CoAP Transport Indication[1]

ietf-core-transport-indication-05

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[1] Used to be Protocol Indication, document name was `transport-indication` already

Goals

1. Enablement of transport discovery
2. No Aliasing
3. Optimization (no cost per request)
4. Proxy usability
5. Proxy announcement

- Give way forward after `coap://` and `coap+tcp` diverged

Changes since IETF118

Why did `coap://` and `coap+tcp` diverge? – rehash of IETF118

Ambiguous: $\texttt{coap://}\underbrace{\texttt{[2001:db8::1]:1234}}_{\text{TCP port? UDP port?}}\texttt{/}$

Clarified: `coap+tcp://[2001:db8::1]:1234/`

Unambiguous:

- `coap://0123456789ab.ble.arpa/` (was `coap+ble://...`)
- `coap://ttyUSB0.dev.alt/` (was `coap+uart://ttyUSB0/`)

Criterion: `coap+foo` needed if the literal for of authority values are ambiguous with respect to transports. Or if the resolution process produces such values.

Changes since IETF118

- Guidance to new transports: `coap://`
  . . . and if is IP based, do SVCB as described in the appendix E.
  . . . and if you need that with IP literals, finish appendix F.
- Security guidence simplified
- Consistenlty talk of "transports"

IETF118 changes are applied.

Let's get this done. . .

Open question: Scope of `has-proxy`

"only through link relations"

- URIs regarded as opaque
- Relations are explicit
- Allows to exclude indvidiual resources from transport indication [2]
- Uses RFC 6690 `rel=hosts` which is not very clear
- Hard to keep track of what works where

vs.

"Applies per Origin"

- HTTP's mechanism
- Simple
- Way shorter wording in terminology section

[2] No support adding transport indication for individual resources is planned

Open question: Self description style guide

e. g. after multicast discovery

“Explicitly using canonical names”

```
<coap://myhostname/foo>,...,
<coap://[2001:db8::1]>;rel=has-unique-proxy;anchor="coap://myhostname"
```

vs.

“Relying on client to re-interpret the document after having parsed parts of it”

```
</foo>,...,
<coap://[2001:db8::1]>;rel=has-unique-proxy;anchor="coap://myhostname"
```

. . . Or do we not care so much about RFC 6690 anyway, because other formats would allow setting a base anyway?

Open question: Appendices

- Is alternative history fiction a thing here?
- (Where) should literals for service parameters (and other data from DNS) go?

Summary

Open questions:

- Decide “only through link relation” vs “always when Origin matches”
- Advertising self-proxies / importance of RFC 6690
- Fate of appendices

What else before this is done?

Interop?