# **APNIC Update**

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RIPE 66

Dublin





#### Look! It's a Vision!

A global, open, stable, and secure Internet that serves the entire Asia Pacific community.

#### ... and a Mission!

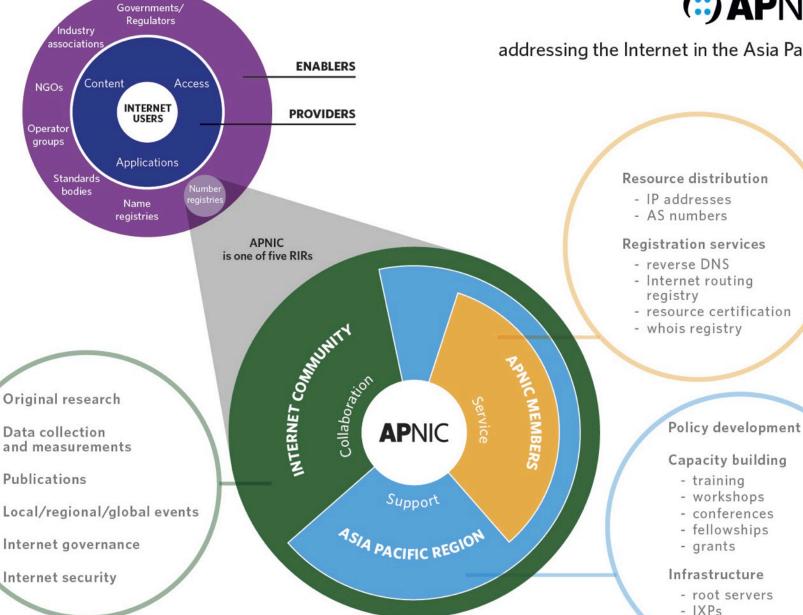
- Function as the Regional Internet address Registry for the Asia Pacific, in the service of the community of Members and others
- Provide Internet registry services to the highest possible standards of trust, neutrality, and accuracy
- Provide information, training, and supporting services to assist the community in building and managing the Internet
- Support critical Internet infrastructure to assist in creating and maintaining a robust Internet environment
- Provide leadership and advocacy in support of its vision and the community
- Facilitate regional Internet development as needed throughout the APNIC community





- engineering assistance

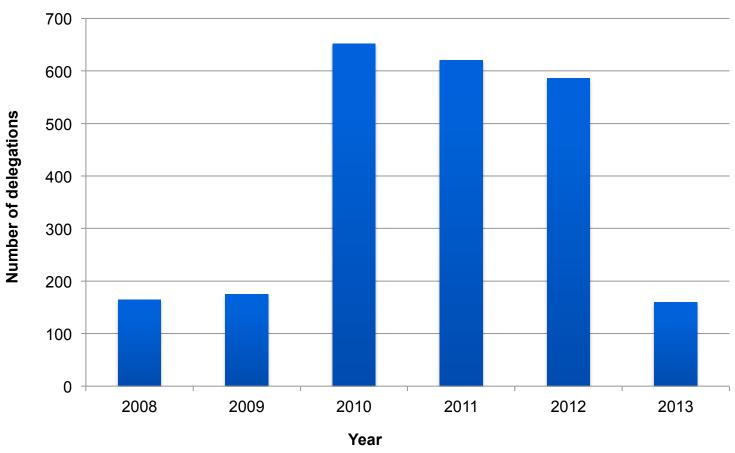
#### addressing the Internet in the Asia Pacific



