

APNIC Update

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CaribNOG 5

24th to 26th April 2013

APNIC



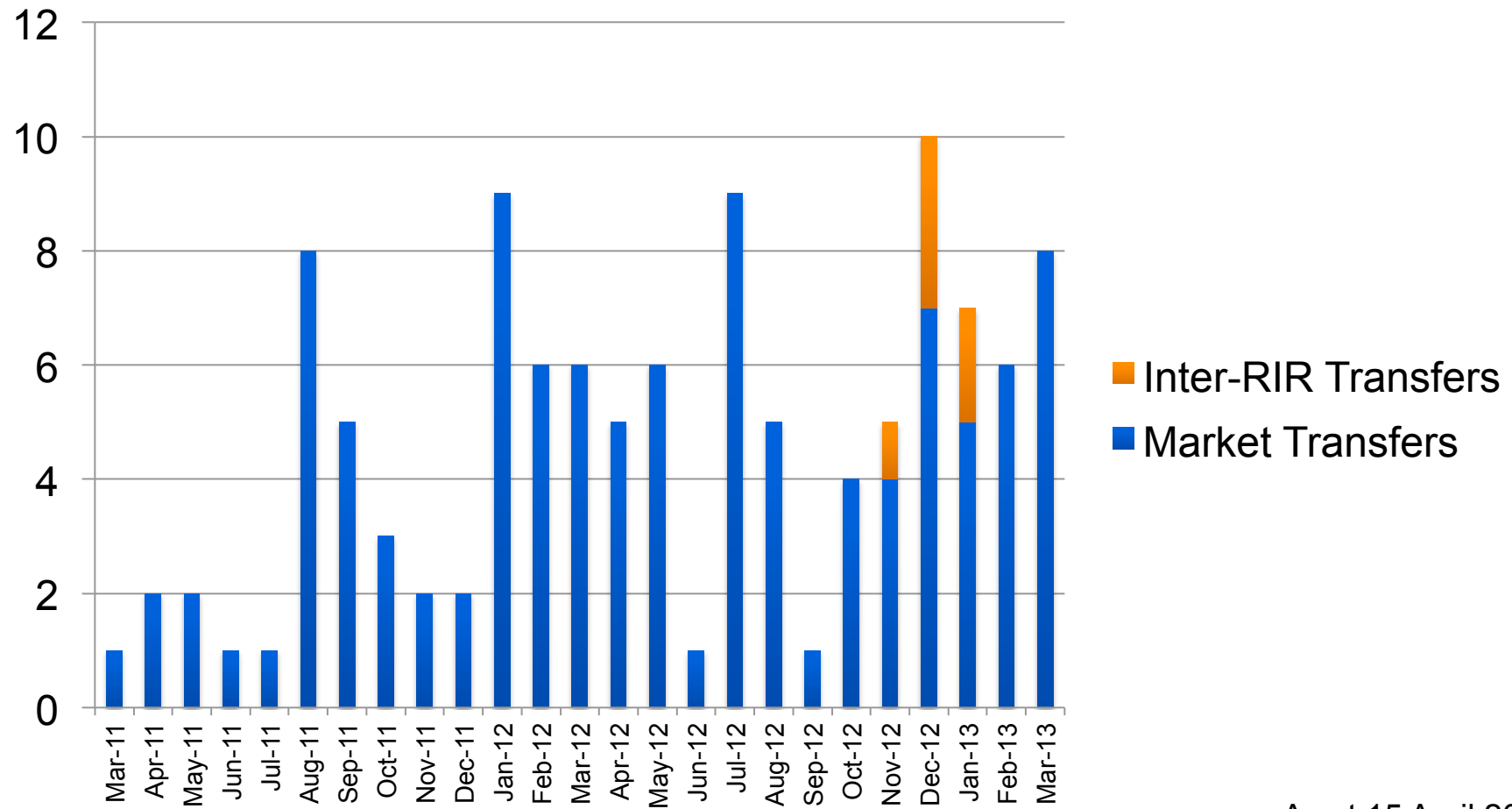
Serving Members

- IPv4
- IPv6
- ASN
- Membership growth
- Alternative WHOIS protocol
- Resources Public Key Infrastructure

