Automation

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What is the IX-F?
What is the IX-F?

- Collection of Internet Exchange Point Associations (IXPAs)
  - AFIX
  - APIX
  - Euro-IX
  - LAC-IX
What is IX-F?

- NA-IX
- EURO-IX
- LAC-IX
- AF-IX
- APIX
What is the IX-F?

• MOU signed by APIX, Euro-IX & LAC-IX to form the IX-F in November 2012 - [www.ix-f.net](http://www.ix-f.net)

• AFIIX signed the MOU to join in 2014

• Plan to work on Global projects -
  – IGF Best Practices
  – ITU IXP Consultation
  – IX-F Database
  – Other Projects related to IXPs
What is the IX-F?

• **AFIX**
  Nishal Goburdhan – JINX (South Africa)
  Kyle Spencer – UIXP (Uganda)

• **APIX**
  Gaurab Raj Upadhaya - NPIX (Nepal)
  Katsuyasu Toyama - JPNAP (Japan)

• **Euro-IX**
  Arnold Nipper - DE-CIX (Germany)
  John Souter - LINX (United Kingdom)

• **LAC-IX**
  Ariel Graizer - NAP CABase (Argentina)
  Milton Kashiwakura - PTT.br (Brazil)
IX-F Database
IXP Database Project

- There are many IXP Databases...
Existing issues

- No single trusted data source
- Poor quality & no or very little APIs / automation
- “We’ll only peer with you, if you’re in PeeringDB”
- All databases are updated manually
- We’re moving into a world of automation
- IXPs hold accurate information but lack automation
Historical Problem

PeeringDB - Database for networks and data centres
IX-F Database

IX-F DB API server written using Python / Django, which can:

- get / create / update / delete IXP, organisation, IP addressing and network information
- all interaction is JSON
- all non-sensitive information will be publicly available
- Members of IXPAs will be able to create, update and delete IXPs from the databases.
IX-F Database

• We have a proof of concept client to interact with this database in Python including unit test code at: 
  https://github.com/euro-ix/ixf-client-py

• The PHP version of this with unit tests also available at: 
  https://github.com/euro-ix/ixf-client-php
Where we are...

- IXP Manager
- IXPs
- Euro-IX
- Django/Python code
- IXPAs
- IX-F DB
- PeeringDB
- Telegeography
IX-F Database

Summary

• Designed for IXPs to export (push) data with minimal intervention
• Simple modifications can be used for IXP to IXPA or to PeeringDB
• At present Euro-IX is the only IXPA interface ready to talk with PeeringDB - we encourage ALL IXPs to use the Euro-IX website while others are being worked on.
• APIX started work, LAC-IX and AFIX to come..
Euro-IX IXP JSON Schema
Euro-IX IXP JSON Schema

Talking about automation..

• Contains both IXP data & IXP Participant data
  – ASN (member list), locations, switch, IXP info
• Open, consistent & an atomic design
• Currently 12 IXP independent implementation
• Open source implementation in IXP Manager
• Source available on github: https://github.com/euro-ix/json-schemas
In search of accurate information

• Give network operators the choice of getting accurate information from either IX-F or PeeringDB
• This data can be obtained using APIs
  • PeeringDB, Telegeography
• Increases use of automation
  • saves time, saves money, increases accuracy.
Now available in English, Portuguese, French, Spanish, Turkish, Romanian, Arabic and German, check out our Youtube channel: https://www.youtube.com/channel/UCFyucVRAAMzxyJIsxnGwsjw

=> more languages to come, if you're interested in translating the video, contact us!
Thank you!

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