

# Entering IPv6 Zone Identifiers into User Interfaces

draft-carpenter-6man-zone-ui

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IETF 119  
March 2024

# Summary

- What happened to rfc6874bis?
- New proposal

# draft-ietf-6man-rfc6874bis

- Make browsers accept:  
`http://[fe80::abcd%eth0]`  
`https://[fe80::abcd%eth0]`
- Sent to IESG in March 2023
- No concrete progress resolving DISCUSSES despite several new versions & side meetings

# Issues

Two unresolved DISCUSS ballots:

- Ops AD (Rob Wilton) – concern about devices whose interface names don't conform.

*Essentially an issue about the scope of the draft. Probably soluble, but...*

- ART AD (Murray Kucherawy) – concerns from the W3C and browser community (WHATWG) about parsing, and cross-origin (in)security of locally significant URIs.

*After almost a year and 6 updates to the draft, no prospect of compromise solution.*

# Our conclusion

When in a hole,  
stop digging.



- It's time to try a different approach.
- Focus on the user interface, not on the wire format.

# draft-carpenter-zone-ui

- **Entering IPv6 Zone Identifiers in User Interfaces**
- In practice, that's “Entering Link Local Addresses in User Interfaces”
- The scope is strictly nodes that support RFC4007, e.g.  
`fe80::1234%eth0` or  
`fe80::1234%7`

# Use cases for manual entry of LLAs

- All become critical for IPv6-only or -mostly LANs:
  - Existence check:  
`ping fe80::1234%eth0`
  - Configure device (e.g. home router)
  - Monitoring tools such as Wireshark
  - Microsoft WSD virtual printer port mechanism
  - National Marine Electronics Association (NMEA)  
“NMEA OneNet Standard for IP Networking of Marine Electronic Devices”, September 2022.

# Formal scope of draft

“Devices whose network stack does **not** support the RFC 4007 model of a human-readable zone identifier are **out of scope** for this document.”



# Normative content

A UI that supports entry of an IPv6 address SHOULD provide a means for entering a link-local address qualified with a zone identifier.

- Ideally, it will support the complete format specified by RFC 4007 (e.g., `fe80::1%eth0`).
- If impractical, it could support an alternative delimiter. Hyphen is suggested (e.g., `fe80::1-eth0`).
- If impractical, it could support two separate input fields (e.g., `fe80::1` in one box, `eth0` in another).

# The browser issue remains

In this model, the zone identifier would not be considered to be part of a URL.

This does not resolve the difficulties in considering the zone identifier as part of the HTTP origin model [RFC6454].

Therefore, this approach does not resolve the issue of how browsers should support link-local addresses.

(See draft-schinazi-httpbis-link-local-uri-bcp, on [HTTPBIS](#) agenda [Friday morning](#).)

# Programming note

- The program providing the UI will store the address and the zone identifier (separately or together).
- The zone identifier will be converted to an interface index (via the socket API).
- A faulty zone identifier will be detected during conversion and should be reported to the user.
- The resulting interface index will be used for any socket calls using the link-local address.

# Housekeeping issues

- The draft obsoletes RFC 6874, which has never been implemented.
- Alternatively, should that be done by draft-schinazi-httpbis-link-local-uri-bcp?
- The draft effectively extends RFC 4007 – should that be “updates 4007”?

# Questions? Comments?

