



**ONTARIO**  
**TORONTO**  
18-21.APR.2010

# Engineering Report

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**Mark Kusters, CTO**

# Engineering Theme

- **Working on a Surge**
- **Lots of work to do**
- **Supplementing staff with contractors**



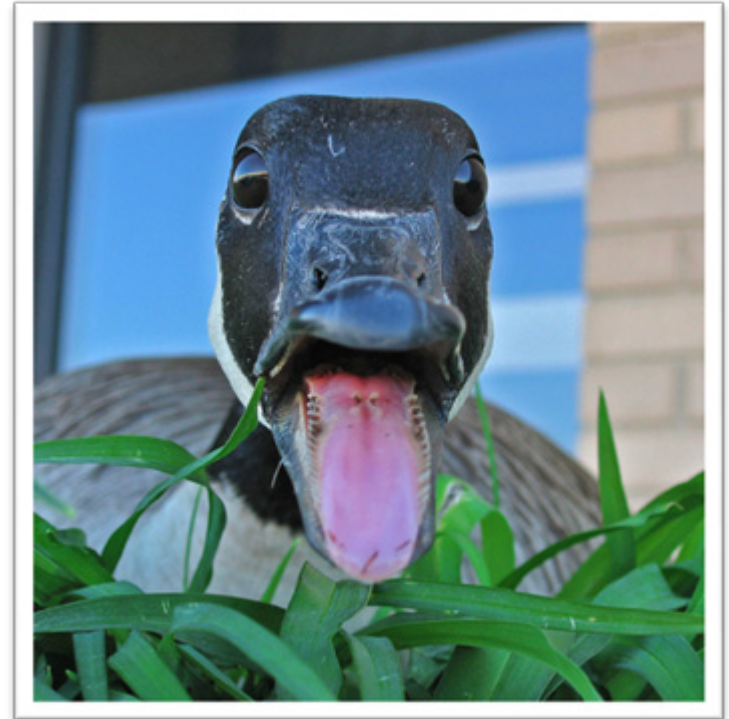
# Staffing

- **Operations**
  - 8 people (new DBA starting after meeting)
- **Development**
  - 14 people (8 contractors)
- **Quality Assurance**
  - 7 people (4 contractors)
- **Requirements**
  - 1 person
- **Management**
  - Me

