

APNIC Update

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AusNOG 2012 06-09-2012

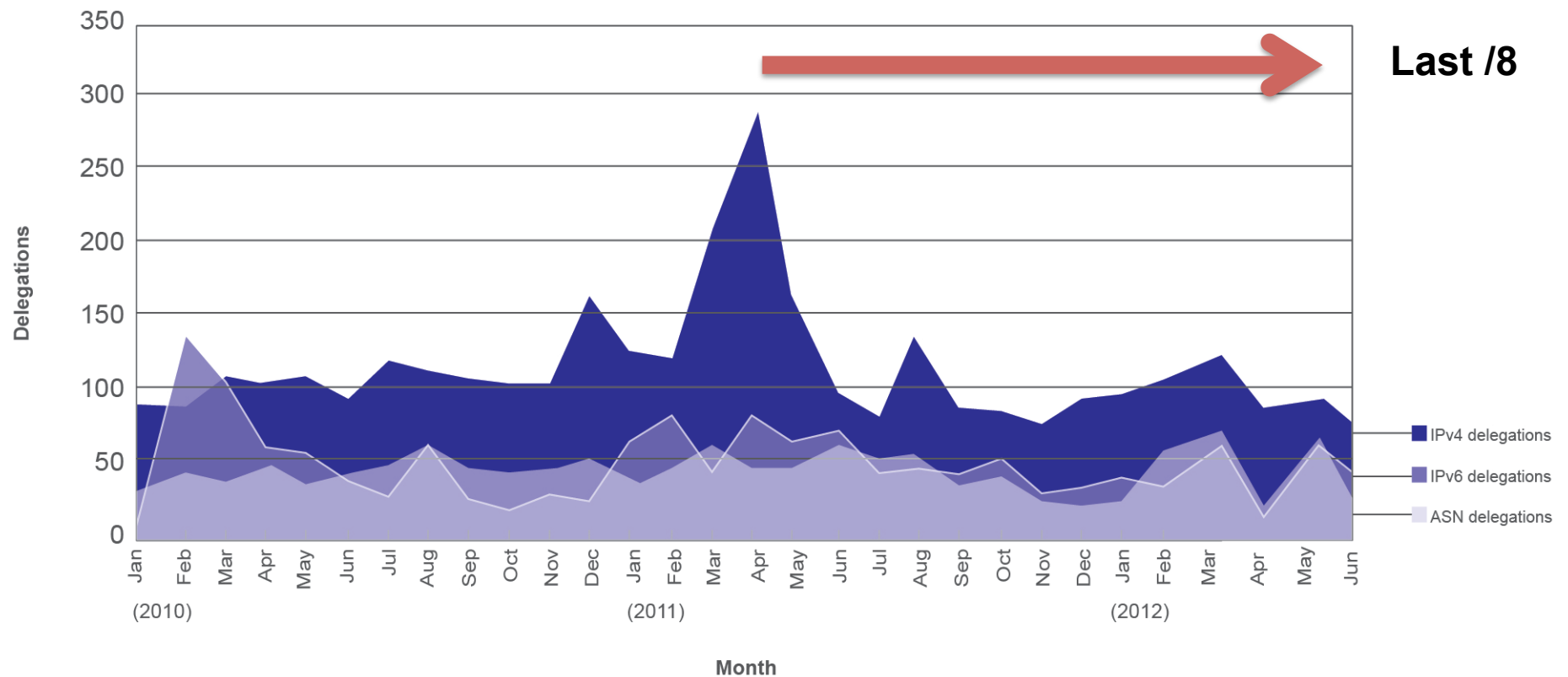
APNIC



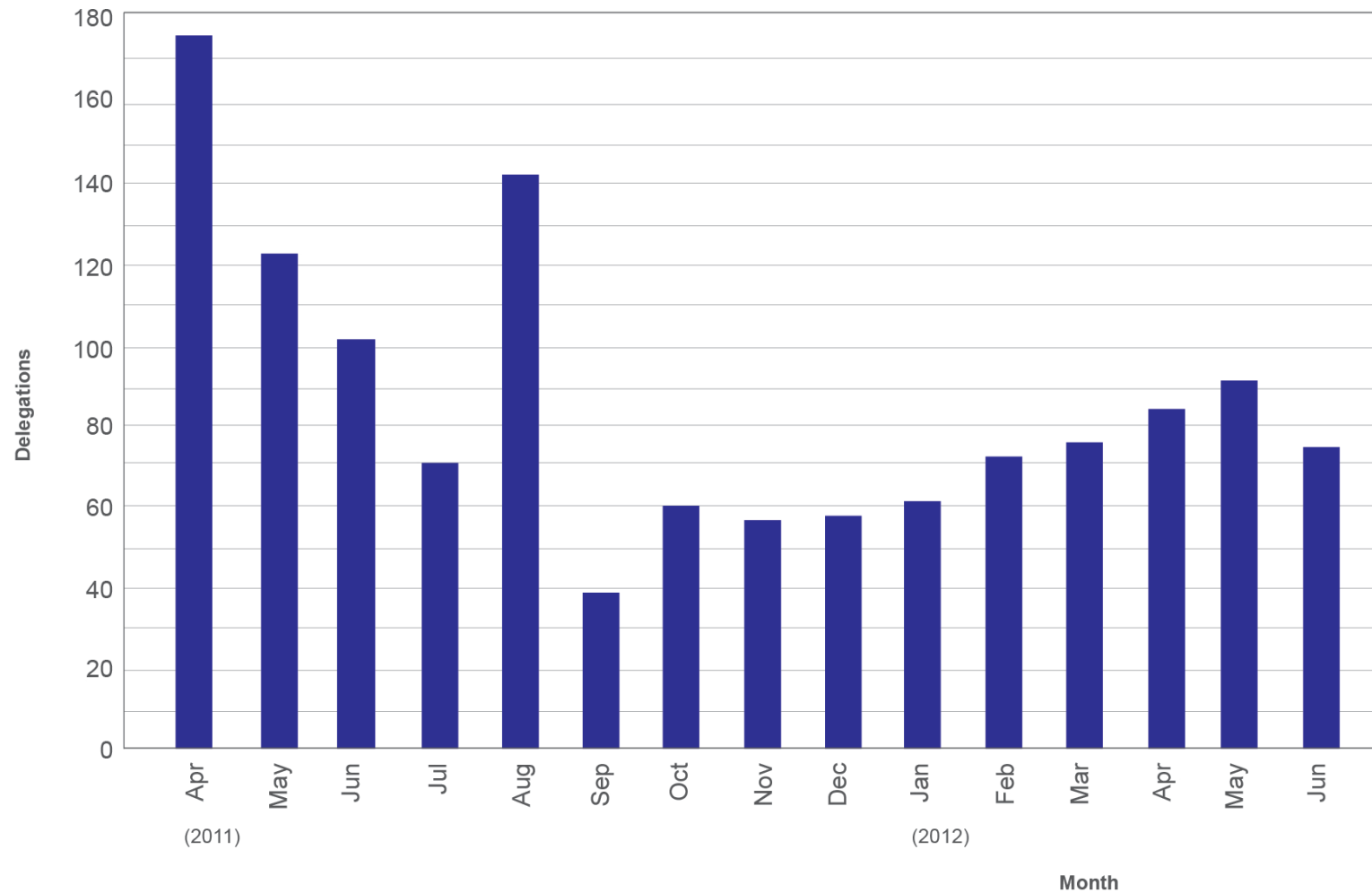
IPv4 Exhaustion

- APNIC reached its final /8 IPv4 block on 15 April 2011
- Now delegating from the final /8 (103/8)
 - Maximum of a /22 per account holder
- IPv4 transfers
 - Pre-approvals
 - Implementation of prop-096
 - Recipient of transferred resources may apply for preapproval by demonstrating need before finding a source
- APNIC secretariat contacted by a few IPv4 brokers
 - Maintains neutrality and ensuring policy compliance
 - Considers pre-approvals and qualified broker listing service

