Apster33

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

APNIC

Contents

IPv6@**APNIC**

The IPv6 Program conducts extensive outreach throughout the Asia Pacific region. The focus of this effort is to support the APNIC Internet community in deploying IPv6 to maintain a scalable Internet for everyone.

As we have reached the last /8 of available IPv4 addresses, it is critical that we deploy IPv6. The APNIC IPv6 Program will continue to support the community in achieving tangible IPv6 deployment and assists the Asia Pacific region in the following ways.

GETTING YOU IPv6 ADDRESSES

Obtaining an IPv6 block is the first step to your transition, and the process is very simple.

Log on to the APNIC website and kickstart the process: just one click to IPv6!

www.apnic.net/kickstart

IPv6 TRAINING AND EDUCATION

It is important that your technical staff are ready to deploy IPv6, therefore implementing training plans are vital. APNIC can help you learn about deploying IPv6 across your network. The APNIC Training team regularly reviews and updates our training content to reflect the industry's best current practice.

You can select IPv6-related courses from various face-to-face and eLearning options. For more on upcoming training events, see:

www.apnic.net/training

Contact APNIC Training to find out how you can sponsor a training session in your local community.

www.apnic.net/events/training-sponsorship

MONITORING IPv6 DEPLOYMENT

If you have or are considering to offer services over IPv6 and want to measure your client's IPv6 capabilities, you can use the APNIC-designed IPv6 Tracker. Utilizing a JavaScript test system, the tracker reports on end-user capability in Google Analytics. The system also works without native IPv6 on your website.

By participating in this program, you will also contribute to a worldwide IPv6 measurement activity that is helping to inform global policy decision-making.

To find out more about measuring IPv6 deployment, visit:

labs.apnic.net/tracker.shtml

SUPPORTING IPv6 DEPLOYMENT

The IPv6 program continues its focus on multi-stakeholder outreach to increase awareness of IPv6 deployment. The Program will continue to liaise with regional and global experts through conferences, workshops and individual meetings.

For more information on this outreach, see:

www.apnic.net/ipv6

APNIC has also participated in the World IPv6 Launch as a website operator.

"The purpose of Labs is to give the community the information they need to make informed networking and resource consumption decisions. APNIC Labs now publish anonymous data summaries, along with graphs, for individual reporting purposes," Geoff said.

Research and Development becomes APNIC **Labs**

For years, the APNIC R&D team, Geoff Huston and George Michaelson, have worked to understand Internet growth in new dimensions. Routing and BGP studies have given an interesting picture of the long-term scalability of the global routing table. Since 2008, annual DNS measurements, taken from nodes all over the world, have been published in the Day in the Life (DiTL) reports. Other major areas of research have included IPv4 exhaustion graphs and in particular, IPv6 uptake measurements.

The community portal, ICONS and Geoff Huston's personal blog, Potaroo, are also sources of APNIC R&D findings. Now, all of this, along with the newest research, can be found in one place – APNIC Labs.

APNIC Chief Scientist Mr Huston said this information has always been available, but he is excited to have a single portal for the community to access.

"The purpose of Labs is to give the community the information they need to make informed networking and resource consumption decisions. APNIC Labs now publish anonymous data summaries, along with graphs, for individual reporting purposes," Geoff said.

See the APNIC Labs blog, Blabs, for the most current reports and findings from APNIC R&D, including ongoing IPv6 uptake measurements, the global BGP landscape, address filtering, Internet security, and more!

