Media type

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A **media type** (formerly known as **MIME type**)[[1]](https://en.wikipedia.org/wiki/Media_type#cite_note-1) is a two-part identifier for file formats and format contents transmitted on the [Internet](https://en.wikipedia.org/wiki/Internet). The [Internet Assigned Numbers Authority (IANA)](https://en.wikipedia.org/wiki/Internet_Assigned_Numbers_Authority) is the official authority for the standardization and publication of these classifications. Media types were originally defined in [Request for Comments](https://en.wikipedia.org/wiki/Request_for_Comments) [RFC](https://en.wikipedia.org/wiki/RFC_(identifier)) [2045](https://tools.ietf.org/html/rfc2045) (MIME) Part One: Format of Internet Message Bodies (Nov 1996) in November 1996 as a part of [*MIME*](https://en.wikipedia.org/wiki/MIME)*(Multipurpose Internet Mail Extensions)* specification, for denoting type of [email](https://en.wikipedia.org/wiki/Email) message content and attachments;[[2]](https://en.wikipedia.org/wiki/Media_type#cite_note-RFC2045-2) hence the original name, *MIME type*. Media types are also used by other internet protocols such as [HTTP](https://en.wikipedia.org/wiki/HTTP)[[3]](https://en.wikipedia.org/wiki/Media_type#cite_note-3) and document file formats such as [HTML](https://en.wikipedia.org/wiki/HTML),[[4]](https://en.wikipedia.org/wiki/Media_type#cite_note-4) for similar purposes.



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Naming[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=1)]

A media type consists of a *type* and a *subtype*, which is further structured into a *tree*. A media type can optionally define a *suffix* and *parameters*:

type "/" [tree "."] subtype ["+" suffix] \*[";" parameter]

The currently registered types are: application, audio, example, font, image, message, model, multipart, text and video.

An unofficial top-level name in common use is called **chemical**.[[5]](https://en.wikipedia.org/wiki/Media_type#cite_note-5)[[6]](https://en.wikipedia.org/wiki/Media_type#cite_note-6)[[7]](https://en.wikipedia.org/wiki/Media_type#cite_note-7)

As an example, an HTML file might be designated text/html; charset=UTF-8. In this example, text is the type, html is the subtype, and charset=UTF-8 is an optional parameter indicating the character encoding.

A subtype typically consists of a media format, but it may or must also contain other content, such as a tree prefix, producer, product or suffix, according to the different rules in registration trees.

Types, subtypes, and parameter names are case-insensitive. Parameter values are usually case-sensitive, but may be interpreted in a case-insensitive fashion depending on the intended use.[[8]](https://en.wikipedia.org/wiki/Media_type#cite_note-8)

**Common examples**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=2)]

* application/graphql
* application/javascript
* application/json
* application/ld+json
* application/msword (.doc)
* application/pdf
* application/sql
* application/vnd.api+json
* application/vnd.ms-excel (.xls)
* application/vnd.ms-powerpoint (.ppt)
* application/vnd.oasis.opendocument.text (.odt)
* application/vnd.openxmlformats-officedocument.presentationml.presentation (.pptx)
* application/vnd.openxmlformats-officedocument.spreadsheetml.sheet (.xlsx)
* application/vnd.openxmlformats-officedocument.wordprocessingml.document (.docx)
* application/x-www-form-urlencoded
* application/xml
* application/zip
* application/zstd (.zst)
* audio/mpeg
* audio/ogg
* image/gif
* image/apng
* image/flif
* image/webp
* image/x-mng
* image/jpeg
* image/png
* multipart/form-data
* text/css
* text/csv
* text/html
* text/php
* text/plain
* text/xml

**Registration trees**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=3)]

All media types should be registered using the IANA registration procedures. For the efficiency and flexibility of the media type registration process, different structures of subtypes can be registered in registration trees that are distinguished by the use of tree prefixes. Currently the following trees are created: standard (no prefix), vendor (vnd. prefix), personal or vanity (prs. prefix), unregistered (x. prefix). These registration trees were first defined in November 1996 (obsoleted [RFC 2048](https://tools.ietf.org/html/rfc2048) - currently [RFC 6838](https://tools.ietf.org/html/rfc6838)). New registration trees may be created by [IETF](https://en.wikipedia.org/wiki/Internet_Engineering_Task_Force) Standards Action for external registration and management by well-known permanent organizations (e.g. scientific societies).

**Standards tree**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=4)]

The standards tree does not use any tree prefix:[[9]](https://en.wikipedia.org/wiki/Media_type#cite_note-RFC6838-9)

type "/" subtype ["+" suffix] \*[";" parameter]

Examples: application/javascript, image/png.

Registrations in the standards tree must be either associated with IETF specifications approved directly by the IESG, or registered by an IANA recognized standards-related organization.

