

# RIPE Labs

## Operators Tools, Ideas, Analysis

IETF 80, IEPG, Prague, 27 March 2011

Mirjam Kühne, RIPE NCC



# What is RIPE Labs?

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- It's a web site, but more importantly:
  - It is a platform and a tool **for the community**
  - Launched in Sept. 2009, major update in June 2010
- You can:
  - Test and evaluate new tools and prototypes
  - Contribute new ideas and research results
  - Provide feedback and discuss with others

<http://labs.ripe.net>

# Why RIPE Labs?

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- Faster, tighter innovation cycle
  - Provide useful prototypes early in the development
  - Adapt to changing environment and requirements more quickly
- Closer involvement of the community
  - Openness
  - Make it easier and more effective to provide feedback and suggestions

# <http://labs.ripe.net>

Project Pages

Twitter Feed

Tag Cloud

Comments

My Folder

Articles

The screenshot shows the RIPE Labs website. At the top left is the RIPE NCC logo (RIPE NETWORK COORDINATION CENTRE). To the right is a search bar labeled 'Site Search' with a 'Search' button. Below the logo is a yellow navigation bar with 'RIPE Labs' and user information for 'Mirjam Kühne', including 'Log Out' and 'My Folder' links. A breadcrumb trail reads 'Home • Users • Data Repository • RIPE Database • About'. Below this is a 'You are here: Home' indicator.

The main content area features a 'RIPE Labs' banner with a lightbulb icon and the text 'Innovative Internet tools & ideas'. To the right of the banner are three green checkmarks with the following text: 'Share experience', 'Showcase tools', and 'Present research'. The banner also includes a 3D bar chart graphic.

Below the banner is a toolbar with buttons for 'contents', 'view', 'edit', 'syndication', 'rules', 'sharing', 'display', and 'add new...'. The main content area is titled 'New contributions' and includes an RSS icon. Two articles are listed:

- IPv6 CPE Surveys** by Mirjam Kühne — 18 October 2010 10:58. It includes a '0 comments' badge and a 'Read more' button. The text below reads: 'Please find below all previous versions of the IPv6 CPE survey and matrix with the most recent version on top.'
- New Release of the Resource Certification System** by Alex Band — 15 October 2010 11:35. It also includes a '0 comments' badge.

On the right side, there is a 'tagcloud' section with a list of tags: 'api', 'apnic', 'arin', 'asns', 'cpe', 'dns', 'dnssec', 'database', 'netsense', 'pi', 'rex', 'ripe', '60', 'ripe', 'db', 'ripe', 'meeting', 'ripe', 'ncc', 'ris', 'rpsl', 'allocation', and 'atlas'. Below the tagcloud is a 'Follow us on Twitter' section with a 'Subscribe to @mir\_ripe\_labs' button and a Twitter icon. It contains two tweets:

- A tweet from 15 October 2010 12:17: 'New resource #certification system released (#rpki). Read more details on #RIPELabs: http://bit.ly/aJVvGI'.
- A tweet from 12 October 2010 10:25: '@patrikhson Yes, the addresses are included in the count, but special policy or changes in policy might extend the life-span of IPv4.'

At the bottom right of the page is the RIPE NCC logo.



