# APNIC Update

## The state of IP address distribution and its impact to business operations

Elly Tawhai
Senior Internet Resource Analyst/Liaison
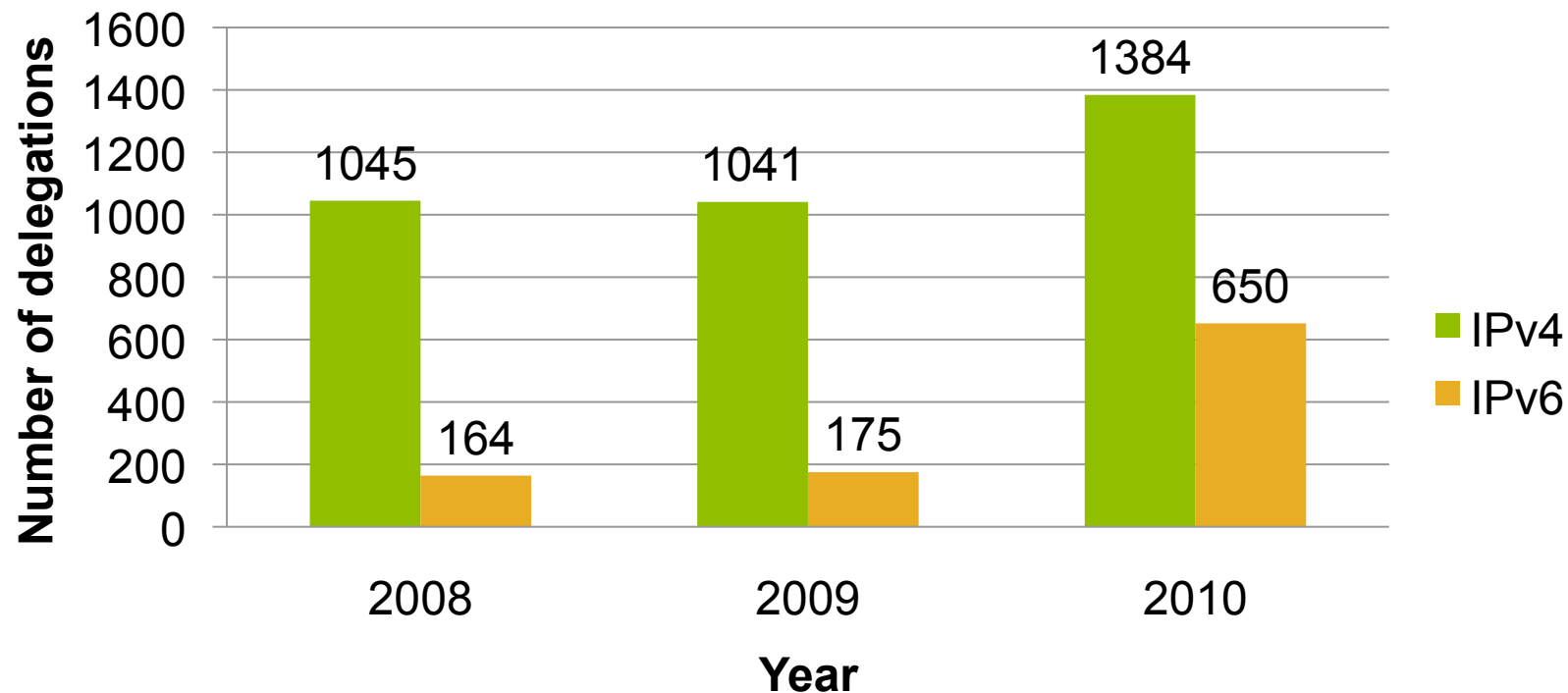Officer, Pacific, APNIC

**AP**NIC

# About APNIC

- ## What we do
  - ### "Regional Internet Registry"

- ## Why we do it
  - ### Needed technical/administrative service
  - ### Support development of the Internet as a single, seamless, routable, global network

