# News from RIPE and RIPE NCC

FRNOG, Paris

11 December 2009

Vesna Manojlovic

# RIPE / RIPE NCC

RIPE

- Operators community
- Develops addressing policies
- Working group mailing lists
- 2010 meetings:
  - Prague 3-7 May
  - Rome  15-19 November

RIPE NCC

- Located in Amsterdam
- Not for profit membership organisation
- One of five RIRs - distributes IP & ASN

# RIPE Policy Development

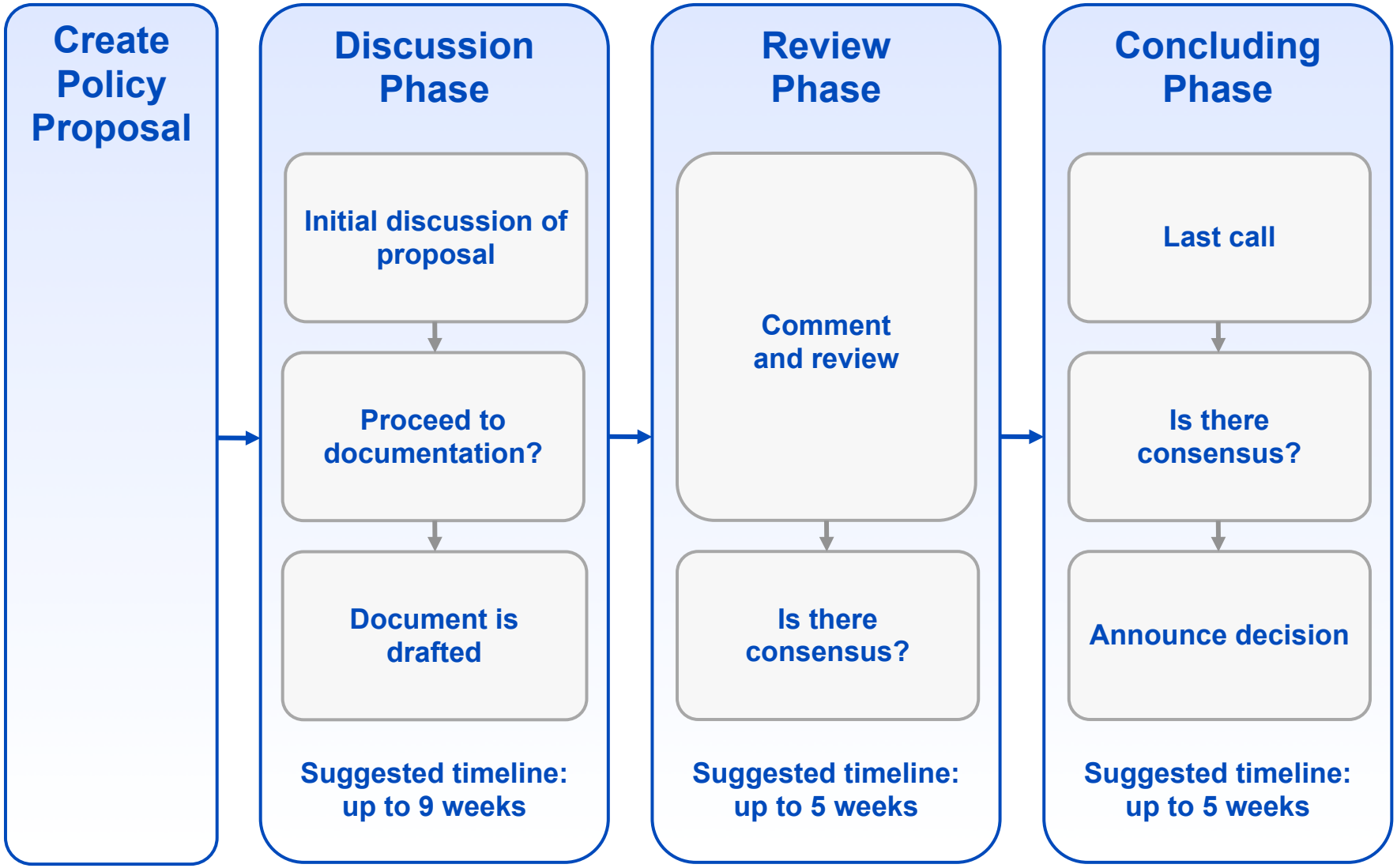
RIPE NCC

# Why would you want to participate?

- Policy determines how you run your business
- Over 6000 LIRs, however;
  - only a fraction are active participants in the PDP
- RIPE community is open to everyone

- Policies change...
  - due to the change in technology
  - because of different business models

# Policy development process



# Hot policy topics

- Use of Final /8 (2008-06)
  - new and existing LIRs can receive only one allocation of minimum size at that time
- IPv4 [...] to Facilitate IPv6 Deployment (2009-04)
  - allocations according to demonstrated need, but downscaled with factor 64
  - minimum allocation or PI assignment is /27
  - condition: IPv6 deployment according to RFC5211
- IPv6 allocation size for 6rd (Rapid Deployment)

# How can you participate?

- Sign up for the Policy Development Process Announcement mailing list

- Read the Working Group mail archives
  - RIPE website → RIPE → Mailing Lists

- Come to the RIPE Meetings
  - Two free tickets for new LIRs
  - Remote participation is also possible

