

Whois protocol

Service description

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1 Introduction

1.1 This document

This document describes The Swedish Internet Foundation's Whois service (Whois protocol).

1.2 Abbreviations & definitions

The Swedish Internet Foundation

The Swedish Internet Foundation (Internetstiftelsen) is the name of the independent public-utility organization that is responsible for the internet's Swedish top-level domain, meaning internet addresses ending in .se. In addition to responsibility for administration and the technical operation of the national domain name registry, The Swedish Internet Foundation promotes the positive development of the internet in Sweden.

Registry Services *Registry Services is responsible for the administration and the technical operation of the national domain-name registry.*

Registrar *A business party who has entered into an agreement with The Swedish Internet Foundation for the right to administer a registrant's domain name*

ccTLD *Country Code Top Level Domain*

CENTR *Council of European National Top-level Domain Registries*

Domain administrator

The person responsible for the administration of a national top-level domain

gTLD *Generic Top Level Domain*

ICANN *The Internet Corporation for Assigned Names and Numbers*

Contact *A contact is a registrant. It is connected to one or more domains. Each contact can be identified by a unique Contact ID*

Contact-ID *A contact's identification. A contact-ID is unique and are allocated to the user when a new contact is created and therefore cannot be chosen by the contact him/herself*

Personal data *All types of information that can directly or indirectly be connect to a natural person. Examples of such information are name, personal identity number and phone number.*

RFC *Request for Comments. A memorandum containing Internet standards and other documents regarding the Internet issued by the Internet Engineering Task Force (IETF)*

TLD *Top-level domain.*

Top-level Domain Act

The Swedish National Top-level Domains for Sweden on the Internet Act (SFS 2006:24)

Whois	<i>See Whois protocol.</i>
Whois protocol	<i>Whois is a TCP-based protocol used to allow lookups in a registry, for example, domain names or IP addresses.</i>
DAS	<i>See Free, Domain Availability Service</i>
Free	<i>A service to check if a domain name is available for registration or not.</i>
Captcha	<i>A CAPTCHA is a type of challenge-response test used in computing as an attempt to ensure that the response is not generated by a computer.</i>

1.3 References

- [1]** The Swedish National Top-level Domains for Sweden on the Internet Act (SFS 2006:24)
- [2]** WHOIS recommendations
<http://www.icann.org/committees/security/whois-recommendation-01dec02.pdf>
- [3]** RFC 812 and RFC 954
- [4]** CENTR report – WHOIS Requirements
<https://www.centri.org/docs/2004/02/centr-ga21-whois.pdf>

1.4 About The Swedish Internet foundation

The Swedish Internet Foundation (Internetstiftelsen) is responsible for the internet's Swedish top-level domain, .se and the top-level domain .nu. Its core operation is the registration of domain names, and the administration and technical operation of domain-name registry under .se and .nu. The Swedish Internet Foundation is an independent public utility organization that promotes the positive development of the Internet in Sweden. Through The Swedish Internet Foundation's Internet fund, the Foundation reserves money each year for projects that in various ways contribute to the development and use of the internet. Read more at www.internetstiftelsen.se

2 Introduction

Since July 1, 2006 The Swedish Internet Foundation has come under the national Top-level Domains for Sweden on the Internet Act, the Top-level Domain Act (SFS 2006:24). The Swedish National Post and Telecom Agency is the supervisory authority. The purpose of the Act is to provide the state with an opportunity for insight into and supervision of the domain administration.

According to the Top-level Domain Act, the domain administrator, in this case The Swedish Internet Foundation, is obliged to maintain a register of allocated domain names under the top-level domain. The information specified in the Act must be accessible without charge via the Internet. However, the domain administrator is responsible for personal data and must therefore also take the General Data Protection Regulation (GDPR) into account.

3 About the Whois protocol

Whois is a TCP-based protocol that is used to enable lookups in a register, for example, domain names or IP addresses.

The original purpose of the Whois protocol¹ and the databases this generates, and which contain register information for all who have registered domain names, was to provide system administrators and domain registrants with a possibility to rapidly and efficiently gain contact to secure Internet functionality and security to thereby maintain the stability of the Internet².

3.1 Purpose

The Swedish Internet Foundation main purpose for Whois is to provide information about registered domain names. Furthermore, according to the Top-level Domain Act, The Swedish Internet Foundation is obliged to maintain a register of allocated domain names. It must be possible to obtain this information free-of-charge via the Internet.

¹ Specified in RFC 812 and RFC 954

² See, for example, <http://www.icann.org/committees/security/whois-recommendation-01dec02.pdf>

4 The Swedish Internet Foundation's Whois service

4.1 Introduction

The Whois service can be accessed via the Whois protocol through port 43 and whois.iis.se.

The Swedish Internet Foundation main purpose for Whois is to provide information about already registered domain names and to secure the administrative and technical management of the top-level domain .se and .nu.

The Whois protocol can also be used to find out if a domain name is free or not, but this is not the main objective. A more suitable search tool for this is Free (DAS), <http://free.iis.se/free?q=example.se>

4.2 Target group

The Swedish Internet Foundation Whois service can be used by anyone who is interested in receiving information about a domain name.

