



Euro-IX update

Exchange Point Operators BOF

NANOG 37

San Jose CA

Kurt Erik Lindqvist of Euro-IX

What is Euro-IX?

- Euro-IX = European Internet Exchange Association
- Formed in May 2001
- Established with three main objectives in mind:
 1. To act as a portal for organizations looking to join an IXP
 2. To educate the general community
 3. To provide a platform for IXPs to exchange information and come together to resolve common industry related issues
- As Euro-IX evolved the last of the three objectives seemed to take priority
- Since the 1st of January 2005 our membership agreed to invited IXPs from around the world to join Euro-IX
- Euro-IX is **NOT** an Internet Exchange Point!

Some current statistics (1)

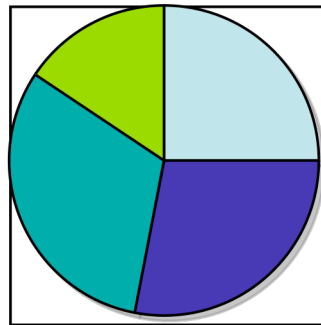
- 38 Affiliated IXPs
- 32 European, 3 Asian and 3 US
- 24 countries represented on 3 continents
- Total aggregated peak traffic of European member IXPs is now well over 530Gbps (was 310Gbps June 2005)
 - this equates to about 18Gbps per IXP (with one IXP now peaking at over 150Gbps)
- 20 European member IXPs are now offering 10GE port services

Some statistics (2)

- Total membership customer base is about 2.400 connectees with approx 1.400 unique ASNs
 - 3 ASNs are connected at more than 12 different IXPs
- Average of 270Mbps peak traffic per European IXP connection
- Average cost for a 1GE port in Europe is:
880 EUR / 1.120 USD per month
(this is exclusive of housing and transit costs)

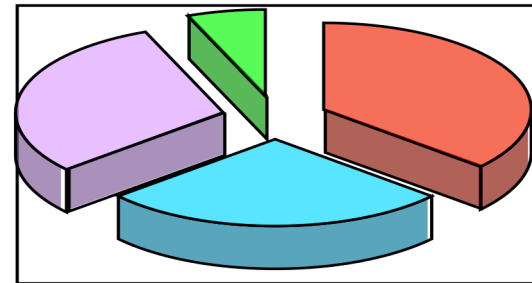
Make up of our membership

IXP Size (Traffic/Customers)



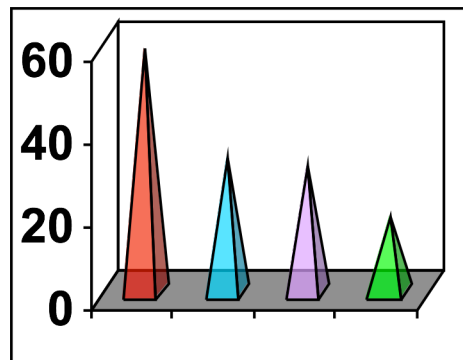
Small
Medium
Large
V Large

IXP Age (Establishment date)



'00 - 02
'97 - '99
'94 - '96
1993

IXP Switching fabric



Cisco
Extreme
Foundry
Other

Other variants

- Financial models (79% Non for profit)
- Topologies
- Customer base

Euro-IX offers its members (1)

- A network/community of 38 IXPs
- Biannual meetings (Euro-IX Forums)
 - More than 30 IXPs in one room discussing IXP specific topics (both technical and organisational)
- Web portal for ISPs looking for IXPs
 - All members have the ability to keep their IXP information up to date on the Euro-IX website
- Regulatory services
 - Part time regulatory officer who directs us to and explains relevant laws that may effect IXPs

Euro-IX offers its members (2)

- Conferencing services facilities
 - Euro-IX has a dedicated server which runs conferencing software that our members are free to use for IXP related discussions
- Benchmarking club
 - Newly introduced initiative to allow members to compare certain performance aspects of their IXPs
- Mailing lists
- A number of information repositories:
 - Member developed network monitoring tools
 - Maintenance diary
 - Euro-IX Switch DB
 - Euro-IX Staff eXchange DB

IXP Switch DB

(currently 150 separate entries)

