APNIC

Apster

-ster *(suffix)* One that is associated with, participates in, makes, or does: *songster.*

Source: ***www.dictionary.com***

March 2002 **Issue 2** APNIC - Addressing the challenge of responsible internet resource distribution in the Asia Pacific Region

Member Services Helpdesk

APNIC's new Member Services Helpdesk will commence operations on Tuesday 2 April 2002.

The new Helpdesk, which will be staffed by APNIC's team of Internet Resource Analysts (Hostmasters), will provide one point of contact for all member enquiries. The Helpdesk will be accessible on a new APNIC telephone number **(+61 7 3858 3188).** Once the new service has been implemented members should use this number to contact APNIC for all of their enquiries.

The Helpdesk will have extended operating hours, from 9:00 am to 7:00 pm (Australian Eastern Standard Time, UTC + 10 hours), making the service more accessible and convenient to members based in different time zones in the Asia Pacific region.

APNIC members and clients will receive a more personalised service from the new Helpdesk and will have direct access to APNIC Hostmasters to resolve their enquiries, in a range of languages including:

- Cantonese
- Mandarin
- Vietnamese
- Filipino (Tagalog)
- Thai

(More languages will be added in the future)

The new service will lead to faster response and resolution of queries, such as:

- IP resource applications
- Status of requests
- Obtaining help in completing application forms
- Membership enquiries
- Billing issues
- Database enquiries

Contacting the Member Services Helpdesk:

Member Services Helpdesk
Phone: + 61 7 3858 3188
Fax: + 61 7 3858 3199
Email: helpdesk@apnic.net
URL: www.apnic.net/helpdesk

Hours of operation

9:00 am to 7:00 pm
(Australian Eastern Standard time,
UTC + 10 hours)
Monday – Friday

Watch for updates about the Member Services Helpdesk on the Helpdesk web site home page at:

www.apnic.net/helpdesk

▶ The APNIC Member Services Helpdesk, providing multilingual help for resource requests, membership enquiries, and related questions – to be launched 2 April 2002.

APNIC launches RPSL whois service

APNIC's new RPSL whois services will provide better performance, higher security, and the ability to offer advanced services, such as an Internet Routing Registry.

To learn more about RPSL, refer to "What is RPSL?", by APNIC Technical Services Manager, George Michaelson (page 4)

APNIC is delighted to announce it has an operating RPSL-compliant whois service, which can provide data from the APNIC regional databases as well as a live copy of the RIPE whois database.

Whois queries directed to rpsl.apnic.net will be resolved by a new dual processor, RedHat Linux system, running RIPEv3 whois code. Users should notice significantly faster response times to queries from this single host, compared to the three (identical) systems which currently host whois.apnic.net.

This facility is the first stage of APNIC's planned migration to RPSL-based whois services for registry applications. It permits APNIC members and the wider Internet community to perform whois queries in RPSL format, as well as enhancing searches to include European data. The service runs on the new RIPEv3 code, which is significantly faster than the previous v2 system, and includes enhanced search functions for searches of whois objects.

APNIC is actively converting RIPE-181 data updates to the current whois service into this RPSL compliant system. Regional NIR data is also being integrated, to create a single, consistent framework.

At this stage, the service provides a read-only view of the data, but future activity will include RPSL-compliant data update during the migration process. Additional features such as PGP signed updates will be possible, as well as integration of the emerging Asia Pacific Internet Routing Registry (APIRR).

Subject to acceptable use provisions, members and others are now able to take near-real-time mirrors (NRTM) of whois data, and APNIC is able to apply filters to prevent non-authorised bulk harvesting of the data.

More information about the planned migration of services to RPSL will be announced during APNIC 13 and on our web site.

Editorial

This edition of *APster* highlights recent changes to the membership structure and address policies, describes important operational developments relating to RPSL and the whois database, and gives an overview of the second APNIC Member and Stakeholder Survey.

Dear Reader

During the preceding months the APNIC Secretariat has implemented the decisions made at the 12th Open Policy Meeting held in Taipei late in August 2001. This issue of *APster* highlights some of the most important activities, including the changes to the membership structure, and address policy.

