

How the RIPE NCC Promotes IPv6

TNC 2011 - Prague, 16 May 2011

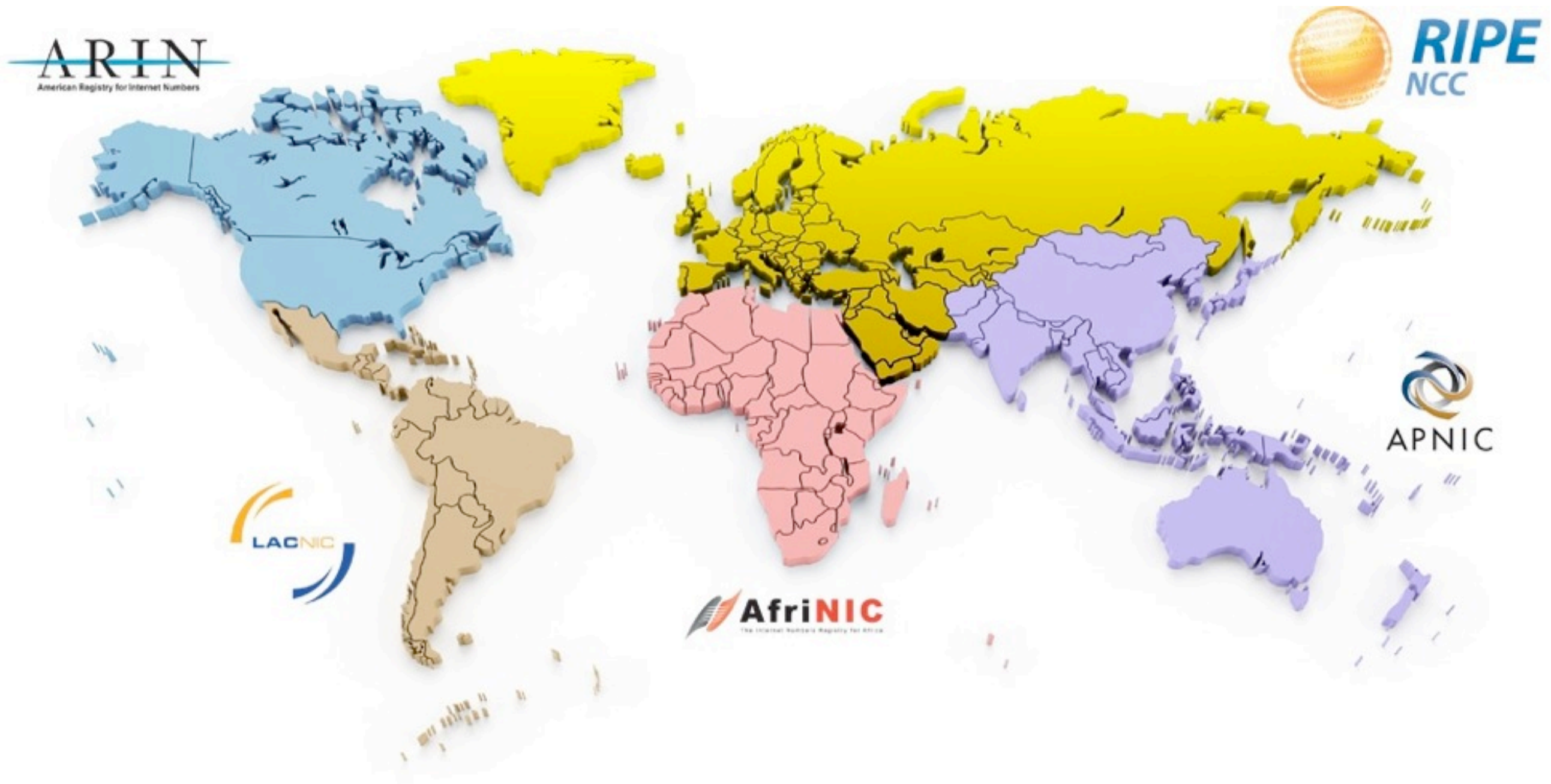
Mirjam Kühne,
RIPE NCC



Topics

- The RIR system
- IPv4 and IPv6 allocation statistics
- IPv6ActNow website
- IPv6 on RIPE Labs
 - IPv6 RIPEness, v6asns, IPv6 CPE survey...
- IPv6 Training
 - IPv6 Training for LIRs
 - IPv6 Roadshows
- World IPv6 Day

The five RIRs



The RIPE NCC

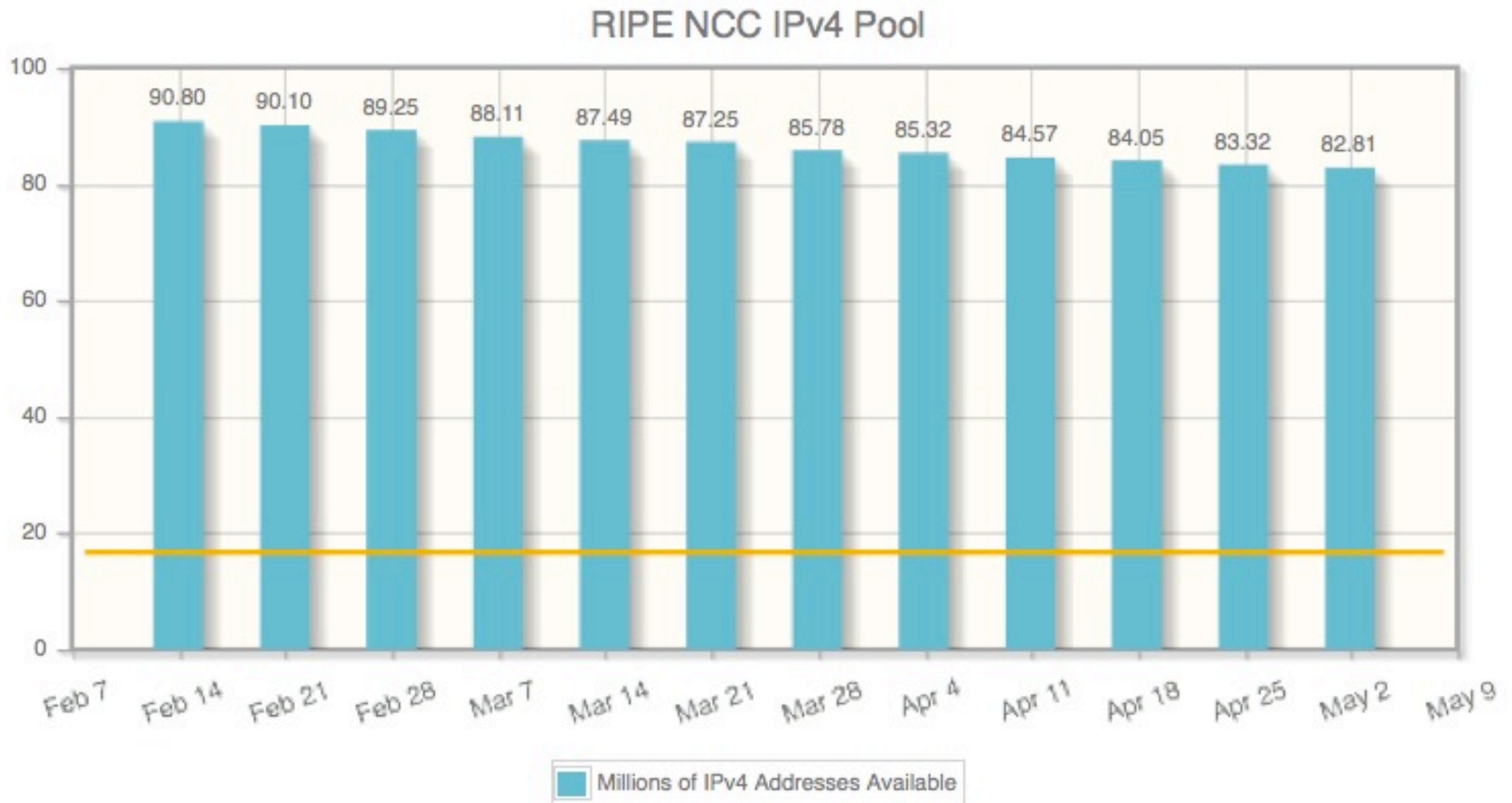
- Independent not-for-profit membership organisation
- Supports the operation and development of the Internet
- Europe, Middle East and Central Asia
- Distributes and registers Internet number resources
- 7,365 members called LIRs

