

IXP Operations Update

June 2015



i n e x
i n t e r n e t n e u t r a l e x c h a n g e

Barry O'Donovan

INEX Operations

barry.odonovan@inex.ie



New Member Connections

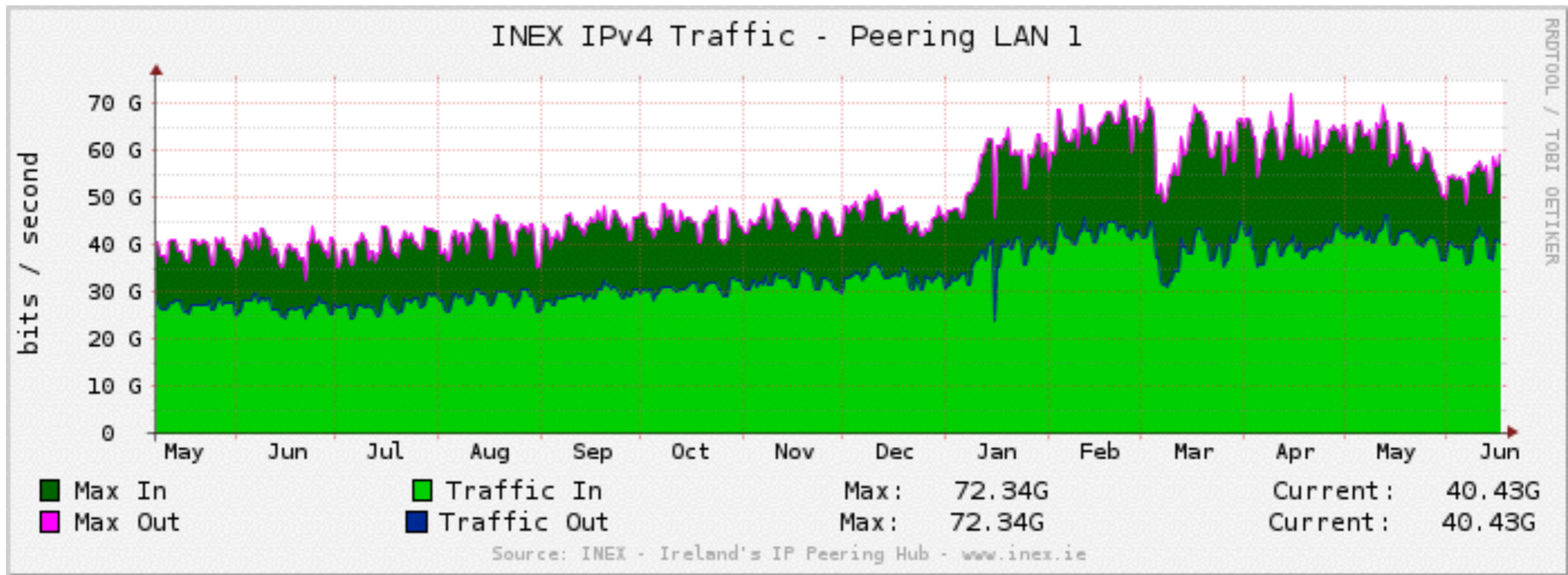
i n e x
i n t e r n e t n e u t r a l e x c h a n g e

Hurricane Electric (AS6939 - turned up RS session)



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i n t e r n e t n e u t r a l e x c h a n g e

