



Euro-IX Update
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Euro-IX, An Association of Internet Exchanges

Euro-IX is an association of Internet Exchanges Points, promoting an open interchange of ideas and experiences, gained to mutual advantage of the membership, by offering fora, meetings, mailing lists and on-line resources. Euro-IX also gathers information on regulatory issues affecting member exchanges within the region and where appropriate from other jurisdictions that could potentially impact on the membership.



Euro-IX, An Association of Internet Exchanges

Why does Euro-IX do this? For the good of the IXP community:

- 2 Forums a year
- Maintaining the Website, database and tools
- Mailing Lists
- News Letter – Subscribe www.euro-ix.net/newsletters
- Working Groups and Task Forces
- Close relationship with IEEE Ethernet Study Group
- Signed MOU with ISOC to support IXPs
- Annual European IXP Report
- Twinning Program
- IXP traffic project, with RIPE NCC, planning Champions League, World Cup
- Benchmarking

➤ Euro-IX, An Association of Internet Exchanges

- 76 affiliated IXPs :
 - 52 IXPs in Europe (32 Countries), operating over 100 Internet exchanges
 - 24 IXPs from the rest of the world
 - Newest Members, SOX (Serbia), ARMIX (Armenia), Thinx IX (Poland), KOSIX (Kosovo), JINX (South Africa), TorIX (Canada), WAIX (Australia) and NAP Africa (South Africa), TPIX (Poland)

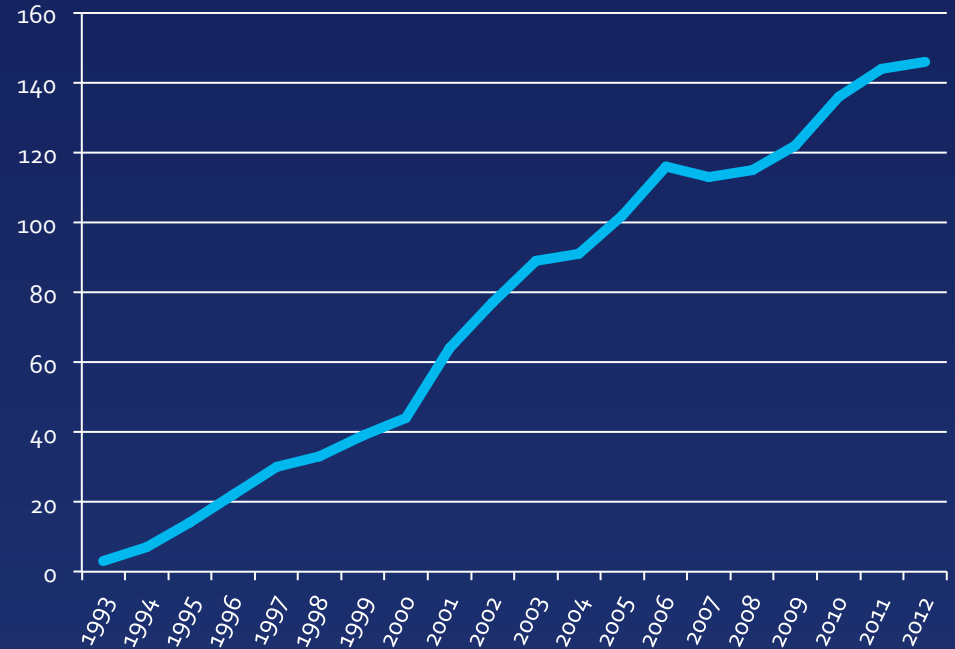
➤ Euro-IX, An Association of Internet Exchanges

- 11 affiliated patrons:

- ADVA Optical Networking
- Brocade
- Cisco
- Extreme Networks
- Interxion
- Juniper Networks
- MRV
- Telecity
- Telehouse
- Alcatel-Lucent
- Huawei



Growth of IXPS in the Euro-IX Region since 1993



➤ Range of ASNs connected to Euro-IX Members

3 - 25 ASNs connected -
TunIXP (Tunisia), FICIX (Finland)

