

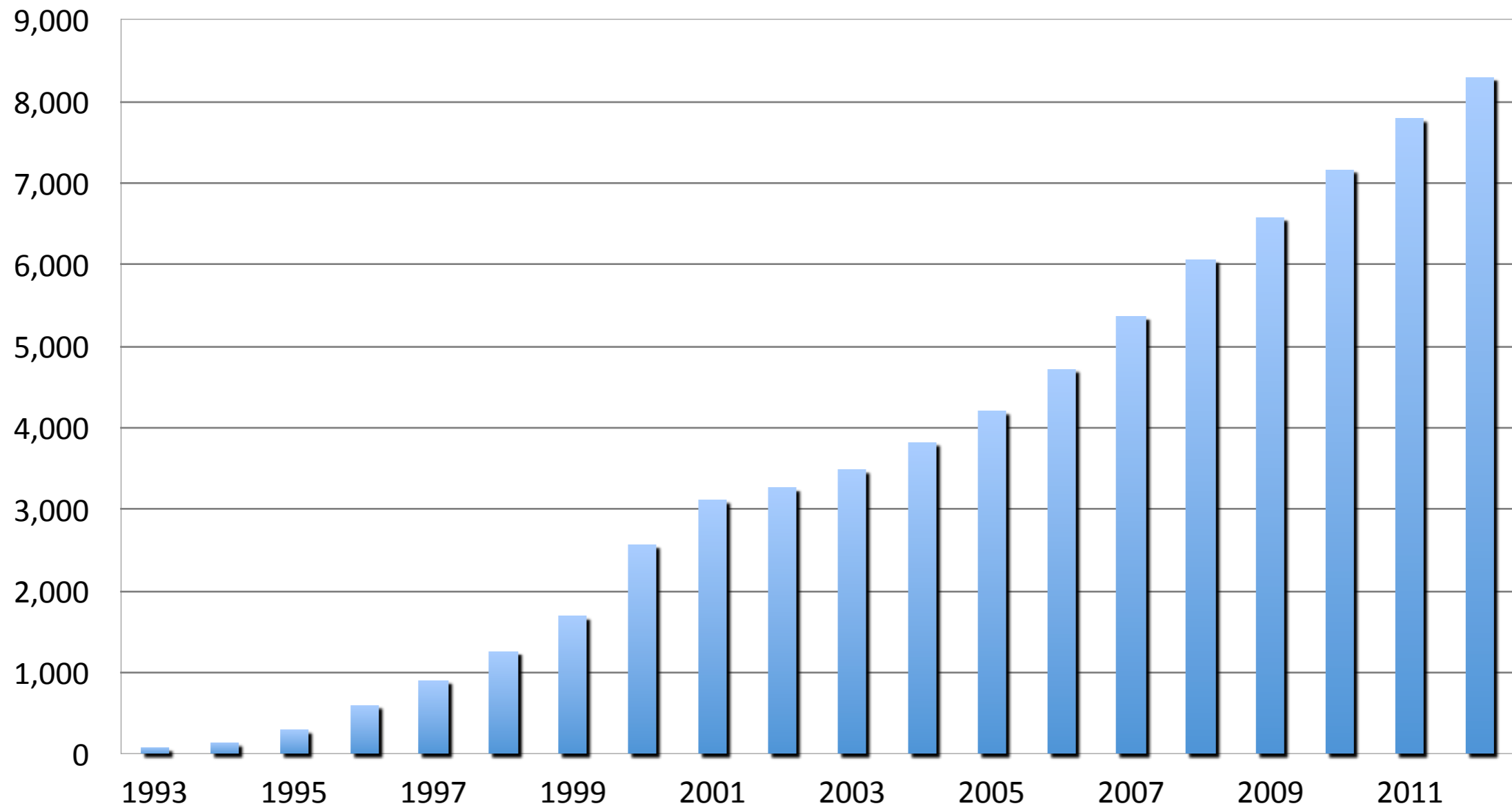
RIPE NCC Update

RIPE NCC Services Working Group
Axel Pawlik
Managing Director



Membership Growth

- As of 31 August 2012 - 8,279 LIRs



Too Much Information...

- Legal and Corporate Governance
- Talk to us...
- Serving our Members
- Development Work
- Measurements and Remote Infrastructure
- Cooperation & Outreach
- ...

Legal and Corporate Governance

RIPE NCC Members With Multiple LIRs

- After carrying out regular due diligence audit, we found that some legal entities are responsible for multiple LIRs
- This means these entities have multiple memberships and thus multiple voting rights
- Under Dutch Civil Law a legal entity can only have *one voting right* in an association
- Affected members have been contacted
- Policy implications on use of last /8

Dutch Police Order Update

- On 8 November 2011, Dutch police presented an order to "lock" registrations in the RIPE DB
- RIPE NCC is seeking clarification on the legal basis of the order
 - Hearing 29 November
 - Decision in 2013
- Two affected blocks of IPv4 address space were de-registered after non-payment of membership fees
- These blocks were then re-allocated in August, according to procedures

Regular Requests for Information

- Typically from LEAs
- Usually referred to public information
 - with a bit of education / background
- Recent “training workshop” with SOCA
 - excellent feedback
 - possibly evolving into half-day training

New Quality of Request

- Fax to Chairman, cc to Barack Obama et al
- From Group called “*United Against Nuclear Iran*”
- Has been answered by acknowledging receipt

17 Sep 2012

On 7 September 2012, the RIPE NCC received a fax from United Against Nuclear Iran (UANI) questioning whether our relationships with Iranian RIPE NCC members are in violation of United Nations (UN) or European Union (EU) sanctions against Iran.