The Whois protocol is a command-based interface and more appropriate for experienced users, such as system administrators, and often requires that you install a program with commando prompts where you enter your whois query.

4.3 Structure of the Whois service

There are no established requirements on how information is to be presented in Whois or which search variables are to be used. However, there are certain recommendations that can be read, for example, in CENTR's report on Whois [4].

4.3.1 Search ability

Many existing Whois services only provide access to the register through one search variable – namely, the domain name. However, there is nothing in the Whois protocol that restricts access to domain names only. Depending on how Whois has been implemented, several different search variables can be used based on the data available in the database.

A common addition, over and above the domain name, is a possibility to search on so-called "NIC handles" or Contact-ID. Contact-ID's are used at The Swedish Internet Foundation but it is not possible to search on a Contact-ID using the Whois protocol. If such a search is made you will get a referral to the The Swedish Internet Foundation's website. A search on a Contact-ID on the The Swedish Internet Foundation's website can provide you with contact information regarding the registered contact.

4.3.2 Impeding automatic download ("data harvesting")

The Whois protocol makes it possible to structure output data in a machine-readable manner. This also means that it is relatively easy to automatically retrieve large amounts of data from the register. In CENTR's report on WHOIS [4], it is stated that a TLD is recommended for introducing mechanisms and procedures that impeded automatic download.

To impede automatic download and prevent abuse of information published in Whois, IIS has taken the following action:

- Since the solution using a random code (captcha) cannot be used in a command-based interface (Whois protocol), and therefore cannot obstruct automatic downloading, The Swedish Internet Foundation has chosen not to permit searches on Contact ID via the Whois protocol. Instead, the user receives a referral to our website. Captcha is not used if the search applies to a domain name.
- The Swedish Internet Foundation only permits a certain number of searches in a specific period of time (1 search/second/IP-address). Any abuse may lead to that you are blocked until further notice.
- Multi-criteria searches and other search functions that search on names, e-mail, fax numbers and corporate registration or personal identity numbers are not permitted. See also section 4.3.3.
- Anyone searching in Whois is requested to read the general terms and conditions which applies. The following is contained in the terms and conditions:
 - The Whois service is provided only for information purposes and may not be used for commercial purposes.
 - That the user may not use the information to create their own database.
 - That the information is protected by the Swedish Copyright Act (1960:729) and catalog protection as described by the Swedish Copyright Act (1960:729)

4.3.3 Multiple criteria searches (Bulk access)

In CENTR's report on Whois [4], it is possible to read that Article 29 Working Party finds that bulk access to Whois shall be restricted. Bulk access can, for example, mean that the user, through a search, can retrieve information about several domain names at the same time. The advice against this is mainly based on each Registry's responsibility for data protection, but also in terms of direct marketing and the original aim of the Whois protocol.

In its current form, The Swedish Internet Foundation does not permit bulk access to the Whois protocol.

5 Searching on domain names

When the user searches on a .se or a .nu domain name using the Whois protocol, the following information is displayed:

- **State** – the status of a domain name. Can be one of the following:

Active – the domain name is registered and the registration period has not expired

Expired – the registration period has expired and the domain name has lapsed. The domain name could be deactivated if it is not renewed. In Whois, the “deactivation date” field is displayed, which shows when the domain name will be deactivated.

Deactivated – the registration period has expired and the domain name has been closed from the Internet. Alternatively, a request for deregistration has been received.

In Whois, the fields “date_to_delete” and “date_to_release” are now also shown. The “date_to_delete” field indicates when the domain name may be deregistered. The “date_to_release” field indicates when the domain name can be released for re-registration.

Quarantine – The domain name has been deregistered and placed in quarantine. The “date_to_release” field shows when The Swedish Internet Foundation will release the domain name for re-registration.

System – The domain name is reserved or blocked by The Swedish Internet Foundation. The “reason” box states the reason for the block.

- *domain* – The domain name in question
- *holder* - Contact ID for the registrant
- *created* – Registration date
- *modified* - Date for the most recent change for the domain name
- *expires* - Date of registration period's expiry
- *transferred* – Date when the domain name changed registrar
- *nserver* – Name server
- *dnssec*, “signed delegation” or “unsigned delegation” - Whether the domain name has DNSSEC or not.
- *registry-lock*, “locked” or “unlocked” - Whether the domain name is locked for updates by having registry lock enabled or not.
- *Status* - Shows which EPP statuses a domain has. A domain can have one or more of the following statuses:
 - ok** – the domain name is active, has name servers, and the registration period has not expired
 - inactive** – the domain name has no name servers
 - serverHold** – the domain is deactivated

clientHold – the domain is deactivated; the status is set by the registrar

serverUpdateProhibited – the domain is locked for updates

serverDeleteProhibited – the domain is locked from being deleted

serverTransferProhibited – the domain is locked from being transferred to another registrar

serverRenewProhibited – the domain is locked from being renewed

pendingDelete – the domain has a scheduled deletion date

- *registrar* – The registrar that administers the domain name