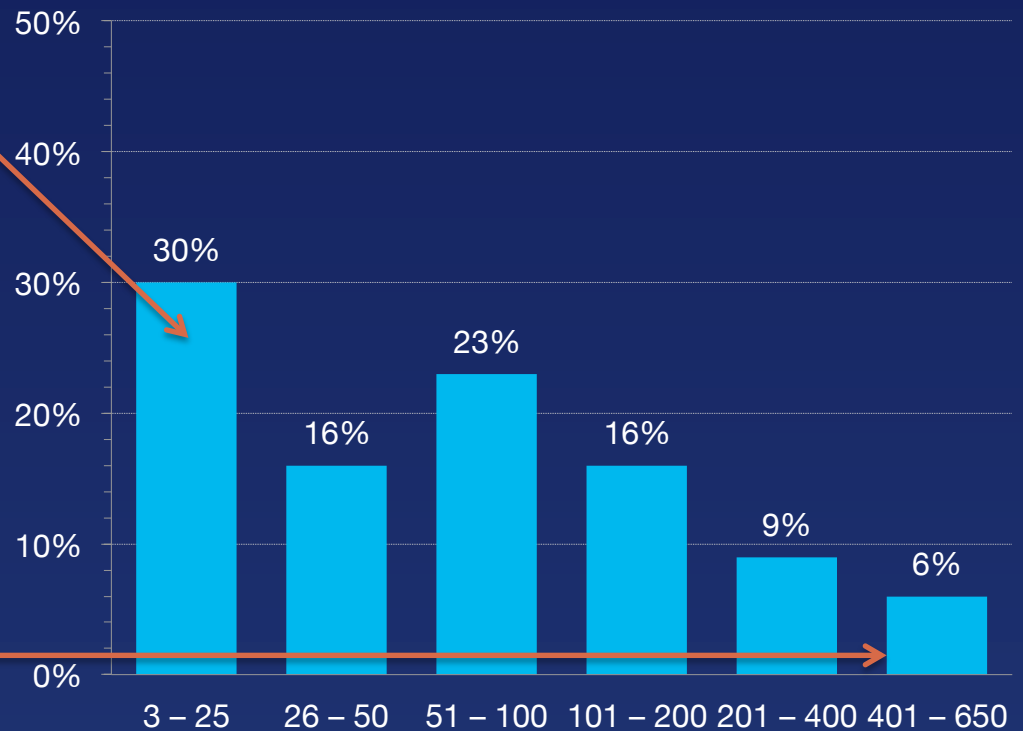
26 - 50 ASNs connected -
CIX (Croatia), DIX (Denmark)

51 - 100 ASNs connected -
NaMeX (Italy), SFINX (France)

