

A tour of Win8 & Win10's new Task Manager

Windows 8's Task Manager offers more power, features, and functions than any of its predecessors.

Possibly more impressive: common tasks such as finding and terminating malfunctioning applications are easier than ever.

Almost a one-stop Windows maintenance shop

A key troubleshooting tool in Vista and Win7, Task Manager is even more useful for solving Win8 operation and performance problems. It also has a new look that's easier to work with.

For Win8's Task Manager, Microsoft consolidated numerous tools that are scattered throughout Vista and Win7. For example, key functions of the Management Console (MMC), the System Configuration tool (MSConfig), and the Resource Monitor (ResMon) are now at your fingertips, inside the revamped Task Manager.

Win8's Task Manager even borrows some good ideas from third-party diagnostic tools. For instance, there's a built-in startup analyzer that lets you see *and control* what's slowing down your system-boot process.

What follows is a visual tour of the new Task Manager. If you're running Win8, open your copy of Task Manager and work along with the examples shown below. At the end of the article, you'll have a good sense of what's in Task Manager and how the major pieces function.

If you're not running Win8, the following text will give you a glimpse of what's coming when you eventually upgrade to Win8 or its successor.

Opening the Task Manager in Windows 8

Windows typically offers multiple ways to accomplish any given task, and that's especially the case with Win8's Task Manager. Here are the easiest ways to access it:

- Press **Ctrl + Shift + Esc**.
- Press **Ctrl + Alt + Delete** and then select **Task Manager**.
- Type "task" on the Start screen and then select **Task Manager** when it appears in the apps list.
- On the Desktop, right-click an empty spot on the taskbar or notification area and select **Task Manager** from the context menu.
- Launch the Quick Link menu (**Windows key + X**) and select **Task Manager**.

However you launch it, Task Manager opens with a simple dialog box.

Starting with an ultra-simplified default screen

In its research for Windows 8, Microsoft noted that the most common use of Task Manager, by far, was ending tasks — killing hung or malfunctioning apps or processes.

So the first time you open Win8's Task Manager, you're presented with a simplified screen that lists your running applications. If an app is hung, the words **Not responding** will appear next to its name. You can then select the problematic program or process and kill it via the **End task** button at the bottom of the dialog box. Simple as that.

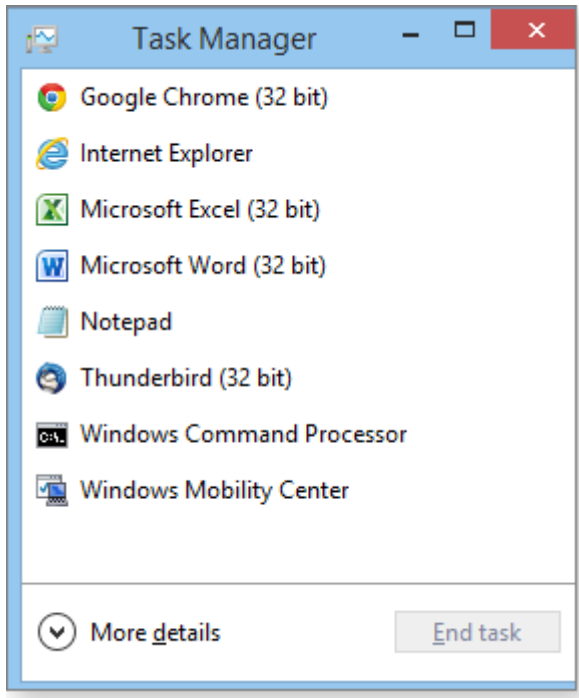


Figure 1. Win8's default Task Manager screen makes it easy to identify a hung app and terminate it with two clicks.

Note: The Win8 Task Manager *no longer uses double prompts*. If you click **End task**, there's no following "Are you sure?" confirmation prompt. Task Manager simply does what you asked — immediately. So be careful. Terminate only those apps that refuse to close the normal way. And if at all possible, kill an app only after you've saved your data.

Processes: Dig deeper with the More details view

The default screen's visual simplicity is deceptive. Task Manager's full set of powerful tools (see Figure 2) is hidden behind the **More details** link at the bottom of the dialog box.

