

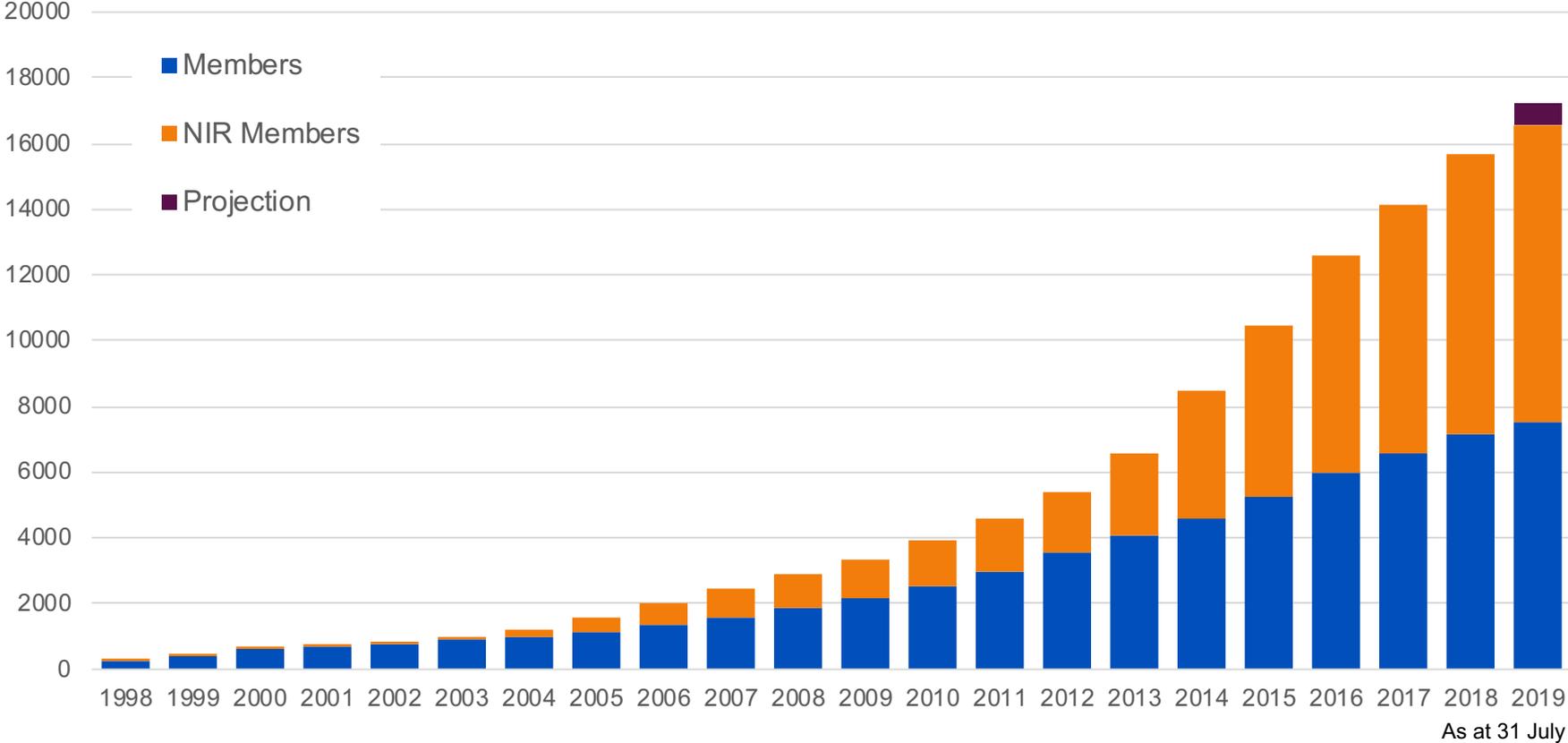
APNIC Update

RIPE79

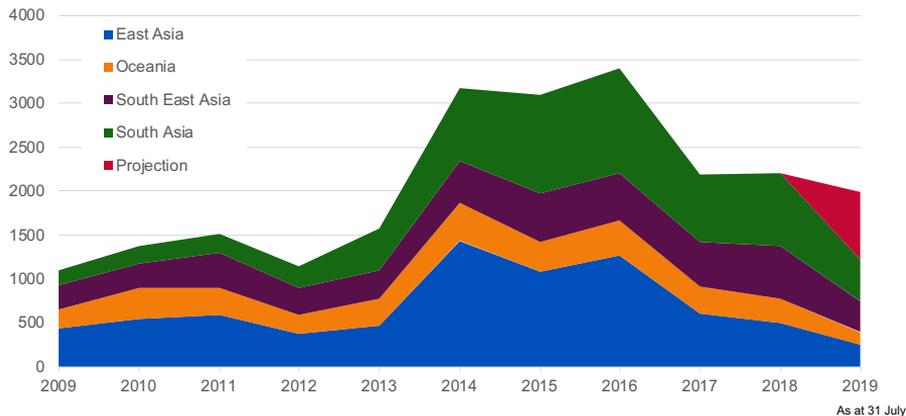
Rotterdam

October 2019

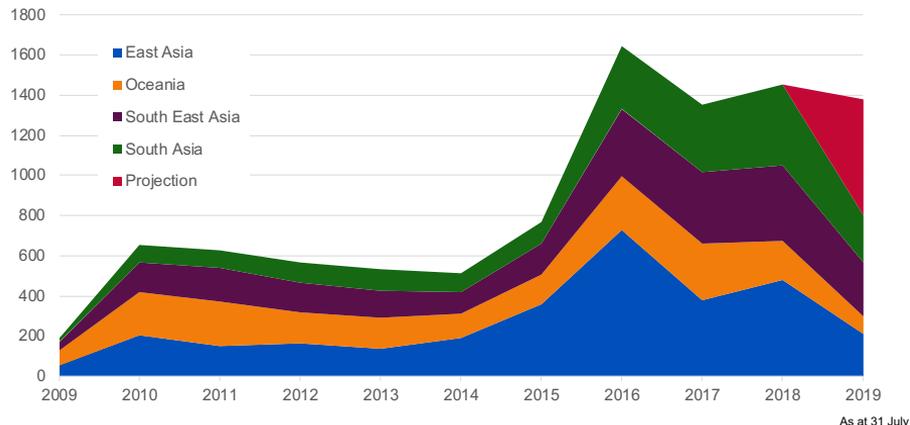
Membership



IPv4 delegations



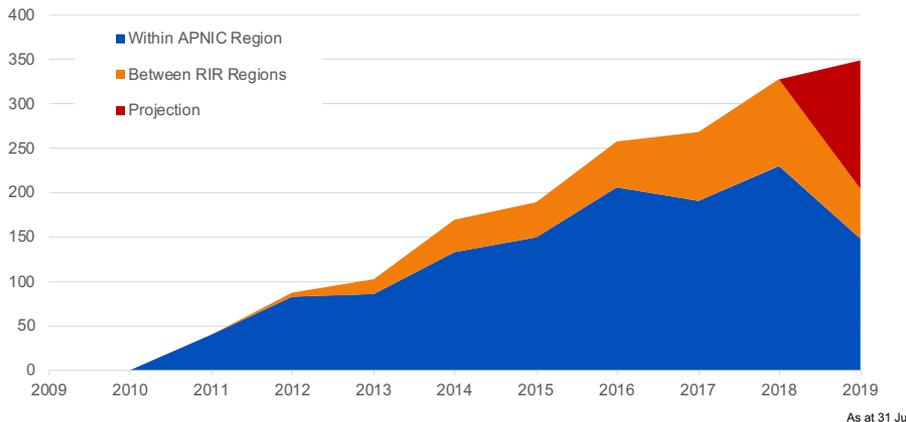
IPv6 delegations



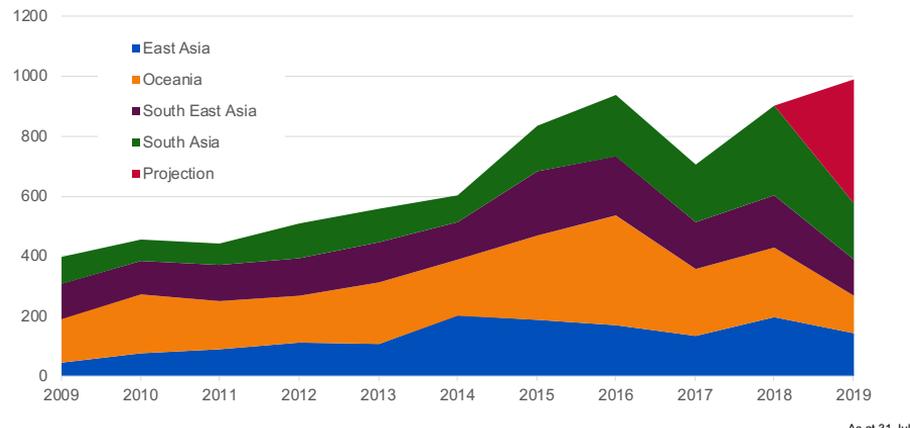
APNIC



IPv4 transfers



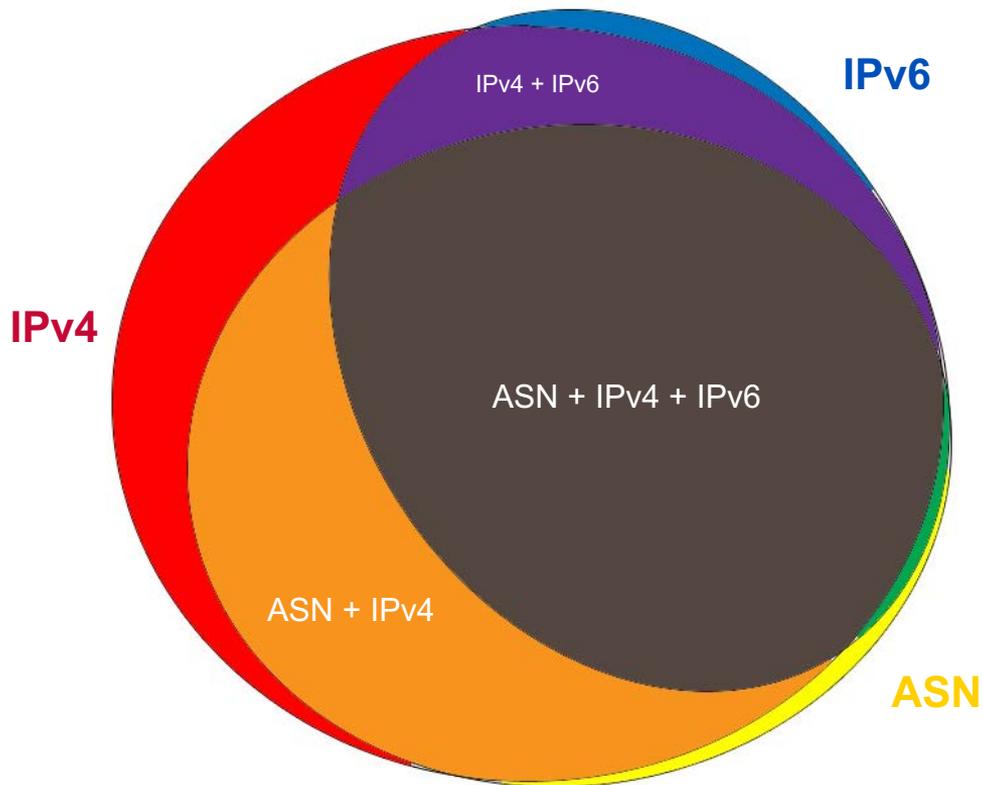
ASN delegations



APNIC



Resource Holdings



Member resource holdings	
IPv4	96%
IPv6	63%
ASN	77%

As at 31 Jul

Policy Implementations



Policy	Status
prop-125: Validation of “abuse-mailbox” and other IRT emails	Reached consensus at APNIC 46; implemented in May 2019 and ongoing development
prop-127: Change maximum delegation size of 103/8 IPv4 address pool to a /23	Reached consensus at APNIC 47; immediate “interim” implementation, and finally implemented after end of comment period, May 2019.
prop-128: Multihoming not required for ASN	Reached consensus at APNIC 47; implemented in July 2019
prop-129: Abolish waiting list for unmet IPv4 requests	Reached consensus at APNIC 47; implemented in July 2019

