APNIC

Apster 28

Apster is the twice-yearly newsletter for the APNIC membersip and community.

August 2009

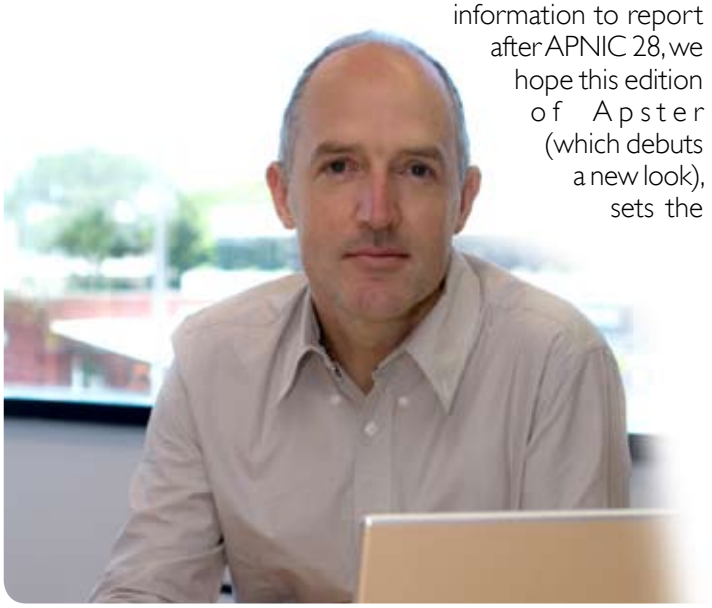
APNIC Update

Welcome to the 28th edition of Apster, coinciding with APNIC 28, which is being held this week in Beijing, hosted by our colleagues at CNNIC.

Our regular meetings are held twice each year in cities throughout the Asia Pacific, most recently visiting Manila, the Philippines and Christchurch, New Zealand. It is, perhaps, appropriate that we are staging the 28th meeting of the APNIC community in Mainland China. Even in the context of the global economic environment, the Internet continues to grow energetically, and countries such as China, India, and other rapidly developing economies in the Asia Pacific play a significant global role.

In the lead up to APNIC 28, there has been vigorous discussion on the policy SIG mailing list. If this is any indication, this meeting will include a healthy debate of the seven policy proposals up for discussion among the meeting attendees and those using the many remote participation options the APNIC Secretariat has made available for those who cannot make it to Beijing.

Although there will be plenty of news and interesting information to report after APNIC 28, we hope this edition of Apster (which debuts a new look), sets the scene for the meeting as it updates you on some developments at APNIC over the past six months:

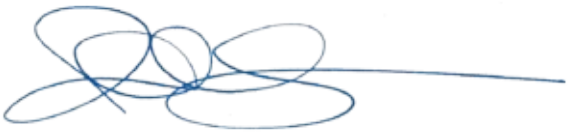


- The new APNIC website, relaunched with a new look and feel and a powerful new CMS behind it
- The APNIC IPv6 Program and the ICONS APNIC Wiki, helping to promote the adoption of IPv6
- APNIC's preparations for the deployment of DNSSEC in the reverse DNS (in-addr.arpa and ip6.arpa) zones
- Our expansion of the RIPE NCC's Test Traffic Measurement (TTM) service in the Asia Pacific region
- A major update to MyAPNIC, bringing new features including a calculator for APNIC Membership fees under the revised fee structure, which will come into effect from 2010
- An update on ISIF, the small grants innovation fund for which we provide Secretariat services
- The developments on training services via eLearning, and new security courses developed with Team Cymru

All of these activities and developments have resulted from, or have been guided in some way by, the latest APNIC Survey, which was released this year. Details of the survey, including the APNIC EC's response, are on the APNIC website, at:

http://www.apnic.net/survey/2009

As I write this, we are in final preparations for our meeting in Beijing. Whether you are reading this during the course of APNIC 28, or at another time, in another place, I do hope that you enjoy this latest edition of Apster.



