



The Current State of RDAP

Mark Kosters & Andy Newton, ARIN

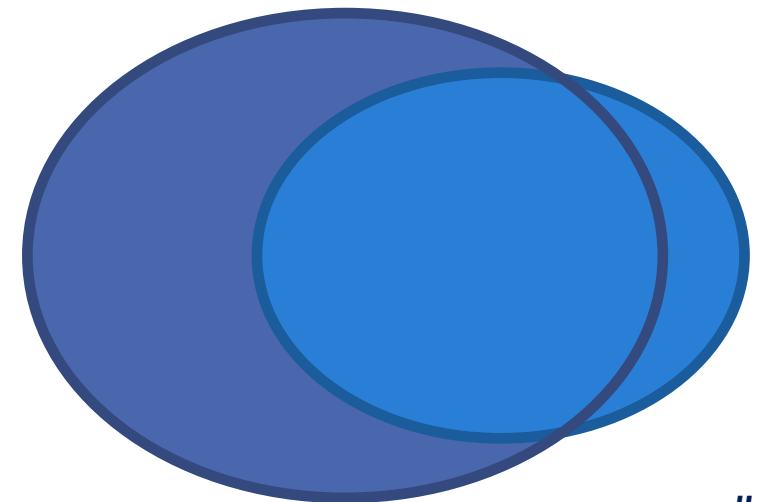




RDAP Basics

- 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



Search
Results

Lookups

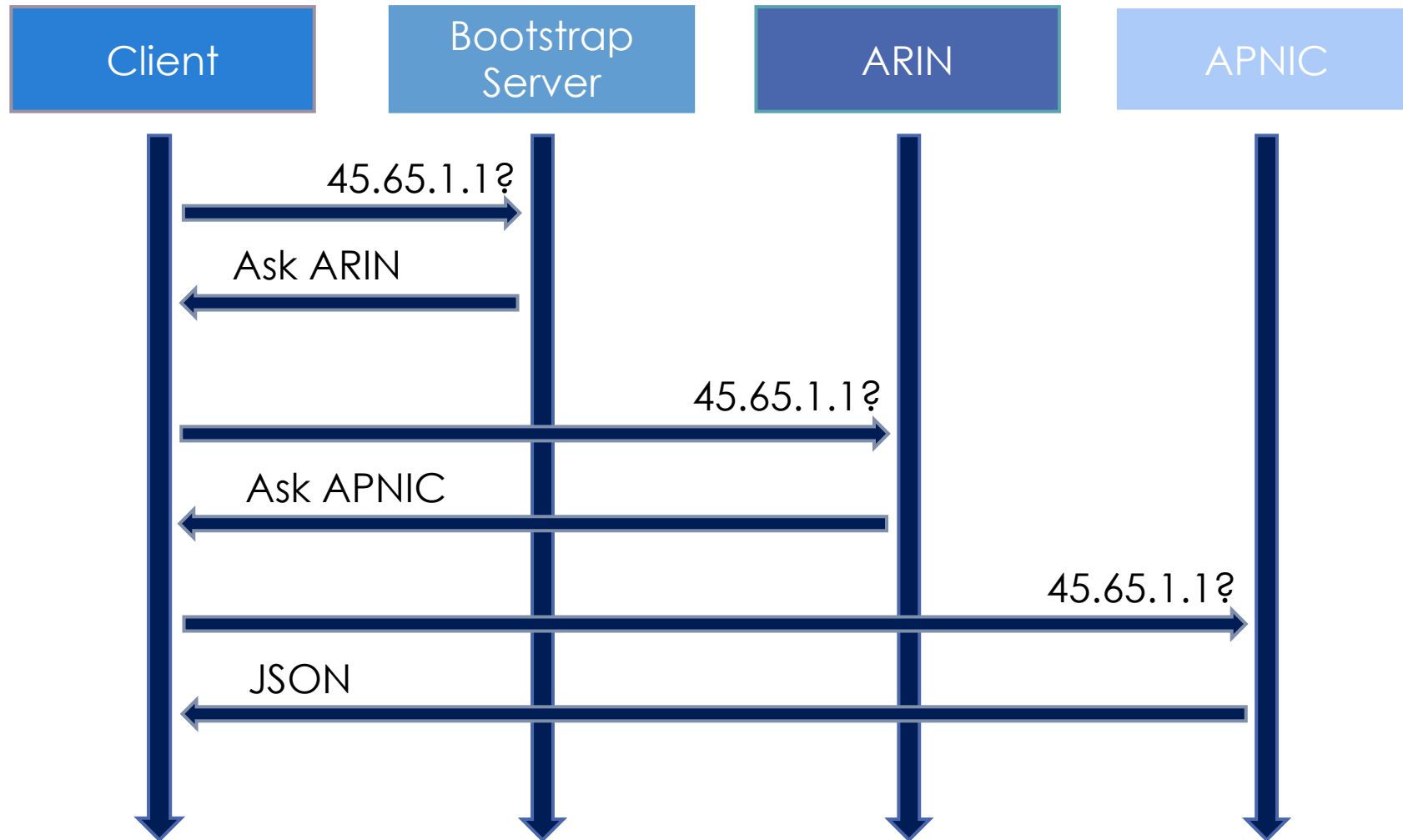


Object
Classes

Common
Data
Structures

Common
Data
Types

Bootstrapping





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

ARIN

LACNIC

APNIC

RIPE

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/>



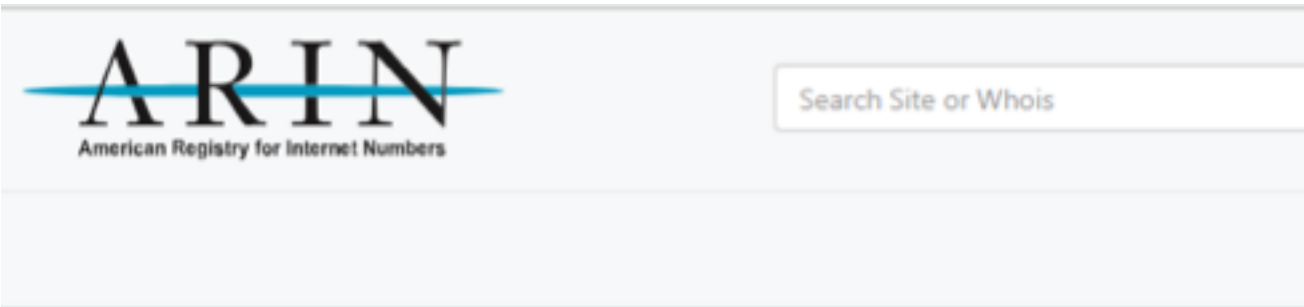
A NEW USE FOR RDAP

September 7, 2018

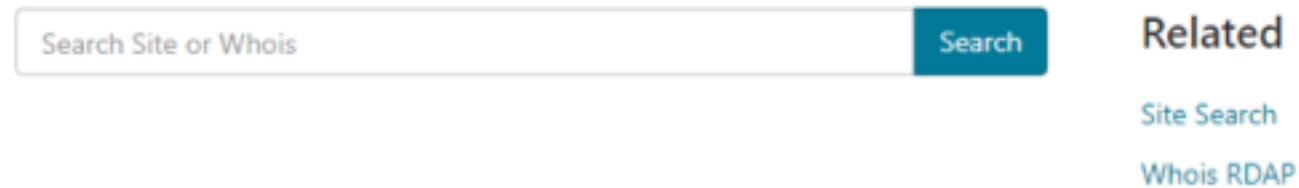
A New Use For RDAP
By [Andy Newton](#) - Chief Engineer, ARIN

As you may already know, [Registry Data Access Protocol \(RDAP\)](#) is a Whois alternative for querying resource registration data from Domain Name Registries (DNRs) and Regional Internet Reaistries (RIRs) like us. You can use

Unified Site Search uses RDAP



Search ARIN Site or Whois



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



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

ARIN Whois/RDAP

swanpipe.com Search

Search Filter: Domain » Search www.arin.net instead

Set query type:

