CoAP Protocol Negotiation

draft-silverajan-core-coap-protocol-negotiation

Bill Silverajan Tampere Univ of Technology

Background: CoAP Transport URI

Transport Info in URI	RFC 3986 Conformance	Relative references	URI aliasing	Location Precision
Scheme				
Authority				
Path				

Choice was then made

Transport Info in URI	RFC 3986 Conformance	Relative references	URI aliasing	Req 4.1.4
Scheme				

Design Requirements

- For ID-core-coap-alternative-transports:
  - Conformance to RFC 3986 encoding rules
  - Precise description of transport and location
  - Ensure relative URIs are resolved correctly
- For ID-core-coap-protocol-negotiation:
  - Expose transport options to interested clients
  - Using CORE link format to tackle resource caching and multiple representations
  - Eliminate URI path (locator/identifier) complexity

What is in the pipeline

- Transport availability falls into the following node categories
  - Type T0 nodes have a single transport
  - Type T1 nodes have 1 or more transports, which may be in unreachable/off states but at least 1 active transport
  - Type T2 nodes have multiple always-active transports
- For T2 nodes
  - Investigate need for session continuity/resumption from one transport to another, and required context for transfer
- For T1 nodes
  - Lifetime value for transport types
  - Observe relationship to detect new / expired CoAP transports
- For T1 nodes
  - Support for alt-loc relationship (eg sleepy node, pub/sub support, etc)
- Security considerations