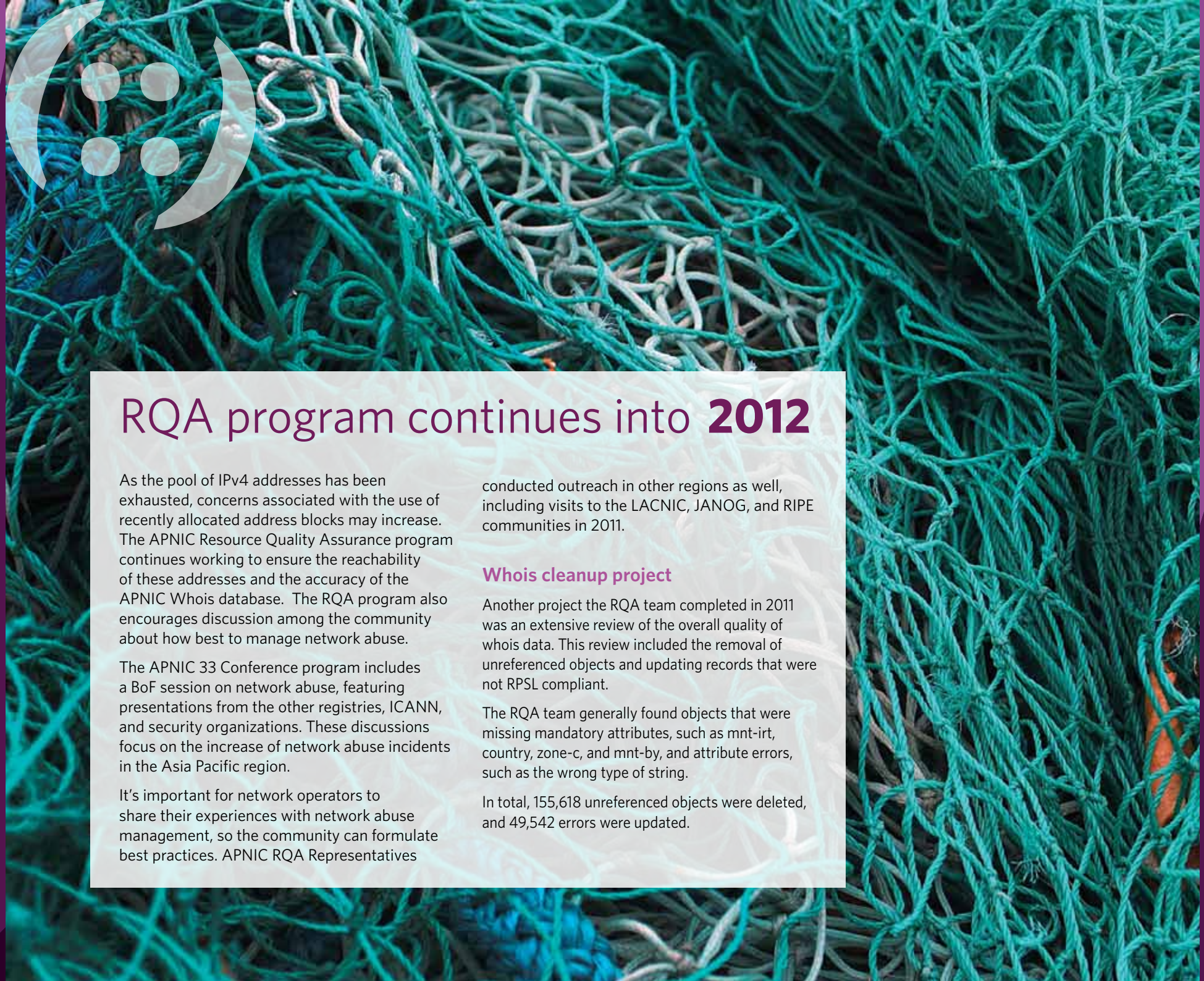
labs.apnic.net

blabs.apnic.net

IPv4

Dual-stack IPv6

IPv6



RQA program continues into **2012**

As the pool of IPv4 addresses has been exhausted, concerns associated with the use of recently allocated address blocks may increase. The APNIC Resource Quality Assurance program continues working to ensure the reachability of these addresses and the accuracy of the APNIC Whois database. The RQA program also encourages discussion among the community about how best to manage network abuse.