The RIPE NCC

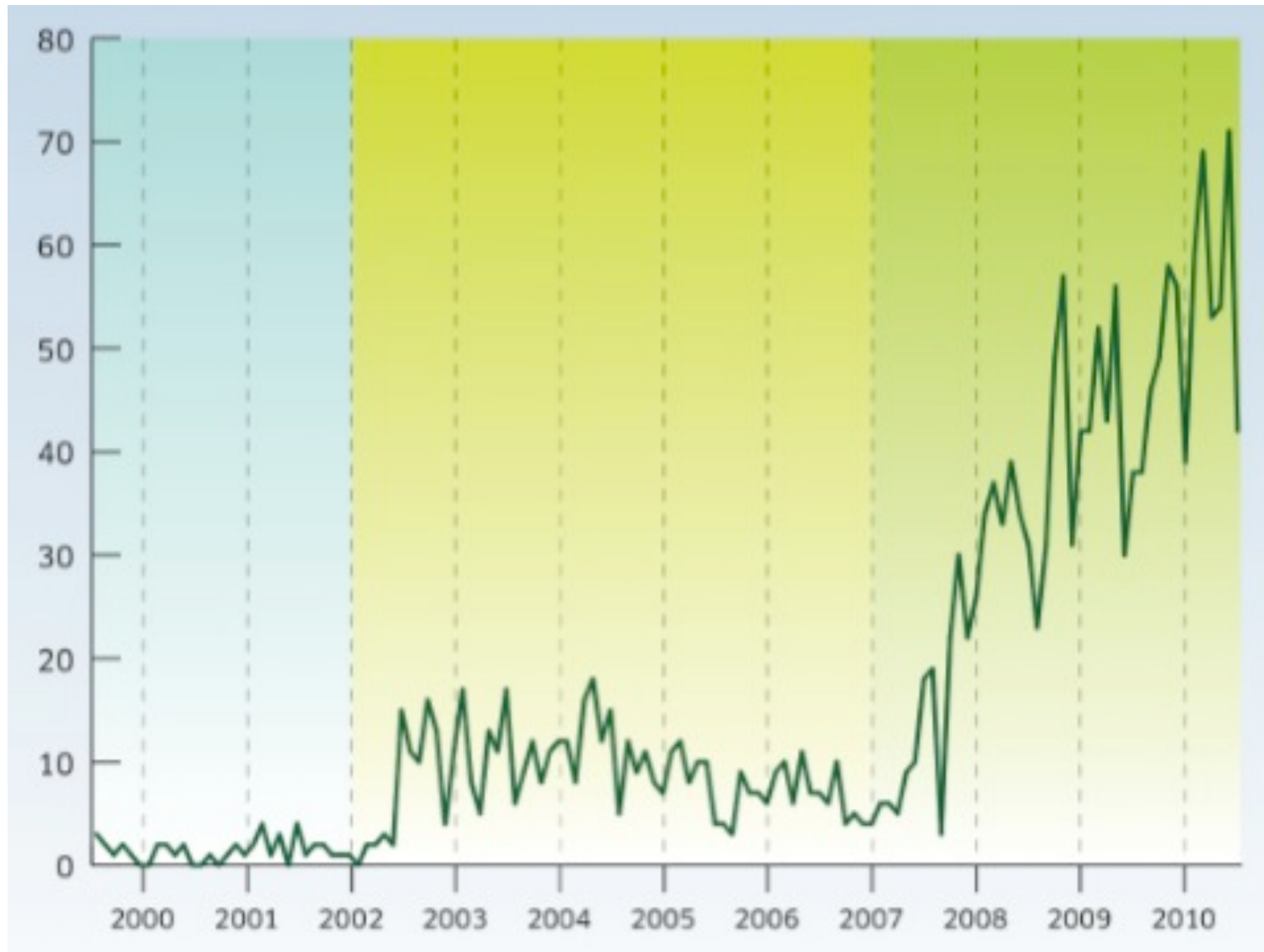
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IPv4 Statistics