# 1. Serving Members



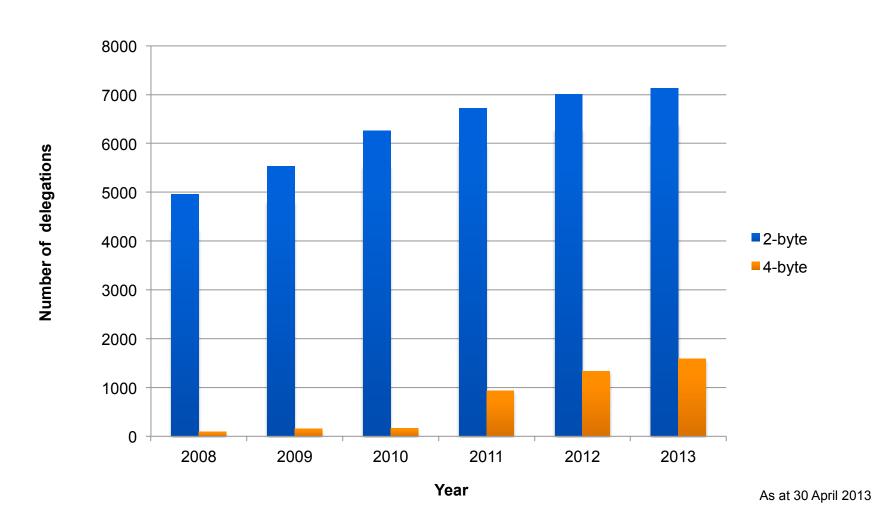
## **IPv6 Delegations – annual**



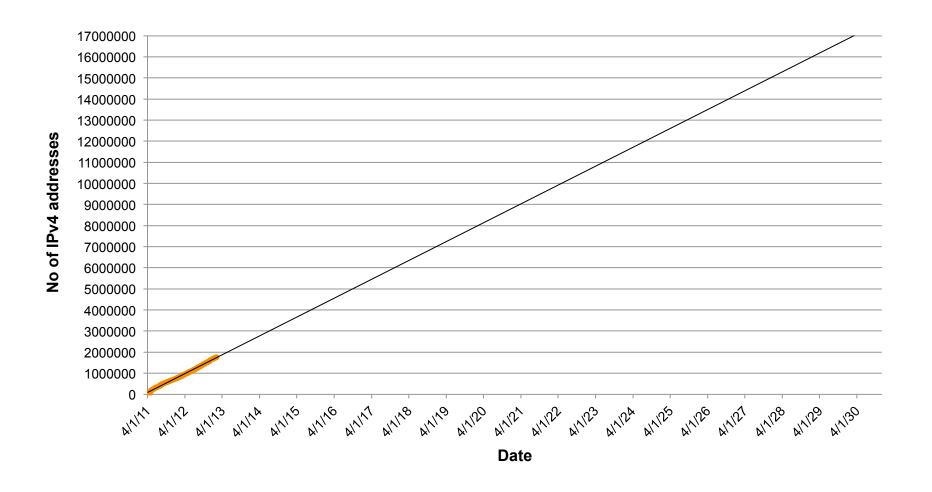
As at 30 April 2013



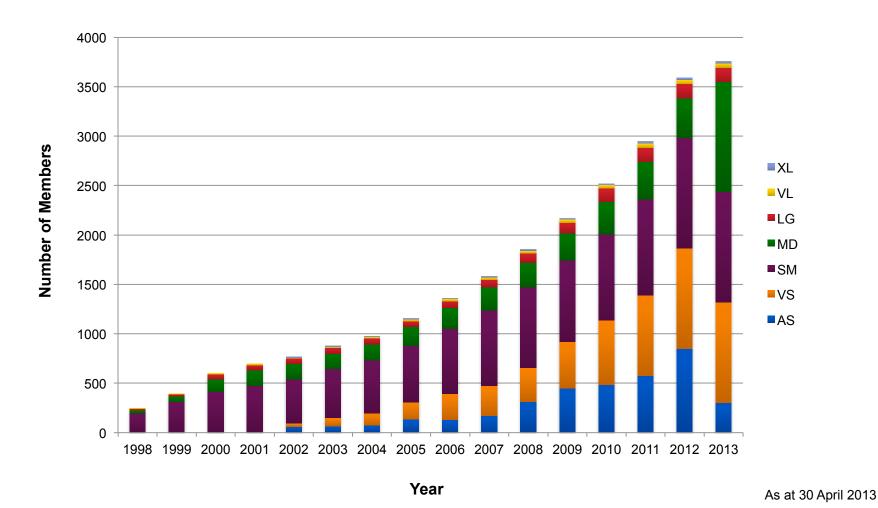
## **ASN Delegations – total**



## Last /8 Delegations – projected



## **APNIC Membership – total**

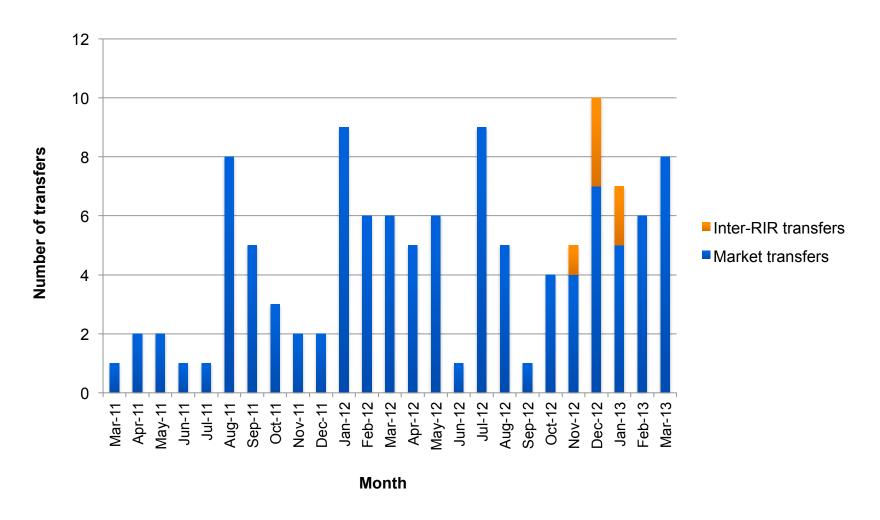




#### **IPv4 Transfers**

- Both inter and intra RIR
- Pre-approval process with demonstrated need
- Broker agreement and listing
- Mailing list
- Transfer fees
  - 20% of the transferred block's annual fee
  - Payable by the recipient, or by the source if ex-APNIC