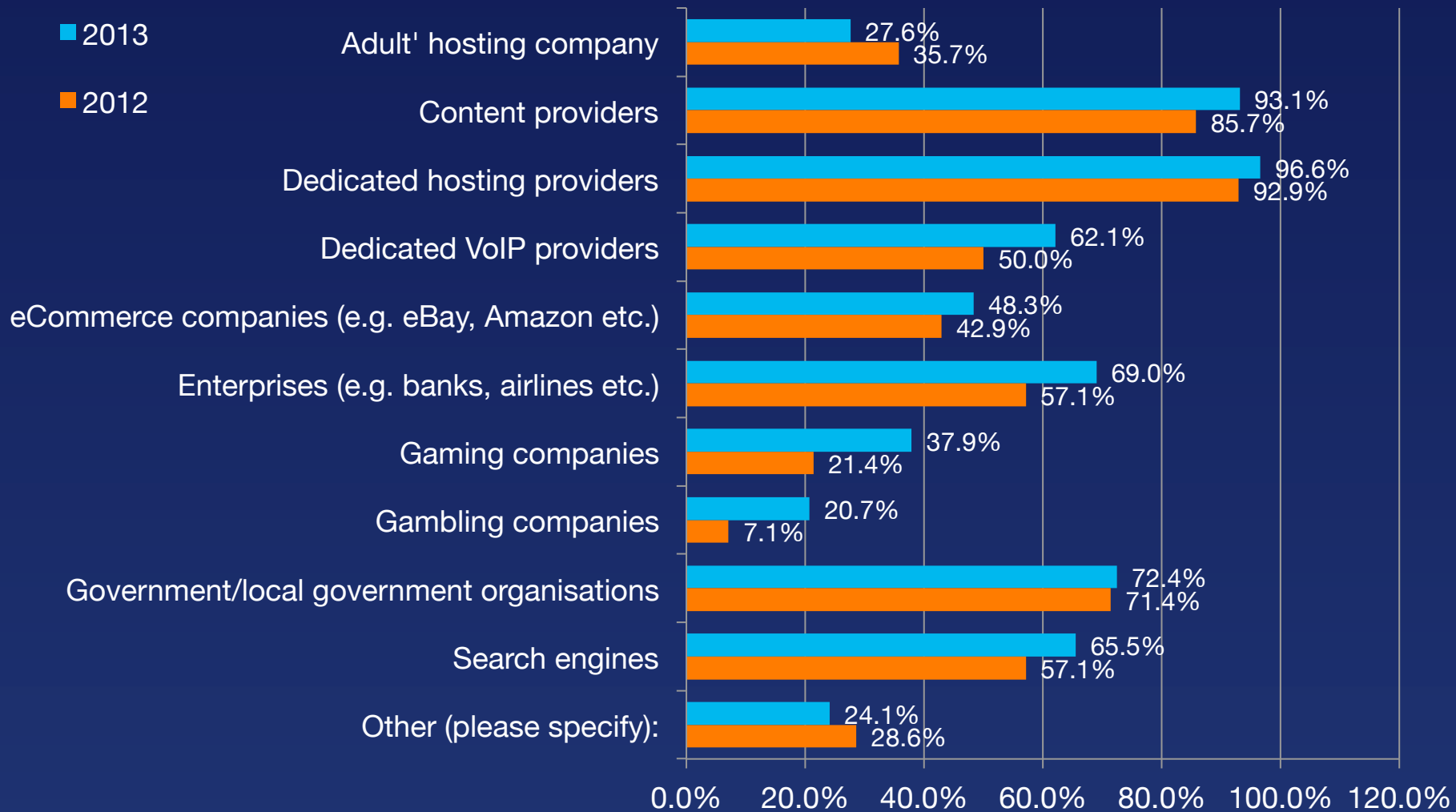
101 - 200 ASNs connected -
UA-IX (Ukraine), TorIX (Canada)

201 - 400 ASNs connected -
PLIX (Poland), MSK-IX (Russia)

