

# 4 Types of Web Cache (And When to Use Them)

*Will Morris* on July 7, 2020 -

*A fast-loading website can make or break your business. There are a variety of steps you can take to , but it's important not to neglect web caching. This is a vital strategy for improving page speed, but it's only effective if you use the right type.*

There are several types of web cache, each of which is useful in different circumstances. It's important to understand the kinds of data they store, as well as the levels of control they offer to you and end-users.

In this article, we'll discuss the importance of web caching. We'll then look at four different types of web cache, when to use them, and how to set them up. Let's get started!

## Understanding the importance of web caching

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When a visitor lands on your website, their browser requests data from your site's server. They then have to wait for the server to return the necessary data before they can view your content.

A web cache is website data a computer has stored temporarily for fast and easy future access. Without web caching in place, browsers have to send new requests every time visitors arrive on your site. If your content has been cached, your server or visitors' browsers can send a static copy of your content instead.

This reduces the number of requests sent to your server, which take longer to process than cached responses. This is the primary purpose of caching and how it can increase page speed.

While boosting loading speeds is important, caching also reduces network costs. It is possible to cache your website content at different points between users' browsers and your server. When cached closer to users, your site's data does not use as many resources. This reduces the impact on your server and could save you money on network costs.

## 4 types of web cache (and when to use them)

There are various points within your website network where you can cache data. To make the most of them, there are four different types of web caching you might consider using. Here's a rundown of each.

### 1. Site cache

A site cache or page cache stores website data the first time a webpage is loaded. Each time a user returns to your website, saved elements are quickly accessed and displayed to visitors.

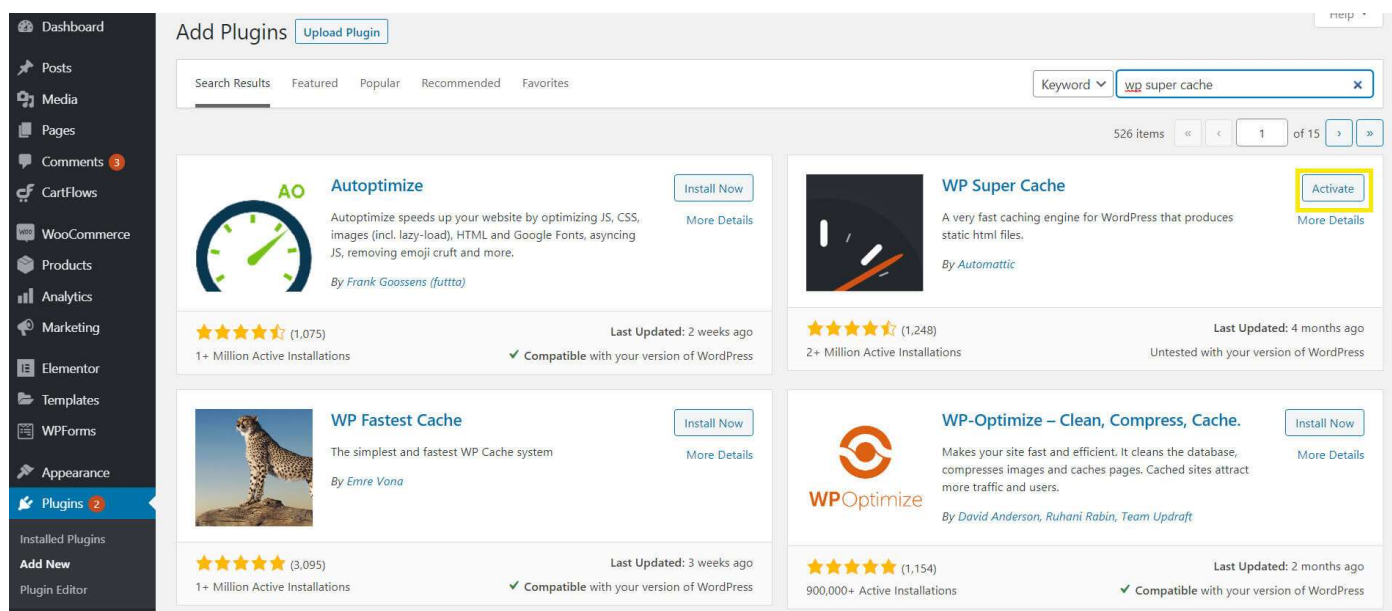
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This is a type of client-side caching, which means that all the stored elements are controlled by the end-user. As a website owner, the only say you have is how long content remains in the cache.

If a page has elements that never change, you can set the cache expiration date far into the future. However, elements that change regularly should have shorter expiration periods so they're periodically refreshed. Otherwise, your site will continue to display outdated content to users loading it from their site caches, even after you've published updates.

