

H.323 Uniform Resource Locator (URL) Scheme Registration

Status of this Memo

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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., Peterson, J., Sparks, R., Handley, M. and E. Schooler, "SIP: Session Initiation Protocol", RFC 3261, June 2002.
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- [9] Rosenberg, J., Salama, H. and M. Squire, "Telephony Routing over IP (TRIP)", RFC 3219, January 2002.

Acknowledgments

This document is prepared and posted on behalf of SG-16 ITU-T. I wish to thank Paul E. Jones, Robert Callaghan and Cullen Jennings for their comments and active help.

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Acknowledgement

Funding for the RFC Editor function is currently provided by the Internet Society.

