APNIC

Apster 29

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

March 2010

IPv4: Less than 10% remain unallocated

The Number Resource Organization (NRO) recently announced that less than 10% of IPv4 addresses remain unallocated. This small pool of remaining IP addresses marks a critical moment in IPv4 address exhaustion, ultimately impacting the future network operations of all businesses and organizations around the globe.

With less than 10% of the entire IPv4 address range still available for allocation to RIRs, it is essential that the Internet community take action to ensure the global adoption of IPv6. Using IPv6 will enable the Internet to continue to grow to millions of times its current size while avoiding adding a level of complexity that would increase costs to network administrators.

APNIC and the NRO are urging all Internet stakeholders to take immediate action by planning for the necessary investments required to deploy IPv6. In partnership with the NRO and the other RIRs, APNIC has launched a new campaign to promote the next generation of Internet Protocol in the Asia Pacific region. The 10% Campaign's aim was to assist with the transition to IPv6, by providing education and information to a broader community which includes the region's C-level executives.

APNIC Chief Scientist, Geoff Huston, said that with IPv4 exhaustion approaching in as little as 18 months, IPv6 allocations are growing. "As the Internet expands in the coming years we expect to see the transition to IPv6 take a prominent role," Huston said. "It may be possible that in 2010 the number of IPv6 allocations will exceed the number of IPv4 address allocations for the first time," he said.

"What key decision makers need to realize is that without IPv6 deployment their businesses will be affected by IPv4 address depletion. We have now come to that critical stage, where if they don't act now, there will be grave consequences," he said.

Fortunately, the industry is responding to the challenge. Around the world, we see more and more examples of Governments working with the private sector and civil society to help their economies prepare for IPv6. Internet Exchanges, operators, and service providers are all beginning to, or planning to, deploy IPv6.

To assist organizations, APNIC has been busy collecting and communicating information from organizations that have deployed IPv6, sharing this across the region. This information is freely accessible via the APNIC website, including ICONS, APstats and various presentations.

APNIC is calling on business leaders to act now by ensuring that access to online content continues via IPv4 and IPv6 (dual stacking); suppliers, partners, equipment vendors, and hosting companies support IPv6; and that staff are adequately trained on IPv6.

Global recovery to pressure IP address pool

A resilient Asia Pacific ICT sector and high penetration rates for mobile Internet devices globally are two standout factors in IP address allocations in 2009, according to a new report.

2009 in Review - the IP Address Registry Perspective by APNIC's Chief Scientist, Geoff Huston, reveals that 2009 was a dynamic time for Internet number resources despite the global economic downturn. Key building blocks of the Internet, Internet Protocol (IP) addresses, provide an indication of Internet growth trends and network maturation within an economy.

Geoff Huston, a globally recognized expert on IP address consumption, explains that although address consumption was down 5% from 2008 figures, current projections that the central IANA pool of unallocated IPv4 addresses could be exhausted as early as late next year, indicate a continuing need for IPv6 deployment.

New allocations performed during 2009 represent the equivalent of approximately 5% of the total IPv4 address space available.

"Conventionally, news of impending exhaustion of addresses would motivate some form of a last minute rush for addresses. This is not visible so far. The industry has been acting in a very calm and considered manner in terms of address demands," Huston said.

2009 Internet Growth rate

Rank	Economy	IPv4 Addresses (Millions)
1	China	50.67
2	United States of America	38.55
3	Japan	11.04
4	Republic of Korea	10.95
5	Russian Federation	5.46
6	Brazil	4.19
7	United Kingdom of Great Britain and Northern Ireland	4.19
8	Italy	4.16
9	France	3.35
10	Germany	3.6

Of the 190.1 million IPv4 addresses allocated during the year, just under half (45.87%) were allocated in the Asia Pacific, with China consuming more IPv4 addresses than any other economy.

"Nearly a quarter of the address space allocated in 2009 went to China," explained Huston. "This is indicative of a significant expansion in broadband and wireless services led by the major telco and mobile operators there," he said.

Japan, the Republic of Korea, Taiwan and Australia also showed strong growth.

In maturing markets, which already have high home broadband penetration, mobile Internet devices are still fuelling continued growth.

"The USA was allocated 38 million addresses in 2009," Huston said. "Considering it is already well connected, with approximately 74% of the population already using Internet services, the continued consumption of IPv4 addresses points to emerging new markets there," he said. "These new markets appear to be led by mobile Internet services, headlined by technologies such as Apple's iPhone and Google's Android platforms."