MyAPNIC

The screenshot shows the MyAPNIC web interface. At the top, there is a navigation bar with links for Home, Resources, Admin, Contact, Tools, Events, Voting, and My Profile. The main content area is titled 'Contact Review & Update' and contains instructions for updating contact information. A modal window titled 'Add IRT Object' is open, showing a form with fields for IRT name, Network abuse email, Maintainer, and four address lines. A 'Submit' button is at the bottom of the form.

MyAPNIC ZEN MYAPNIC-TEST-AP LOGOUT

Home Resources Admin Contact Tools Events Voting My Profile

Home / Administration / Account Details Confirmation

Contact Review & Update

To meet Resource Management Policy, you must keep all your contact details up-to-date. Please review and update your contact information below.

A green tick indicates other users have already reviewed and confirmed the records.

If you do not have the permissions to edit all records, please escalate this to your Corporate Contacts or the person responsible for the information.

Add new contact

Full name	Email
CC Name	cc-email@apnic.net
BC Name	cc-email@apnic.net
TC Name	tc-email@apnic.net

Add IRT Object

Info
If you want to use an IRT object that already exists in whois, click "Add Existing IRT Object" button to register that object.

IRT name IRT-MYAPNIC-TEST-AP2

Network abuse email user@example.net

Maintainer MAINT-ALEX-TEST

Address line 1 Tigers' Den, House#4(SW), Bir Uttam Mir Shaw

Address line 2 Exampletown

Address line 3

Address line 4

Submit

Close

- IRT and Contact validation
 - Prop 125 implementation
 - IRT 'abuse-c' contacts
 - Phase 2: Customer assignments
- Work on RPKI and IRR, DNSSEC, Resource transfers, NIR, and Whois management
- Coming soon
 - SSO for my.apnic.net
 - As for Academy and Events

my.apnic.net

RPKI

- Supporting NIR deployments
- ‘Validation Reconsidered’
 - Published as RFC 8360
- Resource Tagged Attestation (RTA)
 - Submitted IETF draft
 - Running code coming in MyAPNIC
- Covered in 5 Routing Security training workshops
- Big focus at NOGs and APNIC 48

apnic.net/rpki

Measure	31/12/2018	To date	Δ
Members with certs	21.9%	24.8%	2.9%
Members with ROAs	11.0%	16.1%	4.8%
IPv4 under ROAs	6.1%	7.4%	1.3%
IPv6 under ROAs	5.6%	8.6%	3%



RDAP

- Working with NIRs
 - NIR-hosted or APNIC-hosted
- RDAP Mirroring
 - Submitted IETF draft
 - Running code for server and client
- RIR coordination
 - Common RDAP profile

