RIPE NCC DNS Update

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New department

- Global Information Infrastructure – short GII
  - Consolidate IT services operated outside the RIPE NCC network

- Services
  - DNS
  - TTM
  - DNSMON
  - INRDB
  - RIS
  - Storage and Analysis Infrastructure

DNS Services

- Reverse DNS for RIPE NCC zones

- Secondary for other RIRs

- K-root

- F-reverse (in-addr.arpa & ip6.arpa)

- Secondary DNS for ccTLDs

- ENUM Tier-0 (e164.arpa)

- AS112 node at AMS-IX (RFC1918 space sink)

Anycast Cluster (AS197000)

- Two anycast instances operational

  - London (LINX) & Amsterdam (AMS-IX)

- Production for critical zones

  - in-addr.arpa (Reverse IPv4 parent zone)

  - ip6.arpa (Reverse IPv6 parent zone)

  - IPv4 and IPv6 reverse parent zones

    - Primary for RIPE NCC

    - Secondary for other RIRs

  - RIPE NCC forward zones (ripe.net, etc.)

F-reverse

- Serves in-addr.arpa and ip6.arpa

- According to RFC5855 (BCP)

- Servers operated by

  – ARIN, APNIC, AfriNIC, LACNIC, RIPE NCC, ICANN

RIPE
NCC

ERX space with DNSSEC support