The member and stakeholder survey, commissioned by the Executive Council (EC) in 2001, received valuable input from members and other interested parties. Having received the results, the EC developed a response, which will help guide APNIC's future plans. The key issues and actions suggested by the EC for further evaluation is discussed on page 7.

The survey revealed diverse opinions on many issues, but also reaffirmed APNIC's current emphasis on its primary service – address allocation – and on the efforts being made towards service enhancement. It also encourages the development of new services, although these will, of course, require further discussion with the membership. The survey confirms the direction set by APNIC with the development of new training materials as well as the new Member Services Helpdesk, to be launched at the Member Meeting in Bangkok on 7 March.

As we move forward we'll continue to announce new services and service improvements in *APster*. In this way the newsletter fulfils a valuable role in communicating with you, our constituents. However, *APster* also serves as a means of feedback to the Secretariat and discussion among members.

If you have any comments or suggestions on *APster* please email them to me at apster@apnic.net. I also encourage anyone interested in writing short articles for the newsletter to send your ideas to me.

Robert Winkler

Editor

APNIC 13 - Bangkok

APNIC 13 will be held in conjunction with APRICOT2002 at the Queen Sirikit National Convention Center in Bangkok, Thailand, from 3 - 7 March 2002.

Once again, APNIC will provide a conference track for APRICOT, contributing Special Interest Groups (SIGs), Birds of a Feather sessions (BOFs), a social event, and the APNIC Member Meeting.

◀ The Queen Sirikit National Convention Center, Bagkok, Thailand — venue for the 13th APNIC Open Policy Meeting.

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▲ APNIC Technical Services Manager, George Michaelson.

What is RPSL?

APNIC has now deployed a RIPEv3 Whois Database, with RPSL for operational testing. Technical Services Manager, George Michaelson, explains RPSL and its role in helping APNIC provide new and enhanced services.

Routing Policy Specification Language (RPSL) is an Internet standard notation for representing Internet routing information. RPSL is needed to support the exchange of complex routing policy information between ISPs in a secure and openly agreed manner.

So-called IIR daemons (IRRD) use a simple request-response protocol to supply this data in exactly the same way whois services supply the more general domain name and address allocation records. By querying IRRDs, ISPs can configure filters for their border routers, or check router configurations against announced policies. And by using secure, encrypted submission paths, routing managers can propagate declarations of their routing policy in a trustable manner.

Like RIPE-181, RPSL includes many non-routing related concepts and data structures, which means it can be used as a framework for a more general address management service (such as the RIR whois databases). However, RPSL is more rigorously defined than RIPE-181 and capable of far more functionality.

RPSL uses a *type:value* attribute notation in ASCII to represent objects (as does RIPE-181). Each object consists of sets of attributes according to defined templates. Those who have used this format of data in the APNIC whois service will find many RPSL objects look familiar and, in some cases, identical (the *person* object for instance). Others, such as the *mntner* object, have new fields, providing additional security or other data management features.

RPSL is of most value in attributes that have complex structure. *AS-set*, *route*, and related objects can use the RPSL grammar to express complex relationships of imported and exported routing policy.

Deployment issues

APNIC deployed pilot RPSL-based whois services during 2001, testing performance and scaling issues, and porting the software to APNIC's hardware. The tests indicate that the new service is capable of handling significantly greater request rates than the current whois service.

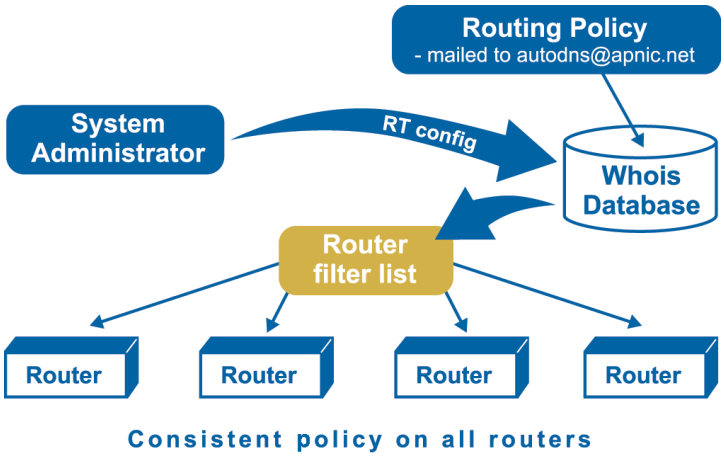
The new data format requires changes to internal systems to convert from RIPE-181 to RPSL format and to meet the new level of integrity checks. Tests to date have revealed a large number of historical records in the current database which require amendment before being imported into the new service. In most cases, these are entries with non-conforming *nic-hdl* values.