# Currently on RIPE Labs

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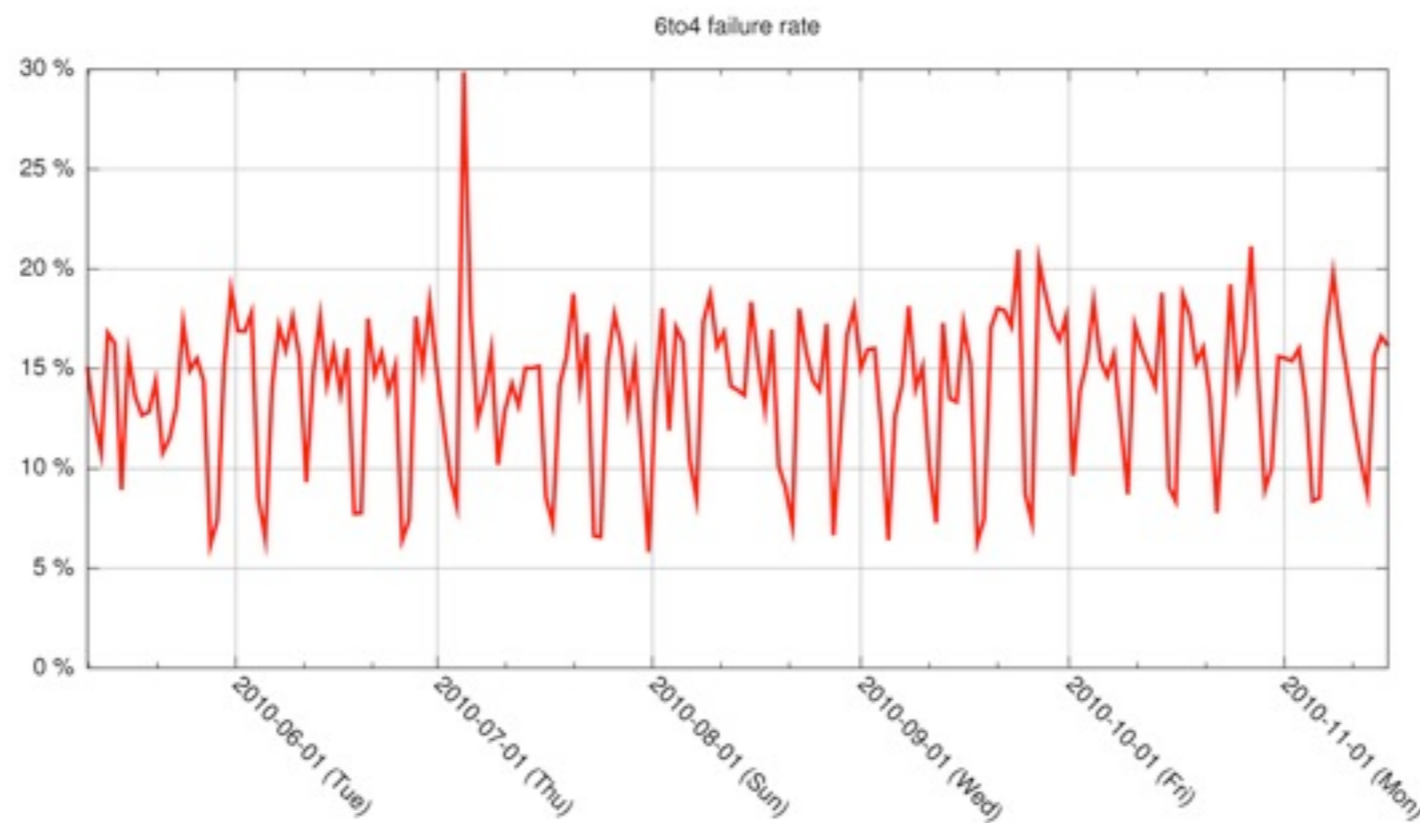
tagcloud

cpe dns dnssec  
database  
rex rpsl atlas  
certification  
datarepository  
ipv4 ipv6  
measurements  
policy reputation  
ripestat  
root-servers  
routing  
statistics  
tools

- IPv4 and IPv6 measurements
- RIPE Database API and tools
- RIPE Atlas
- Statistics and Measurements
- Tools (RIPEstat and more)
- and much more...

# 6to4 Brokenness (Emile Aben)

- Measured that 15% of connections fail
- Recent analysis done on relation between firewall settings and 6to4

