

**CBOR @
2023-08-23**

Not this time:

- draft-ietf-cbor-time-tag → "ship it RSN"

Passed short final WG last call

Interface to SEDATE is stable, can decouple now

Writeup in progress, Shepherd: Barry Leiba

- draft-ietf-cbor-packed

(Further validation by implementation;

use case dns-cbor.)

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*

Diagnostic Notation (EDN)

— draft-ietf-cbor-edn-literals

Originally: Define EDN literals

–00: WG adopted (2023-06-14)

–01: added **ABNF** for EDN (2023-07-10)

–02: added informative appendix on EDN vs. **CDDL** (2023-07-23)
other work?

Text needs review

ABNF needs implementation

→ work on GitHub issues raised

→ get a few reviews next

EDN github issues → please review

Open floodgates for JSON-transcending features:

- #8: Comment syntax: Probably not `/** ... */`
Add **end-of-line** comments instead? `#` ; `//`
Both `#` and `;` have been seen in the wild
`//` would be like JS (via C++), clashes with `/` syntax
- #5: enable trailing commas (PR#10): much-requested

Maintenance: #7 hex floating point; PR#4, PR#9 ABNF fixes

Editorial: #6 document NR1 → int vs. NR2/3 → float

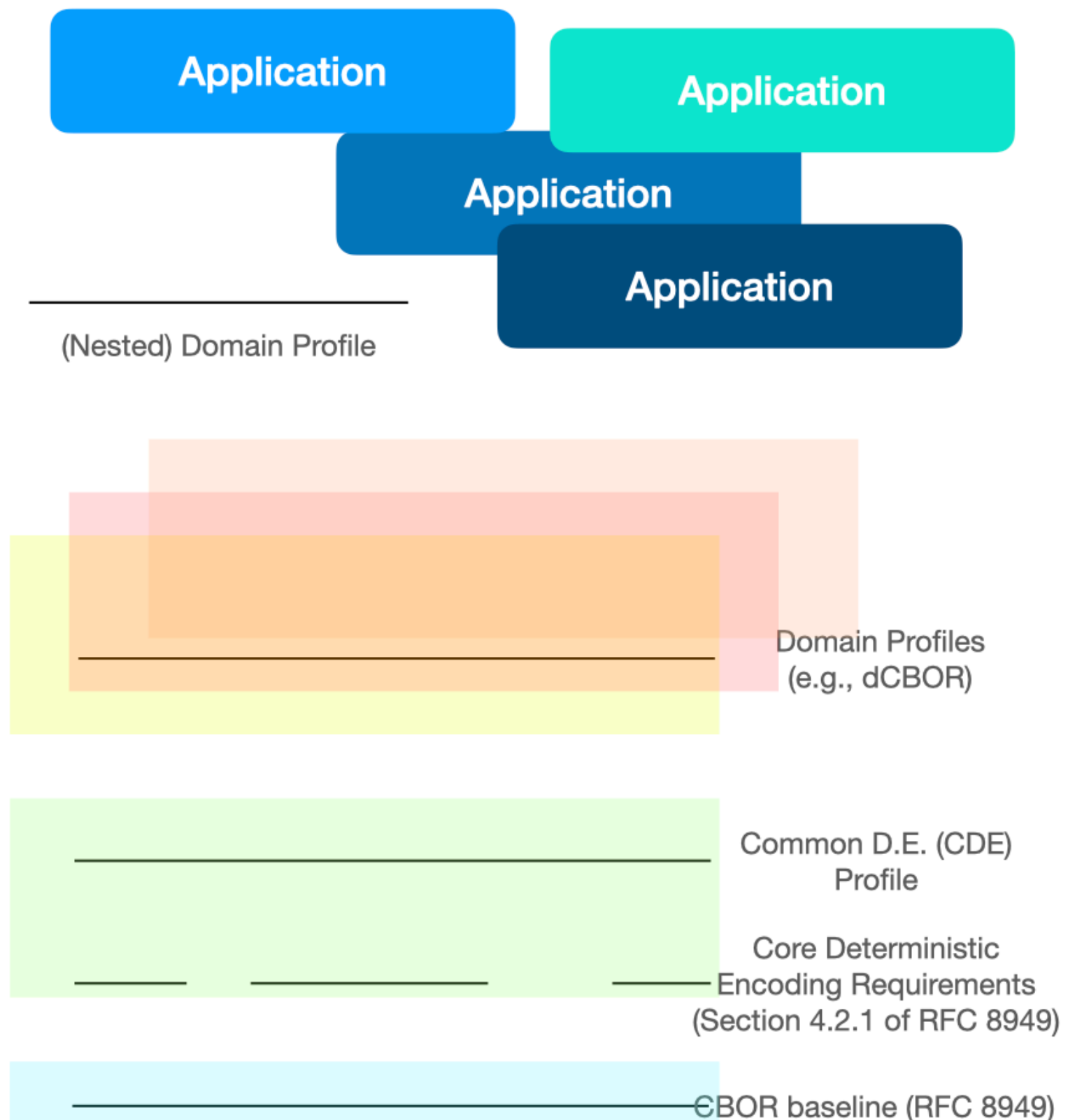
New documents on deterministic encoding

- CBOR deterministic encoding defined by RFC 8949
[draft-bormann-cbor-det: 2023-07-23](#)
Informational document ("**backgrounder**")
- **CDE** common CBOR deterministic encoding profile
"**dCBOR**" numeric reduction without restatements:
[draft-bormann-cbor-dcbor: 2023-07-23...2023-08-23](#)
- dCBOR: [draft-mcnally-deterministic-cbor](#) and
D-CBOR: [draft-rundgren-deterministic-cbor](#)

A layer model

Split "deterministic serialization" into:

- Common CBOR Deterministic Encoding Profile (CDE)
concerned with mapping: **bytes** ↔ **data items** at data model level
- Domain D.E. Profiles
concerned with mapping: **data items** at different data model levels
(generic CBOR ↔ domain specific)



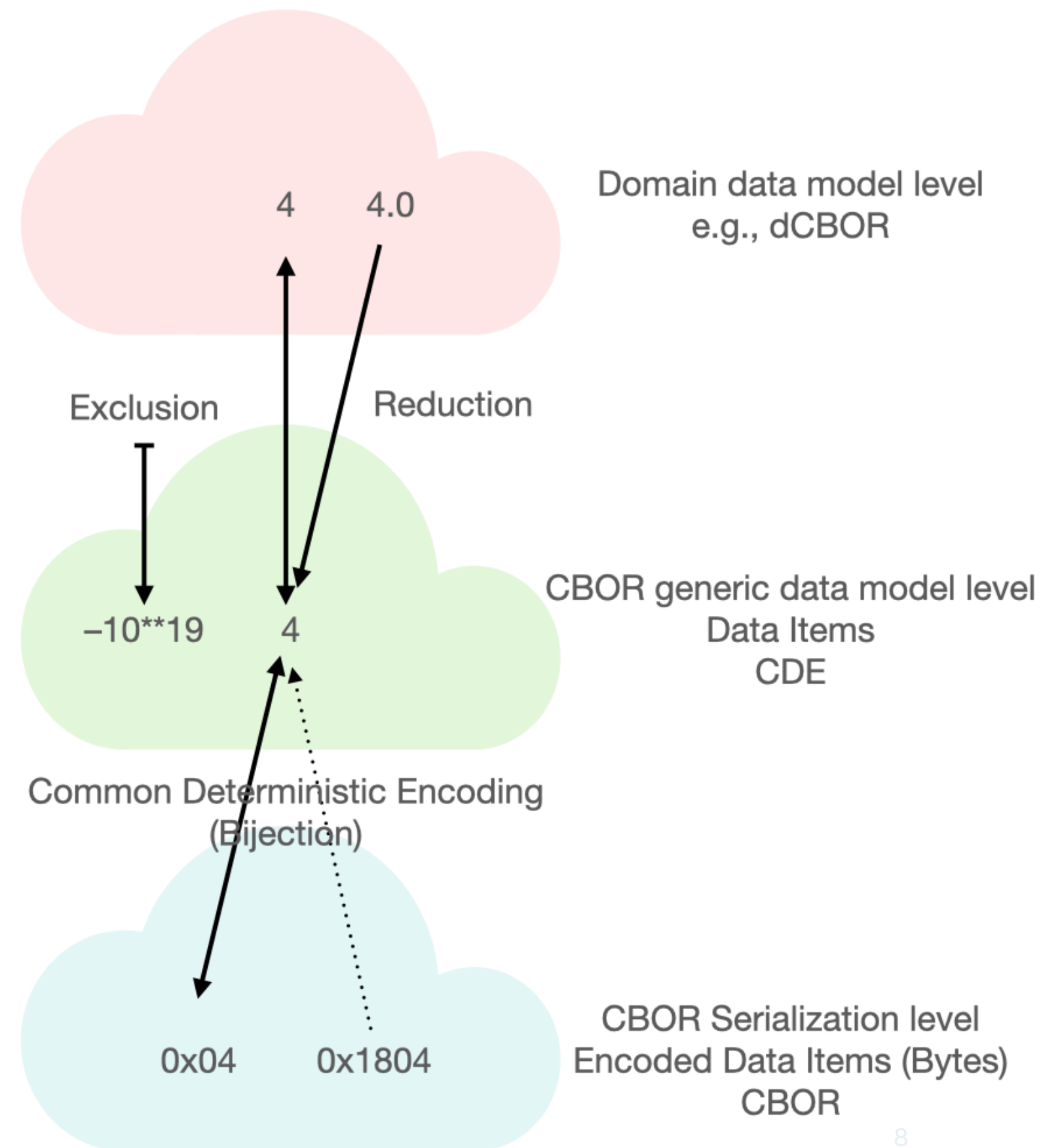
Domain profile, CDE encoding profile

Example Domain Profile: dCBOR

- **excludes** -10^{19} and undefined
- **reduces** 4.0 to 4
(in range $[-2^{63}..2^{64}-1]$)

Common: CDE (Section 4.1.1 ++)

- **selects** preferred encoding
- no indefinite length
- defined map ordering



Objectives

Facilitate wider use of deterministic serialization:

- Use CDE as a **common** set of encoding decisions (small tweaks to RFC 8949 Section 4.2.1: "core deterministic encoding requirements")
Can implement in a **generic** encoder/decoder
- Enable the creation of multiple **simple** domain profiles (no restatement anti-pattern)
dCBOR as the first instance (could also use D-CBOR)

Document slate

Backgrounder draft-bormann-cbor-det probably useful
(**informational**, needs work now)

CDE part of draft-bormann-cbor-dcbor
(should be standards track)

Domain profile part of draft-bormann-cbor-dcbor
(should be **??**)

Absorb -mcnally/-rundgren documents?

Split?

Technical issues (CDE > core d.e. requirements)

- Clarify the mt0/1 → tag 2/3 transition
- Possibly do work on a tag 5 integration?
- Maybe do a bit more work on NaN and their payloads