We also have identified the need to train APNIC membership in use of the new facilities and to provide crossover services during a transition process.

Detailed planning for this work is due to begin shortly and will be presented at APNIC 13 in Bangkok.

APNIC gratefully acknowledges the support and assistance of RIPE NCC in its assessment of their code, deployment, and the logistical planning for deployment. We hope to show the benefits of this collaborative support throughout 2002 as we deploy services.

The following diagram illustrates how available tools can access an RPSL-compliant whois database for automatic router configuration.



RPSL is defined by the following series of IETF standards:

1. C. Alaettinoglu, C. Villamizar, E. Gerich, D. Kessens, D. Meyer, T. Bates, D. Karrenberg and M. Terpstra, “Routing Policy Specification Language (RPSL)”, RFC 2622, June 1999.

   http://rfc.net/rfc2622.html

2. C. Villamizar, C. Alaettinoglu, D. Meyer and S. Murphy, “Routing Policy System Security”, RFC 2725, December 1999.

   http://rfc.net/rfc2725.html

3. D. Meyer, J. Schmitz, C. Orange, M. Prior, and C. Alaettinoglu, “Using RPSL in Practice”, RFC 2650, August 1999.

   http://rfc.net/rfc2650.html

RPSL is also documented in the RIPE database reference manual.

http://www.ripe.net/docs/databaseref-manual.html

Why RPSL?

The APNIC Secretariat has carefully considered the conversion from RIPE-181 to RPSL and has worked closely with the RIPE NCC in pursuing this direction. Briefly, converting to RPSL offers the following benefits:

1. The APNIC membership has expressed its desire for a neutral Internet routing registry based in the Asia Pacific region. Since APNIC already provides all of the services associated with this role, it was sensible to expand the current whois service to meet this need.

2. RPSL permits more accurate declaration of routing policy than the current service. Data conversion testing has revealed existing records which should have failed RIPE-181 conformance checks. RPSL code will enforce object standards more strictly, avoiding these errors.

3. The current RIPE-181 based whois system is no longer able to sustain foreseeable growth in whois service load. The RPSL-based RIPE v3 whois code is written in C and C++, and uses a threaded model of service. It uses a back-end SQL database to represent RPSL objects and has better scaling for this class of service. Based on RIPE NCC experiences, APNIC expects real improvements in stability, speed, and reliability.

4. It is important that APNIC’s IRR services integrate with other services around the world, which have already adopted RPSL.

Revised membership and fee structure

Recent changes to the APNIC membership structure and fee schedule make entry into the APNIC membership more accessible and expand the diversity of membership categories.

A number of key decisions were made at the APNIC Member Meeting held in Taipei in August 2001. As well as a number of policy changes (see page 9), the meeting approved the implementation of a revised membership structure.

APNIC's membership structure previously comprised four tiers. As the organisation has grown, so too has the need for greater fee flexibility for members with either very small or very large address holdings. Also, there was previously no appropriate membership category for organisations wishing to join APNIC and participate in the open policy formulation processes but not hold address resources. These deficiencies were addressed in a proposal approved by the member meeting, which provides three new membership categories:

- Associate, for initial membership and for members not holding IP address resources;
- Very Small, for members holding up to a /22 of IPv4 address space; and
- Extra Large, for members holding more than a /10 of IPv4 space.

With this change, the number of APNIC membership categories has increased to seven, although the relative voting entitlements of the previous strucuture remain unchanged.

The revised membership structure provides greater opportunities for participation in APNIC's policy development process. It also allows those organisations choosing to enter a higher tier than their resource allocation dictates to receive recognition for the additional contribution they make to the development of the Internet community in the Asia Pacific region.