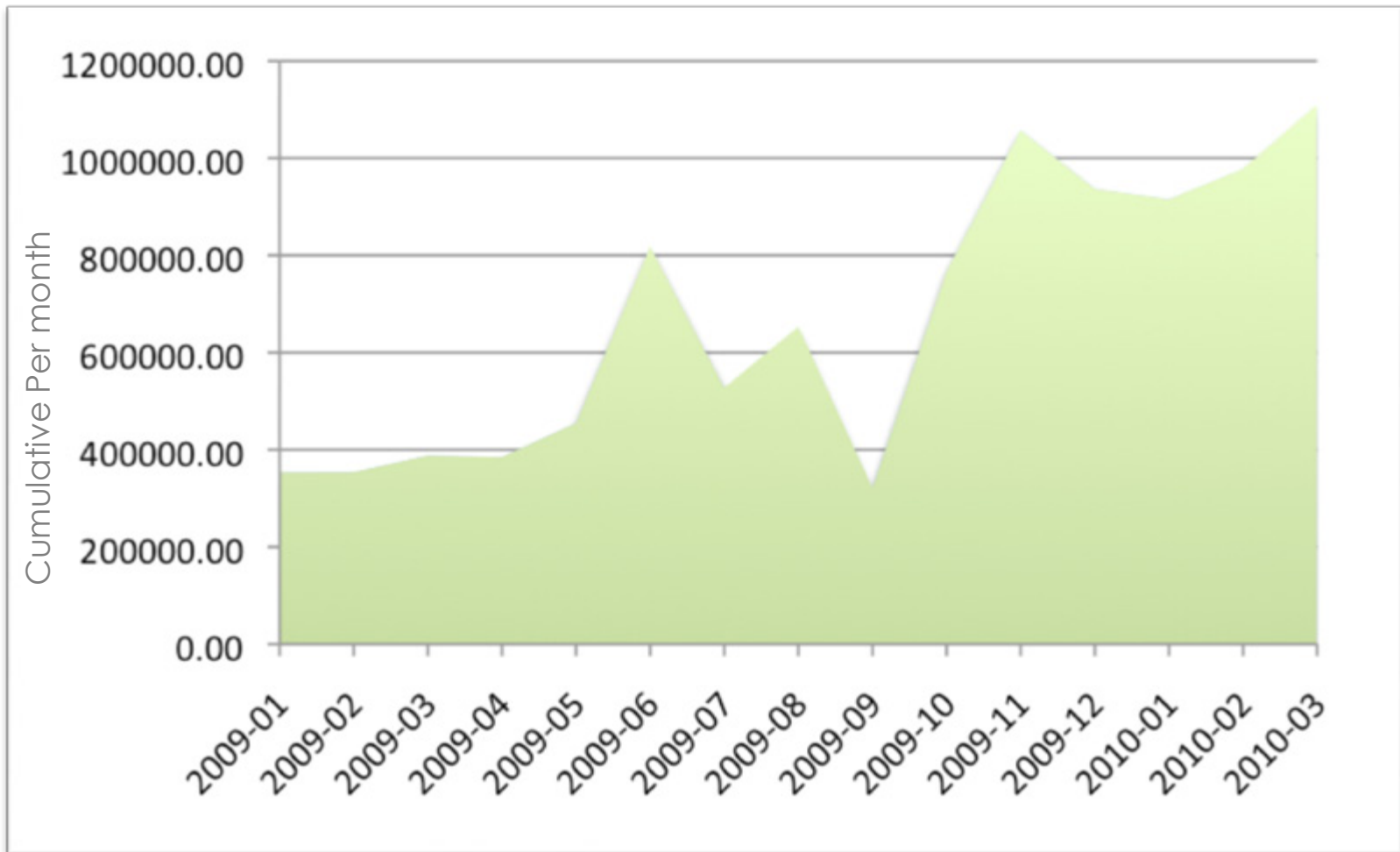


# Operations

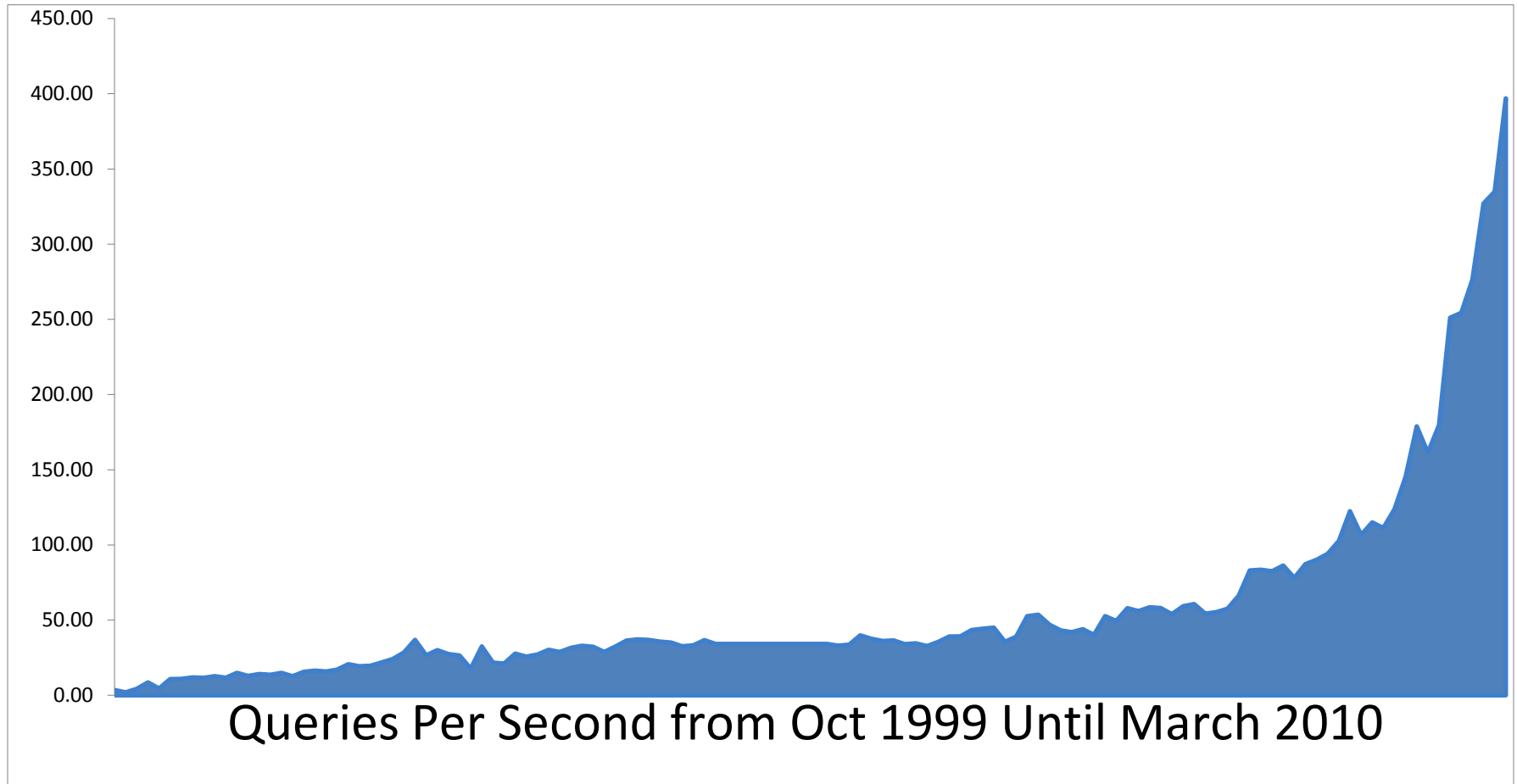
- **Disaster recovery replication operational**
- **Diversity in serving up /8's under in-addr.arpa**
- **DNSSEC operational**
- **Working on two Public Facing Services (PFS) sites**
- **Attempting to keep up with WHOIS traffic**