# Just approved: “Run Out Fairly”

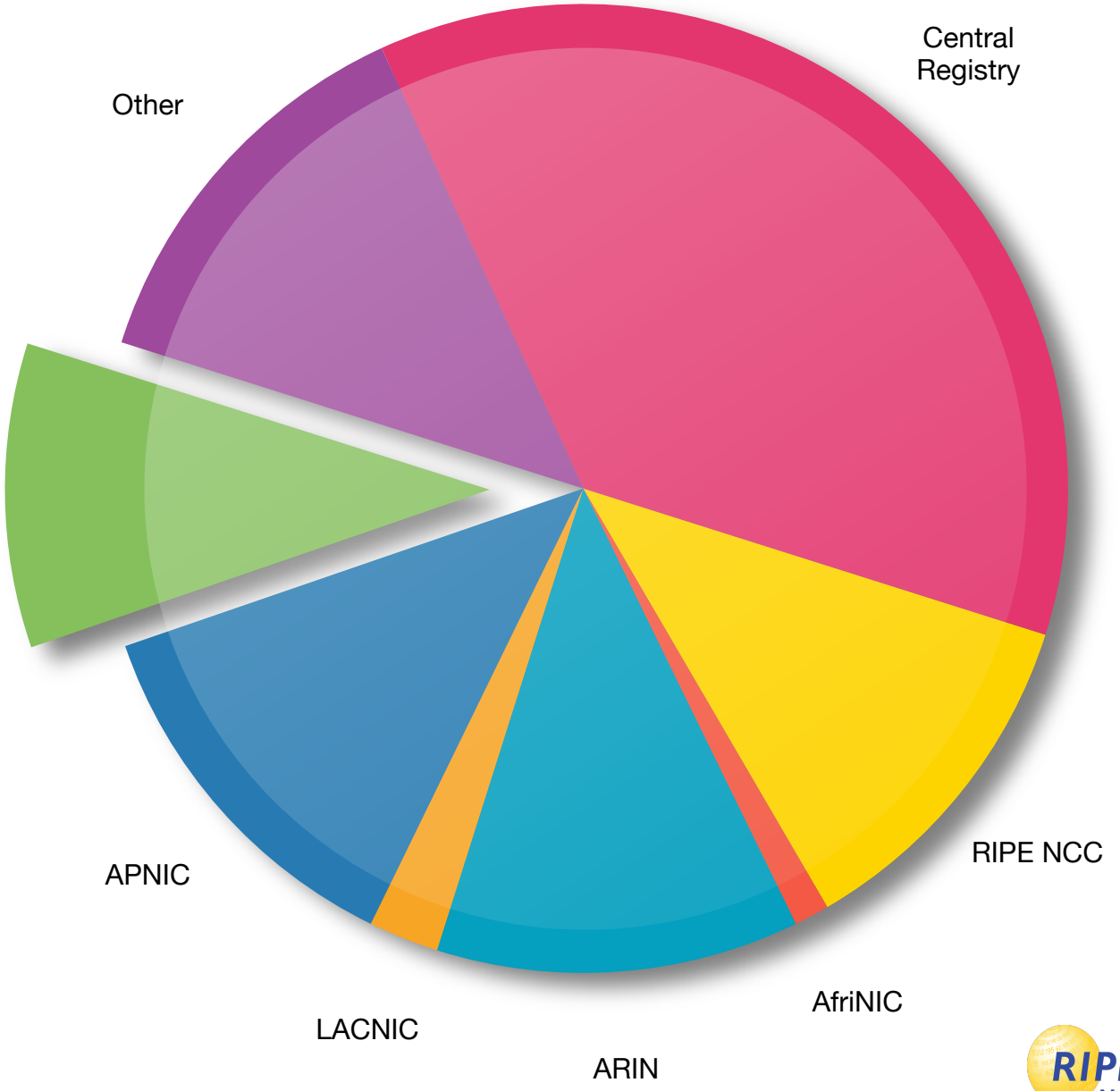
- Warning - sneak preview!
  - real implementation details known in January 2010
- Gradually reduced allocation / assignment periods, for a need of up to...
- ... 9 months (July 2010)
- ... 6 months (January 2011)
- ... 3 months (July 2011)
- In January 2010 - assignments for up to 1 year