Paul Wilson, Director General

IPv6 Program Update

APNIC's IPv6 Program has been extremely active since its inception, spreading the word, facilitating discussion, and providing advice to our members and other interested parties regarding the deployment of IPv6 on their networks.

So far this year, the IPv6 Program represented APNIC's views on IPv4 address exhaustion and IPv6 adoption at: the Thailand IPv6 Summit in Bangkok; the Global Mobile Internet & IPv6 Next Generation Internet Summit 2009 in China; APEC TEL39 in Singapore; PITA AGM 2009; PACNOG 5; the Global IPv6 Summit in Korea 2009; SANOG 14; and the Asia Pacific Next Generation (APNG) 11th Camp and ISOC INET conference in Kuala Lumpur.

We also organized round table meetings with the Indonesian Telecommunications Regulatory Authority, APJII, and the Office of the Government Chief Information Officer (OGCIO) of the Government of the Hong Kong Special Administrative Region as part of the IPv6 Program's multi-stakeholder outreach activities.

The IPv6 Program also participated at CommunicAsia 2009 in Singapore to promote IPv6 multihoming and published a brochure to help disseminate IPv6 information to the wider community.

The IPv6 Program constantly updates the APNIC IPv6 ICONS Wiki, providing up-to-date information to the community:

http://icons.apnic.net/IPv6

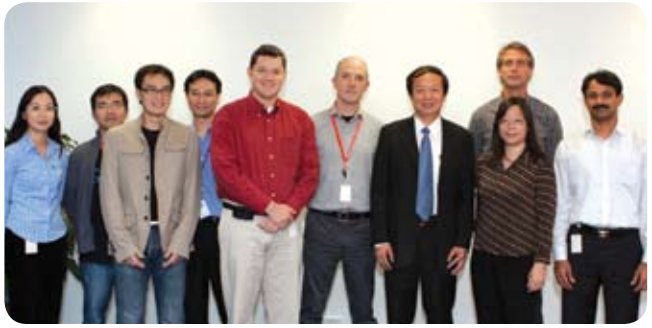
Forging strong regional ties

APNIC has been busy connecting with and forming strong, mutually-beneficial relationships with organizations in the Asia Pacific.

APNIC provides financial and logistical support in addition to participating in various regional conferences. Recently, APNIC assisted SANOG, NZNOG, PITA, and PacNOG to hold their regional meetings.

In addition, by establishing Memorandums of Understanding (MoUs) with like-minded organizations, APNIC agrees to work together and share resources and expertise to advance our shared goals of advancing Internet technology in the region.

▼ APNIC establishes an MoU with TWNIC



This year, APNIC established MoUs with the following organizations:

- Networkers Society of Pakistan (NSP)
- Phillipines Network Operators' Group (PHNOG)
- The Advanced Science and Technology Institute (ASTI)
- Task Force on IPv4 Address Exhaustion, Tokyo, Japan
- BII Group Ltd., Beijing, China
- The Taiwan Network Information Center (TWNIC)
- The National Advanced IPv6 Centre Of Excellence (NAv6)

APNIC also participated at CommunicAsia, where we hosted a member lunch and provided consultation services in a variety of languages. CommunicAsia is a trade show held yearly in Singapore that addresses current and emerging issues in the ICT and digital convergence landscape.

New APNIC Website

APNIC's redesigned website is now live, after having undergone a complete overhaul with a Content Management System back end to bring you all the information and interactive features you'd expect from a CMS-driven site.

With a wealth of new content, improved events calendar, and quicker turn around on updates, visitors are able to find out all they need to know about the current events and activities APNIC is actively supporting in the Internet community.

The new site is easier to navigate and allows viewers to quickly see the top news stories at a glance and choose direct access to frequently sought after content. It features five tabs – Services, Community, Events, Publications, and About APNIC, allowing you to navigate the site quickly and easily.

