



APNIC

Annual Report 2004

Asia Pacific Network Information Centre



APNIC

“Addressing the challenge of responsible Internet resource distribution in the Asia Pacific region”



APNIC

Asia Pacific Network Information Centre
PO Box 2131, Milton
Brisbane QLD 4064
Australia

Phone: +61-7-3858-3100
Fax: +61-7-3858-3199
Email: <info@apnic.net>

©APNIC Pty Ltd 2005



Contents

Introduction	4
What is APNIC?	5
What is APNIC's role?	
How is APNIC structured?	
The Executive Council	5
EC activities in 2004	
EC membership	
The APNIC region	6
APNIC Secretariat	7
Membership status	8
Total membership approaches 1,000	
Review of NIR and confederation fees	
Global coordination and regional development	9
WSIS and Internet governance	
Supporting the emergence of AfriNIC	
APNIC root server deployment	
Pan Asia ICT R&D grants programme	
APNIC's representation in global forums	
Training activities	12
Training team and administration	
Course development	
Training delivery in 2004	
Visiting staff	
APNIC Open Policy Meetings	13
Meeting accessibility and reporting	
APNIC fellowship programme	
Next APNIC meetings	
The policy development process	
Policy changes and related updates in 2004	
Working groups active in 2004	
Communication developments	15
Member and stakeholder survey	
Secretariat restructuring	
Apster	
Outreach activities	
Translation	
Infrastructure development and major projects	16
MyAPNIC	
Secretariat infrastructure and systems	
Lame delegations clean-up	
CRISP project	
Resource status	18
IPv4 address space	
ERX project coming to an end	
IPv6 address space	
AS numbers	
Financial reports	21
Consolidated statement of financial position	
Consolidated statement of activities	
Consolidated statement of cashflows	



APNIC Director General, Paul Wilson.

Introduction

Dear APNIC Members and friends

This, the APNIC Annual Report for 2004, is intended to provide you with a comprehensive overview of APNIC's activities during the past year. I am personally very satisfied with the performance of the organisation in 2004, and proud of the achievements described in these pages.

During 2004, the APNIC Secretariat continued to operate a balanced budget which grew by approximately 28 percent over the previous year. Our activities are steadily increasing, as shown by the growth in membership, resource allocations and training during 2004, and by the modest growth in Secretariat staffing. It is difficult to predict the future, but by all indications, a similar level of growth should be sustained into the coming year.

APNIC's fiscal policy requires the maintenance of a capital reserve equal to the budget of the coming year; and while budgets are growing, it is necessary to obtain an operating surplus in order to satisfy this policy. Fortunately, although APNIC's surplus was small in 2004, the capital reserve is still sufficient to cover the expected budget for 2005.

As to the question of long-term sustainability, certain trends are emerging which need to be considered. A regional increase in mergers and acquisitions is resulting in high levels of membership closure, which increases the relative cost of service to those organisations. At the same time, the fee and membership structure for NIRs is being examined by a special working group. In the case of ISPs served by NIRs, smaller ISPs are favoured, while larger providers have substantial and arguably unreasonable up-front charges for allocation services.

These issues can of course be addressed and resolved through APNIC's democratic processes, however substantial work is required to determine the best solutions.

Over the past year, APNIC's activities on the global stage have continued to increase. Participation in the United Nations WSIS process has become a substantial cost centre, and one, I might add, with little direct benefit in terms of APNIC services to members. However as global focus on Internet governance increases, we need to respond actively to address stakeholder concerns, whatever they may be. At time of writing, we have just been advised of APNIC's recognition by the UN Economic and Social Council (ECOSOC) as an organisation in 'consultative status'. This important recognition will improve our ability to participate in, and influence, outcomes in this important sphere.

In conclusion, I'd like to recognise the efforts of all Secretariat staff, and thank them for their dedication and professionalism over the past year. I would like to sincerely thank all members and friends of APNIC for their ongoing support, which is critical to our collective success.

With best regards

Paul Wilson



What is APNIC?

APNIC is one of four Regional Internet Registries (RIRs) currently providing allocation and registration services to support the operation of the Internet globally. It is a not-for-profit open membership organisation, whose members and stakeholders determine the policies and direction of the organisation through open and consensus-based processes.

What is APNIC's role?

Within the Asia Pacific region, APNIC is charged with ensuring the responsible management of IP addresses and the related numeric resources that are required for stable and reliable operation of the Internet globally. APNIC provides resource services, training and education, and open policy meetings, and represents regional community interests on the global stage.

How is APNIC structured?

APNIC's structure provides openness and transparency in all decision making processes. This structure comprises:

- members, who vote on issues during Member Meetings and provide input through various channels throughout the year
- APNIC Open Policy Meetings, where all interested parties may participate in knowledge sharing, networking, policy development, and training
- an Executive Council (EC), elected by the members to represent them in policy- and decision-making between Member Meetings
- the Secretariat, APNIC's staff, which carries out the day-to-day work of the organisation

The Executive Council

The APNIC By-Laws provide for a seven-member Executive Council (EC), whose main roles are to represent members between Member Meetings and to oversee the operations of the APNIC Secretariat, including inspection of budgets and financial reports.

EC members meet monthly, generally by teleconference, but with face-to-face meetings during APNIC Open Policy Meetings. They are not paid for their services as EC members, although APNIC may fund their attendance at important meetings.



The EC meets with the Asia Pacific representatives on the Address Council (AC) at each APNIC meeting. From left to right: Qian Hualin, Che-Hoo Cheng, Kuo-Wei Wu, Kenny Huang (AC), Geoff Huston, Akinori Maemura, Ma Yan, and Takashi Arano (AC). Not pictured are Yong Wan Ju and also Vinh Ngo, who was appointed to the EC after this meeting, filling the seat vacated by Geoff Huston.

EC activities in 2004

In 2004, the EC held two face-to-face meetings as well as its regular monthly teleconferences. The Secretariat prepares an agenda for each EC meeting, which always includes a review of the monthly financial reports and discussion of major issues for which the Secretariat seeks the oversight and guidance of the EC.

The following are some of the most significant issues which received EC attention in 2004:

- financial oversight, including the approval and monitoring of the annual budget
- selection of the location for APNIC 18
- review and endorsement of consensus decisions of the policy development process from APNIC 17 and 18
- consideration of online voting for election issues
- monitoring of ICANN developments, including negotiations to form the ASO MoU, Address Council (AC) transition plan, appointment of APNIC's AC representative, and the performance of IANA
- the expected incorporation of the NRO
- tracking of World Summit on the Information Society (WSIS) developments
- conduct of, and response to, the APNIC member and stakeholder survey
- review of Korean Internet legislation
- review of the progress of VNNIC in its first year as an NIR
- introduction of a special minimum allocation policy for African economies in APNIC region

EC membership

EC members are elected by the membership for two-year terms. In 2004, the following representatives served on the EC:

EC Member	From	Serving until
Akinori Maemura (Chair)	JP	March 2006
Yong Wan Ju (Secretary)	TW	March 2005
Kuo-Wei Wu (Treasurer)	KR	March 2005
Che-Hoo Cheng	HK	March 2006
Qian Hualin	CN	March 2005
Vinh Ngo	AU	March 2006
Ma Yan	CN	March 2005

Minutes of EC meetings are published on the APNIC web site at: <http://www.apnic.net/ec>



The APNIC region

APNIC serves the Asia Pacific region, comprising the following 62 economies in Asia and Oceania.

