ENUM at the RIPE NCC

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DNS Services
RIPE NCC

Overview

- RIPE NCC and ENUM

- Request Process

- Delegations made recently

- Query Statistics
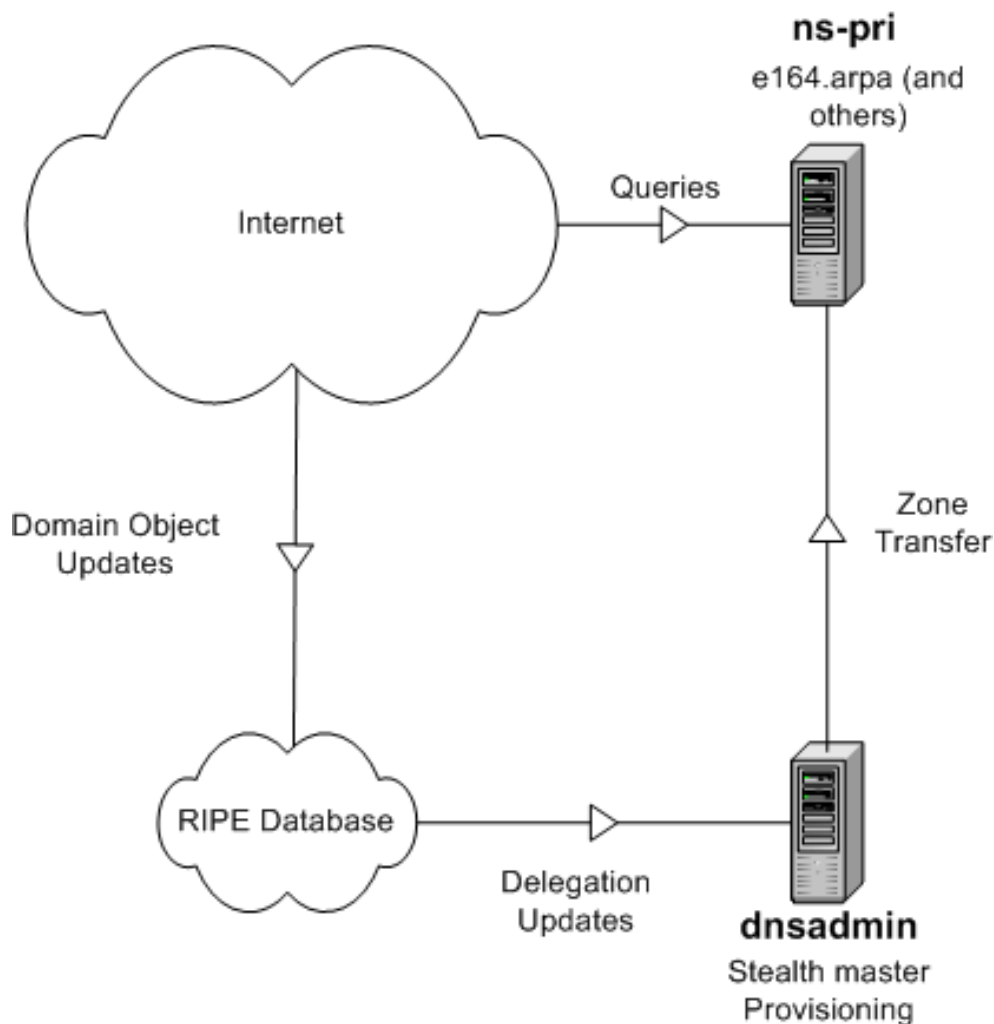
- DNS Improvements

- Questions

RIPE NCC ENUM Team

- Technical contact
  - Andrei Robachevsky
  - Brett Carr
- External Relations
  - Axel Pawlik
  - Paul Rendek
- Registration Services
  - 3 'ENUMsters'
- DNS Provisioning System

DNS Provisioning System

- Domain object submitted

- Checks made on DNS validity

- Domain object updated

- dnsadmin notices change

- e164.arpa zone updated

- Queries referred to new delegation point(s)

ns-pri
e164.arpa (and others)

Internet

Queries

Zone Transfer

Domain Object Updates

RIPE Database

Delegation Updates

dnsadmin
Stealth master Provisioning

Request Process

- ENUM request form updated in August

  - Simpler format

  - Clearer wording

 - Supporting notes document

  - Includes ORGANISATION objects

Delegations made since RIPE 52

- +86 – China (June 2006) (Extension)

- +84 – Vietnam (June 2006)