# IPv4

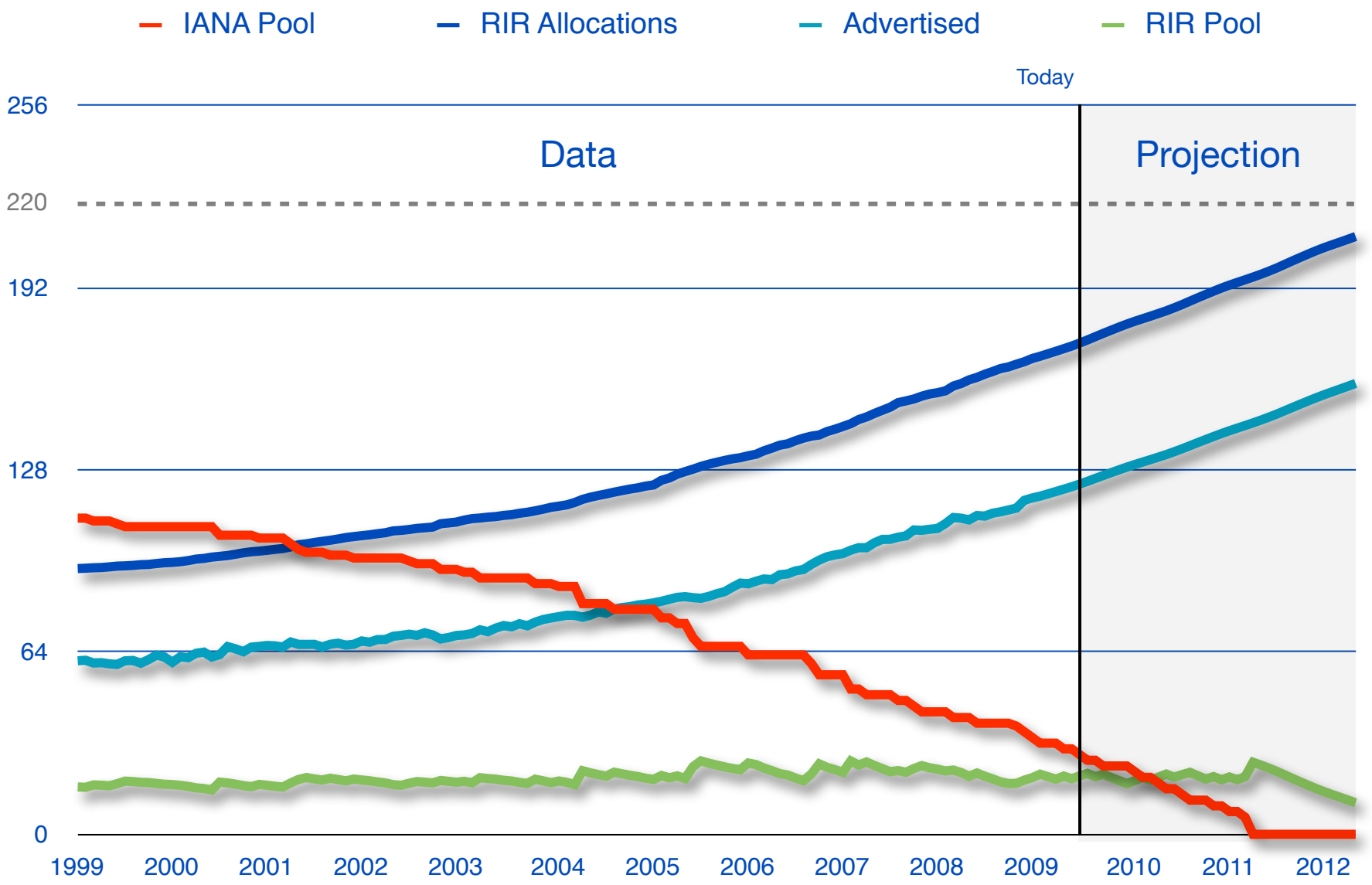
RIPE NCC

# IPv4 address pool

10%
available



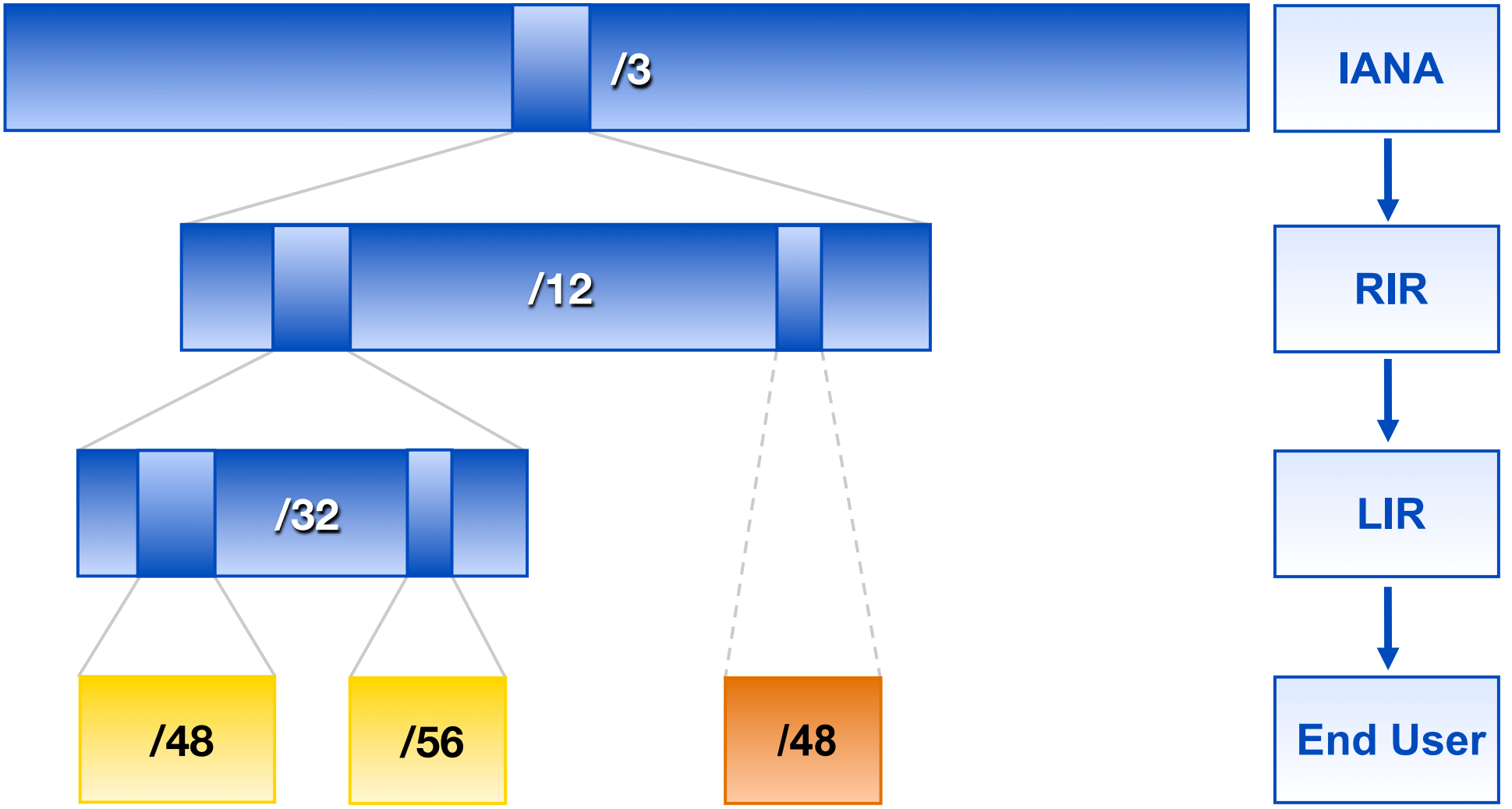
# IPv4 address pool - the future?



