



# RIPE NCC DNS Services Overview

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# Overview

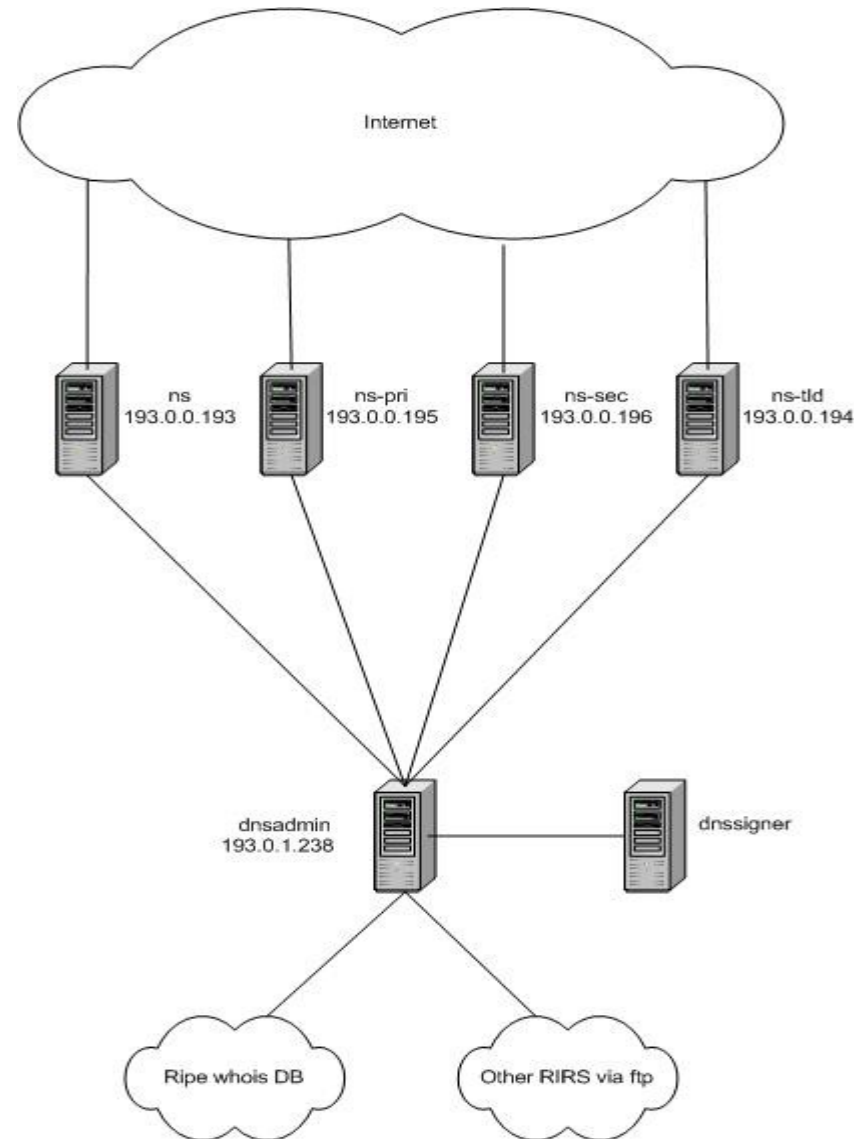
- Introduction
- Reverse/ccTLD Server Infrastructure
- K-Root
- DNSSEC
- ENUM
- Future



# Reverse/ccTLD Server Infrastructure

- 6 Servers involved
  - dnsadmin (dnssigner)
  - ns-pri.ripe.net
  - ns-sec.ripe.net
  - ns-tld.ripe.net
  - ns.ripe.net