- Ready in our provisioning systems

 - Enabled for ARIN

  - Waiting for DNSSEC support with other RIRs

Automated provisioning for It /24 space

- Changes in RIPE database as agreed by DB working group during RIPE62
  - Confusing 3rd octet dash notation removed
  - Support for dash notation in 4th octet implemented
  - Migrated manually provisioned zones into RIPE database to be maintained by their owners
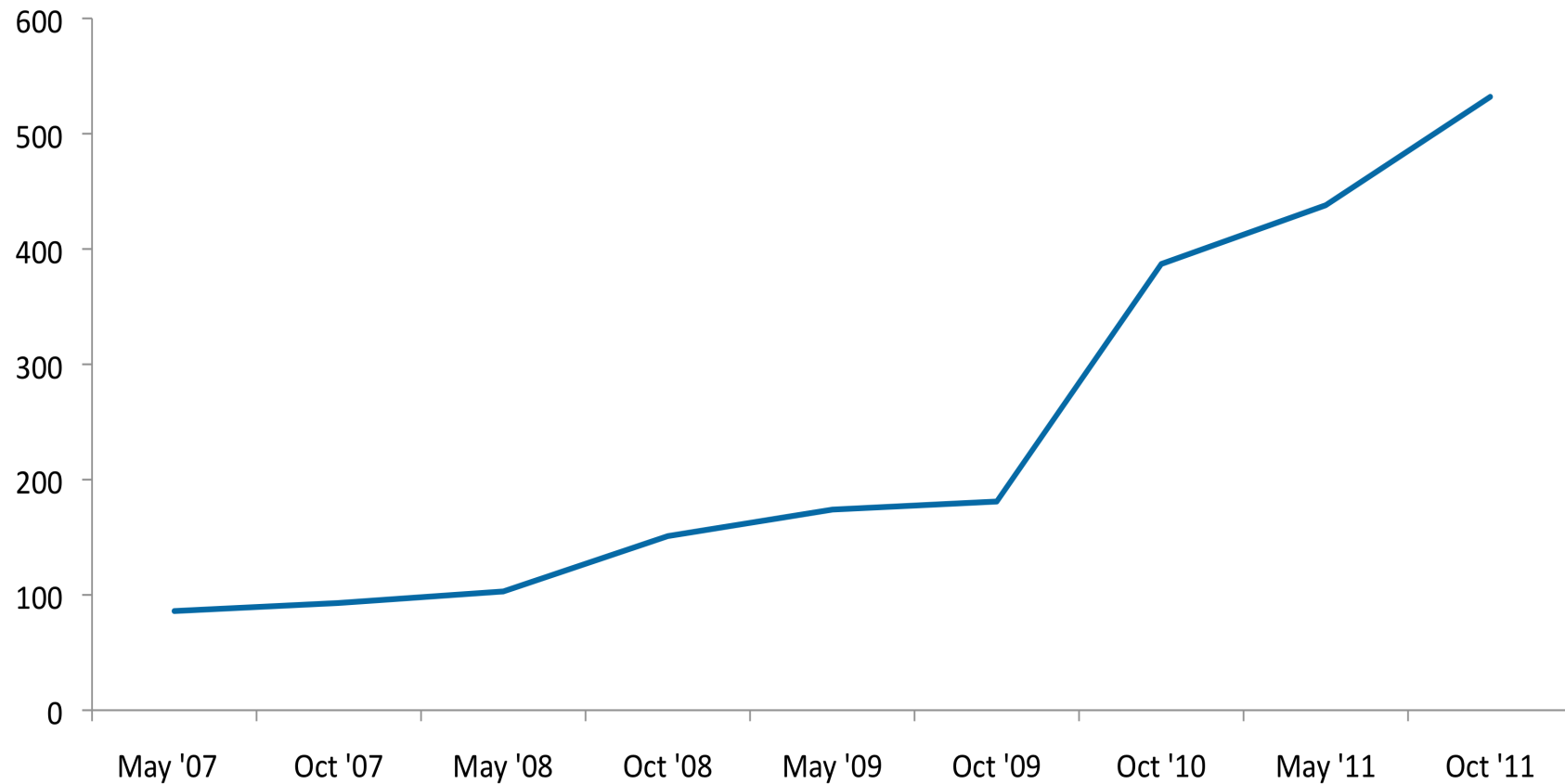
DNSSEC: Signed Parents
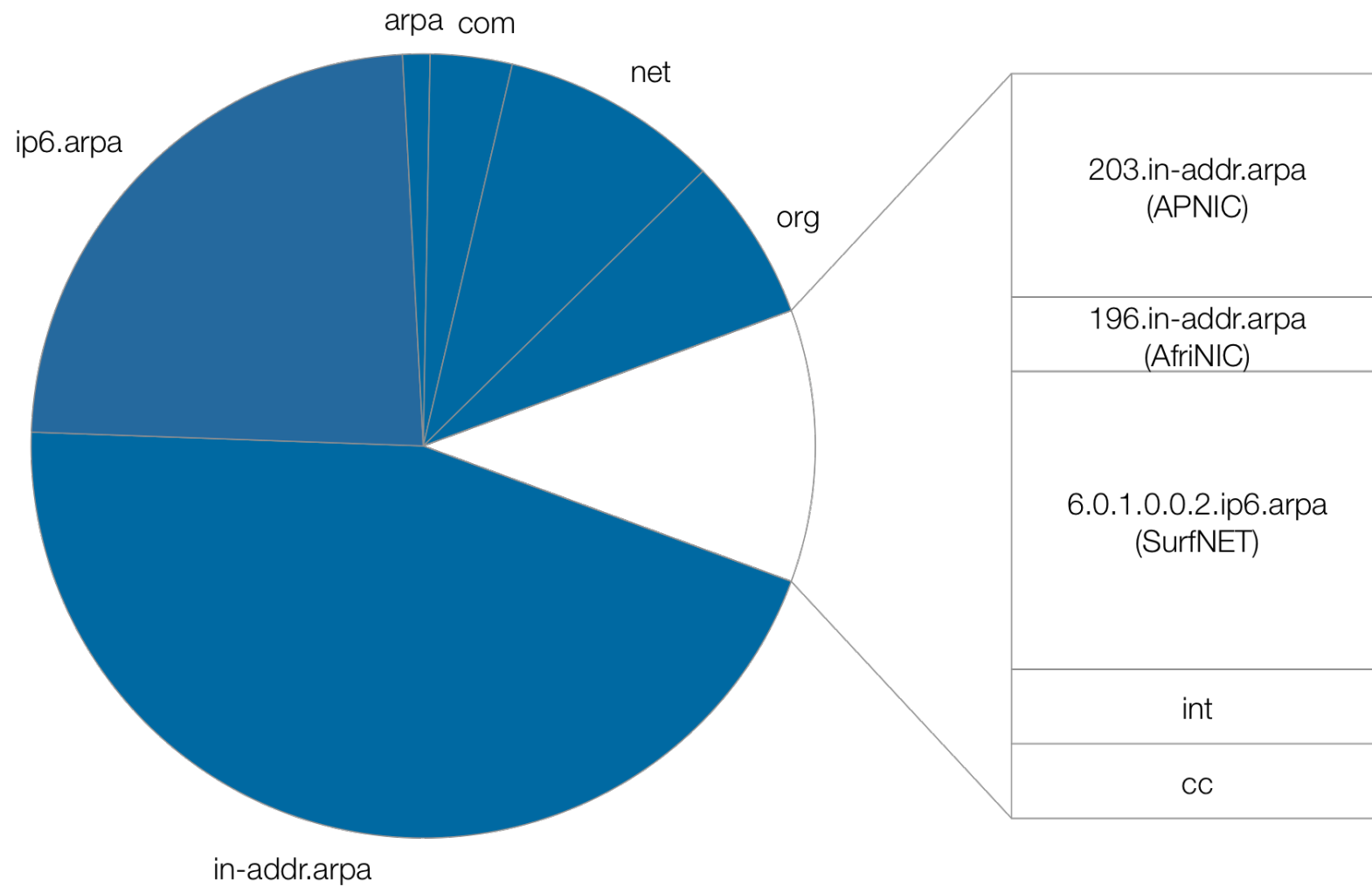
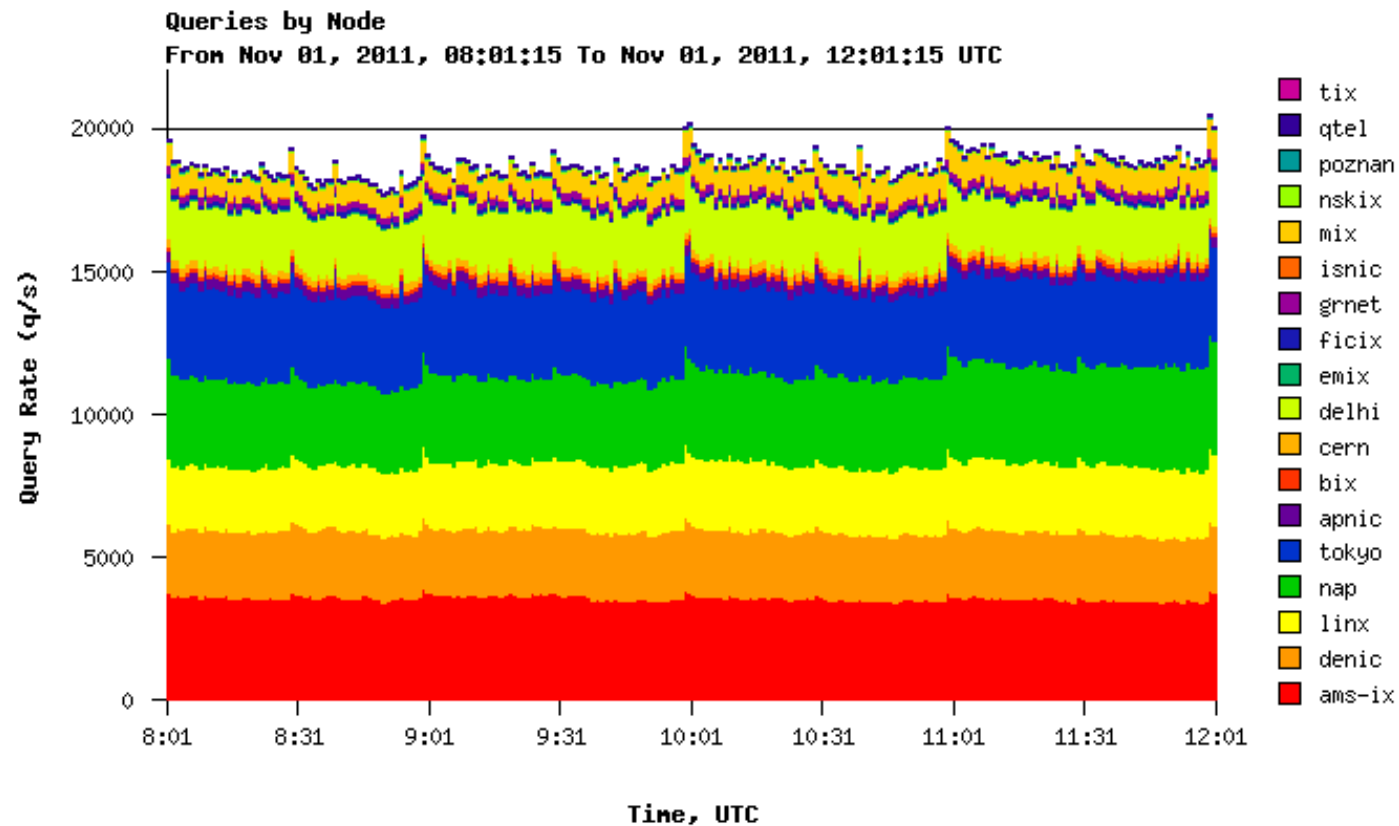# DNSSEC: Signed Parents (by late 2011)
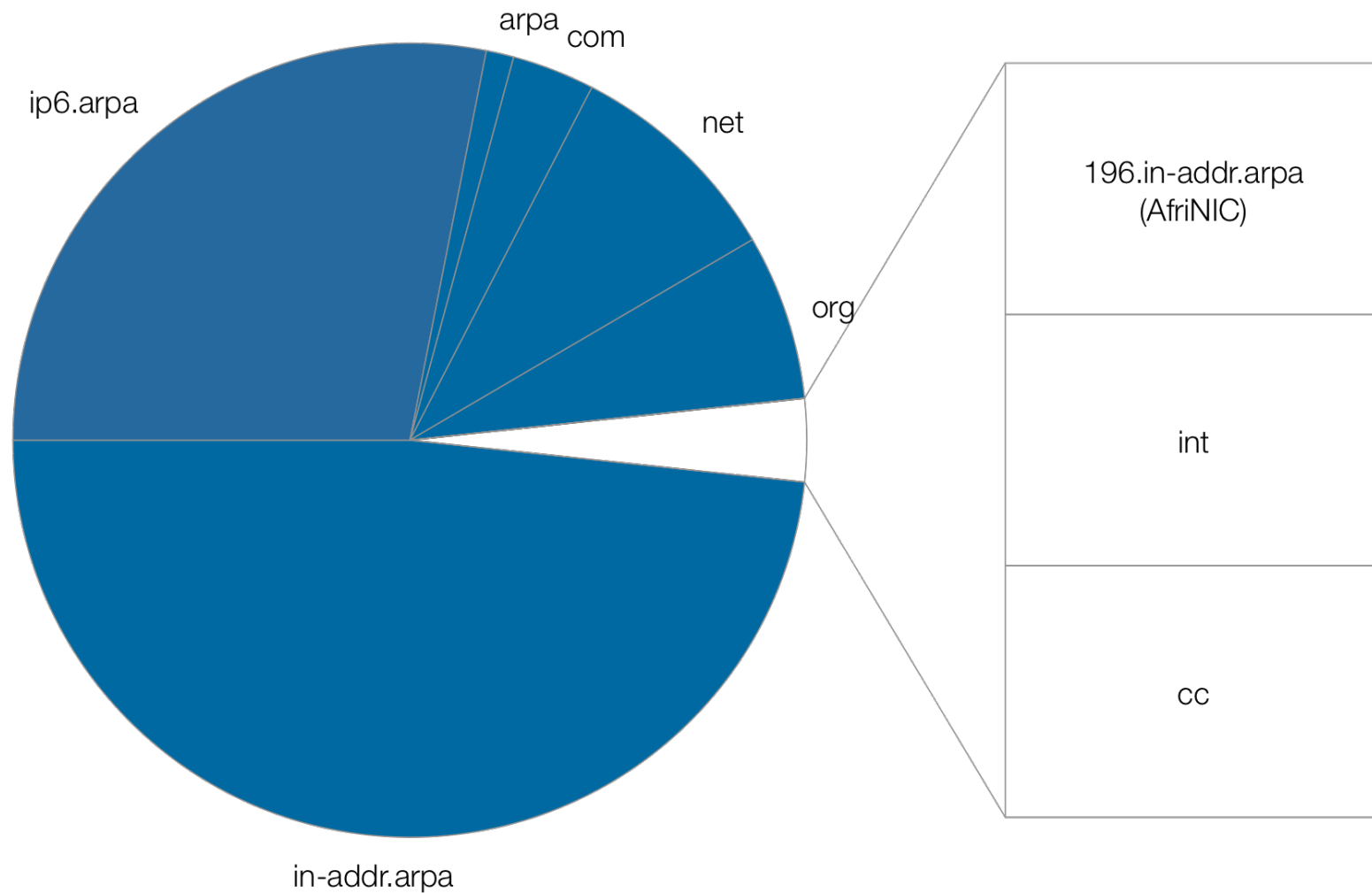
DNSSEC in Reverse DNS
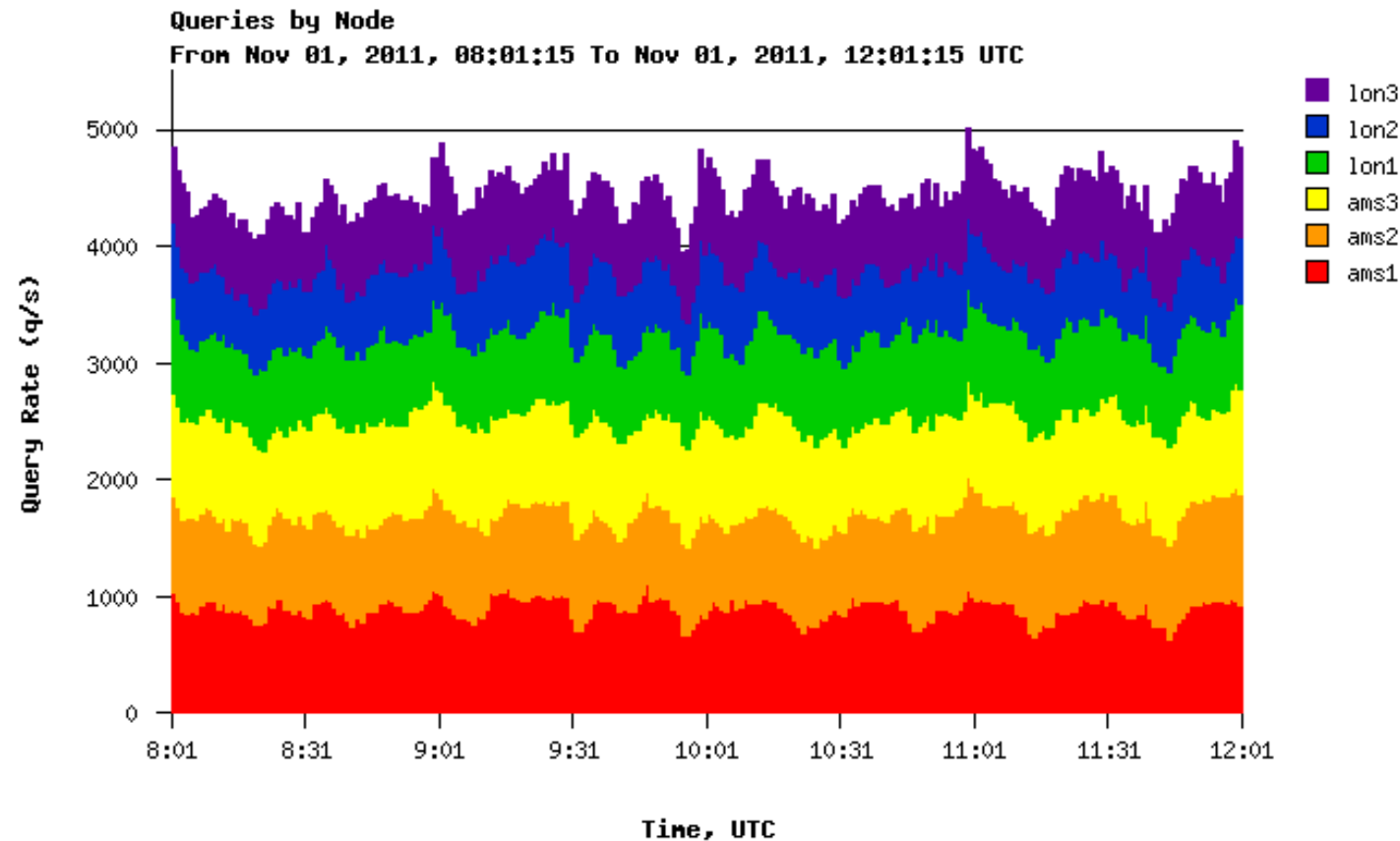
- DS records over time