Inter-RIR Transfers

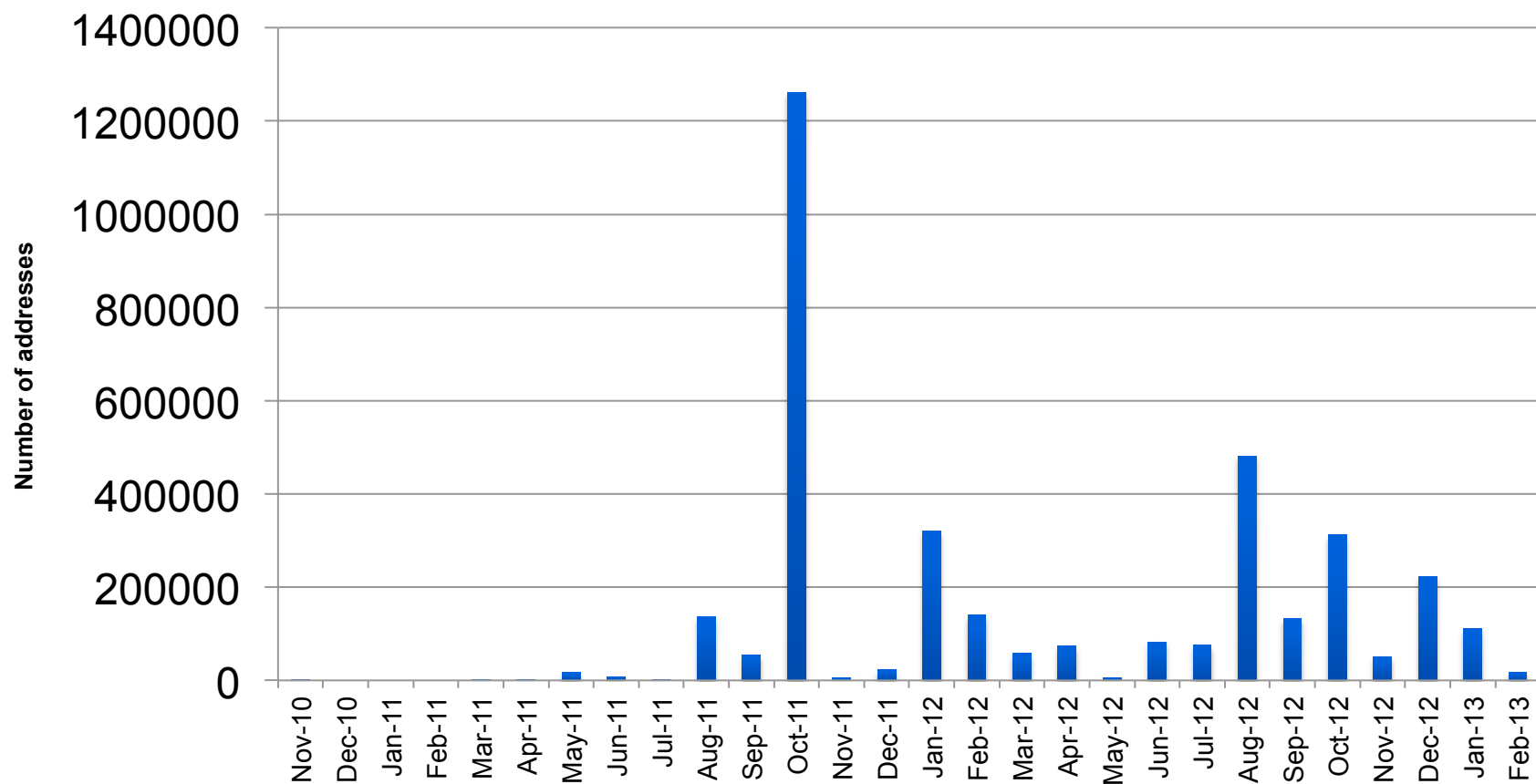
- Completed transfers: 6 from ARIN to APNIC (Nov 2012 – April 2013)
- Transfer time (including evaluation): 1 – 2 weeks
- Successfully transferred live network
- ARIN and APNIC stats overlap one day after the transfer due to the time zone difference