- +590 – Guadeloupe (July 2006)

- +594 – Guyana (July 2006)

- +596 – Martinique (July 2006)

- +262 – France de l'océan indien (July 2006)

- +508 – Saint Pierre and Miquelon (July 2006)

Queries per e164.arpa Nameserver – Aug 06

ns-pri.ripe.net   391084

ns0.verio.net   387080

tinnie.arin.net   382847

cnnic.net.cn   324755

sec3.apnic.net   255726
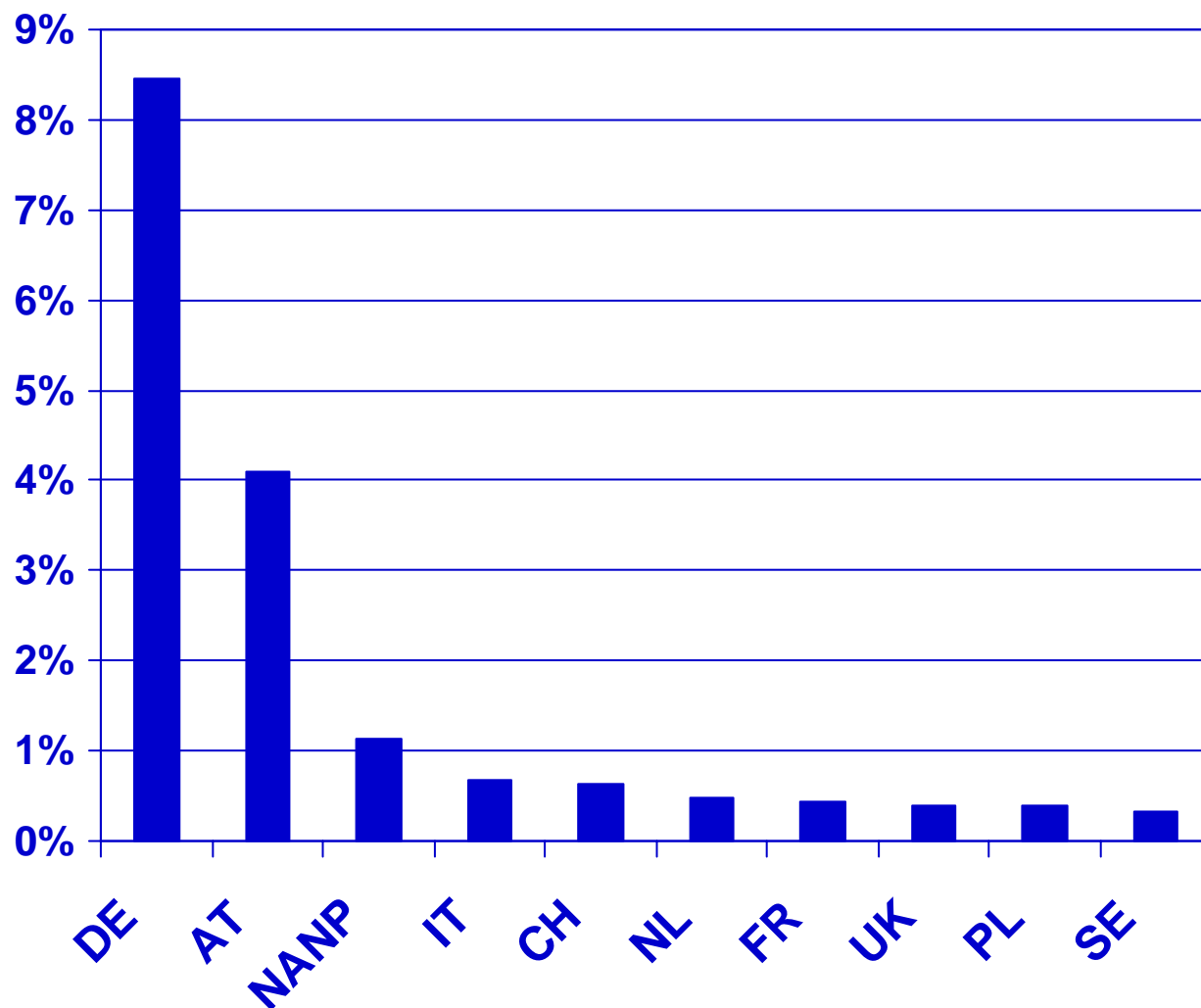
sunic.sunet.se   152300