apnic.net/rdap

Search for Internet Resource Registration Data

E.g. AS4608, NO4-AP, 2001:dc0::/32

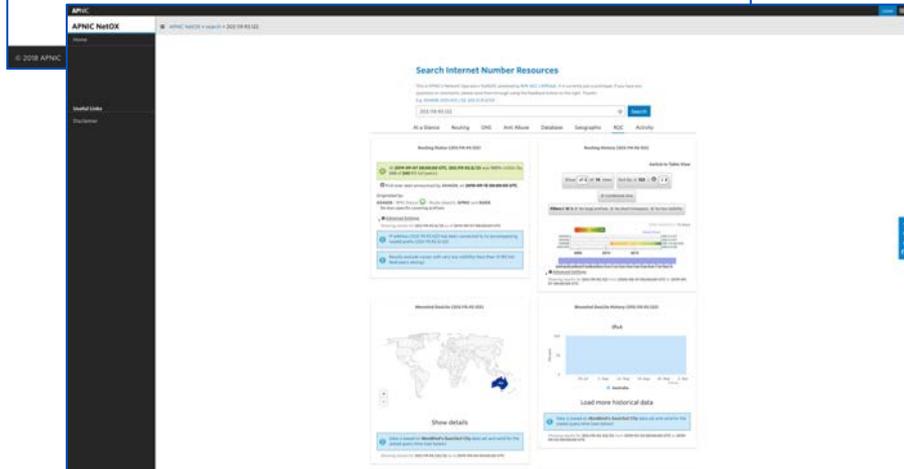
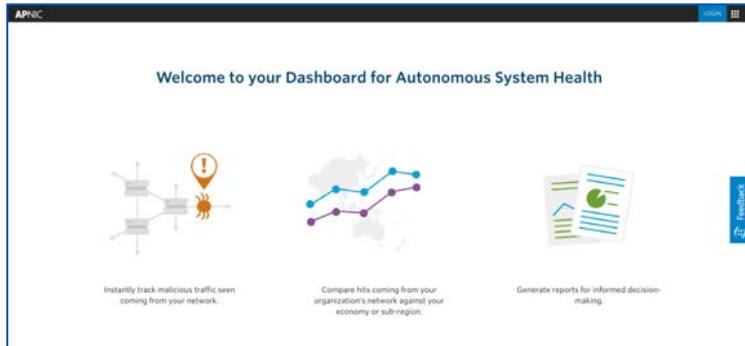
Query by Entity handles only APNIC entities

Organisation		General Information	
Name	TTN-TW	Object	IP Network (ip network)
Country	TW	Handle	210.17.0.0 - 210.17.127.255
Status	ALLOCATED PORTABLE	Start Address	210.17.0.0
Description	Taiwan Telecommunication Network Services Co.,LTD. 110 , 8F , No 89 , Sung Jen RD , Taipei	End Address	210.17.127.255
		IP Version	v4

Reclaiming unused IPv4

- Responding to APNIC Survey 2018
 - 57% support recovery of unused IPv4 address space
 - Total of nearly 6x/8 registered by APNIC, but unrouted
- Identify the holders of:
 - Unrouted current resources
 - Unrouted historical resources
 - Unrouted resources under NIR accounts
- New MyAPNIC listing service of available IPv4
 - Encourage transfer if not return

Information Products



- DASH – Dashboard for AS Health
 - Authentication via APNIC SSO
 - Validation and testing
 - Soft launch at APNIC 48 and interviews
- NetOX – a la RIPEstat
 - Including RQC functions
 - User Interviews at APNIC 48
- Internet Directory
 - Economy comparisons
 - IPv6 Capability
 - VizAS

APNIC Conferences



APNIC 47 / APRICOT 2019

- Daejeon - South Korea
 - 714 attendees from 57 economies
 - IPv6 Hackathon
 - 16 participants (4 female and 12 male)
 - Plus: GFCE, FIRST TC, APCERT, DotAsia, APIX, AP*

APNIC 48

- Chiang Mai - Thailand
 - 422 attendees
 - 52 Fellows from 20 economies
 - 27 Professional, 21 Youth, 4 Returning
 - 50:50 male:female
 - Security and RPKI focus
 - Women in ICT, NextGen Careers, AP* Retreat and APNG Reunion

conference.apnic.net

APRICOT 2020

APNIC 49

25
YEARS

MELBOURNE
AUSTRALIA

12 - 21 February 2020

- Melbourne, Australia
 - Workshops: 12-16 February
 - Conference: 18-21 February
- Venue:
 - Crown Promenade
- Organized with APNOG
 - Hosts: Internet Association of Australia



Training



	2019 to date
Face-to-face training	39
Economies	20
Trainees	1,065
Trainee days	2,848
Community Trainers	19
APNIC Academy Users	2,263
Economies	35
Virtual Labs	848
Course completions	409
Trainee hours	1,907
YouTube Training views	25,263

APNIC Academy

The screenshot shows the APNIC Academy website interface. At the top left is the APNIC Academy logo. To the right are navigation links: Online Courses, Virtual Labs, Live Webinars, Video Tutorials, and My Account. Below this is a 'Live Webinars' section with a sub-header 'Introducing live interactive webinars and courses' and a description 'Register for an upcoming webinar, or view a range of webinar courses.' Underneath is an 'Upcoming webinars' section. The featured webinar is 'Packet Analysis for Network Security' by Warren Finch, scheduled for Wednesday 31 July 2019 at 1:30pm Australia/Brisbane. A timer shows 9 days, 21 hours, 21 minutes, and 3 seconds remaining, with 143 registered attendees. A 'View details' button and a 'Registered' status indicator are also visible.

