



ARIN XXVI

atlanta, ga • 6-8 october 2010

Engineering Report

Mark Kusters, CTO

Engineering Theme

- Continue to work on a surge
- Lots of work to do
- Supplementing staff with contractors

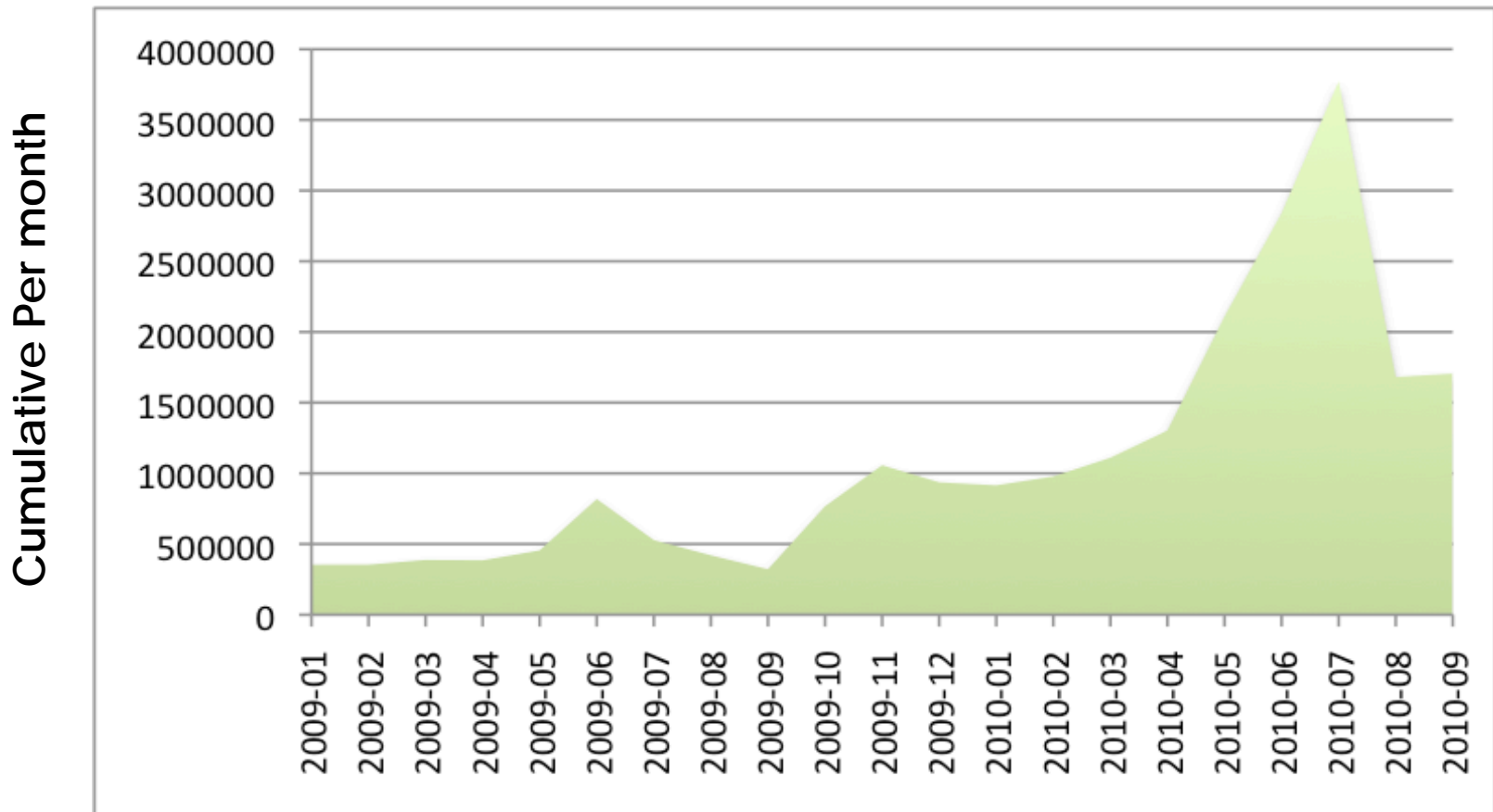
Staffing

- **Operations**
 - 8 people
- **Development**
 - 14 people (8 contractors)
- **Quality Assurance**
 - 7 people (3 contractors)
- **Requirements**
 - 1 person
- **Management**
 - Me