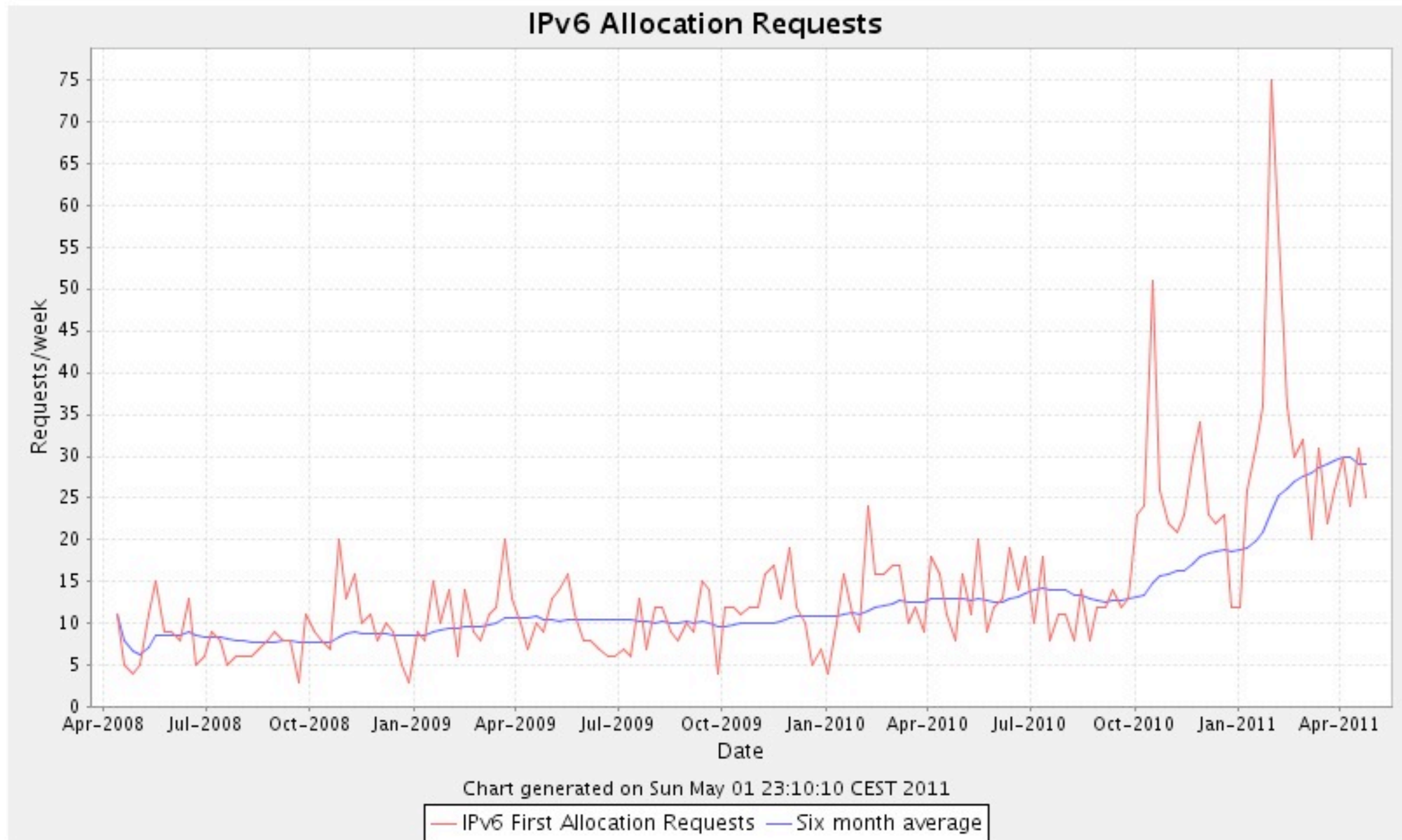


IPv6 Allocations Over Time



Mirjam Kühne, 16 May 2011

IPv6 Allocation Requests



The screenshot shows the homepage of the IPv6 Act Now website. At the top, there is a search bar and a notification to stay updated on news. The main header features the 'IPv6 ACT NOW' logo and a navigation menu with links for Home, News, Info, Policy, Contact, and Forum. Below the header is a large banner with five puzzle-piece sections: 'How To Act Now', 'Small Business', 'Enterprise', 'ISP', and 'Government'. Each section provides a brief description of its content. Underneath the banner are two main content areas: 'Statistics' with a 3D bar and line chart, and 'Interviews' with a video thumbnail of a woman. At the bottom, there are three informational boxes: 'What is IPv6?', 'What about IPv4?', and 'Forums'. The footer contains the text 'This website is operated by the RIPE NCC.' and 'Attribution-Noncommercial-Share Alike 3.0 Netherlands License.'

IPv6 Act Now!

- One-stop shop for IPv6 information
- Audience includes businesses, governments, technical community
- Sections include:
 - How to Act Now
 - Community interviews
 - Statistics
 - RSS feed of IPv6 related news and developments

IPv6 on RIPE Labs

- IPv6 measurements compilation
- Measuring IPv6 at web clients and resolvers
- 6to4 brokenness
- IPv6 RIPEness
- IPv6 Customer Premise Equipment (CPE) survey
- IPv6 transition mechanisms

<http://labs.ripe.net>

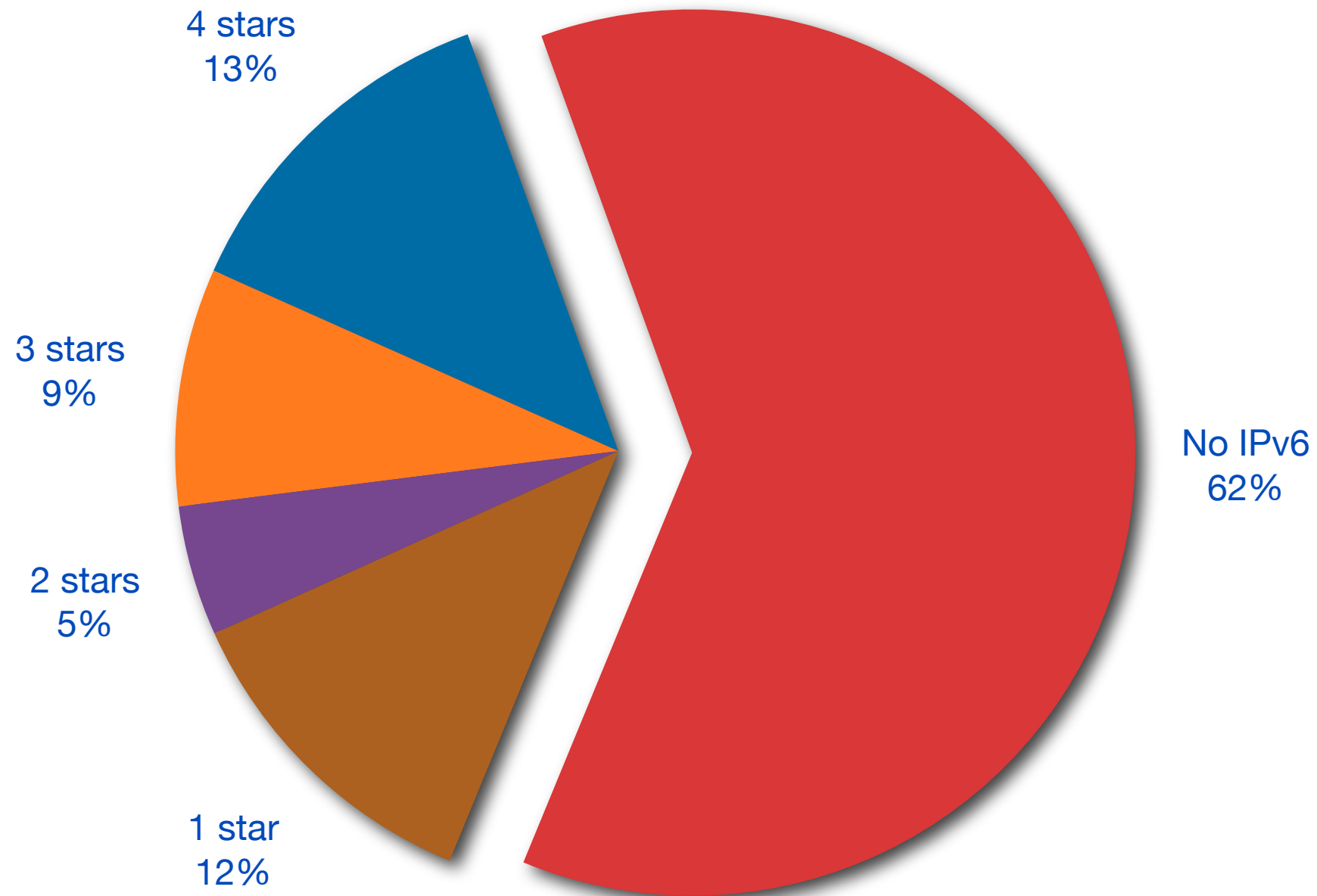
IPv6 RIPEness

- Rating system:
 - One star if the LIR has an IPv6 allocation
- Additional stars if:
 - IPv6 prefix is announced
 - A route6 object is in the RIPE Database
 - Reverse DNS is set up
- A list of all 4-star LIRs and country graphics:

<http://ripeness.ripe.net/>

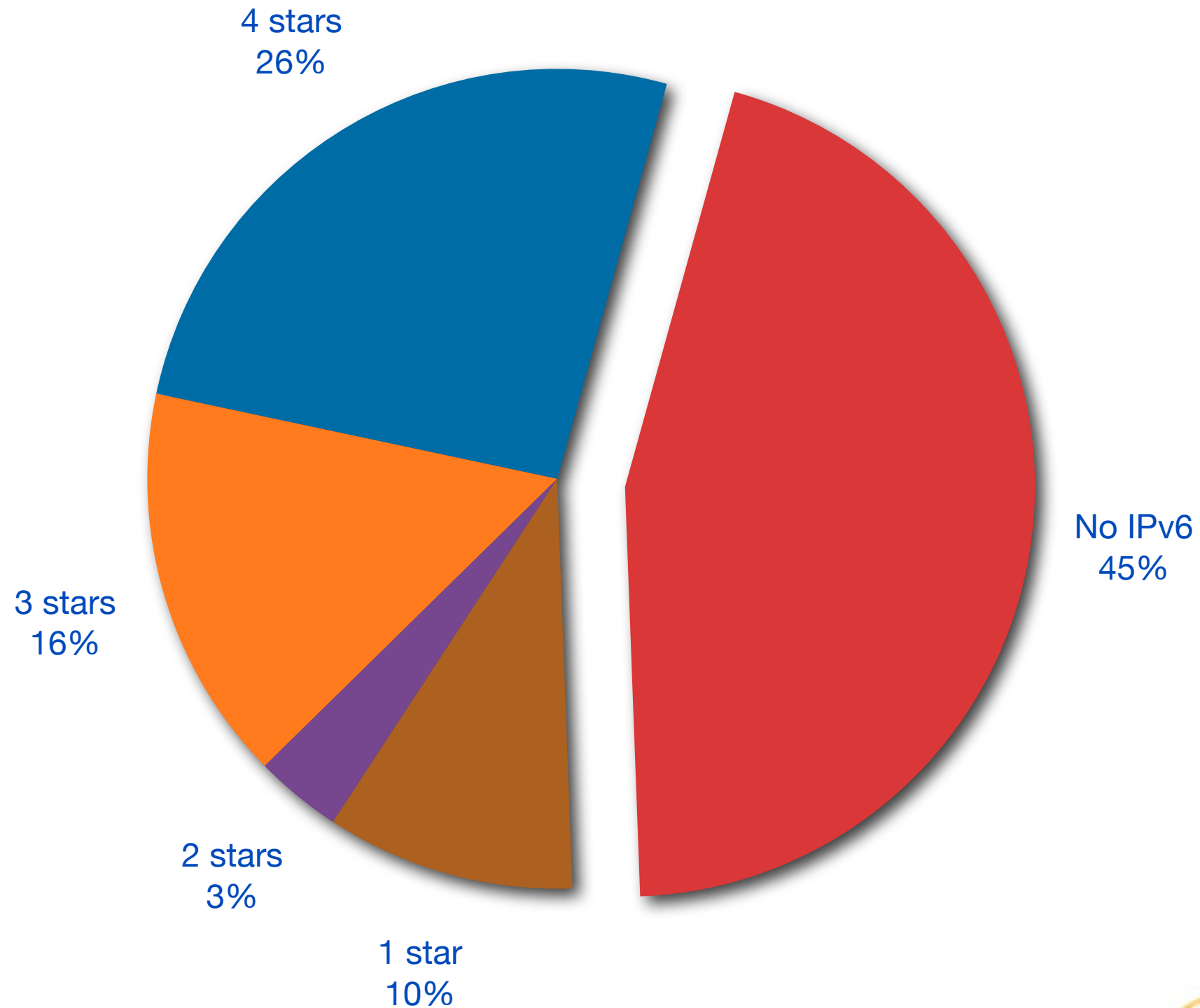
IPv6 RIPEness in the RIPE NCC Service Region