Free, 24/7
Available

17+ online
courses

- New webinar platform
 - 5 webinars, 451 participants
- Access to “eduroam”
 - APNIC Members only
- Launched at APNIC 48:
 - IPv6 Fundamentals (5 modules)
 - Support for 8 languages

A grid of 15 course thumbnails from APNIC Academy. The courses include: IPv6 Address Planning, IPv6 Overview, Network Forensics & Analysis, BGP Basics, DNS Concepts, DNS Security Client Perspective, Network Security Fundamentals, OSPF Operations, RPKI Deployment, DNSSEC, IoT Security Challenges, and IPsec VPN Design. Each thumbnail features a title, a small image, and a 'VIEW COURSE OUTLINE' button.

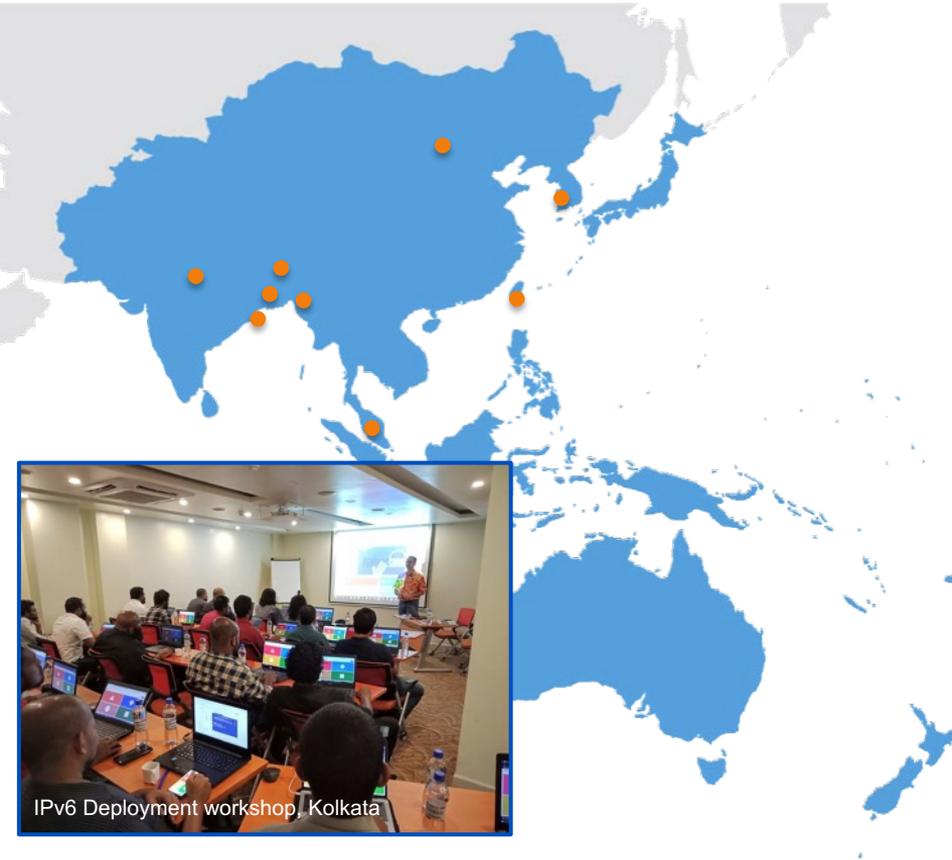
academy.apnic.net

Technical Community



- **NOGs:** Participated in 16 regional NOGs in 2019 (to date)
- **Root servers:** F-root in FJ relocated to IXP; K-root at BTIX
- **R&E:** trainings at APAN 47, 48 with GEANT (TRANSIT-1)
 - Jamie Gillespie is Co-Chair for APAN Security Working Group
 - Continued work with R&E community on training content
 - Supported by funding from Asi@Connect