New Member Connections HE Effect on v6 Traffic



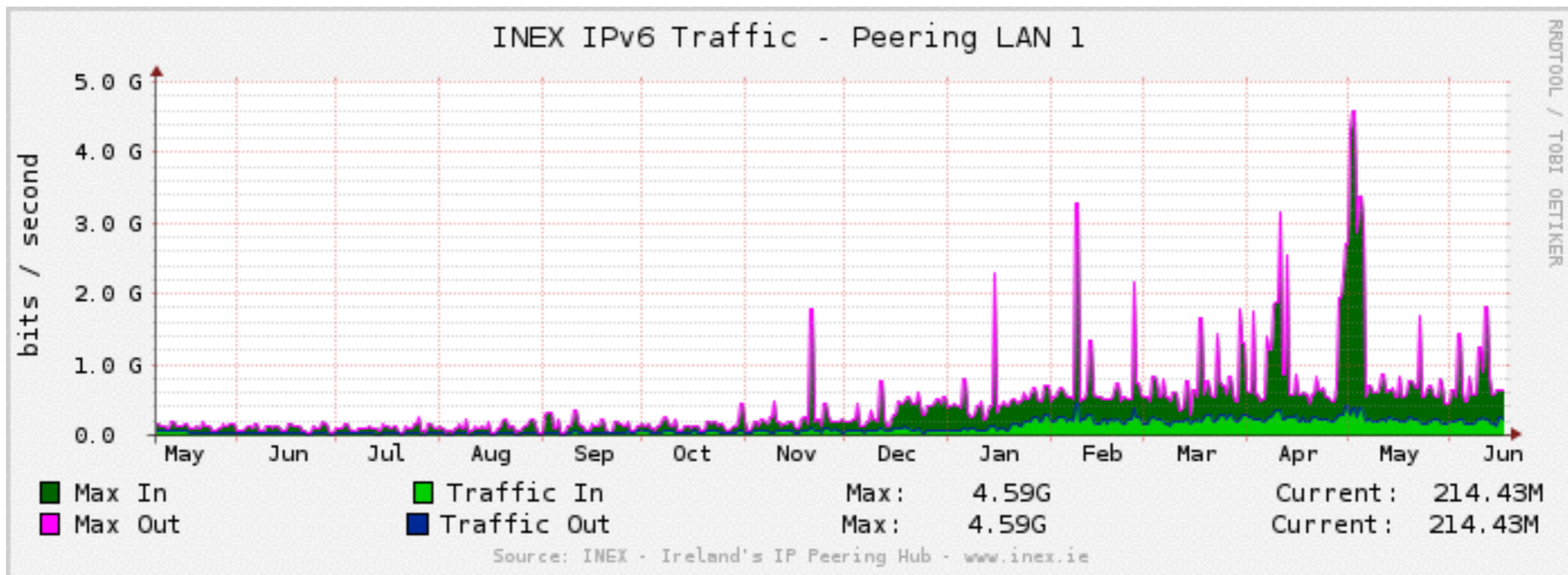
RRDTOOL / TOBI OETIKER

v4 only traffic - average traffic jumped ~33% in the new year



inex
internet neutral exchange

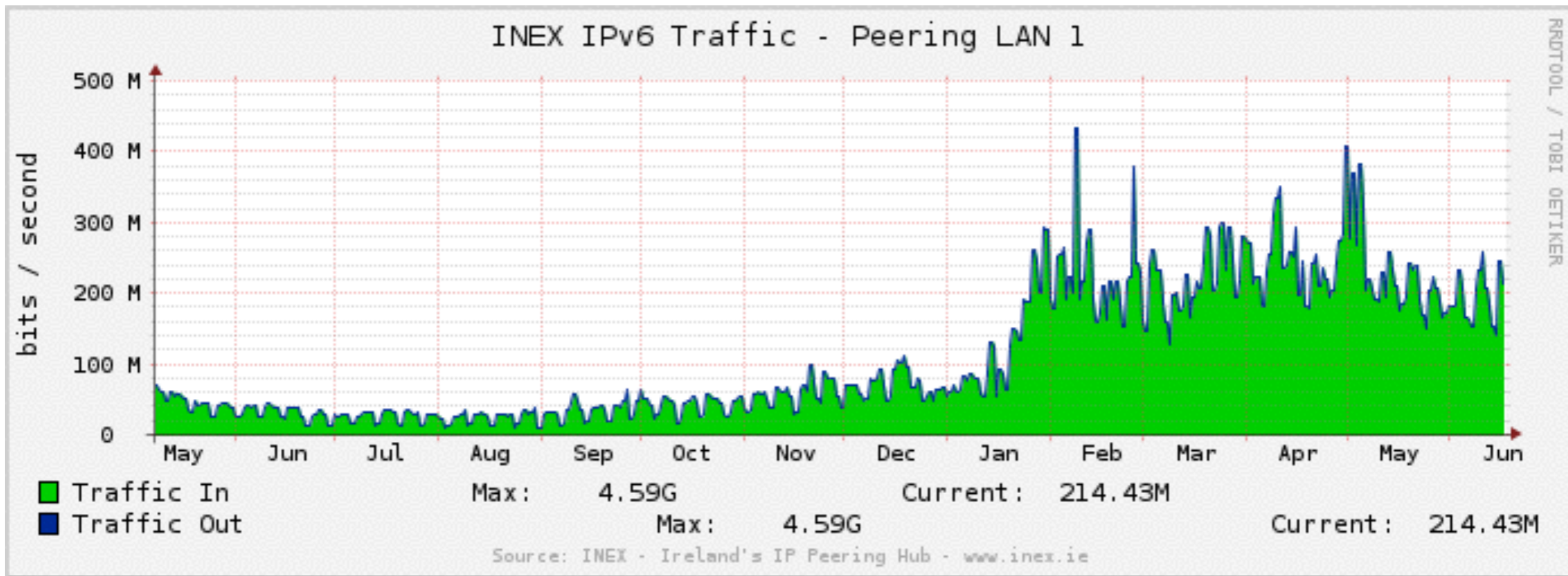
New Member Connections HE Effect on v6 Traffic





