RDAP Basics

- REST – JSON over HTTPS
  - HTTPS for security and authentication
  - JSON for structure and I18N
- Supports both Domain Name Registries and IP Address Registries

RDAP  RIR-centric operations are a superset of DNR queries and data are modeled such that operations, for the most part.
JSON Response

Searches

Lookups
Bootstrapping

Client → Bootstrap Server

Ask ARIN → 45.65.1.1?

Ask APNIC → 45.65.1.1?

JSON

45.65.1.1?

ARIN → APNIC

#ARIN43
Since ARIN 41...
IETF Activities

- Object Tags -> RFC 8521 (yay!)
- Adopted Work
  - Federated Authentication with OpenID
  - Sorting and Paging of Results
  - Reverse Search
- Under discussion
  - jCard replacement
  - RDAP Mirroring (APNIC)
  - Registrar ID to URL Mapping
Object Tagging

• Enables bootstrapping of POCs
• Formalizes method used by ARIN's RDAP bootstrap server

Currently Registered Object Tags

<table>
<thead>
<tr>
<th>ARIN</th>
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<tr>
<td>LACNIC</td>
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RDAP Mirroring

• Potential
  • RIRs could backup each other
  • Distributing data for cloud operations
• Thought Leader: APNIC
RIR (NRO ECG) Activities

- RDAP Alignment
  - 16 items identified
    - Categorized as near-term, medium-term, long-term regarding priority
- Meeting at IETF 104 Prague
@ARIN

- New RDAP query to find networks by their Origin AS
- Networks have CIDR extension
- https://teamarin.net/2018/09/07/a-new-use-for-rdap/
Unified Site Search uses RDAP

- New unified search
- Directs your search to website search of ARIN.NET or Whois search using RDAP based on an algorithm

Search ARIN Site or Whois

Mark Mason
@CCIEMark

Totally digging the new faster @TeamARIN site and search. Now I don’t have to use @henet search daily

9:17 AM · Mar 6, 2019 · Twitter for iPhone
search.arin.net/rdap

• ACSP 2016.03 : Provide Web UI for RDAP
• Growing in popularity
  • Now 30% of all arin.net pageviews are the RDAP page
• Doesn't just search ARIN registry... searches all RIRs.
  • And even domains
• Old Web UI still available at whois.arin.net
New Documentation

Whois/Registration Data Access Protocol (RDAP)

On this page
- Overview
  - How does RDAP differ from Whois?
  - Understanding Bootstrapping
  - Operating Your Own Bootstrap Server
- How to Get Registration Information Using RDAP
  - Using the Whois/RDAP Web Interface
  - Using an RDAP Client
  - NicInfo Query Structure
  - Using Query URLs

Overview
Registery Data Access Protocol (RDAP) is a Whois alternative for querying resource registration data from Domain Name Registries (DNRs) and Regional Internet Registries (RIRs) like ARIN. When you use RDAP clients to query registration data,
ICANN Activities

• RDAP was a very big topic at ICANN 64
gTLD Whois and GDPR

Will GDPR be the death of WHOIS?

Two cybersecurity and privacy attorneys recently argued that the General Data Protection Regulation (GDPR) will interfere with the availability of the WHOIS database and will seriously hinder the efforts of law enforcement and security researchers to track down malware peddlers, hackers and other online criminals.

Whois is dead as Europe hands DNS overlord ICANN its...
Domain Registrars to Implement RDAP

ICANN issued an industry-wide six-month deadline for the deployment of the Registration Data Access Protocol (RDAP) — a replacement for the WHOIS protocol. Kevin Murphy reporting in Domain Incite: "Registration Data Access Protocol fulfills the same function as Whois, but it's got better support for internationalization and, importantly given imminent work on Whois privacy, tiered access to data. ... The registries and registrars knew it was coming and told ICANN this week that they're happy for the 180-day implementation deadline to come into effect." Domain registries and registrars are required to implement an RDAP service by 26 August 2019, says ICANN.
ICANN Creates TSG

• Technical Study Group to create unified access model to non-public data
• Based on RDAP and OpenID for access only by authorized requestors
• Begun in December – Will finish in April
• By invitation only – ARIN invited for technical expertise
# DNR Deployments

<table>
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<tr>
<th>ARIN 41</th>
<th>ARIN 43</th>
<th>CentralNIC</th>
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<td>.Fresenius</td>
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- ARIN 41 includes ccTLDs: .ar, .cr, .cz, .br
- ARIN 43 includes ccTLDs: .ar, .cr, .cz, .br, .tz
- CentralNIC includes: .allfinanz, .art, .basketball, .bmw, .college, .contact, .desi, .dhl, .dvag, .etisalat, .fans, .feedback, .forum, .Fresenius

+ 37 more
Thank you.

Any Questions?