# Reverse/ccTLD Server Infrastructure

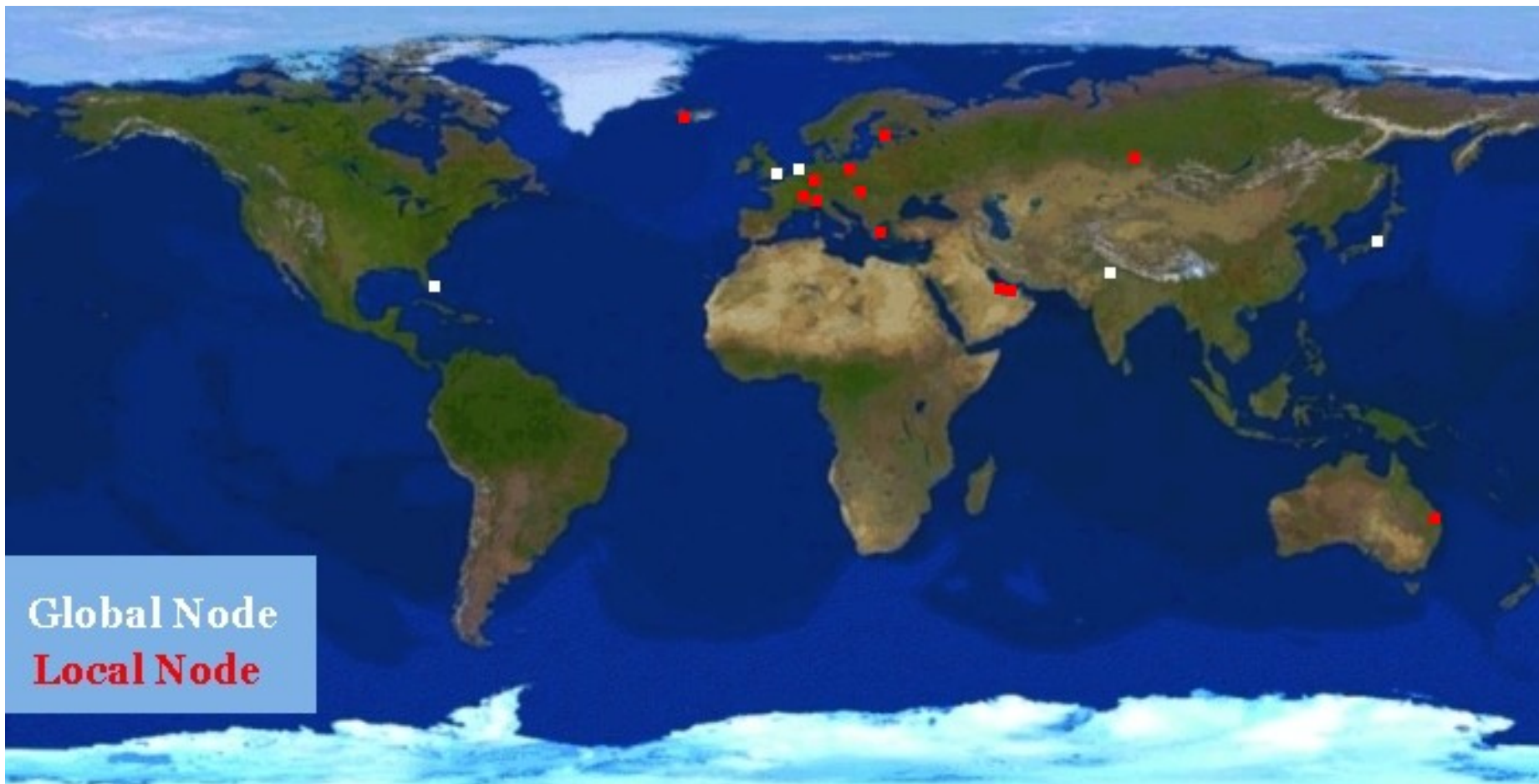




# K-Root

- Anycasted across 17 Locations
- 5 Global Nodes
- 12 Local Nodes
- Hardware and OS Upgrades
- Considering further deployments

# K-Root





# DNSSEC

- Started rollout on non critical zones Oct 2005
- DS Records into reverse via our provisioning system
- Total primary zones 113
- Signed zones 72
- NS Records 521811 (225432 sets)
- DS Records 61
  - RIPE NCC 14
  - Other 47