K-root

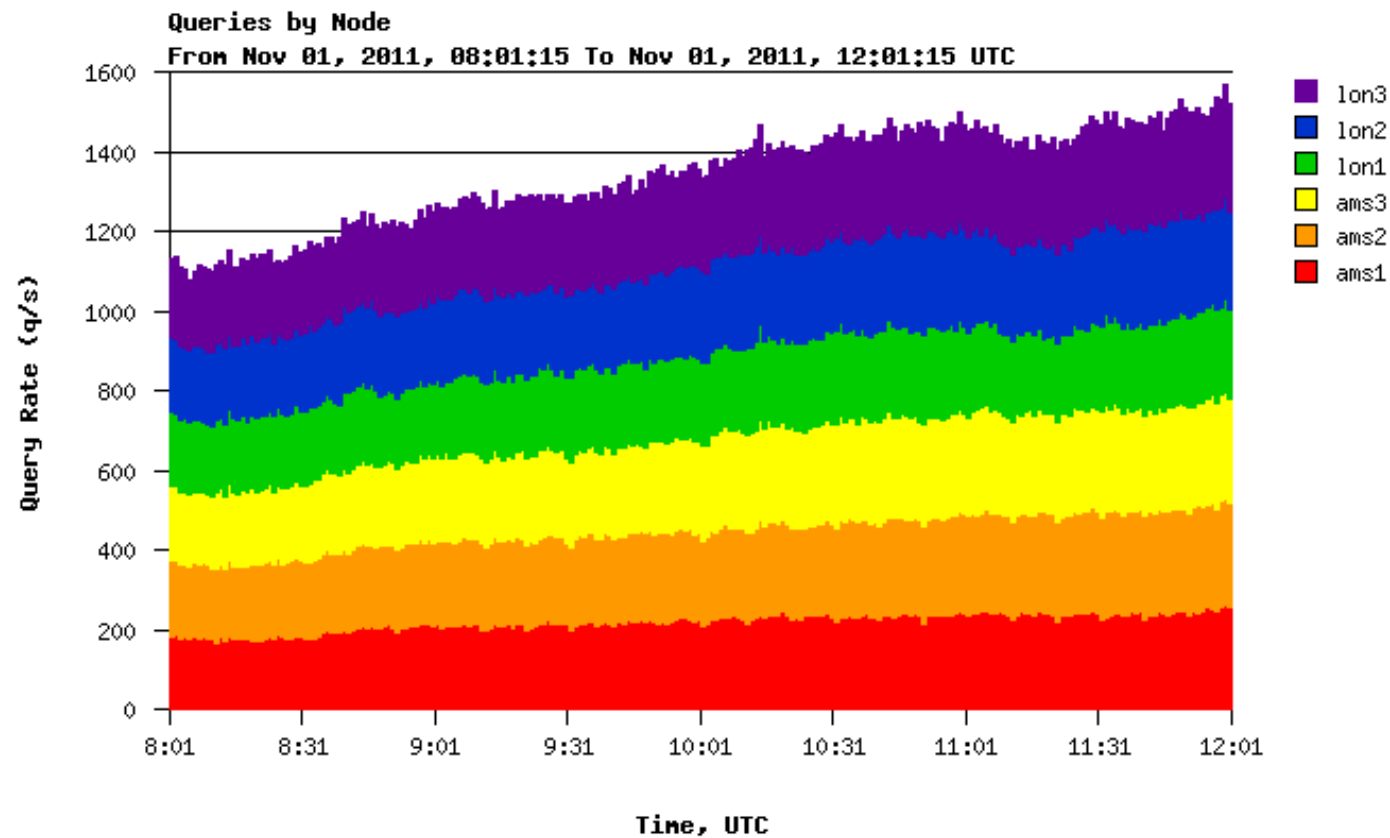- Operations stable with 18 instances