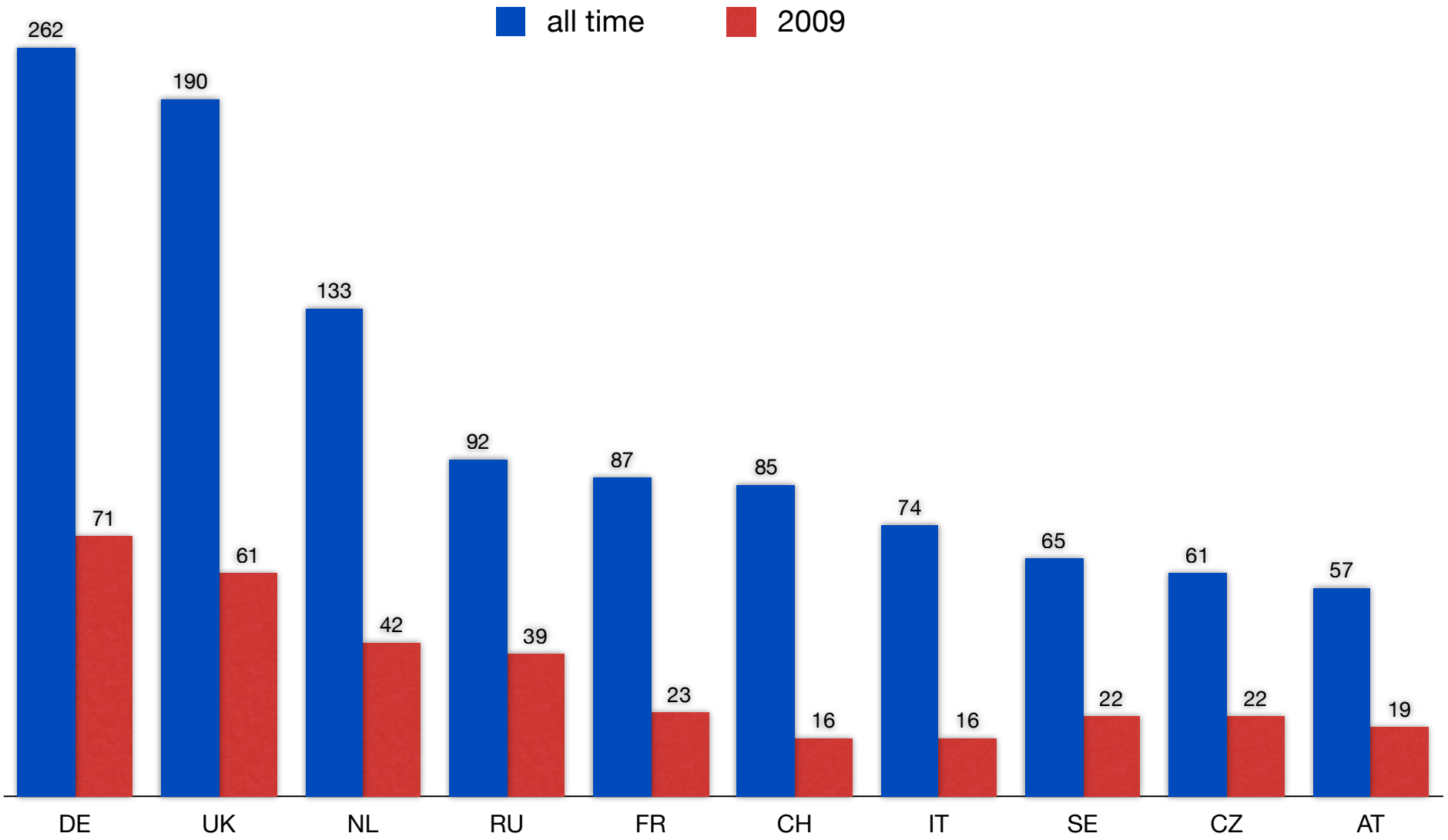
# IPv6

RIPE NCC

# IPv6 address distribution



# IPv6 allocations per country




Updated: 10 dec 2009

# Getting an IPv6 allocation

- To qualify, an organisation must:
  - Be an LIR
  - Have a plan for making assignments within two years

- Minimum allocation size /32
  - larger allocations require solid justification
  - /29 reserved for growth
  - next allocation criteria: HD=0.96 (37% of /32)

# Customer assignments

- Assign to your customers enough addresses
  - /48 = 65,536 subnets
  - /56 = 256 subnets
  - /64 = 1 subnet
  - /128 = one device
  - register in a database accessible by the RIPE NCC
- Make sub-allocations to large customers
  - Service Providers, large enterprises
  - register sub-allocations in the RIPE DB

# Getting IPv6 PI assignment

- To qualify, an organisation must:
  - Demonstrate it will multihome
  - Meet the contractual requirements for Independent Resources
- From this week, also for LIRs
  - LIRs must demonstrate special routing requirements
  - Can not be used for sub-assignments to End Users
- Minimum assignment size /48

