

ARINI
12-14 APRIL 2021



Software Update

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Agenda

A bit of development history

Prioritization

What we have done since ARIN 46

What we plan to do for the remainder of 2021



Development History

History

ARIN Engineering moved from a waterfall development model to Agile starting in 2009

Our first sprint was completed in Dec 2009

- We have completed 170 sprints since that time
- Sprint durations are now 4 weeks with a 2 week release hardening sprint just prior to deployment
- 67 planned releases of software since 2008

Most releases now are no longer customer impacting



Prioritization

Prioritization

Factors that influence priorities:

- Board of Trustee initiatives
- Legal and regulatory
- Ratified policies
- ARIN Consultation and Suggestion Process (ACSP)
- Operating plan objectives
- Defects, maintenance, and upgrades
- Environment changes
- Customer feedback (via the feedback button)
- Customer Survey
- Mailing list requests



What We Have Completed Since ARIN 46



Themes

- Decrease technical debt
- Continue to iterate on IRR
- Upgrade backend services and monitoring

What We did since ARIN 46 - External

- Roll out base-level API for IRR
- New version of RDAP Bootstrap Server software released (github) including Docker image available
- Increase CRL limits in RPKI
- Fix delegated RPKI issue for OT&E so customer doesn't have to request help from RSD after monthly refresh
- Update RDAP bootstrap endpoints in nicinfo & fix some bugs
- Don't send annual validation emails to reassignment POCs
- Upgrade to CentOS 7
- Remove all NetApp appliances
- Remove SSL 1.1 support
- Add captcha to ARIN Online login process
- Anycasted a very busy DNS secondary box
- Moved board and AC support to a cloud-based solution
- Service status dashboard

Service Status Dashboard

We are now displaying our system status on the ARIN website at:

<https://arin.statuspage.io/>

- Outage notifications will be displayed here
- You can subscribe to receive email, sms, slack notifications, rss feeds, or webhooks

The screenshot displays the ARIN Service Status Dashboard. At the top, the ARIN logo and "American Registry for Internet Numbers" are visible, along with a "SUBSCRIBE TO UPDATES" button. A prominent green banner states "All Systems Operational". Below this, the "About This Site" section explains that this page provides updates on service status and includes a link to report service issues: <https://account.arin.net/public/service-issue>. The main section shows four service categories, each with a 90-day uptime chart and a "100.0 % uptime" label:

- Provisioning Services:** Operational, 100.0 % uptime.
- Communication Services:** Operational, 100.0 % uptime.
- Registry Services:** Operational, 100.0 % uptime.
- Reporting Services:** Operational, 100.0 % uptime.

Each chart is labeled "Uptime over the past 90 days" and "View historical uptime".

Past Incidents
Apr 8, 2021
No incidents reported today.

What We did since ARIN 46 - Internal

- Upgrade of Secure64 DNSSEC appliance
 - Will start rolling to a more modern algorithm
- Lots of tech debt on ARIN software
 - Management application
 - Zone generator
- Reporting/analysis of third-party security issues within ARIN Online
 - Dependency checker
 - SonarQube
- Better security monitoring
- Focus on moving internal services into the cloud



What We Have in Plan

Plans for 2021 - External

- Iterate on the IRR
- Premier Services Support
- Add new features to RPKI
 - Adding RRDP instances in the cloud
 - Support for a Hosted repository service for Delegated customers
 - Synchronization of IRR and RPKI objects
- Improved login security following NIST SP800-63b guidelines integrating Have I Been Pwned (HIBP) password checking
- Integration of a new third-party election system
- Roll all the in-addr zones with a more modern algorithm
- Update our load balancers to the latest release and add SSL 1.3 support