Resource Delegations



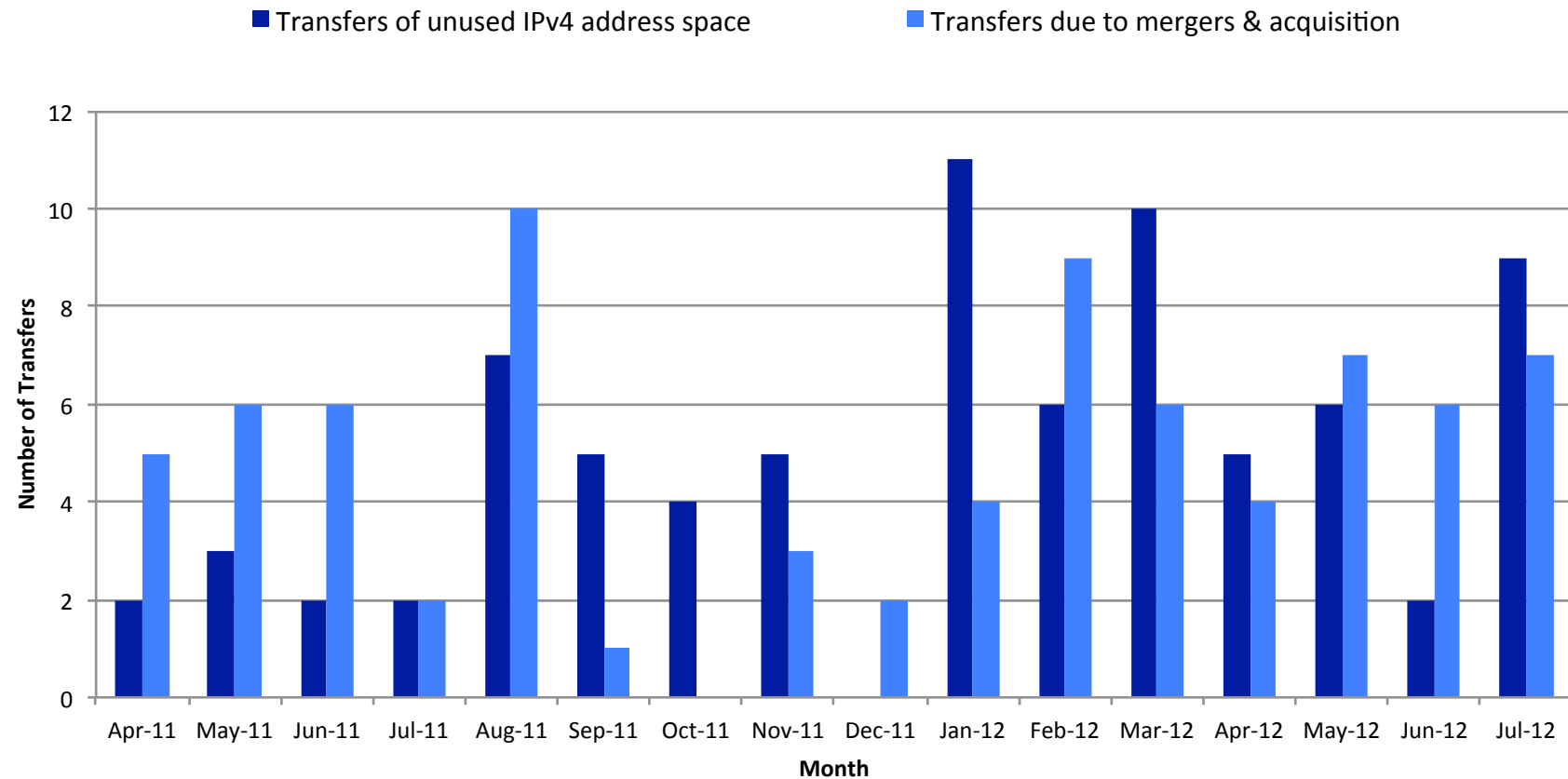
Final /8 Delegations



IPv4 Transfers

- Demonstrated need now required
 - prop-096 implemented November 2011
 - Except routine M&A transfers
- Pre-approval requests
 - Can be sought prior to transfer
 - Request process identical to traditional IPv4 address request
 - Pre-approval when granted is valid for 1 year
- Broker contract/agreement
 - Requires commitment to APNIC policies in all transactions
 - Contracted brokers will be listed and “recognised”
- Inter-regional transfers
 - prop-095 implemented August 2011
 - Requires counterpart RIR with compatible policy (only ARIN as of 31 July 2012)