Statistics as of October 2006



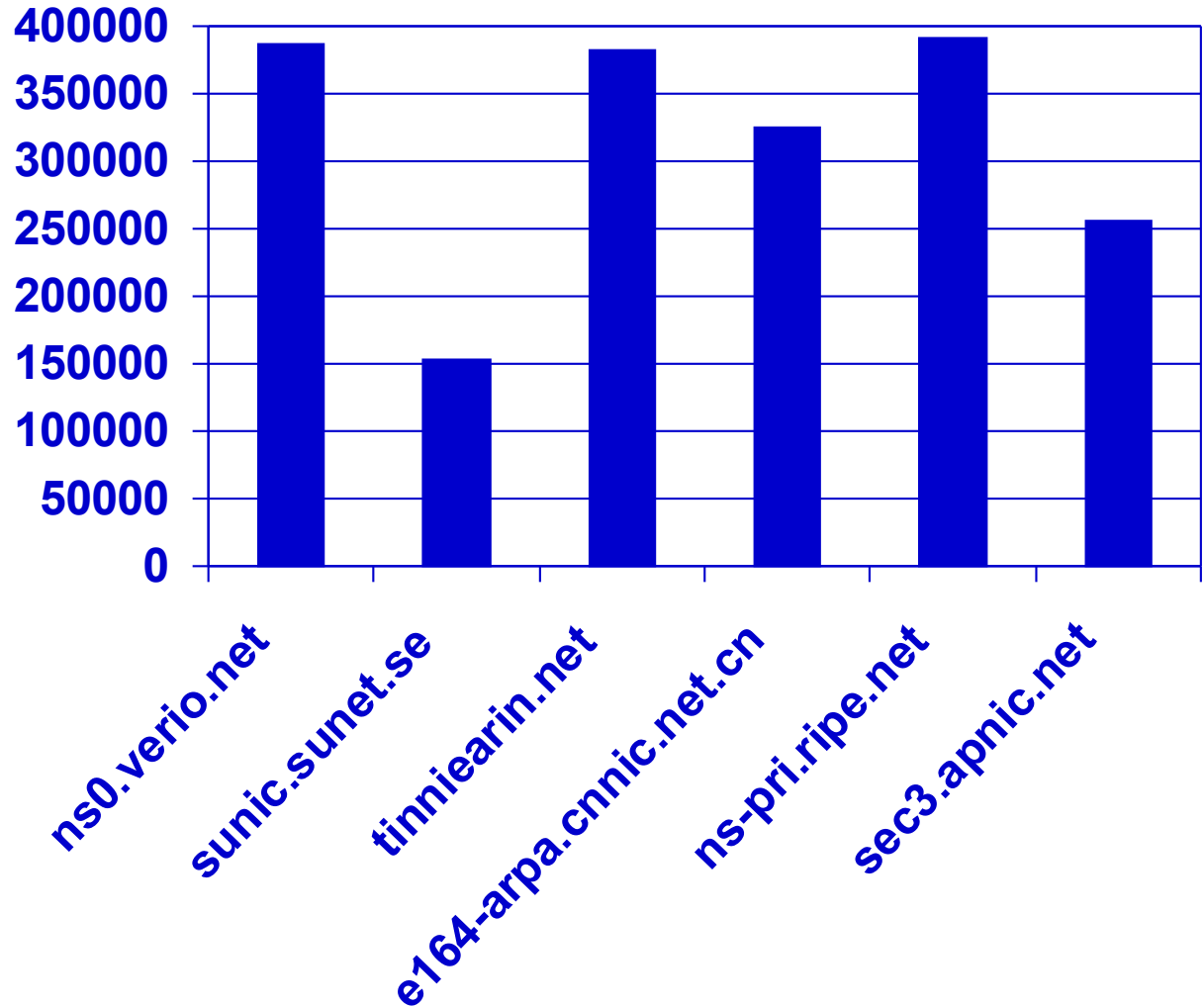
# ENUM

- Tasked by IAB to operate the e164.arpa domain
- Receive delegation requests
- Review technical DNS quality of request
- Announce request to public and ITU
- When no objections received perform delegation
- e164.arpa operated at no charge to all
- Technically almost identical to in-addr.arpa/ip6.arpa