IPv6



- IPv6 Training
 - 9 face-to-face, 219 trainees
 - New Academy course
- 40 blog posts (to date)
 - IPv6 Week promotion
 - 3 new success stories (29 total)
- IPv6 deployment sessions at APNIC conferences
- APNIC Members holding IPv6 resources 63.05%
- Regional IPv6 capability now 28.61% (APNIC Labs)

Security



apnic.net/security

- Security engagements
 - 8 face-to-face training sessions
 - CERTs: LaoCERT, CamCERT; APCERT; APISC Annual CERT Workshop; CERT TO; Pacific CSIRT workshop WS
 - LEA workshops: Regional Prosecutors, ISCR 2019, Cyber Pasifika, HK Police, Interpol
 - GEANT TRANSITS-I at APAN 47/48
- Security Tracks at APNIC 47/48
- APNIC Community Honeynet – new partners in BT, BD, MY, WS, TO, ID
 - Data being used by DASH
- 65 blog posts

Government and IGOs

- ASEAN Regional Cyber Norms Workshop (Jun)
- APT-WTSA20-1 (Jun), first prep meeting for 2020 ITU WTSA – World Telecommunications Standardisation Assembly
- ITU, Global Symposium for Regulators 2019 (Jul) in Vanuatu
 - Klee Aiken replaced Paul Wilson



ASEAN, Cybernorms workshop



APT, WTSA prep meeting



ITU, GSR in Vanuatu

Internet Governance

- VanIGF and Pacific ICT Days (May)
 - First national IGF event in Vanuatu
- APriIGF 2019 (Jul) in Vladivostok
- IGF MAG
 - Sylvia Cadena (reappointed)
 - Rajesh Chharia appointed
 - 3rd Meeting held in Berlin
 - Paul Wilson nominated by Business and Technical communities as MAG Chair 2020 (TBD)



APNIC Foundation



*'To have a global, open,
stable and secure Internet
that is affordable and
accessible to the entire Asia
Pacific community'*

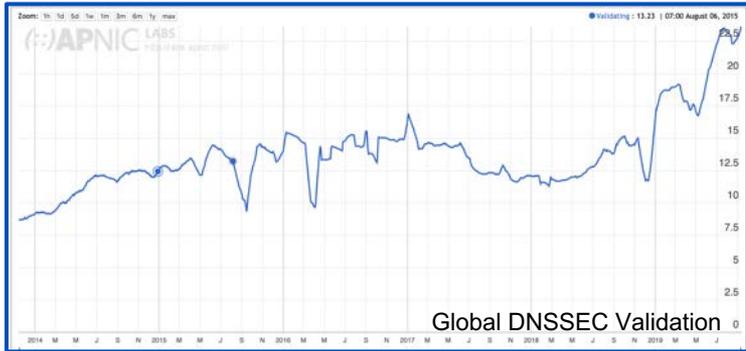
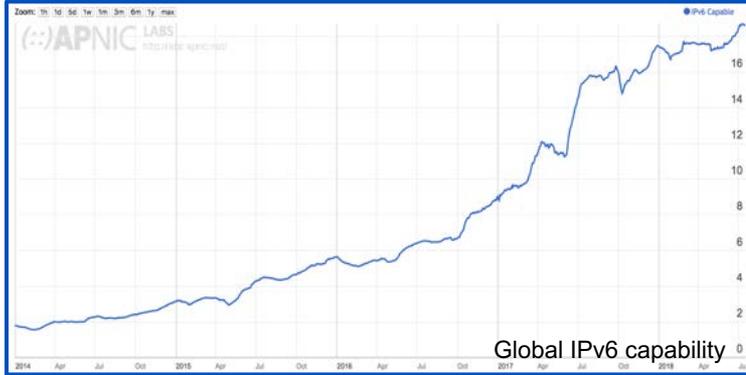
- Board of Directors
 - Edward Tian (CN)
 - Sharad Sanghi (IN)
 - Sylvia Sumarlin (ID)
 - Michael Malone* (AU)
 - Danish Lakhani* (PK)
 - Jun Murai (JP) – since Sep 2019
- Second board meeting
- Over AUD 2M funding signed to date

