

**OCF “Ipanema” – Clarification of CoAP bindings to CRUDN operations – Core
Technology WG CR 2563**

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12.2.3 CoAP method with request and response

12.2.3.1 Overview

Every request has a CoAP method that realizes the request. The primary methods and their meanings are shown in Table 27, which provides the mapping of GET/POST/DELETE methods to CREATE, RETRIEVE, UPDATE, and DELETE operations. The associated text provides the generic behaviours when using these methods, however Resource OCF Interfaces may modify these generic semantics. The HTTP codes in the RESTful descriptions will be translated as described in IETF RFC 8075 clause 7 Response Code Mapping. CoAP methods not listed in Table 27 are not supported.

Table 27 – CoAP request and response

Method for CRUDN	(mandatory) Request data	(mandatory) Response data
GET for RETRIEVE	<ul style="list-style-type: none"> - Method code: GET (0.01). - Request URI: an existing URI for the Resource to be retrieved 	<ul style="list-style-type: none"> - Response code: success (2.xx) or error (4.xx or 5.xx). - Payload: Resource representation of the target Resource (when successful).
POST for CREATE	<ul style="list-style-type: none"> - Method code: POST (0.02). - Request URI: an existing URI for the Resource responsible for the creation. - Payload: Resource representation of the Resource to be created. 	<ul style="list-style-type: none"> - Response code: success (2.xx) or error (4.xx or 5.xx). - Payload: the URI of the newly created Resource (when successful).
POST for UPDATE	<ul style="list-style-type: none"> - Method code: POST (0.02). - Request URI: an existing URI for the Resource to be updated. - Payload: representation of the Resource to be updated. 	<ul style="list-style-type: none"> - Response Code: success (2.xx) or error (4.xx or 5.xx).
DELETE for DELETE	<ul style="list-style-type: none"> - Method code: DELETE (0.04). - Request URI: an existing URI for the Resource to be deleted. 	<ul style="list-style-type: none"> - Response code: success (2.xx) or error (4.xx or 5.xx).

12.2.3.2 CREATE with POST

POST with the "oic.if.create" OCF Interface query parameter (i.e., "POST ?if=oic.if.create") shall be used only in situations where the request URI is valid, that is it is the URI of an existing Resource on the Server that is processing the request. If no such Resource is present, the Server shall respond with an error response code of 4.xx. The use of POST for CREATE shall use an existing request URI which identifies the Resource on the Server responsible for creation. The URI of the created Resource is determined by the Server and provided to the Client in the response.

A Client shall include the representation of the new Resource in the request payload. The new resource representation in the payload shall have all the necessary Properties to create a valid Resource instance, i.e. the created Resource should be able to properly respond to the valid Request with mandatory OCF Interface (e.g., "GET with ?if=oic.if.baseline").

Upon receiving the POST request, the Server shall either:

- Create the new Resource with a new URI, respond with the new URI for the newly created Resource and a success response code (2.xx); or
- respond with an error response code (4.xx or 5.xx).

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