**Vendor tree**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=5)]

The vendor tree includes media types associated with publicly available products. It uses the vnd. tree prefix:[[9]](https://en.wikipedia.org/wiki/Media_type#cite_note-RFC6838-9)

type "/" "vnd." subtype ["+" suffix] \*[";" parameter]

Examples: application/vnd.ms-excel, application/vnd.oasis.opendocument.text.

The terms "vendor" and "producer" are considered equivalent in the context. Industry consortia as well as non-commercial entities can register media types in the vendor tree. A registration in the vendor tree may be created by anyone who needs to interchange files associated with some software product or set of products. However, the registration belongs to the vendor or organization producing the software that employs the type being registered, and that vendor or organization can at any time elect to assert ownership of a registration done by a third party.

**Personal or vanity tree**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=6)]

The personal or vanity tree includes media types associated with non publicly available products or experimental media types. It uses the prs. tree prefix:

type "/" "prs." subtype ["+" suffix] \*[";" parameter]

Examples: audio/prs.sid, image/prs.btif.

**Unregistered tree**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=7)]

The unregistered tree includes media types intended exclusively for use in private environments and only with the active agreement of the parties exchanging them. It uses the x. tree prefix:

type "/" "x." subtype ["+" suffix] \*[";" parameter]

Examples: application/x.foo, video/x.bar.

Media types in this tree cannot be registered. According to RFC 6838 (published in January 2013), any use of types in the unregistered tree is strongly discouraged. In addition, subtypes prefixed with x- or X- are no longer considered to be members of this tree.

According to obsoleted RFC 2048 (published in November 1996)—it should rarely, if ever, be necessary to use unregistered types, and as such use of any x., x- or X- prefixes is discouraged. Obsoleted RFC 1590 (published in September 1993) stated that the use of the x- or X- prefix may be used for unregistered subtypes.

Media types that have been widely deployed (with a subtype prefixed with x- or X-) without being registered, should be, if possible, re-registered with a proper prefixed subtype. If this is not possible, the media type can, after an approval by both the media types reviewer and the IESG, be registered in the standards tree with its unprefixed subtype.

**Suffix**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=8)]

Suffix is an augmentation to the media type definition to additionally specify the underlying structure of that media type, allowing for generic processing based on that structure and independent of the exact type's particular semantics. Media types that make use of a named structured syntax should use the appropriate IANA registered "+"suffix for that structured syntax when they are registered. Unregistered suffixes should not be used (since January 2013). Structured syntax suffix registration procedures are defined in RFC 6838.[[9]](https://en.wikipedia.org/wiki/Media_type#cite_note-RFC6838-9)

The +xml suffix has been defined since January 2001 (RFC 3023), and was formally included in the initial contents of the Structured Syntax Suffix Registry along with +json, +ber, +der, +fastinfoset, +wbxml, and +zip in January 2013 (RFC 6839). Subsequent additions include +gzip, +cbor, +json-seq, and +cbor-seq.[[10]](https://en.wikipedia.org/wiki/Media_type#cite_note-10)

Mailcap[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=9)]

Mailcap (derived from the phrase "mail capability") is a type of meta file used to configure how MIME-aware applications such as mail clients and web browsers render files of different MIME-types. The mailcap format is defined by RFC 1524 "A User Agent Configuration Mechanism for Multimedia Mail Format Information" but is not defined as an Internet standard. It is supported by most Unix systems.

Lines can be comments starting with the # character, or a mime-type followed by how to handle that mime type. The first part is called the content-type, and the second part is called the view-command. For example, video/mpeg; xmpeg %s says if a file encoded in mime has type video/mpeg, run the xmpeg program with the file name as a parameter.

Mime.types[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=10)]

An associated file is the **mime.types** file, which associates filename extensions with a *MIME type*. If the MIME type is properly set, this is unnecessary, but MIME types may be incorrectly set, or set to a generic type such as application/octet-stream, and **mime.types** allows one to fall back on the extension in these cases. Similarly, since many file systems do not store MIME type information, but instead rely on the filename extension, a mime.types file is frequently used by web servers to determine MIME type.

When *viewing* a file, these two work together as follows: **mime.types** associates an extension with a MIME type, while [mailcap](https://en.wikipedia.org/wiki/Mailcap) associates a MIME type with a program.

In UNIX-type systems, the mime.types file is usually located at /etc/**mime.types** and/or $HOME/**.mime.types** and the format is simply that each line is a space-delimited list of a MIME type, followed by zero or more extensions. For example, the HTML type can be associated with the extensions .htm and .html by the following line:

text/html htm html

**Netscape use**[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=11)]

The mime.types file dates to [Netscape](https://en.wikipedia.org/wiki/Netscape), where it used a different format;[[11]](https://en.wikipedia.org/wiki/Media_type#cite_note-11) it used [key-value pairs](https://en.wikipedia.org/wiki/Key-value_pair) and a comma-separated list of extensions, together with a [standard header](https://en.wikipedia.org/wiki/File_format#Magic_number) consisting of a specific comment that identifies the file as a mime.types file, as follows.