IPv4 Market Transfers



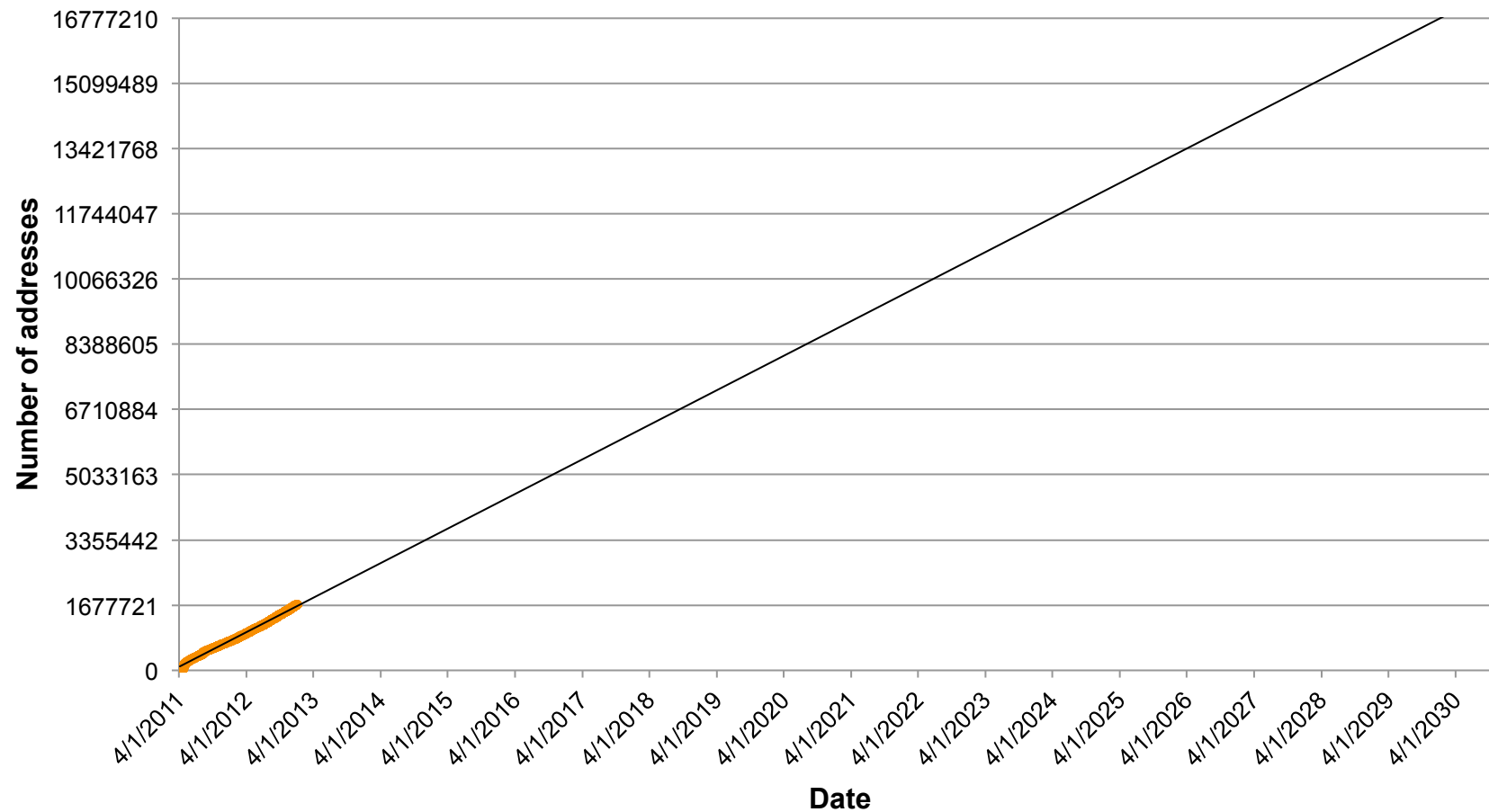
As at 15 April 2013

IPv4 Market Transfer Size

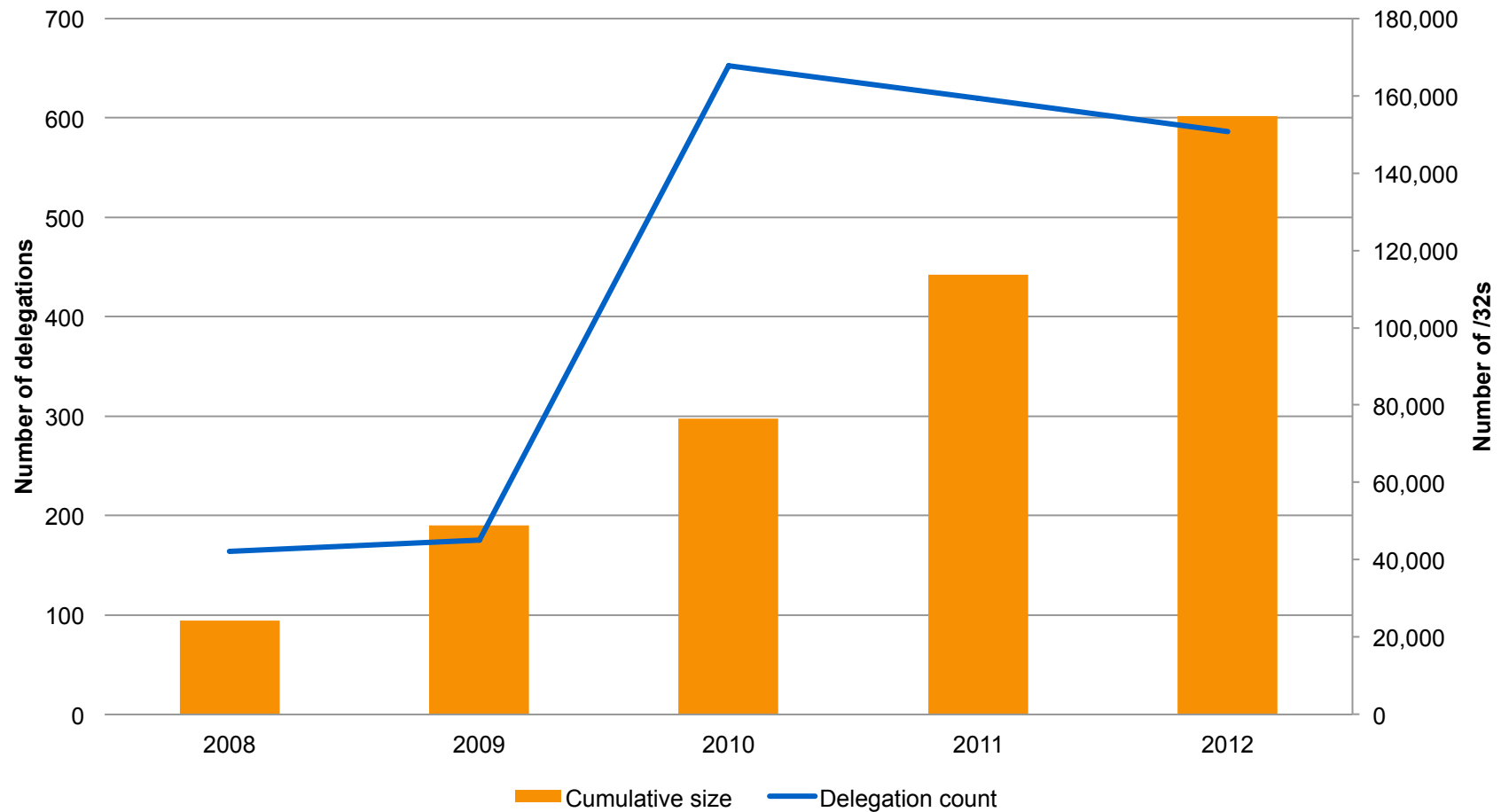


As at 15 April 2013

IPv4 Last /8 Delegation Trend

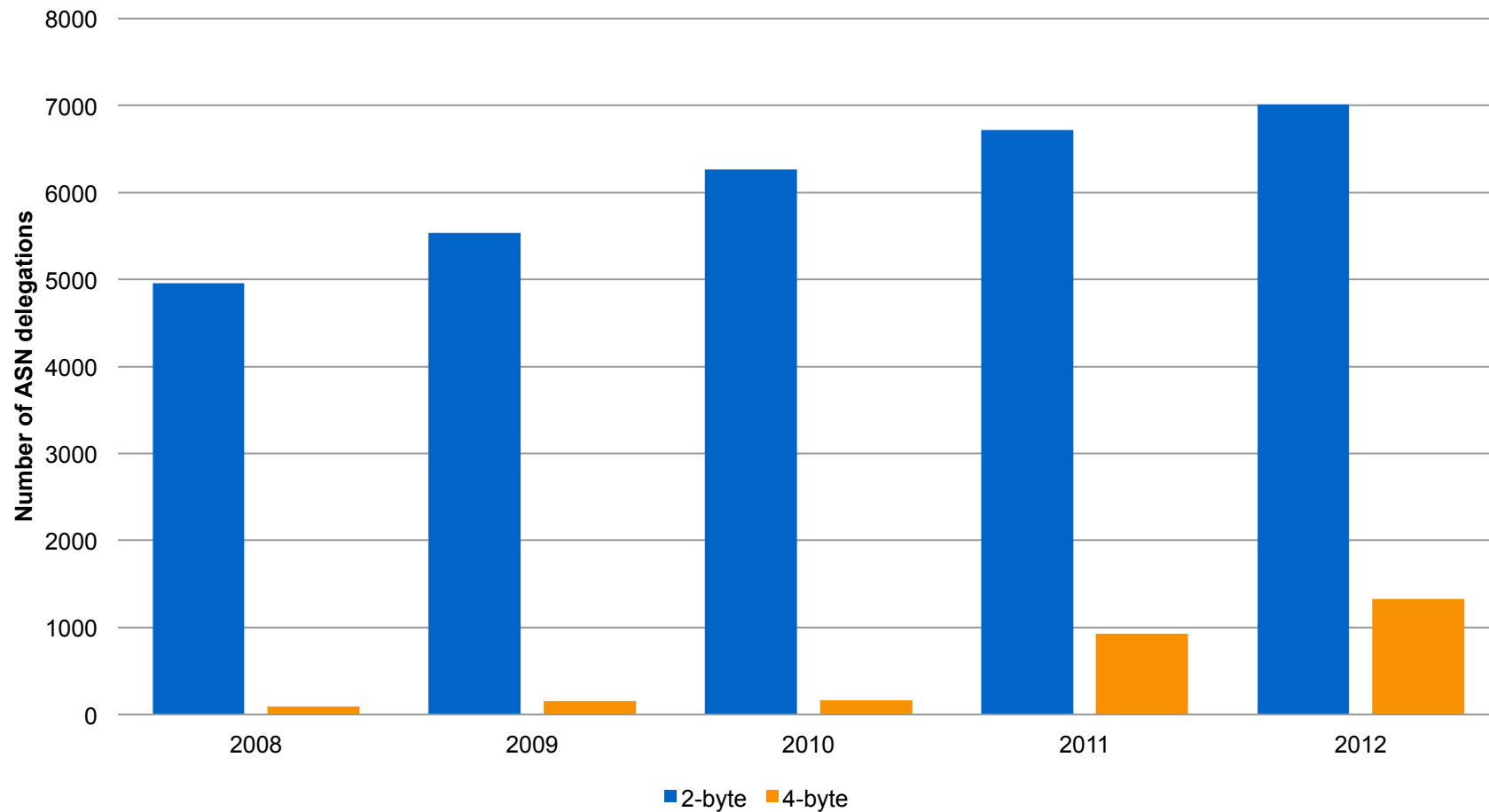


IPv6 Delegations



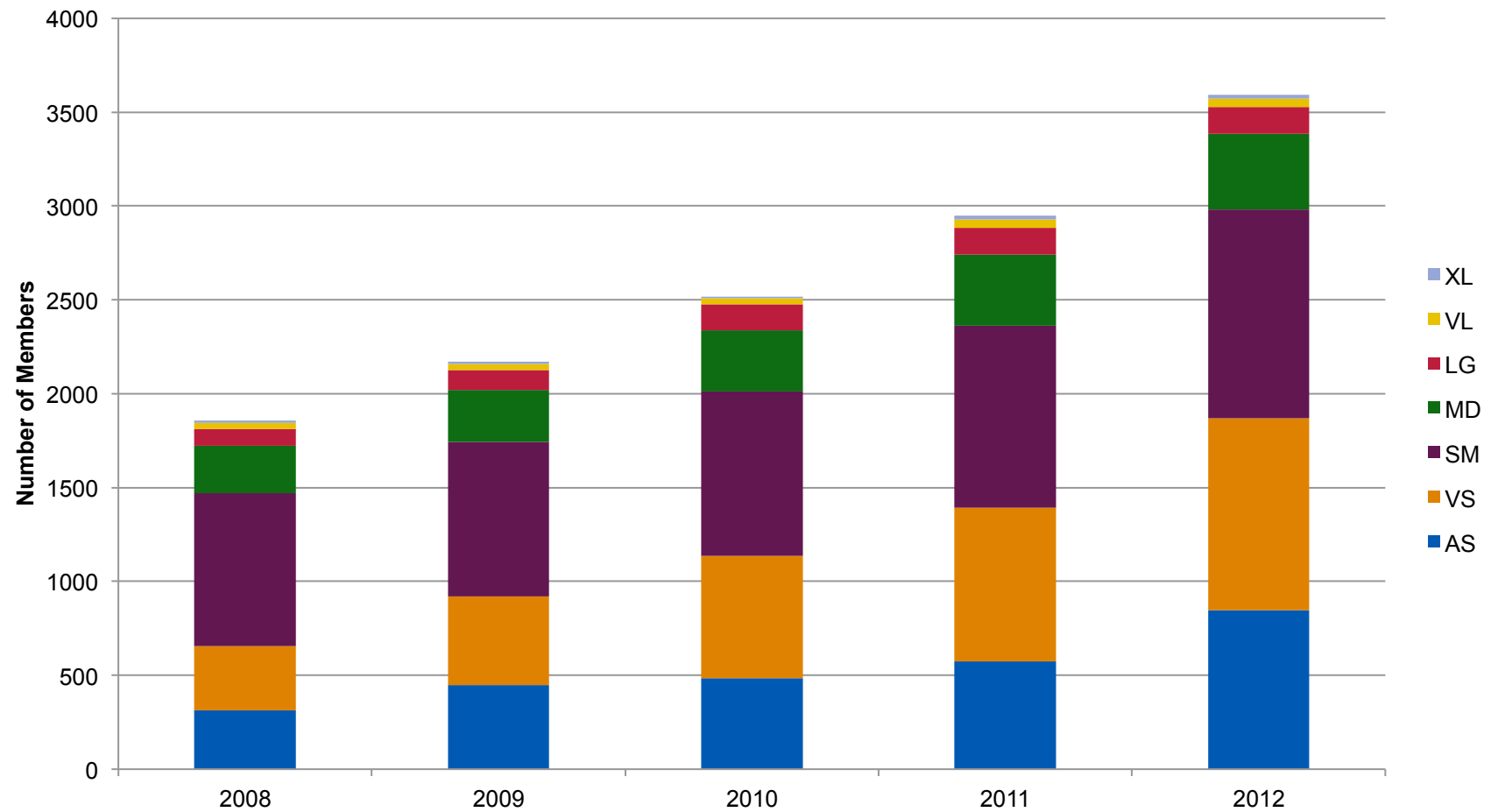
As at 31 Dec 2012

ASN Delegations



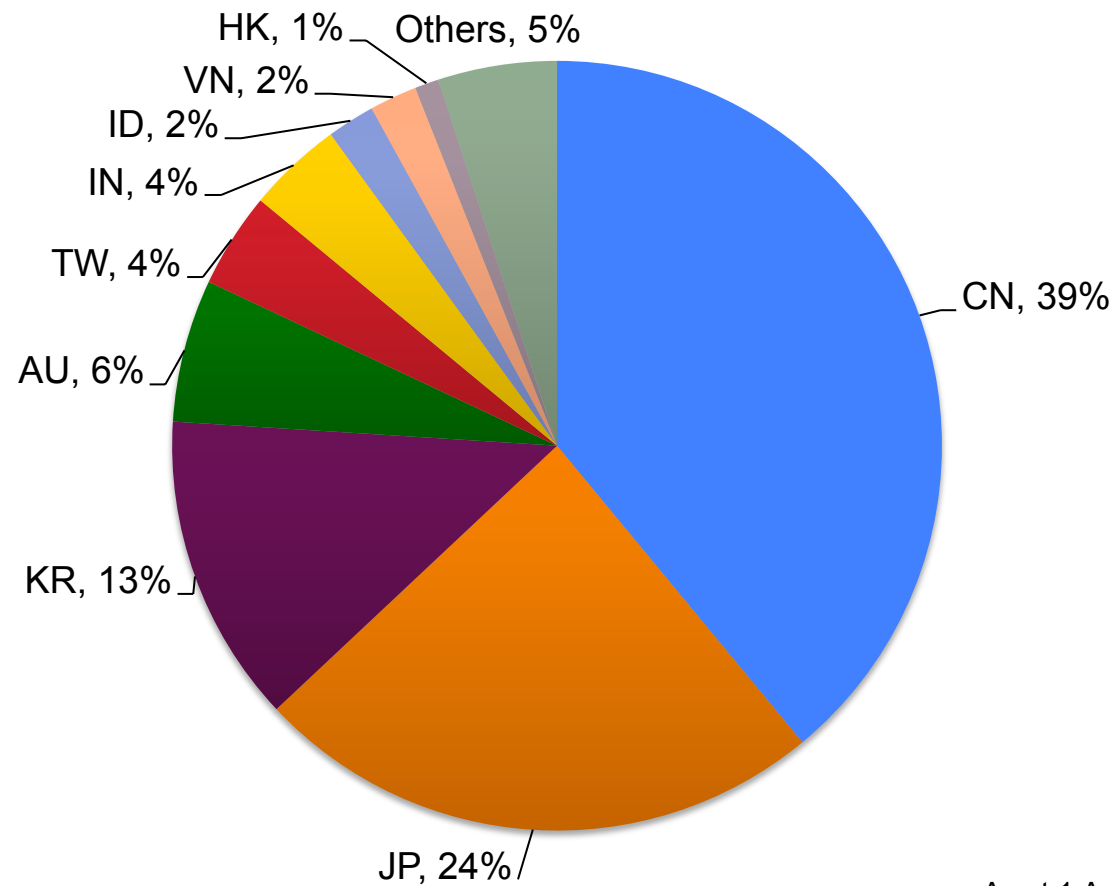
As at 31 Dec 2012

Membership Growth



As at 31 Dec 2012

IPv4 Distribution by Economy



As at 1 April 2013

Alternative WHOIS Protocol

- Web Extension Internet Registration Data Service (WEIRDS)