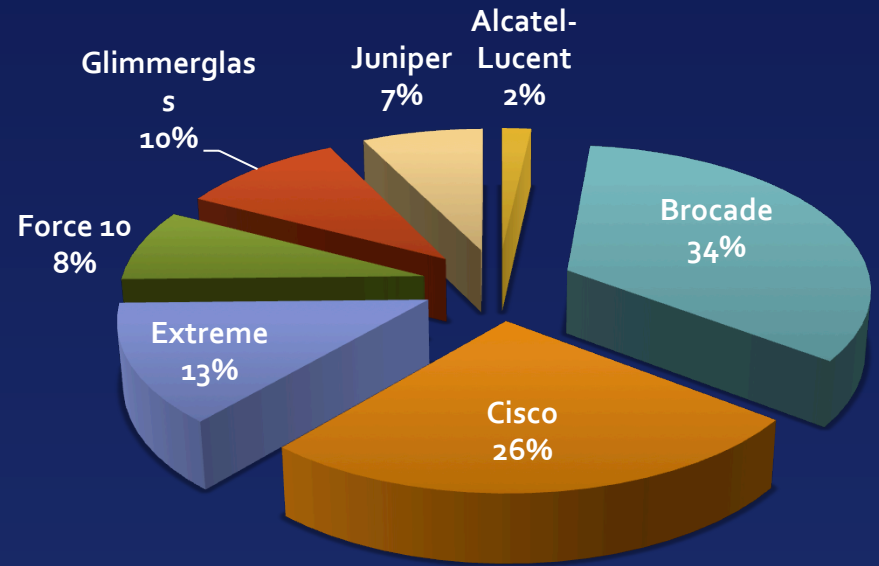
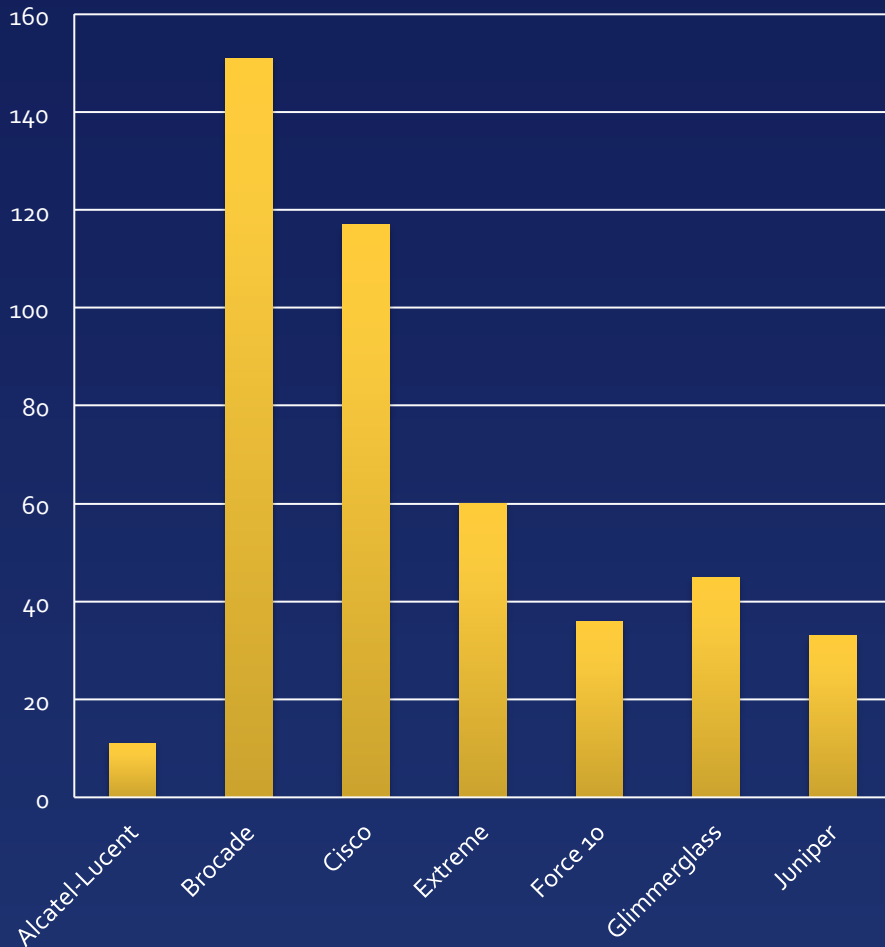
401 - 650 ASNs connected -
PTT.br (Brazil), AMS-IX (Netherlands)



Who connects to an IXP?