inex
i n t e r n e t n e u t r a l e x c h a n g e

New Member Connections HE Effect on v6 Traffic



v6 only traffic - average traffic jumped >>200%

HE advertising ~12k v6 routes of 13k total at INEX



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Planned: Cloudflare, LinkedIn



Member Connection Updates

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Airspeed - 10Gb x 2 LANs

Akamai - 20Gb

BT - 20Gb on LAN2

CIX - 10Gb (formally CNIX)

Colt - enabled IPv6 with AS-COLT (IPv4 is AS-COLTIE)

eircom - 20Gb on both LANs (end 2014)

Hibernia - 2Gb

Microsoft - 40Gb

OGCIO (Government Networks) - 10Gb

Tibus - 10Gb x 2 LANs

New Helpdesk - operations@inex.ie



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Up to 2008 - Shared IMAP Mailbox



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2009 - Cerberus

Server us well but extreme feature creep



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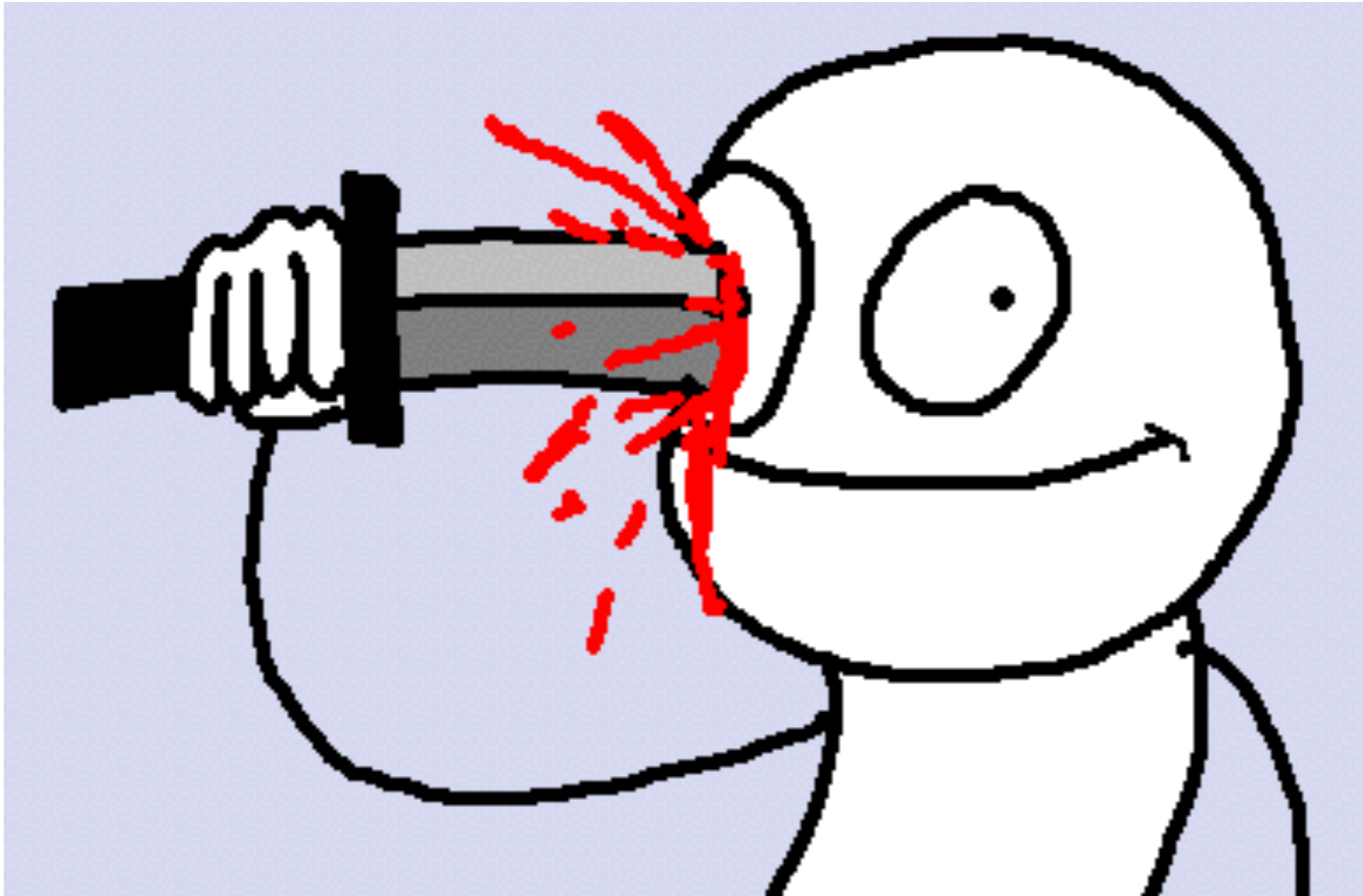
2013 - Realisation that we need something new

