                  The application/whoispp-query Content-Type

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Abstract

   This document defines the expression of Whois++ protocol (RFC 1835)
   queries within MIME (Multipurpose Internet Mail Extensions) (RFC
   2046) media types. The intention of this document, in conjunction
   with RFC 2958 is to enable MIME-enabled mail software, and other
   systems using Internet media types, to carry out Whois++
   transactions.

1. MIME Registration Information

   To: iana@isi.edu
   Subject: Registration of MIME media type application/whoispp-query

   MIME Type name: Application

   MIME subtype name: whoispp-query

   Required parameters: none

   Optional parameters: none

   Encoding considerations: Any valid MIME encodings may be used

   Security considerations: This content-type contains purely
   descriptive information (i.e., no directives). There are security
   considerations with regards to the appropriateness (privacy) of
   information provided through the use of this content-type, and the
   authenticity of the information so-provided. This content-type

provides no native mechanisms for authentication.

Published specification: this document

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Intended usage: common

2. whoispp-query Syntax

   The following grammar, which uses BNF-like notation as defined in
   [RFC2234] defines the set of acceptable input to a Whois++ server.
   As such, it describes the expected structure of a whoispp-query media
   type object.

   N.B.: As outlined in the ABNF definition, rule names and string
   literals are in the US-ASCII character set, and are case-insensitive.

   whois-command   =   (system-command / terms [":" globalcnstrnts])
                       nl

   system-command =   "constraints" / "describe" / "commands" /
                       "polled-by" / "polled-for" / "version" / "list" /
                       "show" [1*sp bytestring] / "help" [1*sp
                       bytestring] / "?" [bytestring]

   terms   =   and-expr *("or" and-expr)

   and-expr   =   not-expr *("and" not-expr)

   not-expr   =   ["not"] (term / ("(" terms ")"))

   term   =   (generalterm / specificterm / combinedterm)
                       localcnstrnts

   generalterm   =   bytestring

   specificterm   =   specificname "=" bytestring

   specificname   =   "handle" / "value" / "template"

   combinedterm   =   attributename "=" bytestring

   globalcnstrnts =   globalcnstrnt *(";" globalcnstrnt)

```
globalcnstrnt  =    "format" "=" format / "maxfull" "=" 1*digit /
                    "maxhits" "=" 1*digit / "case" "=" casevalue /
                    "search" "=" searchvalue / opt-globalcnst

opt-globalcnst =    "authenticate" "=" auth-method / "language" "="
                    language / "incharset" "=" characterset /
                    "outcharset" "=" characterset / "ignore" "="
                    attriblist / "include" "=" attriblist

localcnstrnts  =    0*(";" localcnstrnt)

localcnstrnt   =    "case" "=" casevalue / "search" "=" searchvalue

format         =    "full" / "abridged" / "handle" / "summary" /
                    "server-to-ask"

auth-method    =    bytestring

language       =    <The language code defined in RFC1766 [ALVE95]>

characterset   =    "us-ascii" / "iso-8859-1" / "iso-8859-2" / "iso-
                    8859-3" / "iso-8859-4" / "iso-8859-5" / "iso-
                    8859-6" / "iso-8859-7" / "iso-8859-8" / "iso-
                    8859-9" / "iso-8859-10" / "UNICODE-1-1-UTF-8" /
                    "UNICODE-2-0-UTF-8" "UTF-8"

                       ;"UTF-8" is as defined in [RFC2279].  This is
                       ;the character set label that should be used
                       ;for UTF encoded information; the labels
                       ;"UNICODE-2-0-UTF-8" and "UNICODE-1-1-UTF-8"
                       ;are retained primarily for compatibility with
                       ;older Whois++ servers (and as outlined in
                       ;[RFC2279]).

searchvalue    =    "exact" / "substring" / "regex" / "fuzzy" /
                    "lstring"

casevalue      =    "ignore" / "consider"

bytestring     =    0*charbyte

attributename  =    1*attrbyte

attriblist     =    attributename 0*("," attributename)

charbyte       =    "\" specialbyte / normalbyte

normalbyte     =    <%d33-255, except specialbyte>
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```
   attrbyte        =   <%d33-127 except specialbyte> /
                                    "\" <specialbyte except
                   ":" " " tab nl>

   specialbyte     =   " " / tab / "=" / "," / ":" / ";" / "\" /
                                    "*" / "." / "(" / ")" /
                   "[" / "]" / "^" /
                                    "$" / "!" / "?"

   tab             =   %d09
   sp              =   %d32        ; space

   digit           =   "0" / "1" / "2" / "3" / "4" /
                                    "5" / "6" / "7" / "8" /
                   "9"

   nl              =   %d13 %d10   ; CR LF
```

   NOTE: Blanks that are significant to a query must be escaped. The
   following characters, when significant to the query, may be preceded
   and/or followed by a single blank:

     : ; , ( ) = !

3. Security Considerations

   Security issues are discussed in section 1.

4. References

   [ALVE95] Alvestrand H., "Tags for the Identification of Languages",
             RFC 1766, March 1995.

   [RFC2234] Crocker, D. and P. Overell, "Augmented BNF for Syntax
             Specifications: ABNF", RFC 2234, November 1997.

   [RFC2958] Daigle, L. and P. Faltstrom, "The application/whoispp-
             response Content-type", RFC 2958, October 2000.

   [RFC1835] Deutsch, P., Schoultz, R., Faltstrom, P. and C. Weider,
             "Architecture of the WHOIS++ service", RFC 1835, August
             1995.

   [RFC2046] Freed, N. and N. Borenstein, "Multipurpose Internet Mail
             Extensions (MIME) Part Two: Media Types", RFC 2046,
             November 1996.

   [HARR85]   Harrenstein K., Stahl M. and E. Feinler, "NICNAME/WHOIS",
              RFC 954, October 1985.

   [POST82]   Postel J., "Simple Mail Transfer Protocol", STD 10, RFC
              821, August 1982.

   [IIIR]   Weider C. and P. Deutsch, "A Vision of an Integrated
              Internet Information Service", RFC 1727, December 1994.

   [WINDX]   Weider, C., Fullton, J. and S. Spero, "Architecture of the
              Whois++ Index Service", RFC 1913, February 1996.

   [RFC2279] Yergeau F., " UTF-8, a transformation format of ISO 10646",
              RFC 2279, January 1998.

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Acknowledgement