Device-Stock-UA HTTP Extension
draft-brown-device-stock-ua-00

Abstract

   This document standardizes an HTTP extension header field that allows
   third-party HTTP clients and embeddable HTTP client components to
   include the user agent string of the HTTP-client that is bundled with
   the device operating system.

Status of this Memo

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

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   material or to cite them other than as "work in progress."

   This Internet-Draft will expire on April 19, 2013.

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1. Introduction

An optional header field, User-Agent was originally defined by
Hypertext Transfer Protocol RFC 1945 (since superseded by [RFC2616]).
Its intent was to enable statistical tracking, allow tracing of
protocol violations, and provide a means for tailoring responses
based on HTTP user agent limitations, quirks, and capabilities.

Application developers have long used the user agent string to infer
user agent capability. Increasingly, developers are relying on the
user agent string to infer the capabilities of the hardware,
firmware, and operating system on which the user agent runs. For
example, the user agent string is sometimes used to infer the display
size or whether the user agent allows access to the device file
system. In some cases, the user agent string is used to infer which
other software may be running in addition to the user agent, such as
a bundled media player or mapping service.

This works as follows: when the HTTP client includes a User-Agent
header field, the value of the header field is compared to a
datastore of stock or native user agent strings and known
capabilities of the device on which it is known to run. Responses
are then tailored based on the results supplied by this datastore.

Such content negotiation assumes a one-to-one relationship between
the value of the User-Agent header field and a device. However, many
HTTP clients do not have such a relationship -- third-party web
browsers that run on top of device operating system software, for
example.

To compensate for this, some third-party clients include an
additional, non-standardized header field. The value of this header
field is set to the user agent string of the device's native client.
In practice, several different non-standard header fields are in use,
for example: X-OperaMini-Phone-UA, used by Opera Software ASA;
X-Device-User-Agent; and X-ATT-DeviceId, used by AT&T Inc.

Applications can use such header fields, when available, to serve
content optimized for a particular device, such as a mobile phone,
electronic reader, or tablet computer. This document standardizes
the syntax and semantics for the Device-Stock-UA header field for
this purpose.

2. Notational Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
"SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this

document are to be interpreted as described in [RFC2119].

3. Syntax Notations

This specification uses the Augmented Backus-Naur Form (ABNF)
notation of [RFC5234].

4. Device-Stock-UA

The Device-Stock-UA HTTP header field is an OPTIONAL header field
that, when used, discloses the user agent of the native browser for a
device or operating system. This is for statistical purposes, as
well as to tailor responses to particular user agent or device
constraints.

When the Device-Stock-UA header field is included with a request,
other non-standard header fields that report a user agent string may
be included.

Third-party browsers that use the same user agent string as the
device's default browser SHOULD NOT include the Device-Stock-UA
header field, i.e., its presence indicates the use of something other
than the default browser user-agent string.

If the user agent string for the default browser changes, as with an
operating system update, the Device-Stock-UA header field SHOULD
mirror this change.

The parameter names are case-insensitive. The header field can be
defined in augmented BNF syntax as:

        Device-Stock-UA = "Device-Stock-UA" ":" (User-Agent)
        User-Agent = <Defined in RFC2616 Section 14.43>

Example:

    Device-Stock-UA: CERN-LineMode/2.15 libwww/2.17b3

The user-agent-string should be retrieved from the firmware, matching
that of the HTTP client bundled with the firmware.

[5](#). Use of Device-Stock-UA Header Field

Entities that provide web analytics services SHOULD use the Device-Stock-UA header field (if present) in addition to the User-Agent header field in their identification of devices to ensure that devices are correctly measured.

Content publishers may use the Device-Stock-UA header field (if present) rather than the User-Agent header field in order to infer the nature and capabilities of the underlying device rather than, or in addition to, the capabilities of the browser in question.

Publishers of third-party HTTP-capable clients SHOULD include the Device-Stock-UA with each HTTP request in order to enable publishers to recognize the underlying device.

[6](#). Security Considerations

Because the Device-Stock-UA header field includes hardware and operating system/firmware information, it may help an attacker narrow the scope of an attack by first targeting client device specific vulnerabilities.

The value of Device-Stock-UA may not correctly represent the hardware and software. It can easily be spoofed on the client or modified between the endpoints.

This header field may reveal more specific information about the user agent than would otherwise be the case. This information could then be used for tracking purposes.

[7](#). IANA Considerations

This document specifies the HTTP header field listed below, which should be added to the permanent HTTP header field registry defined in [[RFC3864](#)].

Header field: Device-Stock-UA Applicable protocol: http/https Status: standard Author/Change controller: IETF (iesg@ietf.org) Internet Engineering Task Force Specification document(s): this specification Related information: none

[8](#). Acknowledgments

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9. Normative references

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