Economies in the AP region

	ISO 3166 code	Members		ISO 3166 code	Members
Afghanistan	AF	2	Mayotte	YT	0
American Samoa	AS	1	Micronesia, Fed. States of	FM	1
Australia	AU	238	Mongolia	MN	8
Bangladesh	BD	27	Myanmar	MM	2
Bhutan	BT	1	Nauru	NR	1
British Indian Ocean Territory	IO	1	Nepal	NP	7
Brunei Darussalam	BN	2	New Caledonia	NC	4
Cambodia	KH	4	New Zealand	NZ	44
<i>China</i>	CN	30	Niue	NU	0
Christmas Island	CX	0	Norfolk Island	NF	0
Cocos (Keeling) Islands	CC	0	Northern Mariana Islands	MP	1
Comoros	KM	0	Pakistan	PK	40
Cook Islands	CK	1	Palau	PW	1
East Timor	TL	0	Papua New Guinea	PG	3
Fiji	FJ	4	Philippines	PH	48
French Polynesia	PF	1	Pitcairn	PN	0
French Southern Territories	TF	0	Reunion	RE	0
Guam	GU	6	Samoa	WS	1
Hong Kong	HK	116	Seychelles	SC	0
India	IN	113	Singapore	SG	49
<i>Indonesia</i>	ID	6	Solomon Islands	SB	1
<i>Japan</i>	JP	49	Sri Lanka	LK	11
Kiribati	KI	1	<i>Taiwan</i>	TW	22
Korea, Dem. People's Rep.	KP	0	Thailand	TH	39
<i>Korea, Republic of</i>	KR	4	Tokelau	TK	0
Laos People's Dem. Rep.	LA	3	Tonga	TO	1
Macau	MO	1	Tuvalu	TV	1
Madagascar	MG	1	Vanuatu	VU	1
Malaysia	MY	38	<i>Vietnam</i>	VN	2
Maldives	MV	2	Wallis and Futuna Islands	WF	0
Marshall Islands	MH	0	Other	AP	34
Mauritius	MU	4			
Total economies: 62		Total with APNIC members: 47		Total APNIC members: 978	

Notes:

- Economies recognised within the Regional Internet Registry system are defined according to the International Standards Organization's coding system (ISO 3166).
- APNIC uses the designation 'AP' for organisations that operate across several economies.
- Economies shown in italics are represented by National Internet Registries (NIRs).
- Comoros, Madagascar, Mauritius, Mayotte, Reunion, and Seychelles will become part of the African region when AfriNIC achieves full recognition as an RIR.

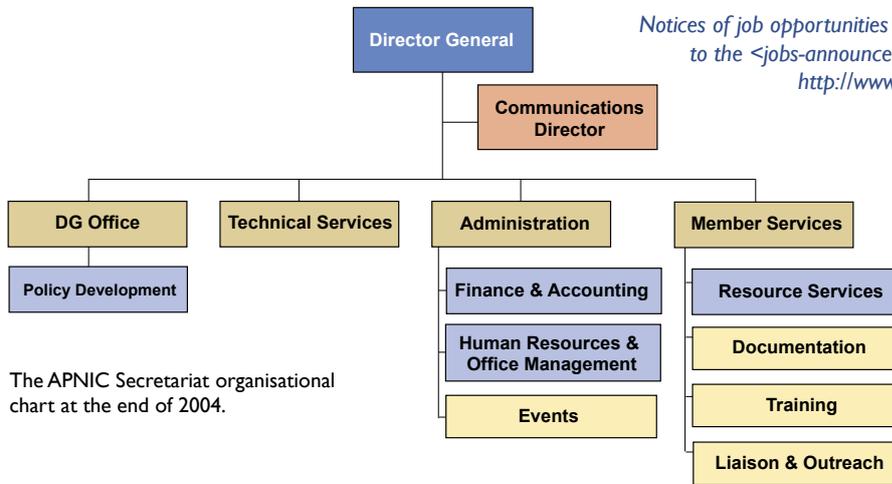


APNIC Secretariat

The Secretariat staff grew by six in 2004, bringing the total staff number to 46 (including 4 part-time staff and two vacancies). To support APNIC’s range of services and responsibilities, new positions were created and some existing roles were redefined during the year. New positions created and filled during 2004 include a Research and Liaison Officer for South East Asia, a Communications Director, an Internet Research Scientist, and an Outreach Coordinator. Two Systems Administrator interns also served during the year.

Asia Pacific languages spoken by APNIC staff

Bahasa Indonesian	Hindi	Sinhalese
Bangla	Japanese	Taiwanese
Cantonese	Korean	Tamil
English	Lao	Telegu
Filipino (Tagalog)	Malay	Thai
Fijian	Mandarin	Urdu
French	Punjabi	Vietnamese



The APNIC Secretariat organisational chart at the end of 2004.

Notices of job opportunities at APNIC are available by subscribing to the <jobs-announce> mailing list. Details are available at: <http://www.apnic.net/community/lists>



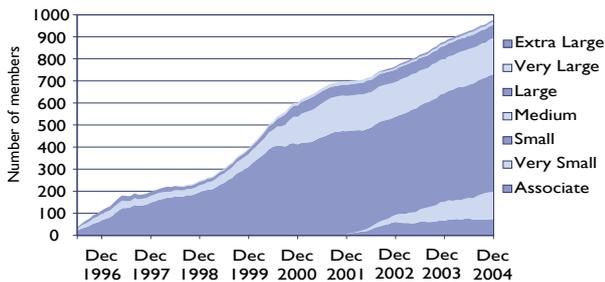


Membership status

Total membership approaches 1,000

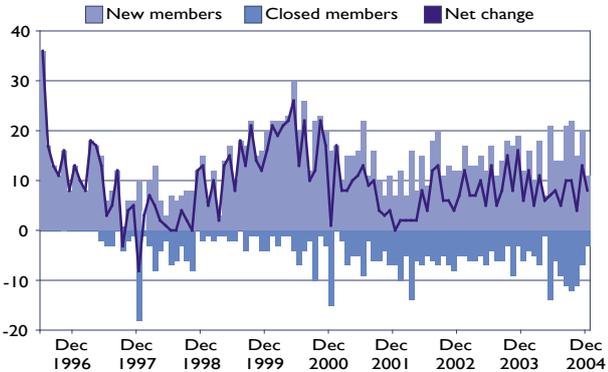
The rate of net membership growth in 2004 was slightly lower than the rate of 2003. By the end of the year, the total membership had risen by 99 to 978 members.

Membership growth (cumulative, by category)



That total gain comprises 189 new memberships opened during the year, offset by 90 closures.

Net membership growth

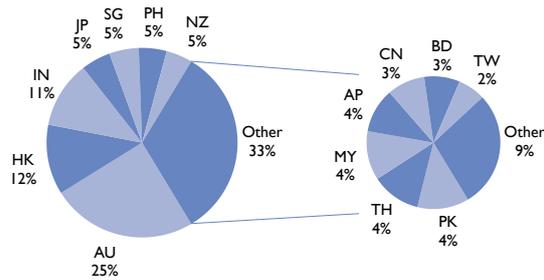


One of the main reasons for membership closure is that multiple existing members have become a single entity, through a merger or acquisition. In these cases, the combined address holding will often mean that the remaining party moves into a higher membership tier.

The APNIC Secretariat also closes memberships when organisations go out of business, become uncontactable, or fail to renew by paying their annual fees. In these cases, the Secretariat reclaims the relevant Internet resources.

The highest level of membership growth in 2004 came from Australia, with a net increase of 41 members. There was significant activity in South Asia, particularly India (which increased by 9 members), Pakistan (7), Bangladesh (2), and Nepal (1). Neighbouring Afghanistan also joined the APNIC membership ranks for the first time, with two members.

Geographic distribution of members



Review of NIR and confederation fees

At APNIC 18, two proposals were discussed in relation to the fee schedules for NIR and confederation members.

The first proposal (prop-022-v001) sought to remove an anomaly in the existing fee schedule that could lead to multiple billing for the same addresses when IPv6 allocations were expanded. This proposal achieved consensus.

The second proposal (prop-024-v001) sought to change the NIR and confederation fee structure by applying an upper limit on the per address fees. Although this proposal did not reach consensus, the discussion led to a working group being established to conduct a fundamental review of the entire NIR fee structure. This review will continue into 2005.

The current NIRs are:

- APJII (Indonesia)
- CNNIC (China)
- JPNIC (Japan)
- KRNIC of NIDA (Korea)
- TWNIC (Taiwan)
- VNNIC (Vietnam)

More details about APNIC membership, including fees, application forms, and lists of current members are available at: <http://www.apnic.net/member>



Global coordination and regional development

WSIS and Internet governance

Discussions of 'Internet governance' were prominent in the global Internet community throughout 2004, as the World Summit on the Information Society (WSIS) continued into Phase II and commenced activities such as the establishment of the Working Group for Internet Governance (WGIG).