RIPE NCC

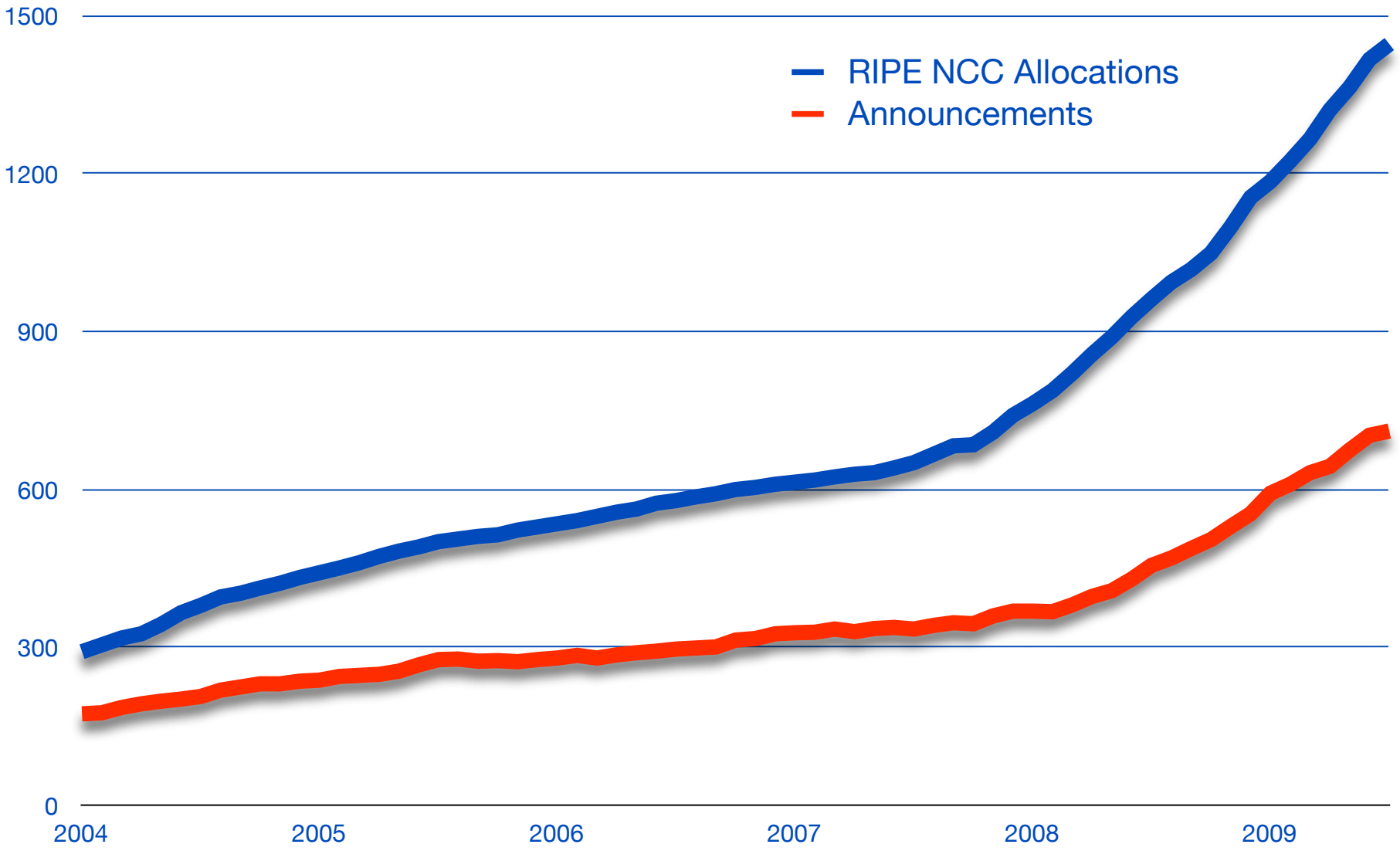
# What does an IPv6 space cost?

- IPv6 PA allocation /32 = 1 scoring unit
- points = ∑(2009-1992)x(scoring unit) =17x1+...

| Category | Points | Fee 2010 |
|---|---|---|
| Extra Small | 0 - 27 | € 1300 |
| Small | - 150 | € 1800 |
| Medium | - 1233 | € 2550 |
| Large | - 8047 | € 4100 |
| Extra Large | > 8047 | € 5500 |

- PI assignment yearly fee: 50 Euro in 2010

# IPv6 allocations and announcements



# IPv6 routing

- Announce your whole allocation as one prefix
  - recommended, not mandatory any more
- If announcing several longer prefixes, please follow the BCP (currently being written)
- Create route6 object in RR
- BGP filter recommendations (Gert Doering)
- Global IPv6 routing table: 2500 entries
- Prefixes per country (Gert Doering)

# Independent Resources

RIPE NCC

# Independent Resources

- What is considered Independent Resource?
  - made directly from RIPE NCC to End User
  - PI (IPv4, IPv6)
  - ASN
  - IXP IPv6
  - Anycast
- Contract with End User required
  - Example contract on RIPE NCC website
  - and registration from Chamber of Commerce
- Yearly charges for Independent Resources

# Requesting Independent Resources

- Sponsoring LIR can request  for End User
- Direct Assignment User can request for themselves
- End User can become LIR

- PI assignment - no sub-assigning allowed!
- Often confusion about “portable addresses”
  - PA allocation is also “independent” from other ISPs