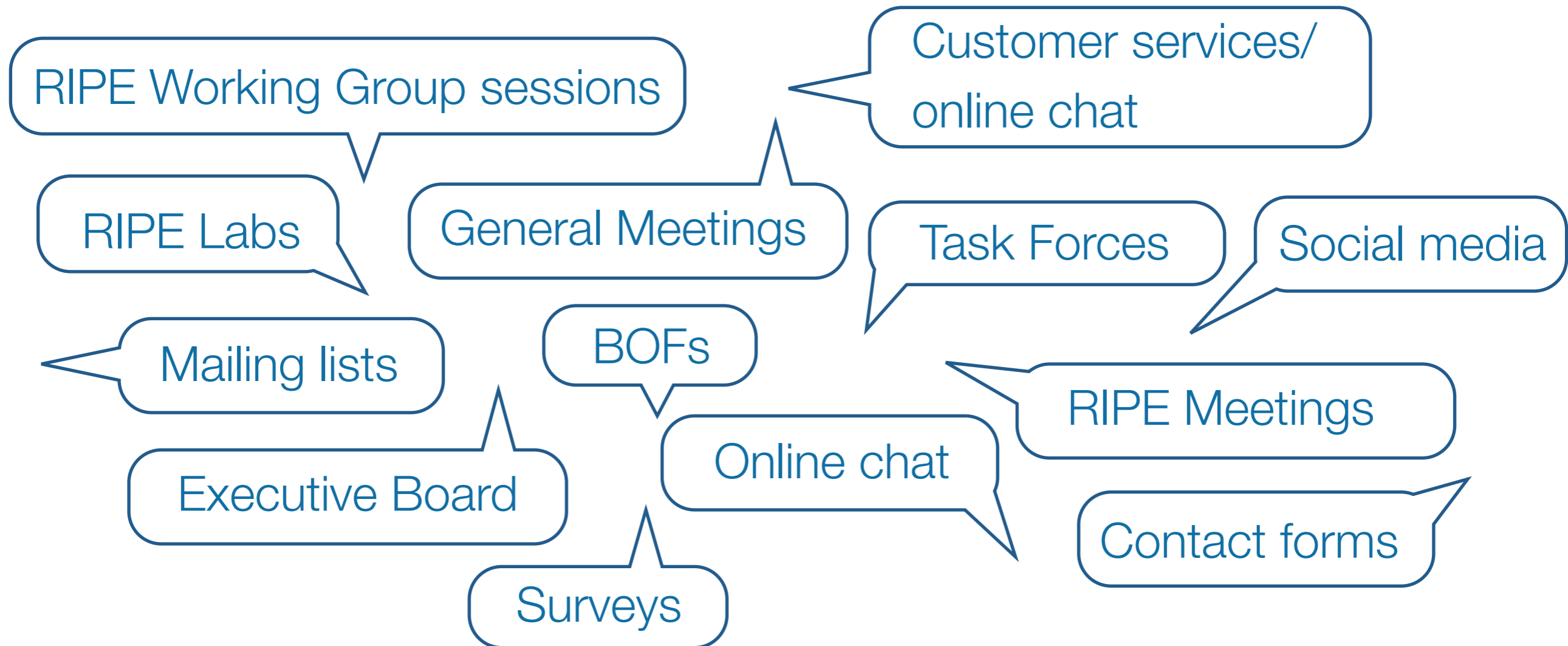
The RIPE NCC is in contact with the Dutch Ministry of Foreign Affairs to ensure that we operate in accordance with Dutch law and all applicable international sanctions. Our advice from the Ministry has been that the RIPE NCC is not in violation of these sanctions. However, we will investigate in cases where new information is provided to us and we will ensure that changing circumstances do not place the RIPE NCC in violation of sanctions.

- Reviewing due diligence procedures
- Contacting authorities for “exemption”, “license”

Talk to us...

Feedback Mechanisms

- Multiple feedback mechanisms include:



- Tailored for different sectors of the community...

Membership and Stakeholder Survey (1)

- Membership and Stakeholder Surveys give **valuable** feedback: 825 respondents in 2011
- Enables us to gauge membership and key stakeholders' opinions to help formulate long-term organisation strategy
- 2011 survey identified more than 50 key areas that we could improve on
- Over the last 12 months we have been actively working to improve these key areas and will publicly document these developments shortly

Membership and Stakeholder Survey (2)

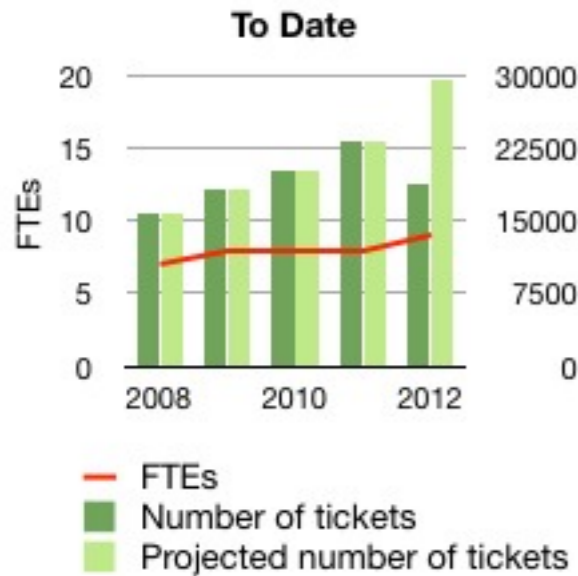
- Now planning to conduct surveys approximately every two years
 - In loose coordination with APNIC
- Dynamic nature of the industry and speed of developments
 - Membership community and other stakeholder groups change regularly
- Preparing for our next survey
 - to be launched at the RIPE 66 Meeting, Dublin, May