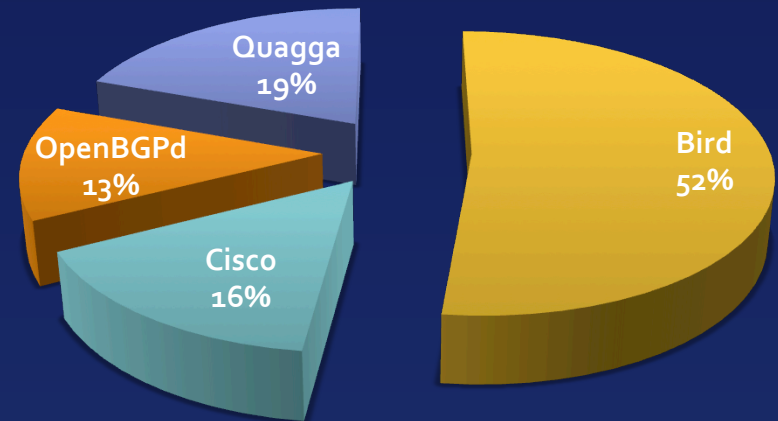
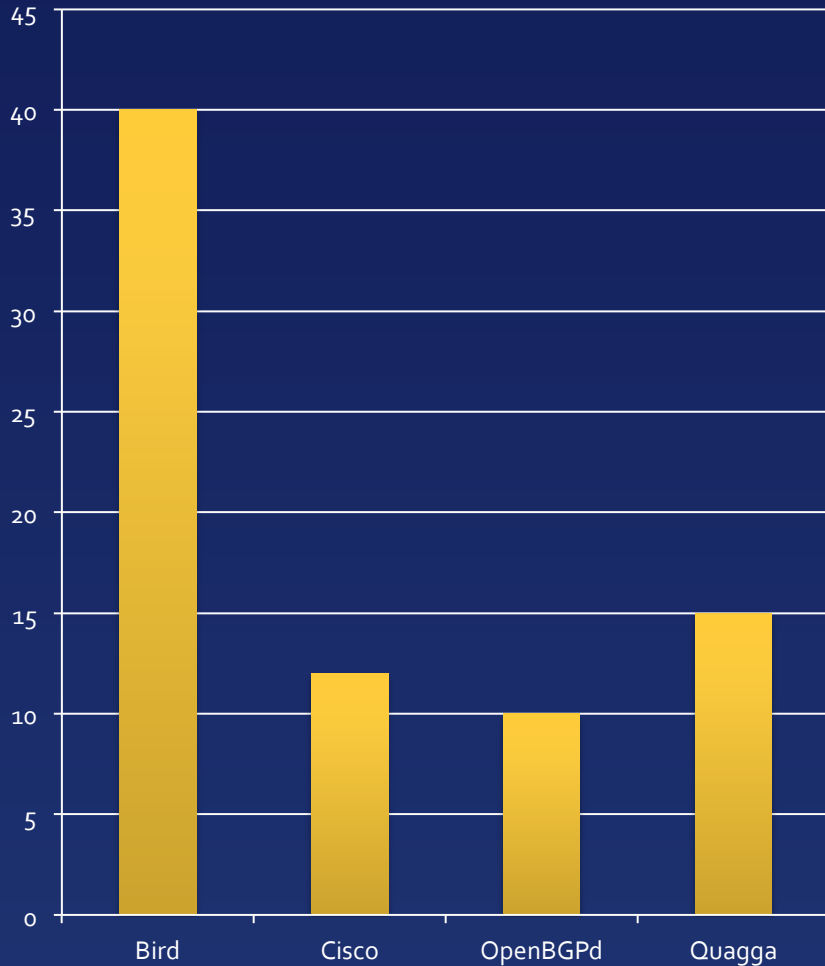