# WHOIS Statistics – v6



# Whois Statistics- v4



# WHOIS Traffic Loads

- **Over 50% of the queries are self-referential**
  - 192.168.2.5 asking for 192.168.2.5
  - Most are singleton queries
  - Increasing over the last year
- **Does not appear to be a botnet**
- **Most seem to be windows boxes**
- **Any ideas on what code is causing this?**

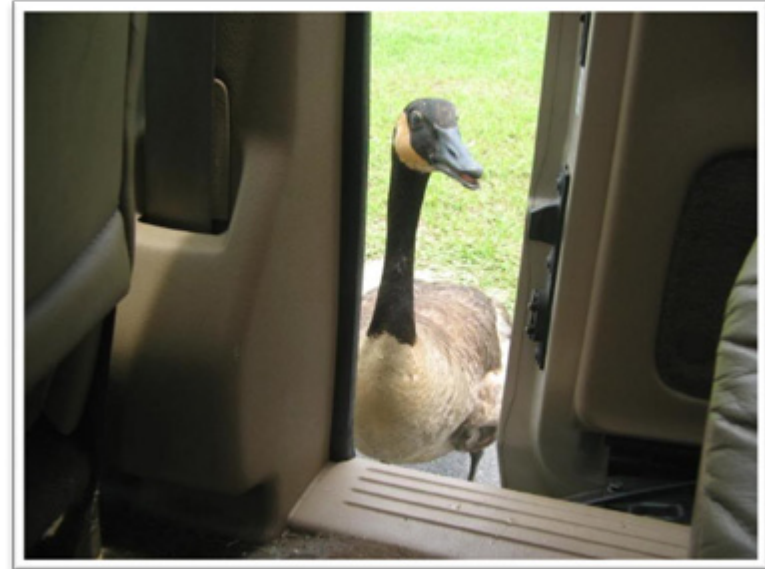
# What to do with WHOIS

- **The WHOIS protocol has been deprecated by the IETF**
- **Whois service is creaky – many problems with existing design – query and display formats, etc.**
- **Adding CPU's and boxes to handle load**
- **But it is time for a new look - Whois-RWS**



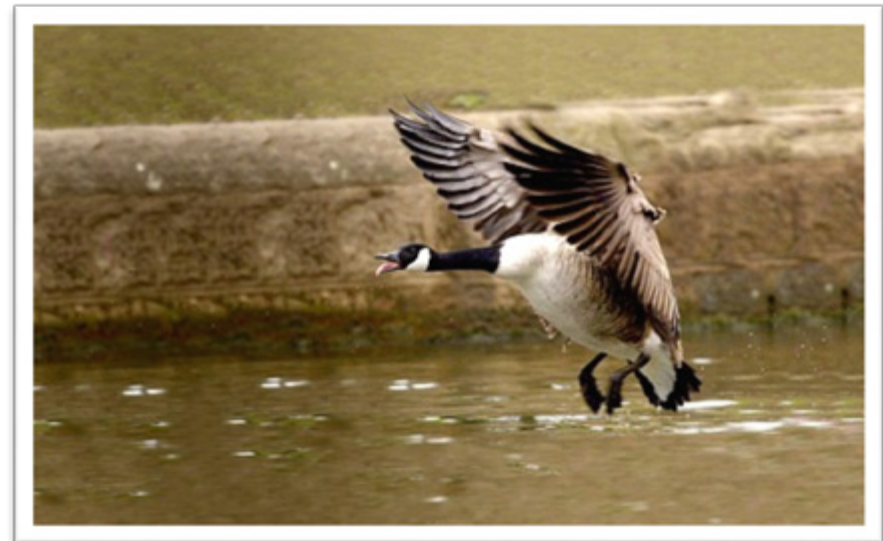
# Development

- 4 ARIN Online Releases
- Improvements to existing systems
- Point of Contact Validation
- Whois-RWS (RESTful Web Services)
- RESTful API for Provisioning
- More secure Templates



