Internet Resource Policy
- Why should I care?

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NZNOG 2005

Asia Pacific Network Information Centre

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Quick survey

- How many of you are involved with Internet address policy?

- How many get excited when you hear the word "policy"?

- How many get annoyed when "idiotic" policy is implemented that makes life more difficult for you?
  - And how many of you write mails to NOG mailing lists to complain about this?

What is APNIC?

- Regional Internet Registry (RIR)
  for the Asia Pacific Region
  - Regional authority for Internet Resource distribution
  - IP addresses (IPv4 and IPv6), AS numbers, in-addr.arpa delegation

- Membership-based organisation
  - Established 1993
  - Non-profit, neutral and impartial

  <u>Not</u> operations forum
  <u>Not</u> standards development

Why do we have RIRs?

- Lessons from the past
  - Growing routing table
  - Wastage of addresses
  - No proper registration system
  - No scalable resource distribution system

- 'Addressing' the problems
  - Creation of RIRs
  - CIDR & Classless addressing
  - Whois database

- RIR goals
  - Aggregation, Conservation & Registration

APNIC's role

- Core activities: Primary responsibilities
  - Critical Internet administrative services
  - Resource allocation
  - Resource registration and reverse DNS
  - Facilitation of policy development

- Additional activities
  - Training, outreach and seminars
  - Publications, APster, annual report, articles
  - Infrastructure development: IRR, root-servers
  - R&D, statistics, etc
  - Services to community through collaboration

Why should I care about APNIC?

- Core activities
  - You may need to request resources from APNIC
  - You may need to use the APNIC whois database
  - New policies are implemented or are changed
    - Driven by community in response to changing technical environment

- Additional activities
  - Facilitating route server deployment
  - Research & white papers
    - Internet society articles, BGP stats
  - Collaboration & partnerships
    - Training and outreach eg. NZNOG ☺
    - MoUs with ISP associations

The Internet has changed

- Internet evolved in a world without predators.
  - DOS was viewed as illogical and undamaging.

- The environment today is hostile.
  - It takes very little to do a lot of damage.

- Mutually distrustful organisations and people are connected
  - No central management

- Internet part of society's infrastructure today

Issues in today's Internet

- Spam

- Network abuse

- Hijacking

- Network security

Does APNIC play a role in this?

- Data integrity & security in whois
  - Accurate, up-to-date & secure data
    - Necessary for troubleshooting
    - If the whois database contains jibberish, it becomes useless

- Authentication of resource custodianship
  - Need for secure manner to validate authorisation

So what has APNIC done?

- Improving data integrity in whois
  - Clean up of un-referenced objects
  - Removal of objects unrelated to actual resource info *(mar-03)*
  - Removal of resource info not in APNIC range *(mar-03)*
  - Modify records that are not RPSL compliant *(mar-03)*
  - Reduce amount of inaccurate / out of date records

- Improving security of whois
  - Protection of un-maintained objects *(sep-02)*
  - Deprecation of 'NONE' and 'MAIL-FROM' *(sep-02)*
  - Secure authentication methods (PGP, MD5)
  - Stop unauthorised changes of records

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So what has APNIC done?

- Authentication of resource custodianship
  - Establish direct relationship with resource holders
    - Multihoming assignment policy
    - ASN customer policy
    - Historical transfer policies
  - Secure management system through MyAPNIC using X.509 certificates

- Future measures
  - Issuing resource certificates
    - Providing infrastructure for routing security

Recent policy changes

- Data integrity
  - Protecting resource records in whois
  - Protecting historical records in whois
  - Privacy of customer assignment records
  - Recovery of unused address space
    - (To be implemented Q1 2005)
  - Lame Delegation cleanup

| prop-010-v001 |
| prop-018-v001 |
| prop-007-v001x |
| prop-017-v001 |
| prop-004-v001 |