Operations

- Keeping up with Whois-RWS traffic
- Upgrading end-of-life equipment
- Installed a PFS-lite site in Canada
- Looking to install a PFS-lite site in the Caribbean for Q4
- Maintaining the various environments we have running (dev/qa/staging/testing)

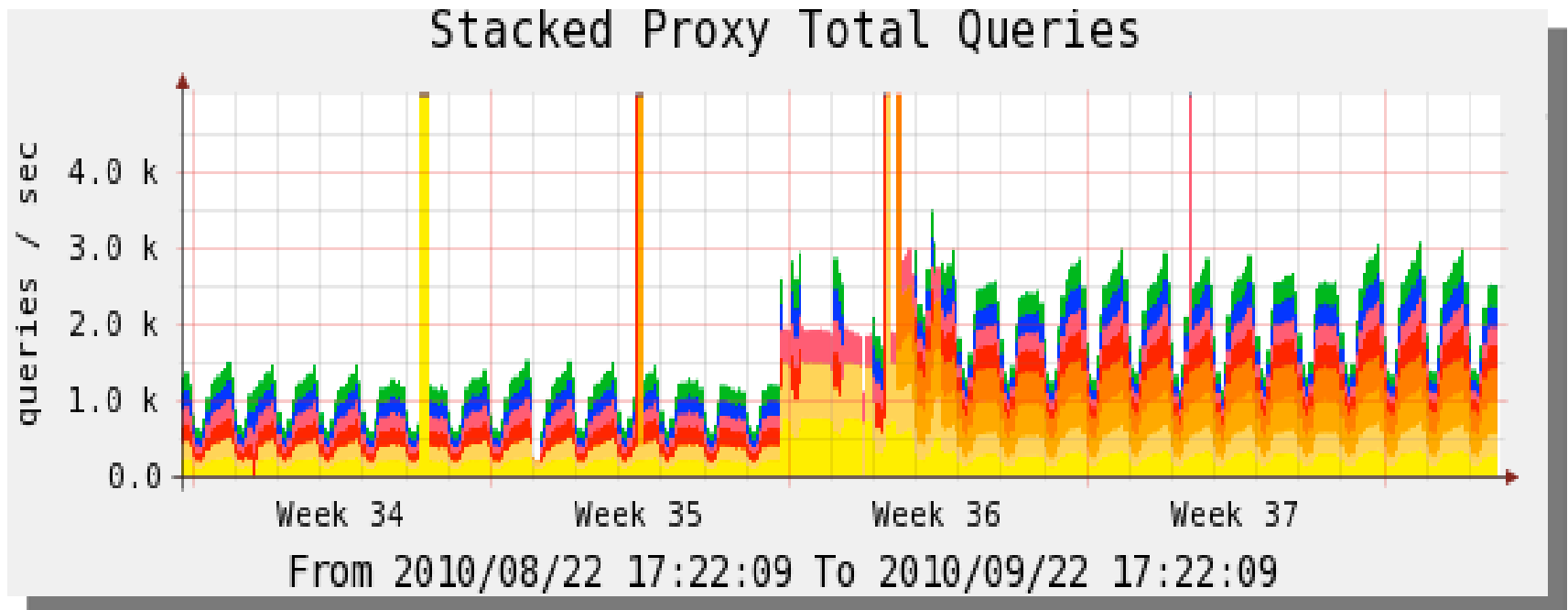
Whois-RWS Statistics – v6



Whois/Whois-RWS Traffic Loads

- Interesting traffic loads
- Now versus 6 months ago
- **At ARIN XXV**
 - 50% of the queries are self-referential
 - 192.168.2.5 asking for 192.168.2.5
 - Most are singleton queries
 - Was increasing over the last year
 - Started noticing decrease after ARIN XXV