The remodeled website also includes feedback and contribution forms, answers to frequently asked questions from the helpdesk, and new and improved photo galleries highlighting the various activities the APNIC community undertakes throughout the year.

Services ::	Here's where you'll find information on the services APNIC provides, apply for resources, or become a member.
Community ::	Want to propose a policy? Community is the place to find out how you can participate in the Asia Pacific networking community or about the activities APNIC supports.
Events ::	Browse through our comprehensive events calendar, sponsor an event, or book an APNIC speaker. You can even offer to host an event.
Publications ::	Catch up on the latest APNIC news or data on Internet resource registration and trends.
About APNIC ::	Meet the diverse group of committed professionals who represent the APNIC Secretariat, or check our job vacancies – are you interested in working at APNIC?

The road to DNSSEC

The DNS has been a longstanding area of vulnerability for the Internet, as indicated by the reports of new vulnerabilities that are discovered in the operation of the DNS. DNSSEC is a set of extensions to the DNS that provide cryptographic authentication of query results.

It creates a chain of interlocking cryptographic keys from the root of the DNS hierarchy through to the authoritative server for the queried zone, capable of providing a high degree of confidence in the authenticity of results of a DNS query.

The reverse zones managed by APNIC are an important part of the chain for reverse DNS, linking the in-addr.arpa. and ip6.arpa. delegations at IANA to member delegations within the blocks assigned to APNIC

Adding DNSSEC to a DNS zone requires careful preparation.

APNIC will be deploying DNSSEC in a three-phase plan. The first phase will be to develop the procedures and systems to operate a DNSSEC platform, which will be deployed to a test service.

The second phase will be an operational test to ensure continuity of service through DNS, DNSSEC, and disaster recovery operations, ending with a deployment to production services.

The third phase will be the development and deployment of services and training for APNIC members to run DNSSEC across their reverse zones, and supply secure delegation information to APNIC, securely linking the DNSSEC-signed zones of APNIC members to the parent zones operated by APNIC.

Sharing the TTM experience

APNIC is currently in the process of sponsoring the installation and upkeep of 12 Test Traffic Management (TTM) servers in various locations around the Asia Pacific to help facilitate network investment by providing the necessary data for connectivity providers and decision makers to make long-term plans for future network development.

The TTM servers are dedicated measurement devices physically installed at various test sites and managed remotely by the RIPE-NCC that comprehensively and continuously measure key Internet connectivity parameters. This enables the diagnosis of problems involving external networks and the detection of long-term trends in external connectivity.

TTM measurements include one-way delays between hosts (latency), packet losses, path information (traceroute), bandwidth, and delay variation (jitter). Summary data, including customizable statistical analysis, is available to all interested parties.

APNIC is providing the funding and equipment for 12 TTM hosting partners to deploy nodes in a variety of locations across the Asia Pacific region. An example of this regional deployment is Cybernet in Pakistan. The deployment will also include devices in Bangladesh, India, Indonesia, the Philippines, Taiwan, and Thailand.

"At Cybernet, we are extremely happy to be collaborating with APNIC to deploy the TTM service on our networks. APNIC's valuable support is allowing us to run the service and share the data with other Pakistan ISPs and network researchers. Finding out more about our network connectivity within Pakistan and abroad will help us plan the most useful upgrades, saving costs to our customers. We hope that other ISPs in this region can benefit similarly from our data."

– Shahid A. Khan, CEO, Cybernet

New features in MyAPNIC

MyAPNIC

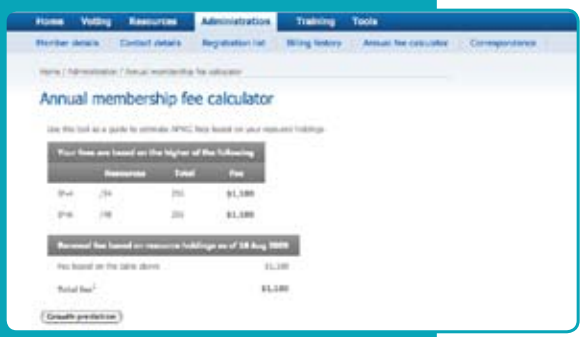
Over the last six months, MyAPNIC, our secure member services website, has been upgraded with a few important new features. Firstly, we have streamlined the entire Internet number resource request procedure such that it can now be achieved entirely within the MyAPNIC interface. Members are able to submit their requests in a greatly simplified manner within the secure MyAPNIC environment.