- Alternative protocol for WHOIS to address shortcomings:
 - Lack of internationalization support
 - No specification of queries, output, or error messages
 - No referral mechanism
 - No authentication mechanism
- Prototype available (json output)
<http://weirds-pilot.apnic.net/ip/202.12.29/23>
- Easy for web developers

Resource Public Key Infrastructure

- Working with ICANN and the other RIRs towards a global system
- New split Trust Anchors deployed end of 2012
- Updated UI to adopt common look-and-feel with RIPE NCC introduced at APRICOT2013/APNIC 35
- Ability for the public to run their own RPKI system inter-operating with APNIC introduced at APRICOT2013/APNIC 35
- Work on public test bed, further UI convergence with RIPE NCC, general signer as Q2/3 2013 deliverables

APNIC Policies in 2013

- Implemented:
 - prop-104: Clarifying demonstrated needs requirement in IPv4 transfer policy (Feb 2013)
 - prop-101: Removing multihoming requirement for IPv6 portable assignments (Feb 2013)
- Did not reach consensus at APNIC 35:
 - prop-105: Distribution of returned IPv4 address (modification of prop-088)
 - Returned to author for further development
 - prop-106: Restricting excessive IPv4 address transfers under the final /8 block
 - Abandoned

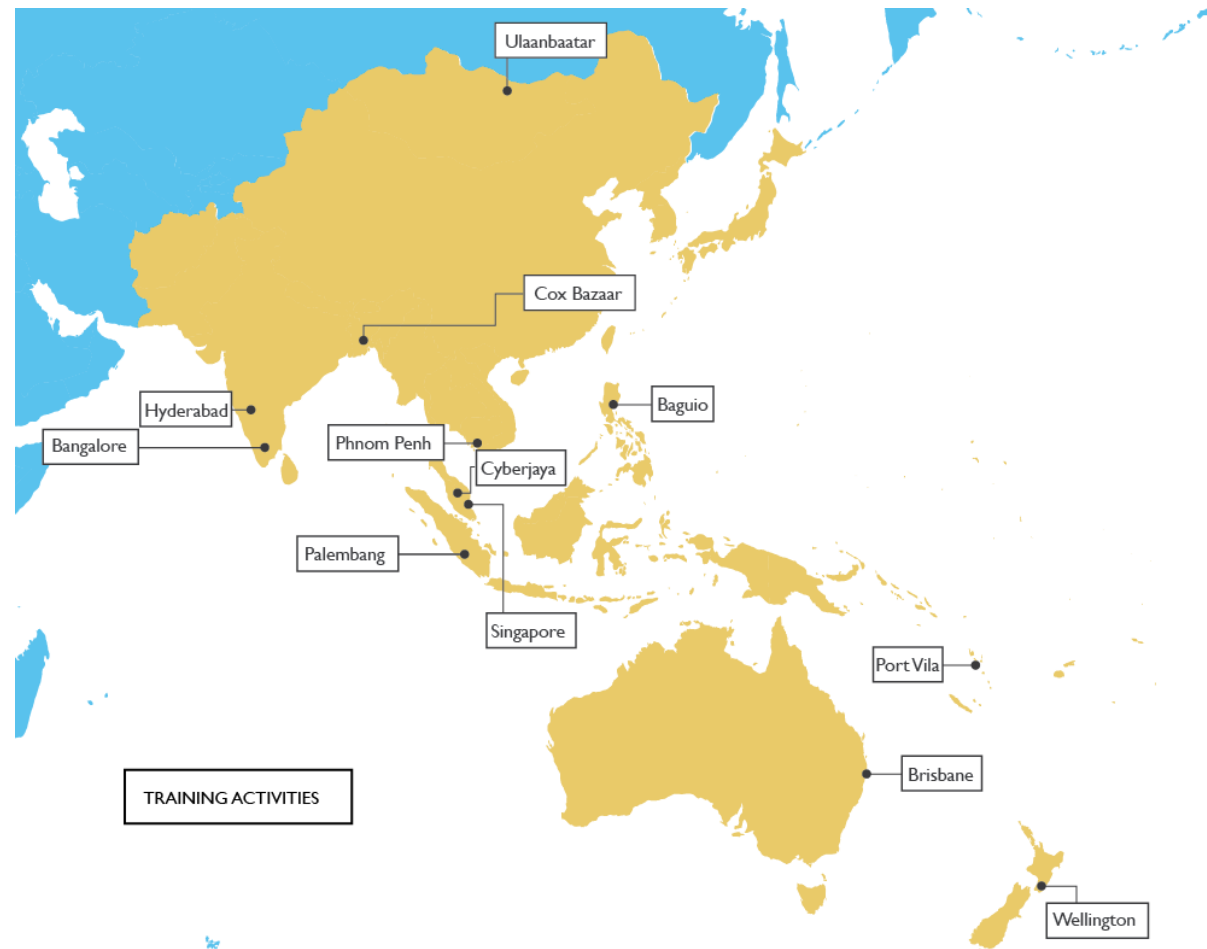
Training

- Continuing focus on IPv6 deployment
 - Comprehensive face-to-face and eLearning sessions
 - IPv6 eLearning day (first Wednesday of every month)
- eLearning
 - Every Wednesday in three time zones
 - 24 modules (1 hour duration per module)
 - Enhanced schedule for 2013
- Face-to-Face
 - Extensive hand-on exercises
 - Physical and Virtual Training Labs to enable participants to build and configure networks
- New training website