Switch/Routers DB: Vendors used



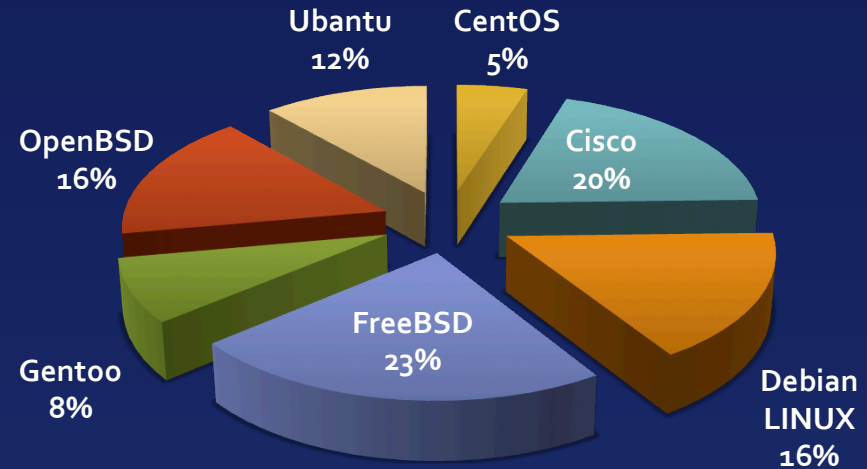
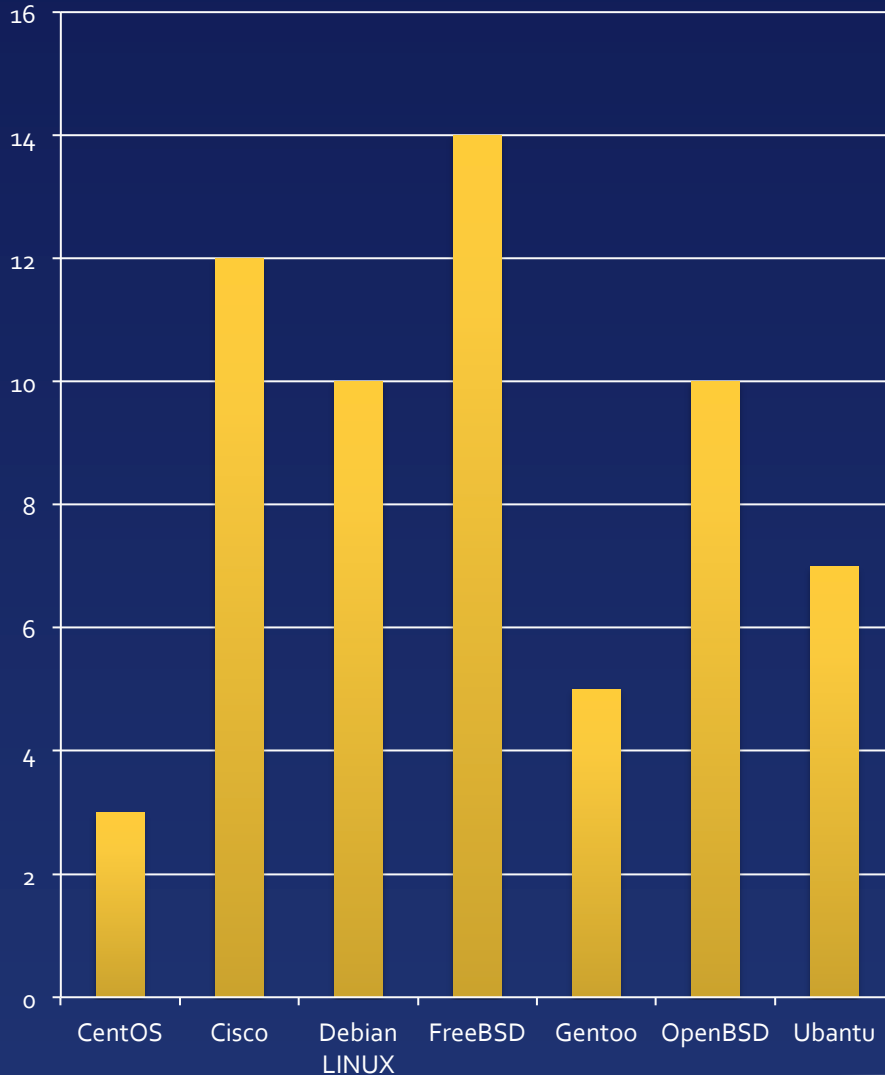
Alcatel-Lucent – DE-CIX
 Brocade – AMS-IX, VIX, JPIX
 CISCO – LONAP, NIX.CZ, MSK-IX
 Extreme – PLIX, MSK-IX, LINX
 DELL (Force10) – BCIX
 Juniper – LINX, VSIX

Route Server DB: Daemon's used



BIRD – LINX, France-IX, NIX.CZ, VIX
CISCO - AMS-IX, MSK-IX, UA-IX
OpenBGPd - BCIX, SWISS-IX, NL-ix
Quagga – PTT.br, JPNAP, ECIX

