RIPE NCC DNS Restructuring Update

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Overview

- Old DNS server setup
- New DNS infrastructure goals
- Current status of new infrastructure
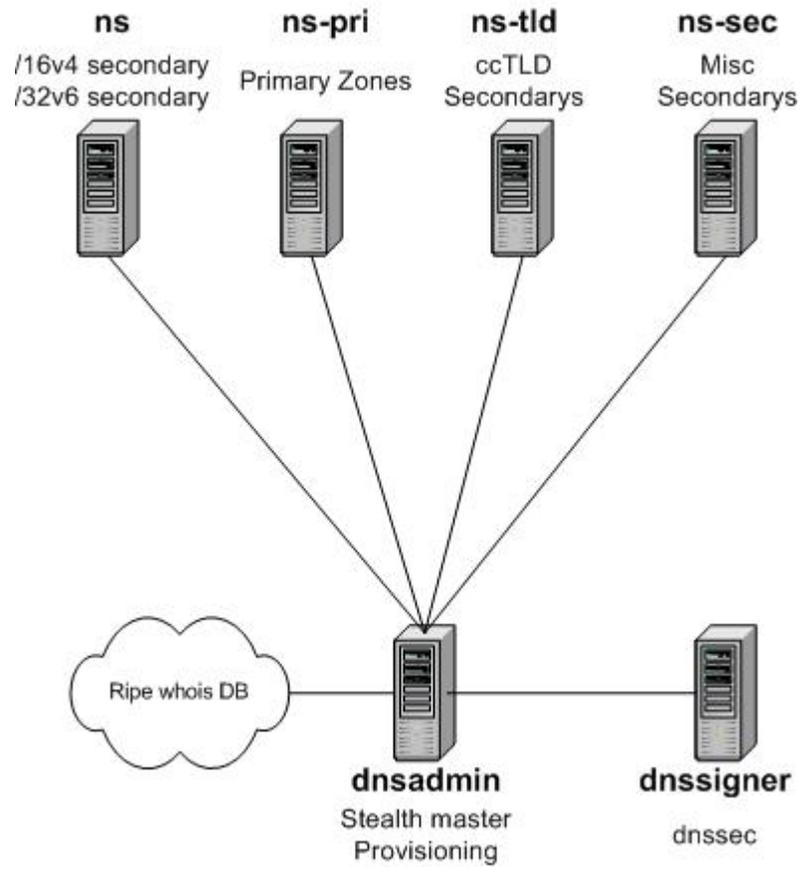- Future

Old Server Setup

- ns.ripe.net
  - Primary for various zones such as ripe.net
  - Primary for /8 v4 and /16 v6 reverses
  - Secondary for /16 v4 and /32 v6 reverses
  - Secondary for around 70 ccTLD zones
  - Secondary for lots of other misc zones.

- Machine was overloaded with queries and zone sizes.
- Provisioning was not optimal

New Server Setup

- Goal: more flexibility and resiliency

- Ease of use for zone updates

- Multiple machines

    Divide load and allow for DNSSEC

- More flexibility for future growth

- Allow for easier migration of zones

New Server Setup

New Servers - Status

- We have now moved majority of zones to their new homes.

- Currently zones are distributed as follows:

ns-pri: 150 zones

ns-sec: 282 zones

ns-tld: 179 zones

ns.ripe.net: 3057 zones

New Servers - Future

- ns.ripe.net upgrades to hard/software

- DNSSEC rollout

- Software upgrades Bind 9.40 and/or NSD

- Deployment of DNS related statistics generation, using DNS Statistics Collector (DSC)

New Servers - Future

ns.ripe.net Upgrade to Hardware

- Had some performance issues

- With the help of NLnetLabs issues identified

- Upgrade to latest hardware

- Upgrade from Slackware 8.1 (kernel 2.4) to Debian 3.1 (kernel 2.6)

New Servers - Future

DNSSEC rollout

- ripe.net is signed for over a month now

- Phased rollout of /8 reverses, complete first few weeks of 2006

- Phased acceptance of secure delegations (DS records)

- Demo of web interface is available at
  http://rosie.ripemtg.ripe.net/cgi-bin/delcheck3.cgi
  - For an assisted demo ask at the Member Services Desk

New Servers - Future

Software

- Bind 9.40 testing and evaluation
- NSD possible rollout on ns-pri to provide increased diversity and redundancy for primary zones

New Servers - Future

Statistics

- ccTLD operators request stats on queries
- Stats are useful for us to capacity plan
- Deploy DNS Statistics Collector (DSC)
- Provides a wide range of statistics
- More information at:
  http://dns.measurement-factory.com/tools/

Questions?

New Server Setup

New Setup consists of:

- dnsadmin. Provisoining, pulls info from whois. Creates zones and configs
- dnssigner. Signs dnssec enabled zones.
- ns-pri. Auth server for primary zones.
- ns. Auth server for /16v4 and /32v6 reverse sec zones
- ns-tld. (with vifs) Auth server for ccTLD sec zones.
- ns-sec. Auth server for all other sec zones.