

Introduction to MIME Types

MIME Type Basics

MIME (Multipurpose Internet Mail Extensions) types, also known as media types, indicate the nature and format of a document, file, or assortment of bytes on the Internet.

MIME types are defined and standardized in IETF's RFC 6838.

The MIME type registry associates particular filename extensions and filename patterns with specific content types.

MIME types enable applications to correctly handle different types of data, ensuring proper rendering and processing.

Structure of a MIME Type

Type:
Represents the broad category of the data.

Examples: `text`, `image`, `audio`, `video`, `application`

MIME Type Format:
`type/subtype`

Subtype:
Specifies the exact type of data.

Examples: `plain`, `jpeg`, `mpeg`, `octet-stream`

Example:
`text/html` represents an HTML document.
`image/jpeg` represents a JPEG image.

Common MIME Type Categories

- text:** For text-based data, such as HTML, CSS, and plain text.
- image:** For image data, such as JPEG, PNG, and GIF.
- audio:** For audio data, such as MP3 and WAV.
- video:** For video data, such as MP4 and WebM.
- application:** For binary data or specific application formats, such as PDF and ZIP.

Common MIME Types and Extensions

Text MIME Types

<code>text/plain</code>	Plain text document (.txt)
<code>text/html</code>	HyperText Markup Language (.html, .htm)
<code>text/css</code>	Cascading Style Sheets (.css)
<code>text/csv</code>	Comma-separated values (.csv)
<code>text/calendar</code>	iCalendar format (.ics)
<code>text/markdown</code>	Markdown file (.md, .markdown)

Image MIME Types

<code>image/jpeg</code>	JPEG images (.jpeg, .jpg)
<code>image/png</code>	Portable Network Graphics (.png)
<code>image/gif</code>	Graphics Interchange Format (.gif)
<code>image/bmp</code>	Windows OS/2 Bitmap Graphics (.bmp)
<code>image/webp</code>	WEBP image (.webp)
<code>image/svg+xml</code>	Scalable Vector Graphics (.svg)
<code>image/tiff</code>	Tagged Image File Format (.tif, .tiff)
<code>image/vnd.microsoft.icon</code>	Icon format (.ico)

Audio/Video MIME Types

<code>audio/mpeg</code>	MP3 audio (.mp3)
<code>audio/ogg</code>	OGG audio (.oga)
<code>audio/wav</code>	Waveform Audio Format (.wav)
<code>video/mpeg</code>	MPEG Video (.mpeg)
<code>video/ogg</code>	OGG video (.ogv)
<code>video/webm</code>	WEBM video (.webm)
<code>audio/webm</code>	WEBM audio (.weba)
<code>video/x-msvideo</code>	AVI: Audio Video Interleave (.avi)

MIME Type Use Cases and Considerations

Setting MIME Types on a Web Server

Web servers use MIME types to inform browsers about the type of content being served. Correctly configuring MIME types ensures that web content is rendered properly.

Example (Apache .htaccess):

```
AddType application/pdf .pdf
AddType text/html .html .htm
AddType image/jpeg .jpg .jpeg
```

MIME Types in HTML

When embedding resources in HTML, it's often necessary to specify the `type` attribute to indicate the MIME type of the embedded content.

Example:

```
<link rel="stylesheet" href="styles.css"
type="text/css">
<script src="script.js"
type="text/javascript"></script>
```

MIME Types in Email

MIME types are essential for sending emails with attachments or formatted content. They allow email clients to correctly interpret and display the email content.

Example:
An email with an attached image would include a MIME part with `Content-Type: image/jpeg`.

Table with MIME types

Common MIME Types

Extension	Kind of document	MIME Type
.aac	AAC audio	audio/aac
.abw	AbiWord document	application/x-abiword