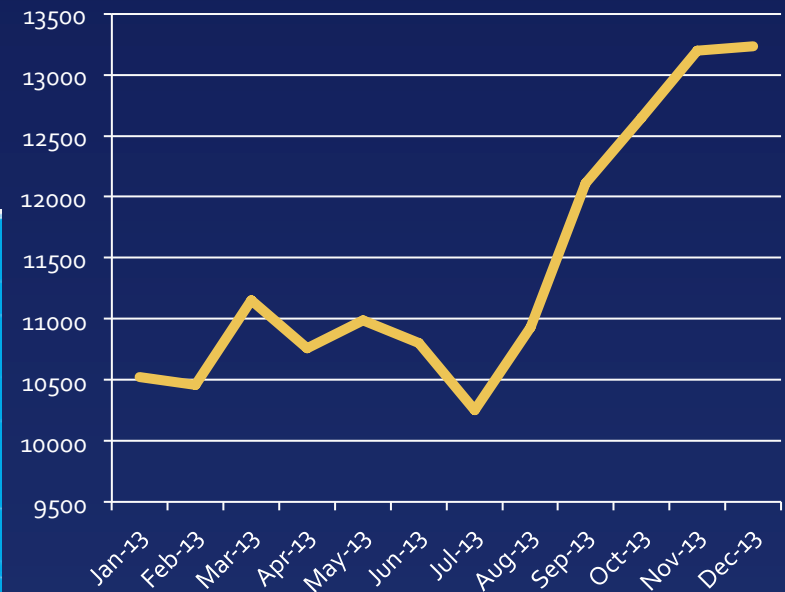
Route Server DB: Operating Systems used



FreeBSD – TOP-IX, France-IX
CISCO - MSK-IX, JPIX, OTTIX
OpenBGPD - BCIX, SWISS-IX, NL-ix
Debian – BIX, DE-CIX, Netnod

IXPs in Euro-IX Region

170 Known IXPs in the Euro-IX Region
44 of 53 Countries have IXPs
126 Cities in the Euro-IX Region have IXPs



Known Euro-IX Region Traffic Growth from a 12 period in Gbps (over public peering LAN)

Note: during 2013 Euro-IX made contact with many more IXPs in Europe, this explains the steep incline in traffic

IXPs in Euro-IX Region

8 Known IXPs in the MENOG Region

Please let us know of any that may be missing!



Internet Exchange Point Association – IX-F

- MOU signed by APIX, Euro-IX and LAC-IX to form the Internet Exchange Point Federation (IX-F) in November 2012 – www.ix-f.net
- Idea to have a Global IXP DB
- Set standards and BCPs
- Automate Data Collection from IXPs
- Plans to collaborate with other external Databases
- Met twice in 2013, planned 2 meetings in 2014 was during APRICOT in Petaling Jaya in Malaysia

Internet Exchange Point Association – IX-F

The Board consists of:

APIX

Raphael Ho - Equinix (Hong Kong)

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)

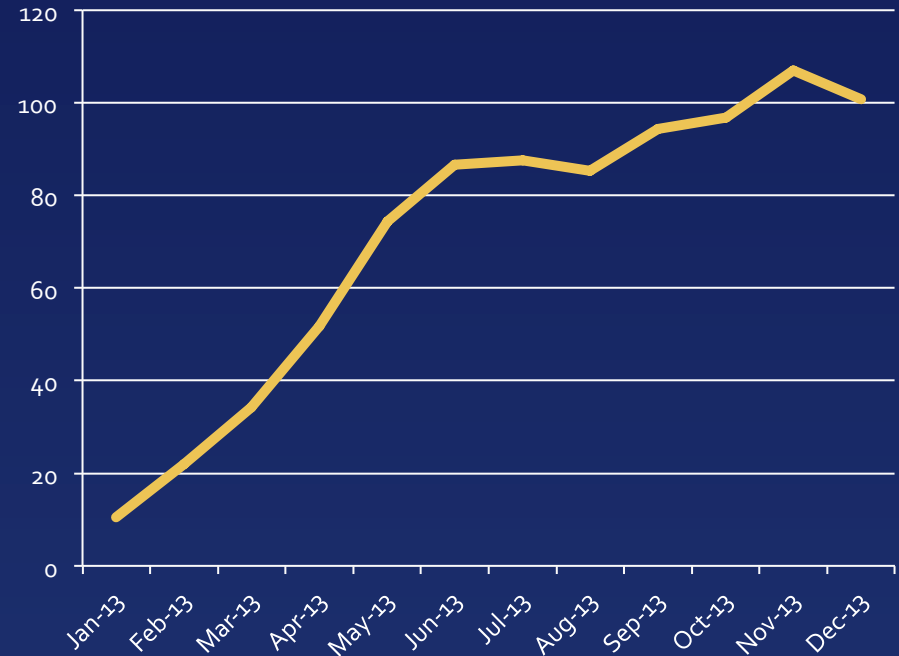


Meet the other Internet Exchange Point Associations (IXPAs)