During 2004, WSIS continued preparatory work for its second phase meeting in Tunis in 2005. All RIRs, including APNIC, monitor WSIS developments and participate in meetings to the extent that the WSIS processes allow.

A dominant feature of the discussions in these forums is the need to agree on what the term 'Internet governance' actually means. Indeed, this is one of the primary tasks of WGIG, which was established by the United Nations to support the WSIS process. WGIG is officially tasked to prepare a report ahead of the Tunis meeting, which may include "proposals for action ... on the governance of the Internet".

The addressing community is represented on WGIG by Raúl Echeberría, Executive Director of LACNIC.

As an ITU-T sector member, APNIC closely follows Internet governance discussions and seeks to effectively represent the interests of the global addressing community. For example, at an ITU workshop on telecommunications standardisation in February, the APNIC Director General, Paul Wilson, was present to explain issues of IP addressing, address management, policy development, and the role and responsibilities of APNIC.

APNIC has sought to keep the community well informed of Internet governance developments through a series of detailed articles in *Apster*, reports in various meetings (including APNIC Member Meetings), and by creating a dedicated Internet governance section on the APNIC web site.

In late 2004, APNIC also began providing in-kind support to a major UNDP-APDIP project on Internet Governance called the Open Regional Dialogue on Internet Governance (ORDIG). ORDIG is also supported by International Development Research Centre of Canada (IDRC), the UN Economic and Social Commission (ECOSOC), and the DIPLO Foundation.

ORDIG's major activities include a multi-stakeholder survey and a community-managed portal on Internet governance priorities for this region, as well as research on best practice policies and the development of Internet governance training materials.

APNIC has links to many Internet governance resources at:
<http://www.apnic.net/news/hot-topics/internet-gov>

The UNDP-APDIP Asia Pacific Internet governance portal is at:
<http://www.igov.apdip.net>

NRO and ASO developments

The Number Resource Organization (NRO) represents a single point of contact for the RIR system and undertakes joint RIR activities, including joint technical projects, liaison activities and policy coordination. Paul Wilson served as Chair of the NRO in 2004, its first full year of operation.

In 2004, the NRO made several contributions to the WSIS process, seeking to promote a better understanding of the current addressing system and how it serves the technical needs of the Internet and provides opportunity for all interested parties to participate.

The NRO completed negotiations with ICANN to establish a new Address Supporting Organization (ASO) structure, designed to be more representative of the RIR communities. Under this new structure (which became active in October 2004) the NRO Number Council will perform the role of the ASO Address Council. The current Asia Pacific representatives of the Number Council are Hyun-joon Kwon, Kenny Huang, and Takashi Arano.

The NRO web site is at:
<http://www.nro.net>

Supporting the emergence of AfriNIC

APNIC continues to work with the other RIRs to support the emergence of AfriNIC as the RIR for the African region, which is expected to become official in mid-2005. In particular, APNIC contributed US\$27,000 of the US\$100,000 the NRO raised from the RIRs to support AfriNIC's early operations.

In July, the APNIC EC introduced a special IPv4 minimum allocation policy to apply to African economies currently in the APNIC region. This interim measure is consistent with policies also introduced by ARIN and RIPE NCC.

APNIC has also offered its help in documentation, training, and software systems.

A visible display of APNIC's support of AfriNIC is the new AfriNIC logo, which was designed by APNIC's graphic designer, Chiaki Kanno.

When AfriNIC does start full operations, it will assume responsibility for many economies currently served by other RIRs. Those in the current APNIC region that will be transferred to AfriNIC are Comoros, Madagascar, Mauritius, Reunion, and Seychelles.



The new AfriNIC logo.

The official AfriNIC web site is at:
<http://www.afrinic.net>



APNIC root server deployment

APNIC continued its involvement in deploying root server mirror sites around the APNIC region in 2004. Working with the respective operators, ISC (F-root) and Autonomica (I-root), APNIC assisted in the deployment of root servers in Brisbane, Jakarta, Kuala Lumpur, and Singapore.

Root server mirrors are announced to the Internet routing system using the BGP anycast technique, which directs traffic from any location to the nearest root server site. APNIC and the root server operators select sites for the mirrors by publicly seeking expressions of interest from prospective hosts. APNIC has now been involved in the deployment of 10 root servers around the region. This number will grow in coming years.

As well as its continued involvement with the F- and I-roots, APNIC will assist the RIPE NCC in deploying mirrors of the K-root around the region in 2005. Planned root server deployments in the coming year include Indonesia, Vietnam, Australia, China, and India.

APNIC will also maintain a continued operational commitment to its existing root server deployments.

Pan Asia ICT R&D grants programme

APNIC continues its close association with the Pan Asia ICT R&D grants programme. This programme is an initiative of the Canadian-funded International Development Research Centre (IDRC) and exists to help researchers and communities in the developing world find solutions to their social, economic, and environmental problems.

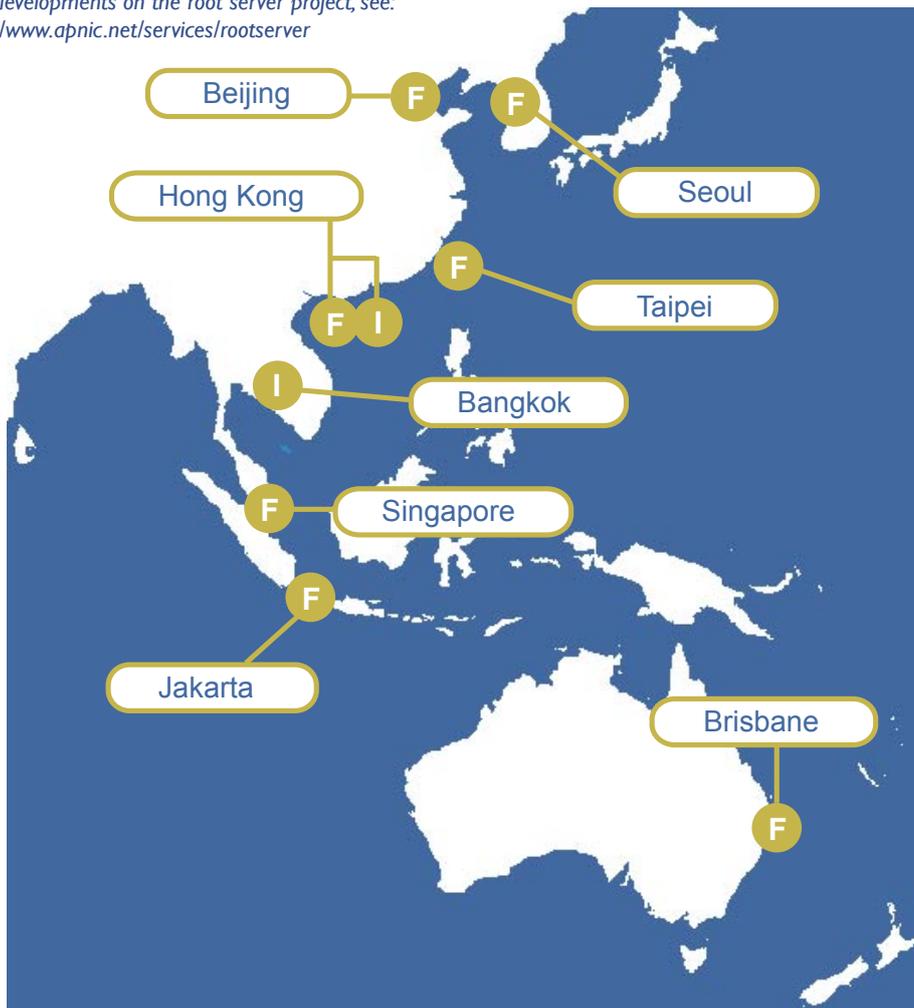
APNIC has been a funding partner in this program since 2002 and sits on both the programme and grants committees.

The Pan Asia ICT R&D grants programme is now one of the most significant funders of ICT research and development in the region. In 2004, the programme funded 21 projects for up to US\$30,000 each.

