

Internet media type

An **Internet media type**,^[1] originally called a **MIME type** after MIME (Multipurpose Internet Mail Extensions) and sometimes a **Content-type** after the name of a header in several protocols whose value is such a type, is a two-part identifier for file formats on the Internet. The identifiers were originally defined in RFC 2046 for use in e-mail sent through SMTP, but their use has expanded to other protocols such as HTTP, RTP and SIP.

A media type is composed of at least two parts: a *type*, a *subtype*, and one or more optional parameters. For example, subtypes of text type have an optional charset parameter that can be included to indicate the character encoding, and subtypes of multipart type often define a boundary between parts.

Types or subtypes that begin with x- are nonstandard^[2] (they are not registered with IANA). Subtypes that begin with vnd. are vendor-specific; subtypes in the personal or vanity tree begin with prs..^[3]

MIME is short for Multipurpose Internet Mail Extensions, a specification for formatting non-ASCII messages so that they can be sent over the Internet. Many e-mail clients now support MIME, which enables them to send and receive graphics, audio, and video files via the Internet mail system.

There are many predefined MIME types, such as GIF graphics files and PostScript files. It is also possible to define your own MIME types.

In addition to e-mail applications, web browsers also support various MIME types. This enables the browser to display or output files that are not in HTML format.

MIME was defined in 1992 by the Internet Engineering Task Force (IETF). A new version, called S/MIME, supports encrypted messages.

List of common media types

IANA manages a registry of media types and character encodings. The organization makes a list^[4] available to the public through the Web. Some of the more notable media types used on the Web are listed below:

- Type application: Multipurpose files
 - application/EDI-X12: EDI X12 data; Defined in RFC 1767
 - application/EDIFACT: EDI EDIFACT data; Defined in RFC 1767
 - application/json: JavaScript Object Notation JSON; Defined in RFC 4627
 - application/javascript: JavaScript; Defined in RFC 4329 but not accepted in IE 8 or earlier
 - application/octet-stream: Arbitrary binary data.^[5] Generally speaking this type identifies files that are not associated with a specific application. Contrary to past assumptions by software packages such as Apache this is not a type that should be applied to unknown files. In such a case, a server or application should not indicate a content type, as it may be incorrect, but rather, should omit the type in order to allow the recipient to guess the type.^[6]
 - application/ogg: Ogg, a multimedia bitstream container format; Defined in RFC 5334
 - application/pdf: Portable Document Format, PDF has been in use for document exchange on the Internet since 1993; Defined in RFC 3778
 - application/postscript: PostScript; Defined in RFC 2046
 - application/soap+xml: SOAP; Defined by RFC 3902
 - application/xhtml+xml: XHTML; Defined by RFC 3236
 - application/xml-dtd: DTD files; Defined by RFC 3023
 - application/zip: ZIP archive files; Registered^[7]
- Type audio: Audio
 - audio/basic: mulaw audio at 8 kHz, 1 channel; Defined in RFC 2046

