H.323 Uniform Resource Locator (URL) Scheme Registration

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Abstract

   ITU-T Recommendation H.323 version 4 introduced an H.323-specific
   Uniform Resource Locator (URL). This document reproduces the H323-
   URL definition found in H.323, and is published as an RFC for ease of
   access and registration with the Internet Assigned Numbers Authority
   (IANA).

Conventions used in this document

   The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
   "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this
   document are to be interpreted as described in BCP 14, RFC 2119 [2].

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1.   Introduction

   ITU-T Recommendations H.323 [3] and H.225.0 [4] define a system for
   multimedia communications services over packet based networks.
   H.225.0 [4] defines an alias type for carrying any standard Uniform
   Resource Locator (URL). H.323 version 4 [3] introduced an H.323-
   specific URL, which may be used to resolve the address of a network
   entity to which H.323 calls may be directed.

   This document reproduces the H323-URL definition found in ITU-T
   recommendation H.323 [3] and is published as an RFC for ease of
   access and IANA registration.

2.   URL Scheme Formal Syntax Definition and Character Encoding

   The H.323 URL is defined in ABNF as shown below. Note that it
   utilizes the Core Rules specified in section 6.1 of [2].

```
   H323-URL     =    "h323:" address [ url-parameters ]
   address      =    user / "@" hostport / user "@" hostport
   user         =    1*(%x21-24 / %x26-3F / %x41-7F / escaped)
                        ; The symbols "%", "@", and symbols with
                        ; a character value below 0x21 may be
                        ; represented as escaped sequences.
   hostport     =    host [ ":" port]
   host         =    hostname / IPv4address / IPv6reference
   hostname     =    *( domainlabel "." ) toplabel [ "." ]
   domainlabel  =    alphanum / alphanum *( alphanum / "-" ) alphanum
   toplabel     =    ALPHA / ALPHA *( alphanum / "-" ) alphanum
   IPv4address  =    1*3DIGIT "." 1*3DIGIT "." 1*3DIGIT "." 1*3DIGIT
   IPv6reference =  "[" IPv6address "]"
   IPV6address  =    hexpart [ ":" IPv4address ]
   hexpart      =    hexseq / hexseq "::" [ hexseq ] / "::" [ hexseq ]
   hexseq       =    hex4 *( ":" hex4 )
   hex4         =    1*4HEXDIG
   port         =    1*DIGIT
   url-parameters  =    *( ";" url-parameter )
   url-parameter   =    1*(%x21-24 / %x26-3A / %x3C-7F / escaped)
                        ; Specific parameter definitions are for
                        ; further study.
                        ; The symbols "%", ";", and symbols
                        ; with a character value below 0x21 may be
                        ; represented as escaped sequences.
   alphanum     =    ALPHA / DIGIT
   escaped      =    "%" HEXDIG HEXDIG
```

   The host is case insensitive.

The "user" is a Unicode [8] string that shall be UTF-8 [7] encoded
and then escaped as necessary. In the "user" field, the characters
with a numeric value below 0x80 are case insensitive and the
characters with a numeric value above or equal to 0x80 are case
sensitive.

The character set and case sensitivity of the "url-parameter" is
specified in each parameter definition.

3.   Intended Usage

The H.323 URL is intended to help an entity resolve the address of
another H.323 entity, where an "entity" may be a user, a device, or a
service. The "user" portion of the URL specifies an alias for the
entity, without carrying any information about the location of the
entity. The "hostport", on the other hand, is the domain name of an
Endpoint, Gatekeeper, Border Element, or other functional element to
which H.323 calls may be directed or for which services may be
performed.

4.   Applications and/or protocols, which may use H.323 URL scheme

H.323 URLs may be carried by other protocols, such as SIP [6] or TRIP
[9]. H.323 URLs may be also contained within web pages or within XML
data, which may be utilized by H.323 entities in order to initiate
calls or perform services.

5.   Security Considerations

When an H.323 URL is carried within H.225.0 [4] messages, security is
addressed by the H.235 security framework [5]. When an H.323 URL
carried within other protocols (such as SIP [6]), the security is
addressed within the corresponding protocol.

In general, security, as it relates to the usage and carriage of the
H.323 URLs, is considered as an issue that should be addressed within
scope of H.323 or other relevant protocols and is not within the
scope of this document.

6.   IANA Considerations

   The purpose of this document is serving as a reference point for the
   purposes of registering the H.323 URL scheme with IANA.

   Having the URL registered with IANA will ensure that there is no
   duplication of the URL scheme "h323". This document reproduces the
   exact H323-URL definition as published in ITU-T Recommendation H.323
   [3].

   Registration Template

      URL scheme name: h323

      URL scheme syntax: Section 2 of RFC 3508

      Character encoding considerations: Section 2 of RFC 3508

      Intended usage: Section 3 of RFC 3508

      Applications and/or protocols which use this scheme: Section 4 of
      RFC 3508

      Interoperability considerations: None. (Section 2 of RFC 3508
      contains the first version of "h323" URL definition.)

      Security considerations: Section 5 of RFC 3508

      Relevant publications: [3] and [4]

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References

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   [3] ITU-T Recommendation H.323v.4 "Packet-based multimedia
        communications systems", November 2000.

   [4] ITU-T Recommendation H.225.0 "Call signalling protocols and
        media stream packetization for packet-based multimedia
        communication systems", November 2000.

   [5]   ITU-T Recommendation H.235 "Security and Encryption for H Series
         (H.323 and other H.245 based) multimedia terminals", November
         2000.

   [6]   Rosenberg, J., Schulzrinne, H., Camarillo, G., Johnston, A.,
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   [7]   Yergeau, F., "UTF-8, a transformation format of ISO 10646", RFC
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   [8]   ISO/IEC 10646-1:1993, Information technology "Universal
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Acknowledgement