IXPs in Af-IX region - Africa

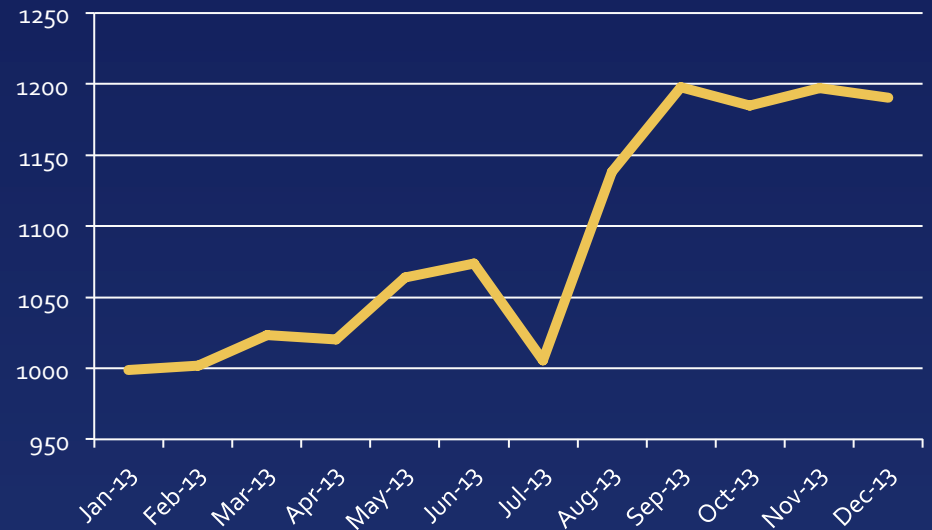
29 KNOWN IXPs IN THE AF-IX REGION
22 of **54** COUNTRIES (AU) have an IXP
26 CITIES in Africa have IXPs



Known Af-IX region Traffic Growth from a 12 period in Gbps (over public peering LAN)

IXPs in APIX region - Asia

79 KNOWN IXPs IN THE APIX REGION
20 of 48 COUNTRIES have IXP
46 CITIES in Asia have IXPs



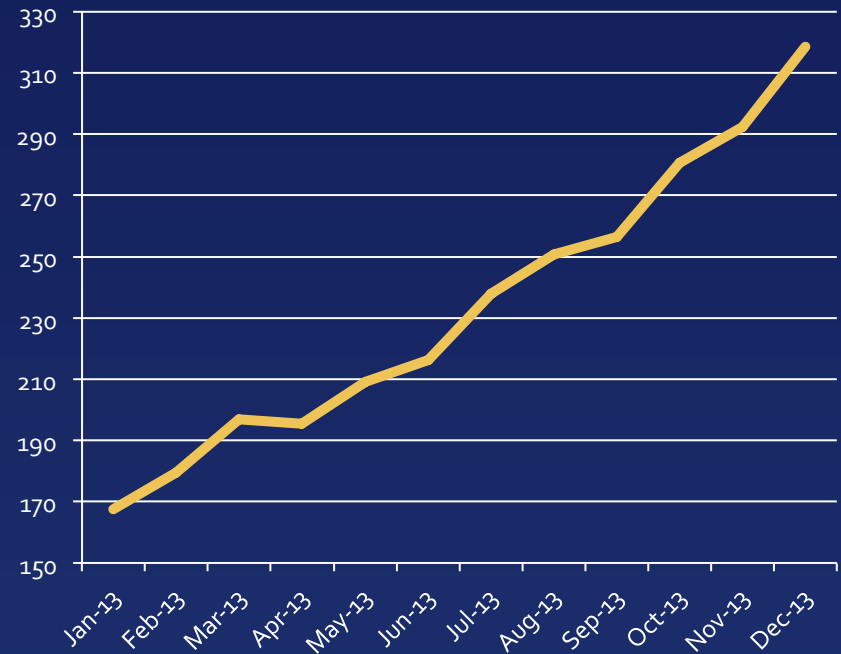
Known APIX region Traffic Growth from a 12 period in Gbps (over public peering LAN)

IXPs in LAC-IX Region – Latin America

53 KNOWN IXPs IN THE LAC-IX REGION

14 of 20 COUNTRIES have IXPs

43 CITIES in Latin America have IXPs



Known LAC-IX Region Traffic Growth from a 12 period in Gbps (over public peering LAN)

➤ The Internet revealed, a movie about IXPs



Now available in English, French ,Turkish, Arabic, Romanian, Portuguese and German, check out the Euro-IX Youtube channel: <http://www.youtube.com/user/TheEuroIX>

... and more languages to come! If your interested in translating the video contact us!



THANK YOU!

Twitter: @euroix