APNIC is particularly interested in encouraging grant applications that deal with Internet infrastructure, technical and administrative policy impacts on developing nations, and research into addressing or routing issues.

Full details of this grant programme are at: http://web.idrc.ca/en/lev-9609-201-I-DO_TOPIC.html

For the latest developments on the root server project, see: <http://www.apnic.net/services/rootserver>



Root server mirrors in the Asia Pacific.



APNIC's representation in global forums

Meetings attended in 2003

Month	Meeting	Location
January	PTC'04	Honolulu, USA
	SANOG III/South Asian IPv6 Summit	Bangalore, India
	RIPE 47	Amsterdam, The Netherlands
	NZNOG'04	Hamilton, New Zealand
February	ITU Seminar on Standardization	Phnom Penh, Cambodia
	APRICOT 2004 / APNIC 17	Kuala Lumpur, Malaysia
March	59th IETF	Seoul, Korea
	UN ICT Task Force Global Forum on Internet Governance	New York, USA
	Asia Pacific Meeting on WSIS Implementation and Preparation for APT Ministerial Conference	Bangkok, Thailand
April	LACNIC VI	Montevideo, Uruguay
	8th PITA Annual General Meeting	Auckland, New Zealand
	Global IPv6 Summit	Beijing, China
	ARIN XIII	Vancouver, Canada
May	RIPE 48	Amsterdam, The Netherlands
	INET/IGC 2004	Barcelona, Spain
	UN ICT Task Force Asia and Pacific Regional Meeting on Internet Governance	Shanghai, China
	Workshop on ENUM and IDN	Bander Seri Begawan, Brunei
	AfriNIC 1	Dakar, Senegal
June	WSIS Second Phase Preparatory Meeting	Hammamet, Tunisia
July	Global IPv6 Summit	Seoul, Korea
	AP* Retreat	Cairns, Australia
	18th APAN	Cairns, Australia
	ICANN Meetings	Kuala Lumpur, Malaysia
	SANOG IV	Kathmandu, Nepal
August	60th IETF	San Diego, USA
	APT/PITA Regional ICT Meeting	Nadi, Fiji
September	APNIC 18	Nadi, Fiji
	Consultations on establishment of WGIG meeting	Geneva, Switzerland
	RIPE 49	Manchester, United Kingdom
	UK IPv6 Task Force, in conjunction with RIPE and the European IST IPv6 Cluster	Manchester, United Kingdom
October	UNESCAP - First Regional Conference	Bangkok, Thailand
	2nd International Seminar on Internet Resources Management	Colombo, Sri Lanka
	NANOG 31/ARIN XIV	Reston, USA
	LACNIC VII	San Jose, Costa Rica
November	61st IETF	Washington DC, USA
	Working Group on Internet Governance (WGIG) Meeting	Geneva, Switzerland
December	ICANN Meetings	Cape Town, South Africa
	Sub-Regional Conference on ICT for Development in Pacific Islands Developing Countries	Suva, Fiji

Presentations given by APNIC staff to external organisations are archived at:
<http://www.apnic.net/community/presentations>



Training activities

Training team and administration

The APNIC training team expanded in 2004 to four full-time training staff, who are supported regularly by staff from other departments. Significant administrative support for the training programme is now provided by the Asian Institute of Technology (AIT) in Bangkok, under an agreement negotiated in 2003.

AIT provides logistical and administrative support for APNIC's training events, drawing on its broad network of contacts within the region.

Course development

APNIC's range of training courses continued to develop in 2004, with the newly finalised DNS workshop deployed early in the year. This is a two-day workshop designed to help networking professionals understand DNS concepts, configuration, and operations. Over the course of the year, the DNS workshop was held at eight locations around the region, including Malaysia, Thailand, Hong Kong, and Singapore.

In addition to the two-day course, development began in early 2004 on a four-day Advanced DNS workshop, expanded to include DNS security and other advanced topics. This course was first held in December in Singapore and will be a significant part of the APNIC training curriculum over the coming years.

APNIC also offered another new technical tutorial in 2004, the APNIC Internet Routing Registry tutorial, which was first delivered at the APNIC 17 meeting in Kuala Lumpur in February.

Training delivery in 2004

A full training schedule in 2004 saw APNIC training staff deliver 34 courses in 25 locations throughout the region, reaching more than 900 Internet professionals over the course of the year. The year also included several significant milestones for the APNIC training programme, including the first APNIC training event in Pakistan, which was hosted by the NUST Institute of Information Technology, and held at the NIIT Rawalpindi campus.

In March, APNIC held its first collaborative training event with AIT/intERLab in Thailand. The courses were conducted in Bangkok, Thailand at AIT campus, and included the new DNS workshop and a session on Internet resource management essentials.

In July, APNIC was invited by University of Malaya to conduct an Internet resource management enrichment tutorial for their Information Technology Masters programme. The session attracted nearly 80 students, university staff, and APNIC members.

The APNIC training team continued its support of Network Operators Groups around the region, delivering training courses in conjunction with SANOG III in Bangalore, India, SANOG IV in Kathmandu, Nepal, and NZNOG'04 in Hamilton, New Zealand. APNIC was also pleased to note the formation of the Pacific Network Operators Group (PACNOG) which followed APNIC 18 in Fiji.

Training locations in 2004

Date	Location	Sponsor or host
January	Bangalore, India	SANOG III/ South Asian IPv6 Summit
	Hamilton, New Zealand	NZNOG 04
February	Kuala Lumpur, Malaysia	APNIC 17/ APRICOT 2004
March	Bangkok, Thailand	intERLab, AIT
	Kathmandu, Nepal	NPIX
	Rawalpindi, Pakistan	NIIT and IEEE
April	Beijing, China	IPv6 Global Summit in China
	Hong Kong	Juniper Networks
	Melbourne, Australia	Telstra Wholesale
May	Manila, Philippines	University of Santo Tomas
June	Vientiane, Laos	LANIC and ETL
	Nha Trang City, Vietnam	VNPT
July	Beijing, China	CNNIC
	Kuala Lumpur, Malaysia	University of Malaya
	Jakarta, Indonesia	NiCE 2004 and APJII
	Kathmandu, Nepal	SANOG IV
August	Nadi, Fiji	APNIC 18
September	Hanoi, Vietnam	VNNIC
	Bangkok, Thailand	CAT Telecom
October	Colombo, Sri Lanka	Sri Lanka Telecom
	Hong Kong	Hong Kong Education City
November	Perth, Australia	APTLD Association
	Taipei, Taiwan	TWNIC
December	Singapore	Republic Polytechnic

Full details of the courses scheduled for 2005 are available at <http://www.apnic.net/training>

Visiting staff

In 2004, the APNIC Secretariat hosted visiting staff from NIRs as part of an ongoing effort to increase consistency of practice and application of policies across the region. In 2004, Shim Dong Wook (KRNIC), Yuka Suzuki (JPNIC), Luo Yan (CNNIC), and Chen Tao (CNNIC) worked with the APNIC hostmaster team.

The RIRs also continued their practise of short-term staff exchanges, which serve to share operational knowledge across the regions. RIPE NCC's Laura Copley spent several weeks at the APNIC Secretariat, as well as attending the APNIC 17 meeting in Nadi, Fiji.



APNIC Open Policy Meetings

APNIC meetings are an opportunity for members of the APNIC community to come together to develop policy, share information, and network with others in the community. The first open policy meeting of each year is held as a conference track of APRICOT and the second as a standalone meeting.

In 2004, APNIC 17 was held in Kuala Lumpur, Malaysia and APNIC 18 was held in Nadi, Fiji. APNIC 18 was the first APNIC meeting to be held in the Pacific region and gave many people from the region their first opportunity to attend an APNIC meeting. The APNIC hostmasters were available throughout both meetings for individual consultations and at the APNIC Helpdesk.

