```

## ➤ IXP Database – use case e.g.1

```
ewP Switch Ports ports impo ports admin Circu circuli VXCn instar db_sc apiwe switc test_
import urllib, json

url = "http://db.ix-f.net/api/ixp/18/member-list"
response = urllib.urlopen(url)

ixpdata = json.loads(response.read())

my_peers = [8916, 20940, 20915, 51406, 41357, 31463, 12041, 21321, 12536, 16509, 20712, 33920, 4

for member in ixpdata["member_list"]:
    if member["asnum"] not in my_peers:
        print "Get some peering with " + str(member["asnum"]) + " (" + member["name"] + ")"
```



## ➤ IXP Database – use case e.g.1

```
enigma:Desktop andy$  
enigma:Desktop andy$ python ixp.py  
Get some peering with 6871 (PlusNet)  
Get some peering with 8689 (PowerGroup (Power Internet Ltd))  
Get some peering with 8676 (PRT Systems)  
Get some peering with 28792 (Public Internet Limited)  
Get some peering with 31402 (Rank Interactive (Blue Square Limited))  
Get some peering with 35662 (Redstation)  
Get some peering with 5552 (Redstone Communications Ltd)  
Get some peering with 5503 (RM Education Plc)  
Get some peering with 51409 (Sectorsix)  
Get some peering with 50056 (Advantage Interactive Ltd)  
Get some peering with 29550 (Simply Transit Ltd.)  
Get some peering with 48961 (Warwicknet Ltd)  
Get some peering with 20738 (Webfusion)  
Get some peering with 44444 (Websense Hosted R&D Ltd. (UK))  
Get some peering with 49158 (Wifinity)  
Get some peering with 13037 (Zen Internet)  
enigma:Desktop andy$
```

## ➤ IXP Database – use case e.g.2

Create clients.yml file from Euro-IX member list JSON file using ARouteServer

- The Euro-IX ML JSON Schema defines a portable output format to export the list of members connected to an IXP
- These can fetch the list of clients and their attributes (AS-SETs, max-prefix limits)
- automatically build the clients.yml file used by ARouteServer to generate route server's configuration
- The client command you use is:

```
arouteserver clients-from-euroix --url <URL> <ixp_id> -o <output_file>
```

## ➤ IXP Database – use case e.g.2

- The JSON file contains information about more than one IXP for every IX e.g., AMS-IX has 'AMS-IX', 'AMS-IX Caribbean', 'AMS-IX Hong Kong' and more.
- To filter only those clients which are connected to the IXP of interest an identifier (ixp\_id) is needed.
- When executed without the ixp\_id argument, the command prints the list of IXPs and VLANs reported in the JSON file; the ID can be found on this list:



## ➤ IXP Database – use case e.g.2

```
$ arouteserver clients-from-euroix --url https://my.ams-ix.net/api/v1/members.json
IXP ID 1, short name 'AMS-IX'
- VLAN ID 502, name 'GRX', IPv4 prefix 193.105.101.0/25, IPv6 prefix 2001:7f8:86:1::/64
- VLAN ID 504, name 'MDX', IPv4 prefix 195.60.82.128/26
- VLAN ID 600, name 'PI'
- VLAN ID 501, name 'ISP', IPv4 prefix 103.247.139.0/25, IPv6 prefix 2001:13c7:6004::/64
IXP ID 3, short name 'AMS-IX Caribbean'
- VLAN ID 600, name 'PI'
- VLAN ID 501, name 'ISP', IPv4 prefix 103.247.139.0/25, IPv6 prefix 2001:13c7:6004::/64
IXP ID 2, short name 'AMS-IX Hong Kong'
- VLAN ID 501, name 'ISP', IPv4 prefix 103.247.139.0/25, IPv6 prefix 2001:13c7:6004::/64
...
```



# ➤ IXP Database – use case e.g.2

- An example from LONAP:

```
$ arouteserver clients-from-euroix --url https://portal.lonap.net/apiv1/member-list/list 1
clients:
- asn: 42
  cfg:
    filtering:
      irrdb:
        as_sets:
          - AS-PCH
        max_prefix:
          limit_ipv4: 100
      description: Packet Clearing House AS42
      ip: 5.57.80.238
- asn: 42
  cfg:
    filtering:
      irrdb:
        as_sets:
          - AS-PCH
        max_prefix:
          limit_ipv6: 100
      description: Packet Clearing House AS42
      ip: 2001:7f8:17::2a:1
- asn: 714
  cfg:
    filtering:
      irrdb:
        as_sets:
          - AS-APPLE
        max_prefix:
          limit_ipv4: 1000
      description: Apple Europe Ltd
      ip: 5.57.81.57
...
```

## ➤ IXP Database – use case e.g.2

- Thanks to Pier Carlo Chiodi for his work on this subject.
- More of his work is on GitHub:  
<https://arouteserver.readthedocs.io/en/latest/USAGE.html#create-clients-yml-file-from-euro-ix-member-list-json-file>

# IXP Database

## *In search of accurate information*

- Peering networks can go to two sources of data to guarantee accuracy
- Tools and portal available on the Euro-IX website, future development for APIX, LAC-IX and AF-IX
- IXPAAs have regional reach to local IXPs
- The data is complementary to database services that the RIR/NIRs & PeeringDB provide

# ➤ IXP Database Funding

- Funding so far has been from Euro-IX
- We need funds to continue development
- Next stage includes:
  - Interface to database for all IXPAAs
  - Fetch data center data from external databases
  - Enhance the data set e.g. add IP Addressing from IXPs
  - Outreach and training for IXPs

**Please contact [bijal@euro-ix.net](mailto:bijal@euro-ix.net) if you are interested in supporting this work!**



# Thank You!

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