Whois-RWS Statistics- Uptick

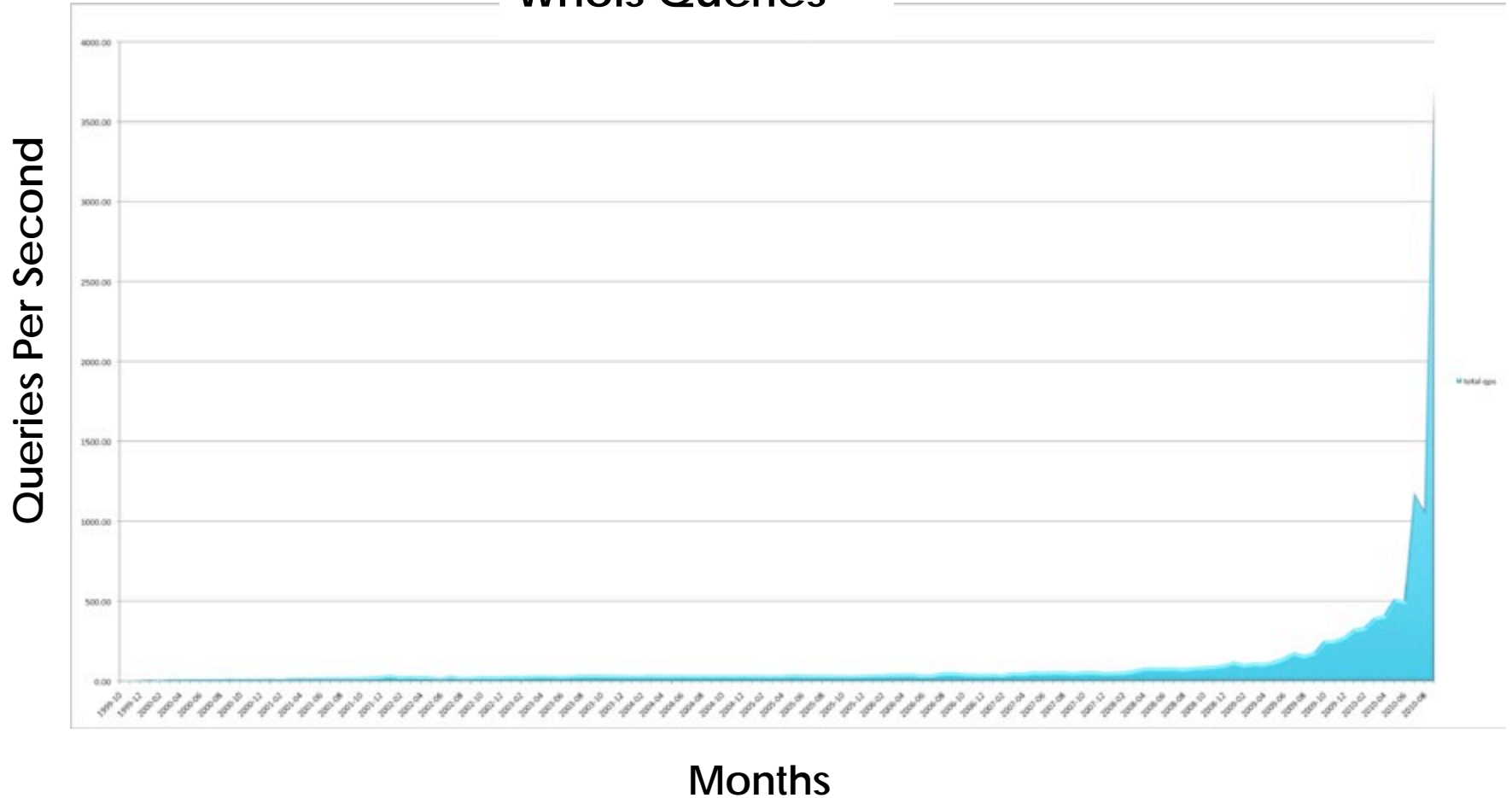


Whois-RWS Traffic Loads

- **In September**
 - Saw a rise in traffic day after Google announced OpenID collaboration with Yahoo
 - Traffic spiked 300%
 - Top ten sites being login sites for various providers – Yahoo, AOL, and Facebook
 - Approximately 5600 queries per second during the height of the day

WHOIS Statistics

Whois Queries



Development/QA

- Improvements to existing systems
- Whois-RWS Rollout
- Four ARIN Online releases since ARIN XXV

ARIN Online Releases

- Improved organization record handling
- POC Validation - implementation of policy
- Bulk Whois report download
- RESTful web service for Whois data
- API Key generation
- Specified Transfer Listing Service

Changes are Coming!

- Big structural changes are in the works
- Because dual systems (serving both legacy and modern provisioning) would be expensive, confusing, and time-consuming
 - DNS Name server requests need to be done online – no more templates
 - API-Keys on templates

Upcoming ARIN Online Release

- Next Public release will incorporate multiple critical features:
- **Improved provisioning**
 - More secure templates using API Key
 - RESTful API
- **Zone Management**
 - UI for name server management
 - DNSSEC Provisioning

Upcoming ARIN Online Release

- **RPKI Services**

- ARIN to sign (assert) directly assigned/allocated resources
- Other related services such as storing signatures/assertions for downstreams under review
- Board of Trustees, along with ARIN General Counsel, are evaluating risks associated with these services
- ARIN seeking input from community regarding the these services

