

# Background: CBOR-associated languages

- **CBOR** = representation and interchange format (binary, concise, efficient)
  - low-level visualization in text as **cbor-pretty** (hex with comments)

Two associated textual languages:

- **EDN** (cbor-diag) → **examples, diagnostics**
  - Text form for single **instance** (item/sequence), convert back and forth (**cbor.me**)
  - Derived from **JSON**, made more useful for humans, added binary, tags, ...
- **CDDL** → **specification, validation**
  - Describe specific data **model** (grammar)
  - Inspired by **ABNF**, can describe JSON, CBOR, CSV\*

# RFC 9741 (was draft-ietf-cbor-more-controls)

- CDDL control operators for ~text-based data
- initiated 2023-02-25
- WG adoption 2023-06-14
- WG last call 2024-03-02
- Pubreq to IESG 2024-10-16
- IETF last call 2024-11-06
- approved 2025-01-09
- published 2025-03-04



# The Matrix

| <b>CBOR</b>   | <b>+ (tags)</b>  | <b>EDN</b>       | <b>+ (app l)</b> | <b>CDDL</b>   | <b>+ (ctrls)</b> |
|---------------|--|------------------|------------------|---------------|------------------|
| 8949,<br>8742 | 8746,<br>9090,<br>9164/954<br>2 9277,<br>8943/958<br>1 | 8949,<br>8610    |                  | 8610,<br>9682 | 9165, 9741       |
| cde           | packed   | edn-<br>literals | e-ref            | modules       | —                |

# draft-ietf-cbor-cde-08

- 2023-11-27 WG document
- lots of editorial tweaking, merged PRs
- 2024-10-16 draft-ietf-cbor-cde-06
  - introduces ALDR discussed at 2024-10-16 interim
  - references cbor-numbers for NaN appendix
- ... 2025-02-10 draft-ietf-cbor-cde-08
  - merged PR #23: Do not use "Profile" for ALDR
  - add Section 2 overview (encoding choices)

# draft-ietf-cbor-packed-14

- Data items can have considerable redundancy
- Method 1: deflate, brotli, zstd: decompression step
- Method 2: Save space at [data model](#) level ("packing")
- [Set of tags](#) (+ simple values)

Underwent WGLC a while ago, closed 2022-05-25

Implementation work... Hackathon IETF 121

Had early allocation discussion recently -- unfinished.

-14: added explanation of interaction with stand-in tags

Would like to WGLC this again now.

— related: [draft-amsuess-cbor-packed-by-reference-04](#)

# draft-ietf-cbor-edn-literals

- EDN: Originally defined in RFC 7049 → 8949 and an appendix to RFC 8610
- edn-literals started out to add extension point: application-specific literals
  - implemented in cbor.me
- Severe mission creep
  - Add ABNF (no ABNF in original definition)
  - Roll up base documents and this extension, editorial, ...
- Now stuck in discussion about implementation preferences

draft-ietf-cbor-edn-e-ref stuck behind (in active use!)