The APNIC 33 Conference program includes a BoF session on network abuse, featuring presentations from the other registries, ICANN, and security organizations. These discussions focus on the increase of network abuse incidents in the Asia Pacific region.

It's important for network operators to share their experiences with network abuse management, so the community can formulate best practices. APNIC RQA Representatives conducted outreach in other regions as well, including visits to the LACNIC, JANOG, and RIPE communities in 2011.

Whois cleanup project

Another project the RQA team completed in 2011 was an extensive review of the overall quality of whois data. This review included the removal of unreferenced objects and updating records that were not RPSL compliant.

The RQA team generally found objects that were missing mandatory attributes, such as mnt-irt, country, zone-c, and mnt-by, and attribute errors, such as the wrong type of string.

In total, 155,618 unreferenced objects were deleted, and 49,542 errors were updated.

New Conference feature: APNIC Services **forum**

The Secretariat will launch an APNIC Services Forum at the APNIC 33 Conference in New Delhi to present current and upcoming services.

Resource transfers: For those Members who do not have sufficient IPv4 resources, APNIC facilitates resource transfers. You can apply for pre-approval, which remains valid for 12 months in MyAPNIC.

APNIC also has an inter-regional transfer policy for APNIC Members and members of other RIRs to transfer IPv4 resources into and out of the Asia Pacific region. Stay tuned for updates from APNIC Services on corresponding policies in the other regions.

www.apnic.net/transfer

RPKI: Resource Public Key Infrastructure (RPKI) is a system aimed at improving global routing security. APNIC's role in RPKI is to digitally sign all resources delegated to Members, verifying their right of use.

The APNIC Secretariat is currently working to improve the infrastructure of this system, to make it more stable and reliable for users. This also enhances the interoperability with corresponding systems in other regions.

www.apnic.net/rescert

IRT: It is now mandatory for all new objects created to have an Incidence Response Team (IRT) contact. These contacts will enable better abuse management throughout the Asia Pacific region.

There are still 633,299 objects in the APNIC Whois Database that need mnt-irt updates.

www.apnic.net/irt

DNSSEC: APNIC offers a facility via MyAPNIC to add an extra layer of protection to your reverse DNS records by adding the "ds-rdata;" attribute to your domain objects.

www.apnic.net/dnssec

Agile enhances productivity and **accountability**

During the past 18 months, the APNIC Software team has integrated Agile methodology into their systems, as part of a commitment to continuously improve Secretariat operations.

The implementation began in 2009 when APNIC Software manager Bryon Westmoreland conducted a comprehensive departmental review of the team's work processes. He found that a new approach in software design and systems development was needed for better transparency and productivity.

Agile vs Waterfall development cycles

Prior to Agile, APNIC Software followed a "waterfall" development cycle, which was not making the best effective use of the team's resources. In a Waterfall development cycle, progress is seen as cascading through the phases of conception, analysis, design, development and testing.

"We produce a lot of code for internal clients, but this is a highly dynamic environment – we needed more room to be reactive if software needs change," Bryon said.

Agile development at APNIC focuses around two-week "sprints" where work is broken up into increments called "stories". The team has several meetings to discuss the project, and each developer works on a different aspect of the project simultaneously.

Projects can take one or multiple sprints to achieve a finished product. The sprints make the team as a whole, and as individuals, more flexible and adaptable with a tight feedback loop between requesters and developers.

Benefits of Agile methodology

Since the Agile implementation, APNIC Software has had greater success and productivity in meeting the needs of requests within the Secretariat.

Mr Westmoreland said that better results with the new method has had a positive impact on team morale, in addition to enhancing redundancy and group involvement.

"Every developer understands and agrees upon all tasks required to complete each project. This means anyone on the team can do the work within the agreed scope and time estimates," he said.

Another feature of the Agile methodology is enhanced transparency and accountability to other departments.

Aspects of Agile have also been incorporated into other department processes. A facilitation course will be held for select staff later this year, so other teams can similarly benefit from a new approach to project management as it applies to them.