.arc	Archive document	application/x-freearc
.avi	AVI video	video/x-msvideo
.azw	Amazon Kindle eBook	application/vnd.amazon.ebook
.bin	Binary data	application/octet-stream
.bmp	Bitmap Graphics	image/bmp
.bz	BZip archive	application/x-bzip
.bz2	BZip2 archive	application/x-bzip2
.csh	C-Shell script	application/x-csh
.css	CSS	text/css
.csv	CSV	text/csv
.doc	Microsoft Word	application/msword
.docx	Microsoft Word (OpenXML)	application/vnd.openxmlformats-officedocument.wordprocessingml.document
.eot	MS Embedded OpenType fonts	application/vnd.ms-fontobject
.epub	Electronic publication	application/epub+zip
.gz	GZip Compressed Archive	application/gzip
.gif	GIF	image/gif
.htm, .html	HTML	text/html
.ico	Icon format	image/vnd.microsoft.icon
.ics	iCalendar format	text/calendar
.jar	Java Archive	application/java-archive
.jpeg, .jpg	JPEG images	image/jpeg
.js	JavaScript	text/javascript
.json	JSON format	application/json
.jsonld	JSON-LD format	application/ld+json
.mid, .midi	MIDI	audio/midi, audio/x-midi
.mjs	JavaScript module	text/javascript
.mp3	MP3 audio	audio/mpeg
.mpeg	MPEG Video	video/mpeg
.mpkg	Apple Installer Package	application/vnd.apple.installer+xml
.odp	OpenDocument presentation	application/vnd.oasis.opendocument.presentation
.ods	OpenDocument spreadsheet	application/vnd.oasis.opendocument.spreadsheet
.odt	OpenDocument text	application/vnd.oasis.opendocument.text
.oga	OGG audio	audio/ogg
.ogv	OGG video	video/ogg
.ogx	OGG	application/ogg
.opus	Opus audio	audio/opus
.otf	OpenType font	font/otf
.png	PNG	image/png
.pdf	PDF	application/pdf
.php	PHP	application/php
.ppt	Microsoft PowerPoint	application/vnd.ms-powerpoint
.pptx	Microsoft PowerPoint (OpenXML)	application/vnd.openxmlformats-officedocument.presentationml.presentation
.rar	RAR archive	application/vnd.rar
.rtf	RTF	application/rtf
.sh	Bourne shell script	application/x-sh
.svg	SVG	image/svg+xml
.swf	Adobe Flash document	application/x-shockwave-flash
.tar	TAR	application/x-tar

.tif, .tiff	TIFF	image/tiff
.ts	MPEG transport stream	video/mp2t
.ttf	TrueType Font	font/ttf
.txt	Text	text/plain
.vsd	Microsoft Visio	application/vnd.visio
.wav	Waveform Audio Format	audio/wav
.weba	WEBM audio	audio/webm
.webm	WEBM video	video/webm
.webp	WEBP image	image/webp
.woff	Web Open Font Format	font/woff
.woff2	Web Open Font Format	font/woff2
.xhtml	XHTML	application/xhtml+xml
.xls	Microsoft Excel	application/vnd.ms-excel
.xlsx	Microsoft Excel (OpenXML)	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet
.xml	XML	application/xml or text/xml
.xul	XUL	application/vnd.mozilla.xul+xml
.zip	ZIP archive	application/zip
.3gp	3GPP audio/video container	video/3gpp or audio/3gpp
.3g2	3GPP2 audio/video container	video/3gpp2 or audio/3gpp2
.7z	7-zip archive	application/x-7z-compressed
.markdown, .md	Markdown File	text/markdown
.m4a	MPEG 4 audio	audio/mp4
.mp4	MPEG 4 video	video/mp4
.mov	QuickTime video	video/quicktime
.flv	Flash video	video/x-flv
.wmv	Windows Media Video	video/x-ms-wmv
.asf	Advanced Systems Format	application/vnd.ms-asf
.mpg	MPEG-1 video	video/mpeg
.mpeg2	MPEG-2 video	video/mpeg2
.qt	QuickTime Movie	video/quicktime
.ogg	Ogg Vorbis audio	audio/ogg
.oga	Ogg Audio	audio/ogg
.spx	Speex audio	audio/ogg
.ogv	Ogg video	video/ogg
.txt	Plain Text	text/plain
.rtf	Rich Text Format	application/rtf
.pdf	Adobe PDF	application/pdf
.ps	PostScript	application/postscript
.tar	Tape Archive	application/x-tar
.zip	ZIP Archive	application/zip
.gzip	Gzip	application/gzip
.xhtml	XHTML	application/xhtml+xml
.html	HTML	text/html
.ics	iCalendar	text/calendar
.vcf	vCard	text/vcard
.svg	Scalable Vector Graphics	image/svg+xml
.png	Portable Network Graphics	image/png
.jpeg	JPEG images	image/jpeg

.gif	Graphics Interchange Format	image/gif
.bmp	Bitmap Image File	image/bmp
.mp3	MPEG Audio Layer 3	audio/mpeg
.wav	Waveform Audio File Format	audio/wav
.midi	Musical Instrument Digital Interface	audio/midi
.mp4	MPEG-4 video	video/mp4
.mpeg	MPEG video	video/mpeg
.avi	Audio Video Interleave	video/x-msvideo
.json	JavaScript Object Notation	application/json
.js	JavaScript File	text/javascript
.css	Cascading Style Sheets	text/css
.csv	Comma-Separated Values	text/csv
.woff	Web Open Font Format	font/woff
.ttf	TrueType Font	font/ttf
.otf	OpenType Font	font/otf
.eot	Embedded OpenType Font	application/vnd.ms-fontobject
.ico	Icon File	image/x-icon
.webp	Web Picture format	image/webp
.mjs	JavaScript Module	text/javascript
.wasm	WebAssembly Module	application/wasm