For this reason, site caching is ideal for websites with a lot of static content. Since your site rarely changes, users will be able to continue loading your pages quickly while still seeing the latest version of your site. On the other hand, sites that include many dynamic features may benefit more from other types of caching.

To take advantage of site caching, consider using a WordPress plugin. There are many that provide this feature, including and . You'll need to install and activate your chosen plugin via your WordPress dashboard:



After activation, most plugins will automatically enable page caching. You can then navigate to the plugin's settings and configure them to suit your content.

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## 2. Browser cache

Browser caching is a type of site caching built into the end-user's web browser. Website elements are stored by the browser on your visitor's computer and grouped with other files associated with your content. A browser cache can contain HTML pages, CSS stylesheets, images, and other multimedia content.

Browser caching overlaps with site caching because they are both client-side systems. The primary difference is that the browser, rather than the end-user, controls the cache. All browsers have a cache that flushes out old files without any need for user intervention.

The plugins we mentioned in the previous section can also be used to leverage browser caching. Alternatively, you can turn it on manually. To do so, access your website `.htaccess` file. You'll need to use and an FTP client such as to access your server.

Then, right-click on `.htaccess` and select *View/Edit*. This opens the file in a text editor such as . Copy and paste the into the file:

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```
<IfModule mod_expires.c>
ExpiresActive On

# Images
ExpiresByType image/jpeg "access plus 1 year"
ExpiresByType image/gif "access plus 1 year"
ExpiresByType image/png "access plus 1 year"
ExpiresByType image/webp "access plus 1 year"
ExpiresByType image/svg+xml "access plus 1 year"
ExpiresByType image/x-icon "access plus 1 year"

# Video
ExpiresByType video/mp4 "access plus 1 year"
ExpiresByType video/mpeg "access plus 1 year"

# CSS, JavaScript
ExpiresByType text/css "access plus 1 month"
ExpiresByType text/javascript "access plus 1 month"
ExpiresByType application/javascript "access plus 1 month"

# Others
ExpiresByType application/pdf "access plus 1 month"
ExpiresByType application/x-shockwave-flash "access plus 1 month"
</IfModule>
```

You can update the expiration time as needed based on your needs. If you have more dynamic features than static elements, the expiration should be short to avoid serving old content to visitors.

### 3. Server cache

Server cache is an umbrella term covering a number of different types of caching. This includes Content Delivery Network (CDN) caching, object caching, and opcode caching. Each stores different content on your website's server. This type of caching is administered by website owners without any input from end-users.

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Server caching is one of the best methods for reducing server loads. When a request is made, the server checks its temporary storage for the necessary content before processing it the request in full.

If the requested content is available in the server cache, it will be returned to the browser right away. This enables your server to handle more traffic and return your webpages faster.

The methods used to set up server caching vary depending on the specific type of cache you want to implement. is a popular CDN for WordPress users. If you want to activate object caching, WordPress has a you can use.

For opcode caching, you'll need a WordPress plugin such as WP Rocket. After installing and activating it, opcode caching should initiate automatically. You can update or purge the cache in the plugin's settings.

## 4. Micro cache

Another type of caching that many website owners might not be aware of is micro caching. This method stores content for very short periods of time. It generally saves static versions of dynamic elements for up to 10 seconds. As this is a type of site cache, it's controlled by end-users with limited input from website owners.

Micro caching is not a common type of cache because of the short storage time. The sites that benefit from this form of caching also fit into a small profile. They're typically high traffic and feature rapidly changing content, such as the constantly updating graphs on currency exchange and stock websites.

To use micro caching, you need to open your server configuration file. You'll need root server access to do this, which might not be possible with certain types of hosting. If you do have access to this file, add the :

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```
proxy_cache_path /tmp/cache keys_zone=cache:10m levels=1:2 inactive=600s m
server {
proxy_cache cache;
proxy_cache_valid 200 1s;
...
}
```

You can adjust the parameters to suit the needs of your website. Before adding this code, remember to .

## Conclusion

Client-side and server-side caching both have their benefits. They also have different implementation methods. Choosing the right type of web cache can boost your page loading speeds and improve your site's User Experience (UX).

To choose the right type of web cache, there are four options you might want to know about:

1. **Site cache:** Ideal for static content.
2. **Browser cache:** A popular and effective client-side cache option.
3. **Server cache:** Best for high-traffic websites that need to reduce server strain.
4. **Micro cache:** A targeted option for highly dynamic sites.

Do you have any questions about web caching and its benefits? Let us know in the comments section below!

*Image credit:* .

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**Kedar Joshi**

Hi Will,

This is a very informative blog. I was not much aware about the micro cache and its importance before I read this blog. It is very helpful. Thanks for sharing.

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