NetSuite implementation

The first major software project adopting Agile in 2012 has been the integration of an Enterprise Management System - NetSuite - with APNIC's existing systems.

The Software team took three sprints to complete the integration of APNIC's Finance Systems, the most critical phase of the ERM implementation.

"This is the first time the entire team has been dedicated to a single project, and it was a very smooth implementation," Bryon said.

NetSuite is scheduled for completion by mid-2012.

ISIF.asia joins international innovation **alliance**

The Information Society Innovation Fund (ISIF) will join forces with similar small grants and awards programs in other regions under a new umbrella alliance to promote innovation and social development solutions on a wider scale.

This international collaboration – The Seed Alliance – will provide assistance for the three regional partner programs, conducted under the auspices of the APNIC (ISIF.asia); LACNIC (FRIDA); and AfriNIC (FIRE).

The Seed Alliance is made possible by a generous grant of AUD 1.3 million by the International Development Research Centre (IDRC) of Canada. The three Regional Internet Registry partners: LACNIC, AfriNIC, and APNIC, will also contribute funds. ISIF is also supported by ISOC as a partner, and dotAsia as a sponsor.

APNIC Learning and Development Director Philip Smith has been heavily involved with development projects throughout his career and looks forward to working more closely with LACNIC and AfriNIC.

"The global alliance will also invest significant resources to support the launch of FIRE, a new grants and awards program in the AfriNIC region, adopting lessons learned from the ISIF and Frida project cycles," Philip said.

More information about how to apply for a grant will be available on the ISIF website following the Seed Alliance Launch on 30 March 2012.

www.isif.asia

Policy **Update**

Implemented 9 August 2011:

prop-083: Alternative criteria for subsequent IPv6 allocations

prop-095: Inter-RIR transfer proposal

Implemented 21 November 2011:

prop-096: Maintaining demonstrated needs requirement in transfer policy after the final /8

Proposals Under Discussion

prop-099: IPv6 Reservation for Large Networks

prop-100: National IP Address Plan - Allocation of country-wide IP address blocks

prop-101: Removing multihoming requirements for IPv6 portable assignments

prop-102: Sparse allocation guidelines for IPv6 resource allocations

Proposals Abandoned in 2011

prop-092: Distribution of additional APNIC IPv4 address ranges after IANA exhaustion

prop-091: Limiting of final /8 policy to specific /9

prop-090: Optimizing IPv6 Allocation Strategies

prop-089: Additional criterion for final /8 allocations (and assignments)

prop-087: IPv6 address allocation for deployment purposes

prop-086: Global Policy for IPv4 Allocations by the IANA Post Exhaustion

prop-085: Eligibility for critical infrastructure assignments from the final /8

prop-084: Frequent whois information update request

www.apnic.net/policy

Preview: APNIC **Connect**

Our Members and Stakeholders have asked us to provide more information on the latest developments and research that affects them.

APNIC Connect is a portal that will provide these details. It will streamline information and allow our Members and Stakeholders to share content with each other, and the wider community.

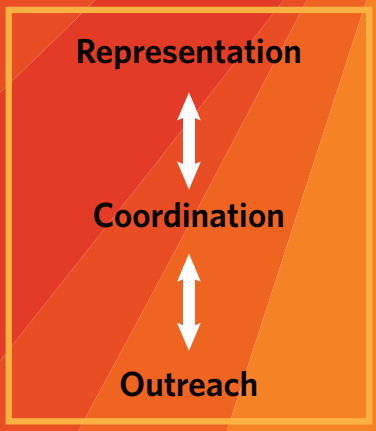
APNIC will also be a part of this information exchange, with Representatives sharing best practice following training, liaison, and outreach activities.