A similar picture of strong growth in mobile Internet services is evident in Australia (2.6 million new IPv4 addresses in 2009); Canada (2 million); and the Netherlands (2 million); all of which have a mature wired broadband market where 70% - 85% of the population are already Internet users.

With IPv4 exhaustion approaching in as little as 18 months, the number of IPv6 allocations is growing. Within the Asia Pacific region, Australia and Japan showed the highest level of activity in 2009. Australia received 52 new IPv6 allocations and Japan 32.

"As the Internet expands in the coming years, IPv6 is expected to take a prominent role. It may be possible that the number of IPv6 allocations in 2010 will exceed the number of IPv4 address allocations for the first time," Huston said.

"The message on IPv6 deployment is spreading, with a global increase in the number of economies now with IPv6 resource holdings increasing by 17%," he said.

Local economies with IPv6 address allocations for the first time in 2009 include: Brunei, Cook Islands, Micronesia, New Caledonia, Samoa, the Solomon Islands, Tonga, and Vanuatu.

Message from the Director General

Welcome to the 29th edition of Apster, coinciding with APNIC 29 / APRICOT 2010 in Kuala Lumpur, Malaysia, hosted by our colleagues at PIKOM, the National ICT Association of Malaysia.

As well as providing valuable plenary and tutorial content, we anticipate this conference will feature continued debate on Internet resource policy matters as the community meets to discuss current and future policy framework for the region. No doubt, there will be vigorous and healthy discussion on IPv4/IPv6 consumption and the future of the Internet, especially now the IANA pool of unallocated IPv4 resources has reached around 8 %. However, it is encouraging to note that recent statistics indicate that IPv6 adoption is gaining momentum.

On the governance front, a Community Consultation at APNIC 29 will ask the community for its views on investigations the International Telecommunications Union (ITU) is making into the feasibility of changing the IP address distribution model, which is the foundation of the Internet as we know it today.

An ITU Working Group will meet in March to discuss the proposal and as an ITU-D sector member APNIC will participate to ensure the views of its stakeholders are considered during the deliberations.

Remember, discussions are open to all those attending the conference in person as well as those using the remote participation options made available by the APNIC Secretariat.

I would personally like to thank our colleagues at PIKOM, the many sponsors that made this event possible, and those who are so enthusiastically participating in the policy development process for their efforts and contributions.

Whether you are reading this during the course of APNIC 29, or at another time, in another place, I do hope you enjoy this latest edition of Apster.

Paul Wilson, Director General

APNIC policy update

On 10 February 2009, APNIC implemented three policy proposals that reached consensus during APNIC 28 in Beijing, China in August 2009. The APNIC Executive Council endorsed the proposals during their November 2009 meeting. The three policies implemented are:

prop-050: IPv4 address transfers

Policy restrictions on the transfer of registrations of IPv4 address allocations and IPv4 portable address assignments between current APNIC account holders have now been removed.

prop-073: Simplifying allocation/assignment of IPv6 to APNIC Members with existing IPv4 addresses

New alternative simplified criteria has been introduced to allow a Member with existing IPv4 space to qualify for an appropriately-sized IPv6 block under the matching IPv6 policy and request that IPv6 block through a simple online form.

prop-075: Ensuring efficient use of historical AS numbers

APNIC now has the ability to recover unused historical AS numbers for eventual reassignment to other APNIC account holders.

A fourth policy proposal that reached consensus at APNIC 28, 'prop-074: Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks (ASNs) to Regional Internet Registries', is pending completion of the remaining steps of the global policy process.

For more information on APNIC policy proposals, see:

http://www.apnic.net/policy/proposals

IPv6 Program update

The APNIC IPv6 Program gained momentum and influence in 2009, reaching out to a multi-stakeholder community at CommunicAsia 2009. This general ICT exhibition represented an audience that relies on—but is not directly involved with—Internet network infrastructure.

The APNIC IPv6 Program also made significant progress in reaching out to policy makers and regulators through participation at APEC TEL conferences, and by organizing roundtables and face-to-face meetings with government representatives.

APEC TEL 40

APNIC participated in the APEC Telecommunications and Information Working Group (TEL) 40 conference in Cancun, Mexico (24-30 September 2009) as one of our strategic activities to reach out to telecommunication policy makers and regulators.

APEC TEL aims to improve telecommunications and information infrastructure in the Asia Pacific region by developing and implementing appropriate telecommunication and information policies, including relevant human resource and development cooperation strategies.