Attendance at APNIC meetings in 2004

APNIC 17 (Kuala Lumpur)	Total APRICOT attendance	931
	Member Meeting attendance	123
APNIC 18 (Nadi)	Total attendance	146
	Member Meeting attendance	72

Meeting accessibility and reporting

APNIC continued to provide many ways for onsite and remote participants to access and understand Open Policy Meeting discussions, including:

- live video streaming
- live transcripts by professional stenographers
- Jabber chat
- onsite notice board web site
- onsite APNIC Helpdesk
- newcomers assistance programme
- CEO's event

APNIC Open Policy Meetings encourage active participation in policy proposals by both onsite and remote participants. APNIC 18 was the first APNIC meeting where a live policy proposal was presented by a remote participant via telephone while presentation slides were displayed onsite. The remote presenter was then able to respond to comments from the onsite participants.



Onsite and remote participants were able to view live transcripts and video streams of meeting presentations in real time. Video archives were available within a day of each session.

APNIC fellowship programme

The fellowship programme targets key staff from organisations developing or providing Internet services within developing economies, particularly those responsible for managing Internet resources (such as IP addresses, Autonomous System numbers, and routing registry data).

The second APNIC fellowship programme enabled 14 fellows from Samoa, American Samoa, Sri Lanka, Indonesia, Nauru, Papua New Guinea, Bangladesh, Philippines, Pakistan, and Fiji to attend workshops and the Open Policy Meeting at APNIC 18. The programme was funded by Softbank BB Japan and by 15 percent of the total sponsorship contributions received for APNIC 18.

Next APNIC meetings

APNIC 19 will be held as a conference track of APRICOT 2005 in Kyoto, Japan, from 21 to 25 February 2005. At the time of publication, the EC was evaluating proposals to host APNIC 20 in the third quarter of 2005.

All APNIC Open Policy Meeting information is available at: <http://www.apnic.net/meetings>



Workshop participants during APNIC 18 in Fiji.

The inaugural CEO's event at APNIC 18 was developed to allow CEOs and senior executives of Internet organisations to discuss issues of common interest and exchange thoughts and experiences.



Policy developments

The policy development process

APNIC policies are developed by the APNIC membership and the broader Internet community in an open process of discussion and consensus. Policy proposals are posted to the SIG mailing lists at least one month before APNIC meetings. Following discussion and endorsement at APNIC meetings, proposals are posted back to the mailing list for a further eight-week comment period. After the comment period, the APNIC EC endorses policy proposals that have achieved community consensus. This extended timeline is designed to allow all members of the Internet community, not just those who attend APNIC meetings, to actively participate in policy development.

Policy changes and related updates in 2004

Clean up of lame delegations (prop-004-v001)

At APNIC 16 in 2003, the APNIC Secretariat was authorised to disable lame DNS reverse delegations in the APNIC Whois Database. The project began in 2004 and will continue in 2005.

IANA policy for allocation of IPv6 blocks to Regional Internet Registries (prop-005-v003)

In 2003, the RIRs put forward a proposal that IANA allocate larger IPv6 blocks to the RIRs to allow for more efficient address management techniques. A modified version of the proposal was presented at APNIC 18 in 2004 and consensus was reached to adopt the proposal in principle. Several details of this proposal remain to be discussed on the Policy SIG mailing list and coordinated with the other RIRs.

IANA to RIR IPv4 allocations (prop-008-v001)

In 2003, the APNIC EC endorsed this policy after consensus was reached at the AMM at APNIC 16.

In 2004, following endorsement by the other RIR communities, the Address Council (AC) of the Address Supporting Organization (ASO) reached consensus to forward the policy to the ICANN Board for ratification.

IPv4 minimum allocation size (prop-014-v001)

At APNIC 17, there was consensus to lower the minimum IPv4 allocation size to a /21 and to lower the eligibility criteria. An LIR is now eligible to receive an IPv4 allocation if it can demonstrate an immediate need of /23 and provide a detailed plan for use of a /22 in a year.

IPv6 allocation to closed networks (prop-015-v001)

In the global IPv6 policy document published by the RIR communities in 2002, it was not clear whether allocations could be made to networks that did not route the address range on the global Internet. At APNIC 17, there was consensus to clarify

this and specifically allow IPv6 allocations to closed networks, if the other eligibility criteria are met.

IPv6 allocations to IPv4 networks (prop-016-v001)

The global IPv6 policy document indicates that allocations larger than the initial allocation size could be justified by documenting existing IPv4 infrastructure. At APNIC 17, there was consensus to clarify these criteria.

Protecting historical resource records in the APNIC Whois Database (prop-018-v001)

This policy, adopted by consensus in 2003, was implemented in December 2004. All historical resource records are now protected with the APNIC-HM maintainer, a practice consistent with the management of current resources. To ensure integrity of information, APNIC will not update historical information in the APNIC Whois Database until the resource holder demonstrates the organisation's right to the resources and enters a formal agreement with APNIC either as a member or non-member account holder. The policy does not prevent resource holders from continuing to use their historical resources.

Expansion of the initial allocation space for existing IPv6 address space holders (prop-021-v001)

Consensus was reached at APNIC 18 to allow existing IPv6 address holders to take advantage of the policy described above in 'IPv6 allocations to IPv4 networks (prop-016-v001)' to expand the size of their initial IPv6 allocations based on IPv4 infrastructure.

Proposal to abolish redundant charges in IPv6 allocations (prop-022-v001)

There was consensus on the proposal to revise the method of calculating IPv6 'per address' fees so that the practice of charging NIRs multiple fees for the same address range will be abolished. The new fee structure will be implemented in 2005.

Proposal on IPv6 IRR service at APNIC (prop-025-v001)

There was consensus on the proposal for APNIC to implement an IPv6 Routing Registry. APNIC has maintained an IPv4 Routing Registry as part of the APNIC Whois Database since 2002.

IPv4 minimum allocation size for African economies

The APNIC EC has the ability to make decisions on behalf of the membership between Open Policy Meetings. In 2004, the APNIC EC resolved to amend the criteria and minimum IPv4 allocation size for LIRs in the African region. These changes were made to bring APNIC into line with criteria applied to African economies by ARIN and the RIPE NCC in the lead up to the formal establishment of AfriNIC.

*The progress of individual policy proposals is tracked at:
<http://www.apnic.net/docs/policy/proposals>*



Special Interest Groups (SIGs) in 2004

SIG	Chair	Co-chairs
Database	Xing Li	Hakikur Rahman
DNS operations	Joe Abley	n/a
IX	Philip Smith	Che Hoo Cheng
IPv6 technical	Kazu Yamamoto	Jun Murai (until September) Tomohiro Fujisaki & Tao Chen (from November)
NIR	Maemura Akinori	David Chen & Izumi Okutani (from August)
Policy	Takashi Arano	Kenny Huang Yong Wan Ju (until August) Toshiyuki Hosaka (from August)
Routing	Philip Smith	Randy Bush



Participants during the IPv6 SIG at APNIC 18.

Working groups active in 2004

IPv4 guide working group

Chaired by Yi Lee, the IPv4 guide working group was proposed at APNIC 18 in Fiji to review and develop guidelines for cable and DSL networks in the document, 'APNIC guidelines for IPv4 allocation and assignment requests'.

IPv6 guide working group

Chaired by Akira Nakagawa, Billy MH Cheon, and Toshiyuki Hosaka, this working group was established in October 2003, following a decision at APNIC 16 to draft guidelines to complement the global policy document, 'IPv6 address allocation and assignment policy'. At APNIC 17, the working group presented a draft guideline document to the Policy SIG. The final guideline document, 'APNIC guidelines for IPv6 allocation and assignment requests', was published in July 2004.

Communication developments

Member and stakeholder survey

In 2004, the APNIC EC commissioned the third independent APNIC member and stakeholder survey as a response to recent developments in the Internet environment such as WSIS and greater deployment of IPv6. The survey questionnaire asked participants to rate and comment on current and potential future APNIC activities.

The questionnaire was developed by the survey consultants, KPMG, with the assistance of member focus groups in Tokyo, Hong Kong, and Delhi. In total, the survey received 245 individual responses from 27 economies, of which all but one were current APNIC member account holders.

The consultants' report, released at APNIC 18 in Fiji, provides a comprehensive summary on the breadth of responses received and the issues raised. In response to the report, the APNIC EC noted the generally positive feedback reported in the survey results and requested that the Secretariat consider implementing changes in 2005 to current services based on issues identified in the survey.

