RIPE 86 – Euro-IX Update

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Membership Association of IXPs

Events

- Two Membership events per year hosted by our Members
- Workshops & hackathons
- Online/ virtual workshops

Services

- Reports
- Newsletters
- Mailing list
- IXP Benchmarking
- Working groups

Tools & Community Projects

- Internet eXchange Point Database – IXPDB
- Peering Toolbox
- Fellowship & Mentor-IX
- Route Server Large BGP Communities list
- A new IXP Film

DE-CIX Update

> Migration to Peering LAN 2.0 based on EVPN for improved security and robustness at all locations (except for India)
> Launch of the DE-CIX Cloud ROUTER to support direct data transfer between different hyperscale cloud providers available at all locations
> New traffic peaks a DE-CIX DFW, NYC, LIC and FRA.

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MSK-IX Update

> First Implementation BGP roles (RFC 9234) at Route Servers started March, 2023

> Implemented at Bird daemon, some minor issues, but working fine

> Closed peering groups started at IXP
  — Isolation for corporate and business peers
  — Protection from DDoS attack

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MSK-IX Update

> Other topics

— Smart customer notifications about BGP, BFD sessions state and prefixes state (20+ types)
— DDoS protection based on FlowSpec

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Stuttgart-IX Update

> New Peak: 122G (almost 50x compared to 04/2020)
> 29 peers, 825G connected capacity
> Preparations for EVPN/VXLAN, 25G and 400G Ports ongoing (expected Q1/24)

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MIX Update

> Traffic peaked at 2.38 Tb/s
> 10 points of presence and 3 IXPs in Italy
> 2 new points of presence and 2 new IXPs in Rome and Caserta (Q3 2023)
> Focused on development of regional interconnection hubs

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MIX Update

> Extension of the broadcast domain on main peering LAN by EoY 2023

> BGP training courses for members by EoY 2023

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LINX Update

> Equinix Partner at LINX NOVA

> Expansion at LINX Manchester to Atlas Edge

> New Strategic partnership with Africa Data Centers

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IXP{DB}

A trusted source of information about IXPs!

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The Internet eXchange Federation – IX-F

The IX-F JSON Schema

- A community driven schema that **allows IXPs to report their data** in a standard automated fashion

- It includes data sets on:
    - The IXP participants
    - IXP locations
    - Hardware used at IXPs and it's participants
    - Route Servers
- You can find the schema and documentation here - https://github.com/euro-ix/json-schemas
- IXPs can also add their IX-F export APIs to PeeringDB - https://docs.peeringdb.com/ix-f-json-import-rules/

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Coming soon...

Data & Visuals

Enables users:

- Visualise the data via Maps and Charts
- Dynamic filters
- Downloadable data sets in structured formats

Building Data Pipelines

We are able to:

- Collect and organise the data
- Encourage IXPs to adopt to the schema
- Data validation – coming soon!

Next Steps

- Finalise traffic API and build traffic trend datasets
- Enable the comparison tool
- Develop a pricing API
- Identify useful 3rd party data

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Other Information

- Mailing list for users - https://lists.euro-ix.net/mailman/listinfo/ixpdb

- GitHub JSON Member List Schema – https://github.com/euro-ix/json-schemas

- API – https://api.ixpdb.net

- Website - https://ixpdb.euro-ix.net/en/

- IXPDB admin team - ixpdb-admin@euro-ix.net

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IXPDB Sponsors

Contact secretariat@ix-f.net if you'd like to find out more or sponsor us!

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Peering Toolbox

Community Focused Learning Tool

peeringtoolbox.euro-ix.net

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Traditional Transit

20+ years ago

- ISPs provide Internet transit to organisations (content providers and end-users)
- Enterprise networks bought their Internet access from access and transit providers

What has happened?

- Internet has become an essential part of every organisation's services, so they are taking more control over it
- Businesses needed to optimise their services

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What's Changed?

- Growth in the importance of Internet to business operations is driving more enterprise networks to manage their own connection to the internet

- Managing this comes with risk

- Now there's more than one vendor relationship:
    - IXPs
    - Direct Peers

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What's the Problem?

- Enterprises now take on roles previously the responsibility of their ISP:
    - Having the right resources: IP Addresses, ASNs
    - Managing their peers and related costs
    - How to peer and with whom?
    - Understanding the peering community
- There's A LOT to learn:
    - Where to start
    - Who to speak to
    - What are the best practices?
    - How to deal with network problems & outages?
- Solution?

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What is the Peering Toolbox?

By the Community

- Community focused Euro-IX project
- Organisations involved include LINX, NAPAfrica, Kentik, HEANET

Aims

- Provide a learning structure and best practice information for new entrants into the interconnection community

Aims

- The toolbox will act as a reference/guide that IXPs and networks can point others to for best practice information and learn how meet the IXP and peers' requirements

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Current work

- Philip Smith hired as Product Manager
  - 25+ years experience
    - BGP, IXP, peering, routing workshops
    - Capacity building and technical training all over the world

- Inventory of resources created
  - https://www.peeringtoolbox.net
    - beginners section done!
  - Under development - an interactive toolbox

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What is the Peering Toolbox?

The Peering Toolbox is designed to be a quick access reference guide to network operators who want to understand the steps need to go through to find and set up peering for their network with other infrastructure operators.

Our Services

Beginner	Intermediate	Advanced
If you are new to peering, this is the section of the Toolbox for you.	If you know what needs to be done to set up peering with another entity, but would like a ready reference for verification of the steps you need to take, this is the section for you.	For peering experts, a repository of tips, tricks, advice, troubleshooting, good practice, etc.
Learn more	Learn more	Learn more

What is a Network Operator

Learn about what a network operator is.

Learn more

What is Transit

This section of the Toolbox describes the Internet ecosystem and how network operators interconnect with each other to create what we know as the Internet.

Learn more

What is Peering

This section of the Toolbox describes the Internet ecosystem and how network operators interconnect with each other to create what we know as the Internet.

Learn more

What is an Internet Exchange Point

An Internet Exchange Point (IXP) is an open neutral interconnect where network operators can interconnect for the purpose of exchanging traffic.

Learn more

The Internet Eco-System

The global Internet is made up of all types of network infrastructure operators. Learn about the different categories in this section.

Learn more

Let's Chat!

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Route Server Working Group

March 2023 - Turin

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Route Server Working Group

- Chairs: **Irene Lalioti (LU-CIX) and Stavros Konstantaras (AMS-IX)**

- 14 IXP presents and route server develops

- Topics included:
    - Automation
    - Monitoring
    - Birdseye

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Route Server Working Group

Decisions taken

- The community is in favour of supporting the restriction of the amount of BGP communities that can be used per BGP feed

- It was agreed to simplify it, allowing MAX 500 BGP communities of any type per BGP feed.

- In favour of deprecating and stop using Extended communities on Route Servers

- Support only standard and Large communities

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Route Server Working Group

Decisions taken cont.

RFC1997 BGP communities

- A strong consensus on keeping them transparent on the Route Server implementations

- No strip and no react

- IXP manager is already doing that

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Regulatory Working Group

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Regulatory Work

Euro-IX writes a letter to EU on the SPNP "fair share" debate (2023)

- As the European Association for Internet Exchange Points (IXPs), where the IXPs primary business is to interconnect networks, we wanted to share our concerns on this ongoing discussion.

Euro-IX's Response to the EU Consultation on the future of the electronic communications sector & its infrastructure

- We responded to section 4 of the survey "The fair contribution by all digital players".

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Thank You!

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