Representing IPv6 Zone Identifiers in Uniform Resource Identifiers

draft-ietf-6man-uri-uri-zoneid-00

Brian Carpenter
Bob Hinden

March 2012
Motivation

- Literal addresses in URIs are intended for operational and diagnostic use.
- Sometimes, there is a need to make tests that relate to a specific interface on the host.
  - A web browser might be the handiest tool for this.
- For link-local addresses, RFC 4007 defines a text representation of the Zone Identifier (in practice usually equal to an interface name).
  - There is no defined mapping for the Zone ID in URI syntax, so browsers cannot support it.
Current draft

- Proposes an update to the ABNF for URIs (RFC 3986)
  - Use % as separator, like RFC 4007
  - Since % is the escape character in RFC 3986, the % itself has to be escaped
  - Modifies the *IP-literal* branch of the ABNF
  - It’s entirely possible we have misunderstood how to describe the % according to RFC 3986
Previous work

- draft-fenner-literal-zone tackled this topic in 2005
- Proposed a different solution
  - Used _ underscore as separator instead of %
  - Used the IPvFuture branch of the URI syntax
- Insufficient interest at that time
  - It seems that operational interest is stronger now
Options

- Link local address with no Zone ID
  http://[fe80::a] Works today

- With RFC4007 Zone ID
  http://[fe80::a%en1] Broken (% = escape)

- With RFC3986-legal Zone ID http://[fe80::a%25en1] Ugly, confusing

- With alternative separator != RFC4007
  http://[fe80::a_en1]

- With “IPvFuture” syntax Confusing
  http://[v6. fe80::a_en1]
Status

- Note that ABNF details are best handled by email, so we have not covered them here.

- There is not a consensus on the current approach