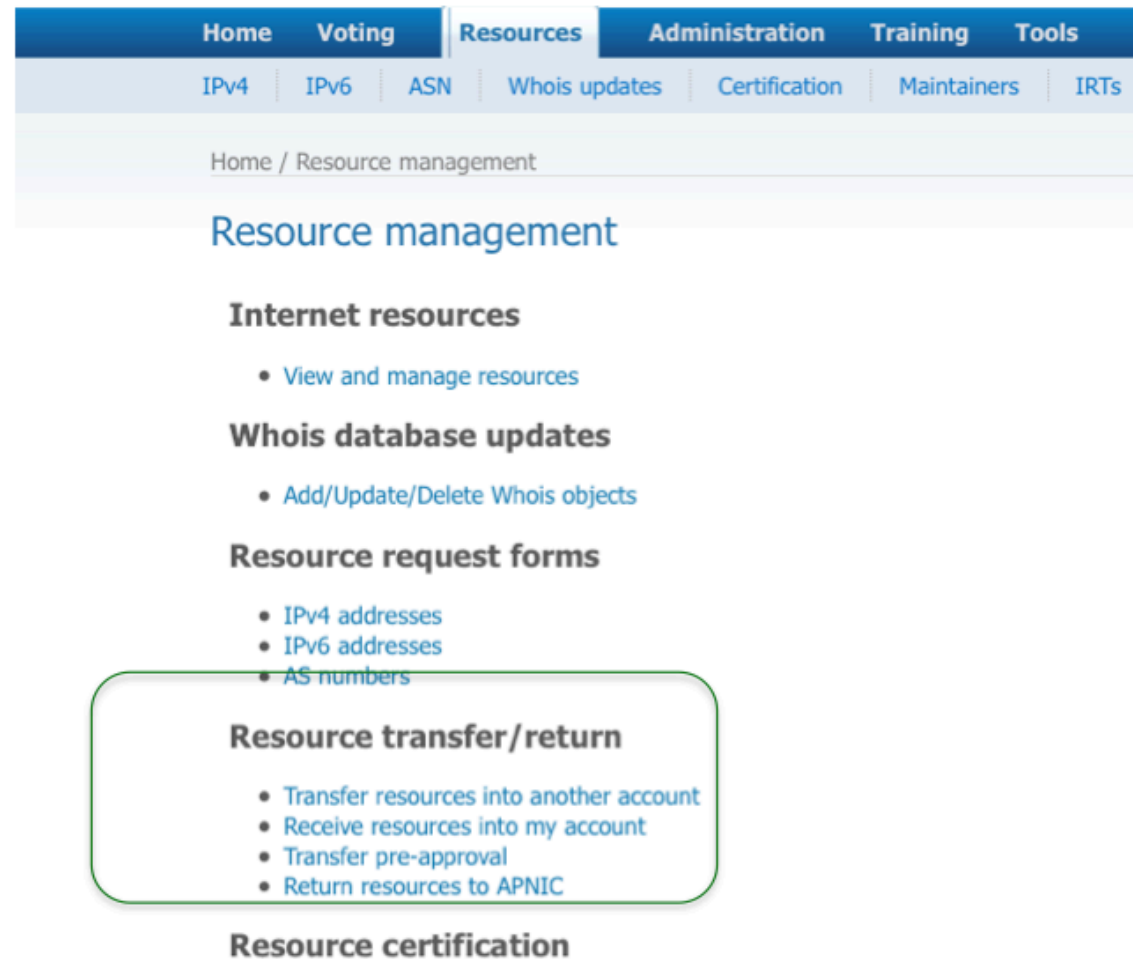
IPv4 Transfers



Inter-RIR Transfer Summary

- Submit pre-approval request via MyAPNIC for evaluation
- Consider using APNIC IPv4 Transfer Listing Service after receipt of approval
 - <http://www.apnic.net/pre-approval-listing>
- Locate and reach agreement with source of IPv4 addresses outside of AP region
- Source initiates IPv4 transfer via respective RIR
 - Additional info: <http://www.apnic.net/transfer>

Supporting IPv4 Transfers



The screenshot shows the APNIC website's 'Resource management' section. The navigation bar at the top includes 'Home', 'Voting', 'Resources' (which is active), 'Administration', 'Training', and 'Tools'. Below this, a secondary bar lists 'IPv4', 'IPv6', 'ASN', 'Whois updates', 'Certification', 'Maintainers', and 'IRTs'. The breadcrumb trail indicates the path 'Home / Resource management'. The main heading is 'Resource management'. Underneath, there are several sections: 'Internet resources' with a link to 'View and manage resources'; 'Whois database updates' with a link to 'Add/Update/Delete Whois objects'; 'Resource request forms' with links to 'IPv4 addresses', 'IPv6 addresses', and 'AS numbers'; 'Resource transfer/return' (highlighted with a green border) with links to 'Transfer resources into another account', 'Receive resources into my account', 'Transfer pre-approval', and 'Return resources to APNIC'; and finally 'Resource certification'.

Home Voting Resources Administration Training Tools

IPv4 IPv6 ASN Whois updates Certification Maintainers IRTs

Home / Resource management

Resource management

Internet resources

- [View and manage resources](#)

Whois database updates

- [Add/Update/Delete Whois objects](#)