The revised membership structure has been applied to new members joining APNIC since 1 December 2001 and is being applied progressively to membership renewals as they occur from 1 March 2002 onwards. Details of the new membership and fee structure are outlined in the following table.

Membership tiers, fees, and voting entitlement

Membership Tier*	Annual Fee	Amount of IPv4 address space	Amount of IPv6 address space	Voting Entitlement
Associate	US$625	None	None	1
Very small	US$1,250	Up to and including /22	N/A	2
Small	US$2,500	Greater than /22, up to and including /19	Up to and including /35	4
Medium	US$5,000	Greater than /19, up to and including /16	Greater than /35, up to /32	8
Large	US$10,000	Greater than /16, up to and including /13	Greater than /32, up to /29	16
Very large	US$20,000	Greater than /13, up to and including /10	Greater than /29 (subTLA)	32
Extra large	US$40,000	Greater than /10	N/A	64

* For members holding both IPv4 and IPv6 address space, the Membership Tier is assessed separately for IPv4 and IPv6 as above. The member's effective Membership Tier is then assessed as the larger of these. Australian organisations are required to pay the Goods and Services Tax (GST) on all APNIC membership fees.

IP resource application fee

Previsouly, all new members paid an initial account start-up fee of US$1,000. Under the new membership and fee structure, the start-up fee no longer applies, making membership more accessible for many organisations. Abolishing this fee also recognises that there may be reasons for joining APNIC other than seeking address resources.

In place of the start-up fee is a new IP resource application fee of US$2,500, payable on the first request only for IP address resources. Requests for AS numbers and subsequent requests for IP resources are not subject to this fee.

▲ All APNIC members are encouraged to display their APNIC Member logos on their web site and in other materials. For details, contact info@apnic.net.

Non-member fees

It is not essential that organisations obtain address resources from APNIC as members because non-member applications for Internet addresses, AS numbers or reverse delegations are possible. Non-members are invoiced according to the number of APNIC resources they have been assigned. There is an additional fee at the time of assignment, plus an ongoing maintenance fee. Both these fees are scaled to the number of resources the non-member is assigned; see the Non-member fee table.

Non-member allocation and maintenance fee

Allocation or assignment service	Unit	Allocation fee	Yearly maintenance fee
Internet addresses	Host address	US$1.00*	US$0.10
Autonomous System (AS) numbers	AS number	US$500.00	US$50.00
Reverse in-addr.arpa domain delegations	classfull in-addr domain	US$50.00	US$0.00

* The minimum fee for Internet address assignments is US $8,192.

Member and stakeholder survey

To meet APNIC's goal of continuous improvement in its services, the Executive Council (EC) commissioned consultants KPMG to conduct a second member and stakeholder survey during 2001.

Following on from the first such survey, conducted in 1999, the consultants canvassed the opinions of a wide selection of APNIC members and stakeholders in the Asia Pacific region, the results of which serve as a solid foundation for APNIC's future planning.

Executive Council response

The EC has given careful consideration to the many diverse opinions expressed in the survey report and has developed a response that will direct APNIC's operations as it strives to meet the expectations of its constituents.

The survey reaffirmed that IP address allocation is the single most important service that APNIC provides. Important secondary services include resource and database services, training and meetings.

The EC has also highlighted a number of areas that need to be investigated by APNIC, both to develop its services and to define its relationship to its members and the broader community.

The KPMG report and the EC response are now available on the APNIC website at http://www.apnic.net/survey/2001/.

Key issues

The EC response to the survey discusses the following broad areas:

- Service quality improvements
- Development of future APNIC services
- Member input
- APNIC decision framework
- The role of the members
- ISO quality certification
- Support for diversity
- Support for development
- Governmental liaison

MyAPNIC

MyAPNIC, the secured members-only web area, is a step closer to implementation with the release of a stable functioning prototype.

