CoRE: CoRECONF

— RFC 9254: YANG-CBOR (2022-07-18)

— RFC 9595: CORE-SID (2024-07-31)

— WGLC passed 2023-09-18 (➔ -17): CORE-COMI

— WGLC passed: CORE-YANG-LIBRARY

(1) Continuation work on YANG-CBOR (CBOR WG)

- RFC 9254: YANG-CBOR (2yo): stable, no known problems
- RFC 9595: CORE-SID: need to do bulk processing now
- individual submissions to CBOR WG:
  - draft-bormann-cbor-yang-standin-00
    Efficient (binary) representation of text-based YANG types
    In current draft: tag 1 (date/time), 52/54 (IP addresses)
  - draft-bormann-cbor-yang-metadata-00
    Extend YANG-CBOR to support representation of
    YANG metadata annotations (RFC 7952)

(2) core-sid: ramping up YANG-SID launch

- [✓] Designated experts (DE) assigned 2024-10-04 (?): Michel Veillette, Alexander Pelov, Laurent Toutain
- Next steps: Coordinate DE team, RPC (RFC-editor), IANA, others:
  - yang-sid-logistics@ietf.org [✓]
  - …

(3) coMI

Base: RFC 9254 YANG-CBOR, RFC 9595 YANG-SID

CoRECONF = YANG/CBOR over CoAP
RESTCONF = YANG/* over HTTP
NETCONF = YANG/XML over SSH

COMI: Status

- draft-ietf-core-comi-19 2024-11-03
  - IANA considerations fix (for core-sid RFC 9595-to-be)
- Implementation discussions at TRT2G interims in May and June
- **Simplification continues**: SID 0 instead of GET?
  - Get rid of "datastore resource" GET/PUT; can do FETCH/iPATCH of "SID 0"
  - Get rid of term "data node resource" and § 5.2.2; fix GET examples
  - Interim!
- multiple RPC/Actions allowed in one payload? Semantics?
- Want more examples!

COMI: Scaling

Comi was designed for constrained devices:
Small management bases

- Selective retrieve: Subtrees only
  - limited selection via special query parameters:
    ?c= (config), ?d= (default)
  - special SID selection for notifications

Extend selective retrieve?

- depth limit? (blunt instrument)
- Requirement for projection?
  - E.g., want list of interface names, not all interface info

Cf. YANG-scaling discussion @netmod

COMI: Plan

— This (-17..-19) is an implementation draft!

— Get implementer input on further simplification

— ~~After summer break:~~
Get remaining comments addressed
(and further examples made)

— Probably another WGLC then

➔ Leave scaling discussion to an extension

CoRE: CRIs (HREF)

draft-ietf-core-href defines **CRIs** and **CRI references**
Extract information model from URIs and URI references
Do concise RFC 3986/7 equivalent in a CBOR data model

— -16 (2024-07-24): draft-ietf-core-href-16
  — IANA early review:
    ➔ No repercussion to URI Scheme registry
  — "updates 7595" in abs/intro

HREF: Ongoing

- #77 more test vectors. More test vectors. (#52, #53)
  - To get those test vectors in place: edit them in CSV: PR#79
  - #76: Add test vector for zone identifiers

~~Complete the I-D after summer break~~

HREF: Zone identifiers

Extracting the URI information model:

```
host-ip      = (bytes .size 4 // (bytes .size 16, ?zone-id))
zone-id      = text
```

draft-ietf-6man-zone-ui-04

...describes how to enter a zone identifier into a user interface. It obsoletes RFC 6874 and updates RFC 4007, RFC 7622 (XMPP) and RFC 8089 (file URL scheme).

HREF: Zone identifiers -- way forward?

1. Pay no attention to those sounds in the background -- it's just a draft
2. Completely expunge zone identifiers from CRIs
3. Keep the CRI side zone-id around, accommodating future zone-id representations

   (the information model does not care about the kerfuffle around % characters in host IP addresses)

Note: RFC 4007 defines:

— zone indices, and
— "human-readable" zone identifiers
  — decimal zone indices: "7"
  — "non-null strings" (interface names IRL):
    "eth0" or "enx525400d5e0fb"

```
zone-id     = text
```

"text" is limited to UTF-8, which comprises ASCII — sane?
(draft-ietf-6man-zone-ui says »~RFC 4007 says "ASCII"«, and then »RFC 4007 does not specify the character set allowed in a zone identifier«)