## **IPv4 Market Transfers – monthly**



# 2. Supporting our region



#### **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 website: <a href="http://www.apnic.net/training">http://www.apnic.net/training</a>



## **Training in 2013**

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





- ISIF: Information Society Innovation Fund
  - Small grants and awards for ICT projects
  - Partners: IDRC, ISOC, dotAsia
  - http://isif.asia

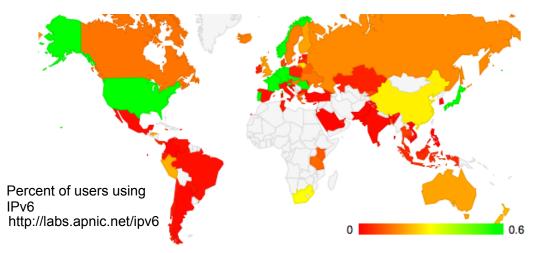
- Seed Alliance: Global joint effort
  - ISIF + Frida (LACNIC) + FIRE (AfriNIC)
  - Funding support from IDRC and SIDA

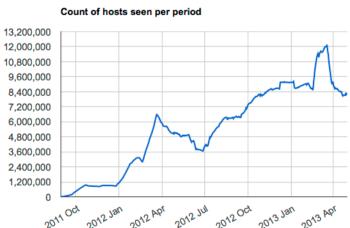


## 3. Collaborating



## **Measuring IPv6**





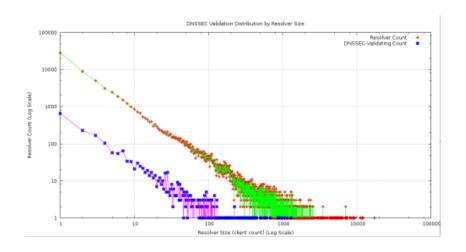
We've been conducting a largescale IPv6 measurement across the Internet to provide baseline data about the rate of deployment of IPv6 across countries and individual networks

| Economy   | ASN      | AS Name   | #<br>samples | v6<br>capable | v6<br>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         |
| <u>AU</u> | AS38083  | CURTIN-UNI-AS-AP Curtin University                          | 715          | 89.6503       | 88.951          |
| US        | AS3598   | 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         |
| <u>US</u> | 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-DIRECPC - 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         |





## **Measuring DNSSEC**

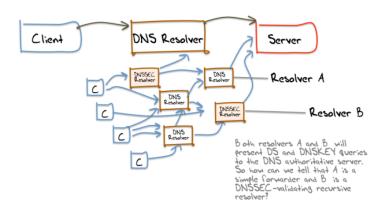


#### What are the questions?

- 1. What proportion of DNS resolvers are DNSSEC-capable?
- 2. What proportion of users are using DNSSEC-validating DNS resolvers?
- 3. Where are these users?
- 4. How long does DNSSEC validation take for a client?

We are measuring the extent of DNSSEC use, and looking at the level of use of DNSSEC validation across resolvers and end clients in the Internet

How can we interpret what we are seeing?



#### **Public Affairs**

- International Telecommunications Union (ITU)
  - Membership in D Sector only
  - WCIT, WTPF, WTDC, PP14
  - work with the ITU-D ASP on IPv6 Capacity Building
- Asia Pacific Telecommunity (APT)
  - Regional prepcoms
- APEC-TEL
  - IPv6 promotion, and soon: security
- OECD
  - Geoff Huston study on IPv6 (unreleased)

#### **Internet Governance Forum**

- Predominant global forum for discussing Internet governance issues
  - Includes all sectors of society
- Eighth Annual IGF will be held in Bali, Indonesia in October 2013
- Paul Wilson, APNIC DG, is participating this year on the IGF's Multistakeholder Advisory Group (MAG)
- Internet organizations such as APNIC have supported the IGF process intensively since its inception
  - The NRO has doubled its annual contribution to the IGF

www.apnic.net/igf



### and finally...

- APNIC 36: Xi-an, China
  - 20 to 30 August 2013
  - Now featuring workshop week
  - APNIC's 20<sup>th</sup> birthday



- APNIC 37: APRICOT 2014, Bangkok, Thailand
  - 18 to 28 February 2014

## Questions?

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