IXP	Switch Name	Vendor	Model	Software	Further info.
AIX	switch.aix.gr	Cisco	4006	7.6(1)	Details
AMS-IX	esw-sar-01	Foundry	BigIron 15000	07.6.05gT51	Details
AMS-IX	esw-nik-01	Foundry	BigIron 15000	07.6.05gT51	Details
AMS-IX	esw-tel-01	Foundry	BigIron 15000	07.6.05gT51	Details
AMS-IX	esw-glo-01	Foundry	BigIron 15000	07.6.05gT51	Details
AMS-IX	csw-nik-02	Foundry	BigIron MG8	1.1.2aT101	Details
AMS-IX	psw-tel-01	Glimmerglass	System 300	R01.04p005	Details
AMS-IX	csw-tel-02	Foundry	BigIron MG8	1.1.2aT101	Details
AMS-IX	psw-nik-01	Glimmerglass	System 300	R01.03p003	Details
BNIX	cat6509-belnet	Cisco	Catalyst 6509	IOS 12.2(17d)SXB1	Details
BNIX	cat6509-interxion	Cisco	Catalyst 6509	IOS 12.2(17d)SXB1	Details
BNIX	cat6509-level3	Cisco	Catalyst 6509	IOS 12.2(17d)SXB1	Details
CATNIX	pn-6506	Cisco	Catalyst 6506	7.4(3)	Details
CIXP	sw4003-2-cixp	Cisco	Catalyst 4003	5.1(2a)	Details
CIXP	sw5i-cixp	Extreme	Summit 5i	6.1.5	Details
CIXP	ths48-1-cixp	Extreme	Summit 48	4.1.15	Details
DE-CIX	sw003	Cisco	WS-C6509-NEB-A	8.2(1)	Details
DE-CIX	sw001	Cisco	C6509	7.2(2)	Details
DE-CIX	sw004	Cisco	WS-C6509-NEB-A	8.2(1)	Details
DE-CIX	sw005	Cisco	WS-C6509-NEB-A	8.2(1)	Details
ESPANIX	MAD1GSW1	Enterasys	MATRIX E7	5.04.11	Details
ESPANIX	MAD1GSW2	Enterasys	MATRIX E7	5.04.11	Details
GIGAPIX	gigapix-lx-1	Cisco	C3548XL	c3500XL- c3h2s-mz.120- 5.WC7.bin	Details

Staff eXchange

Member IXP details		Staff loan				Staff secondments		Test lab		Further info.
IXP	Location	E-mail assist	Phone assist	Cust check	Loan staff	Visits	Staff train	Test Lab	Available to members	Contact/ Conditions
[REDACTED]	[REDACTED]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Details
[REDACTED]	[REDACTED]	Yes	No	-	No	No	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	No	No	No	No	Details
[REDACTED]	[REDACTED]	-	-	-	-	-	-	-	-	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	No	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	Yes	Yes	Yes	No	No	Details
[REDACTED]	[REDACTED]	-	-	-	-	-	-	-	-	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	Yes	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	No	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	Yes	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	Yes	Yes	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	Yes	Yes	No	No	No	Details
[REDACTED]	[REDACTED]	-	-	-	-	-	-	-	-	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	No	Yes	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	Yes	Yes	Yes	Yes	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	Yes	Yes	No	No	No	Details
[REDACTED]	[REDACTED]	Yes	Yes	-	Yes	Yes	No	Yes	Yes	Details

Our membership is willing to share its knowledge!

- Shown by:
 - Number of attendants and discussions that take place at our forums
 - Amount of member entries in Euro-IX information repositories and databases
 - Responsiveness to questions on the mailing lists
- Presentations on implementation experiences
 - What went wrong and what went right!!
- Willing to answer questions from IX community

Our membership fees

- Volunteers are great, but we can't rely on them all the time.
- We do charge a membership fee
 - We have costs (Secretariat, Web designer, office, meetings, etc.)
 - When an IXP pays a fee it then pushes them into a level of commitment to get a return on their investments.
 - Makes it easier for engineers to ask their supervisors to have permission to go to forums as part of the fee goes into running the forums :-)
- Current European membership fee is 4.000 EUR per annum
- Current Non-European fee is 2.500 EUR per annum
 - No voting rights and reduced subsidies at forums

Any questions?

www.euro-ix.net



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