Information on APNIC stakeholder surveys is available at: <http://www.apnic.net/survey>

Secretariat restructuring

Strategic planning during 2004 resulted in some structural changes within the Secretariat. The most significant of these was the implementation of a new senior staff position under the title of Communications Director.

This senior management position, immediately below the Director General, will be responsible for coordinating external communications-related activities across the organisation, as well as having line-management responsibility for a number of APNIC departments.

APNIC strategic planning is an ongoing process, and will continue in 2005 with the incorporation of feedback from the recent member survey, along with other projects and activities.



Anne Lord, formally the Policy Liaison Manager, has now filled the new position of APNIC Communications Director.



Apster

Apster, the newsletter for APNIC members and the Internet community, was first published in 2001. In its fourth year of publication, Apster continued to provide informative and thought-provoking articles for the community on subjects including:

- the Internet in Malaysia
- the Internet in the Pacific Islands
- ENUM
- IP addressing in China
- Development of DNSSEC
- Internet governance

Apster is also an important vehicle for keeping members abreast of policy changes, regional events, and Secretariat news.

All APNIC members are automatically subscribed to Apster.

*Apster is available for download from:
<http://www.apnic.net/apster>*

Outreach activities

The APNIC Secretariat continued efforts to improve the reach and effectiveness of its activities throughout the region. Training courses, meeting fellowships, and communication channels such as Apster are all ways of meeting this goal. APNIC also participates in the activities of other technical communities in the region to meet organisations and individuals who might not otherwise have the opportunity to attend APNIC events. In particular, outreach activities are directed towards communities in developing nations.

APNIC's involvement with the booming Internet community in South Asia was strengthened in 2004 with the appointment of a Research and Liaison Officer for South Asia. This helped lead towards Memoranda of Understanding (MoUs) that APNIC entered into with four of the key ISP associations in the region, including the ISP Association of India, the ISP Association of Bangladesh, the ISP Association of Pakistan, and the ISP Association of Nepal. These MoUs will create opportunities for learning and information sharing for members of APNIC, the ISP associations, and the Internet community in general.

Translation

In 2004, the APNIC Secretariat continued publishing key APNIC documents in languages of the Asia Pacific region to assist members of the community whose first language is not English. The Secretariat received valuable support from NIRs and other members in developing these translations. Selected APNIC documents are now available in the following languages: Bahasa Indonesia, Chinese (simplified), Chinese (traditional), Japanese, Korean, Thai, and Vietnamese.

*Translated documents are available at:
<http://www.apnic.net/trans>*

Infrastructure development and major projects

In 2004, APNIC staff continued to develop technical infrastructure for more resilient, expanded external services and a more efficient and secure Secretariat network. Some of the most significant developments are described below. Other activities, such as the Early Registration Transfer (ERX) project and the root server deployments, are detailed in other sections of this report.

MyAPNIC

MyAPNIC offers a secure way for APNIC account holders to access private information and an increasing range of APNIC services. The service, first launched in 2002, is under continuous development. Version 1.3 was launched early in 2004, and included new features such as:

- bulk upload and download facilities
- a simplified, online IPv4 request form
- looking glass
- request tracking

Over the course of the year, a number of other updates were implemented, including:

- reverse DNS delegation registration
- management of public/private status of resources

The 'corporate contact' category was introduced by the APNIC Secretariat in 2003 to control administrative privileges over all areas of a MyAPNIC account. More than 75 percent of APNIC members now have corporate contacts for the MyAPNIC service.

Plans for MyAPNIC updates in 2005 include:

- a new, easier-to-use IP address request form
- a tool to display history of routing announcement and withdrawal
- a new system interface to allow database update automation through MyAPNIC

In related work, Allocation Manager, the back end system used by the APNIC Secretariat to manage resources and member accounts received a number of major upgrades during 2004.

Secretariat infrastructure and systems

APNIC's network operations staff worked hard throughout 2004 to achieve many significant improvements in internal Secretariat infrastructure. These included:

- improved systems for internal communication
- an upgrade to the APNIC Certification Authority system and installation of a cryptographic hardware module
- improvements and maintenance to internal member management systems



- completion of a work flow analysis in member application and billing cycles (this will support new development projects over the next 18 months)
- work on packaging technologies for easy distribution of systems to other organisations

The APNIC software team also completed a major upgrade to the APNIC event management system, which is now being used by other organisations such as APRICOT and SANOG.

The Secretariat is currently in the process of commissioning a new co-location facility in Brisbane, upgrading offsite services in Japan and Hong Kong, and making other changes to improve disaster recovery and operational status.

Lame delegations clean-up

A new policy authorising the Secretariat to clean-out lame DNS reverse delegations in the APNIC Whois Database went into operation towards the end of 2004. The Secretariat's Technical department will report in detail on the project and on the improvements in DNS lame statistics at APNIC 19 in February 2005.

More information on clean-up of lame delegations in the APNIC Whois Database is available at:
<http://www.apnic.net/services/rev-dellame-delegation-response.html>

CRISP project

CRISP, or the Cross Registry Information Service Protocol, represents the next generation of whois information tools.

Based on XML, the protocol offers several advantages over existing whois services:

- CRISP can be implemented in common by all of the RIRs and will provide users with a cohesive, consistent view of registry-managed data for the whole Internet.
- CRISP unifies the view of data for both number resource management and domain name management.
- CRISP will not supplant existing whois services, which will continue to be available for some time, but will instead be a new service, providing data collated from a range of registry sources.

In 2004, the IETF CRISP working group, of which APNIC Technical Services Manager, George Michaelson, is currently Co-chair, issued its first RFC, the requirements specification document RFC 3707. This was followed in the first days of 2005 by three more RFCs specifying domain name behaviours, the layering for CRISP to BEEP, and the core protocol. More RFCs are expected to follow in 2005, including a CRISP profile for routing, which is an initiative of members from the APNIC region.

CRISP services are expected to become available in 2005, with the NRO providing a context for common implementation and coordination between the RIRs. APNIC expects to be implementing CRISP services in test form throughout the

life of the working group, and will be participating fully in the development and deployment of the protocol over the coming years.

All RFCs released by the CRISP working group are available from the APNIC IETF document mirror at:
<http://ftp.apnic.net/ietf/ietf-mirror>

More information on CRISP is available on the working group homepage at:
<http://www.ietf.org/html.charters/crisp-charter.html>



APNIC Technical Services Manager, George Michaelson, is currently Chair of the IETF CRISP working group.

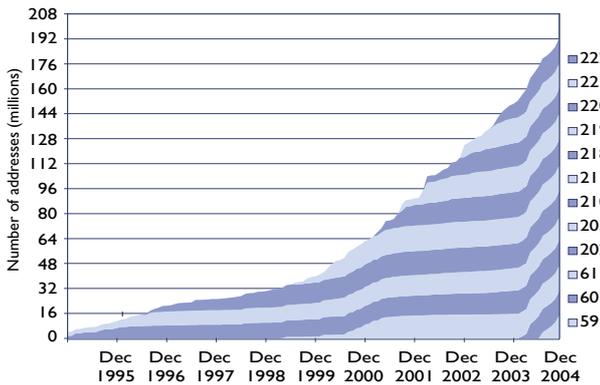


Resource status

IPv4 address space

Demand for IPv4 address space increased again in 2004. APNIC's IPv4 allocation rate for the year was 2.58 /8s (compared to 1.98 in 2003 and 1.25 in 2002).

Total IPv4 allocated (cumulative, by /8 range)



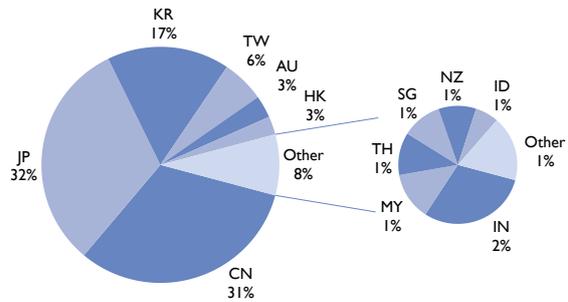
APNIC received the following /8 ranges from IANA in 2004: 058/8 and 059/8 (both in April).