- ## How we do it
  - ### Non-profit mutual organization
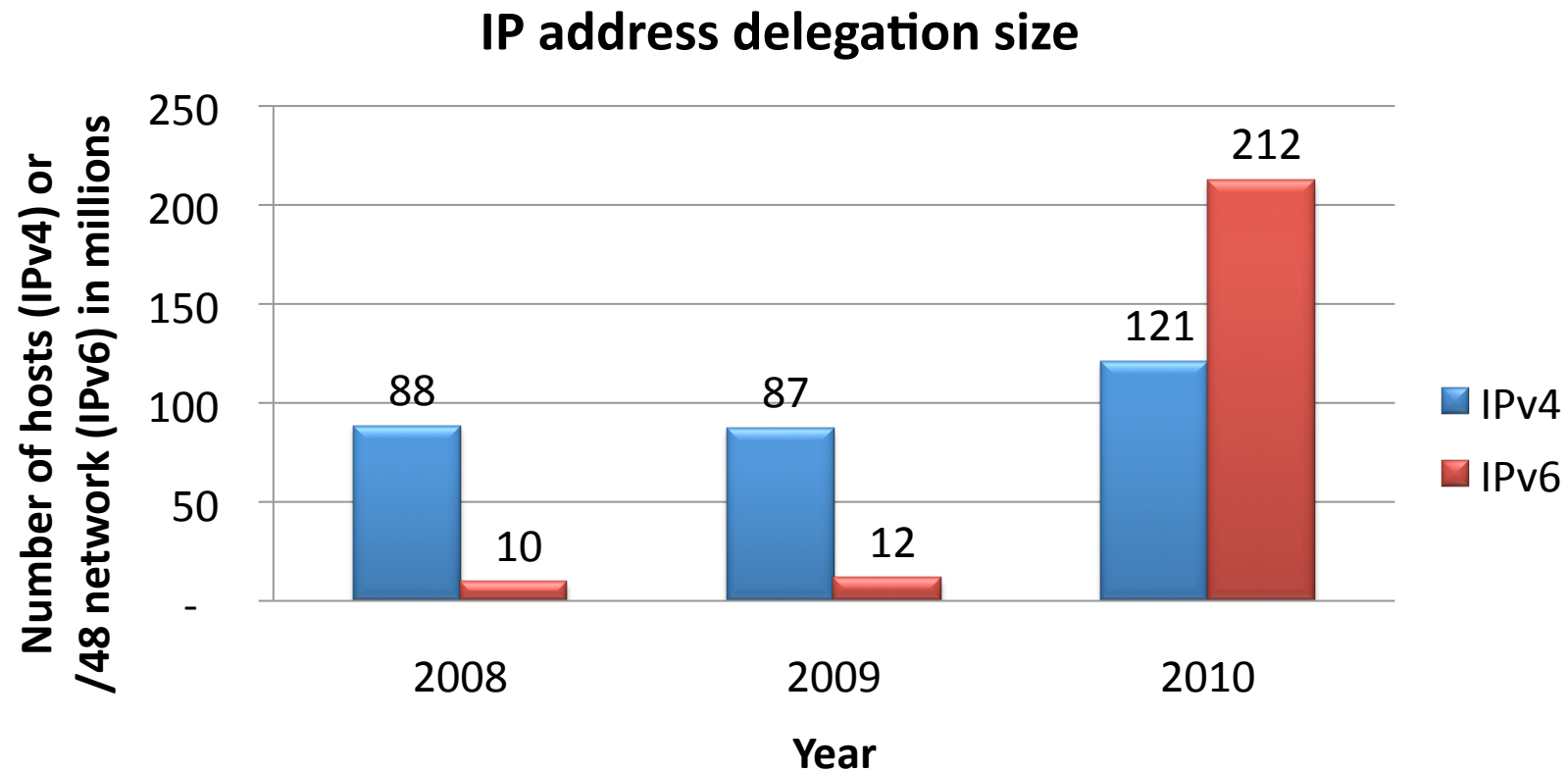  - ### Bottom-up policy process

