Conditional Attributes for Constrained RESTful Environments

draft-ietf-core-conditional-attributes
(https://github.com/core-wg/conditional-attributes)

Bill Silverajan
IETF 120 Core WG Meeting
Current Status: Version -07

• 1 review received last week
  -> Draft being updated this week to address the review

• Early Review from the IoT Directorate given for version -06
  -> Most review comments have been addressed in version -07
  -> 2 issues will be discussed this week with reviewer, to be resolved for -08

• Feedback from IANA to clarify registration procedures for the requested Conditional Attributes registry in Section 6
Diff to -06: Intended Status

• Intended status changed from Informational to Standards Track
  • Based on discussions originating in IETF 116, IoTDIR early review and ML messages
Diff to -06: State projection

• Introduction of Resource State Projections

• Implication of using state projection with conditional attributes is this:
  • When a server receives a request containing conditional attributes from a client, the server provides a projected resource state to the client which is separate from a resource state requested without conditional attributes.
State projection

GET /CO2
Token: 0x42
Observe: 0

2.05 Content
Token: 0x42
Observe: 12
"600 ppm"

2.05 Content
Token: 0x42
Observe: 23
"800 ppm"

ClientA

ClientB

Server

GET /CO2?c.gt=1000
Token: 0x66
Observe: 0

2.05 Content
Token: 0x66
Observe: 20
"800 ppm"

2.05 Content
Token: 0x42
Observe: 29
"1000 ppm"

2.05 Content
Token: 0x42
Observe: 23
"1100 ppm"

2.05 Content
Token: 0x66
Observe: 33
"1100 ppm"

2.05 Content
Token: 0x42
Observe: 43
"900 ppm"

2.05 Content
Token: 0x42
Observe: 26
"900 ppm"
Diff to -06: Registration Cancellation

- From https://mailarchive.ietf.org/arch/msg/core/vSrEc-59XQeYf3V-LoMNTJ-uPs8/
  - How does a client cancel an existing registration?

- Solution:
  - Per RFC 7641: Client can forget and RST
  - Client can cancel with Observe Option value 1, but the URI MUST include conditional attributes
Diff to -06: Security Considerations

- Resolved 2 issues:
  - Impact of c.pmax used for amplification attacks and mitigation steps
  - Impact of c.epmax used for resource exhaustion and mitigation steps
Remaining Issues: "AND" vs "OR"

• From https://mailarchive.ietf.org/arch/msg/core/vSrEc-59XQeYf3V-LoMNTJ-uPs8/
  • Multiple conditional attributes in a query component have their relationship as "AND".
  • Is it possible to have multiple conditional attributes with "OR" relationships

• Resolution
  • If an "OR" relationship is desired, the client can register several registrations independently on the resource being observed, with each registration containing different conditional attributes.

• Comments on this? (And should this be expressly stated in the document?)
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Thank you!