In addition, users can now manage all their reverse delegations, including IPv6, IPv4, and AS numbers within the MyAPNIC web interface.

Thirdly, in response to APNIC's new sliding-scale fee structure, MyAPNIC now includes a fee calculator that accurately estimates APNIC Membership fees based on resource holdings.

The fee calculator can also predict a member's future membership fees based on estimations of growth in their organization's resource requirements.

The fee calculator will be available to Corporate and Billing Contacts to facilitate budgetary planning. MyAPNIC is constantly being enhanced to better serve the interests of our members.



ISIF's first year

ISIF, the Information Society Innovation Fund, recently celebrated its first anniversary. A report detailing the first year of ISIF's activities will be presented at the APNIC 28 Member Meeting in Beijing, including updates on the projects we funded, the development of policies and procedures, and a review of the selection process.

As we progress into our second year, the ISIF Secretariat is developing an evaluation plan to streamline its activities to achieve maximum efficiency.

The call for applications for a second round of funding closed on 31 July 2009. We received 207 applications from 24 economies and these are presently being reviewed. The Grants Evaluation Committee will first shortlist the best project proposals, then the candidates will be invited to a Proposals Development Workshop at APNIC 29 in Kuala Lumpur in February 2010. The selected proposals will be announced soon after.

Eleven projects that received funding during the initial round of grants in 2009 have recently submitted progress reports. The ISIF Secretariat will soon publish summaries of these reports. Several grantees have also published articles in various IT journals, further disseminating their knowledge and innovations.

Two key issues that limit Internet growth in the Asia Pacific region are the lack of access to technical skills and unreliable network infrastructure. ISIF's primary objective is to help advance local and regional projects that are aimed at introducing, improving, and applying Internet technology for the benefit of these communities.

ISIF is a joint initiative between the Canadian International Development Research Centre (IDRC), the Internet Society (ISOC) and APNIC.

For more information about ISIF, visit: http://isif.asia

DITL 2009

In line with APNIC's commitment to contributing to research and development within the regional networking community, we were selected to participate in 2009's Day In The Life of the Internet (DITL).

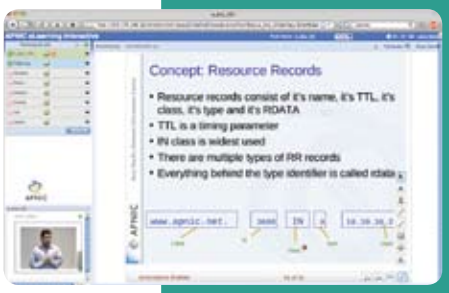
The "Day in the Life of the Internet" is an annual event that collects a diverse range of Internet measurement data over a certain period of time, which was increased to 72 hours this year compared with the usual 48. The aim of the project is to collect data to aid in the discussion of the operational future of the Internet.

APNIC is one of the few organizations in this region that can give accurate information on address distribution and utilization through analysis of the traffic to our regional DNS servers.

During the 2009 event, APNIC captured the DNS packetflows to its DNS servers in Brisbane, Hong Kong, and Tokyo, contributing 478 gigabytes of data to the project. The total data collected by "The Day in the Life of the Internet 2009" currently stands at 3.7 terabytes from 47 organizations at 160 data collection points.

The "Day In The Life of the Internet" is coordinated by the Cooperative Association for Internet Data Analysis (CAIDA – http://www.caida.org) and the DNS Operations, Analysis, and Research Center (OARC). It began as a trial-run in 2006 and was followed by the first full-scale event in 2007.