Total   1893792
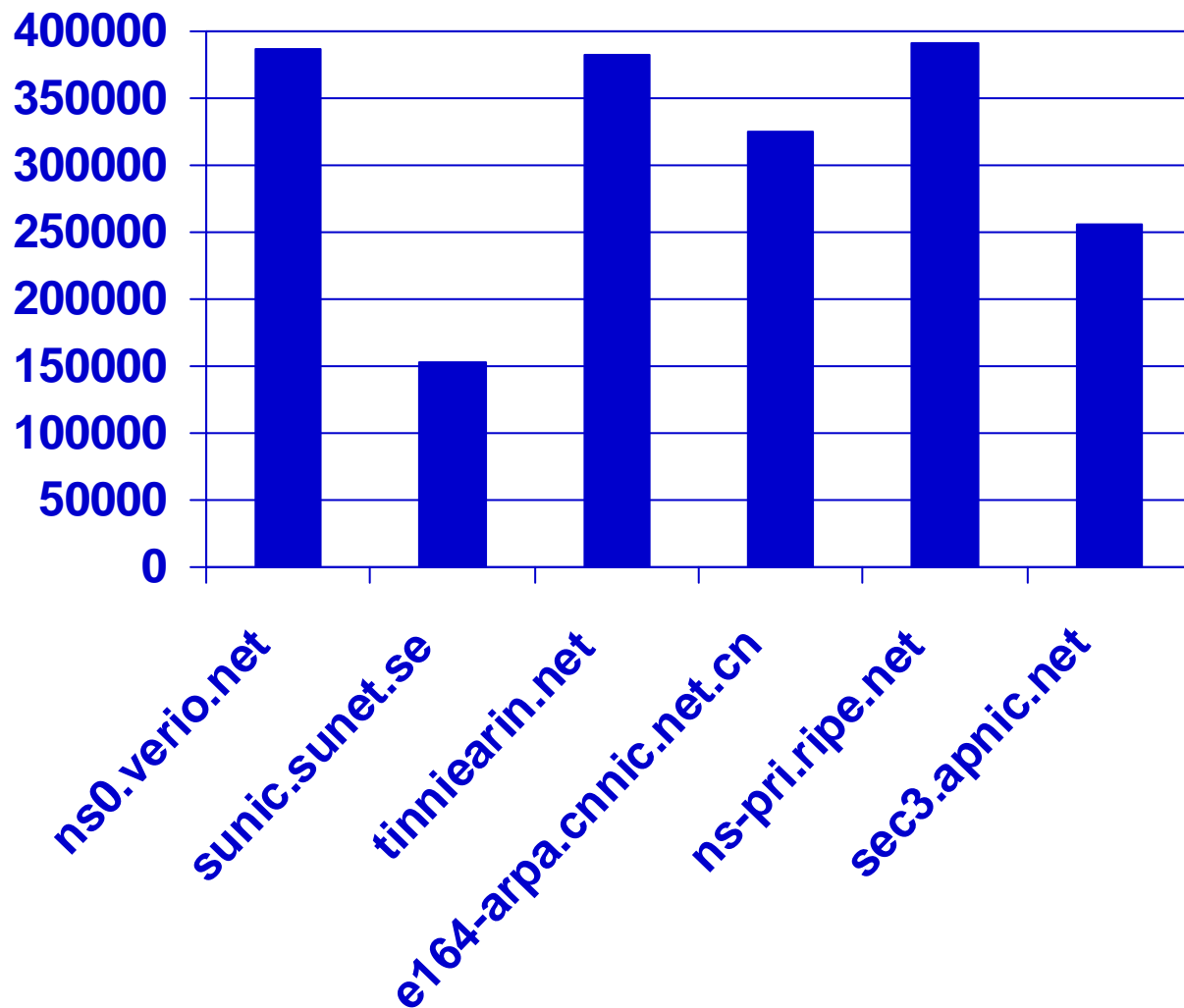
42 queries per minute

The figures represent a subset of ENUM queries due to normal DNS caching.
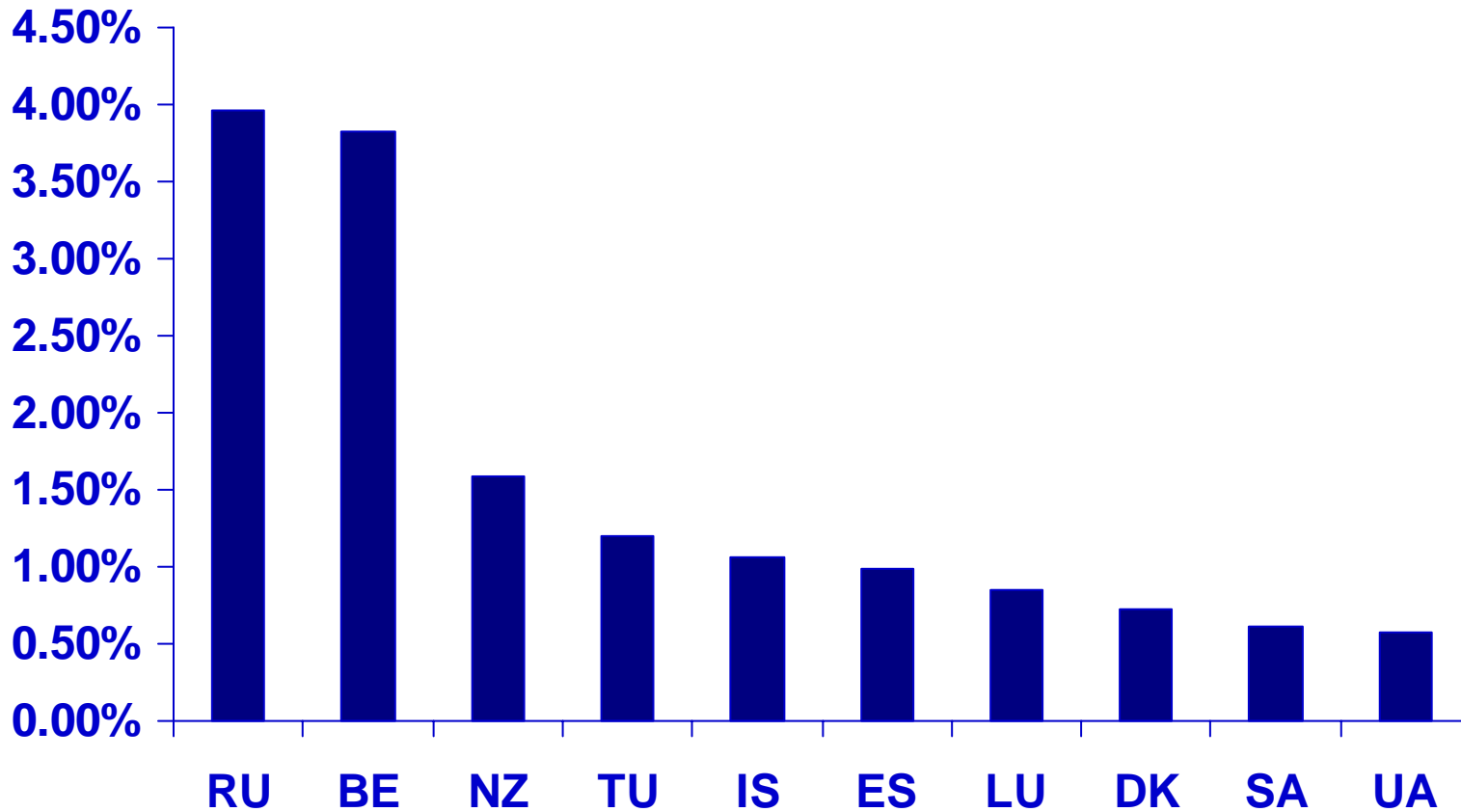
Queries per delegation – August 2006

- Top 10 received at ns-pri.ripe.net

- Average 8.76 queries per minute

- 9.4.e164.arpa averages 0.74 queries per minute

- These numbers are averages for a subset of ENUM DNS queries

Queries for Undelegated Zones - Top 10

**ENUM queries for undelegated e146.arpa zones
seen at ns-pri.ripe.net (Aug 06)**

Invalid Queries

- Total invalid queries   25922 (6.6%)

- Queries prefixed with 0   8918

- Queries prefixed with 0.0   4966

- Rest:
  Missing separator   3100.e164.arpa
  Strange prefixes   4.4.+.e164.arpa
  Incorrect prefixes   1.8.8.e164.arpa