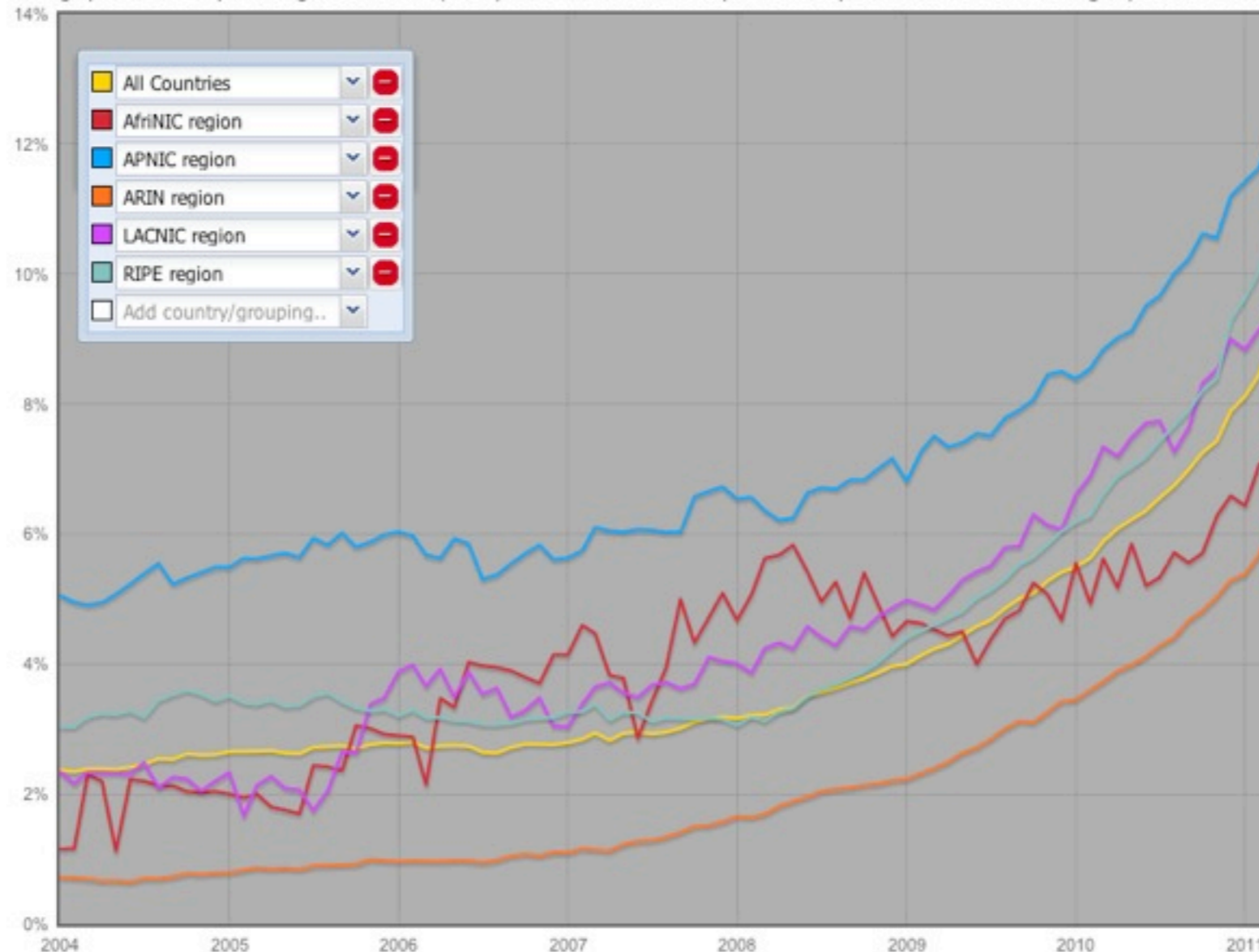


<http://labs.ripe.net/Members/emileaben/6to4-why-is-it-so-bad>

# IPv6 enabled ASes in Global Routing

- Any country or region possible
- Updated daily, permalink provided

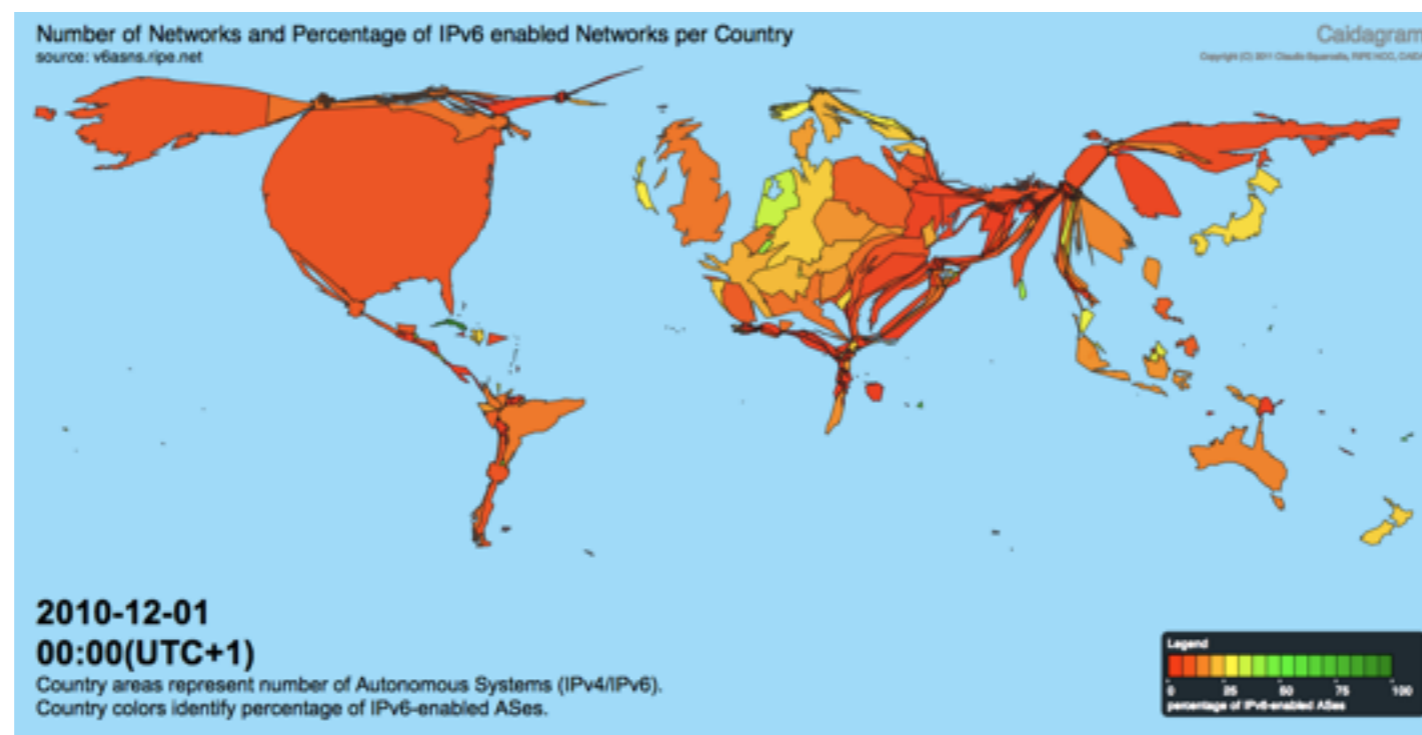
This graph shows the percentage of networks (ASes) that announce an IPv6 prefix for a specified list of countries or groups of countries



<http://v6asns.ripe.net>

