Issues

3rd APNIC Meeting

Singapore, Jan '96

Overview

- XXNIC.NET
- Registration Database Issues
- Provider Allocation Issues

XXNIC.NET

- APNIC reserved region ISO 3166 “national NIC” domain names
  - Have a common naming convention for the region’s national NICs
- Currently 54 names have been reserved
  - 5 have been delegated
    - JPNIC, KRNIC, AUNIC, MYNIC, TWNIC

Problems

- InterNIC is charging for the domain names
  - » 49 * US $50.00 = US $ 2450.00
    - – (plus APNIC.NET and wire transfer fees, etc).
- IANA has delegated creation of national NIC names to APNIC
  - » But the criteria are somewhat vague

Registration Database Issues

- Database Format
- Database Objects
- Object TTLs
- Hierarchical Delegation
- Database Updates

Database Format

- APNIC uses the RIPE Database software
  - » Database is a flat ASCII file
  - » Tag: Value pairs compose fields of records
  - » All fields up to a blank line define a record
- RIPE Software allows e-mail add/modify/delete requests
- RIPE Software is actively supported and in use globally

Problems

- InterNIC uses a different format
  - » Cannot transfer records between InterNIC and APNIC easily
- "Tag: value" pairs not standardized
- Semantics of tags not defined
- Syntax and symantics of values not defined

Database Objects

- APNIC currently maintains:
  - » inetnum (network) objects
  - » person (contact) objects
  - » aut-num (AS number) objects
  - » mntner (maintainer) objects
- APNIC accepts:
  - » domain (DNS) objects

Questions on Objects

- Should APNIC accept other objects?
  - » In particular, should APNIC run a routing registry?
  - » Should we require domain objects for in-addrs?
- Should APNIC create new objects?
- Should APNIC modify the fields of existing objects?

Object TTLs

- APNIC recently emailed people on the contact information in the APNIC database
- Results:
  - » 635 messages sent out to value of e-mail: field of record
  - » ~300 messages simply bounced
  - » ~200 records require updating
  - » ~25 records no longer apply

Proposal

- APNIC adds a field to all records
  - » Time To Live (ttl:)
- TTL will be a long period
  - » e.g., 2 years
- After the TTL expires, the record will be deleted from the database
  - » After suitable notification, of course

Implications

- Expensive
  - » If email doesn't work, then have to go fax, postal mail or telephone route
  - » Very labor intensive
- Deletion of records may come as a surprise to people in the future.
  - » Must be well publicized

Hierarchical Delegation

- APNIC should be able to delegate control of database updates to confederations of ISPs (e.g., “national NICs”)
- APNIC has had bad experiences with InterNIC’s rwhois in the past
  - » I still feel it is not production quality
- Updating the APNIC database would appear to be somewhat problematic

Proposal

- APNIC applies resources to the implementation of a delegatable whois service
  - » either making rwhois production quality or taking another approach
- Goal is to be able to delegate authority by the next APNIC meeting

Database Updates

- InterNIC database is the most often queried for whois information
  - » APNIC does not currently update the InterNIC database
  - » InterNIC refuses to transfer ownership of objects from one organization to another directly
    - – Objects must be returned for re-delegation

Problem & Proposal

- Problem: InterNIC uses its own update and database software
  - » SWIP is used to update the database
  - » SWIP tag/values do not correspond well to RIPE database format tag/values.
- Proposal: APNIC applies resources to write a translator from RIPE format to SWIP format

Provider Allocation Issues

- Existing address space
- Very large initial requests
- Non-announced provider requests
- Provider filtering issues

Existing Address Space

- Some (generally large) organizations have large amounts of historically allocated address space
- According to new policies, APNIC cannot allocate address space to these organizations unless all previously allocated space is 75%-80% consumed.
  - » Even if that address space is not in the AP region

Very Large Initial Requests

- APNIC uses the “Slow Start” procedure to regulate the amount of address space initially allocated
- Some ISPs wish to deploy very large networks in very short amounts of time
  - » Using “SlowStart” will result in a larger number of **internal** routing entries

VLIR (cont'd)

- APNIC currently allows for the allocation of space with some room for topological growth
  - » e.g., allocating a /22 for each POP
- These requests are exceptional and require additional justification (and significantly more work)
- Should APNIC charge more for this?

Non-Announced Provider Requests

- In some cases, a provider may be allocated space but may be unable to make use of that address space
  - » E.g., regulatory issues, bankruptcy, etc.
- Proposal: APNIC requires a provider prefix be announced on the Internet within 3 months of allocation

Provider Filtering Issues

- Some large providers are now filtering long prefix networks
  - » This encourages organizations to request shorter prefixes
- APNIC's position: APNIC has no control over providers, thus they can set filters to whatever they like.
  - » To insure the highest chance of reachability, organizations should obtain IP addresses from their provider

Other Issues?

- Problems?
- Proposals?
- Modifications?