WEIRDS @ RIPE

Ed Shryane
Database Group, RIPE NCC

- Limited data model

  - RPSL (Routing Policy Specification Language) (RFC 2622) is essentially free-form text.

- Not internationalised

  - Originally US-ASCII, RIPE Whois is latin-1 (ISO-8859-1)

- No Authentication

  - Not possible to do authenticated queries

- No redirection

  - canonical datasources (other RIRs) are mirrored

  - no bootstrapping

- Command-line oriented (port 43)

RIPE
NCC

- Alternative to Whois

- Lookup Only (updates are not supported)

- Names and Numbers

  - RIRs: numbers (resources)

  - TLD: names

- Uses Standard Transport and Data Protocols

- WEIRDS - The Service

  - "Web Extensible Registration Data Service"

- RDAP - The Protocol

  - "Registration Data Access Protocol"

- IETF Working Group

  - http://datatracker.ietf.org/wg/weirds/

  - Formed in April 2012

What are the Benefits of RDAP?

- Builds on Existing Standards

  - Uses HTTP as transport protocol

    - Query parameters in URL

    - Standard Status Codes in Response

    - Support for transport security

    - Support for authentication

    - Supports redirection

    - RDAP Uses RESTful URI scheme

  - Uses JSON as data format

    - Structured format, well understood

    - Easy for Developers to work with

RIPE
NCC

- **aut-num**

- IP (**inetnum**, **inet6num**)

- Entity (**organisation**, **person**, **role**)

- Nameserver

  - Not implemented by RIPE NCC

- Domain

  - Only reverse domains in RIPE Database

- Beta deployment since July 2013

  - https://rdap.db.ripe.net/

- Live data (up to date)

- Java, open source

  - https://github.com/RIPE-NCC/whois

- Participated in IETF WG Interop Testing

- Collaboration with APNIC on implementation

```
inetnum:        193.0.0.0 - 193.0.7.255
netname:        RIPE-NCC
descr:          RIPE Network Coordination Centre
org:            ORG-RIEN1-RIPE
descr:          Amsterdam, Netherlands
remarks:        Used for RIPE NCC infrastructure.
country:        NL
admin-c:        JDR-RIPE
admin-c:        BRD-RIPE
tech-c:         OPS4-RIPE
status:         ASSIGNED PI
source:         RIPE # Filtered
mnt-by:         RIPE-NCC-MNT
mnt-lower:      RIPE-NCC-MNT
```

RIPE
NCC

```
{ "handle" : "193.0.0.0 – 193.0.7.255",
  "startAddress" : "193.0.0.0/32",
  "endAddress" : "193.0.7.255/32",
  "ipVersion" : "v4", "name" : "RIPE-NCC",
  "type" : "ASSIGNED PI",
  "country" : "NL",
  "entities" : [ {
    "handle" : "OPS4-RIPE",
    "vcardArray" : [ ],
    "roles" : [ "abuse" ],
    "entities" : [ ] } ],
  "remarks" : [ {"description" : [ "RIPE Network Coordination Centre", "Amsterdam, Netherlands" ]} ],
  "links" : [ ],
  "events" : [ {"eventAction" : "last changed", "eventDate" : "2013-03-19T16:24:19Z"} ],
  "rdapConformance" : [ "rdap_level_0" ],
  "notices" : [ {"title" : "Filtered", "description" : [ "This output has been filtered." ]},
   {"title" : "Source","description" : [ "Objects returned came from source", "RIPE" ]},
   {"title" : "Terms and Conditions",
     "description" : [ "This is the RIPE Database query service. The objects are in RDAP format." ],
     "links" : [ ]} ],
  "port43" : "whois.ripe.net"}
```

RIPE
NCC

WEIRDS-WG Progress

- Bootstrap*

- JSON Response

- Object Inventory

- RDAP Query*

- RDAP Security (DONE)

- Redirects

- Using HTTP (DONE)