● 1 star ● 2 stars ● 3 stars ● 4 stars ● No IPv6

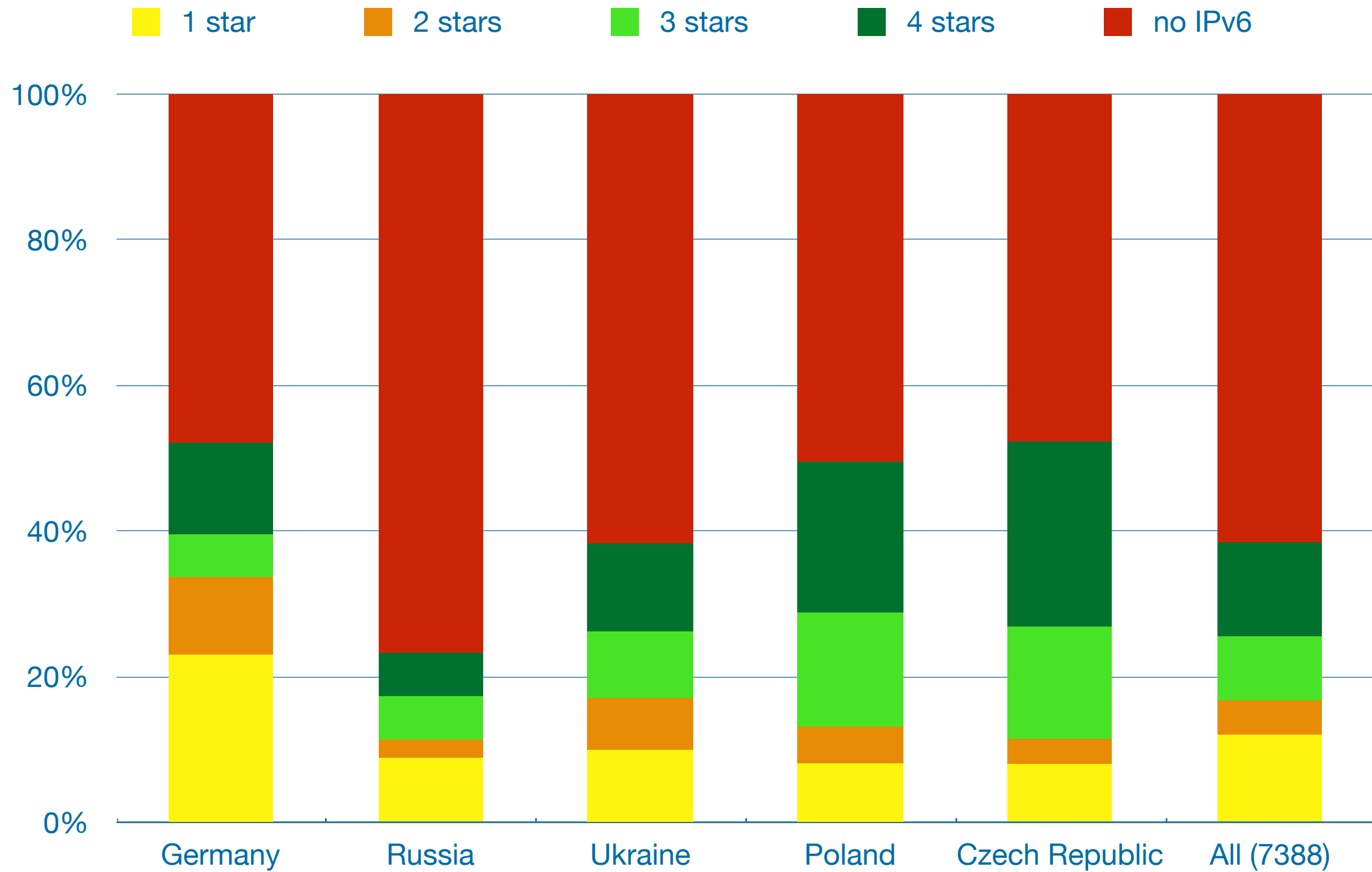


IPv6 RIPEness in the Czech Republic

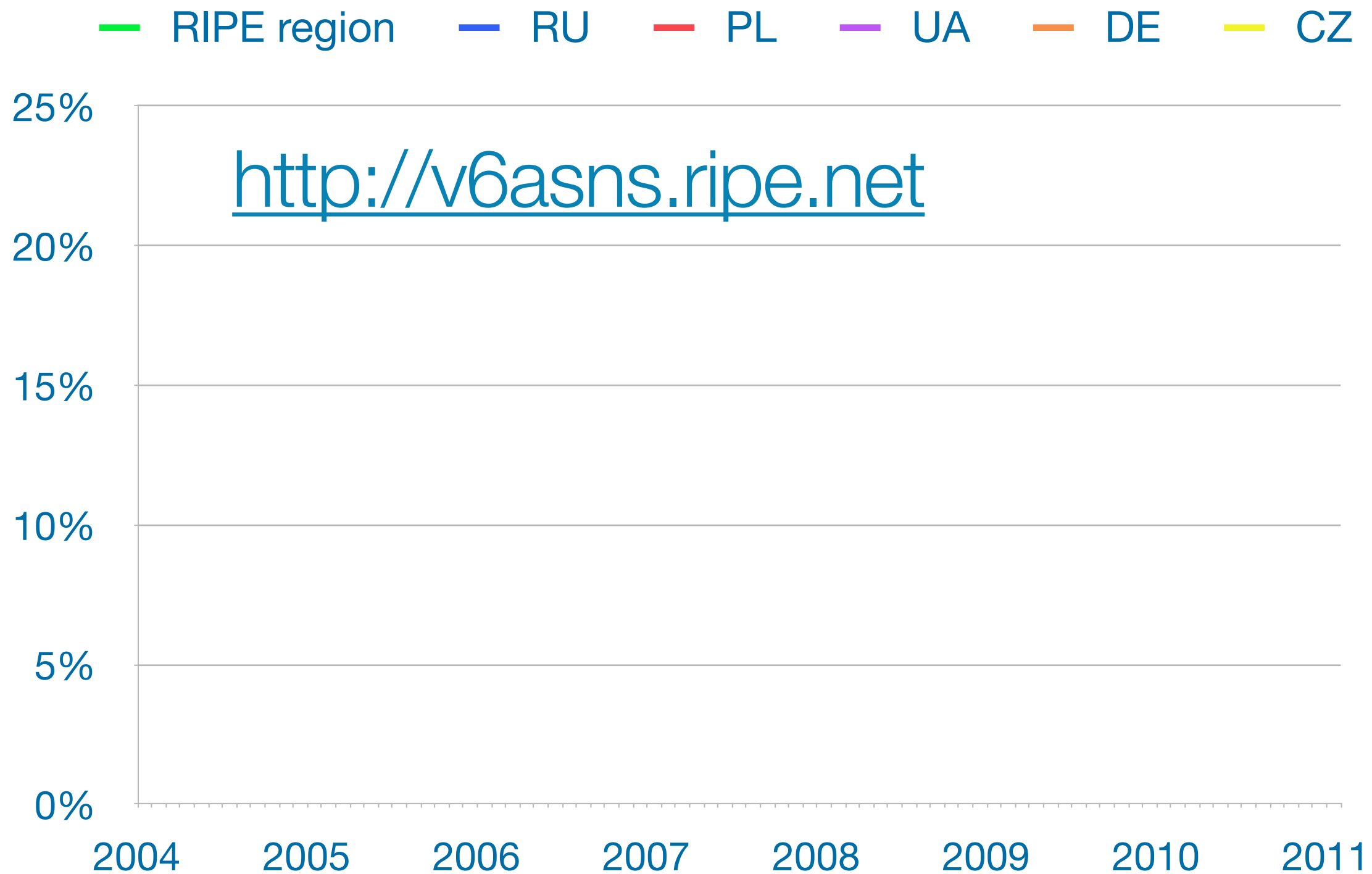
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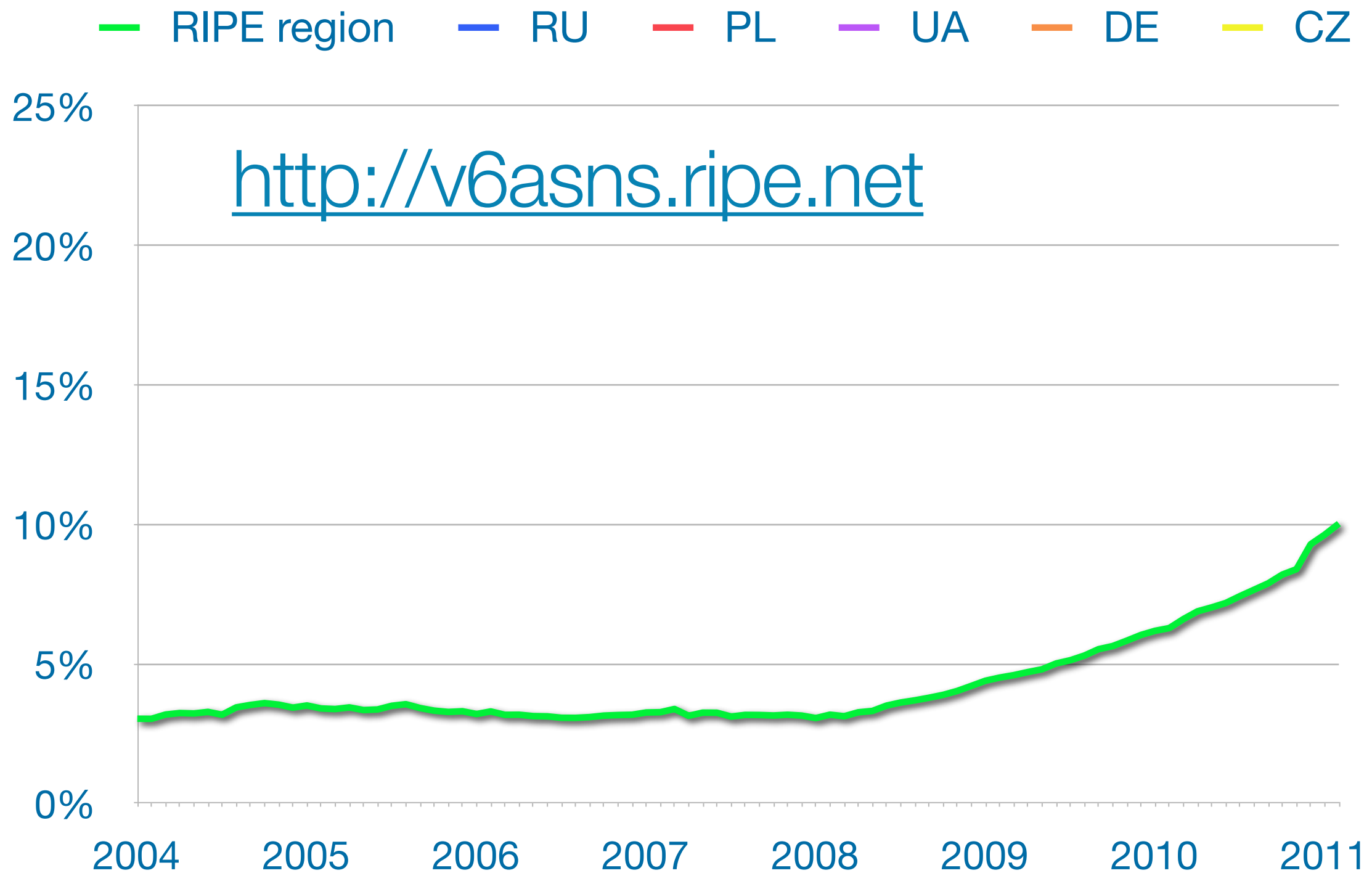
IPv6 RIPEness per country (relative)