F-reverse (in-addr.arpa)
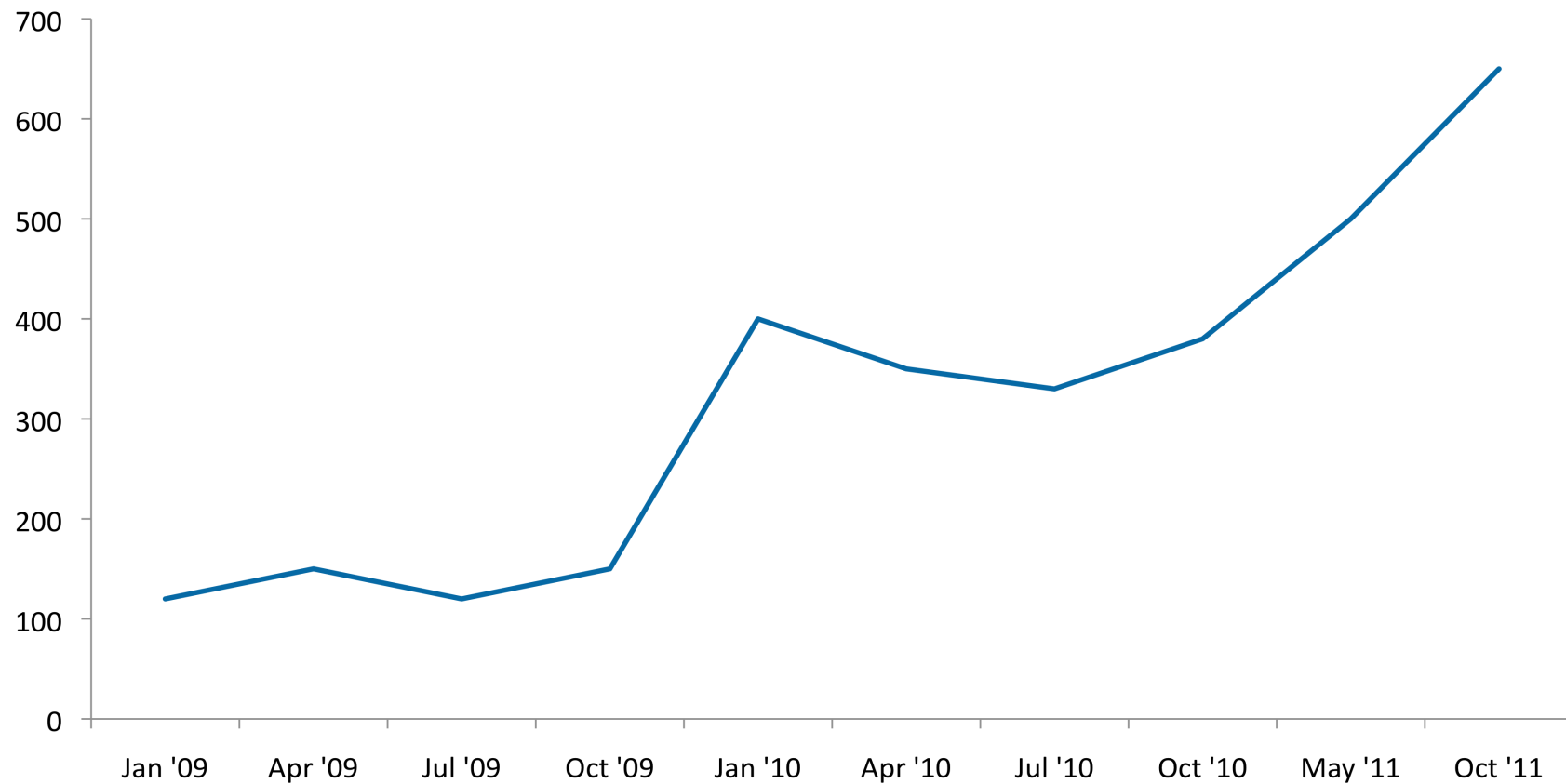
- Operations stable with 2 instances