Serving our Members

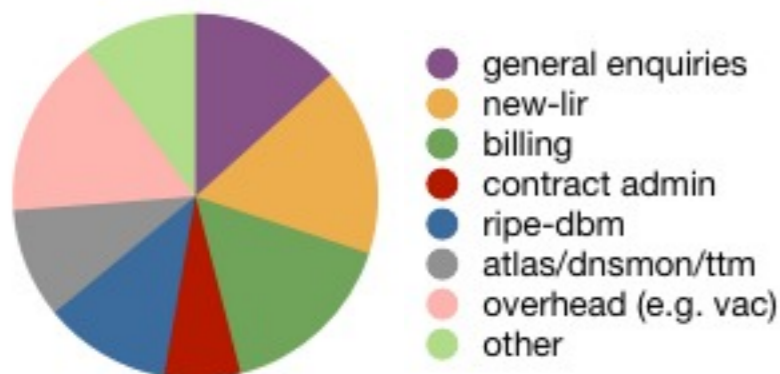
Operational Statistics

- Increasing ticket-load Customer Services and Registration Services

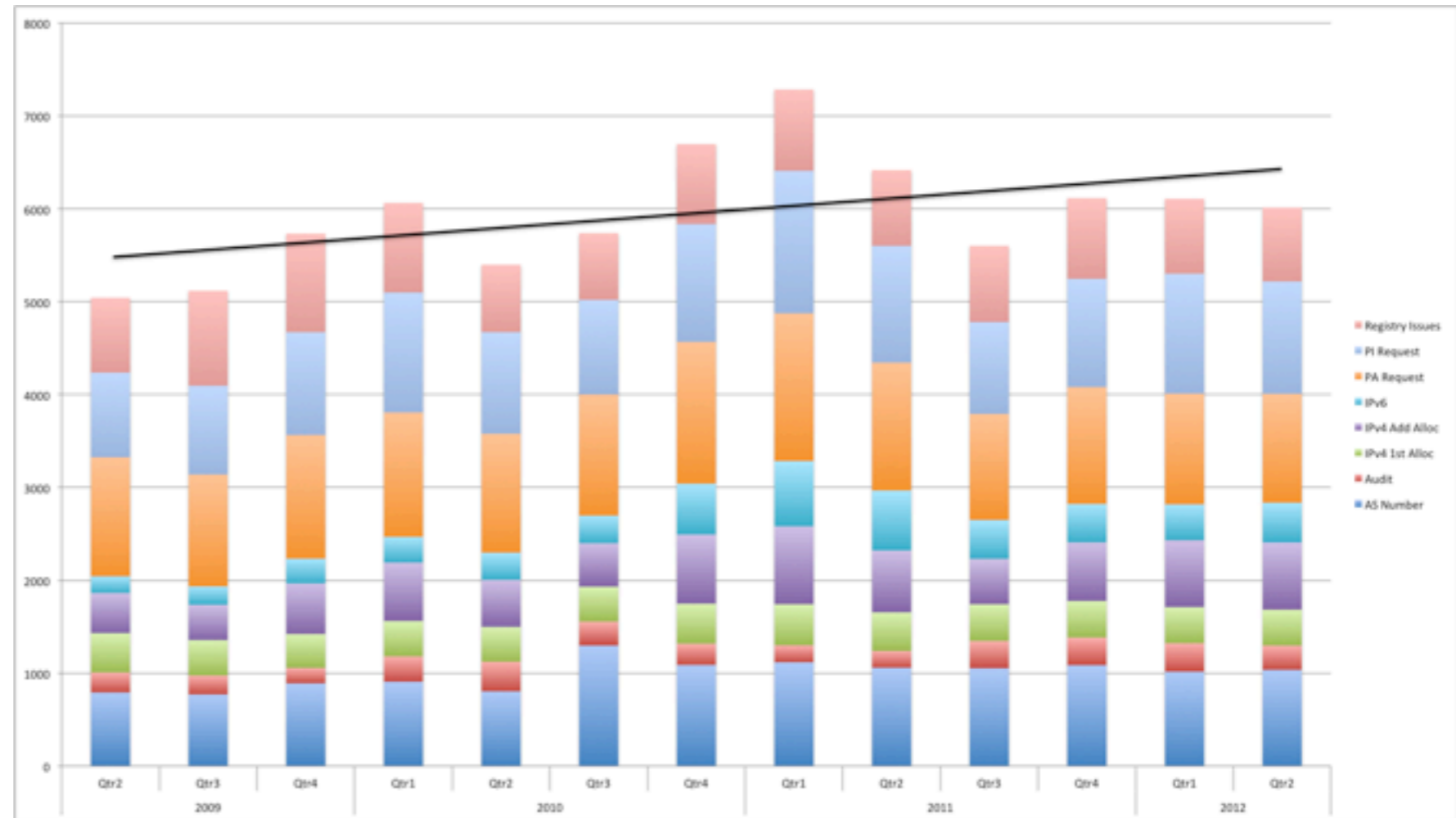
CS tickets



Division of time in 2012

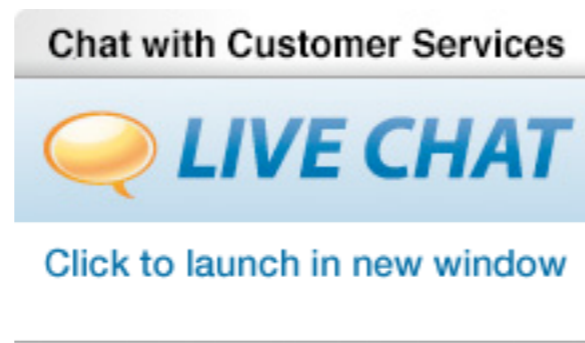


RS tickets



Customer Contact

- 3-Question post-contact survey since January
 - 93 responses, 83% of customers satisfied



- Live Chat from 13:00 to 17:00 CET
 - doubled availability
 - very happy customers (5 out of 5 stars)
 - 314 sessions since August 2011

Registration Services Developments

- 2012 main focus - stable approach to last /8
- Improved communication & coordination support
 - Proactive phone calls
- Coordination support
 - Helping members solve problems by locating contacts
- Further improve IPv6 support to LIRs
- Introduce Live Chat for RS (Q1 2013)