- audio/mp4: MP4 audio
 - audio/mpeg: MP3 or other MPEG audio; Defined in RFC 3003
 - audio/ogg: Ogg Vorbis, Speex, Flac and other audio; Defined in RFC 5334
 - audio/vorbis: Vorbis encoded audio; Defined in RFC 5215
 - audio/x-ms-wma: Windows Media Audio; Documented in Microsoft KB 288102 ^[8]
 - audio/x-ms-wax: Windows Media Audio Redirector; Documented in Microsoft help page ^[8]
 - audio/vnd.rn-realaudio: RealAudio; Documented in RealPlayer Customer Support Answer 2559 ^[9]
 - audio/vnd.wave: WAV audio; Defined in RFC 2361
 - Type image
 - image/gif: GIF image; Defined in RFC 2045 and RFC 2046
 - image/jpeg: JPEG JFIF image; Defined in RFC 2045 and RFC 2046
 - image/png: Portable Network Graphics; Registered, ^[10] Defined in RFC 2083
 - image/svg+xml: SVG vector image; Defined in SVG Tiny 1.2 Specification Appendix M ^[11]
 - image/tiff: Tag Image File Format; Defined in RFC 3302
 - image/vnd.microsoft.icon: ICO image; Registered ^[12]
 - Type message
 - message/http
 - Type model: 3D models
 - Type multipart: Archives and other objects made of more than one part
 - multipart/mixed: MIME E-mail; Defined in RFC 2045 and RFC 2046
 - multipart/alternative: MIME E-mail; Defined in RFC 2045 and RFC 2046
 - multipart/related: MIME E-mail; Defined in RFC 2387 and used by MHTML (HTML mail)
 - multipart/form-data: MIME Webform; Defined in RFC 2388
 - multipart/signed: Defined in RFC 1847
 - multipart/encrypted: Defined in RFC 1847
 - Type text: Human-readable text and source code
 - text/cmd: commands; subtype resident in Gecko browsers like FireFox 3.5
 - text/css: Cascading Style Sheets; Defined in RFC 2318
 - text/csv: Comma-separated values; Defined in RFC 4180
 - text/html: HTML; Defined in RFC 2854
 - text/javascript (**Obsolete**): JavaScript; Defined in and obsoleted by RFC 4329 in order to discourage its usage in favor of application/javascript. However, text/javascript is allowed in HTML 4 and 5 and, unlike application/javascript, has cross-browser support
 - text/plain: Textual data; Defined in RFC 2046 and RFC 3676
 - text/xml: Extensible Markup Language; Defined in RFC 3023
 - Type video: Video
 - video/mpeg: MPEG-1 video with multiplexed audio; Defined in RFC 2045 and RFC 2046
 - video/mp4: MP4 video; Defined in RFC 4337
 - video/ogg: Ogg Theora or other video (with audio); Defined in RFC 5334
 - video/quicktime: QuickTime video; Registered ^[13]
 - video/webm: WebM open media format
 - video/x-ms-wmv: Windows Media Video; Documented in Microsoft KB 288102 ^[8]
 - Type vnd: Vendor Specific Files
 - application/vnd.oasis.opendocument.text: OpenDocument Text; Registered ^[14]
 - application/vnd.oasis.opendocument.spreadsheet: OpenDocument Spreadsheet; Registered ^[15]
 - application/vnd.oasis.opendocument.presentation: OpenDocument Presentation; Registered ^[16]
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- application/vnd.oasis.opendocument.graphics: OpenDocument Graphics; Registered ^[17]
- application/vnd.ms-excel: Microsoft Excel files
- application/vnd.openxmlformats-officedocument.spreadsheetml.sheet: Microsoft Excel 2007 files
- application/vnd.ms-powerpoint: Microsoft Powerpoint files
- application/vnd.openxmlformats-officedocument.presentationml.presentation: Microsoft Powerpoint 2007 files
- application/msword: Microsoft Word files
- application/vnd.openxmlformats-officedocument.wordprocessingml.document: Microsoft Word 2007 files
- application/vnd.mozilla.xul+xml: Mozilla XUL files
- Type x: Non-standard files
 - application/x-www-form-urlencoded Form Encoded Data; Documented in HTML 4.01 Specification, Section 17.13.4.1 ^[18]
 - application/x-dvi: device-independent document in DVI format
 - application/x-latex: LaTeX files
 - application/x-font-ttf: TrueType Font No registered MIME type, but this is the most commonly used
 - application/x-shockwave-flash: Adobe Flash files for example with the extension .swf; Documented in Adobe TechNote tn_4151 ^[19] and Adobe TechNote tn_16509 ^[20]
 - application/x-stuffit: StuffIt archive files
 - application/x-rar-compressed: RAR archive files
 - application/x-tar: Tarball files
- Type x-pkcs: PKCS standard files
 - application/x-pkcs12: p12 files
 - application/x-pkcs12: pfx files
 - application/x-pkcs7-certificates: p7b files
 - application/x-pkcs7-certificates: spc files
 - application/x-pkcs7-certreqresp: p7r files
 - application/x-pkcs7-mime: p7c files
 - application/x-pkcs7-mime: p7m files
 - application/x-pkcs7-signature: p7s files

