RDAP: Brave New Protocol?
RDAP: standards and possibilities

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Long–long ago, far–far away away WHOIS protocol appeared…

- *First specification: RFC 812 (1982)*
- *Current specification: RFC 3912 (2004)*
- 43 port
- *Plain text, ASCII only*
- *Too flexible format*
World has changed

- Need new protocol
- IDN names
  - Privacy Laws
  - Need data model
  - Need new protocol
RDAP: specification

- **RFC 7480**: HTTP Usage in the Registration Data Access Protocol (RDAP)
- **RFC 7481**: Security Services for the Registration Data Access Protocol (RDAP)
- **RFC 7482**: Registration Data Access Protocol (RDAP) Query Format
- **RFC 7483**: JSON Responses for the Registration Data Access Protocol (RDAP)
- **RFC 7484**: Finding the Authoritative Registration Data (RDAP) Service
- **RFC 7485**: Inventory and Analysis of WHOIS Registration Objects

**Authors**: APNIC, ARIN, CNNIC, ICANN, LACNIC, Verisign, Viagenie
RFC 7480: HTTP Usage in the Registration Data Access Protocol

• HTTPS is a must!
• Strict specification
• All benefits of HTTP(S)
• Web service
  • Load balancing
  • Rate limits
• HTTP error codes
RFC 7481: Security Services for the Registration Data Access Protocol

- No native security, use other protocol levels
- Authentication: HTTP, OpenID, OAuth...
- Authorization: Access levels
  - Basic Data
  - Private Data
- Data integrity
  - MAC
**RFC 7482: Registration Data Access Protocol Query Format**

**RFC 7483: JSON Responses for the Registration Data Access Protocol (RDAP)**

- **RESTful requests**
  - [https://example.com/rdap/ip/192.0.2.0/24](https://example.com/rdap/ip/192.0.2.0/24)
  - [https://example.com/rdap/domain/xn--fo-5ja.example](https://example.com/rdap/domain/xn--fo-5ja.example)

- **JSON responses**
  - IANA registry [https://data.iana.org/rdap/](https://data.iana.org/rdap/)
  - See also RFC 7485: Inventory and Analysis of WHOIS Registration Objects
RDAP: Future services

- Regexp search
- Historical data
- Sorting and paging
- ...

Source: https://datatracker.ietf.org/wg/regext/documents
RDAP: Relevant links

- **Entry point:** [https://about.rdap.org/](https://about.rdap.org/)
- **APNIC:** [https://www.apnic.net/about-apnic/whois_search/about/rdap/](https://www.apnic.net/about-apnic/whois_search/about/rdap/)
- **ICANN:** [https://www.icann.org/resources/pages/rdap-gtld-profile-2016-07-26-en](https://www.icann.org/resources/pages/rdap-gtld-profile-2016-07-26-en)
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Questions?

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