# Caidagram (Claudio Squarcella & CAIDA)

- Visualising geographically annotated Internet measurements
  - Example shows IPv6 enabled ASes per continent

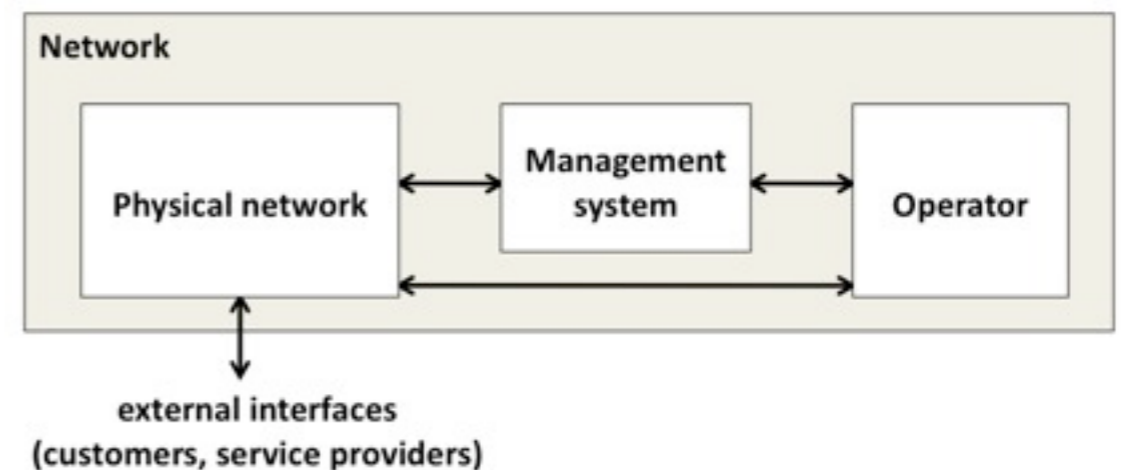


<http://labs.ripe.net/Members/csquarce/caidagram-visualization-tool>



# Network Complexity (Michael Behringer)

- How to deal with network complexity
  - A function of three elements (see image)
  - Now mostly theoretical
  - Looking for more input from operators