Resource request forms

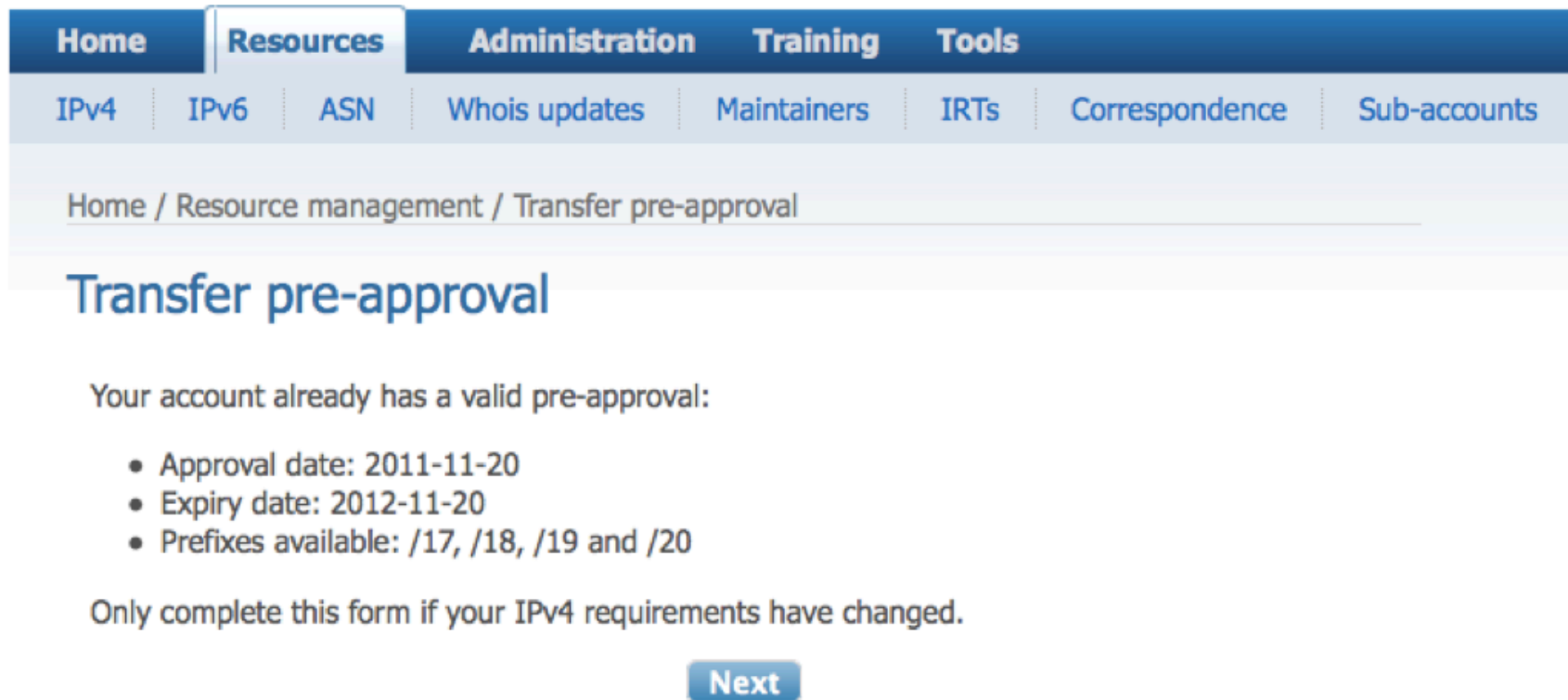
- [IPv4 addresses](#)
- [IPv6 addresses](#)
- [AS numbers](#)

Resource transfer/return

- [Transfer resources into another account](#)
- [Receive resources into my account](#)
- [Transfer pre-approval](#)
- [Return resources to APNIC](#)

Resource certification

IPv4 Pre-approval



The screenshot shows the APNIC website's IPv4 Pre-approval page. The navigation bar at the top includes 'Home', 'Resources' (which is active), 'Administration', 'Training', and 'Tools'. Below this, a secondary bar lists 'IPv4', 'IPv6', 'ASN', 'Whois updates', 'Maintainers', 'IRTs', 'Correspondence', and 'Sub-accounts'. The breadcrumb trail reads 'Home / Resource management / Transfer pre-approval'. The main heading is 'Transfer pre-approval'. The content states that the account already has a valid pre-approval with the following details:

- Approval date: 2011-11-20
- Expiry date: 2012-11-20
- Prefixes available: /17, /18, /19 and /20

It then instructs the user to 'Only complete this form if your IPv4 requirements have changed.' and provides a 'Next' button.

Policies at APNIC 34

- Consensus - Returned to Policy SIG mailing list for final comments
 - Prop-104: Clarifying demonstrated needs requirement in IPv4 transfer policy
 - Prop-101: Removing multihoming requirement for IPv6 portable assignments