ARIN Online - Zone Management

ARIN
American Registry for Internet Numbers

SEARCH WHOIS need help?

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

IPV6 ENABLED

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	HOSTNAMES OF NAMESERVERS
0.112.64.in-addr.arpa.	Nameserver 1: <input type="text" value="NS1.WEB-ZERO.NET"/>
1.112.64.in-addr.arpa.	Nameserver 2: <input type="text" value="NS2.WEB-ZERO.NET"/>
2.112.64.in-addr.arpa.	Nameserver 3: <input type="text" value="NS3.FOO.COM"/>
3.112.64.in-addr.arpa.	Nameserver 4: <input type="text" value="NS4.BAR.COM"/>
4.112.64.in-addr.arpa.	Nameserver 5: <input type="text" value="NS5.BLING.COM"/>
5.112.64.in-addr.arpa.	Nameserver 6: <input type="text"/>
6.112.64.in-addr.arpa.	Nameserver 7: <input type="text"/>
7.112.64.in-addr.arpa.	Nameserver 8: <input type="text"/>
8.112.64.in-addr.arpa.	Nameserver 9: <input type="text"/>
9.112.64.in-addr.arpa.	Nameserver 10: <input type="text"/>
10.112.64.in-addr.arpa.	Nameserver 11: <input type="text"/>
11.112.64.in-addr.arpa.	Nameserver 12: <input type="text"/>
12.112.64.in-addr.arpa.	Nameserver 13: <input type="text"/>
13.112.64.in-addr.arpa.	
14.112.64.in-addr.arpa.	

Upcoming Challenges/Research

- **Large Release coming**
 - RPKI moving from pilot to production
 - DNSSEC to be fully implemented
 - ARIN Online IPv4 and IPv6 resource management
 - RESTful provisioning
- **Finding out cause of Whois-RWS traffic growth**
- **Improving the integration of IRR**
- **Completing some outstanding member service requests (ie. whowas service, operational test and evaluation environment)**
- **Replacement of legacy gear**

Thank You for your Time and Attention

Questions?