Helpdesk research => maximum pain



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Helpdesk research => maximum pain

Pain so great, we stuck with what we had



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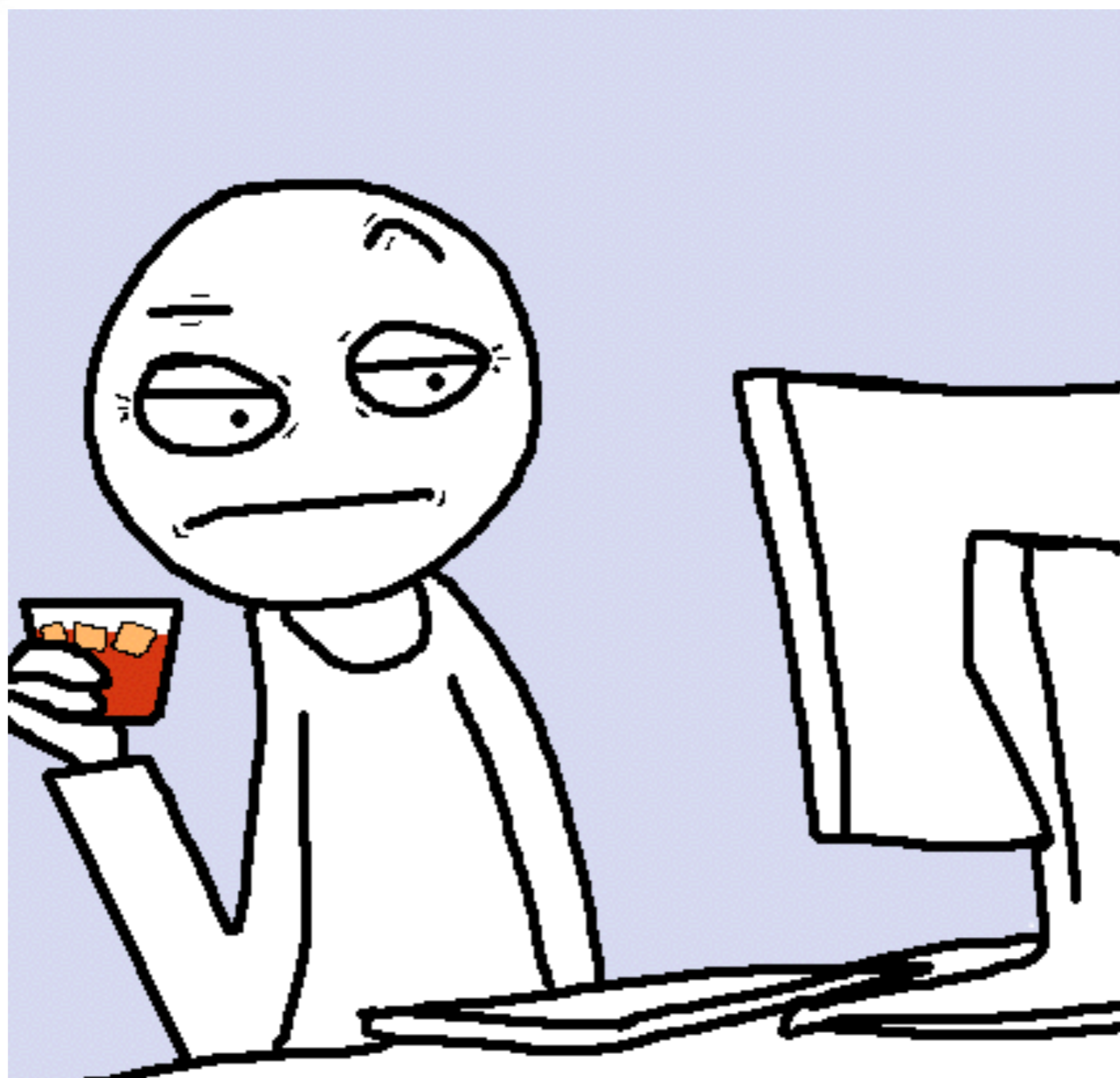
- Pain so great, we stuck with what we had

