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B. de h0ra
Zalando SE
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**The respond-sync Prefer header preference
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Abstract

[RFC7240] standardizes a means of indicating client preferences using the "Prefer" header. This specification defines a "Prefer" header preference extension to indicate synchronous processing, called "respond-sync".

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1. Introduction

[RFC7240] standardizes a means of indicating client preferences using the "Prefer" header. This specification defines a "Prefer" header preference to indicate synchronous processing, called "respond-sync".

1.1. Terminology

The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY, and OPTIONAL, when they appear in this document, are to be interpreted as described in [RFC2119].

2. The "respond-sync" Preference

The "respond-sync" preference indicates that the client prefers the server to respond synchronously to a request. For instance, in the case where the server would respond with a 202 (Accepted) response but the client is willing to wait, the server MAY honor the "respond-sync" preference by returning a 201 (Created) or a 200 (Ok) response instead.

ABNF [RFC5234]:

```
respond-sync = "respond-sync"
```

Clients MAY send a "wait" preference in conjunction with the "respond-sync" preference to indicate an upper bound on how long it is willing to wait for the server to process the request.

The motivation for the "respond-sync" preference is to support synchronous request handling by allowing a client to indicate to a server its preference for synchronous and non-202 responses where the server would normally return a 202 (Accepted) response, but not require specifying timing directives as per the "wait" preference defined in [RFC7240].

An example request specifying the "respond-sync" preference:

```
POST /collection HTTP/1.1
Host: example.org
Content-Type: application/json
Prefer: respond-sync

{"property": "value"}
```

An example synchronous response using 201 (Created):

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HTTP/1.1 201 Created

Location: <https://example.org/collection/123>

3. IANA Considerations

If this work is accepted, IANA is requested to register the "respond-sync" preference per [[RFC7240](#)] to the HTTP Preferences registry as follows:

- o Preference: respond-sync
- o Value: None
- o Optional Parameters: None
- o Description: Indicates the client prefers that the server respond synchronously to a request.
- o Reference: This specification, [Section 2](#).

4. Security Considerations

A server could incur greater costs in attempting to comply with a synchronous preference than performing work asynchronously. Unconditional compliance from a server could allow the use of the preference for denial of service when presented by multiple clients. A server can ignore the preference to avoid allocating resources to the request that it does not wish to commit.

5. Informative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), DOI 10.17487/RFC2119, March 1997, <<http://www.rfc-editor.org/info/rfc2119>>.
- [RFC5234] Crocker, D., Ed. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", STD 68, [RFC 5234](#), DOI 10.17487/RFC5234, January 2008, <<http://www.rfc-editor.org/info/rfc5234>>.
- [RFC7240] Snell, J., "Prefer Header for HTTP", [RFC 7240](#), DOI 10.17487/RFC7240, June 2014, <<http://www.rfc-editor.org/info/rfc7240>>.

Author's Address

Bill de h0ra
Zalando SE

Email: bill@dehora.net