APNIC eLearning



APNIC's elearning-Interactive system allows APNIC Training to deliver courses to students all over the world in an interactive online environment. The class first meets online, then they undertake 3-5 sessions of course material, studying the course while interacting in a virtual learning community.

elearning-Interactive courses have so far been given on Internet Resource Management (IRM), DNS, Security, and IPv6 and have been very well received. More sessions are planned for the future and will be listed as part of our normal training events calendar.

eLearning-Interactive uses DimDim as its software platform. This allows us to interact with the trainees via IM chat and use features like virtual whiteboards and screen-sharing.

We have set up an eLearning studio, allowing the trainer to view the class on a large screen while they speak and interact with them as if they were teaching in a face-to-face environment.

A second trainer also participates in the session as a producer, monitoring chat, answering questions, and generally supporting the instructor.

Our eLearning-Interactive webclasses form part of APNIC's Blended Learning Environment, a combination of face-to-face training and workshops, eLearning-Interactive, and self-paced online modules to provide continuity of learning.

The self-paced modules use a mixture of multimedia and presentation technologies and are geared to support and augment the face-to-face and Webclass training. APNIC Training is currently redeveloping these modules and the first new module, which covers the development of an address plan for address resource requests, is currently being piloted.

For further information please see: **www.apnic.net/training**

Fighting network abuse

APNIC Training has recently begun working with Team Cymru to provide network security training in the Asia Pacific region.

Team Cymru is a group of network security experts distributed around the globe dedicated to fighting network abuse on the Internet. In particular, they strive to identify and eliminate botnets and maintain intelligence on the latest techniques being used to create, command, and control these vast networks of zombie computers.

At present, botnets remain a major threat, and the techical challenges faced by their designers, such as IDSs and firewalls, are trivial to overcome, standing as a weak link in our collective defences against such activities.

Team Cymru are passionate about network security and fight against threats to the security of the Internet through grass-roots education of network engineers and providing insight and assistance to ISPs, CERTs, hosting providers, and law enforcement.

APNIC Training and Team Cymru are now working closely to provide botnet and network forensics training in the Asia Pacific region, with a focus on dealing with the latest threats to network security. So far, two two-day training events have been held in Suva, Fiji and at NZNOG, respectively.

These courses provided the attendees with a unique insight from a criminal's point of view and hands-on experience in forensic investigation techniques to combat botnets.

Team Cymru have now established a training hub in Kuala Lumpur, which will act as a base of operations for joint training activities with APNIC in future.

Team Cymru website: **http://www.team-cymru.org/**

Training calendar

Title	Date(2009)	Location
IPv6, Forensics and Security, IPv6	24-28 Aug	Beijing, China
IRME, IPv6	7-11 Sep	Port Moresby, Papua New Guinea
IRME, IPv6	23-25 Sep	Ulan Bator, Mongolia
IRME, ISP	23-25 Sep	Yangon, Myanmar
IRME, IPv6	28-30 Sep	Darussalam, Brunei
IRME, Advanced IPv6	19-21 Oct	Australia
IRME, IPv6	20-23 Oct	Sihanoukville, Cambodia
IRME, Routing/IRR	21-23 Oct	Vietnam
IRME, Advanced IPv6	26-29 Oct	Hong Kong
IRME, Routing, IRR, IPv6	26-29 Oct	Manila, The Philippines
IRME, IPv6	18-20 Nov	Kathmandu, Nepal
IRME, IPv6	18-20 Nov	Kolkata, India
Training TBD	22-28 Nov	Nadi, Fiji
IRME, IPv6, DNS	23-25 Nov	Colombo, Sri Lanka
IRME, Routing	2-4 Dec	Karachi, Pakistan
IRME, IPv6	3-4 Dec	Seoul, Korea
IRME, Routing, IRR	7-9 Dec	China
IRME, DNSSEC	7-8 Dec	Taipei, Taiwan

Internet Resource Management Essentials (IRME): Introduces, highlights, and explains the key essentials of Internet resource management. Targeted at IT professionals responsible for administering and managing Internet resources, including IP managers, senior hostmasters, and network engineers.