APNIC co-organized a workshop which provided an opportunity to achieve cross-economy and cross-industry information exchange regarding IPv6 deployment. Miwa Fujii, APNIC's IPv6 Program Manager, provided support to the working group that organized the APEC workshop. Miwa also presented a session entitled 'IPv6 101'.

Paul Wilson, APNIC's Director General, delivered a presentation, 'Transforming the Internet: From IPv4 to IPv6', to raise awareness among policy makers and regulators about IPv4 address exhaustion and the importance of a smooth transition to IPv6. Representatives from Government and industry, as well as those from ARIN, ICANN, and IANA, also participated as speakers at the event.

Miwa Fujii, APNIC's Senior IPv6 Program Specialist at APEC TEL 40

APNIC will continue its involvement with APEC TEL in 2010 providing accurate information and recommendations regarding Internet Resource management.

COMMUNITY ENGAGEMENT

The program also initiated other small-scale regional meetings to deliver customized information to different stakeholders by collaborating with local leaders.

As part of the IPv6 Program's multi-stakeholder outreach activities, APNIC also organized round table meetings with regulators in the region including:

- The Indonesian Telecommunications Regulatory Authority
- APJII
- The Office of the Government Chief Information Officer (OGCIO) of the Government of the Hong Kong Special Administrative Region

Reaching out to Government regulators about IPv4 exhaustion and IPv6 adoption helps raise awareness about this issue; importantly, this also highlights what Governments can do to help with preparation. Governments can assist by preparing backbones to supporting industry and by reviewing procurement criteria, thereby supporting their economies through these actions.

Kickstart your IPv6

You can now get a block of IPv6 addresses easily and simply!

New policy criteria make it simple for any Member with IPv4 addresses but no IPv6 addresses to qualify for an appropriately-sized IPv6 block (depending on their IPv4 allocation or assignment). Eligible Members simply have to use one click of the mouse to get these IPv6 addresses; it's that easy!

The best part is there are no forms to fill out, and no Membership fee increases at the time of delegation. Just one click to IPv6!

Through MyAPNIC, eligible Members will see the "Get your IPv6 addresses" icon on the main landing page, and the landing page under the 'Resources' section. Simply by clicking on the icon you can receive IPv6.

Alternatively, you can access this icon via links provided on APNIC's website, including on the banner of the main APNIC home page, the 'Services' section, and at the IPv6 Program page.

How much space will a Member receive?

Members will receive the following minimum delegations:

- A Member that has an IPv4 allocation would be eligible for a /32 of IPv6
- A Member that has an IPv4 assignment would be eligible for a /48 of IPv6

How does this help?

It is now easier than ever to get your own IPv6 addresses.

* Complete the first step in your IPv6 deployment plan with a single click
* Automatically get an IPv6 delegation if you already hold IPv4 addresses
* Help increase IPv6 adoption

For more information on the policy changes affecting IPv6 delegation, refer to Section 5.1 of the IPv6 address allocation and assignment policy [APNIC 089].

http://www.apnic.net/kickstartIPv6

New fees structure + calculator

With the implementation of the new fee schedule from 1 January 2010, APNIC has developed a new Fee Calculator to assist Members with calculating their fees. The Calculator provides Members with projected 2010 membership fees based on their address holdings.

The Calculator can also be used to add in additional address holdings that are applied for before the membership renewal date, thus providing Members up-to-date fee projections. To access the new Calculator, simply log in to your MyAPNIC account and click on the 'Administration' tab. For more information on the APNIC fee changes for 2010, visit

www.apnic.net/member-fees

A 50% discount applies to Members from Least Developed Countries.

The list of LDCs used for the purposes of this fee discount is defined and maintained by the United Nations Statistics Division (currently available as http://unstats.un.org/unsd/methods/m49/m49regin.htm#least). The discount will be applied in accordance with the LDC status of the Member's economy on the date of membership renewal.

APNIC highlights issues at IGF 2009

APNIC participated at the fourth annual Internet Governance Forum (IGF) in Sharm El Sheikh, Egypt, 15-18 November 2009, where attendees from all stakeholder groups showed significant interest in the transition to IPv6.

APNIC represented the Asia Pacific Internet addressing community in a number of sessions, including the main session on critical Internet resources where the moderators requested Paul Wilson, APNIC Director General, to explain how IP addresses are distributed. Paul Wilson was also a panellist at the 'Adopting IPv6: What You Need To Know' workshop.