Audit Activity Development

- Drivers

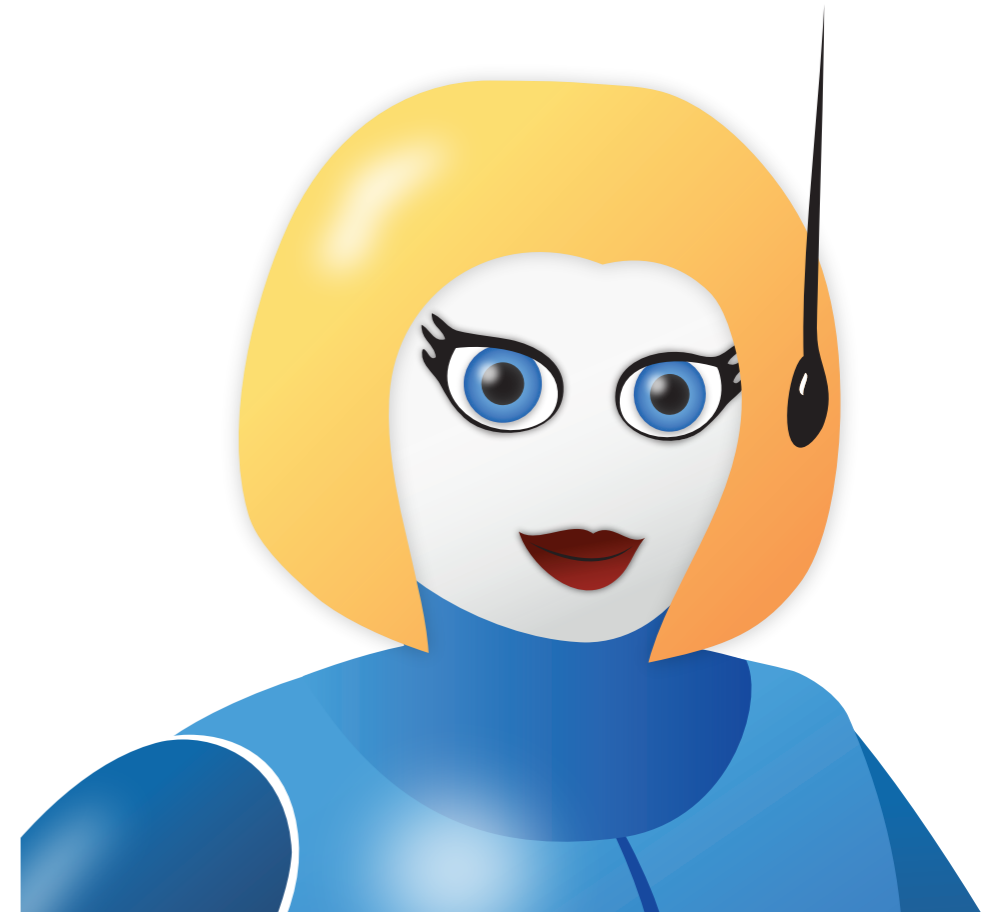
- Accurate, complete and current RIPE Registry
- Increase reliability perception of RIPE DB
- Measure & publicise reliability of organisation data
- Regular contact with RIPE NCC members after reaching last /8
- Ease member maintenance of RIPE Registry data

Audit Activity Development (2)

- Activities
 - Selected and reported audits
 - Policy violations
 - Quality audit
 - Every three years by RIPE NCC
 - Audit result visible in RIPE DB objects
 - LIR support with Reverse DNS delegation checking; BGP visibility; RPKI status; Routing Registry
 - Facilitate LIR self-auditing (next phase)

Training Services Department

- IPv6, LIR and RR Training courses
 - More technical and more hands-on
- IPv6 Roadshow
- Presentations at conferences
- Get Comfy: learn online!
 - Webinars
 - Instructional movies
 - New Database videos, explained by Debbie
 - IPv6 videos, transitioning techniques (Q4)



IPv6 CPE Survey 2012

- Enquiries about IPv6-ready CPE is a very common request we get
- Things are improving in terms of availability
 - A lot of new CPE support IPv6
- One place to find an overview of which models are available in your region

IPv6 ACT NOW

Home News Info Community Links FAQ Contact

How to Act Now World IPv6 Launch Transition Get IPv6 IPv6 Events Training Interviews Statistics IPv4 Exhaustion

CPE Survey Matrix

Hide Matrix Filter Options Uncheck all row filters View Entire Matrix Reset Matrix

D-Link Technicolor Cisco D-Link

Filter/Compare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturer:	D-Link	D-Link	D-Link	D-Link	D-Link	D-Link	D-Link	D-Link
Model number:	DIR-655L A1	DIR-635 A1	DIR-625 C1	DIR-655 B1	DIR-653 A1	DIR-652 B1	DIR-645 A1	DIR-636L A1
Minimum Software version:	V1.00	v1.02	v3.00	v2.07	v1.00	v2.00	v1.03	v1.01
Availability per region Filter by Country:	Europe North America South America Middle East East Asia	North America Middle East Russia and CIS Asia	Europe North America Asia	Europe South America Middle East Russia and CIS Asia	North America	Europe	Europe North America South America Middle East Russia and CIS Asia	Europe North America South America Middle East Russia and CIS Asia
Network Support WAN: ADSL	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Network Support WAN: VDSL	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Network Support WAN: Ethernet	Available	Available	Available	Available	Available	Available	Available	Available
Network Support WAN: Gigabit ethernet	Available	Available	Available	Available	Available	Available	Available	Available

Development Work

Creating Value For Members

- Our mission:
Making life of our members easier with tools and services
- Examples:
 - IP address management
 - Tools for data processing and workflows
 - Tools for data analysis
 - Increase in knowledge level
 - Training and education

Creating Value For Members

- RESTful API for RIPE Database
 - Very popular: >500,000 queries per day
- IP Analyser - API for private member data about resources
 - *hold on for Alex' presentation...*
- RIPE NCC RPKI Service and Validation Toolset
 - Make more informed BGP routing decisions
 - 1,105 members certified their resources, 840 ROAs

Resource Certification (RPKI) Developments

- As presented at RIPE 64, focus on four areas:
 - Security, Resilience, Operator Autonomy, Service Expansion
- Most work has gone into the back-end system
- Only visible change is a new user interface in the LIR Portal to manage ROAs
- Participation in IETF (sidr) ongoing

Resource Certification (RPKI) Developments

- Most frequently heard feature request:
 - Allow PI End Users to get a certificate and create ROAs
- The RIPE NCC position:
 - Resource Certification is a *member* service
 - We need to have a *direct* relationship to make an authoritative statement about holdership

PI End Users and Legacy holders should become members to use the Resource Certification (RPKI) Service

RIPE Database Redevelopment

- We are redeveloping the 12-year-old C and Perl combination of code for the RIPE Database
- New code is OS independent, well-documented and easy to maintain
- We can easily add functions per community requests
- Drop-in replacement for existing RIPE Database server software users

RIPE Database Redevelopment, Future

- Finishing the update code and then providing the code to the community
- Working on fresh client side tools (Route filter generator, whois client) based on RIPE Database API
- Rethinking DB organisation to facilitate the “Strong Registry” concept

NRTM / Proxy as Membership Services

- Near Real Time Mirroring (NRTM)
 - local copy of an anonymised mirror of RIPE Database in real time sync
 - 22 users, of which 14 members already
- RIPE Database Proxy
 - redirect queries to us on behalf of their customers
 - per IP address limits are applied to their end users
 - 20 contracts, only 3 active users
- Maintaining the contracts involves a lot of administrative tasks

