

CoRE Resource Directory

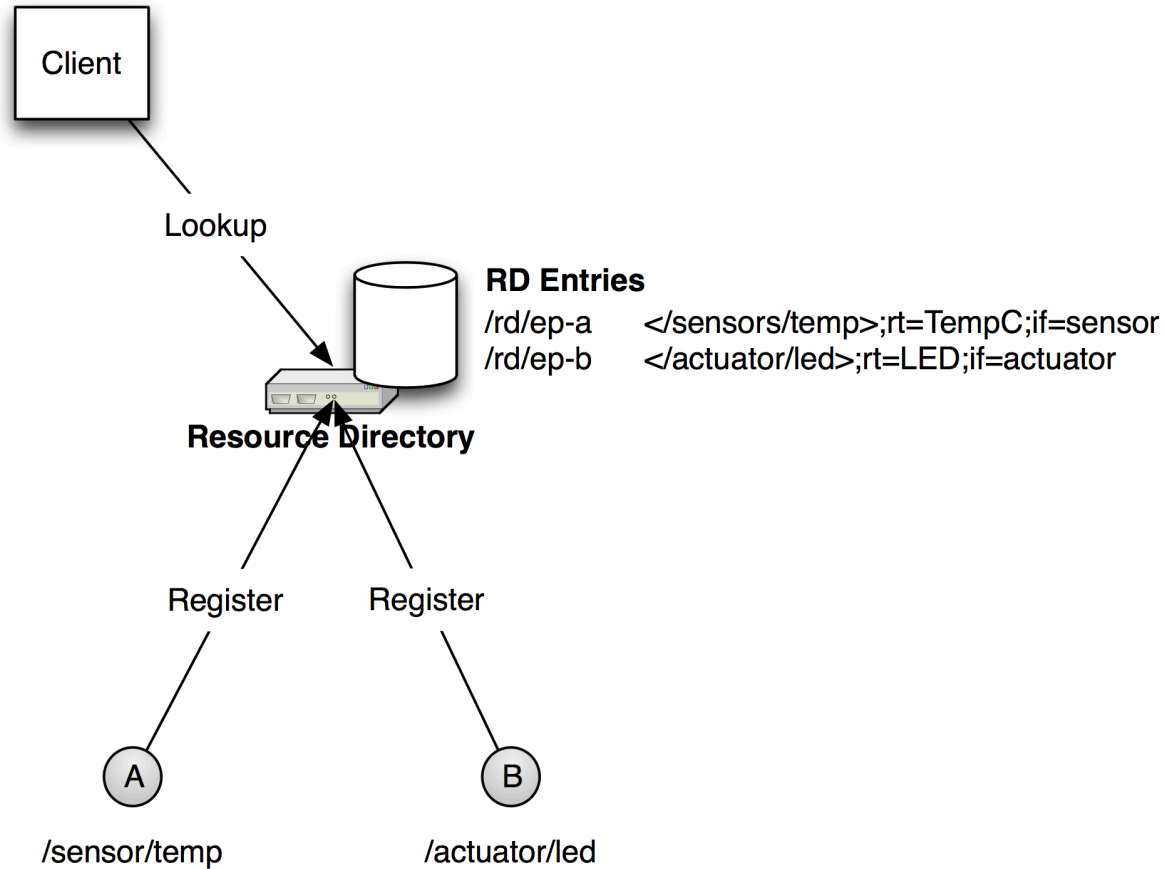
draft-shelby-core-resource-directory-00

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Background

- Not a new concept (think search engine)
- EU project SENSEI (2008-2010)
 - <http://www.sensei-project.eu>
 - Developed an M2M web resource architecture
 - “Resource Directory” was a main concept
- CoRE hack fests
 - Resource directories were deployed to make testing easier
- Also see draft-bormann-core-simple-server-discovery-00

Architecture



RD REST Interface

- Discovery

- GET `coap://ff02::1/.well-known/rd?rt=core-rd`
- 2.05 Content `</rd>;rt=core-rd`

- Registration

- POST `coap://{RD}/rd Etag: 0x40`
- 2.01 Created Location: `/rd/{end-point}`

- Update

- PUT `coap://{RD}/rd/{end-point}`

- Validation

- GET `coap://{EP}/.well-known/core Etag: 0x40`

- Deletion

- DELETE `coap://{RD}/rd/{end-point}`

- Lookup

- GET `coap://{RD}/rd?rt=TemperatureC`

New Link-Format Attributes

- Two new link-format attributes defined
- Resource Instance (ins=)
 - Distinguishes between resources with the same Resource Type (rt=)
 - Max length of 63 octets
- Export Flag (exp)
 - Existence of flag allows an RD or other entity to export link to e.g.
 - Another RD or search engine
 - DNS-SD

Known Issues

- Terminology section needed
 - Host, End-point, Resource Entry, RD, etc.
- How to differentiate between multiple RDs in discovery?
 - Use ins= attribute to differentiate between RDs
- How to tell the RD about the host?
 - Add a “Host ID” attribute to registration
 - Could be host name, device serial #, HIT etc.
- People seem to confuse host, end-point and resource
 - Explain that end-point is an logical concept that the RD uses to handle updates and deletes
- Clarify that RD stores the source IP address and port or registration
- Define how observe can be used on RD resources