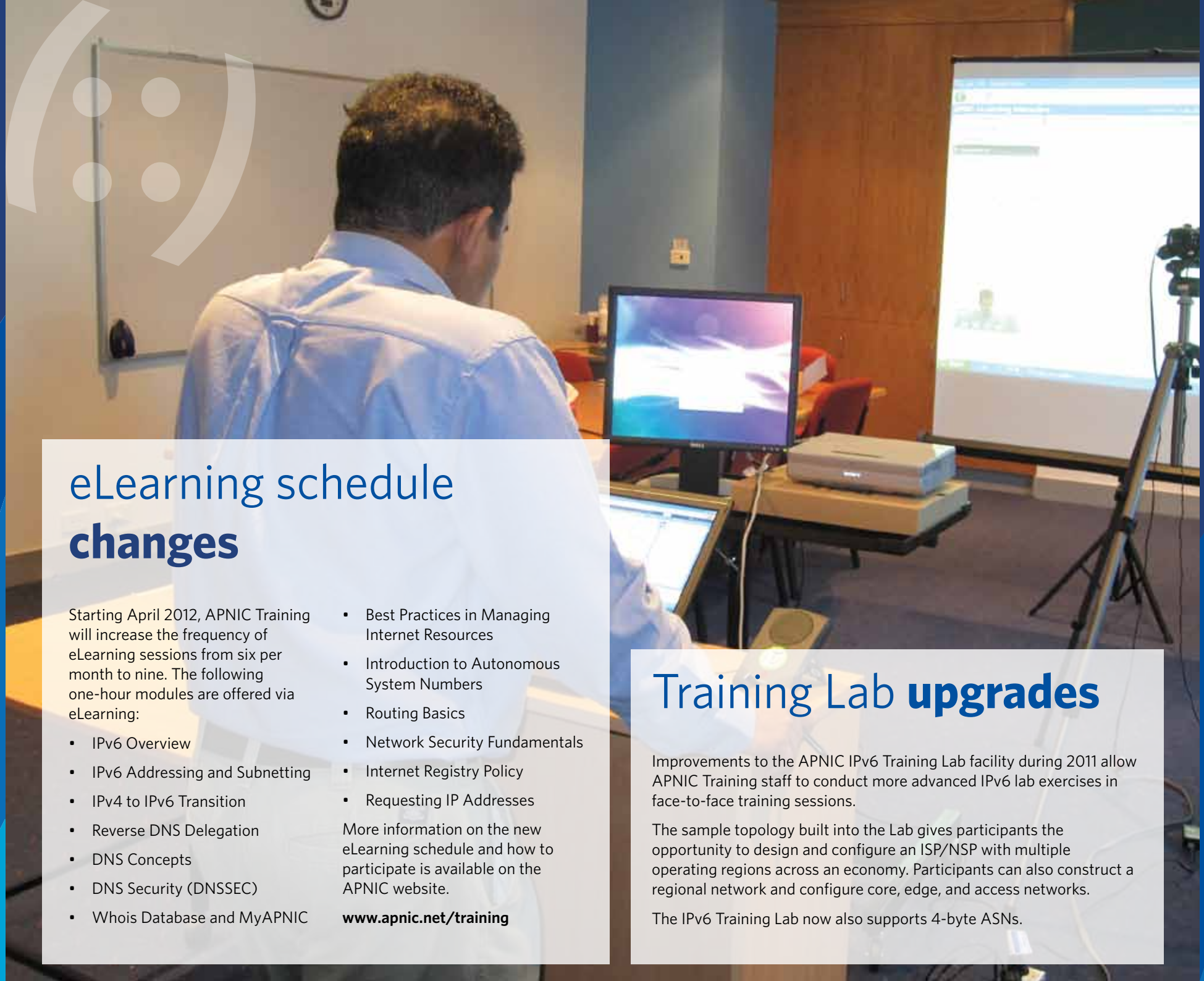
APNIC Connect will be rolled out in 2012. Stay tuned for more developments and how you can get involved.

