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The RWhois Version 1.x Uniform Resource Locator
<[draft-mealling-rwhoisurl-01.txt](#)>

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1. Abstract

RWhois is an Internet directory access protocol, defined in [RFC1714](#) [1] and [RFC2167](#) [3]. This document describes a format for an RWhois Uniform Resource Locator (URL) that will allow Internet clients to have direct access to the RWhois protocol. An RWhois URL will represent a single query to an RWhois server.

2. URL Definition

An RWhois URL begins with the protocol prefix "rwhois" and is defined by the following ABNF grammar.

```
RWHOISURL = "rwhois://" [ SERVER ] "/" [ QUERY ]  
  
SERVER    = 1 *DNSCHAR *["." 1*DNSCHAR] [ ":" 1..65535 ]  
  
QUERY     = [ CLASS ] "?" TERMS  
  
CLASS     = 1*ALPHA  
  
TERMS     = a list of query terms as defined in RFC 1714 and/or RFC2167  
  
DNSCHAR   = ALPHA/DIGIT/DASH  
  
ALPHA     = "a".."z"/"A".."Z"
```

DIGIT = 0..9

DASH = "-"

The RWhois prefix indicates an entry or entries residing in the RWhois server running on the given hostname at the given port number as encoded in SERVER. The default port is TCP port 4321. Any URL-illegal characters (e.g., spaces) MUST be escaped using the % method described in [RFC 1738](#).

The CLASS specifies the RWhois class to which the object(s) in question belong. If the CLASS part of the URL is omitted, all data contained in the server will be searched. Please note that this may cause ambiguities that may not be intended. Those developers encoding RWhois URLs should encode the class if it is available. Note that if the entry resides in the RWhois namespace, it should be reachable from any RWhois server in that tree. If the SERVER part of the URL is missing, it is assumed to be a local query.

If the QUERY is missing then the URL does not identify a particular object, authority-area or class. Instead it simply identifies the server. In the event a client receives such a URL it should connect to the server and initiate its default behavior for connecting to a new and possibly unknown server. Suggested behaviors include checking for that servers available classes and/or authority-areas.

[3. RWhois Version 1.0 vs. 1.5 Interoperability](#)

This URL is meant to work with both the 1.0 and 1.5 versions of the RWhois protocol. There are two issues that developers should be aware of when using this URL.

*** Output Display and Restriction Keywords**

In RWhois Version 1.0, an additional pre-query term could be specified that determined which values were returned to the client. These were derived from the original whois [[RFC954](#)] specification and included items like dump (#), SUMMARY (\$), and FULL (=). Since a URL is used to point to the instance of the object and not its representation, the developer should determine what display type and restriction to use for his/her particular application. Thus, even though this term is considered part of the query in 1.0, it MUST NOT to be used in the URL itself.

*** Authority Areas**

Version 1.5 has a much stronger concept of authority areas. This should be kept in mind when encoding a particular URL so that no ambiguity is encountered for similar objects in different authority areas. Thus, as with CLASS, the authority area should be encoded whenever it is available.

[4. Examples](#)

The following are some example RWhois URLs using the format defined above.

- * An RWhois URL referring to the domain class objects that contain the string "network solutions", available from the local RWhois server.

```
rwhois:///domain?network%20solutions
```

- * An RWhois URL referring to the domain class containing the string "network solutions" on a particular RWhois server. This URL corresponds to a base object search of the domain class.

```
rwhois://netman1.netsol.com/domain?network%20solutions
```

- * An RWhois URL referring to the set of entries found by querying the local RWhois server and looking for a person with the name of "Scott Williamson". Note the % encoded quotes and space.

```
rwhois:///person?name=%42scott%20williamson%42
```

5. Security Considerations

The RWhois URL format does not provide a way to specify security information to use when resolving the URL. It is expected that such requests will either be unauthenticated or the client will be able to negotiate the security requirements. The security implications of resolving an RWhois URL are the same as those of resolving any RWhois query. See the [RFC 1714](#) and [RFC 2167](#) for more details.

6. Prototype Implementation Availability

There is a prototype implementation of the specification defined in this document available. It is the RWhois client, provided in both source and binary forms. See for more details.

7. Bibliography

[1] Williamson, S., and Kusters, M., "RWhois Protocol", [RFC 1714](#), March, 1995.

[2] Berners-Lee, T., Masinter, L., and McCahill, M., "Uniform Resource Locators (URL)", [RFC 1738](#), December, 1994.

[3] Williamson, S., M. Kusters, D. Blacka, J. Singh, K. Zeilstra, "Referral Whois (RWhois) Protocol V1.5", [RFC 2167](#), June, 1997.

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