

URI-Path abbreviation in CoAP

`ietf-core-uri-path-abbrev-04`

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2026-03-20, CoRE at IETF125

Why?

GET `/.well-known/core` has 17 bytes of Uri-Path.

EDHOC was unhappy.

cBRSKI is unhappy.

IETFers are jealous of other SDOs¹

¹LwM2M's `/rd` is a BCP190 no-go

Solution

Numeric Uri-Path-Abbrev option.

Abbreviated	Expanded
Uri-Path: 0	Uri-Path: “.well-known”, “core”
d0 00	bb . w e l l - k n o w n 04 c o r e
2	17

Critical. Safe-to-forward².

Uri-Host (3), Uri-Port (7), **Uri-Path-Abbrev (13)**, Uri-Query (15).

²even though Uri-Path is not

Open items after IETF124

Part I: Move in `ietf-core-corr-clar` Section 2.2 (PR #32)

Now appendix A, updating RFC7252:

“Unrecognized critical options cause 4.02 Bad Option *even for NON*”.

- Only affects tentative use.
- Still expect RST/silence: deployed behavior.
- Practical simplification: when only UPA support is known and just value is tentative.

Open items after IETF124

Part II: Simplify Proxy-Uri interaction

PRs #33 and #38³

- Mixed Uri-Path + Uri-Path-Abbrev: consistently disallowed.
If proxies would introduce path segments, service can't support UPA.
- *As the last hop is not to a forward-proxy, servers will never see Proxy-Uri effects.*⁴

⇒ replaced general “*SHOULD understand*” for mixed case with “*MUST*” for server-proxy hybrids.

³My apologies for the short-notice changes – but presenting them in a single change is still better than giving you half of it here and half of it in the next interim.

⁴Ongoing corr-clar issue #51.

Open items after IETF124

Part III: Addressing reviews

- Clarify that Uri-Path and UPA conflict means UPA is the Bad Option.
- Editorial changes after reviews from Carsten and Esko.

Next steps

Done.

Backup: Applications

EDHOC first 3 message total: -30 byte down to 122⁵ (-20%).

Negligible over lifetime. Significant during mass onboarding
([ietf-lake-reqs](#), straddles AKE-for-6TiSCH fragmentation boundary).

EST/cBRSKI Eases management of .well-known coordination with HTTP.

-responses “If you queried me for `/.well-known/core?a=b`, you’d get `{payload}`”

Ideally: Server MUST implement (in [ietf-ace-edhoc-oscore-profile](#), incoming in cBRSKI)

⁵CoAP data: 3×5 (CoAP structure) + 2×2 Uri-Path-Abbrev + 2×1 C_I / true + 101 from [RFC 9528](#)