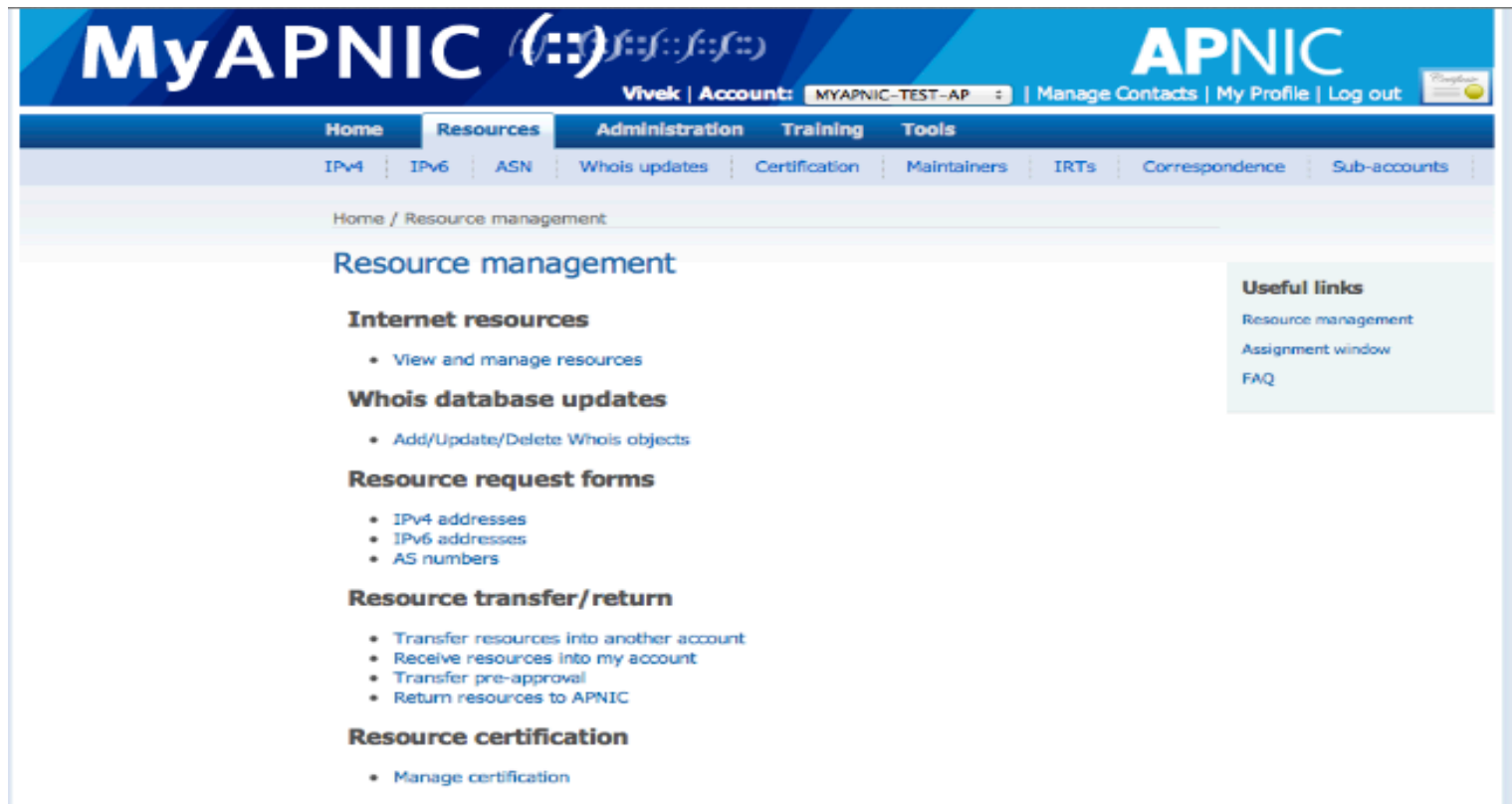
DNSSEC

- 3 May 2011, DS records submitted to IANA
 - Allows validation to occur from root down to APNIC's reverse zones
- Users can update reverse DNS DS record through MyAPNIC
 - Single zone via whois domain objects
 - Multiple zones via zone file upload
- Operational statistics
 - 49 in-addr.arpa zones signed with DS record in IANA
 - 164 DS records registered in 49 zones
 - 82 child reverse zones registered in APNIC with DS record
 - 12 ip6.arpa zones signed with DS record in IANA
 - 11 child reverse zones registered (in APNIC) with DS record

RPKI Current Status

- In service since 2009
- Self-signed TA over all APNIC holdings
 - Offline HSM
- APNIC-RPKI
 - Online HSM
 - Talks Up-Down to APNIC-MEMBERS
- APNIC-MEMBERS
 - Hosted RPKI engine, talks up-down to APNIC-RPKI
 - Visible via MyAPNIC (portal) including ROA management