See also

- XML and MIME
- RTP audio video profile
- mime.types

References

- [1] "Internet Media Type registration, consistency of use" (<http://www.w3.org/2001/tag/2002/0129-mime>). W3C. 2002-06-03. . Retrieved 2006-11-29.
- [2] Freed, N. and Borenstein, N. (November 1996). "RFC 2045 - Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies" (<http://tools.ietf.org/html/rfc2045#section-5>). IETF. . Retrieved 2006-11-29.
- [3] Freed, N.; Klensin, J. (December 2005). "RFC 4288 - Media Type Specifications and Registration Procedures" (<http://tools.ietf.org/html/rfc4288#section-3.2>). IETF. . Retrieved 2008-06-14.
- [4] <http://www.iana.org/assignments/media-types/>
- [5] RFC 2046 - Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types. Tools.ietf.org. Retrieved on 2010-09-29.
- [6] HTTP/1.1: Entity (<http://www.w3.org/Protocols/rfc2616/rfc2616-sec7.html#sec7.2.1>). W3.org. Retrieved on 2010-09-29.
- [7] MIME SUBTYPE NAME: zip (<http://www.iana.org/assignments/media-types/application/zip>)
- [8] <http://support.microsoft.com/kb/288102>
- [9] http://real.custhelp.com/cgi-bin/real.cfg/php/enduser/std_adp.php?p_faqid=2559&p_created=&p_sid=uz4Tpoti&p_lva=1085179956&p_sp=2559&

- p_li=cF9zcmNoPTEmcF9zb3J0X2J5PSZwX2dyaWRzb3J0PSZwX3Jvd19jbnQ9MSZwX3Byb2RzPTMsMTEmcF9jYXRzPSZwX3B2PTIuMTEmcF9jdj0mcF9z
p_prod_lvl1=3&p_prod_lvl2=11&tabName=tab0&p_topview=1
- [10] MIME SUBTYPE NAME: png (<http://www.iana.org/assignments/media-types/image/png>)
 - [11] <http://www.w3.org/TR/SVGTiny12/mimereg.html>
 - [12] MIME subtype name : Vendor Tree - vnd.microsoft.icon (<http://www.iana.org/assignments/media-types/image/vnd.microsoft.icon>)
 - [13] Quicktime (<http://www.iana.org/assignments/media-types/video/quicktime>)
 - [14] vnd.oasis.opendocument.text (<http://www.iana.org/assignments/media-types/application/vnd.oasis.opendocument.text>)
 - [15] vnd.oasis.opendocument.spreadsheet (<http://www.iana.org/assignments/media-types/application/vnd.oasis.opendocument.spreadsheet>)
 - [16] vnd.oasis.opendocument.presentation (<http://www.iana.org/assignments/media-types/application/vnd.oasis.opendocument.presentation>)
 - [17] vnd.oasis.opendocument.graphics (<http://www.iana.org/assignments/media-types/application/vnd.oasis.opendocument.graphics>)
 - [18] <http://www.w3.org/TR/html401/interact/forms.html#h-17.13.4.1>
 - [19] http://www.adobe.com/go/tn_4151
 - [20] http://www.adobe.com/go/tn_16509

External links

- IANA MIME media types list (<http://www.iana.org/assignments/media-types/>)
- RFC 2045 (<http://www.ietf.org/rfc/rfc2046.txt>), RFC 2046 - Multipurpose Internet Mail Extensions (MIME), parts 1 and 2

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