Measurements and Remote Infrastructure

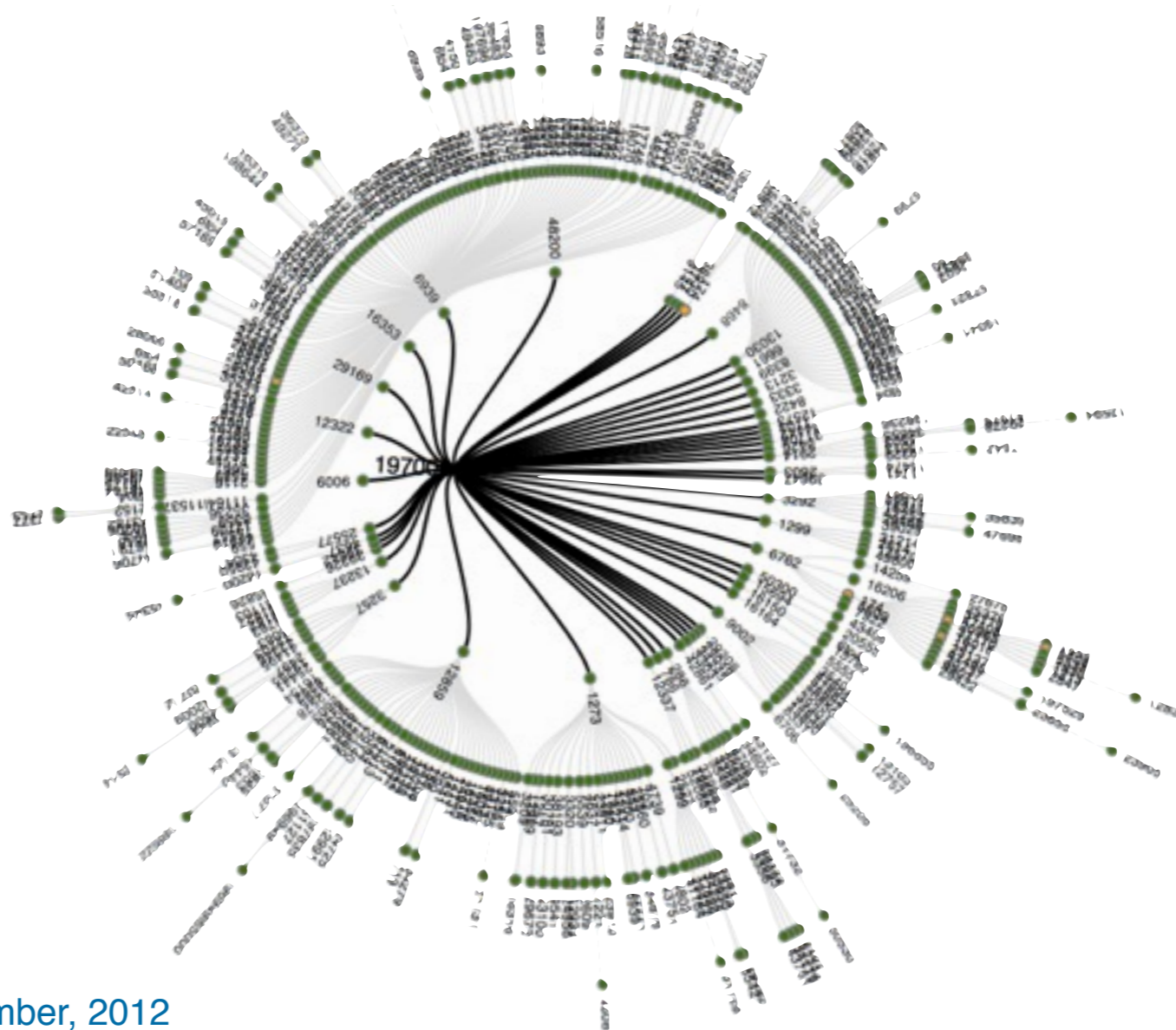
RIPE Atlas

- More value for the Community:
 - DNS, SSL-Cert measurements
 - More powerful user-defined measurements possible



RIPE Atlas

- More value for RIPE NCC members:
 - User-defined measurements available to **all** members
 - IPv6 Traceroute Measurements from 100s of probes



RIPE Atlas

- Plans:
 - Even more powerful user-defined measurements
 - RIPE Atlas Anchors
 - pilot starting now
 - goal: ~50 deployed in 2013