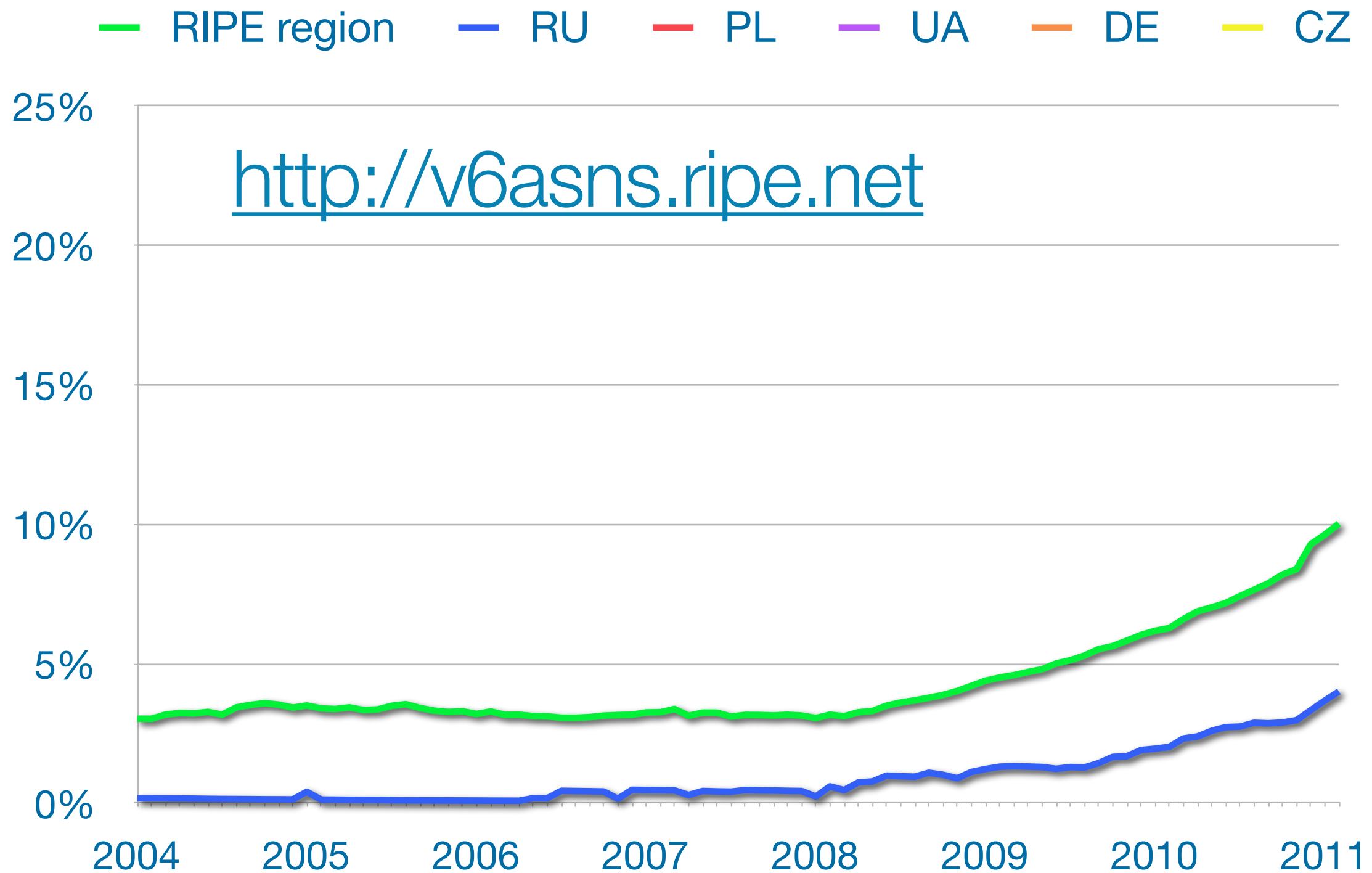
Networks Announcing IPv6



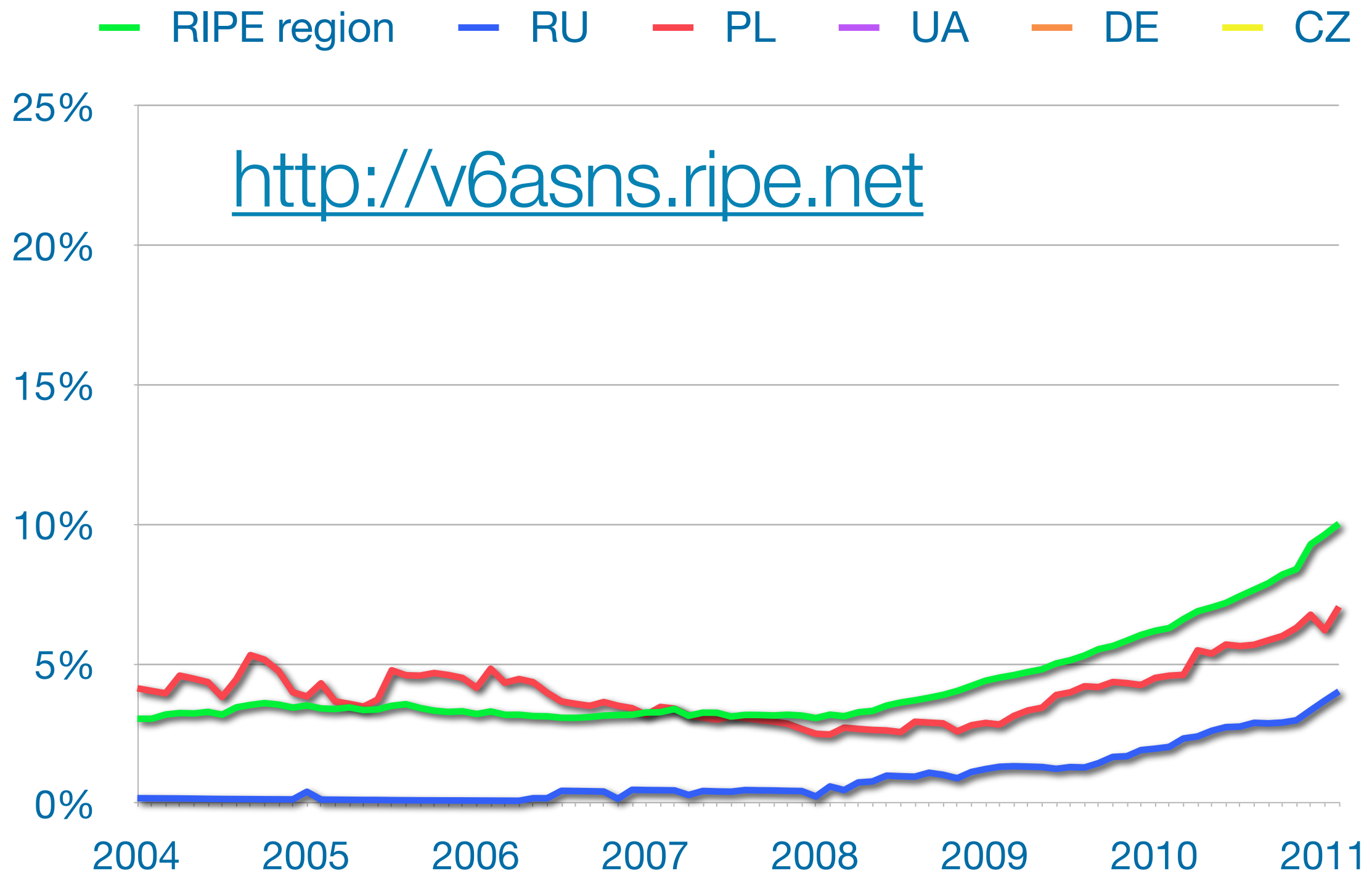
Networks Announcing IPv6



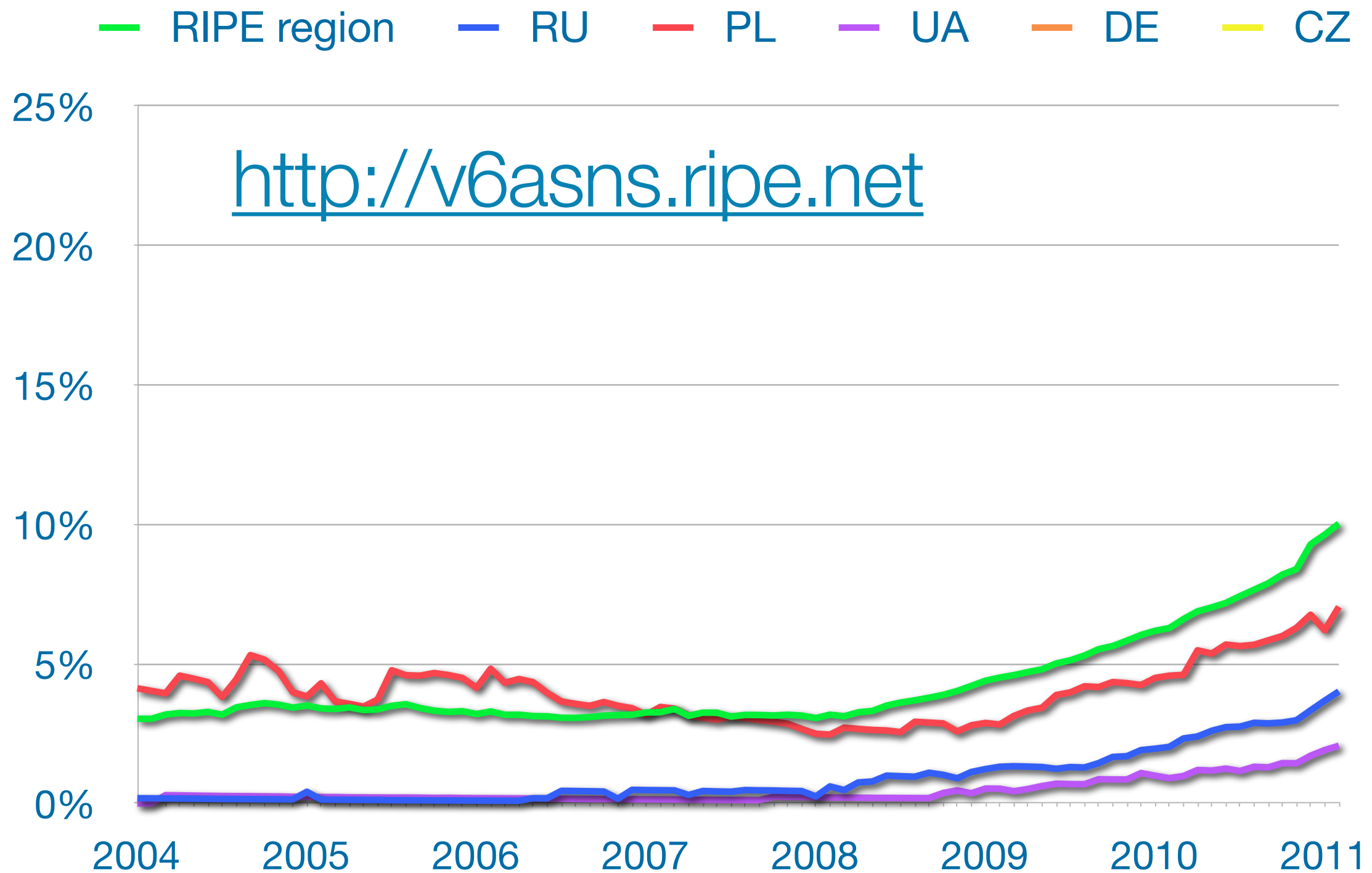
Networks Announcing IPv6



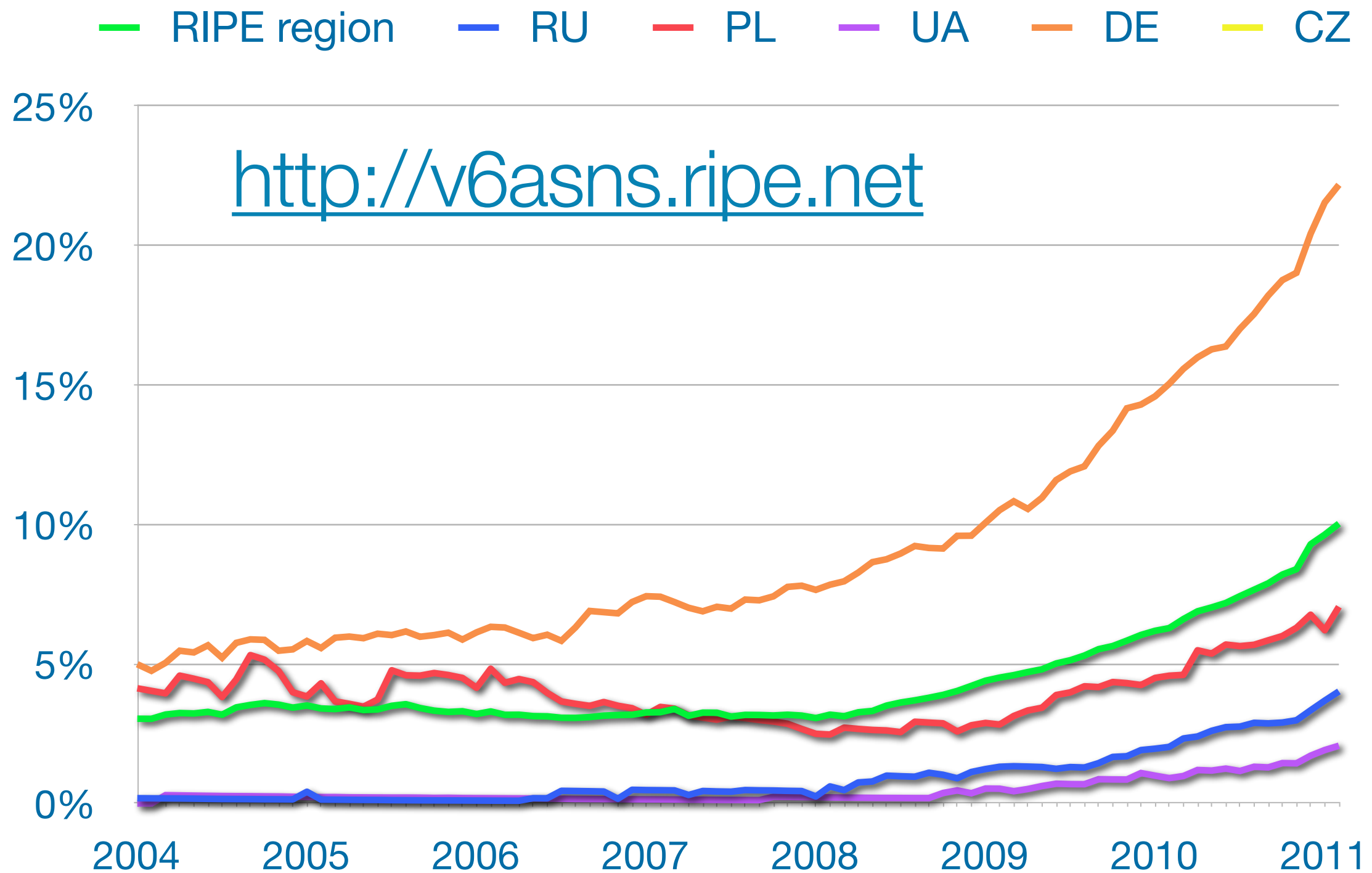
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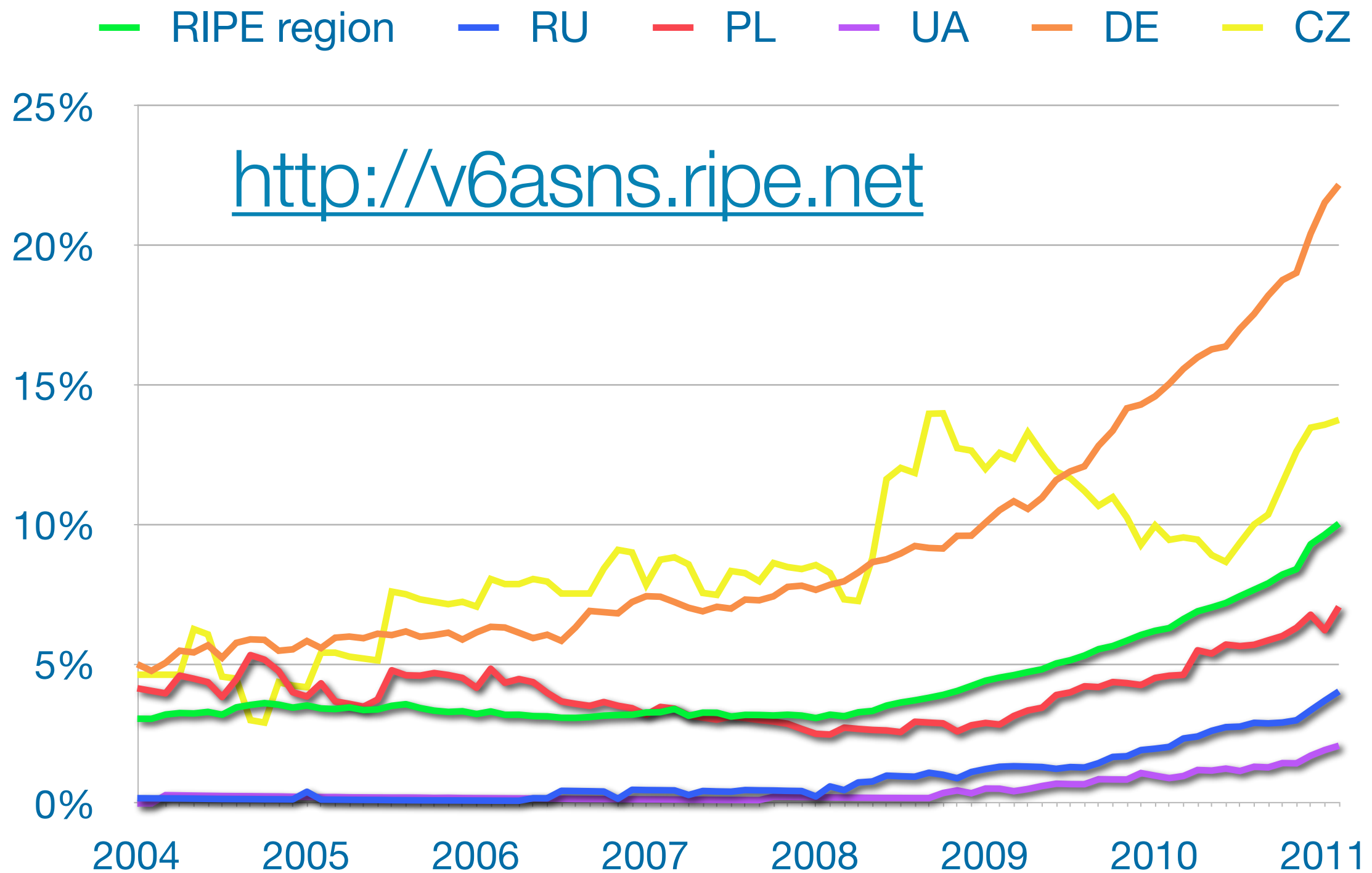
Networks Announcing IPv6



Networks Announcing IPv6



Networks Announcing IPv6



IPv6 Transition Mechanisms

- Overview of transition mechanisms (in progress)
- Decisions tree for providers
 - Content providers or access providers?
 - Still enough IPv4 available or not?
 - Which transition mechanism possible?
- Measurements of certain mechanisms:
<http://labs.ripe.net/Members/emileaben/6to4-how-bad-is-it-really>
<http://labs.ripe.net/Members/emileaben/6to4-why-is-it-so-bad>

IPv6 CPE Survey and Matrix

	AVM (FRITZ!Box)	Draytek	Zyxel	Juniper (ScreenOS)	Juniper (JUNOS)	Cisco	D-Link