2015 - Try again, new methodology => pain killerz



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Candidates included:

Freshdesk, GrooveHQ, Zendesk, Kayako, Cerb5 and many more...



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Contrary to my initial preconceptions, the winner was Zendesk

- Excellent API (essential as we needed to import old tickets)

- Easily configurable triggers and automations

- Supports markdown

- Nice UI plus iOS / Android apps

- Poor reporting (@ Zendesk Regular anyway)

Live since end of April



New Operations Phone Number

i n e x
i n t e r n e t n e u t r a l e x c h a n g e

+353 1 531 3339



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Current support contact details and 24/7 policy always available from:

<https://www.inex.ie/support>



camara.org

i n e x
i n t e r n e t n e u t r a l e x c h a n g e



Irish registered charity that improves education in disadvantaged communities around the world by recycling old computer equipment.

Collection / drop off service: Chapelizod Ind. Est.





LAN1 Renumbering Project

i n t e r n e t n e u t r a l e x c h a n g e

Currently past 66% utilisation

The higher that creeps, the more time consuming it'll be

Migrate from /25 to /23 => utilisation becomes 16%

Originally scheduled for week beginning July 6th



LAN1 Renumbering Project

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Migrate from /25 to /23 => utilisation becomes 16%

Originally scheduled for week beginning July 6th

=> cancelled!

We underestimated the volume of back-end work required

New date to be announced in due course



LAN1 Renumbering Project - Back End Work

i n e x
i n t e r n e t n e u t r a l e x c h a n g e

Auto-generation of many services affected:

- route collector

- route servers

- AS112

- Nagios, Smokeping

- DNS (ARPA)

- RIPE Objects

- various other APIs



LAN1 Renumbering Project - Back End Work

i n e x
i n t e r n e t n e u t r a l e x c h a n g e

Auto-generation of many services affected

- can't just switch them over at the start

- need services and monitoring visibility of both address ranges during the migration window

- => second IXP Manager installation in parallel



LAN1 Renumbering Project - Back End Work

i n e x
i n t e r n e t n e u t r a l e x c h a n g e

Development work required:

- Plan to provide a config migration script

- Script to open a ticket for each member - and confirm receipt

- Database scripts to update IP addresses



LAN1 Renumbering Project - Sample Timeline

i n e x
i n t e r n e t n e u t r a l e x c h a n g e



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i n t e r n e t n e u t r a l e x c h a n g e

LAN1 Renumbering Project - Sample Timeline

T-1 week: internal config freeze for old database



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i n t e r n e t n e u t r a l e x c h a n g e

T-1 week: internal config freeze for old database

T-3 days: final reminder to mailing lists



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T: recommended change window 23:00 - 05:00

- have larger trafficers lined up in advance

- all ops team up and available

- expect 80+% of members migrated



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T+(1-4) days: pick off remaining members

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T+7 days: apply ACLs for old address space and contact any affected members

LAN2 Maintenance - May 2015



swi2-deg1-3 (Brocade FESX) replaced with a Brocade CES2000 (swi2-deg1-4)

swi2-ix1-2 (Brocade FESX) retired and connections rehomed to swi2-ix2-1 (TI 24X)

software updates



i n e x
i n t e r n e t n e u t r a l e x c h a n g e

Switch Auction

Following LAN1 and LAN2 upgrades, we have kit to auction:

- 2 x Brocade TurboIron 24X

- 5 x FESX624+2XG (possibly with 10Gb XFPs)

Full details will be announced to the mailing list early next week

Method will be via blind auction with kit to be collected from Telecity



IXP Manager @ Euro-IX in April

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Held a workshop on the Sunday evening

- ~24 attendees
- Good attendance from Eastern Europe and Africa
- Many already using it unbeknownst to us
- Recorded by Euro-IX to be made publicly available



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Also attended by DE-CIX

- Sponsoring new IX in Angola
 - => sponsoring new IXP Manager functionality

That's all folks...



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