Internet Engineering Task Force (IETF)
Request for Comments: 6713
Category: Informational
ISSN: 2070-1721

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August 2012

The 'application/zlib' and 'application/gzip' Media Types

Abstract

This document defines the 'application/gzip' and 'application/zlib' media types for compressed data using the gzip and zlib compression formats.

Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Not all documents approved by the IESG are a candidate for any level of Internet Standard; see Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at http://www.rfc-editor.org/info/rfc6713.

1. Introduction

zlib [RFC1950] and gzip [RFC1952] are widely used compression formats. zlib is a stream format, while gzip adds header and trailer fields more appropriate for a file format. Both implement the DEFLATE compression scheme described in [RFC1951].

They are used to compress a wide variety of material, from unstructured text to structured data to executable code.

Some applications have informally used media types such as application/gzip-compressed, application/gzipped, application/x-gunzip, application/x-gzip, application/x-gzip-compressed, and gzip/document to describe data compressed with gzip. The media types defined in this document should replace those media types in future applications.

2. The 'application/zlib' Media Type

The 'application/zlib' media type describes a block of data that is compressed using zlib [RFC1950] compression. The data is a stream of bytes as described in RFC 1950.

2.1. Registration Details

Type name: application

Subtype name: zlib

Required parameters: N/A

Optional parameters: N/A

Encoding considerations: Binary

Security considerations: See Section 4 below.

Interoperability considerations: N/A

Published specification: [RFC1950]

Applications that use this media type: anywhere data size is an issue

Additional information:
Magic number(s): first byte is usually 0x78 but can also be 0x08, 0x18, 0x28, 0x38, 0x48, 0x58, or 0x68. The first two bytes, when interpreted as an unsigned 16-bit number in big-endian byte order, contain a value that is a multiple of 31.

File extension(s): N/A
Macintosh file type code(s): N/A

Person and email address to contact for further information: see http://www.zlib.net/

Intended usage: COMMON

Restrictions on usage: N/A

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Change controller: IETF

3. The 'application/gzip' Media Type

The 'application/gzip' media type describes a block of data that is compressed using gzip [RFC1952] compression. The data is a stream of bytes as described in RFC 1952.

3.1. Registration Details

Type name: application

Subtype name: gzip

Required parameters: N/A

Optional parameters: N/A

Encoding considerations: Binary

Security considerations: See Section 4 below.

Interoperability considerations: N/A

Published specification: [RFC1952]

Applications that use this media type: anywhere data size is an issue

Additional information:
Magic number(s): first two bytes are 0x1f, 0x8b.
File extension(s): gz
Macintosh file type code(s): N/A

Person and email address to contact for further information: see http://www.gzip.org/

Intended usage: COMMON

Restrictions on usage: N/A

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4. Security Considerations

zlib and gzip compression can be used to compress arbitrary binary data such as hostile executable code. Also, data that purports to be in zlib or gzip format may not be, and fields that are supposed to be flags, lengths, or pointers could contain anything. Applications should treat any data with due skepticism.

Also see the security considerations in the underlying format documents: Section 5 of [RFC1950], Section 6 of [RFC1951], and Section 4 of [RFC1952].

5. IANA Considerations

IANA has updated the "Application Media Types" registry to include 'application/zlib' as described in Section 2 and 'application/gzip' as described in Section 3.

6. Normative References

[RFC1950] Deutsch, P. and J-L. Gailly, "ZLIB Compressed Data Format Specification version 3.3", RFC 1950, May 1996.

[RFC1951] Deutsch, P., "DEFLATE Compressed Data Format Specification version 1.3", RFC 1951, May 1996.

[RFC1952] Deutsch, P., "GZIP file format specification version 4.3", RFC 1952, May 1996.

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