# Existing assignments: End User choices

- Sign contract with their original LIR
- Find a new sponsoring LIR
- Become an Direct Assignment User and get a
  RIPE NCC End User Assignment Agreement
- Become an LIR
- Return the resources

# Existing Assignments: LIR's task

- List of independent resources in LIR Portal
- By September, LIRs have marked their:
  - my Infrastructure / my End User
  - not my End User
- All resources not marked are charged to LIR!
- Next step: upload contracts by December 2009
- "Phase 3", in 2010
  - RIPE NCC will contact "orphanned" End Users

# Charging Scheme 2010

- 5 LIR categories: Extra Small to Extra Large
- Category determined by IPv4 and IPv6 allocations over time
- Per category fee in 2010 is the same as in 2009

- New in 2010:
  - Direct assignments don't influence category
  - 50 Euro fee for every direct assignment

# 32-bit AS Numbers

- 32-bit ASN deployment schedule:

- 1 Jan 2008: 16-bit default, 32-bit on request
- 1 Jan 2009: 32-bit default, 16-bit on request
- 1 Jan 2010: Undifferentiated ASN Pool

Note:

- 16-bit AS Numbers will not be deprecated
- This schedule applies to newly assigned ASNs

# 32-bit AS Numbers and you

- Can you handle the new format: “AS4192351863”
- If not, please act now!

- Prepare for 32-bit ASNs in your organisation:
  - Check whether your hardware is compatible;
    if not, ask your hardware vendor for support
  - Check whether your upstream provider is running
    compatible hardware;
    if not, encourage them to upgrade!

# More from RIPE NCC

IPv6 Act Now

http://www.ipv6actnow.org/

Google

Admin Wikipedia iii BECHA Travel Weather RSS Monthly log NCCgCal Parent Effectivene... Share on Li

sNet | RIPE NCC Speakers an... | RIPE Policy Proposal 2... | RFC 5211 - An Intern... | draft-despres-6rd-0... | IPv6 Act No