<http://training.apnic.net>

Training delivered in 2013 (Jan to Apr)

- Face-to-face training
 - 30 courses in 12 locations
 - 614 participants
- eLearning
 - 39 courses
 - 326 participants



As at 15 April 2013

IPv6 in the Community

- IPv6@APNIC Conferences
 - IPv6 Plenary at APNIC 35 in Singapore, Feb 2013 focused on mobile network deployment
 - Workshop at ICANN 46, Beijing
- Asia Pacific IPv6 Task Force (APIIPv6TF)
 - Continued provision of Secretariat services
 - Met at APNIC 34 and 35

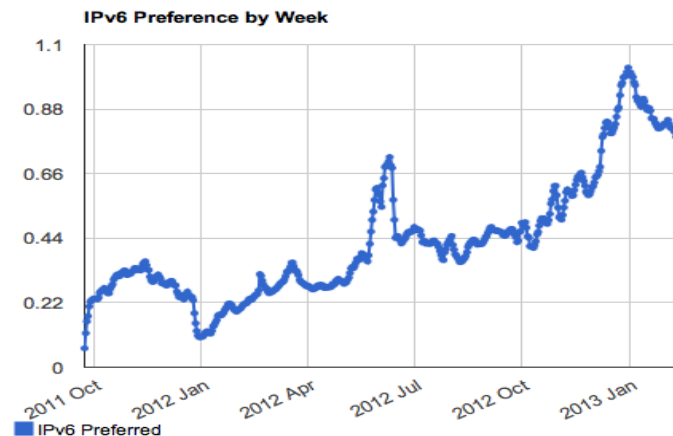
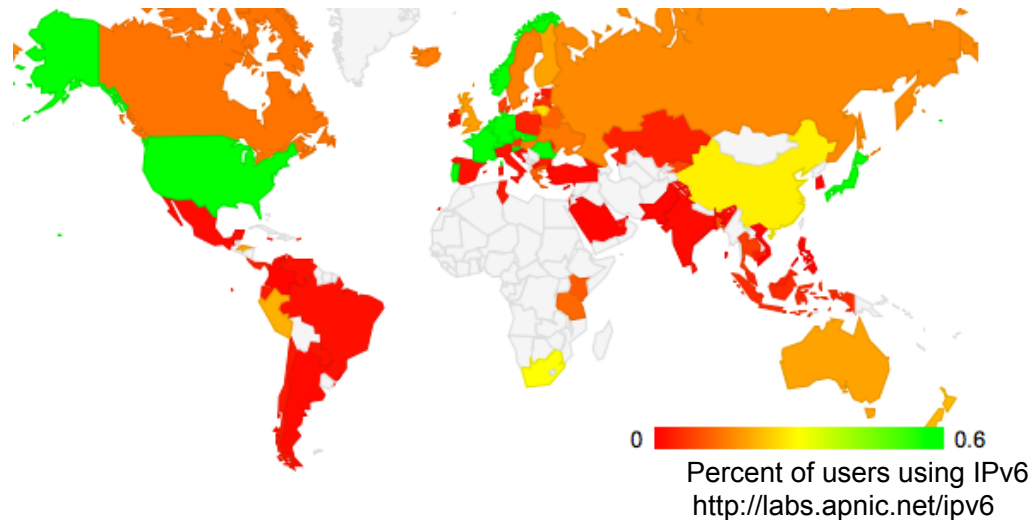
APNIC Labs: IPv6 measurement

- IPv6 Capability Tracker
 - Google Analytics tracking tool to enable website operators to measure client IPv6 capabilities
- Measuring IPv6
 - Measuring the end-to-end capability of IPv6 clients per economy
 - Readiness data at end-user level for various intergovernmental organizations and economies
- IPv6 preference by AS Number
 - Measures IPv6 client capability per autonomous system
- IPv4 address report
 - Measuring IPv4 free pool address exhaustion

