

# Web server directory index

(Redirected from [Index.php](#))

When an [HTTP](#) client (generally a [web browser](#)) requests a [URL](#) that points to a directory structure instead of an actual web page within the directory structure, the [web server](#) will generally serve a default page, which is often referred to as a main or "index" page.

A common filename for such a page is **[index.html](#)**, but most modern HTTP servers offer a configurable list of filenames that the server can use as an index. If a server is configured to support [server-side scripting](#), the list will usually include entries allowing dynamic content to be used as the index page (e.g. [index.cgi](#), [index.pl](#), [index.php](#), [index.shtml](#), [index.jsp](#), [default.asp](#)) even though it may be more appropriate to still specify the HTML output ([index.html.php](#) or [index.html.aspx](#)), as this should not be taken for granted.

An example is the popular [open source](#) web server [Apache](#), where the list of filenames is controlled by the [DirectoryIndex](#)<sup>[1]</sup> directive in the main server configuration file or in the [configuration file](#) for that directory. It is possible to not use file extensions at all, and be neutral to content delivery methods, and set the server to automatically pick the best file through [content negotiation](#).

If the server is unable to find a file with any of the names listed in its configuration, it may either return an error (usually [403 Index Listing Forbidden](#) or [404 Not Found](#)) or generate its own [index page](#) listing the files in the directory. Usually this option, often named `autoindex`, is also configurable.<sup>[2]</sup>

## History

A scheme where web server serves a default file on per-subdirectory basis has been supported as early as [NCSA HTTPd 0.3beta](#) (22 April 1993),<sup>[3]</sup> which defaults to serve `index.html` file in the directory.<sup>[3][4]</sup> This scheme has been then adopted by [CERN HTTPd](#) since at least 2.17beta (5 April 1994), whose default supports `Welcome.html` and `welcome.html` in addition to the NCSA-originated `index.html`.<sup>[5]</sup>

Later web servers typically support this default file scheme in one form or another; this is usually configurable, with `index.html` being one of the default file names.<sup>[6][7][8]</sup>

## Implementation

In some cases, the [home page](#) of a website can be a menu of [language options](#) for large sites that use [geotargeting](#). It is also possible to avoid this step, for example, by using [content negotiation](#).



[www.wikipedia.org](https://www.wikipedia.org) (<https://www.wikipedia.org>), the index of Wikipedia, a multilingual online encyclopedia. Here the website's [home page](#) offers many different languages.

In cases where no known `index.*` file exists within a given directory, the web server may be configured to provide an automatically generated listing of the files within the directory instead. With the Apache web server, for example, this behavior is provided by the `mod_autoindex` module<sup>[9]</sup> and controlled by the `Options +Indexes` directive<sup>[10]</sup> in the web server configuration files. These automated *directory listings* are sometimes a security risk because they enumerate sensitive files which may not be intended for public access, in a process known as a directory indexing attack.<sup>[11]</sup> Such a security misconfiguration<sup>[12]</sup> may also assist in other attacks, such as a path or *directory traversal attack*.<sup>[13]</sup>

Icon	File	Last modified	Size	Description
	<a href="#">Parent Directory</a>		-	
	<a href="#">checker-teste/</a>	2020-07-06 15:19	-	
	<a href="#">checker-teste/</a>	2020-07-06 15:19	-	
	<a href="#">game/</a>	2020-07-06 15:19	-	
	<a href="#">game-module/</a>	2020-07-06 15:19	-	
	<a href="#">checker.py</a>	2020-07-06 15:19	1.7K	
	<a href="#">find-1e.js</a>	2021-11-17 23:30	542B	
	<a href="#">status.php</a>	2021-11-17 23:30	181	
	<a href="#">time.txt</a>	2021-11-17 23:30	23	Timestamp file
	<a href="#">update-files.sh</a>	2020-07-06 15:19	224	

An Apache index page.

## Performances

When accessing a directory, the various available index methods may also have a different impact on usage of OS resources (RAM, CPU time, etc.) and thus on web server performances.

Proceeding from *fastest* to *slowest* method, here is the list:

- using a static index file, e.g.: `index.html`, etc.;
- using a web server feature usually named *autoindex* (when no index file exists) to let web server autogenerate directory listing by using its internal module;
- using an interpreted file read by web server internal program interpreter, e.g.: `index.php`;
- using a CGI executable and compiled program, e.g.: `index.cgi`.