Search

Stay updated on our news

# IPv6 ACT NOW

Your IP: 212.123.27.210

Home News Info Policy Contact Forum

## How To Act Now

Learn more about what you can do

## Small Business

Everything a small business needs to know about IPv6 adoption

## Enterprise

Deploying IPv6 within an enterprise

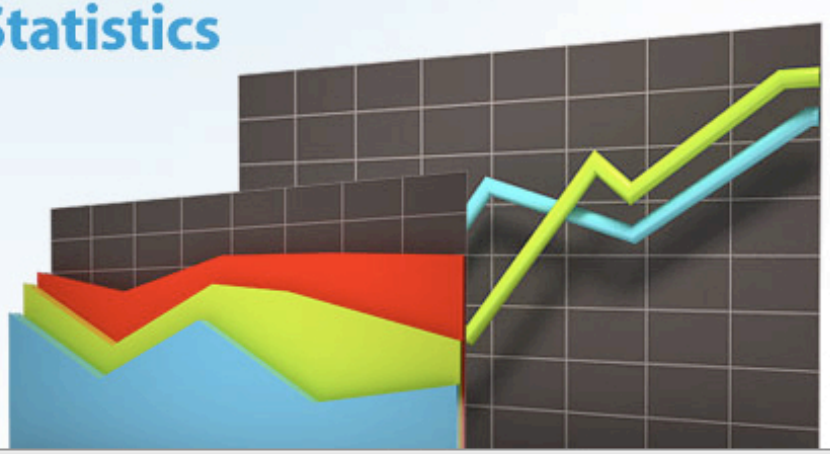
## ISP

Implementing IPv6 as an ISP

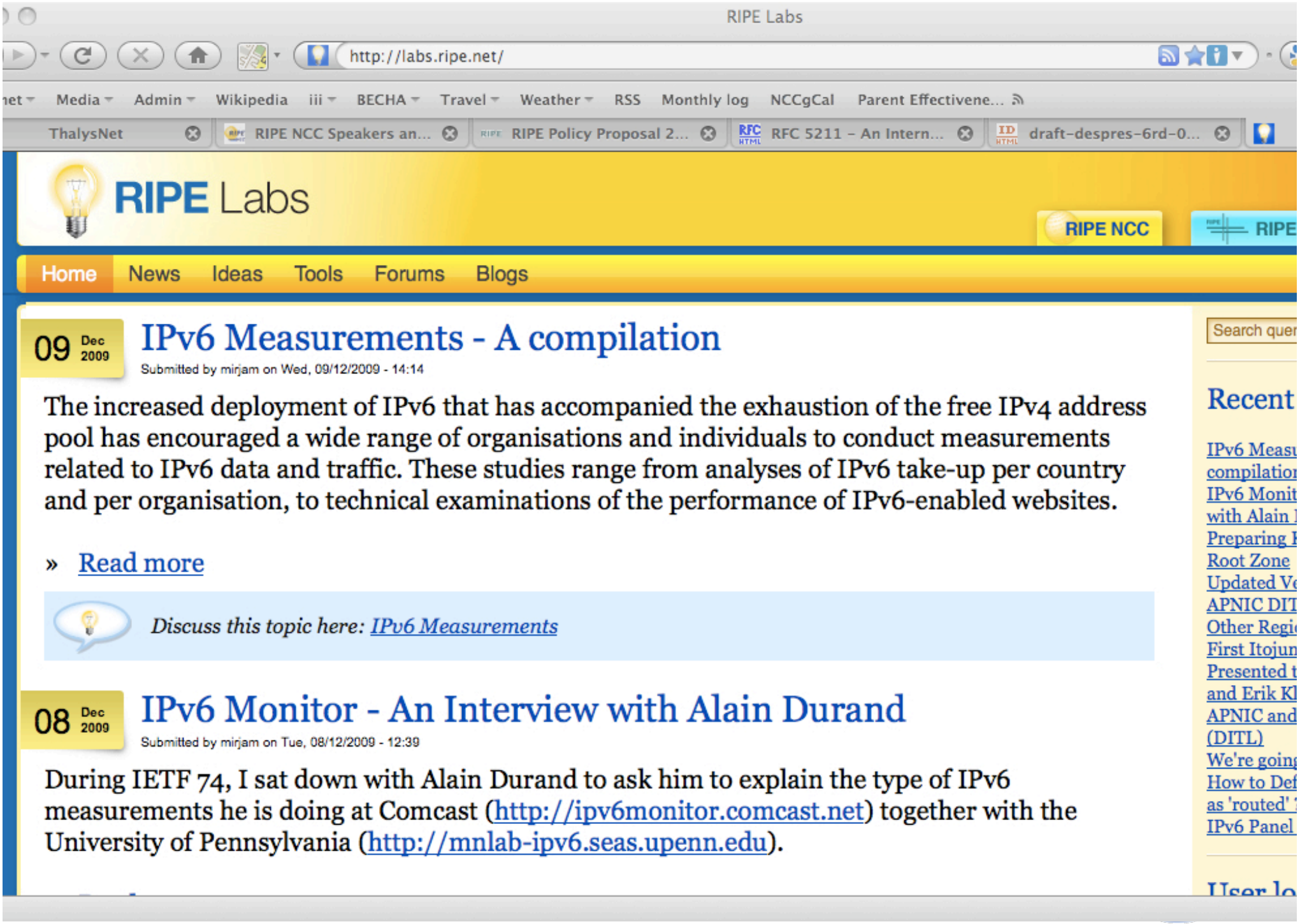
## Government

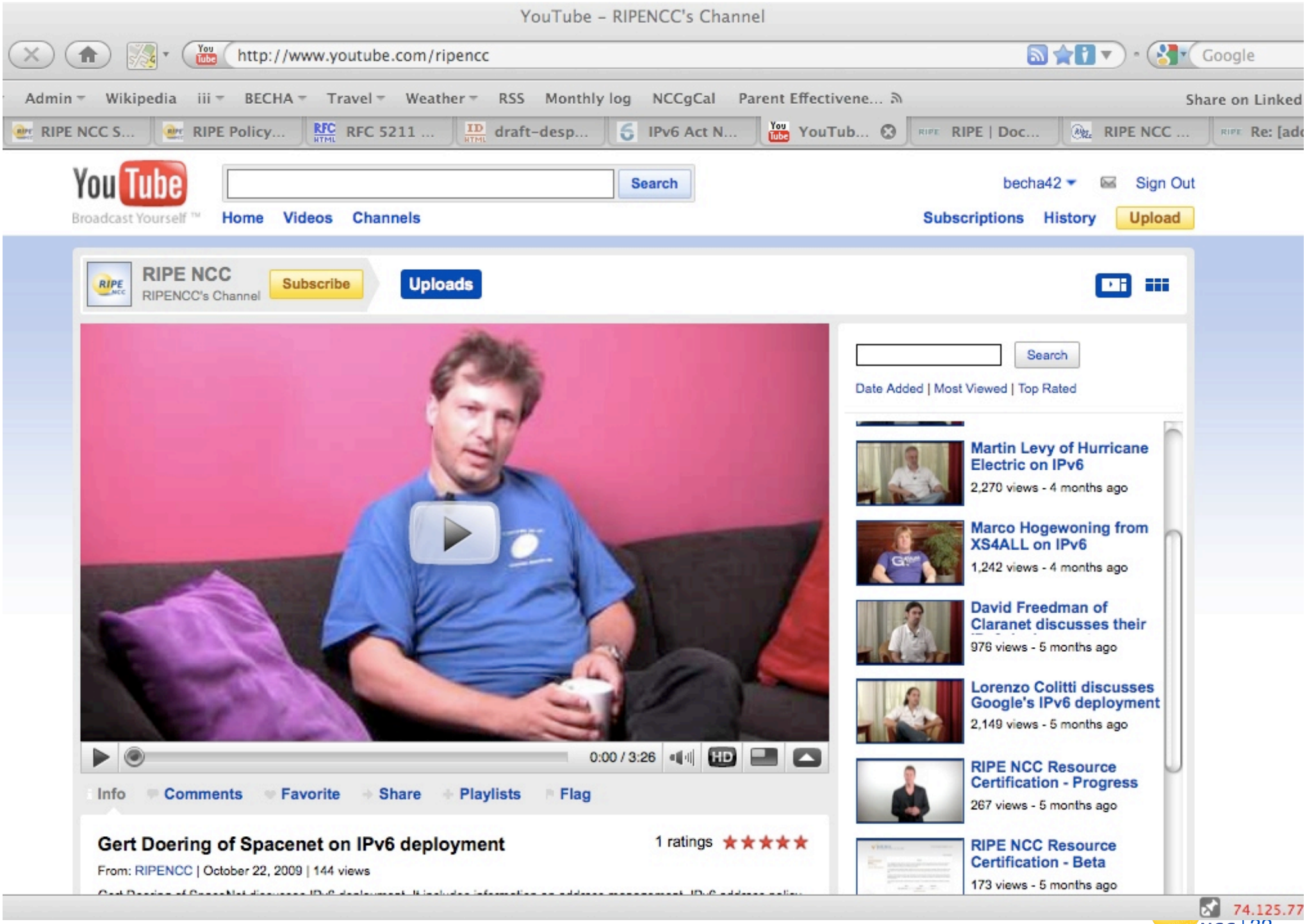
Information about IPv6 planning for government organisations