Other workshops, 'Managing Internet Addresses: Global and regional viewpoint' and 'Analyzing Resource Requests: present and future', featured APNIC Communications Area Manager, Germán Valdez, as a speaker, where he spoke to help IGF participants better understand how the IP address distribution system was developed to meet Internet operators' needs.

For the first time, the IGF program included a main session that facilitated feedback from regional IGF initiatives that had been held throughout 2009. In 2010, to increase the participation of stakeholders from the Asia Pacific, APNIC has joined the organizing committee for the first Asia Pacific regional IGF to be held in Hong Kong, 15-16 June 2010, with the support of the Hong Kong Office of Government Chief Information Officer.

TO BE CONTINUED?

As IGF 2009 was the second last IGF in the series of five IGFs mandated by the UN Secretary-General, there was a special session, 'Taking Stock and Looking Forward – on the desirability of the continuation of the Forum'. At this session, Lillian Sharpley from AfriNIC, on behalf of the NRO, spoke of the RIR communities' support for the continuation of IGF. Based on the feedback from that session, which was overwhelmingly in support of continuing IGF in its present form, and from subsequent deliberations, a decision will be made on whether IGF will continue after 2010.

The fifth annual IGF will be held in Vilnius, Lithuania, 14-17 September 2010.

Staff updates

Tuan Nguyen, Internet Resource Analyst

Tuan joined APNIC in October 2009. Tuan has previously worked for the Queensland Nursing Council as a Systems Administrator, and as a Network Manager with the Australian Army. At APNIC, he is responsible for allocating and assigning IP address space, maintaining APNIC databases, and providing support to Members. In his spare time, Tuan enjoys most sports, reading, games, movies, and travelling.

Samantha Marks, Editor

Samantha first came to Brisbane from Virginia Beach, Virginia in 2005 to study Australian and Indigenous culture at UQ. In 2007 she completed her Masters in Journalism at QUT. She also has a Bachelor of International Studies from the American University, Washington DC. She has worked at Media Matters for America, and brings to APNIC varied experience in writing and editing for print publications, online, and radio. Samantha enjoys photography.

NRO emphasizes importance of Internet in developing regions

The Number Resource Organization (NRO) highlighted the importance of fair and equitable access to Internet number resources in all regions, at the Internet Governance Forum (IGF) in Sharm El Sheikh, Egypt.

As mobile Internet and broadband becomes more widespread in developing regions, there is an urgent need for IPv6-compatible networks and devices to be available. This is the only way that developing countries can continue to compete on a global stage.

THE FINAL FIVE

Raúl Echeberría, Executive Director of the Latin America and Caribbean Network Information Center (LACNIC) says "the RIRs will each receive one of the last five blocks of IPv4 addresses from IANA at the same time.

"Because the RIRs that serve the least developed regions (LACNIC and AfriNIC) allocate addresses at a slower rate, it is likely that we will continue to allocate IPv4 addresses after the other RIRs have run out," Echeberría said. "This will allow these developing regions some critical extra time to deploy IPv6 efficiently and effectively," he said.

Executive Director of LACNIC, Raúl Echeberría

"The RIR system works on a bottom-up policy approach, ensuring fair and equitable access to critical Internet resources for both developed and developing nations. Regardless of the exact date of IPv4 address exhaustion, the NRO, and the RIR system that it represents, will ensure that IPv6 addresses are distributed responsibly and fairly."

Part of ensuring that IPv6 deployment is a success is the multi-stakeholder approach adopted at events such as the IGF. Representatives of both the private and public sector must continue to work together to secure the future growth and development of the Internet. For this reason, APNIC and the NRO encourage all parties to participate in workshops, as well as other multi-stakeholder events relating to Internet governance.

APNIC is dedicated to providing ongoing training to our Members, ensuring a smooth transition to IPv6.

‘Small’ ICT business innovation still big in Asia Pacific

The Asia Pacific is still proving to be the center of Information and Communication Technology (ICT) innovation in small business, with the release of 2009 figures showing the sector is surging. APNIC’s Chief Scientist, Geoff Huston’s report, *2009 in Review - the IP Address Registry Perspective*, shows despite a 5% global downturn, the Asia Pacific accounted for nearly half of the IP addresses allocated in 2009. Small business is leading the way in innovative approaches to the extension of infrastructure in the Asia Pacific. This approach requires flexible and timely funding strategies to support technical research and implementation, such as the assistance provided by funding programs such as ISIF.