Supporting RPKI

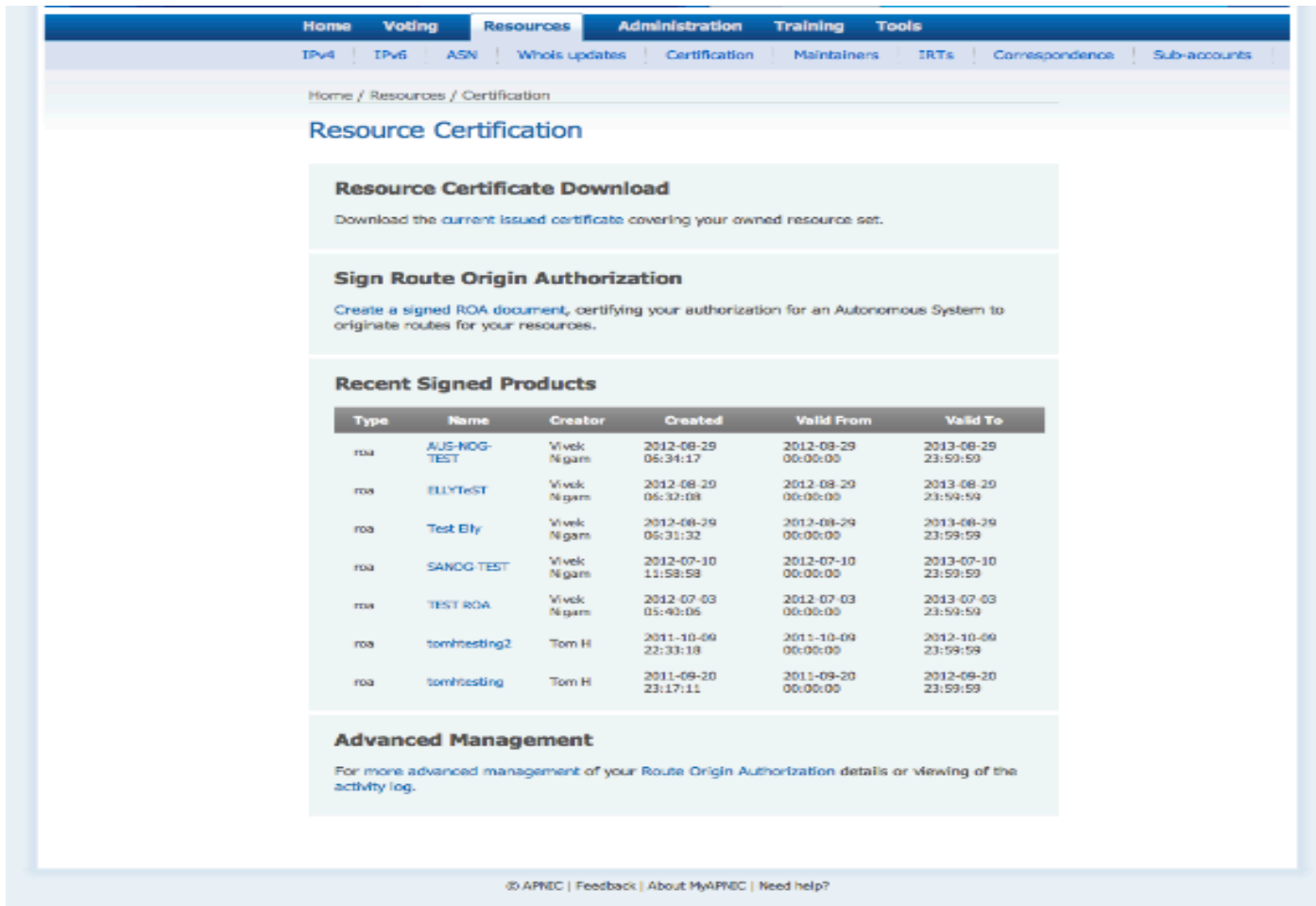


The screenshot displays the MyAPNIC website interface. At the top, the header includes the MyAPNIC logo, the APNIC logo, and a user account section showing 'Vivek | Account: MYAPNIC-TEST-AP' with links for 'Manage Contacts', 'My Profile', and 'Log out'. Below the header is a navigation bar with tabs for 'Home', 'Resources', 'Administration', 'Training', and 'Tools'. Under the 'Resources' tab, there are links for 'IPv4', 'IPv6', 'ASN', 'Whois updates', 'Certification', 'Maintainers', 'IRTs', 'Correspondence', and 'Sub-accounts'. The main content area is titled 'Resource management' and lists several categories of resources:

- Internet resources**
 - View and manage resources
- Whois database updates**
 - Add/Update/Delete Whois objects
- Resource request forms**
 - IPv4 addresses
 - IPv6 addresses
 - AS numbers
- Resource transfer/return**
 - Transfer resources into another account
 - Receive resources into my account
 - Transfer pre-approval
 - Return resources to APNIC
- Resource certification**
 - Manage certification

On the right side of the page, there is a 'Useful links' section with links to 'Resource management', 'Assignment window', and 'FAQ'.

ROA Creation



The screenshot shows the APNIC Resource Certification page. The navigation bar includes links for Home, Voting, Resources, Administration, Training, and Tools. The Resources section is active, showing links for IPv4, IPv6, ASN, Whois updates, Certification, Maintainers, IRTs, Correspondence, and Sub-accounts. The breadcrumb trail is Home / Resources / Certification. The main content area is titled 'Resource Certification' and contains three sections: 'Resource Certificate Download' with a link to download the current issued certificate, 'Sign Route Origin Authorization' with a link to create a signed ROA document, and 'Recent Signed Products' which displays a table of recent ROA entries. The table has columns for Type, Name, Creator, Created, Valid From, and Valid To. Below the table is an 'Advanced Management' section with a link to view activity logs. The footer includes links for APNIC, Feedback, About MyAPNIC, and Need help?

Home / Resources / Certification

Resource Certification

Resource Certificate Download

Download the [current issued certificate](#) covering your owned resource set.

Sign Route Origin Authorization

Create a [signed ROA document](#), certifying your authorization for an Autonomous System to originate routes for your resources.

Recent Signed Products

Type	Name	Creator	Created	Valid From	Valid To
roa	AUS-NOG-TEST	Vivek Nigam	2012-08-29 06:34:17	2012-08-29 00:00:00	2013-08-29 23:59:59
roa	ELLYTeST	Vivek Nigam	2012-08-29 06:30:08	2012-08-29 00:00:00	2013-08-29 23:59:59
roa	Test Ely	Vivek Nigam	2012-08-29 06:31:32	2012-08-29 00:00:00	2013-08-29 23:59:59
roa	SANOG-TEST	Vivek Nigam	2012-07-10 11:58:58	2012-07-10 00:00:00	2013-07-10 23:59:59
roa	TEST ROA	Vivek Nigam	2012-07-03 05:40:06	2012-07-03 00:00:00	2013-07-03 23:59:59
roa	tomtesting2	Tom H	2011-10-09 22:33:18	2011-10-09 00:00:00	2012-10-09 23:59:59
roa	tomtesting	Tom H	2011-09-20 23:17:11	2011-09-20 00:00:00	2012-09-20 23:59:59

Advanced Management

For more advanced management of your Route Origin Authorization details or viewing of the activity log.