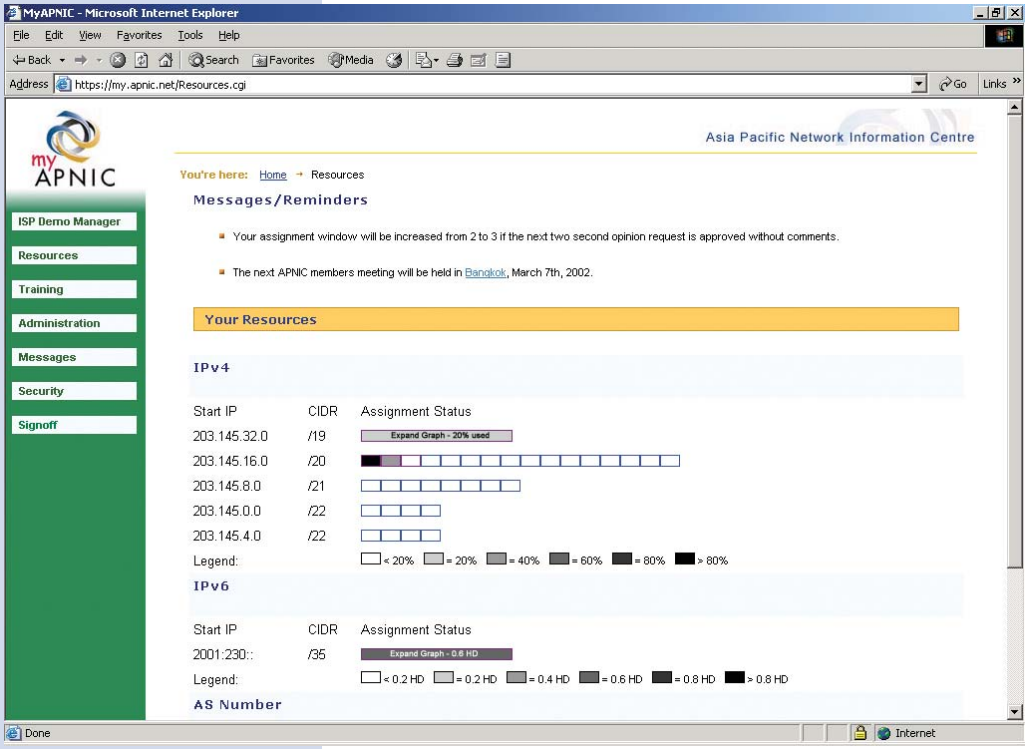
Since its first demonstration during APNIC 12, *MyAPNIC* has undergone significant development and testing. A new version, ported to Linux and secured by digital certificates, is now availble for public testing.

MyAPNIC is a secure, members-only area which will be deployed on the APNIC web site to provide members with a suite of management tools, allowing them to administer billing information, staff security preferences, training, and – most importantly – address resource details.

All APNIC members will be able to use *MyAPNIC* when it is released. Members who wish to do so will first need to apply for and install a digital certificate.

The service will integrate with the APNIC Whois database, membership records, and with APNIC resource request forms. The status of all APNIC address resources held by the member will be accessible via a series of simple management screens.

During APNIC 13 in Bangkok, the current version of *MyAPNIC* will be demonstrated and members will be invited to obtain certificates allowing them to participate in the ongoing testing of the service.



▲ One of the sample *MyAPNIC* management screens, allowing users to adminster details of IP address assignments.

Policy update

APNIC 12 in Taipei was the most productive APNIC meeting ever in terms of policy development. APNIC has now documented and implemented the major policy decisions from that meeting.

A series of policy proposals was discussed in the course of the Open Policy Meeting during APNIC 12. Following very productive SIG sessions, proposals establishing criteria for initial portable allocations of IPv4 address space and amendments to policies relating to address allocations for cable and DSL networks were accepted.

New policies were also approved for:

- Small multihoming IPv4 assignments; and
- Internet exchange (IX) points requesting IPv4 or IPv6 assignments for their transit LANs.

With these new and amended policies, clear criteria for address space eligibility now exist, which is intended to lead to greater certainty and efficiency in address requests.

The existing joint-RIR policy on IPv6 addressing has been under review for a considerable time. During APNIC 12, consensus was reached on new IPv6 address policy principles, with a call for further discussion of the minimum allocation size and development of specific policies. Consensus was also reached on extending the IPv6 bootstrap policy until the next IPv6 policy is implemented.

