HTTP
Internet-Draft
Intended status: Standards Track
Expires: January 26, 2020
Cloudflare
July 25, 2019

Declaring Support for HTTP/2 Priorities
draft-lassey-priority-setting-00

Abstract

HTTP/2 provides a prioritization scheme but experience has shown that implementation support varies. This document defines an HTTP/2 setting that endpoints can use as an affirmative signal to indicate their support for HTTP/2 Priorities.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at https://datatracker.ietf.org/drafts/current/.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on January 26, 2020.

Copyright Notice

Copyright (c) 2019 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust’s Legal Provisions Relating to IETF Documents (https://trustee.ietf.org/license-info) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.
1. Introduction

The HTTP/2 specification defines a priority scheme in [RFC7540], Section 5.3, which some implementers have opted not to fully support. The lack of signalling about the status of the implementation has caused several implementations to implement heuristics to detect when the clients they are connected to do not support priorities as defined and take steps to compensate for that. The intent of this draft is to provide and affirmative signalling mechanism for each client to communicate whether or not it supports and will use the priority scheme as defined in [RFC7540], Section 5.3.

2. Terminology

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

3. The SETTINGS_ENABLE_HTTP2_PRIORITIES SETTINGS Parameter

This document adds a new SETTINGS parameter to those defined by [RFC7540], Section 6.5.2.

The new parameter name is SETTINGS_ENABLE_HTTP2_PRIORITIES. The value of the parameter MUST be 0 or 1 to indicate not supporting or supporting HTTP/2 priorities respectively. If either side sends the parameter with a value of 0, clients SHOULD NOT send priority frames and servers SHOULD NOT make any assumptions based on the presence or lack thereof of priority frames. If both sides send the parameter with a value of 1, then both parties MAY use HTTP/2 priorities as they see fit. A sender MUST NOT send the parameter with the value of 0 after previously sending a value of 1. If a client or server does not send the setting, the peer SHOULD NOT make any assumptions about its support for HTTP/2 priorities.
4. IANA Considerations

4.1. A New HTTP/2 Setting

This document registers an entry in the "HTTP/2 Settings" registry that was established by Section 11.3 of [RFC7540].

Name: SETTINGS_ENABLE_HTTP2_PRIORITIES

Code: 0xTBD

Initial Value: 1

Specification: This document

5. Normative References


Authors’ Addresses

Brad Lassey
Google

Email: lassey@chromium.org

Lucas Pardue
Cloudflare

Email: lucaspardue.24.7@gmail.com