apnic.foundation

Foundation Activities

- Work continued on the four Pacific projects:
 - Technical training and support for PNG Internet community
 - PNGCERT
 - CERTs/CSIRTs
 - LEAs in the Pacific
- Second community consultation for PNG training and workshop in July (16 engagements to date)
 - Additional funding of AUD 140k confirmed
- Third and final regional Pacific CERT project workshop
 - with AUD 21k additional funding
- Final workshop in Pacific LEA project completed
- APNIC contribution USD 100,000 to 6 ISIF Grants

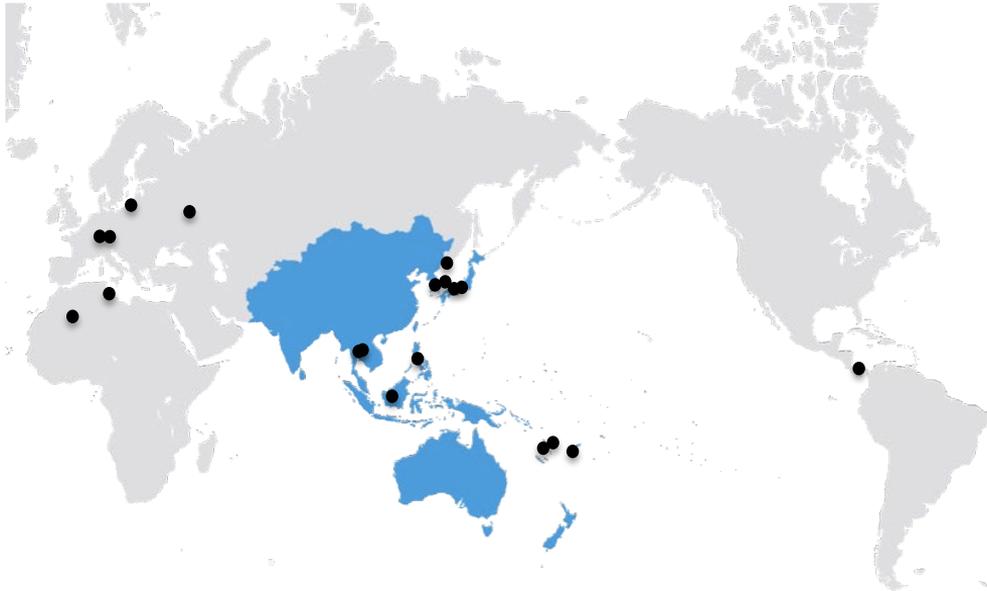
APNIC Labs



- 18 presentations at RIRs, NOGs, IETF, technical conferences
 - Routing, DNS, address policy, ...
- Research Projects
 - DNS resolver concentration
 - DNS research with ICANN
 - ICANN SSAC and RSSAC
 - DNSSEC and NSEC caching
 - Open resolver (1.1.1.1)
 - ITHI DNS measurement
 - BGP update analyser
- 16 blog posts

labs.apnic.net

Global Engagement



- ICANN APAC TWNIC Forum; ICANN 64, 65; DNS OARC; DNS Symposium, RightsCon Tunis
- IETF 104, 105
- PAM 2019
- GSR 2019
- PITA 23rd AGM and Conference
- IGF MAG, ITU-WSIS Forum 2019, APT WTSA20-1
- GFCE

RIR Collaboration



- Received 3 staff visits (RIPE NCC x 2 and LACNIC)
- RIR policy managers meeting and LACNIC visit
- New NRO Public Safety Coordination Group
- RIR work on RDAP consistency
- Participation at all RIR meetings and NRO coordination group meetings
- I* and NRO EC meetings scheduled in 2019

Questions?