

ICANN's Whois Policy: Registry Obligations

A “What is ICANN's Whois Policy”
Subteam Presentation

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Registry Obligations

They are laid out in Appendix of the Registry Agreement, e.g., for PIR it is Appendix 5.

*“.ORG Agreement Appendix 5
Whois Specifications
(8 December 2006)”*

Available on ICANN's website under Quick Links: Registry Agreements

They include:

“Registry Operator’s Whois service is the authoritative Whois service for all second-level Internet domain names registered in the .ORG top-level domain and for all hosts registered using these names.”

.ORG, Appendix 5, Section 1

- “Registry Operator’s Whois service will be updated on a near real-time basis”
- “The Whois servers shall provide results in ASCII for standard and IDN .ORG domains”
- “Provisions for the detection of abusive usage of Registry Operator’s Whois system (e.g., excessive number of queries from one source), and corresponding protective measures, have been implemented, and Registry Operator may implement further countermeasures against abuse as necessary.”

“The Whois Service substantially consists of two parts:

- Port 43 Whois services
- Web-based Whois services”

.ORG, Appendix 5, Section 1

Web-based service

Registries must provide links:

- at its Registry web site,
- to each ICANN-Accredited Registrar that is a party to its Registry-Registrar Agreement

Port 43

- A text-based, human-readable, query system (accessed from the “run line” of your computer, or from bulk processes)
- An official port assigned by the Internet Assigned Numbers Authority (the IANA).
- Which accesses a built-in set of commands for the processing and response to this this type of query.

Now a deep dive – how do Registries know what commands they must receive, and how to format and provide responses? Some examples are given in the Registry agreement, but the fact is Registries (and Registrars) use a system set up by IETF, the Internet Engineering Task Force... a protocol...

It's a long story....

In 1982 Ken Harrenstien of SRI International wrote and the IETF published “RFC 812,” *NICNAME/WHOIS*.

- The “official specification” of NICNAME/WHOIS;
- It set up a protocol for a “transaction based query/response server” to provide a “netwide directory service to ARPANET users”
- And ran on the “SRI-NIC machine.”

(ARPANET: world's first operational [packet switching](#) network and the core network that came to compose the global [Internet](#) – part of a DARPA (US Department of Defense project))

... continuing

In 1985 RFC 954 replaced RFC 812 as the official NICNAME/WHOIS protocol

... and set out a “new series of commands” for this text-based, “netwide directory service to internet users.”

... continuing

In 2004 RFC 3912 modified RFC 954

With the modern title, *WHOIS Protocol Specification*, it did not replace RFC 954, but removed information “no longer applicable in today’s Internet,” and

Had an interesting security note:

“The WHOIS protocol has no provisions for strong security. WHOIS lacks mechanisms for access control, integrity, and confidentiality. Accordingly, WHOIS-based services should only be used for information which is non-sensitive and intended to be accessible to everyone.”

Why do RFCs matter?

The RFCs formulate the way a system works: what commands the system recognizes, how the requester can delimit or format the responses, and ways the receiver of the request should respond.

➔ For us, these RFCs are the basis of the ***Directory Service*** we often refer to as the Whois.

Directory Service

Note: we have not even talked about Data yet. That's because the majority of Registry Whois requirements are technical specifications – system specifications – of the Directory Service type established by the IETF RFCs.

Finally, Whois Data

The Registry Contract for .ORG sets out a “Domain Record” as the sample fields a Registry must provide, but qualifies it with the notice that the “Registry Operator will not be required to post Whois Output Fields that are not required for posting in the Registrar Accreditation Agreement.”

Here is the sample Output provided for the query: Whoisdomain.org:

Domain ID: D535334-LRMS

Domain Name: WHOISDOMAIN.ORG

Created on: 01-Jan-2005 04:00:00 UTC

Last updated on: 10-Jan-2005 20:25:23 UTC

Sponsoring Registrar: EXAMPLE REGISTRAR
LLC (R63-LRMS) ...

Whois data #2

...

Status: DELETE PROHIBITED

Status: RENEW PROHIBITED

Status: TRANSFER PROHIBITED

Status: UPDATE PROHIBITED

Registrant ID: 5372808-ERL

Name Server: NS01.EXAMPLEREGISTRAR.ORG

Name Server: NS01.EXAMPLEREGISTRAR.ORG

Whois data #3

Registrant ID:

Registrant Name:

Registrant Organization:

Registrant Street

Registrant City

Registrant State/Province

Registrant Postal Code

Registrant County:

Registrant Phone:

Registrant Email

(with same fields for Admin, Tech and in some cases, Billing)

Whois data #4

Registrant ID:

Registrant Name:

Registrant Organization:

Registrant Street

Registrant City

Registrant State/Province

Registrant Postal Code

Registrant County:

Registrant Phone:

Registrant Email

(with same fields for Admin, Tech and in some cases, billing)

Thick Registries

The Registries holding this authoritative, extensive set of domain data are called **“Thick Registries.”**

Registrars are also expected to display this data in their own Whois services as well.

Thin Registries

Verisign negotiated a different deal for .COM and .NET in 1999 (when management of these domain names moved to the then-infant organization ICANN).

Its data display is much narrower:

Thin registry data

Domain Name: VERISIGN-GRS.COM
Registrar: NETWORK SOLUTIONS, LLC.
Whois Server: whois.networksolutions.com
Referral URL: <http://www.networksolutions.com>
Name Server: NS1.CRSNIC.NET
Name Server: NS2.NSIREGISTRY.NET
Name Server: NS3.VERISIGN-GRS.NET
Name Server: NS4.VERISIGN-GRS.NET
Status: REGISTRAR-LOCK
Updated Date: 20-oct-2004
Creation Date: 08-sep-2000
Expiration Date: 08-sep-2008

Thin registry #2

... and the Registrars hold the more detailed identification data fields of Registrant, Admin, Technical.

(Stay tuned for James's presentation...)

That's a lot of information!

Overall

Registries run a **Directory Service** pursuant to the requirements of the RFCs on Whois from the IETF.

What **Data** they access in that service depends on what data they hold under their contracts with ICANN.

- Verisign's two Registries are “**thin**” - .COM and .NET
- Most gTLDs are “**thick,**” and the New gTLDs are expected to be as well.

Disclaimer: this has been a presentation only of the gTLD Whois Policy.

We look forward to Wilfried's return for the IP address policy, and to discussions with the ccTLDs for theirs (which vary by country)

A final requirement

If requested by ICANN, Registry Operator will provide bulk access to up-to-date data concerning domain name and nameserver registrations maintained by Registry Operator in connection with the .ORG TLD...

Section 2, .ORG Appendix 5

That's about it. Questions welcome!