

Group Communication for the Constrained Application Protocol (CoAP)

draft-ietf-core-groupcomm-bis-02

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Goal

- › Intended normative successor of experimental RFC 7390 (if approved)
 - As a Standards Track document
 - Obsoletes RFC 7390, Updates RFC 7252 and RFC 7641
- › Be standard reference for implementations that are now based on RFC 7390, e.g.:
 - “Eclipse Californium 2.0.x” (Eclipse Foundation)
 - “Implementation of CoAP Server & Client in Go” (OCF)
- › What’s in scope?
 - CoAP group communication over UDP/IP, including latest developments (Observe/Blockwise/Security ...)
 - Unsecured CoAP or group-OSCORE-secured communication
 - Principles for secure group configuration
 - Use cases (appendix)

Overview of -02 updates

- › Clarify messaging/endpoint model – server may respond from different UDP port [#1](#)
- › Consistency requirement for response suppression updated – now based on response code class [#2](#)
- › ‘Group definition’ 2.1 expanded into subsections; relations between group types detailed.
 - Encoding application group using ‘Uri-Host’ Option added [#3](#)
 - Best practices for application group inclusion in request added

Overview of -02 updates

- › Included FETCH method in many places, where applicable. Also in Observe 2.3.5 and Block-Wise 2.3.6.
- › Various enhancements & editorial
 - A few more Observe re-registration details
 - ...

Server response from different UDP port

› Issue #1, now closed



Next steps

- › Move handling of multiple CoAP responses from CoAP layer to the application layer, in 2.3.1
 - based on Interop experience
- › Extend proxy operation 2.3.3 with caching of responses
 - explore caching scenarios – **can we suppress the sending of multicast request in certain cases? Can Proxy do cache-refresh?**

Next steps

- › More reviews would be good!
 - Promised @IETF 108: Christian, Francesca

- › Test selected functions in CoAP implementations
 - E.g. “Observe + multicast” extension of RFC 7641
 - Report results

Thank you!

Comments/questions?

<https://github.com/core-wg/groupcomm-bis/>

Motivation (backup slide)

- › RFC 7390 was published in 2014
 - CoAP functionalities available by then were covered
 - No group security solution was available to indicate
 - It is an Experimental document (started as Informational)
- › What has changed?
 - More CoAP functionalities have been developed (Block-Wise, Observe)
 - RESTful interface for membership configuration is not really used
 - Group OSCORE provides group end-to-end security for CoAP
- › Practical considerations
 - Group OSCORE clearly builds on RFC 7390 normatively
 - However, it can refer RFC 7390 only informationally