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ROA Record

The screenshot shows the APNIC web interface for a Signed Product Details page. At the top is a navigation bar with links: IPv4, IPv6, ASN, Whois updates, Certification, Maintainers, IRTs, Correspondence, and Sub-accounts. Below this is a breadcrumb trail: Home / Resources / Certification / Signed Product Details. The main heading is "Signed Product Details". A light blue box contains the text: "This ROA authorizes the routing of the following IP address resources through the Autonomous System, **131211**:". Below this, the record type is "IPV6" and the address is "2001:DF0:90::/48". A table of metadata follows: Name: AUS-NOG-TEST, Creator: Vivek Nigam, Created: 2012-08-29 06:34:17, Valid From: 2012-08-29 00:00:00, and Valid To: 2013-08-29 23:59:59. At the bottom of the box are two buttons: "Download" and "Delete This Object". The footer of the page contains the text: © APNIC | Feedback | About MyAPNIC | Need help?

IPv4 | IPv6 | ASN | Whois updates | Certification | Maintainers | IRTs | Correspondence | Sub-accounts

Home / Resources / Certification / Signed Product Details

Signed Product Details

This ROA authorizes the routing of the following IP address resources through the Autonomous System, **131211**:

IPV6

2001:DF0:90::/48

Name:	AUS-NOG-TEST
Creator:	Vivek Nigam
Created:	2012-08-29 06:34:17
Valid From:	2012-08-29 00:00:00
Valid To:	2013-08-29 23:59:59

[Download](#)

[Delete This Object](#)

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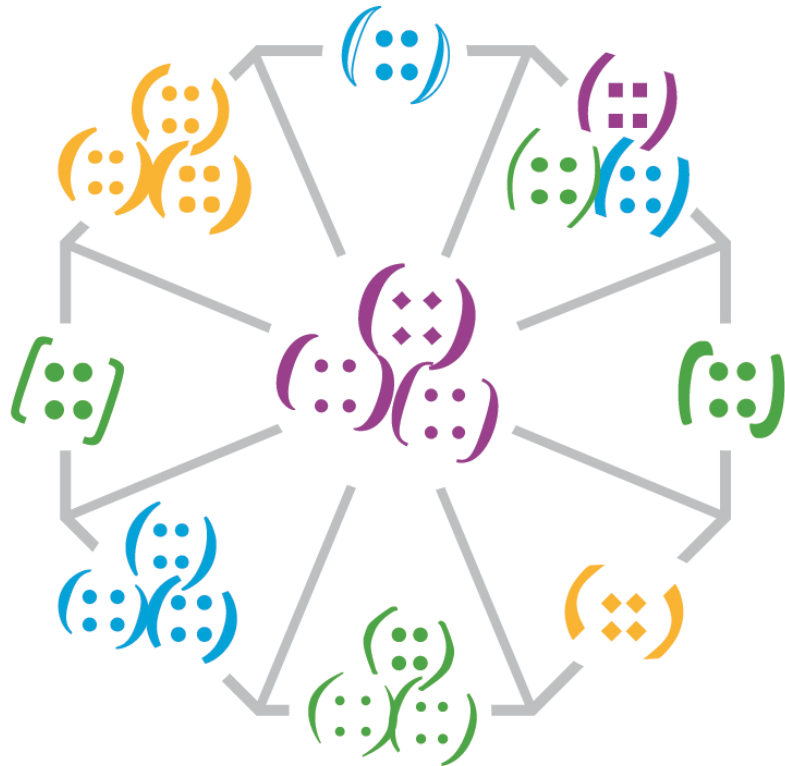
RPKI 2012 Deliverables

- Split TA, preparation for ICANN TA over-sign
- MaxLength changes for ROA management
- NIR, member integration
- General Signer in MyAPNIC portal

APNIC Survey 2012

- Seventh survey conducted
 - Members and other stakeholders
 - Conducted independently
 - Guaranteed confidentiality
- 1,333 valid responses
 - Increase of 67.9% from 2010
- 55 economies
- Survey report available at:
 - <http://www.apnic.net/survey>

APNIC CONNECT



- Network Information Centre
- Sharing ideas
- Reporting from events
- APNIC Representatives
- Join our community!

Coming Up...



- APNIC 35, Singapore
 - 19 February – 1 March 2013 (with APRICOT 2013)
 - All Invited!!!

Thanks

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APNIC