The Information Society Innovation Fund (ISIF) is a small-grants program established in 2008 aimed at stimulating creative solutions to ICT development needs in the Asia Pacific region. The program is a partnership between the Asia Pacific Network Information Centre (APNIC), the Canadian International Development Research Centre (IDRC), the Internet Society (ISOC), and with generous support from the dotAsia domain registry.

The 2010 ISIF program received its greatest number of applications so far with 207 submissions received from 25 different economies. The competition was very tough, comprising a strict set of selection criteria and a rigorous process followed by the Grants Evaluation Committee (GEC), to finally select 8 projects from Bhutan, India, Nepal, Sri Lanka, Vietnam, and Australia (to be deployed in Timor-Leste).

POSITIVE COMMUNITY IMPACT

The successful projects showcase innovation, cooperation, and technical knowledge, and have the potential to create social change in their communities in areas such as IT infrastructure, health, or multilingualism. The projects also reflect current issues in technical and social discussion, including two projects that focus on IPv6 research and deployment; exploring the opportunity for developing economies to get ahead in the IPv6 challenge. Two other projects focus on the deployment of wireless technologies to serve isolated communities providing alternative services thus making communications cheaper and more accessible.

The ISIF program has received an increasing number of applications and requests for support. This indicates there is a vibrant community of reliable organizations and qualified IT professionals eager to test and develop new ideas, recognizing the need to boost R&D investment for ICT4D initiatives. The ISIF program has reviewed its partnership and sponsorship strategy, opening the possibility for other interested parties to join the program. This will allow a higher number of projects to be sponsored per year, as well as fund sponsor workshops and produce in-depth publications.

For more details on how your organization can support cutting edge ICT programs in the region, contact Sylvia Cadena, ISIF Project Officer.

During 2010, results of the projects funded during 2009 will be shared with the Internet community.

ISIF is planning to continue with a new call for applications. Details will be available in late 2010 at:

www.isif.asia

IPv6 in South Asia

IPv6 Migration

In the second half of 2009, APNIC participated in a series of IPv6 workshops organized by the Telecom Engineering Centre (TEC) of India. Staged in New Delhi, Bangalore, Chennai, and Mumbai, these IPv6 migration workshops brought together many stakeholders including policy and technical experts, Government representatives, network operators, the private sector, and the user community.

Discussions focused on the steps needed to make the Internet truly inclusive for large-scale development, and encourage mass participation by all parts of the community.

APNIC Training conducted a hands-on two-day IPv6 training at the Mumbai workshop and had a speaker at the event.

In addition to presenting at the workshop, APNIC Communications Area Manager, German Valdez, also conducted a full-day CEO briefing organized by APNIC. This exclusive briefing was a great success with representatives from both private and public sector organizations attending.

A National Strategy

It was a big year for IPv6 in India with Government, academia, service providers, system integrators, and application and system vendors, attending a special IPv6 Summit in New Delhi during December.

In recognition of the important role that grassroots events such as this play in building IPv6 awareness, APNIC was a Platinum Sponsor and played an active role in the forum with Paul Wilson, APNIC Director General, conducting a presentation called 'Transforming the Internet: From IPv4 to IPv6'.

An important milestone in India's journey towards IPv6 awareness and deployment, the purpose of the Summit was to discuss the state of IPv6 deployment in India and collaborate ideas into a concrete national strategy.

APNIC took the opportunity to cement closer relations with the IPv6 Forum India, signing an MoU (Memorandum of Understanding) to raise IPv6 awareness, propagate widespread deployment, and build an active IPv6 community in India.

Internet for Everyone

INET Delhi 2009 is part of the Internet Society INET series of regional conferences focusing on enabling Internet access through inclusive development. Communications Area Manager, German Valdez and Senior Community Engagement Specialist, Srinivas Chendi participated in the one-day intensive conference which considered the scope, role, capacity, and reality of key Internet technology development programs "which will make the Internet truly inclusive for all."

APNIC at 7th annual CTO Forum, Fiji

APNIC was hard at work participating in the 7th annual Commonwealth Telecommunications Organization (CTO) Forum in Nadi, Fiji, 14-15 September 2009. The theme for the Forum was 'Delivering Broadband Connectivity for All: Needs and Challenges'.

The Forum, one of the CTO's largest events, brings together top ICT policy makers, regulators, operators, and other key stakeholders, to deliberate on the most effective policy and regulatory frameworks for advancing connectivity, governance, universal access, content creation, and successful ICT business models in the Commonwealth and beyond. The Forum creates an unrivalled platform for the examination of best practices and discussions on policy, regulatory and industry opportunities and challenges in the ICT sector in many emerging economies.