- Address management
  - Lowering the IPv4 minimum allocation size & criteria
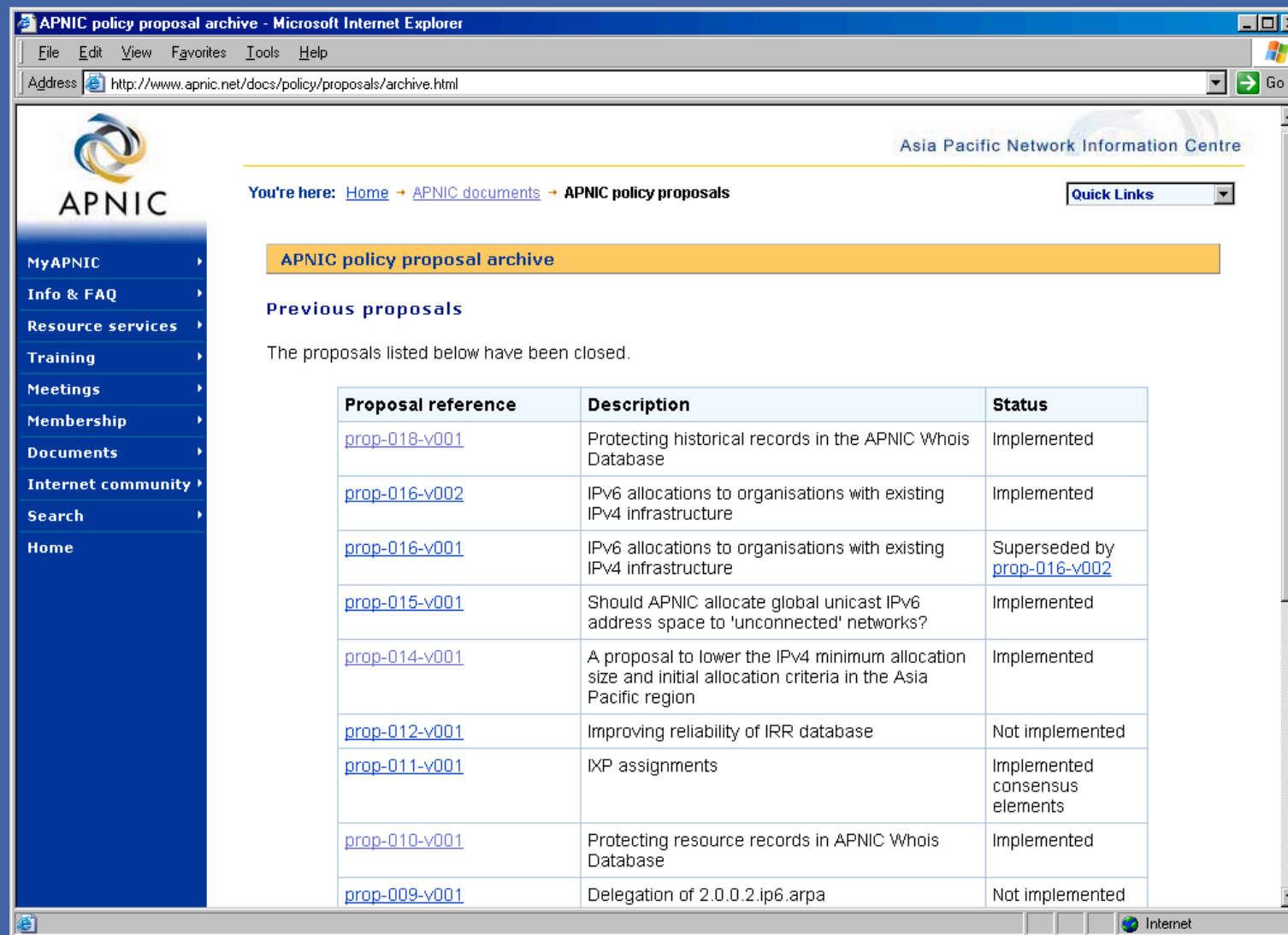 - IPv6 allocations to organisations with existing IPv4 infrastructure

| prop-014-v001 |
| prop-016-v002 |

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Policy development

- Policy is not static
    - The Internet changes and evolves
    - Policy responds to these changes!

- It is those who need and use the Internet resources who determine the policies
    - Hey, that's You! ☺
    - (Not the APNIC secretariat)

Policy proposal archive

APNIC policy proposal archive - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Address http://www.apnic.net/docs/policy/proposals/archive.html   Go

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APNIC policy proposal archive

Previous proposals

The proposals listed below have been closed.

Proposal reference	Description	Status
prop-018-v001	Protecting historical records in the APNIC Whois Database	Implemented
prop-016-v002	IPv6 allocations to organisations with existing IPv4 infrastructure	Implemented
prop-016-v001	IPv6 allocations to organisations with existing IPv4 infrastructure	Superseded by prop-016-v002
prop-015-v001	Should APNIC allocate global unicast IPv6 address space to 'unconnected' networks?	Implemented
prop-014-v001	A proposal to lower the IPv4 minimum allocation size and initial allocation criteria in the Asia Pacific region	Implemented
prop-012-v001	Improving reliability of IRR database	Not implemented
prop-011-v001	IXP assignments	Implemented consensus elements
prop-010-v001	Protecting resource records in APNIC Whois Database	Implemented
prop-009-v001	Delegation of 2.0.0.2.ip6.arpa	Not implemented

Internet

http://www.apnic.net/docs/policy/proposals/archive.html

The policy development process

Need Discuss Consensus Implement

Proposal (4 w before meeting) • ML discussion • Meeting discussion • Consensus • Report to AMM • Consensus • Comment period (8 weeks) • Consensus • EC endorsement • Implementation (3 months)

You can participate!