APNIC IPv4 address space, allocated and available

/8 range	Allocated	% Allocated	% Available
059	14753792	87.94%	12.06%
060	15560704	92.75%	7.25%
061	16408576	97.80%	2.20%
163	65536	0.39%	99.61%
166	65536	0.39%	99.61%
196	10240	0.06%	99.94%
202	15744256	93.84%	6.16%
203	10939136	65.20%	34.80%
210	16310272	97.22%	2.78%
211	16777216	100.00%	0.00%
218	16408576	97.80%	2.20%
219	16654336	99.27%	0.73%
220	15974400	95.21%	4.79%
221	16359424	97.51%	2.49%
222	16162816	96.34%	3.66%
Totals	188194816	74.78%	25.22%

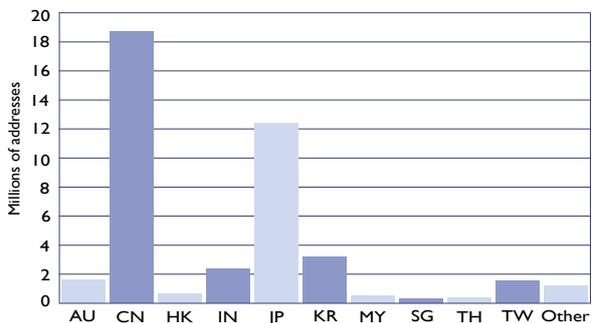
The relative distribution of IPv4 address space throughout the Asia Pacific region has remained quite stable for several years, with China, Japan, and Korea holding the greatest address allocations.

Total distribution of IPv4 allocations (by economy)



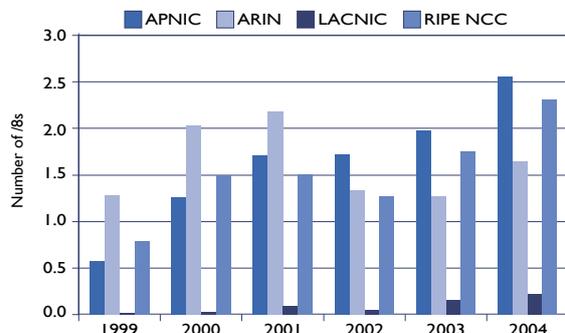
In 2004, China was the greatest single consumer of IPv4 address space in this region, followed by Japan. On current trends, it is likely that China will soon hold more IPv4 addresses than any other economy in the region.

IPv4 addresses allocated in 2004 (by economy)



Comparison with allocation reports from the other RIRs shows that for the past three years, the Asia Pacific region has been consuming more IPv4 address space than the other regions.

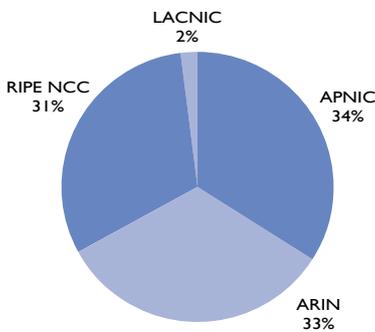
IPv4 allocations by RIRs (yearly comparison)





The Asia Pacific region now holds more IPv4 address space than any other region.

Total global distribution of IPv4 allocations (by RIR)



ERX project coming to an end

Begun in January 2003, the Early Registration Transfer (ERX) project has been underway for the past two years. This is a coordinated, cross-RIR effort to move whois records for Internet resources registered before the advent of the RIRs into the whois database of the RIR in whose region the registrant is based.

The last network block to be dealt with under this project is 192/8, which is expected to be fully transferred by early 2005.

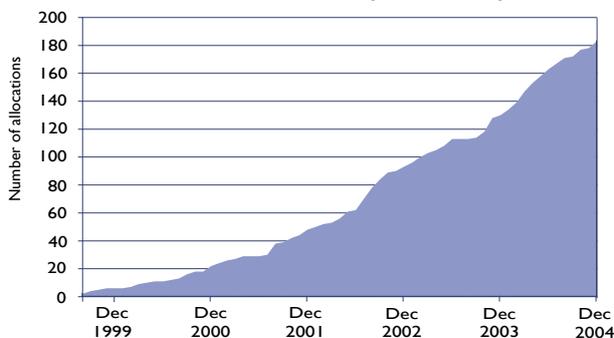
AfriNIC is likely to require a small ERX-like transfer process early in 2005, which will be completed in time for its formal acceptance as an RIR.

More information on the ERX project and APNIC's role in it is available at: <http://www.apnic.net/db/erx>

IPv6 address space

The number of IPv6 allocations made by APNIC rose from 37 in 2003 to 56 in 2004. These allocations made in 2004 represented the equivalent of 12.17 /23 ranges.

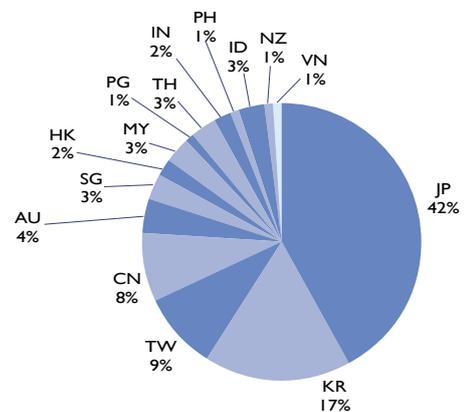
Total IPv6 allocations (cumulative)



In 2004, IANA allocated to APNIC the IPv6 ranges of 2001:4400::/23, 2001:8000::/19, and 2001:A000::/20.

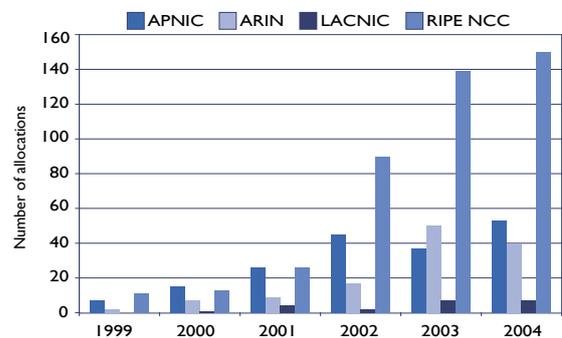
The number of Asia Pacific economies holding IPv6 allocations rose in 2004 from 14 to 15, following the first allocation to Vietnam.

Total distribution of IPv6 allocations (by economy)



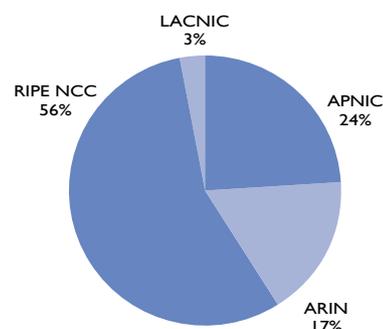
Demand for IPv6 in the APNIC, LACNIC, ARIN regions has remained relatively stable over the past three years (although there was a slight drop in demand in the ARIN region). The RIPE region continues to show growth in demand for IPv6.

IPv6 allocations by RIRs (yearly comparison)



The RIPE region now holds 56 percent of the total allocated IPv6 address space. The Asia Pacific region now holds 24 percent of the IPv6 address space allocated globally.

