

# What is RAM cache? How do I clear this cache on Windows?

RAM cache provides quick access to frequently used PC data and speeds up system responsiveness. But how does it work and how do you clear it?

This article will examine how RAM cache works, the advantages and disadvantages of periodically clearing the cache, and more.

## What is RAM cache and how does it work?

RAM cache refers to a portion of a computer's random access memory ( RAM ) used to store frequently accessed data. It acts as a buffer between the processor and slower storage devices, such as hard drives or SSDs .

Its primary purpose is to speed up data retrieval and improve overall system performance.

It's important to note that RAM cache is volatile memory, meaning its contents will be lost when you restart your PC . In this case, the data must be fetched from the storage device and saved back to the RAM cache upon restart. But the good news is that the whole process usually happens quickly!

Here's how RAM caching works:

1. **Data retrieval** : When your PC accesses data from a storage device, the data is initially loaded into the RAM cache through a process called caching. The cached data is then readily available for fast processor access. This eliminates the need to directly fetch data from the slower storage device each time it's requested.
2. **Cache algorithms** : RAM caches use various algorithms to determine which data will be stored in the cache and how long it will be stored there. In most cases, these algorithms prioritize data that is frequently accessed or recently accessed.
3. **Cache management** : RAM cache management is typically handled by the operating system or caching software. The system monitors data usage patterns and automatically adjusts cache contents based on demand. For example, the system may sometimes remove infrequently used data from the cache to make room for new data.

## Is clearing the RAM cache the same as freeing up RAM?

Clearing the RAM cache is different from freeing up RAM . Although both actions involve memory management, they target different aspects.

Clearing the RAM cache refers to emptying the cache memory that stores frequently accessed data in your computer's RAM. However, clearing the RAM cache does not directly target or free up memory occupied by active processes or data.

Meanwhile, freeing up RAM refers to releasing memory occupied by inactive or unused processes and data. This allows the system to have more memory to perform new tasks.

So, what happens if cached data is taking up a lot of space in your RAM? Wouldn't deleting it free up your RAM?

Generally, the amount of space occupied by data cached in RAM is usually small. Remember, the purpose of RAM caching is to store frequently accessed data for fast retrieval. And the truth is, this type of data doesn't require a significant portion of available memory.

## **How to clear RAM cache on Windows**

Here are some methods for clearing the RAM cache on your device.

### **1. Restart the device.**



Restart your Windows device and all the RAM cache will disappear. But why?

When you restart your computer, the operating system shuts down all processes and services, including those using the RAM cache. Therefore, the contents of the cache are cleared and RAM is effectively cleared.

### **2. Delete temporary files**

Here's another easy and effective method!

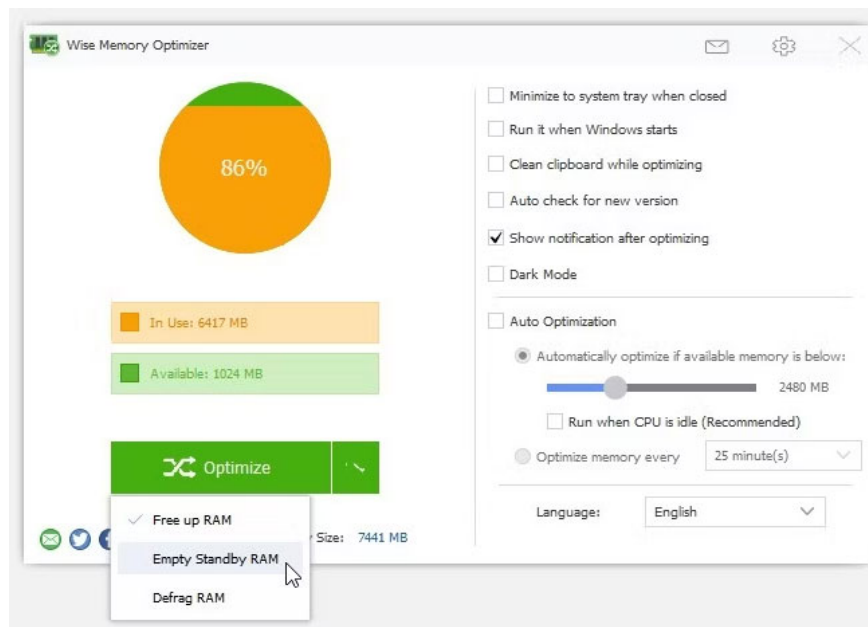
By deleting temporary files, you are removing unnecessary files that accumulate over time. This includes data that may be stored in the RAM cache.

### **3. Using third-party tools**

You can also clear the RAM cache using a third-party tool like Wise Memory Optimizer.

Here are the steps to follow:

1. Download and install Wise Memory Optimizer .
2. Run the tool and click the **Optimize drop-down menu**.
3. Select **Empty Standby RAM** from the options and follow the on-screen instructions.



The best part about this tool is that you can also use it to free up RAM. To do that, apply the previous steps and select **Free up RAM** from the **Optimize drop-down menu**.

**Note :** It is important to download tools like Wise Optimizer from reputable sources and use them cautiously. Always ensure compatibility with your system and follow the instructions provided with the tool.

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