APNIC External Relations: Productive **collaboration**

In 2012, APNIC will be actively building its External Relations Program in response to Member and Stakeholder feedback. As a result, there will be improved Representation, Coordination, and Outreach. This will focus on Internet governance and technical community outreach and improved remote participation.

From 2009 to 2011, APNIC was an active participant in more than 80 different regional and global forums addressing topics ranging from addressing to technical aspects of Internet development. The Representation Program will continue this active participation to ensure effective collaboration is achieved.





eLearning schedule **changes**

Starting April 2012, APNIC Training will increase the frequency of eLearning sessions from six per month to nine. The following one-hour modules are offered via eLearning:

- IPv6 Overview
- IPv6 Addressing and Subnetting
- IPv4 to IPv6 Transition
- Reverse DNS Delegation
- DNS Concepts
- DNS Security (DNSSEC)
- Whois Database and MyAPNIC
- Best Practices in Managing Internet Resources
- Introduction to Autonomous System Numbers
- Routing Basics
- Network Security Fundamentals
- Internet Registry Policy
- Requesting IP Addresses

More information on the new eLearning schedule and how to participate is available on the APNIC website.

www.apnic.net/training

Training Lab **upgrades**

Improvements to the APNIC IPv6 Training Lab facility during 2011 allow APNIC Training staff to conduct more advanced IPv6 lab exercises in face-to-face training sessions.

The sample topology built into the Lab gives participants the opportunity to design and configure an ISP/NSP with multiple operating regions across an economy. Participants can also construct a regional network and configure core, edge, and access networks.

The IPv6 Training Lab now also supports 4-byte ASNs.

New faces at APNIC in **2011**

Angelique Willow,
Travel Administrator

Ben O'Hara,
Senior Network Engineer

Blandine Cousin,
Events Manager

Boom Buchanan,
Internet Resource Analyst

Brenda Buwu,
Systems Administrator
(End User Support)

George Salisbury,
Systems Administrator
(Applications)

Laurel Koh,
Communications and
Events Officer

Nataliya Teremchuk,
Office and Facilities Manager

Philip Smith,
Learning and
Development Director

Sarah Hu,
Editor

Sheryl Hermoso,
Training Officer

Tian Xia,
Office and Communications
Administrator

Zen Chuan,
Internet Resource Analyst

Upcoming Training **events**

COURSE	START	END	LOCATION
eLearning: IPv6 Addressing and Subnetting	15-Feb-12	15-Feb-12	Pacific / Oceania
eLearning: Reverse DNS Procedures	15-Feb-12	15-Feb-12	South East Asia
eLearning: Internet Registry Policies	15-Feb-12	15-Feb-12	South Asia
Workshop: IPv4/IPv6 BGP Routing (APRICOT 2012)	21-Feb-12	25-Feb-12	New Delhi, India
Tutorial: IRM (APNIC 33)	27-Feb-12	27-Feb-12	New Delhi, India
Workshop: IPv6	27-Feb-12	28-Feb-12	Bandar Seri Begawan, Brunei Darussalam
Workshop: IPv6	27-Feb-12	28-Feb-12	Bangkok, Thailand
Tutorial: IRR (APNIC 33)	28-Feb-12	28-Feb-12	New Delhi, India
Tutorial: IRM + Policy	29-Feb-12	29-Feb-12	Bandar Seri Begawan, Brunei Darussalam
Remote Participation for APNIC 33	1-Mar-12	1-Mar-12	Hanoi, Vietnam
Remote Participation for APNIC 33	1-Mar-12	1-Mar-12	Bandar Seri Begawan, Brunei Darussalam
eLearning: Requesting IP Addresses	7-Mar-12	7-Mar-12	Pacific/ Oceania
eLearning: IPv6 Overview	7-Mar-12	7-Mar-12	South East Asia
eLearning: IPv4 to IPv6 Transition	7-Mar-12	7-Mar-12	South Asia
eLearning: DNS Concepts	21-Mar-12	21-Mar-12	Pacific/ Oceania

Apster33

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