- Probably misconfigured equipment

DNS Improvements

- ## DNS delegation checks

  - Made with web checker

  - http://www.ripe.net/cgi-bin/delcheck/delcheck2.cgi

- ## Ongoing DNS quality checks

  - Under development

- ## IPv6 DNS glue

  - DOMAIN class changed

  - Glue works - see 1.8.e164.arpa
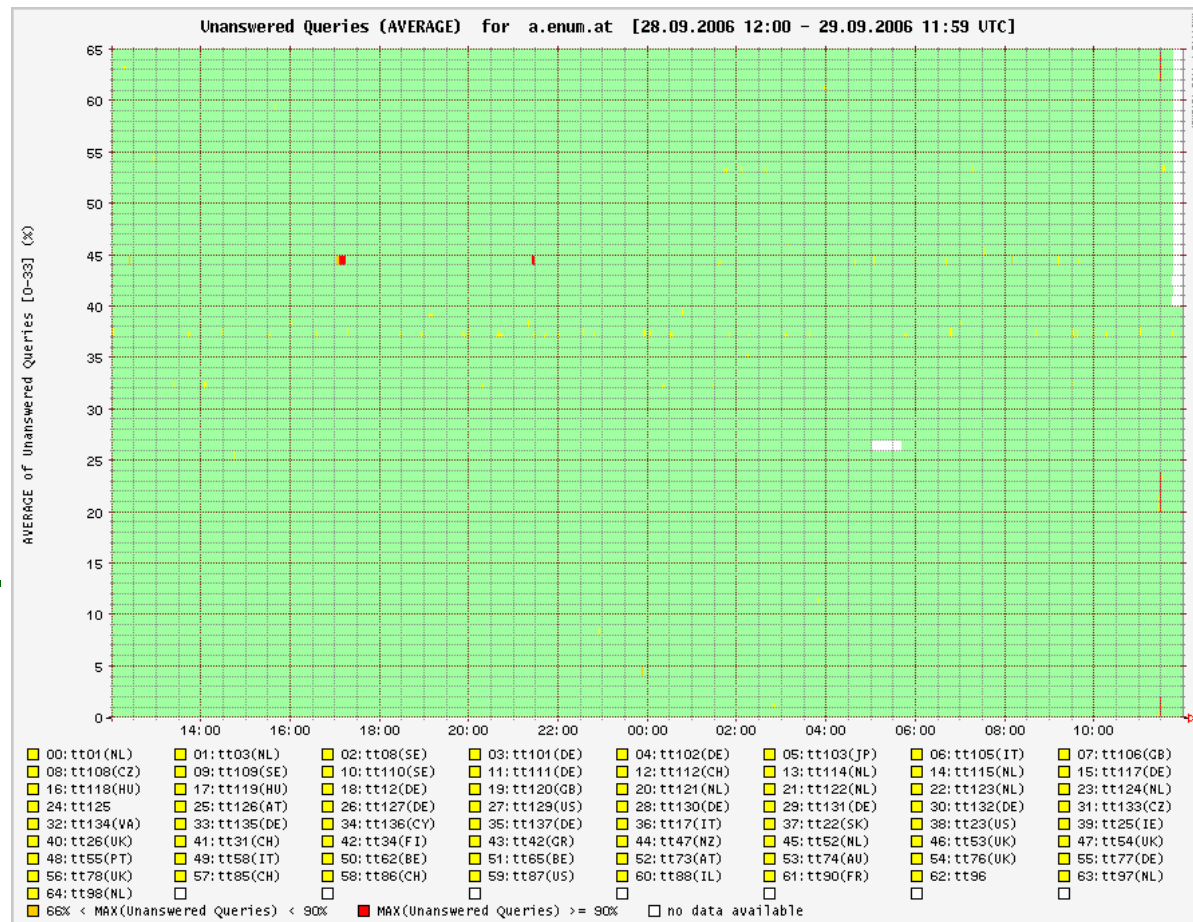
IPv6 Glue Example – 1.8.e164.arpa

% Information related to '1.8.e164.arpa'

domain:	1.8.e164.arpa
descr:	Ministry of Internal Affairs and Communications
admin-c:	JP11
tech-c:	JP3
zone-c:	JP5
nserver:	a.ns.1.8.e164.arpa 202.11.16.56
nserver:	a.ns.1.8.e164.arpa 2001:218:2003:0:0:0:0:53
nserver:	b.ns.1.8.e164.arpa 61.200.83.228
notify:	enum@soumu.go.jp
mnt-by:	JPENUM-MNT
mnt-lower:	JPENUM-MNT
changed:	enum@soumu.go.jp 20051128
changed:	hostmaster@ripe.net 20060809
source:	RIPE

RIPE NCC DNSMON

- Shows DNS performance
- Distributed monitoring
- http://dnsmon.ripe.net
- **dnsmon-sales@ripe.net**

Questions?