# ARIN Online Releases

- Create an ARIN Online account
- Login and Login Assistance
- Link to Existing Points of Contact (POC)
- Create and Manage POC Records
- Create and Manage Organization Records
- Query WHOIS
- Ask ARIN
- Track Tickets
- Message Center
- View Network and ASN records
- Reassignment Reports
- Associations Report




# Upcoming ARIN Online Releases

- **POC Validation**
- **Zone Management**
  - DNSSEC Provisioning
- **RESTful API for Provisioning**
- **RPKI Integration**



# ARIN Online - Zone Management



[SEARCH WHOIS](#)

NUMBER RESOURCES
PARTICIPATE
POLICIES
FEES & INVOICES
KNOWLEDGE
ABOUT US

Welcome, dev

MESSAGE CENTER

WEB ACCOUNT

POC RECORDS


ORGANIZATION DATA

**MANAGE RESOURCES**

TRACK TICKETS

ASK ARIN

log out



MANAGE RESOURCES

### Manage Reverse DNS

Using the text fields on the right, specify the hostnames (not the IP addresses) of the nameservers that should be authoritative for ALL the reverse DNS zones listed on the left. If you did not intend to specify a unified set of nameservers for all the reverse DNS zones listed on the left, then please press the CANCEL button to go back to the previous screen.

SELECTED ZONES IN - NET-64-112-0-0-1

- 0.112.64.in-addr.arpa.
- 1.112.64.in-addr.arpa.
- 2.112.64.in-addr.arpa.
- 3.112.64.in-addr.arpa.
- 4.112.64.in-addr.arpa.
- 5.112.64.in-addr.arpa.
- 6.112.64.in-addr.arpa.
- 7.112.64.in-addr.arpa.
- 8.112.64.in-addr.arpa.
- 9.112.64.in-addr.arpa.
- 10.112.64.in-addr.arpa.
- 11.112.64.in-addr.arpa.
- 12.112.64.in-addr.arpa.
- 13.112.64.in-addr.arpa.
- 14.112.64.in-addr.arpa.

HOSTNAMES OF NAMESERVERS

Nameserver 1:

Nameserver 2:

Nameserver 3:

Nameserver 4:

Nameserver 5:

Nameserver 6:

Nameserver 7:

Nameserver 8:

Nameserver 9:

Nameserver 10:

Nameserver 11:

Nameserver 12:

Nameserver 13:

CANCEL
SUBMIT

[Contact Us](#)
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[Site Map](#)
[Search ARIN](#)
[Privacy Statement](#)
[Accessibility](#)
[Network Abuse](#)

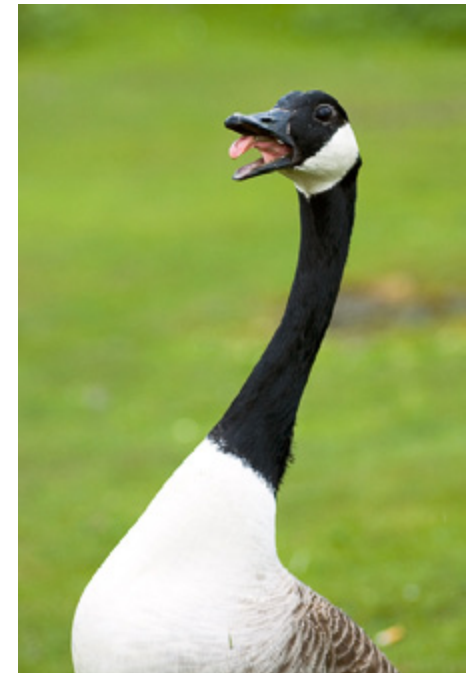
© Copyright 1997 - 2010, American Registry for Internet Numbers

Version 2.6-SNAPSHOT build deployed04-08-2010 14:27:33

# ARIN Online

(as of 04/09/10)

- **Active accounts = 15,998 (registered and confirmed, with active status)**
- **Active accounts with a profile = 14,497 (customer logged in and created a profile)**
- **Confirmed POC links = 13,252**
- **POC requests = 9,800**
- **ORG requests = 5,577**
- **Overall a 1.5x increase over ARIN XXIV**



# Agile Methology

- Ensuring that schedule accidents do not happen
- Working on strengths of the organization
- Integration of QA within Development
- More frequent releases



# Quality Assurance

- **Making sure things work**
- **Focusing on the Customer Experience**
  - Broad browser support
  - Full regression testing





# Project Management

- **Managing three large development projects**
- **Testable systems**





# Upcoming Challenges/Research

- **Additional ARIN Online features**
- **RESCERT to be moved from pilot to production by the end of 2010**
- **RESTful Provisioning**
- **Document Management/Retention Systems**
- **Replacement of Legacy Gear**
- **LISP participation**

Thank You for your Time and Attention

# Questions?