**AP**NIC

# Overview

- IP address distribution in the AP region

- Status of IPv4 exhaustion

- IP address availability impact in business

- Strategic considerations

- Other news

**AP**NIC

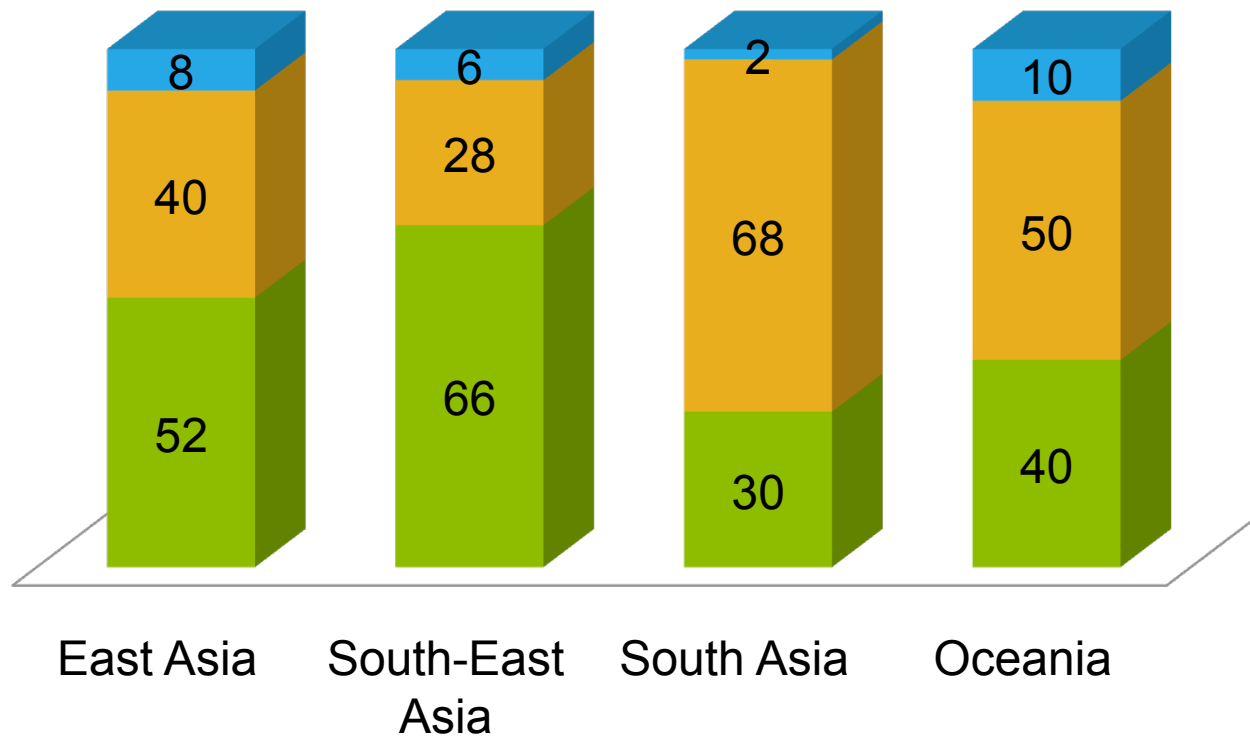# APNIC IP Address Distribution 2008 - 2010

**IP address delegation count**

# APNIC IP Address Distribution 2008 - 2010

**IP address delegation size**



Number of hosts (IPv4) or /48 network (IPv6) in millions

- 2008: IPv4 = 88, IPv6 = 10
- 2009: IPv4 = 87, IPv6 = 12
- 2010: IPv4 = 121, IPv6 = 212

Year

# What Do the Stats Say?

- The Internet in the Asia Pacific region is growing at an accelerated rate, particularly in <u>access networks</u>

- APNIC IPv4 requests continue because of network growth to meet the <u>population demand</u> while IPv6 is being deployed

- IPv6 <u>is</u> being deployed globally!