- Workshop/BoF planned for RIPE 62

<http://labs.ripe.net/Members/mbehring/network-complexity-and-how-to-deal-with-it>

# RIPE ATLAS - Active Measurements

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- New project to build next generation Internet measurement network (started in Nov.)
  - Aims to supports thousands of measurement nodes
  - Can be hosted by ISPs, IXPs, individuals...
- Currently 350 active probes worldwide

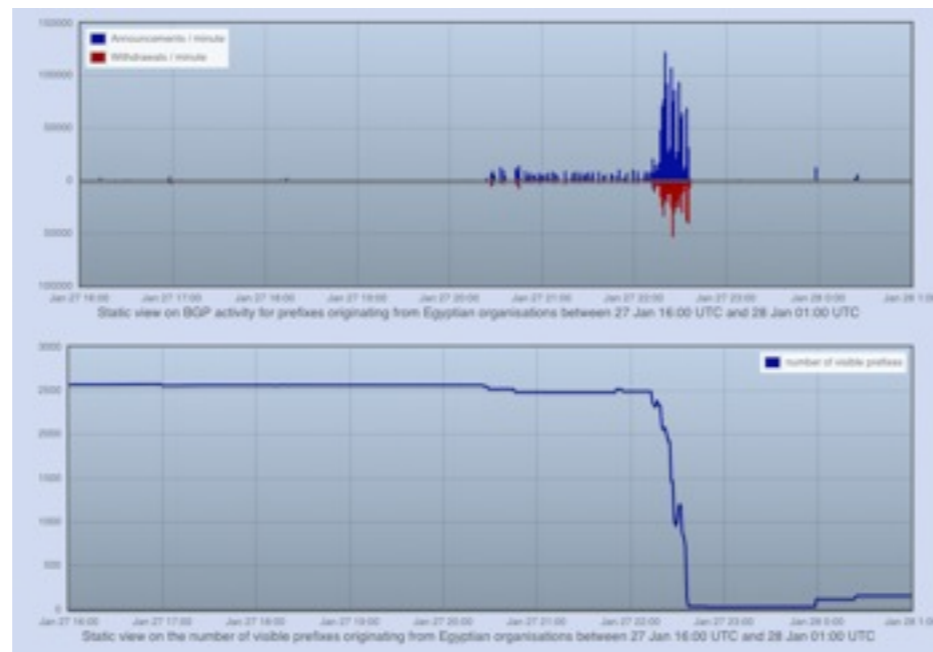
<http://labs.ripe.net/atlas>

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



# RIPEstat - stat.ripe.net

- Modular and Extendable Toolbox
  - Developed together with community - you!
- Shows IPv4/IPv6 and ASN info
  - Statistics (time, aggregation, zoom)
  - Status (real-time, aggregation, zoom)



# Reputation System to Fight Spam

- Work done by John Quarterman and U-Texas
  - Economic incentives for providers
  - Various organisational layers
  - ASN rankings and spam blocklists

ASN	CC	Description	ASN	CC	Description
1	9829	IN BSNL-NIB	1	7643	VN VNPT-AS-VN
2	24560	IN AIRTELBROADBAND-AS-AP	2	9829	IN BSNL-NIB
3	7738	BR T da Bahia S.A.	3	24560	IN AIRTELBROADBAND-AS-AP
4	7643	VN VNPT-AS-VN	*4	17974	ID TELKOMNET-AS2-AP
5	6849	UA UKRTELNET JSC UKRTELECOM	*5	2856	GB BT-UK-AS
*6	27699	BR T DE SAO PAULO SA	6	25019	SA SAUDINETSTC-AS
*7	9050	RO RTD ROMTELECOM S.A	7	6849	UA UKRTELNET JSC UKRTELECOM
*8	5384	AE EMIRATES-INTERNET	*8	12322	FR PROXAD Free SAS
*9	8167	BR TELESC	*9	18403	VN FPT-AS-AP
10	25019	SA SAUDINETSTC-AS	10	7738	BR T da Bahia S.A.

<http://labs.ripe.net/Members/jsq>

# Suggestion and Questions

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- Please take a look and **participate**
- Leave a comment under an article
- Questions and suggestions to **labs@ripe.net**

**<http://labs.ripe.net/>**

# Questions?