## References

1. "mod\_dir - Apache HTTP Server" ([http://httpd.apache.org/docs/2.0/mod/mod\\_dir.html#directoryindex](http://httpd.apache.org/docs/2.0/mod/mod_dir.html#directoryindex)). [httpd.apache.org](http://httpd.apache.org). Retrieved 2014-05-30.
2. ASF Infrabot (2019-05-22). "Directory listings" (<https://cwiki.apache.org/confluence/display/HTTPD/DirectoryListings>). Apache foundation: HTTPd server project. Retrieved 2021-11-16.
3. "WWW-Talk Apr-Jun 1993: NCSA httpd version 0.3" (<http://1997.webhistory.org/www.lists/www-talk.1993q2/0135.html>). *1997.webhistory.org*.
4. "NCSA HTTPd DirectoryIndex" (<https://web.archive.org/web/20090131074833/http://hoo.hoo.ncsa.uiuc.edu/docs/setup/srm/DirectoryIndex.html>). January 31, 2009. Archived from the original (<http://hoo.hoo.ncsa.uiuc.edu/docs/setup/srm/DirectoryIndex.html>) on January 31, 2009.
5. "Change History of W3C httpd" (<https://web.archive.org/web/19970605110106/http://www.w3.org/pub/WWW/Daemon/Features.html>). June 5, 1997. Archived from the original (<http://www.w3.org/pub/WWW/Daemon/Features.html>) on June 5, 1997.
6. "mod\_dir - Apache HTTP Server Version 2.4 § DirectoryIndex Directive" ([https://httpd.apache.org/docs/2.4/mod/mod\\_dir.html#directoryindex](https://httpd.apache.org/docs/2.4/mod/mod_dir.html#directoryindex)). [httpd.apache.org](http://httpd.apache.org). Archived ([https://web.archive.org/web/20201112002816/https://httpd.apache.org/docs/2.4/mod/mod\\_dir.html](https://web.archive.org/web/20201112002816/https://httpd.apache.org/docs/2.4/mod/mod_dir.html)) from the original on 2020-11-12. Retrieved 2021-01-13.
7. "NGINX Docs | Serving Static Content" (<https://docs.nginx.com/nginx/admin-guide/web-server/serving-static-content/>). [docs.nginx.com](https://docs.nginx.com). Archived (<https://web.archive.org/web/20201111202956/https://docs.nginx.com/nginx/admin-guide/web-server/serving-static-content/>) from the original on 2020-11-11. Retrieved 2021-01-13.

8. "Default Document <defaultDocument> | Microsoft Docs" (<https://docs.microsoft.com/en-us/iis/configuration/system.webserver/defaultdocument/>). *docs.microsoft.com*. Archived (<https://web.archive.org/web/20201208215905/https://docs.microsoft.com/en-us/iis/configuration/system.webserver/defaultdocument/>) from the original on 2020-12-08. Retrieved 2021-01-13.
9. "mod\_autoindex - Apache HTTP Server Version 2.4" ([https://httpd.apache.org/docs/2.4/mod/mod\\_autoindex.html](https://httpd.apache.org/docs/2.4/mod/mod_autoindex.html)). *httpd.apache.org*. Retrieved 2021-01-13.
10. "core - Apache HTTP Server Version 2.4 § Options Directive" (<https://httpd.apache.org/docs/2.4/mod/core.html#options>). *httpd.apache.org*. Retrieved 2021-01-13.
11. "IBM Docs" (<https://www.ibm.com/docs/en/snips/4.6.0?topic=categories-directory-indexing-attacks>). *IBM*. 2021-03-08. Retrieved 2021-05-07.
12. "A6:2017-Security Misconfiguration" ([https://owasp.org/www-project-top-ten/2017/A6\\_2017-Security\\_Misconfiguration.html](https://owasp.org/www-project-top-ten/2017/A6_2017-Security_Misconfiguration.html)). *OWASP*. Retrieved 2021-05-07.
13. "Path Traversal" ([https://owasp.org/www-community/attacks/Path\\_Traversal](https://owasp.org/www-community/attacks/Path_Traversal)). *OWASP*. Retrieved 2021-05-07.

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