Conditional Attributes for Constrained RESTful Environments

draft-ietf-core-conditional-attributes

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

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IETF Core WG Interim Meeting 2022-02-24
Latest developments

• Continuing to incorporating feedback received for updates, corrections and clarifications
• 3 Github issues closed since last reported progress
• Draft has moved from -00 to -02
Resolved Issue 1: Value of “Band” attribute

- Conditional attributes “lt” and “gt” indicates the limits where the value of the resource SHOULD cross before triggering 1 (and only 1) notification
Technical Issue 1: Value of “Band” attribute

- Band enabled and gt=2 and lt=12

```
  00 01 02 03 04 10 11 12 13 14 01 02 03 04 05 10 11 12 13 14 00 01 02
  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
  B  03 04 10 11 03 04 05 10 11
```

SERVER

```
gt 2 & lt 12
```

CLIENT
Resolved Issue 1: Value of “Band” attribute

• Band is an xs:Boolean but is its value significant?
  • Github Comment 1: “The band attribute is defined as a boolean type, but the use of the band attribute is determined by its presence, not its value. We should probably explicitly explain that.”
    • Accept both band=1 and band=0 as setting the notification band
  • Github Comment 2: “Do we need the band attribute to have a value to begin with? This query component can simply be a name, instead of name-value pair (i.e band does not have any datatype).”
    • Example: /temperature?band&gt=30&lt=35

• Resolution: ”band” will be a query parameter without a value. See bullet point above
  • Should the text provide guidance about what to do if the band parameter is sent with a value?
Resolved Issue 2: Proxy considerations

- The following text has been added in the Implementation Considerations:
  - “This specification defines conditional attributes that can be used with CoRE Observe relationships between CoAP clients and CoAP servers. However, it is recognised that the presence of 1 or more proxies between a client and a server can interfere with clients receiving resource updates, if a proxy does not supply resource representations if the value remains unchanged (e.g., if pmax is set, and the server sends multiple updates when the resource state contains the same value). A server SHOULD use the Max-Age option to mitigate this by setting Max-Age to be less than or equal to pmax.”
Security Considerations

• “The security considerations in Section 11 of {{RFC7252}} apply. Additionally, the security considerations in Section 7 of {{RFC7641}} also apply.”
IANA Considerations

• “This memo requests a new Conditional Attributes registry to ensure attributes map uniquely to parameter names.”

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Parameter</th>
<th>Value</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Period (s)</td>
<td>pmin</td>
<td>xs:decimal (&gt;0)</td>
<td>This memo</td>
</tr>
<tr>
<td>Maximum Period (s)</td>
<td>pmax</td>
<td>xs:decimal (&gt;0)</td>
<td>This memo</td>
</tr>
<tr>
<td>Minimum Evaluation Period (s)</td>
<td>epmin</td>
<td>xs:decimal (&gt;0)</td>
<td>This memo</td>
</tr>
<tr>
<td>Maximum Evaluation Period (s)</td>
<td>epmax</td>
<td>xs:decimal (&gt;0)</td>
<td>This memo</td>
</tr>
<tr>
<td>Confirmable Notification</td>
<td>con</td>
<td>xs:boolean</td>
<td>This memo</td>
</tr>
<tr>
<td>Greater Than</td>
<td>gt</td>
<td>xs:decimal</td>
<td>This memo</td>
</tr>
<tr>
<td>Less Than</td>
<td>lt</td>
<td>xs:decimal</td>
<td>This memo</td>
</tr>
<tr>
<td>Change Step</td>
<td>st</td>
<td>xs:decimal (&gt;0)</td>
<td>This memo</td>
</tr>
<tr>
<td>Notification Band</td>
<td>band</td>
<td>(none)</td>
<td>This memo</td>
</tr>
<tr>
<td>Edge</td>
<td>edge</td>
<td>xs:boolean</td>
<td>This memo</td>
</tr>
</tbody>
</table>
Next Steps

• Continue getting feedback and reviews
• Ready for WGLC?
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Thank you!