Hardware version required	7270, 7570	Vigor 2130 series, vigor 120	All models released in 2010	All	All	Most SOHO boxes	Most new boxes
Minimum software level required	"Labor" only	2130:v1.3.0 120:v3.2.4.3	Per model, check vendor	6.1	10.2	12.4T or 15	see notes
Status	Beta	General deployment	Beta	General deployment	Early deployment	General deployment	General deployment
WAN layer 2							
Docsis 3.0	vendor	no	no	no	no	-	-
ADSL 2+	confirmed	120 only	vendor	confirmed	confirmed	confirmed	no
VDSL	confirmed	no	vendor	no	vendor	-	no
Ethernet	confirmed	vendor	vendor	confirmed	confirmed	confirmed	confirmed
FTTx	-	vendor	vendor	no	no	-	no
WAN Layer 3							
PPPoA	confirmed	no	vendor	no	vendor	confirmed	no
PPPoE	confirmed	confirmed	vendor	confirmed	confirmed	confirmed	vendor
RFC1483/bridge	vendor	no	vendor	no	no	vendor	no
RFC1483/routed	-	-	vendor	vendor	vendor	vendor	no
Plain IP	-	vendor	vendor	confirmed	confirmed	confirmed	no

New CPE Survey Released

- Targeting vendors, operators and users
- Focus on three basic questions:
 - What does the system claim to be capable of?
 - Which of these options are you using now?
 - How good or easy-to-use are those features?
- Over 70 responses received already
 - Some initial results on next slides

<http://labs.ripe.net/Members/marco/ipv6-cpe-survey-please-participate>

IPv6 Training

- Training for Local Internet Registries
 - Targeted at LIRs/RIPE NCC members
- IPv6 Roadshows
 - Targeted at technical staff operating governments and enterprise networks
 - Collaboration with industry and regional Network Operators Groups (NOGs)
- Presenting at various conferences and events

World IPv6 Day

- Event in Amsterdam <http://www.ipv6day.nl>
 - Co-organised by various organisations
 - Workshops, tutorials, keynote speakers, panels, measurements, press room
 - Targeted at IT industry, students, ISPs, press...
- Event in Moscow <http://www.enog.org>
 - Part of Regional Meeting/ENOG
- RIPE NCC Measurements and Monitoring

Questions?