#--Netscape Communications Corporation MIME Information

# Do not delete the above line. It is used to identify the file type.

type=text/html exts=htm,html

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|  | This article **is missing information about**. Please expand the article to include this information. Further details may exist on the [talk page](https://en.wikipedia.org/wiki/Talk:Media_type). *(November 2019)* |

See also[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=12)]

* [Content negotiation](https://en.wikipedia.org/wiki/Content_negotiation)
* [Content sniffing](https://en.wikipedia.org/wiki/Content_sniffing)
* [XML and MIME](https://en.wikipedia.org/wiki/XML_and_MIME)
* [Filename extension](https://en.wikipedia.org/wiki/Filename_extension)

References[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=13)]

* 1. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-1) [*"Media Types"*](https://www.iana.org/assignments/media-types/media-types.xhtml)*. IANA.*[*IANA*](https://en.wikipedia.org/wiki/IANA)*. 4 June 2018. Retrieved 5 June2018.*
  2. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-RFC2045_2-0) *Freed, N.; Borenstein, N. (November 1996).*[*"Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies"*](https://tools.ietf.org/html/rfc2045)*.*[*Internet Engineering Task Force*](https://en.wikipedia.org/wiki/Internet_Engineering_Task_Force)*. Retrieved 15 July 2015.*
  3. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-3) [*"Hypertext Transfer Protocol -- HTTP/1.0"*](https://tools.ietf.org/html/rfc1945#section-3.6)*. May 1996. Retrieved 2 Feb 2017.*
  4. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-4) [*"HTML 4.01 Specification"*](https://www.w3.org/TR/html401/types.html#type-content-type)*. 24 Dec 1999. Retrieved 2 Feb 2017.*
  5. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-5) *Daniel Leidert, Egon Willighagen (2007).*[*"The chemical-mime-data project"*](https://web.archive.org/web/20161008090203/http:/chemical-mime.sourceforge.net/)*. Archived from*[*the original*](http://chemical-mime.sourceforge.net/)*on 2016-10-08. Retrieved 2016-04-28.*
  6. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-6) [*"Chemical MIME Home page"*](https://www.ch.ic.ac.uk/chemime/)*. Retrieved 11 May 2019.*
  7. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-7) *S. Rzepa, Henry; Murray-Rust, Peter; J. Whitaker, Benjamin (14 August 1998). "The Application of Chemical Multipurpose Internet Mail Extensions (Chemical MIME) Internet Standards to Electronic Mail and World Wide Web Information Exchange". Journal of Chemical Information and Modeling. American Chemical Society.****38****(6): 976–982.*[*doi*](https://en.wikipedia.org/wiki/Doi_(identifier))*:*[*10.1021/ci9803233*](https://doi.org/10.1021%2Fci9803233)*.*
  8. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-8) [*"Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies"*](https://tools.ietf.org/html/rfc2045#section-5.1)*. November 1996. Retrieved 20 September 2018.*
  9. ^ [Jump up to:***a***](https://en.wikipedia.org/wiki/Media_type#cite_ref-RFC6838_9-0) [***b***](https://en.wikipedia.org/wiki/Media_type#cite_ref-RFC6838_9-1) [***c***](https://en.wikipedia.org/wiki/Media_type#cite_ref-RFC6838_9-2) *Freed, N.*[*"Media Type Specifications and Registration Procedures"*](https://tools.ietf.org/html/rfc6838)*. Ietf Request for Comments (RFC) Pages - Test. Internet Engineering Task Force (IETF). RFC6838.*[*ISSN*](https://en.wikipedia.org/wiki/ISSN_(identifier))[*2070-1721*](https://www.worldcat.org/issn/2070-1721)*. Retrieved 15 July 2015.*
  10. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-10) [*"Structured Syntax Suffix Registry"*](http://www.iana.org/assignments/media-type-structured-suffix/media-type-structured-suffix.xml)*(XML). IANA. 2012-07-20. Retrieved 2019-11-08.*
  11. [**^**](https://en.wikipedia.org/wiki/Media_type#cite_ref-11) WEBMASTERS: [mime types](http://venus.soci.niu.edu/~archives/WEBMASTERS/nov97/0054.html) [Archived](https://archive.is/20001207065300/http:/venus.soci.niu.edu/~archives/WEBMASTERS/nov97/0054.html) 2000-12-07 at [Archive.today](https://en.wikipedia.org/wiki/Archive.today), John McAnally, Thu, 22 Jan 1998 15:29:29 -0600 (CST)

External links[[edit](https://en.wikipedia.org/w/index.php?title=Media_type&action=edit&section=14)]

* [IANA list of official media types](https://www.iana.org/assignments/media-types/media-types.xhtml)
* [The Python Standard Library | mailcap Mailcap file handling](https://docs.python.org/2/library/mailcap.html)