Document changes

These policy changes necessitated the creation or revision of a number of documents and forms. The APNIC Secretariat has implemented the policy decisions and most of the new and revised documents are now available for use on the APNIC website, in particular:

- *APNIC IPv4 ISP request form* (online and text)
- *Multihoming assignment request form* (text)
- *IXP assignment request form* (text)
  (while some of the new request forms only exist in text format now, work has commenced on providing online versions)
- Member and non-member application forms
- Standard APNIC Membership Agreement
- APNIC document review policies and procedure

Finally, the policy decisions meant that APNIC's primary IPv4 policy document required several amendments. A new version, *Policies for IPv4 address space management in the Asia Pacific region*, has been drafted, as has a new AS number policy. Both of these documents have been published to the community with calls for public comments.

▶ Participants in the APNIC Member Meeting during APNIC 12, Taipei, August 2001.

Policy highlights

Criteria for initial IPv4 allocations

For the first time establishes clear, certain critieria for organisations seeking their first IPv4 allocation.

Cable and DSL networks

The work of the Broadband Working Group led to the acceptance of guidelines for evaluating requests by cable or DSL operators, as well as clearer registration requirements.

Small multihoming assignments

Clarifies the eligibility of organisations to receive portable assignments smaller than the minimum allocation for the purposes of multihoming their network.

Internet Exchange Point assignments

Provides for portable IPv4 or IPv6 assignments to IXPs for addressing their transit LANs.

▲ APNIC Trainig Manager, Champika Wijayatunga.

Training services expansion in 2002

Development of new course content, recruitment of additional training staff, and the introduction of online training materials are on the agenda for 2002.

Training schedule

2002

March
Singapore

April
Mumbai, India
Bangalore, India

May
Guangzhou, China
Hong Kong

June
Melbourne, Australia
Jakarta, Indonesia

July
Suva, Fiji

August
Hyderabad, India
Colombo, Sri Lanka

October
Pakistan (city tba)

November
China (city tba)

*The APNIC training schedule is provisional and subject to change. Please check the web site for regular updates at http://www.apnic.net/training

The APNIC member training program continues to grow every year. In 2001, APNIC training courses reached 900 participants in 14 locations around the region. In 2002, the program is set to be expanded even further.

Recruitment

Recruitment is well underway for addtional training staff to conduct training courses and to develop materials and teaching strategies. Of course, APNIC hostmaster staff will continue to assist in delivering training courses, bringing both hostmaster experience and valuable language skills.

New RPSL module under development

As discussed on pages 4-5, APNIC is upgrading whois services to the RPSL-compliant RIPEv3 software. To support the membership in this regard, APNIC is currently developing new RPSL-specific course material, as well as reviewing existing material for necessary updates.

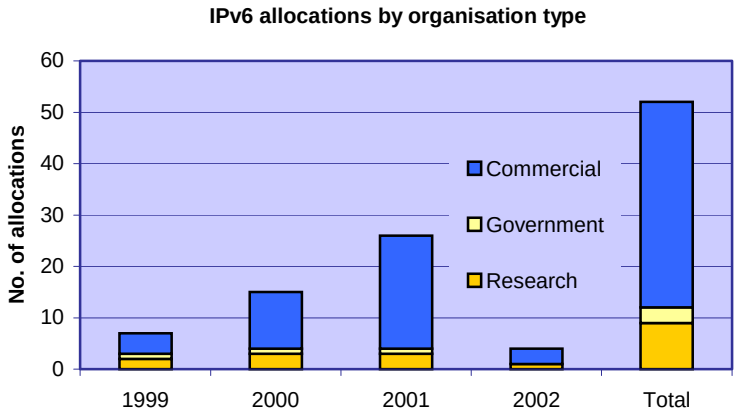
Online training delivery

APNIC is currenty investigating a system for developing and delivering online training materials, to complement face-to-face training sessions. The system being considered allows for flexible delivery, progressive assessment, student tracking, and a range of management tools.