APNIC's Director General, Paul Wilson, was invited to be a panel member for the session, 'Growing global ICT regulatory trends,' a discussion on Internet governance.

"APNIC was proud to be presenting at the CTO in Fiji," Mr Wilson said. "The event helps to highlight current issues surrounding the Internet, in particular, IPv6 deployment and Internet governance. It is critical that key stakeholders start making efforts to facilitate IPv6 deployment now," he said.

Mr Wilson presented information during the session entitled, 'Expanding the Internet - from IPv4 to IPv6'. Government and industry partnerships facilitating IPv6 deployment were discussed as part of this session.

Mr Wilson also discussed the Information Society Innovation Fund (ISIF) during the talks. ISIF is a small grants program that aligns with a key mandate of the CTO—to bridge the digital divide—by delivering unique knowledge-sharing ICT programs to developing countries.

Key Topics:

- Emerging Broadband Policy and Regulatory Environment
- National and Regional Broadband Initiatives - Connecting the Unconnected
- Focusing on Content Development and Value-added Services

Training calendar

Provisional Schedule for 2010

Title	Location	Dates
IPv6 / IRME	Vientiane	2 Mar
IPv6 / IRME	Bangkok	2 Mar
IPv6 / IRR / (APNIC 29)	Kuala Lumpur	1 Mar
IPv6 / DNS / DNSSEC		Mar
IRME / IRR / IPv6	Kathmandu	14 Mar
IPv6 (IPv6 Summit)	Beijing	6 Apr
IRME / IPv6	Ulaanbaatar	10 Apr
IRME / TBD (PITA AGM)	Honiara	26 Apr
IPv4 / IPv6 Routing	Lahore, Islam	9 Apr
APECTEL IPv6 Workshop	Taipei	6 May
IRME / IPv6		May
IRME / Security	Hong Kong	May
IRME (APJII)	Jakarta	May
IRME / ISP Services		May
IRME / IPv6 (VNNIC)		Jun
IRME / Routing	Phnom Penh	Jun
IRME / IPv6	Singapore	Jun
IRME / Routing	Darusalam	Jun

eLearning calendar

eLearning Schedule for 2010

Course	Economy / Region	Date
IRM	Pacific / Oceania	10 Mar
Routing	Pacific / Oceania	24 Mar
IRM	South Asia	14 Apr
IRR	South Asia	28 Apr
IRM	Pacific / Oceania	12 May
DNS	Pacific / Oceania	26 May
IRM	South-east / Eastern Asia	9 Jun
IRR	South-east / Eastern Asia	23 Jun
IRM	Pacific / Oceania	14 July
IPv6	Pacific / Oceania	28 July
IRM	South-east / Eastern Asia	11 Aug
DNS	South-east / Eastern Asia	25 Aug
IRM	South Asia	8 Sept
Routing	South Asia	23 Sept
IRM	South-east / Eastern Asia	13 Oct
Routing	South-east / Eastern Asia	27 Oct
IRM	South Asia	10 Nov
IPv6	South Asia	24 Nov
IRM	Pacific / Oceania	8 Dec
IRR	Pacific / Oceania	22 Dec

APNIC training sponsorship

A core objective of APNIC is to develop and deliver training programs to assist the Asia Pacific Internet community to build their capabilities, knowledge, and understanding. This enables users to make the most of Internet resources, and effectively apply modern Internet technologies and techniques. APNIC fulltime training staff travels across the region presenting an annual program of training to our Members.

APNIC Training is marketed to our membership base of more than 2,000 major ISPs, National Internet Registries (NIRs), content providers, domain registries, and Government regulators.

Sponsoring a training event allows you to expose your organization, products, and services to an audience of Internet professionals in your local market.

http://www.apnic.net/events/sponsor-an-event

APNIC 29 Sponsors

APNIC would like to thank the following organizations whose support helped make this meeting possible.

APNIC Meeting Sponsorship reduces delegate participation costs and enables the widest range of Members to attend these important events.

Local Host

PIKOM

Platinum Sponsor

TM

Gold Sponsor

PHCOLO

Social Event Sponsors

HURRICANE ELECTRIC INTERNET SERVICES

Google

APNIC Member Meeting Sponsors

CNNIC 中国互联网络信息中心 CHINA INTERNET NETWORK INFORMATION CENTER

JPNIC

KRNIC KISA Korea Internet & Security Agency

TWNIC

Remote Participation Location Sponsors

INET Always by your side

How to contact APNIC

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

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

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.