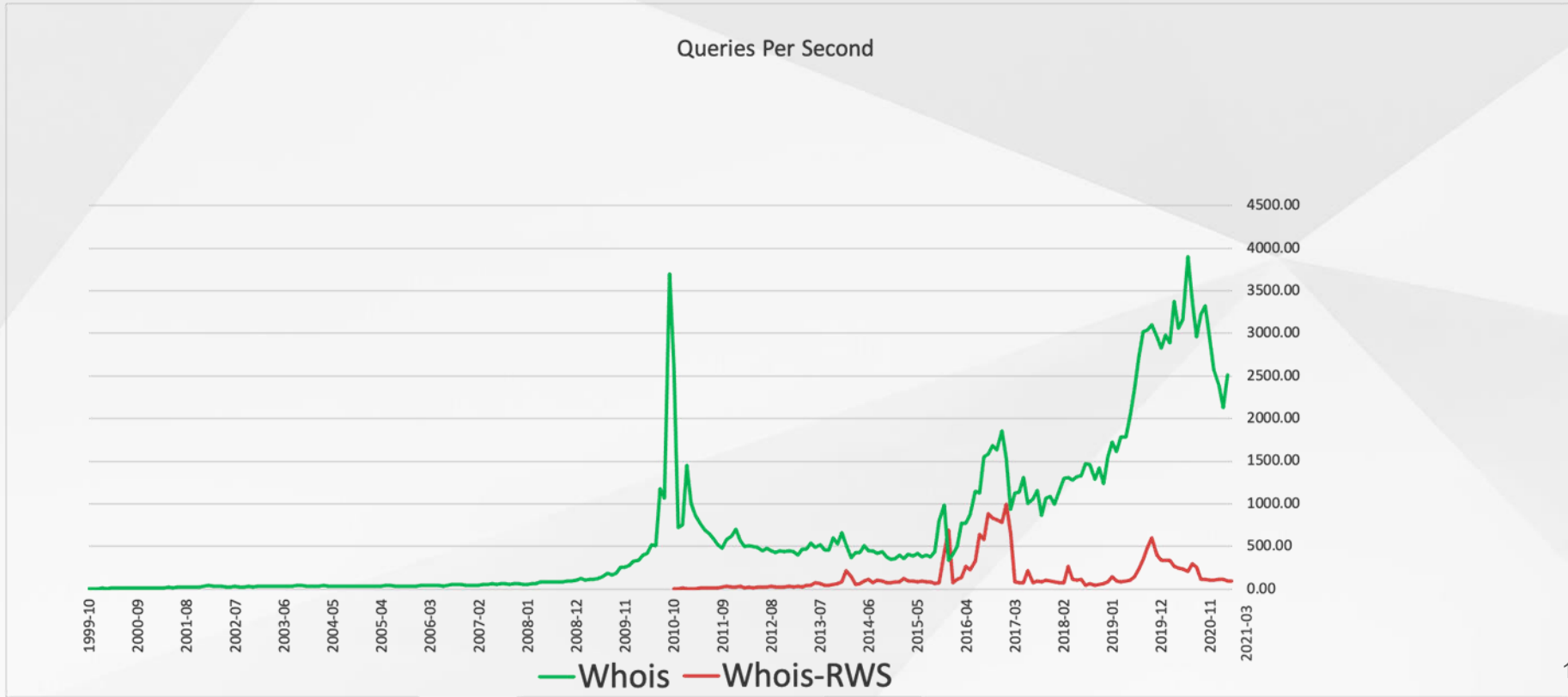
Plans for 2021 - Internal

- Move more services into the cloud that are currently hosted by ARIN
- Upgrade our PBX
- Move existing CentOS 6 boxes to CentOS 7
- Reduction of more application software technical debt
- Update internal Windows software
- Make billing application fully redundant
- Upgrade our security video monitoring gear
- Harden laptop support for zero-touch management
- Upgrade our monitoring system
- Improvements to our high-availability infrastructure
- Hardware refresh of our directory service infrastructure

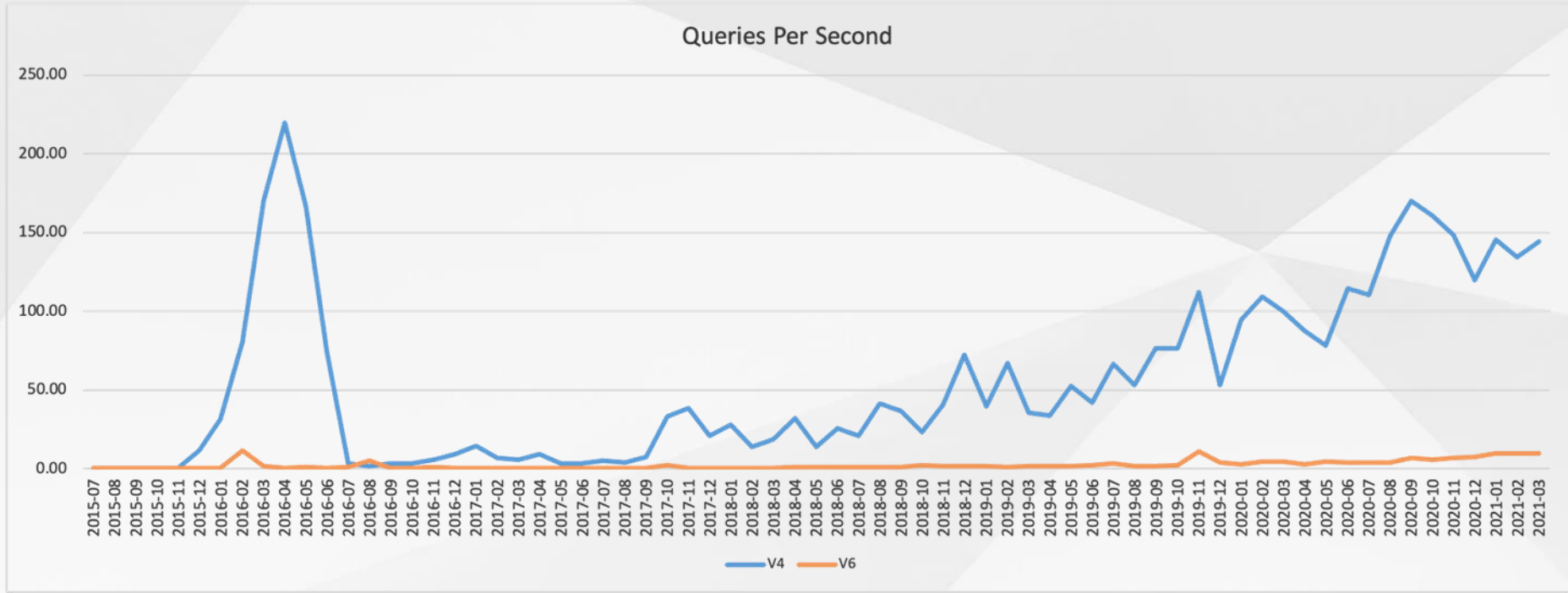


Bonus

Whois and Whois-RWS



RDAP



Thanks!

Any
Questions?