Already video footage has been taken from a live training session to incorporate in a trial module. Much remains to be done on this project; however, more details should be available in the next issue of APster.

Resource snapshot

Analysis of IPv6 allocation data since the service was introduced in 1999 shows a steady increase in the number of commercial organisations demonstrating an interest in IPv6 address resources.



Operations update

Each issue, the Operations Update will report selected highlights of developments within the APNIC Secretariat, focusing on improvements to infrastructure, procedures, and staffing.

Technical Department

APNIC's Japan router upgraded

APNIC has upgraded its router at the WIDE hosted facility in Otemachi, Tokyo. The upgrade, from a Cisco 3640 to a Cisco 7200, increases the local CPU and memory capacity and improves APNIC's BGP capabilities at the NSPIXP2 exchange point.

APNIC will also deploy an additional connection to another Japanese Internet exchange shortly, and will also expand resources and services hosted in Japan as part of its regional distribution plans. This will improve service availability and compliments network engineering work at the Secretariat office to improve core service reliability and distribute load effectively.

The new router was pre-configured with help from Philip Smith (Cisco) and shipped to Japan, where Akira Kato (WIDE) very kindly undertook the deployment. APNIC gratefully acknowledges their assistance and support.

The upgrade serves two purposes. First, it allows APNIC to host services at this significant regional exchange location with multiple provider connectivity. The WIDE-Otemachi facility currently hosts APNIC's second DNS server and a mail delivery service which provides failover email services for APNIC and ARIN. Additional services will be deployed in the near future.

Second, it provides a data collection point, which is used by Philip Smith as one of his data sources for the ongoing BGP measurement project.

This facility also hosts a RIPE RIS data collector, which APNIC hosts on behalf of RIPE. Further information about the RIS project can be obtained from:

http://www.ripe.net/ripencc/pub-services/np/ris-index.html

RT2 deployed

RT2, the new version of the request ticketing and tracking system used by APNIC, is now deployed and operational. RT2 provides better internal management of email requests to APNIC and improved attachment handling. RT2 is an open source project to which APNIC has provided some developmental assistance.

Documentation Department

Document translations

The APNIC Secretariat is again offering assistance to members for translation of some important documents. The main IPv4 policy document has previously been available in several languages, but recent revisions to that document mean that new translations will soon be called for. We will also seek translations in 2002 of documents such as the new ASN policy (when finalised), help for request forms, and any other documents that the community believes would be useful. Details will be announced soon on the apnic-announce mailing list.

Revised document numbering system

The numbering system for official APNIC documents has been updated to provide more effective archiving and easier reference to historical documents. Previously, documents were given a single number (such as apnic-086) and any revisions to the document required a new number. The revised system simply adds a version number (such as apnic-086v001). Although documents will still be referred to by their original number, file names displayed in the archive will clearly show the full version history. Along with the new numbering system, the headers of all APNIC documents have now been updated to meet the requirements of the Document Review Policies and Procedures (which came into operation in December 2001).

RIR update

LACNIC

LACNIC moves towards formal recogntion

LACNIC, the emerging registry for Latin America and the Caribbean held its second Open Policy Meeting on 28 November 2001 in Sao Paulo, Brazil. This meeting was held in conjunction with the AHCIET Internet 2001 seminar and a workshop hosted by the Network Engineering Work Group of the Brazil Steering Committee and follows the first policy discussion meeting held in Buenos Aires, in December 2000.

LACNIC is a joint undertaking of AHCIET, ENRED, CABASE, ECOM-LAC, NIC BRAZIL and NIC MEXICO. It is currently in a transitional process, intending to obtain formal recognition from ICANN to operate as the Regional Internet Registry. LACNIC will administer IP address space, ASNs, reverse delegations, and other services on behalf of the Internet community in the Latin American and Caribbean Region.

RIPE NCC

RIPE 41 proposes alternative IPv6 allocation criteria

RIPE 41 was held in Amsterdam in January 2000. At a well-attended joint session of the LIR and IPv6 Working Groups, the global IPv6 policy draft was discussed. The consensus of that meeting was to recommend replacing the initial allocation criteria with new criteria based around membership of an RIR and a documented need to make at least one assignment. The session recommended that the new criteria be limited to 2,000 allocations in each RIR region. The result of this session has been referred to the global-v6 mailing, where it has since been the subject of vigorous discussion.