<http://labs.apnic.net>

<http://blabs.apnic.net>

Measuring IPv6

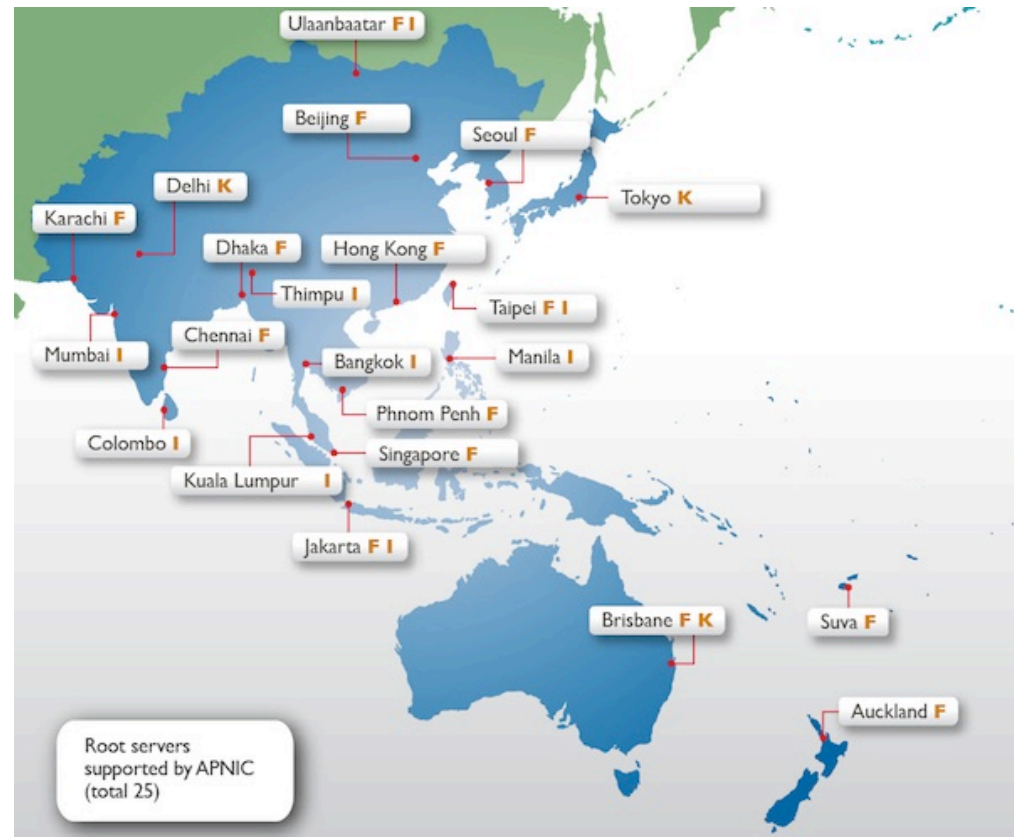


We've been conducting a large scale IPv6 measurement across the Internet to provide baseline data about the rate of deployment of IPv6 across countries and individual networks

Economy	ASN	AS Name	# samples	v6 capable	v6 preferred
US	AS19782	INDIANAGIGAPOP - Indiana University	1566	100	100
CN	AS37944	CNNIC-CSTNET-AP CHINA SCIENCE AND TECHNOLOGY NETWORK	1354	100	100
CN	AS23910	CNGI-CERNET2-AS-AP China Next Generation Internet CERNET2	7060	100	100
JP	AS9607	BBTOWER BroadBand Tower, Inc.	255	96.0784	96.0784
NZ	AS24226	CATALYST-IT-AS-AP Catalyst IT	830	94.3373	93.9759
JP	AS55394	GREE-NET GREE, Inc.	519	93.6416	71.0983
AU	AS38083	CURTIN-UNI-AS-AP Curtin University	715	89.6503	88.951
US	AS3596	MICROSOFT-CORP-AS - Microsoft Corp	1113	74.9326	72.4169
ID	AS17553	IPBNET-AS-AP Bogor Agricultural University	251	74.9004	60.9562
AU	AS4608	APNIC-AP Asia Pacific Network Information Centre	629	73.6089	70.9062
NZ	AS58666	NASL-AS-AP Network Access Services Limited	206	69.4175	61.165
US	AS5661	USF - UNIVERSITY OF SOUTH FLORIDA	295	69.1525	65.4237
US	AS1312	VA-TECH-AS - Virginia Polytechnic Institute and State Univ.	480	67.7083	62.7083
CZ	AS197451	VUTBR-AS Brno University of Technology	416	64.6635	59.375
GB	AS786	JANET The JNT Association	223135	63.1044	52.4337
US	AS15169	GOOGLE - Google Inc.	12414	60.9312	18.9866
NO	AS57963	LYNET-INTERNETT-AS Lynet Internett AS	326	58.8957	55.2147
US	AS2055	LSU-1 - Louisiana State University	266	58.2707	55.2632
NZ	AS17649	DMZGLOBAL-AP DMZGlobal Ltd	239	58.159	54.3933
US	AS6621	HNS-DIRECT-AS - Hughes Network Systems	2041	56.8349	56.1979
US	AS6263	NDIN - State of North Dakota; ISD	249	56.6265	54.6185
CN	AS17672	CHINATELECOM-HE-AS-AP asn for Hebei Provincial Net of CT	2706	54.139	51.2565
NZ	AS18119	ACSDATA-NZ ACSData	931	53.4909	52.3093
US	AS1351	UVM-EDU-AS - University of Vermont	242	53.3058	45.8678
CN	AS4538	ERX-CERNET-BKB China Education and Research Network Center	4868	50.4314	47.6787
JP	AS2500	WIDE-BB WIDE Project	208	50	49.0385
HK	AS4528	HKU-AS-HK The University of Hong Kong	635	48.6614	44.5669

Root Server Deployment

- New I-Root in Ulaanbaatar, Mongolia
- F-root upgrades in Chennai, Hong Kong, and Seoul
- Small node trial in Dhaka



Upcoming Conferences

- APNIC 36: Xi'an, China
 - 20 to 30 August 2013



- APRICOT 2014 Bangkok, Thailand
 - 18 to 28 February 2014 (includes APNIC 37)

Thanks

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APNIC