# Queries per e164.arpa Nameserver – Aug 06

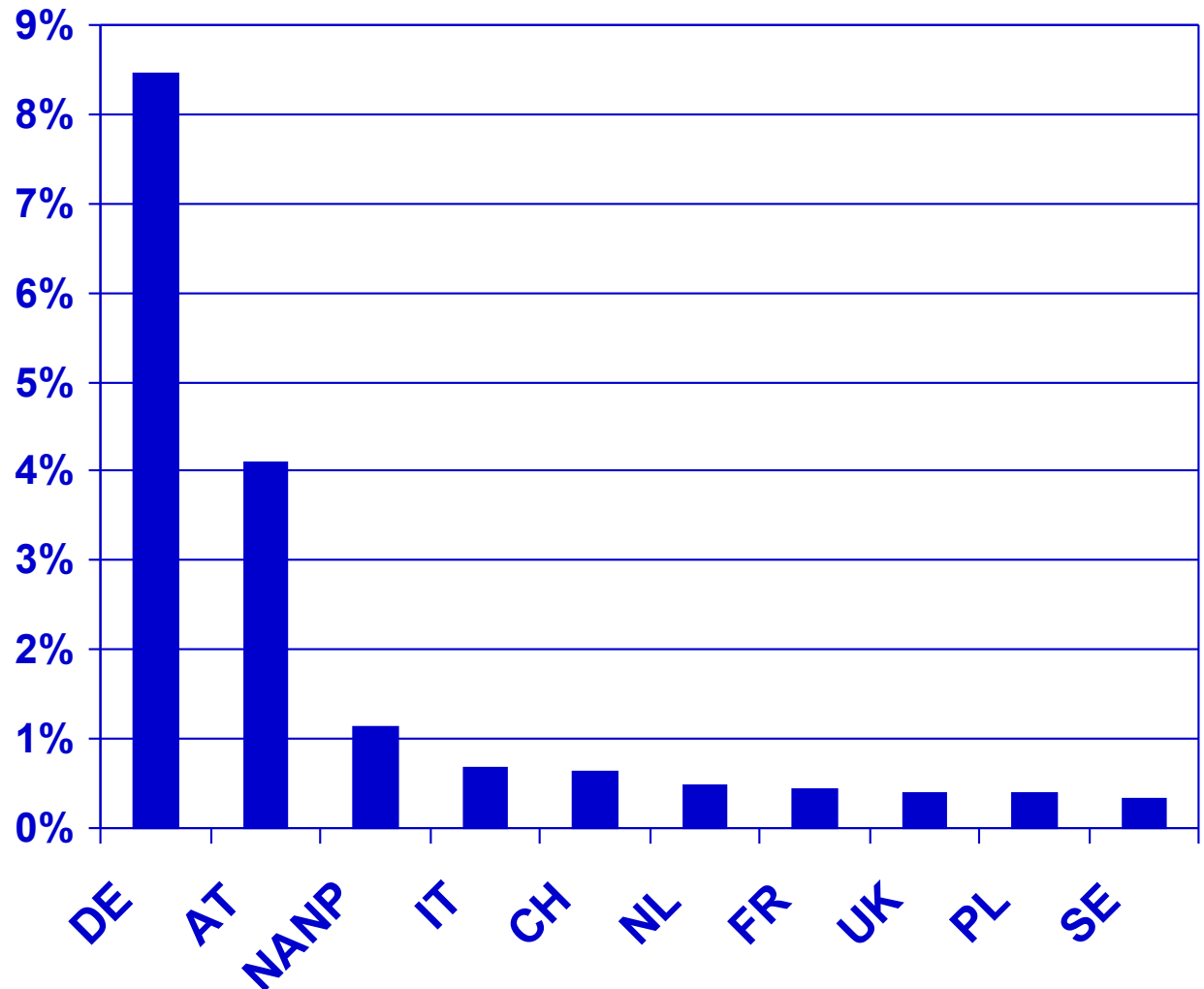
ns-pri.ripe.net	391084
ns0.verio.net	387080
tinnie.arin.net	382847
cnnic.net.cn	324755
sec3.apnic.net	255726
sunic.sunet.se	152300
Total	1893792



42 queries per minute

# 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





# 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



# Future

- New team formed 01/11/2006
- DNS statistics improvements (DSC)
- Hardware and OS upgrades/renewals
- NSD/BIND 9.40 testing
- Lameness checking/reporting

# Questions?