Archives of the global-v6 discussion list are available at:

http://www.apnic.net/mailing-lists/global-v6/

Calendar

APRICOT 2002
3-7 March 2002
Bangkok, Thailand
http://www.apricot.net/

ICANN Meeting
10-14 March 2002
Accra, Ghana
http://www.icann.org/meetings/

IPv6 Summit
13-15 March 2002
Madrid, Spain
http://www.ipv6-es.com/02/in/i-index.asp

IETF 53
17-22 March 2002
Minneapolis, Minnesota, USA
http://www.ietf.org/meetings/meetings.html

ARIN IX
7-10 April 2002-01-14
Las Vegas NV
http://www.arin.net/

RIPE 42
29 April - 3 May 2002
Amsterdam, Netherlands
http://www.ripe.net/ripe/meetings/

WWW2002: Eleventh International World Wide Web Conference
7-11 May 2002
Honolulu, Hawaii, USA
http://www2002.org/

IPv6 Summit
9-12 May 2002
Beijing, China
http://www.ipv6forum.org/

IPv6 Conference
21-22 May 2002
Russia
http://www.ipv6forum.org/

TERENA Networking Conference 2002
3-6 June 2002
Limerick, Ireland
http://www.terena.nl/tnc2002/

INET 2002 (ISOC)
18-21 June 2002
Washington DC, USA
http://www.isoc.org/

IPv6 Technology Deployment Summit
18-21 June 2002
Washington DC, USA
http://www.ipv6forum.org/

ICANN Meetings
Late June 2002 (tentative)
Eastern or Central Europe
http://www.icann.org/meetings/

IETF 54
14-19 July 2002
Yokohama, Japan
http://www.ietf.org/meetings/meetings.html

Global IPv6 Summit
11-13 September 2002
Luxembourg
http://ipv6-summit.isoc.lu/

ICANN Meetings
October/November 2002 (tentative)
Asia/Pacific
http://www.icann.org/meetings/

New phone and fax numbers

APNIC has upgraded its phone system to meet growing call volumes and ensure that services are provided as efficiently as possible. This upgrade means changes to our phone and fax numbers. The old numbers will be phased out in the near future, so please note the new numbers and update any pre-programmed keys on telephones and fax machines.

Telephone +61 7 3858 3100

Fax +61 7 3858 3199

How to contact APNIC

Location:	Level 1, 33 Park Road, Milton, Brisbane Australia
Postal Address:	PO Box 2131, Milton 4064 QLD, Australia
Phone:	+61 7 3858 3100
Fax:	+61 7 3858 3199
Web site:	http://www.apnic.net

Emailing APNIC

To ensure that email requests are tracked and processed efficiently, APNIC operates a range of mailbox accounts.

Enquiries	E-mail Address
General, including spam and network abuse:	info@apnic.net
Membership:	member-apply@apnic.net
Account:	billing@apnic.net
Hostmaster (filtered)*:	hostmaster@apnic.net
Helpdesk:	helpdesk@apnic.net
Training:	training@apnic.net
Web site:	webmaster@apnic.net
Technical:	technical@apnic.net
APNIC database:	apnic-dbm@apnic.net
Meetings:	meetings@apnic.net
Sponsorships:	sponsorships@apnic.net
APster Newsletter:	apster@apnic.net

* To improve services to members, the Hostmaster mailbox is filtered. All email to the Hostmaster mailbox must include a valid account name in the subject line. The account name must be enclosed in brackets or parentheses in the subject field - [XXXXX-YY] or (XXXXX-YY), where XXXXX is based on the member name and YY is the country code. If you are unsure of your exact account name, contact billing@apnic.net.

Feedback

To ensure that APster meets your needs, please provide us with feedback on the newsletter articles or provide suggestions for articles for future issues. Please fax +61 7 3858 3199 or email apster@apnic.net these to us.

Name:
Position:
Organisation:
Member Account Name (If applicable):
Phone:
Fax:
Email:
Comments/Suggestions: