

Diagnostic Notation Next Steps?

Background: CoRAL

Constrained RESTful Application Language (CoRAL):
Hypermedia format

- links to resources, with type information
- forms, to specify action input on resources
- simple resource metadata

Replacing Links-JSON/-CBOR (a cleaned-up link-format)
Originated in T2TRG, now in CoRE WG

CoRAL Representation Formats

- primary: CBOR-based
 - concise, for constrained devices
 - bespoke text-based
 - for whiteboards and RFCs
- (1) Do we need a JSON version? (Not on agenda...)
 - (2) Can we get by with CBOR diagnostic notation?

CBOR diagnostic notation is tedious for CoRAL

Much of the CoRAL content is CRIs
Constrained Resource Identifiers: parsed URIs

```
[ -1, / scheme = "coap" / coap://198.51.100.1:61616/.well-known/core
  [h' C6336401 ', / host /
    61616], / port /
  [ ".well-known", / path /
    "core" ]
]
```

```
[ true, / discard / /.well-known/core?rt=temperature-c
  [ ".well-known", / path /
    "core" ],
  [ "rt=temperature-c" ] / query /
```

Application-specific extensions?

Potential approach:
embrace application-specific extensions of diagnostic notation.

```
cri 'coap://198.51.100.1:61616/.well-known/core'
```

```
cri '/.well-known/core?rt=temperature-c'
```

Syntax is patterned after h'...', b64'...', ...

Application defines the word before the first quote.
Registry?

Other CoRAL considerations

CBOR-packed vs. CURIEs in CRI

— Easy to do prefix:

coaps://coap.me → [-2, ["coap", "me"]]

Usage: coaps://coap.me/foo/bar → `225([[["foo","bar"]]])

— Harder to do prefix:

coaps://coap.me/foo/ → [-2, ["coap", "me"], ["foo"]]

coaps://coap.me/foo/bar → `225([[["???", "bar"]]])