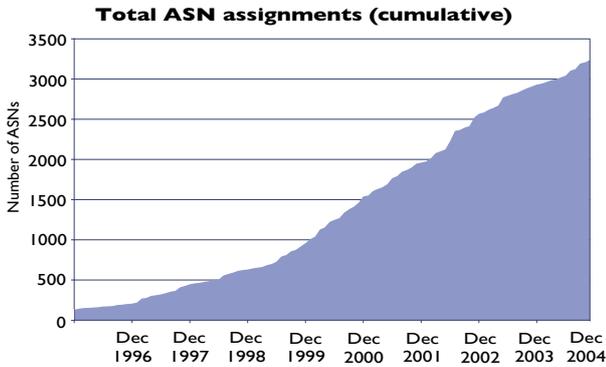
Total global distribution of IPv6 allocations (by RIR)



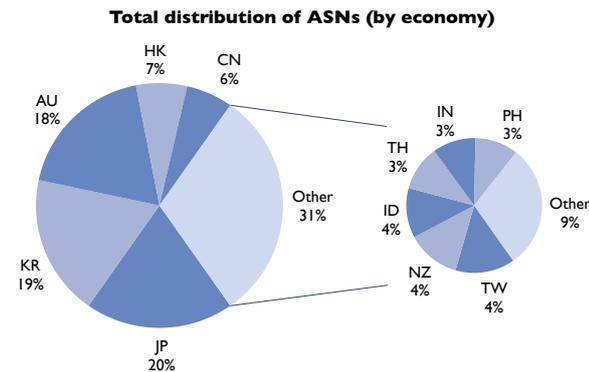


AS numbers

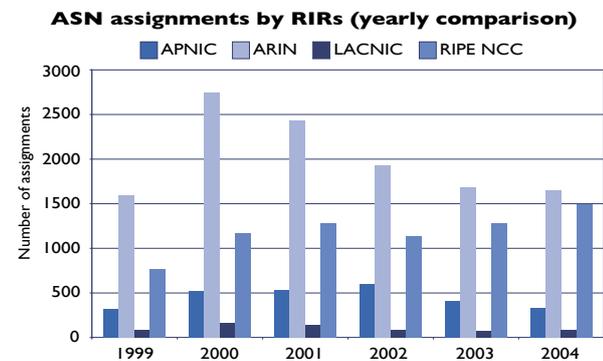
Demand for ASNs in the Asia Pacific region continues to decline at a significant rate. In 2004, APNIC assigned only 329 ASNs (down from 403 in 2003 and 584 in 2002).



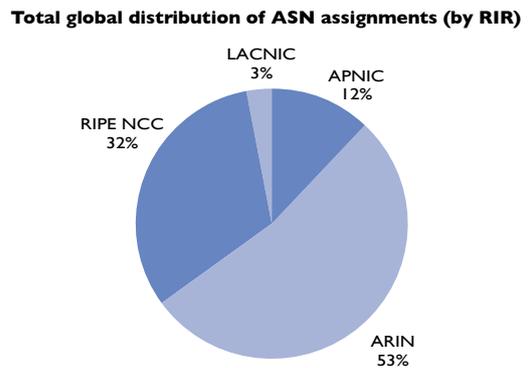
The overall distribution of ASNs throughout the region remains almost unchanged since the previous year, with Japan, Korea, and Australia still holding the greatest number of ASNs.



Although demand for ASNs has been falling in this region since 2002, it has been steadily rising in the RIPE region over the same period. In the ARIN region, a decline in demand since 2000, now shows signs of leveling out. Demand in the LACNIC region appears to be stable at a relatively low rate.



Global distribution of ASNs has not varied significantly in the past year – the ARIN region continues to hold the majority of assigned ASNs, followed by the RIPE region. The APNIC and LACNIC regions combined have consumed only 15 percent of the total assigned ASNs.



APNIC provides a helpdesk at each APNIC meeting to provide personal service to anyone with a query about resource requests or membership requirements. The helpdesk is also available throughout the year by phone (+61-7-3858-3188) or email <helpdesk@apnic.net>.





Financial reports

As was the case in the previous year, the financial environment in 2004 was characterised by fluctuations in the exchange rate around a relatively low US dollar. However, because most of APNIC's income is in US dollars and most of its expenses are in AU dollars, APNIC's invested capital reserve is structured to protect the overall financial position from such fluctuations. By the end of 2004, despite the exchange rate position and a slightly reduced membership growth rate, APNIC managed to achieve a modest surplus of US\$20,337. The following financial reports have been audited by PricewaterhouseCoopers.

Consolidated statement of financial position

	Year end 2004 (US\$)	Year end 2003 (US\$)	% change from 2003
Exchange rate	0.7835	0.7521	4%
Current assets			
Cash	3,691,561	3,716,177	-1%
Term deposit investment	2,585,550	2,256,300	15%
Receivables	510,816	364,395	40%
Advance payment	128,152	122,415	5%
Other	25,169	23,193	9%
Total current assets	6,941,248	6,482,480	7%
Non-current assets			
Other financial assets	663,273	544,351	22%
Property, plant, and equipment	1,074,177	1,007,453	7%
Long term deposit investment	783,500	752,100	4%
Total non-current assets	2,520,950	2,303,904	9%
Total assets	9,462,198	8,786,384	8%
Current liabilities			
Accrued expenses	517,170	397,155	30%
GST withholding	11,649	11,623	0%
Provisions	300,228	127,877	135%
Unearned revenue	2,061,047	1,961,779	5%
Total liabilities	2,890,094	2,498,434	16%
Equity			
Share capital	0.78	0.75	4%
Retained earnings	6,572,103	6,287,949	5%
Total equity	6,572,104	6,287,950	5%
Total liabilities & equity	9,462,198	8,786,384	8%

Notes:

The consolidated statements of financial position, activities, and cashflows are the consolidation of the APNIC Pty Ltd accounts translated into US\$.

For a better understanding of APNIC Pty Ltd's financial position and performance, as represented by the results of its operations and its cashflows for the financial year ended 31 December 2004, the consolidated statement of financial position, activities, and cashflows should be read in conjunction with the annual statutory financial report and the audit report.

The amounts in this APNIC financial report are expressed in US\$. The exchange rate used to convert AU\$ amounts to US\$ in this report (0.7835), is based on the notes spot rate as at 31 December 2004, as provided by the Australian Taxation Office.



Consolidated statement of activities

	2004 in US\$	2003 in US\$	% change from 2003
Exchange rate (*)	0.7380	0.6538	13%
Revenue			
Interest received	282,928	195,950	44%
IP resource application fees	351,188	351,845	0%
Membership fees	3,510,392	3,409,078	3%
Non-member fees	27,686	80,994	-66%
Per allocation fees	635,180	418,275	52%
Reactivation fees	2,876	0	0%
Sundry income	78,007	31,319	149%
Sub-total	4,888,257	4,487,461	9%
Exchange rate gain/(loss)	83,843	(573,846)	-115%
Total revenue	4,972,100	3,913,615	27%
Expenditure			
Communication expenses	105,933	139,823	-24%
Depreciation expense	300,454	208,676	44%
Donation, contribution and sponsorship	65,562	17,110	283%
ICANN contract fees	172,016	115,622	49%
Meeting and training expenses	68,576	70,014	-2%
Membership fees	93,569	31,712	195%
Other operating expenses	1,319,305	1,106,419	19%
Professional fees	413,019	274,106	51%
Rent	219,749	191,427	15%
Salaries	2,108,829	1,660,573	27%
Total expenditure	4,867,012	3,815,482	28%
Operating surplus/(loss) before income tax expense	105,088	98,133	7%
Income tax expense	84,711	36,398	133%
Operating surplus/(loss) after income tax expense	20,377	61,735	-67%

Notes:

The exchange rate used to convert AU\$ amounts to US\$ in this report (0.7380), is based on the average monthly average rate for year 2004 as provided by the Australian Taxation Office.



Consolidated statement of cashflows

For the year ended 31 December 2004

	2004 (US\$)	2003 (US\$)
Cash flows from operating activities		
Receipts from members and customers	4,592,177	3,620,069
Payments to suppliers and employees	(4,399,575)	(3,447,970)
	192,602	172,099
Interest received	254,418	170,938
Income tax (paid)/received	(20,916)	45,735
Net cash inflow from operating activities	426,104	388,772
Cash flows from investing activities		
Payments for equipment/furniture/office improvement	(408,821)	(642,758)
Payments for investment, long term deposits	(388,962)	(2,058,276)
Proceeds from sale of property, plant and equipment	0	0
Net cash outflow from investing activities	(797,783)	(2,701,034)
Net increase/(decrease) in cash held:	(371,679)	(2,312,262)
Cash at the beginning of the financial year	3,716,177	4,107,546
Effects of exchange rate changes on cash	347,063	1,920,893
Cash reserve at the end of the financial year	3,691,561	3,716,177

