Help to use the RDAP

This document provides help on how to use the RDAP on the .alstom gTLD

Registration Data Access Protocol (RDAP) is the successor of WHOIS. Like WHOIS, RDAP provides access to information on Internet resources (domain names, IP addresses, etc.). The RDAP server will enable you to query objects related to domain name operations (domain name, name server, registrar) and obtain information about these objects.

Document content

Introduction

The Registration Data Access Protocol (RDAP) is the successor to WHOIS. Like WHOIS, the RDAP service provides access to information about Internet resources (domain names, IP addresses, etc.).

Unlike WHOIS, the RDAP service provides:
- Data that can be manipulated by computer programs.
- Differentiated access to data
- Queries and responses structured in a uniform manner across all RDAP services

The RDAP server of the .alstom Registry will allow you to query objects related to the operation of domain names (domain name, name server, registrar) and obtain information about these objects.

RDAP server responses are in JSON format, which is difficult for humans to read directly. For the general public, there are online RDAP clients (e.g. https://about.rdap.org/) or the address https://whois.nic.alstom, which formats the RDAP response so that it can be read by anyone.

Development of an RDAP client

The RDAP protocol is based on HTTP. Your client will therefore send HTTP requests to the target TLD server in order to retrieve the desired information in JSON format.

We invite you to consult all the RFCs provided below for more details.

http status codes

The HTTP code is found in the server's response, in what is called the 'header' (for example, set the verbose option with the curl command to retrieve the header and HTTP code).

- 200 - Request status OK
- 400 - Request status INVALID (invalid domain name format)

o Invalid domain name

▪ Request URL: https://rdap.nic.alstom/domain/ab--go.alstom

▪ Server response: {

```
"description": [
  "bad domain name"
],
"errorCode": 400,
"notices": [
  {
```

- 404 - Request status INVALID (malformed URL, object not found, etc.)

o Malformed URL

- Request URL: https://rdap.nic.alstom/domain/xn--cafe.alstom

Server response : {

```
"description": [
  "bad domain name"
],
"errorCode": 400,
"notices": [
  {
```

Reference RFCs

- RFC 7480: HTTP Usage in the Registration Data Access Protocol (RDAP)
- RFC 7481: Security Services for the Registration Data Access Protocol (RDAP)
- RFC 9083: JSON Responses for the Registration Data Access Protocol (RDAP)
- RFC 9224: Finding the Authoritative Registration Data (RDAP) Service
- RFC 8056: Registration Data Access Protocol (RDAP) Object Tagging
- RFC 8977: Registration Data Access Protocol (RDAP) Query Parameters for Result Sorting and Paging
- RFC 8982: Registration Data Access Protocol (RDAP) Partial Response
- RFC 9082: Registration Data Access Protocol (RDAP) Query Format

- RFC 9536: Registration Data Access Protocol (RDAP) Reverse Search
- RFC 9537: Redacted Fields in the Registration Data Access Protocol (RDAP) Response

Additional ICANN documentation

RDAP RESPONSE PROFILE 21-02-2024 : https://www.icann.org/en/system/files/files/rdap-response-profile-21feb24-en.pdf
RDAP TECHNICAL IMPLEMENTATION GUIDE 21-02-2024 :
https://www.icann.org/en/system/files/files/rdap-technical-implementation-guide-21feb24-en.pdf

Available URLs

▪ Domain name : https://rdap.nic.alstom/domain/domainname.alstom
▪ Name server : https://rdap.nic.alstom/nameserver/nameserver.alstom
▪ IP research : https://rdap.nic.alstom/nameservers?ip=ipaddress

▪ Registrars:
▪ Query by GURID : https://rdap.nic.alstom/entity/gurid
▪ Query by name : https://rdap.nic.alstom/entity/registrarname or
https://rdap.nic.alstom/entities?fn=registrarname

Internationalisation management (IDN)

The RDAP server accepts queries on domain names and name servers in A-LABEL or U-LABEL formats.
Reminder:
A-LABEL = the domain name encoded in ASCII (beginning with xn--)
U-LABEL = the domain name in Unicode - readable by humans

Using RDAP via your web browser

Queries on domain names

Request format via your browser:
https://rdap.nic.alstom/domain/domainname.alstom

Example

Request URL: https://rdap.nic.alstom/domain/cafe.alstom
Elements present in the RDAP server response:
▪ rdapConformance
▪ objectClassName
▪ handle
▪ ldhName
▪ unicodeName
▪ events
    ▪ eventAction : registration / expiration / last changed / last update of RDAP database

▪ status
▪ entities

- objectClassName
- handle
- status
- port43
- events
- links
- vcardArray
- roles : sponsor / registrar / (with sub-entities representing contacts admin, abuse and technical) / registrant / admin / tech / billing
- publicIds

- secureDNS
  - delegationSigned
  - dsData

- nameservers
  - objectClassName
  - handle
  - status
  - links
  - ldhName
  - ipAddresses
- links
- notices

Queries on registrars

Request format via your browser:
- By registrar name:
https://rdap.nic.alstom/entity/registrarname
- By registrar GURID : https://rdap.nic.alstom/entity/gurid
- By registrar name (alternative) : https://rdap.nic.alstom/entities?fn=registrarname

Example

URL of request : https://rdap.nic.alstom/entity/9998
Elements present in the RDAP server response:

- rdapConformance
- objectClassName
- handle
- events
  - o eventAction : registration / last changed / last update of RDAP database
- status
- vcardArray
- roles : registrar
- publicIds
- entities
  - o links
  - o vcardArray
  - o roles : admin / tech / abuse
- port43
- links
- notices

Queries on name servers

Browser query format:

▪ By name server name: https://rdap.nic.alstom/nameserver/*nameservername.alstom*

▪ By name server IP address : https://rdap.nic.alstom/nameservers?ip=*nameserveripaddress*

Example

URL of request : https://rdap.nic.alstom/nameserver/*ns0.nic.alstom*

Elements present in the RDAP server response:

- rdapConformance
- objectClassName
- handle
- status
- links
- ldhName
- unicodeName
- ipAddresses
- entities
  - objectClassName
  - handle
  - status
  - port43
  - events
  - links
  - vcardArray
  - roles : registrar / sponsor
  - publicIds
- notices