

## PSA: Don't Forget to Reboot Your Mac to Free Memory from kernel\_task



This is a helpful reminder for Mac users that it's important to periodically [restart your Mac](#) to maintain optimal system performance.

Rebooting your Mac from time to time offers several benefits that help system performance and stability. Over time, it is not unusual for certain background processes, applications, and system tasks to accumulate and start consuming large amounts of memory, CPU, and system resources, which can lead to a reduction in system performance or even an

outright sluggish and slow Mac. Not only does a reboot help to clear out memory usage, system caches, and end any unnecessary processes running in the background, it's also valuable because it allows for the installation of any necessary security patches or [system updates](#) to install as well.

### Rebooting helps to free up kernel\_task memory allocation

One of the more common system tasks that can really get out of hand in modern MacOS versions is **kernel\_task**, and rebooting periodically can help to tame kernel\_task when it has began to consume excessive memory or CPU utilization. Since kernel\_task is responsible for maintaining many core system functions, including memory allocation, virtual memory and swap, and thermal regulation, it's not unusual for a prolonged system uptime to lead to sluggish performance as kernel\_task becomes more and more burdened by tasks and processes, that it does not always efficiently free up on its own. Hence, a restart of the Mac can help to prevent kernel\_task from overloading MacOS, clearing system caches, resetting background tasks and processes, and releasing any memory or virtual memory that may be stuck.

### Before reboot: 6 GB memory consumed by kernel\_task

The screenshot below demonstrates what kernel\_task can look like within Activity Monitor on a Mac that is behaving very sluggishly, despite no obvious reason. As you can see, the kernel\_task process itself is taking up a very large amount of RAM, with *over 6GB of memory consumed by kernel\_task*, for no obvious reason:

Process Name	Memory	Threads	Ports	PID
kernel_task	6.38 GB	594	0	0
WindowServer	939.2 MB	22	8,006	642
Messages	537.8 MB	11	2,592	3959
Emoji & Symbols	379.6 MB	4	13,794	47460
Finder	344.1 MB	12	1,973	59406
Preview	305.3 MB	5	469	1211

This was on a Mac that has been used heavily with many browser tabs and sessions, but Safari and Chrome were quit, and the Mac was left to sit on its own overnight. Nonetheless, kernel\_task did not free up that memory to MacOS, system performance suffered, but a reboot helped considerably.

### After reboot: 9 MB memory consumed by kernel\_task

And what happens after a quick restart of the Mac? You will see in the screenshot below, that a restart has allowed kernel\_task to free up all of that memory allocation, reducing memory usage to just 9 MB!

Process Name	Memory	Threads	Ports	PID	User
kernel_task	9.8 MB	555	0	0	root
kernelmanagerd	8.4 MB	2	60	371	root
KernelEventAgent	1.6 MB	2	22	401	root

MEMORY PRESSURE	
Physical Memory:	16.00 GB
Memory Used:	7.46 GB
Cached Files:	8.62 GB
Swap Used:	0 bytes
App Memory:	4.76 GB
Wired Memory:	1.37 GB
Compressed:	469.4 MB

## **More system usage = more need for a reboot**

The more applications and web browser tabs you use concurrently on a Mac, and the less system memory you have in total, the more you will likely benefit from periodically rebooting your Mac.


## **I thought MacOS manages memory allocation and system resources on its own?**

It does! And MacOS manages memory and resources quite well. But nothing is perfect, and the more concurrent apps, browser windows/tabs, media, and resources you consume, the more likely that various system tasks will be aggressively utilized, which can lead to performance degradation or processes like `kernel_task` getting overwhelmed. Since `kernel_task` will manage virtual memory for you, and it does not always release swap after it's no longer used, an occasional reboot can help this out.

Additionally, many Macs still in usage today only have 8GB or 16GB total memory, which with how memory hungry modern MacOS versions, apps, aggressive workflows, and heavy lifting can be, are not always sufficient for fantastic performance under heavy demand. A simple way to maintain performance with lesser system resources is to use fewer apps concurrently, but also to periodically reboot the Mac to flush out various caches, virtual memory, and reset various system resource allocations.

## **Solution: Restart the Mac Periodically, & Install System Software Updates**

So what to do? This is the easy part:

- If you're not familiar, [restarting your Mac](#) is as easy as it gets: Pull down the  Apple menu and choose "Restart"
- Also, get in the habit of [regularly updating your MacOS system software](#), which also requires a system restart to finish installation of that software update.

That's really all there is to it. You don't need to do this super often, but maybe once or twice a week you might notice a benefit. If you haven't restarted your Mac in three months, and your Mac feels slow, a restart will undoubtedly make it feel speedy again. If your Mac is chronically overburdened and under-resourced (cough 8GB RAM with modern MacOS and a heavy workflow cough), you might want to restart every day.

If you regularly install MacOS system software updates, you might not have this issue or reboot requirement as often, but many of us postpone updates for many reasons, and can find ourselves going weeks or months without restarting a Mac.

## But what about getting in the Guinness Book of World Records for record uptime?

There's a whole realm of geek cred associated around lengthy [system uptime](#), since very extended uptimes often are an indicator of general system stability and efficiency ([one of the longest Mac uptimes we have seen is 454 days](#), but several in the comments reported even longer uptimes, and one rarely used Mac apparently has an [uptime of 2700 days](#) as reported in our comments!), so obviously if you reboot often you won't be competing in the longest uptime competitions. But, your Mac performance will likely be better, especially with modern MacOS versions that are very resource heavy and like to use a lot of memory.

By the way, this applies to any computer or device, but obviously we're focusing on Macs here. Nonetheless you might want to get in the habit of periodically rebooting your iPhone, iPad, Windows PC, or Android too.

What are your thoughts on rebooting your Mac, and do you restart the Mac often or on a particular schedule? Do you notice notable performance benefits by more regular system restarts? Do you leave your Mac on all the time and never reboot? Do you participate in the Worlds Longest Uptime competitions? Let us know your thoughts, experiences, and opinions on this topic!

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