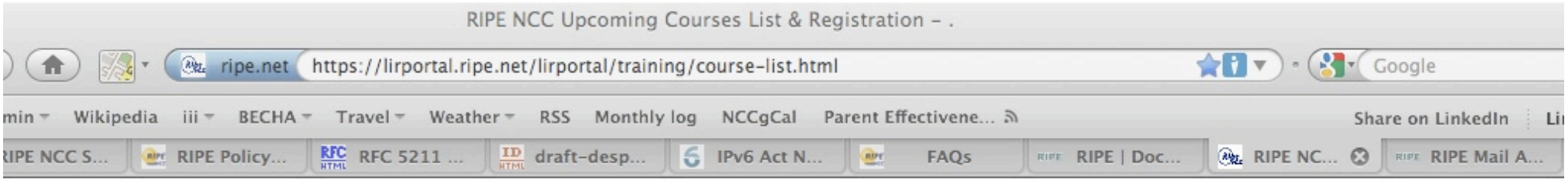
## Statistics



## Interviews


RIPE Labs
http://labs.ripe.net/
Media
Admin
Wikipedia
BECHA
Travel
Weather
RSS
Monthly log
NCCgCal
Parent Effectivene...
ThalysNet
RIPE NCC Speakers an...
RIPE Policy Proposal 2...
RFC 5211 – An Intern...
draft-despres-6rd-0...
RIPE Labs
RIPE NCC
Home
News
Ideas
Tools
Forums
Blogs
09 Dec 2009
IPv6 Measurements - A compilation
Submitted by mirjam on Wed, 09/12/2009 - 14:14
The increased deployment of IPv6 that has accompanied the exhaustion of the free IPv4 address pool has encouraged a wide range of organisations and individuals to conduct measurements related to IPv6 data and traffic. These studies range from analyses of IPv6 take-up per country and per organisation, to technical examinations of the performance of IPv6-enabled websites.
» Read more
Discuss this topic here: IPv6 Measurements
08 Dec 2009
IPv6 Monitor - An Interview with Alain Durand
Submitted by mirjam on Tue, 08/12/2009 - 12:39
During IETF 74, I sat down with Alain Durand to ask him to explain the type of IPv6 measurements he is doing at Comcast (http://ipv6monitor.comcast.net) together with the University of Pennsylvania (http://mnlab-ipv6.seas.upenn.edu).
Recent


YouTube - RIPENCC's Channel
http://www.youtube.com/ripencc
Google
Admin
Wikipedia
BECHA
Travel
Weather
RSS
Monthly log
NCCgCal
Parent Effectivene...
Share on Linked
RIPE NCC S...
RIPE Policy...
RFC 5211 ...
draft-desp...
IPv6 Act N...
YouTub...
RIPE | Doc...
RIPE NCC ...
Re: [ad
YouTube
Broadcast Yourself ™
Search
becha42
Sign Out
Home
Videos
Channels
Subscriptions
History
Upload
RIPE NCC
RIPENCC's Channel
Subscribe
Uploads
Search
Date Added | Most Viewed | Top Rated
Martin Levy of Hurricane Electric on IPv6
2,270 views - 4 months ago
Marco Hogewoning from XS4ALL on IPv6
1,242 views - 4 months ago
David Freedman of Claranet discusses their
976 views - 5 months ago
Lorenzo Colitti discusses Google's IPv6 deployment
2,149 views - 5 months ago
RIPE NCC Resource Certification - Progress
267 views - 5 months ago
RIPE NCC Resource Certification - Beta
173 views - 5 months ago
0:00 / 3:26
HD
Info
Comments
Favorite
Share
Playlists
Flag
Gert Doering of Spacenet on IPv6 deployment
1 ratings
From: RIPENCC | October 22, 2009 | 144 views




# RIPE NCC Upcoming Courses List & Registration



## RIPE NCC Upcoming Courses List & Registration

You can register yourself and/or your colleague for any of the available training courses below.

If a course is already closed then please email training@ripe.net to be placed on the waiting list.

Click on the table headers to sort the list by location, type or date.

| Course Type ∨ | Status | Location | Date | |
|---|---|---|---|---|
| IPv6 Training Course | Full | Milan, Italy | Friday, January 15, 2010 | Starhotels Splendido |
| IPv6 Training Course | Register > | Amsterdam, Netherlands | Friday, January 29, 2010 | RIPE NCC Office |
| IPv6 Training Course | Register > | Dubai, United Arab Emirates | Tuesday, February 9, 2010 | To be decided |
| IPv6 Training Course | Full | Moscow, Russian Federation | Friday, February 12, 2010 | To be decided |
| IPv6 Training Course | Full | London, United Kingdom | Wednesday, February 17, 2010 | To be decided |
| IPv6 Training Course | Register > | Stockholm, Sweden | Thursday, February 25, 2010 | Hosted by: Netnod |
| IPv6 Training Course | Register > | Stockholm, Sweden | Friday, February 26, 2010 | Hosted by: Netnod |
| IPv6 Training Course | Register > | Amsterdam, Netherlands | Friday, March 12, 2010 | RIPE NCC Office |
| IPv6 Training Course | Register > | Rosh Ha'ayin, Israel | Monday, March 15, 2010 | Hosted by: 013 Netvision |
| IPv6 Training Course | Register > | Odessa, Ukraine | Friday, March 26, 2010 | |

More information:

www.ripe.net
www.ipv6actnow.org

BECHA@ripe.net