**AP**NIC

# Registry Update

- IPv4 exhaustion

  - Now in stage 3, as of 15 April 2011
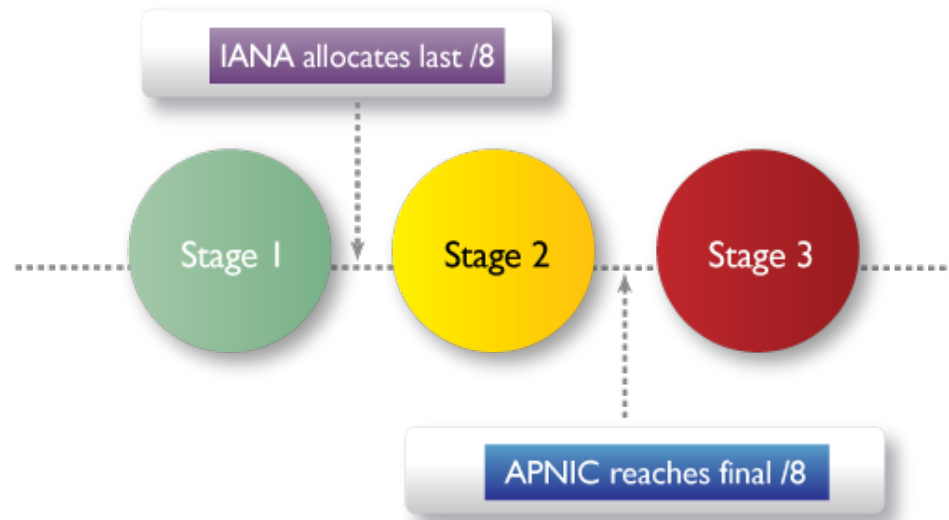


  - IANA handed out APNIC's last /8 block, **103/8**, on 3 February 2011

# Policy Changes

- **IPv4 policy during Stage 3**

  - To extend the life of APNIC's last /8, each organization can only receive a limited size from it

    - Limited to a single maximum delegation of /22

    - Minimum delegation size is a /24

      - Implemented May 2011

# Resource Services

- 2010 IPv6 delegations more than tripled

  - 650 delegations in 2010

  - Strong response to "Kickstart IPv6" with over 402 new applications

    - Members with existing IPv4 allocations or assignments may instantly qualify for an IPv6 block