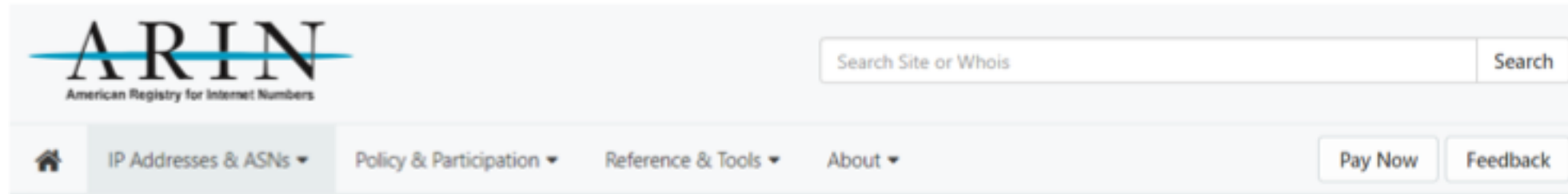
- Automatic (auto-detect query type)
- Domain (in-addr.arpa or ip6.arpa)
- Entity (e.g. Handle or ID for a Contact, Organization, POC, or Maintainer)
- IP Address or CIDR range
- Search Entities by Full Name
- ASN (Autonomous System Number or Autnum)
- Origin AS

"swanpipe.com"

Domain Search Result

Source Registry	not provided
Handle	2324685148-VRSN
Name	swanpipe.com
Registration	Mon, 22 Oct 2018 17:50:57 GMT (Mon Oct 22 2018 local time)
Expiration	Tue, 22 Oct 2019 17:50:57 GMT (Tue Oct 22 2019 local time)

New Documentation



Home > IP Addresses & ASNs > IP & ASN Registry Services > Using Whois > Whois/Registration Data Access Protocol (RDAP)

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

Looking for instructions on using ARIN's Whois/RDAP search? Visit [ARIN's Whois page](#).

ARIN Whois/RDAP

Search Filter: Automatic Search www.arin.net instead

Overview

Registry 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,

Using Whois

Whois/Registration Data Access Protocol (RDAP)

Whois-RWS

Reporting a Whois Inaccuracy

Whois Terms of Use

Related

[RDAP Infosheet](#)

[Community Software Repository](#)

[RDAP FAQ \(Github\)](#)

ICANN Activities



- RDAP was a very big topic at ICANN 64



gTLD Whois and GDPR



 **Zeljka Zorz**, Managing Editor
May 31, 2018



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.



16 WHOIS Privacy Plan Draws Fire

SEP 13

Internet regulators are pushing a controversial plan to restrict public access to **WHOIS** Web site registration records. Proponents of the proposal say it would improve the accuracy of WHOIS data and better protect the privacy of people who register domain names. Critics argue that such a shift would be unworkable and make it more difficult to combat phishers,



Data Centre ► **Networks**

Whois is dead as Europe hands DNS overlord ICANN its

Can we still have a GDPR moratorium, asks US domain-name body

Domain Registrars to Implement RDAP

Domain Registrars Given a Six-Month Deadline to Implement Registration Data Access Protocol (RDAP)

By CircleID Reporter

Mar 01, 2019 10:44 AM PDT | [Comments: 0](#) | [Views: 3,781](#)

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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

Details

ICANN Blog

Author: Ram Mohan, Coordinator, Technical Study Group on Access to Non-Public Registration Data

1 Feb 2019

Technical Study Group Advances Draft Model

in f t d e +



The Technical Study Group on Access to Non-Public Registration Data recently spent three days in Washington, D.C. engaged in intense and collegial discussions to develop a [detailed draft](#) of the Technical Model for Non-Public Registration Data. Nine of our ten members worked together with representatives from the ICANN organization to refine the requirements necessary for a model. We also discussed how to simplify the user experience for such a system and added new assumptions to our [charter](#). We are working hard to share the draft Technical Model with the [ICANN](#) community before ICANN64 in Kobe, Japan.

DNR Deployments



ARIN 41

- VeriSign
 - .com
 - .net
- ccTLDs
 - .ar
 - .cr
 - .cz
 - .br

ARIN 43

- VeriSign
 - .com
 - .net
- Afilias
 - .info
- Neustar
 - .biz
- ccTLDs
 - .ar
 - .cr
 - .cz
 - .br
 - .tz
- CentralNIC
 - .allfinanz
 - .art
 - .basketball
 - .bmw
 - .college
 - .contact
 - .desi
 - .dhl
 - .dvag
 - .etisalat
 - .fans
 - .feedback
 - .forum
 - .Fresenius
- .Fresenius
 - .frl
 - .fun
 - .gent
 - .host
 - .icu
 - .ink
 - .kfh
 - .kpn
 - .lidl
 - .love
 - + 37 more



Thank you.

Any Questions?