F-reverse (ip6.arpa)
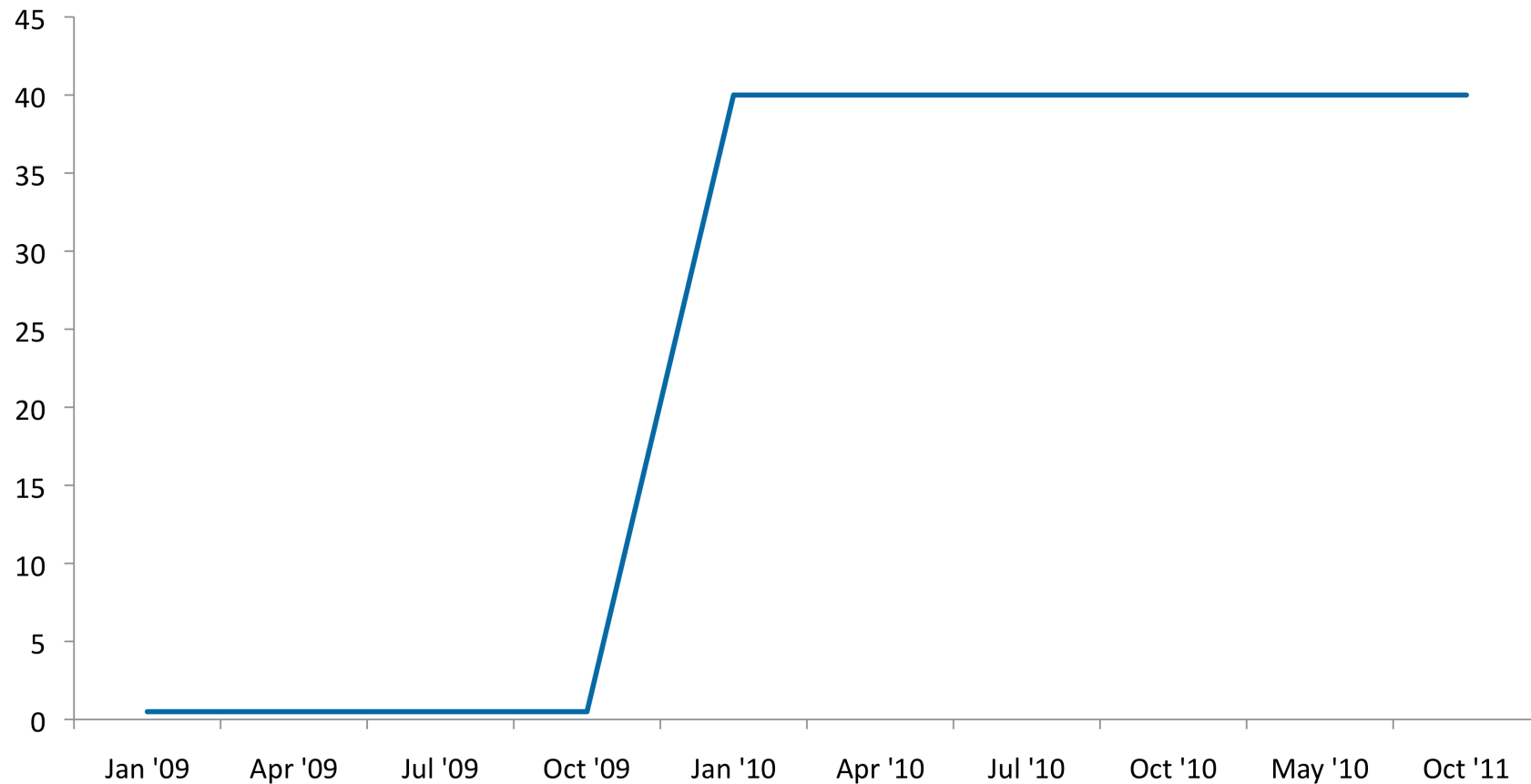
- Operations stable with 2 instances

K-root IPv6

- Queries per second received over IPv6

K-root and TCP

- Queries per second received over TCP

DNS Analysis

- Deployed Hadoop infrastructure with 16 computation and storage nodes

- Continuous data input from our DNS systems
  - AS112, K-root, F-reverse

- Used for ad-hoc data analysis on full packet captures

- Live demo in presentation on MAT-WG today

Anycast Cluster

- ns.ripe.net

  - Secondary for LIR reverse space

  - Hosts around ~4,500 zones

- ns-<ccTLD>.ripe.net

  - Secondary for developing ccTLDs

  - Lots of communication with all the ccTLDs involved

  - Expect to finish by end of 2011

DNSMON improvements

- ## Faster data processing

  - ~5 minutes from data gathering to display

- ## Faster plot generation

  - Plots generated more reliable and quick

- ## New user interface

  - Development still ongoing

AP57.2: Cleanup Forward Domain Data

- Started with **domain** objects in the RIPE Database for 43 ccTLDs

- Two are still actively using the RIPE Database

  - .gov.il has just been removed a week ago

  - .mc to be deleted in January 2012

- 41 deleted – TLD object with all sub-domains

- Users cannot create new TLD objects

- Syntax will be changed when last removed

Questions?

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