Kickstart your IPv6 network!
Click here to find out how to get your IPv6 block

# IPv6 within the Pacific

**Number of IPv6 delegations as 10 April 2011**
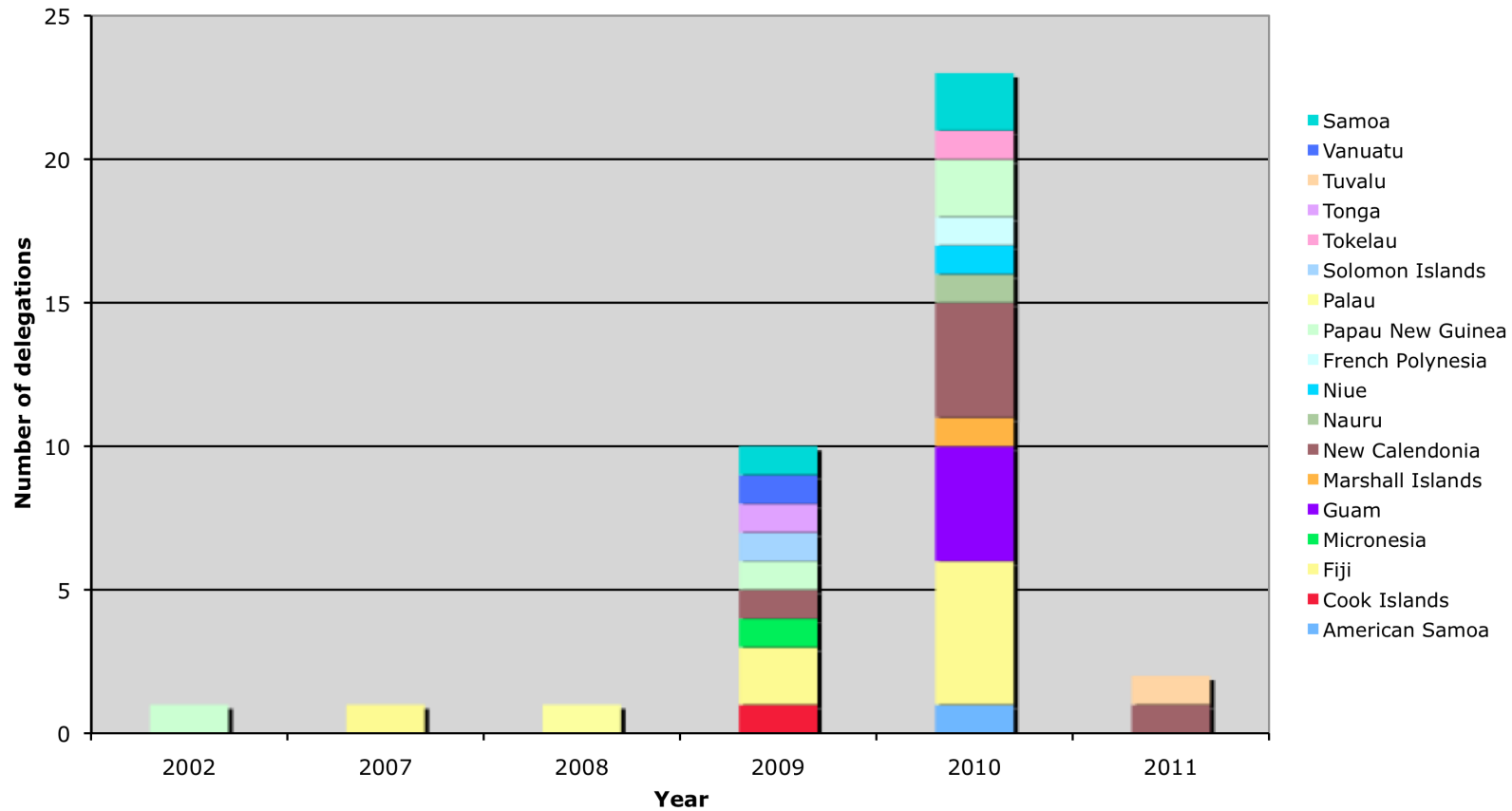
# IP Address Availability Impact

- ## Strategic

  - How to maintain growth post IPv4 depletion

  - IPv6 business pressures

- ## Operational

  - Extending IPv4 life

  - IPv6 deployment stages

**AP**NIC

# Strategic Considerations

- How to maintain growth post IPv4 depletion

  - Will IPv4 be available from other sources?

  - Deploy public IPv4 selectively

  - How much to invest on migration technologies

- IPv6 business considerations

  - Transit provisioning

    - You will need to handle IPv6 traffic

  - Content providers

    - You will be asked to provide IPv6 connectivity

  - Consumer access

    - You will need to use IPv6 to expand your network

**AP**NIC

# IPv6 Capacity Building

- APNIC remains committed to providing Training, focusing on IPv6 topics

  - Face-to-face

  - eLearning

- Streamlined IPv6 request processing

  - 1-click IPv6 request in MyAPNIC

  - 1-click IPv6 membership sign-up

  - Much lower cost per IP address compared to IPv4

**AP**NIC

# Conclusions

- Now in stage 3, as of 15 April 2011. Sticking with an IPv4 only network is no longer an option

- Start considering your IPv4 life extension and IPv6 deployment options

  - There is no single answer; find the one that fits your business strategy

- Commit resources (staff and budget) to address this issue. Establish deadlines and regular reporting to senior management

**AP**NIC

# 4-byte AS news

- 1 January 2010 no distinction between 2-byte and 4-byte AS numbers

- Perform following checks to see if 4-byte AS numbers can be supported within network:

  - Core routers, Border routers, Aggregation routers

  - IOS release contained on these routers

  - Double check with peers to see if support 4-byte AS

- For more information refer to:

  - http://as4.cluepon.net/index.php/Main_Page

# Next Meeting – APNIC 32

Where: Busan, South Korea

When: Sunday, 28 August - Thursday, 1 September 2011

# Thank You

elly@apnic.net

**AP**NIC