IPv6: Provides an understanding of IPv6: Its structure, operation, and technical features, a detailed discussion of IPv6 addressing and architecture, and the issues related to the deployment, transition, and coexistence with IPv4.

ISP Services: Provides a fundamental overview of the core technologies that drive the Internet relevant to its operation and development: Routing, DNS, IPv6, and Internet security, as well as TCP/IP, IP addressing, subnetting, and network design.

Routing: Focuses on data routing and associated protocols, router configuration, network infrastructure design, and interior and exterior gateway routing protocols.

Internet Security and Forensics: Understanding the current threats; identifying and assessing risks; building resistance to intrusion; responding to violations and vulnerabilities; and establishing a robust, stable, and secure network.

Internet Routing Registry (IRR): The IRR is an evolving network database of Internet registered routes and routing policies. We look at the benefits of this system and how to use it most effectively.

Staff Updates

An An, Internet Resource Analyst

Joining APNIC in March 2009, An An has worked previously as a customer service consultant for Telstra and as an IT support officer for Rio Tinto. He is fluent in Chinese Mandarin. His responsibilities at APNIC will include processing requests for IP address space and AS number allocations within the Asia Pacific region. He holds multiple degrees related to IT from Chinese and Australian universities.

Kosta Servis, Software Engineer

Kosta started at APNIC in May 2009. He studied Computer Science at the Heriot-Watt University in Edinburgh. Originally from Athens, Greece, he has lived, studied, and worked in the UK, Spain, and Australia for the last 12 years. He obtained a Sun Java certificate and is working toward his Graduate certificate in Computer Science. In his spare time, Kosta likes to play basketball and train in taekwondo.

Bryon Westmoreland, Software Engineering Manager

Bryon joined APNIC in March 2009. He has a Bachelor's degree in Mathematics and a Masters degree in Computer Science. Previously, he worked as a Senior Software Engineer and later as the Software Manager for a California-based digital agency. In his spare time, Bryon enjoys most sports, reading, going to movies, and spending time with his family.

Renee Coyne, Receptionist

Renee joined APNIC in June 2009. She has a dual Diploma of Business and Event Management. She is responsible for running the APNIC reception, as well as providing office administration services. Prior to joining APNIC, Renee worked primarily in customer service. In her spare time, she enjoys cooking, dancing, and spending time with her friends, family, and her puppy, Sheba.

Sara Thiplekha, Internet Resource Analyst

Sara joined APNIC in May 2009. She previously worked as a SAP Enterprise System Consultant for various system development projects throughout the Asia Pacific. Sara holds a postgraduate qualification in Information Science specializing in Internetworking from the University of New South Wales, Australia. In her own time, Sara enjoys most types of social activities and loves public speaking.

How to contact APNIC

Office location
Level 1, 33 Park Road, Milton, Brisbane QLD 4064 Australia

Postal address
PO Box 2131, Milton, Brisbane QLD 4064Australia

Phone
+61 7 3858 3100

Fax
+61 7 3858 3199

Email
info@apnic.net

VoIP
helpdesk@voip.apnic.net

MyAPNIC

Are you using MyAPNIC?

APNIC members can use MyAPNIC to:

- View APNIC resources held by their organization
- Monitor the amount of address space assigned to customers
- View current and past membership payments
- View current tickets open in the APNIC email ticketing system
- View staff attendance at APNIC training and meetings
- Vote online

For more information on MyAPNIC's features, see:

www.apnic.net/services/myapnic

APNIC Helpdesk

+61 7 3858 3188

Helpdesk@apnic.net

Helpdesk Languages

Bahasa Indonesia, Bengali, Cantonese, English, Filipino (Tagalog), Hindi, Mandarin, Thai

eco APNIC This issue of *Apster* is printed on recycled paper.