More information about policy development can be found at:

http://www.apnic.net/docs/policy/dev

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Join the APNIC mailing lists

- Announcements   **apnic-announce**
- Policy discussions   **sig-policy**
- Whois database   **sig-db**

- Subscribe to the lists!
  - Important to stay in touch
  - All fairly low-traffic

- How to
  - Online: http://www.apnic.net/community/lists/
  - Email: <list name>-request@lists.apnic.net, 'subscribe' in message body
    - eg. To: apnic-talk-request@lists.apnic.net subscribe

APNIC Open Policy Meeting
21 – 25 February 2005   Kyoto – Japan   APNIC

Next meeting in conjunction with

APRICOT 2005
Kyoto, Japan 16-25 February

- Participate in policy development
- Attend workshops, tutorials & presentations
- Exchange knowledge and information with peers
- Stay abreast with developments in the Internet
- View multicast online
- Provide your input in matters important to you

http://www.apnic.net/meetings/

APNIC 19 Meeting – some highlights

- Routing security tutorial
  - By Russ Housley (full day)
    - Tuesday 22 Feb

- APOPS (chair: Philip Smith)
  - Operators forum - good, operational content
    - Tuesday 22 Feb

- Routing SIG (chair: Philip Smith)
  - "S-BGP overview" (Stephen Kent)
    - Wednesday 23 Feb

- DNS SIG (chair: Joe Abley)
  - Always *the most* interesting SIG!
    - (I'm not just saying that because Joe Abley is here…)
      » *Psst Joe… I think you owe me a beer*
    - Thursday 24 Feb

Easy to participate remotely

- Jabber chat, live transcripts, webcast

http://www.apnic.net/meetings/19/
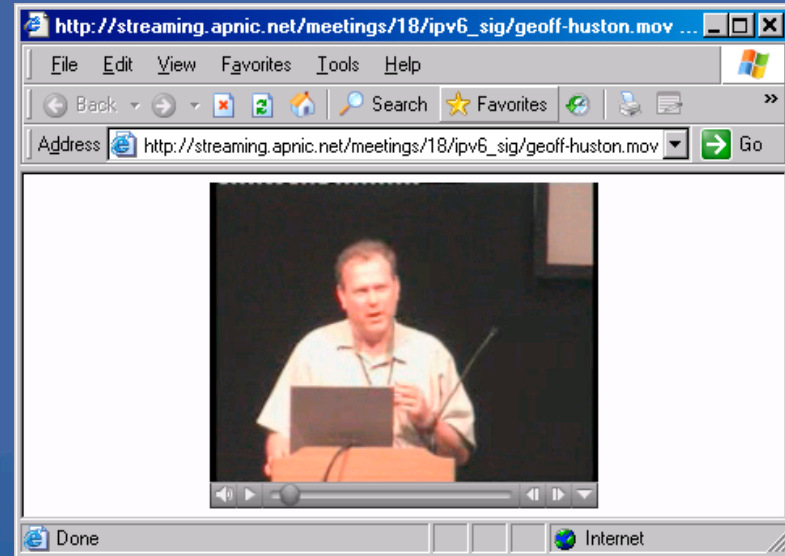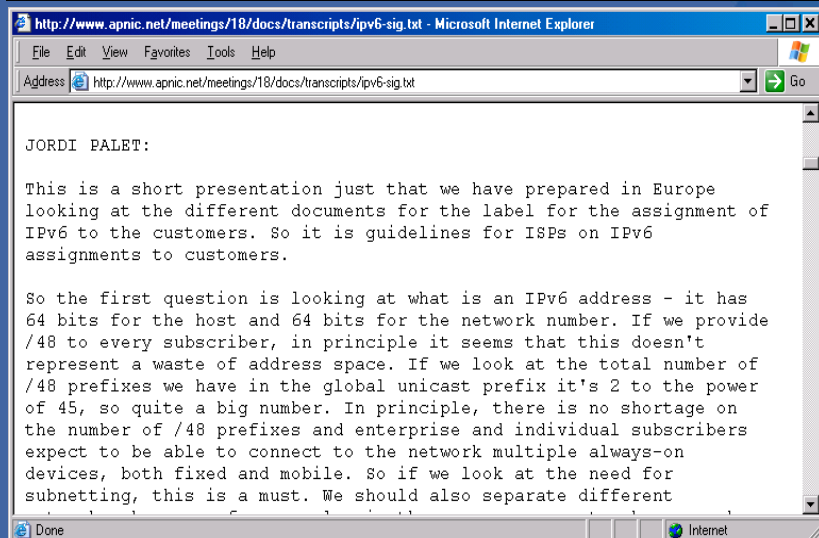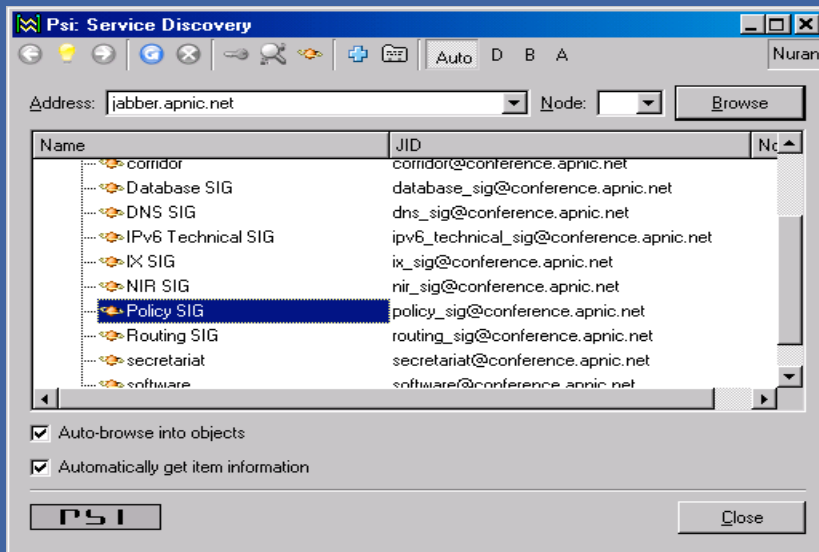
Important to get your input

