WISHI: Joint T2TRG and OCF Call

20 April 2018

Binding Mode
for Dynamic Resource Linking

- https://tools.ietf.org/html/draft-ietf-core-dynlink-05
  - Defines dynamic linking of state updates between resources
  - Uses "bindings"

- Issue: How to find resources that can be bound?

- Proposal: Define binding mode discovery
  - Server goes into binding mode (e.g., by pressing a button)
  - All bindable resources are annotated with a "core.bm" target attribute
  - Client does multicast discovery via /.well-known/core?rt=…&bm=*
  - Also works with Resource Directory

Correct Definition and Use of "ep" and "ins" Attributes

- "ep" is a URI Template parameter to provide a client-defined endpoint identifier to RD
  - "ep" often maps to unique identifiers such as IMEI (cf. LWM2M)
  - To be used in combination with "d" (domain) parameter otherwise
  - Usually used for lookup by application looking for a specific device
  - Groups together a number of resources
  - Automatically associated with resource links by RD!
  - „ep" and „d" should be proper target attribute names (not defined in RD)
- „ins" originally introduced to distinguish resources with the same "rt" on the same device ("ep")
  - `</t1>;rt=temperature;ins=indoor, </t2>;rt=temperature;ins=outdoor`
  - Now linked to DNS-SD „Instance"

Correct Definition and Use of "ep" and "ins" Attributes

- Issue: "ep" and "d" not defined as proper target attributes
- Proposal: Properly define so in RD document, add text on handling

- Issue: "ep" considered useless by some as not properly defined
  - RD generates endpoint identifier internally anyway (handle resource)
  - Client-defined identifier provided through security context
- Proposal: Keep "ep" as client-defined identifier
  - Applications use identifier different from security
  - Commissioning tool registering endpoint has different security context

- Issue: "ins" considered global instance identifier
- Proposal: Clearly define to be only unique within "ep"
  - Global uniqueness requires "ins" & "ep" (& "d")
  - Provides more flexibility

More Generic Context Base URI for Resource Directory

- RD allows "con" parameter to provide a base URI different from the registration source <address:port> information
- "con" is a base URI restricted to the authority part (no path)

- Issue: A registered endpoint might not be a natural endpoint
  - Endpoint is hosted with a coaps://gw.example.com/dev/d1 base URI
  - /dev/d1 prefix must go into link entries
  - Moving the endpoint to a different base URI is expensive
  - No patch mechanism defined yet to make it more efficient

- Proposal: Allow „con" to be any base URI for relative links