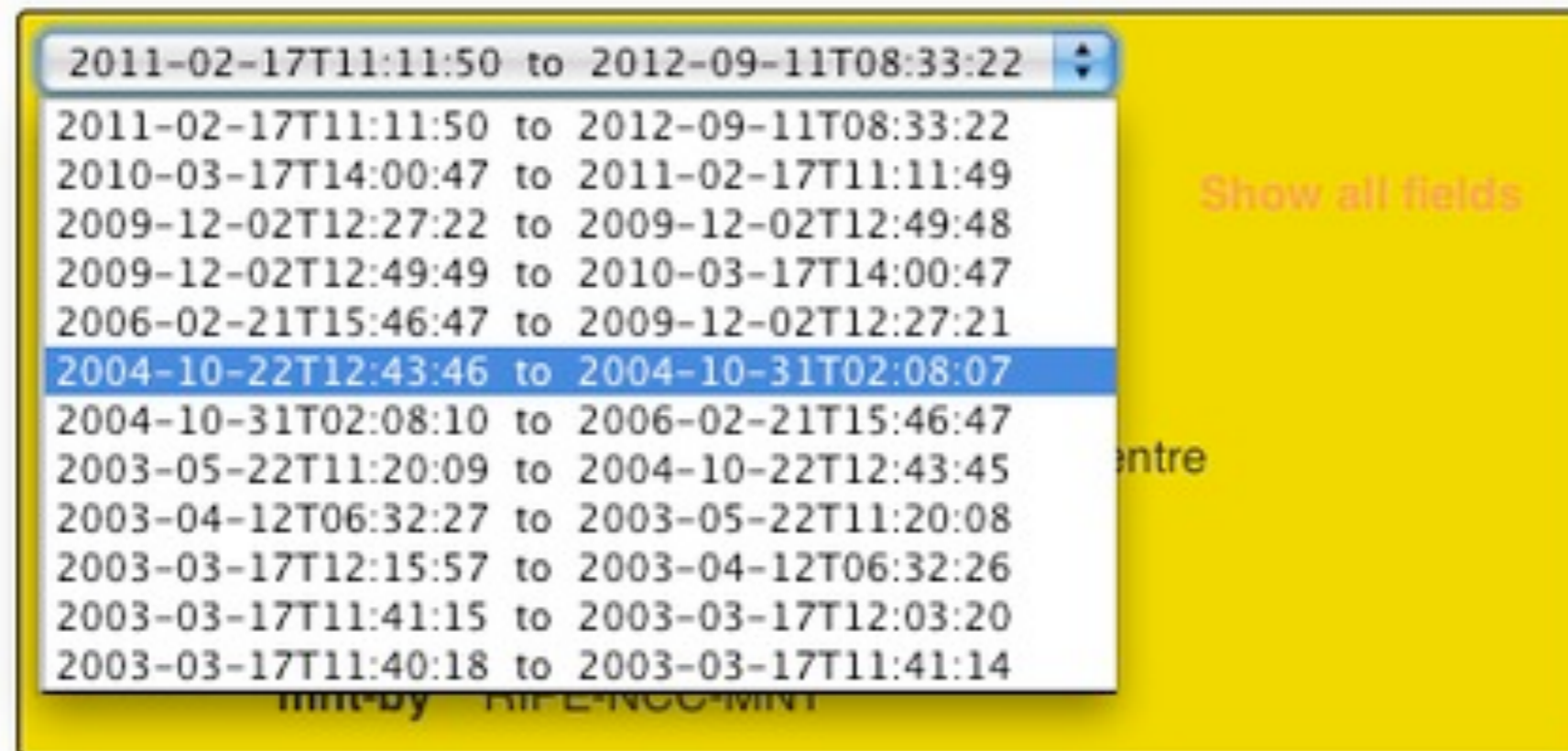
RIPEstat

192/8									12457	614	504	285	173	102	63	22	66	2	1						
193/8	10	9	15	25	45				4438	1473	985	272	156	127	26	14	110	17	5						
194/8	4	6	28	16	28				3155	1138	707	221	143	264	53	43	134	3							
195/8			14	14	20				1389	1604	542	52	14	454	63	55	127								
196/8									394	121	114	64	80	63	19	4	21	4	6						
197/8											26	6	21	30	22	8	15	4	6	10	1	2			
198/8									5202	782	423	249	200	88	51	24	86	9	8						
199/8									2903	666	1414	808	139	72	39	24	63	16	6			1			
200/8									854	157	97	198	343	223	56	38	17	2		1			1		
	/32	/31	/30	/29	/28	/27	/26	/25	/24	/23	/22	/21	/20	/19	/18	/17	/16	/15	/14	/13	/12	/11	/10	/9	/8

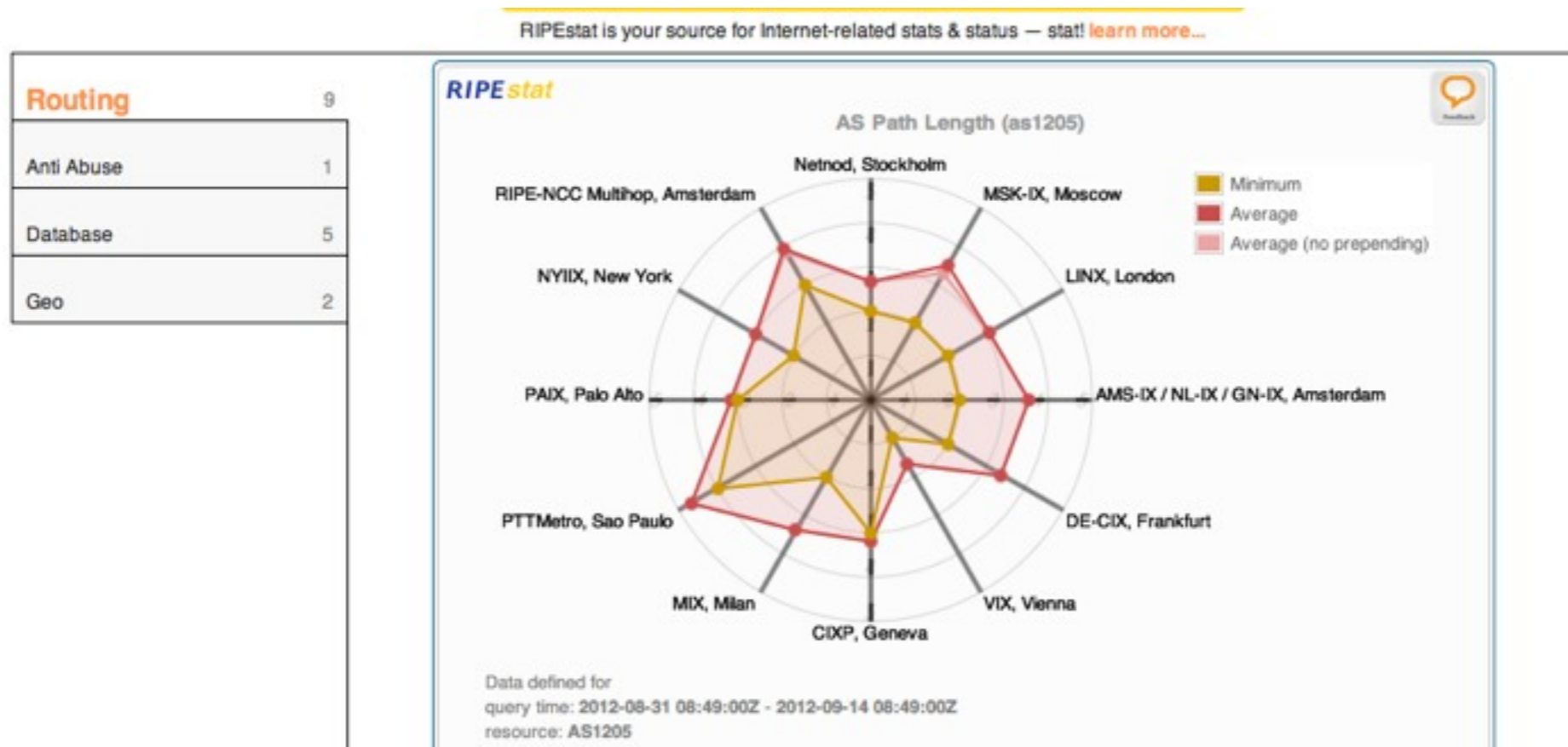
- More Value for the community:
 - Consolidation: embeddable, data calls, performance
 - Prefix size distribution

RIPEstat

- More Value for RIPE NCC members:
 - Better linked from LIR Portal
 - History demo in database object browser



RIPEstat

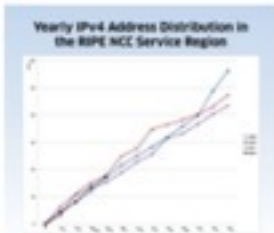


- Plans:
 - Results easier to share
 - New tabbed layout

Making Sense of It All

1 comment IPv4: Business As Usual

Daniel Karrenberg — May 29, 2012 05:00 PM



In anticipation of reaching the last /8 of IPv4 addresses in the RIPE NCC service region, we have been looking at the number of IPv4 addresses the RIPE NCC handed out over the last four years. The curves look surprisingly uniform.

0 comments World IPv6 Launch - Lasting Effect on Content

Emile Aben — Jul 23, 2012 03:30 PM



Now that World IPv6 Launch is weeks behind us it's interesting to look at what long-lasting effects it had.

Tags: statistics, measurements, ipv6launch

[» Read more](#)

0 comments Internet Traffic After First Round of Euro 2012 Matches

Fergal Cunningham — Jun 15, 2012 03:10 PM



In this article we show some interesting traffic graphs seen at IXPs during the first round of matches.

Tags: World IPv6 Launch - Results from HTTP Measurements

Felix Wilhelm — Aug 23, 2012 08:55 AM

Filed under: measurements, ipv6launch, ipv6

3

For World IPv6 Launch the RIPE NCC measured 60 selected participants from over 50 vantage points all over the world. In this article we present the DNS and HTTP measurement results from a 4-day period as a 3 minute movie. We will discuss general observations and look at some specific events.

Introduction

In a previous article we described the measurements the RIPE NCC performed for World IPv6 Launch. With ping and traceroute we measured performance and reachability on the network layer. On the application layer we measured availability of HTTP service, over both IPv4 and IPv6. These results are visualised in dashboards, for each IP version a matrix which shows the outcome of the latest HTTP measurements from each vantage point to each measured participant (you can click on the images to get a bigger version).



0 comments First Measurement Results of World IPv6 Launch

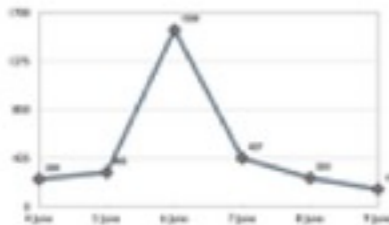
Mirjam Kühn



Tags: ipv6launch, ipv6

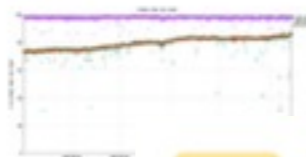
0 comments World IPv6 Studies

Ann Barcomb



0 comments De-bogonising 128.0.0.0/16

Kjell Leknes — Jun 15, 2012 10:06 AM



Please find below an update of our effort to help network operators clean-up redundant settings with respect to 128.0.0.0/16

Tags: routir

offer
looks

0 comments A Use Case for IPv6 Reachability Testing with RIPE Atlas

Vesna Manojlovic — Jul 03, 2012 12:55 PM



RIPE Atlas was used to perform IPv6 reachability test IPv6 Launch. O usage statistics that this feature even after the "launch" is over.

Tags: atlas

3 comments Internet Traffic During the 2012 Olympics

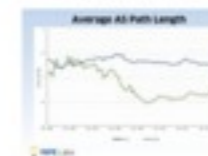
Fergal Cunningham — Sep 04, 2012 11:45 AM



Following on from the European Championship earlier this year, we looked at changes in Internet traffic volume at IXPs.

0 comments Update on AS Path Lengths Over Time

Mirjam Kühn — Sep 10, 2012 09:05 AM



One way to determine the denseness of the Internet, or its "interconnectedness", is to look at the path length between Autonomous Systems (ASes). A while ago we looked at that and also at differences between IPv4 and IPv6 networks. Has this changed in the meantime? See our findings

below.

Tags: routing

[» Read more](#)

5 comments Internet Traffic During the European Championship 2012

Fergal Cunningham — Jun 08, 2012 04:05 PM

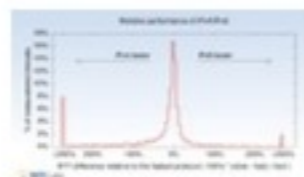


The European Football Championship was the third most watched event in the world (after the World Cup and the Olympics). Euro 2012 was held in Poland and Ukraine from June 8 to July 1, 2012. We teamed up with Euro-IX to look at Internet Exchange Point traffic during the tournament.

Tags: ixp, statistics

0 comments Measuring World IPv6 Launch - Comparing IPv4 and IPv6 Performance

Emile Aben — Jun 21, 2012 04:50 PM



Following on from last year's during IPv6 Day, we again looked at relative performance of IPv4 and IPv6 from the measurements we conducted. In this article we describe the methodology and the show the results of these measurements.

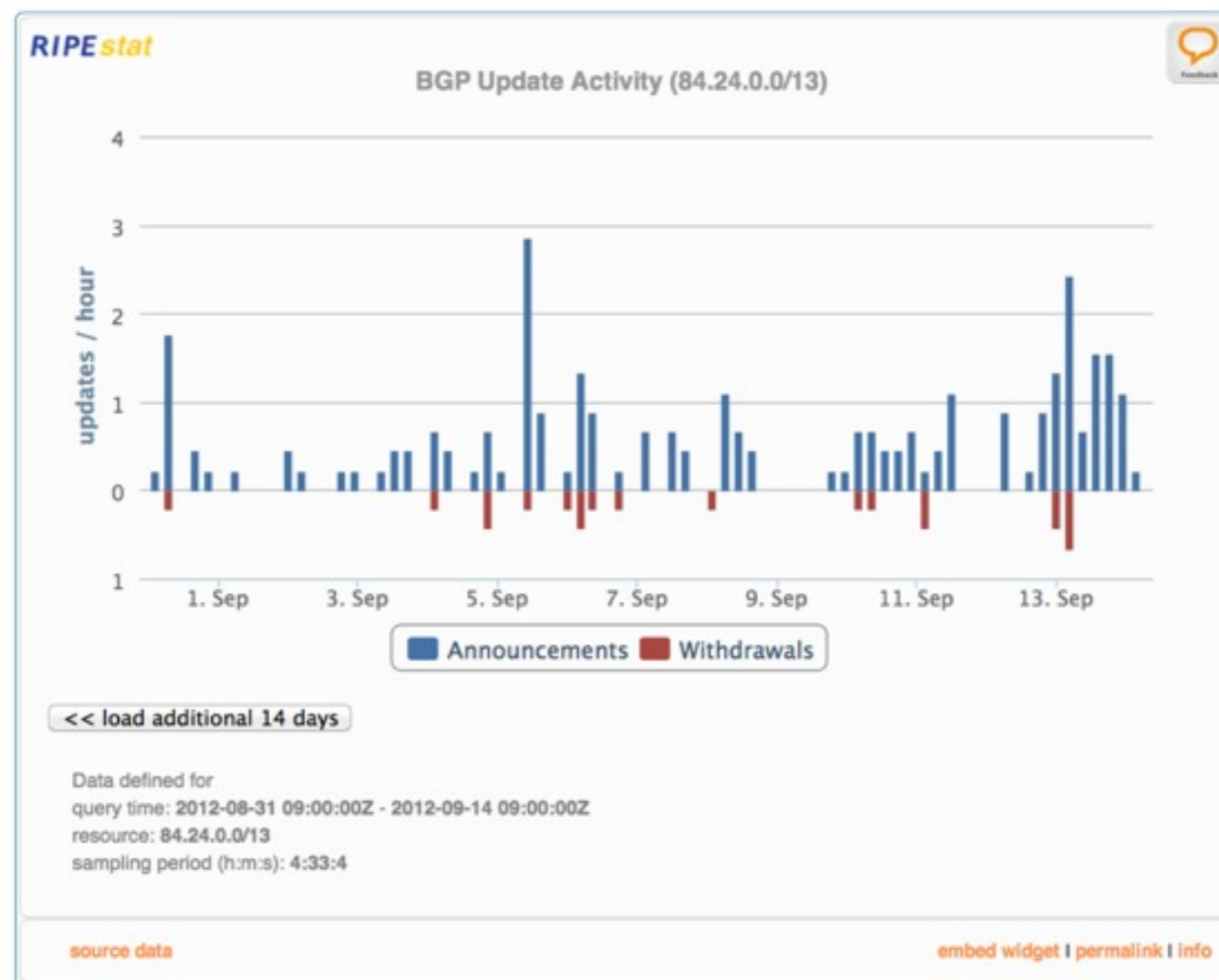
Tags: ixp, statistics

Tags: measurements, ipv6launch, ipv6

[» Read more](#)

RIS: Routing Information Service

- Business as usual
- User interface elements moving to RIPEstat!



TTM

- Continuing operation on user request
 - Many test boxes no longer maintainable
 - Back-end struggling hard
 - A drain of resources to keep running
 - Users not charged for 2012
- Most functionality will be in Atlas Anchors
- Proposal:
 - continue to operate with ‘best effort’ service level
 - terminate Q2/2013



DNSMON

- Business as usual
 - small outages caused by aging TTM back-end
- Will be moved to membership service in 2013
 - current users will have to become members
 - opening to all members in second half 2013
 - focus on TLDs and similar
- Plans:
 - Integration with RIPE Atlas
 - Presentation in RIPEstat

DNS

- ~~Business as usual~~ : rDNS Outage
 - actions taken:
 - provide 24/7 contact coverage
 - several procedural improvements
 - re-implementation of provisioning system
 - full report with interesting lessons being prepared
- Pilot for K-root member instances
 - local root name service in member network
 - resilience against reflection attack
 - membership value



Cooperation & Outreach

RIR Cooperation

- Longstanding friendly cooperation and help
 - Software development, staff exchange, ...
- NRO as vehicle for joint activities of all RIRs
- New: MoU with APNIC on “Common Interest” projects
 - avoiding replication
 - increasing efficiency and service
- MoU open to other RIRs

Joint APNIC / RIPE NCC Projects

- ... currently being agreed:
 - Co-Branding RIPEstat
 - Co-Branding RIPE Atlas
 - Sharing Certification GUI
 - Roadmap WEIRDS services
 - Database re-implementation
 - Other items are in the pipeline
 - Resource sharing / contributions

External Relations Activities

- Goals of RIPE NCC External Relations
 - Build relationships with all public and private sector Internet stakeholder groups
 - Defend the open, bottom-up policy development processes of the Internet community
 - Grow the influence of the RIPE NCC, particularly in government circles
 - Inform the RIPE community of relevant developments in Internet governance discussions
 - Showcase RIPE NCC capacity-building efforts

External Relations Activities

- Capacity building
 - IPv6 Roadshow
 - Four events in 2012, two more planned
 - Plans for expansion to Russian region in 2013
- Internet governance
 - RIPE NCC instrumental in establishing the first Arab IGF event in Kuwait, Oct 2012
 - Preparing for global IGF in Baku, Azerbaijan, Nov 2012
 - Issues to include RPKI, IPv4 trading

External Relations Activities

- Working with government and public sector
 - Preparation for ITU WTSA and WCIT events, Dec 2012
 - Working with CEPT (European administrations), Arab Regional Group, other regional and industry groups
 - Cooperation with Law Enforcement
 - Annual meeting in London, March 2012
 - Middle East LEA meeting planned for Nov 2012
 - Targeted training events with specific agencies
 - Participation in OECD, APEC TEL

And...

All the other invisible stuff...

- Re-design of core IT network
- Set-up of new wireless network
- Backoffice systems integration
- Finance – VAT increase in NL from 1 Oct 2012
- New invoicing system in 2013
- HR keeping on their toes
 - keeping in sync with legislation
 - Health and Pension re-negotiations
- Housing Adventures in protected property

Questions?