- Get involved
- Subscribe to mailing lists
- Participate in meetings!
  - You don't have to be present to participate
    - Remote participation possible
  - You don't have to be a member
    - Anyone can propose and discuss policy
  - It's easy to participate!
- *You are affected by Internet resource policy*

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Thank You

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Useful references

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Current policy proposals

Proposal ref	Description
prop-003-v002	Policy for mirroring on IRR
prop-005-v004	IANA policy for allocation of IPv6 blocks to RIRs
prop-008-v001	IANA IPv4 resource request procedures
prop-017-v001	Recovery of unused address space
prop-019-v001	A proposal for whois database query
prop-020-v001	Application of the HD ratio to IPv4
prop-021-v001	Expansion of the initial allocation space for existing IPv6 address space holders
prop-022-v001	Abolishing redundant charges in IPv6 allocations
prop-024-v001	Changing NIR fee structure
prop-025-v001	Proposal on IPv6 IRR service at APNIC

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

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Protecting historical records in the Whois DB
(prop-018-v001)

- Motivation
  - Unprotected db records increasingly becoming source of abusive activities in the Internet
- Proposal summary
  - Protect all historical IP & AS records with APNIC-HM maintainer
  - Existing custodian who wants to maintain their records to sign a formal agreement with APNIC
    - Annual fee USD 100 per account
  - Note
    - Existing custodians <u>can still use the resource</u>, but will not be able to change the record
- Status
  - Approved by consensus at APNIC 17
  - Implemented 14 December 2004

    http://www.apnic.net/docs/policy/proposals/prop-018-v001.html

Privacy of customer assignment records
(prop-007-v001)

- Motivation
  - Privacy issues with publishing customer data
  - Customer data poorly maintained
- Proposal summary
  - Remove requirement for public registration of assignments by members/ISPs
  - Public registration still be optional
  - Own assignment info still available through MyAPNIC
- Note
  - APNIC allocations continue to be publicly registered
- Approved by consensus at APNIC 16
  - Implemented 30 September 2004

http://www.apnic.net/docs/policy/proposals/prop-007-v001.html

Lowering the IPv4 minimum allocation size & criteria (prop-014-v001)

- Motivation
  - Feedback from community of difficulties obtaining address space
  - Barriers too high
- Proposal summary
  - Lower minimum allocation
    - /21 initial allocation
  - Lower eligibility criteria
    - Have used a /23 from upstream provider or demonstrate an immediate need for a /23; and
    - Demonstrate a detailed plan for use of a /22 within a year
- Status
  - Approved by consensus at APNIC 17
  - Implemented 16 August 2004

http://www.apnic.net/docs/policy/proposals/prop-014-v001.html

Recovery of unused address space
(prop-017-v001)

- Motivation

  - Approx 36% of all allocated address space is not advertised

- Proposal summary

  - To recover address space which is unused

- Status

  - Approved by consensus at APNIC 17

  - To be implemented 1st quarter 2005

http://www.apnic.net/docs/policy/proposals/prop-017-v001.html

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