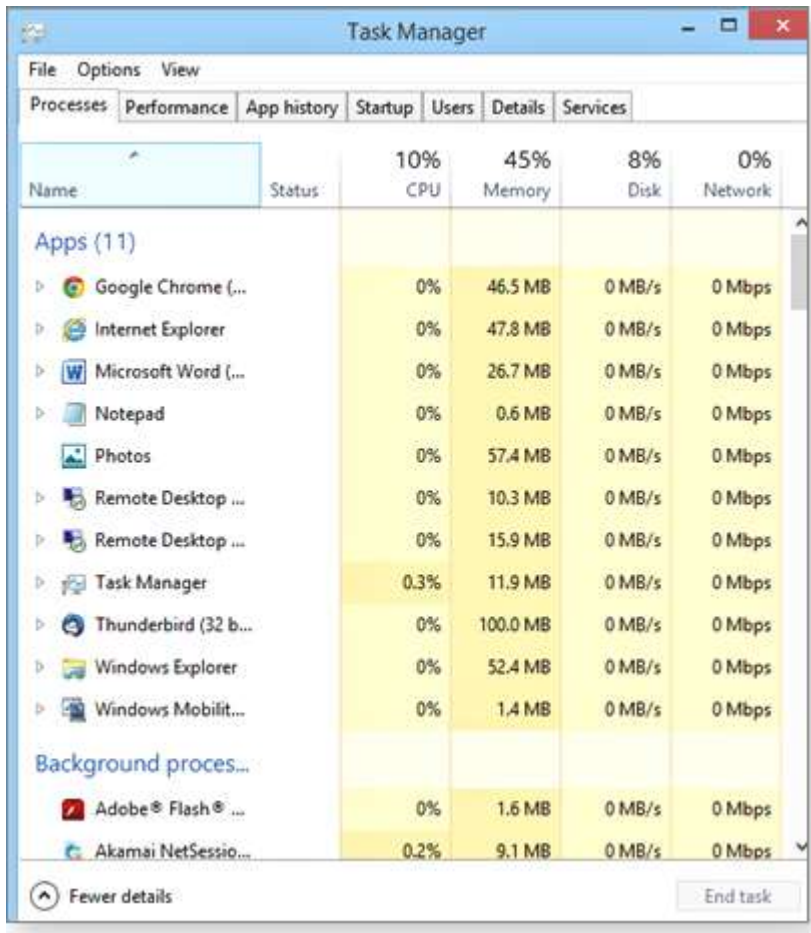


Figure 2. Win8's Task Manager groups like processes together and uses color-coded *heat maps* to help show what's going on.

On the left side of Task Manager's Processes tab, the **Name** column lists all software currently running in Windows. They're organized into three groups: **Apps**, **Background Processes**, and **Windows Processes**. (You'll most likely need to scroll down the list to see the last group.)

The three-part grouping helps you determine what's safest to kill or modify. In general, ending or modifying an **Apps**-level task won't impart any risk to the system. (But, again, you might lose unsaved data.) On the other hand, it's dangerous to meddle with items in the **Windows Processes** group — they're part of the Windows operating system itself. **Background Processes** typically fall somewhere in between.

Some process names have a small expand/contract arrow to their left. This indicates a **group** of related items. Simply click the arrow to see what's inside.

The Processes section also includes a four-column, color-coded *heat map* of the PC's CPU, Memory, Disk, and Network subsystems.

The heat map visually groups items that are behaving similarly. The colors change according to system impact. Light colors represent light use and light system impact. Darker, redder colors indicate heavier use and greater system impact.

In the Figure 2 example, everything's operating normally, so only a few muted colors are used. But if Task Manager detected a critical problem — say, a process was hogging 99 percent of the CPU — that item would be highlighted in dark red. This color coding makes it easy to see what's operating normally and what needs attention.

Task Manager also will change the color of a column header if any item in that column is experiencing a critical condition. It gives you a quick way of locating a malfunctioning item, even if that item is out of sight — for example, it has scrolled off the bottom of the page.

As with previous versions of Task Manager, you can click any column's header to sort the contents. One click sets up a descending sort; a second click sets up an ascending sort. This makes it easy to float processes and apps that are consuming the most (or least) resources to the top of the list.

Figure 3 shows the Memory column sorted so that the most memory-intensive items are listed first.

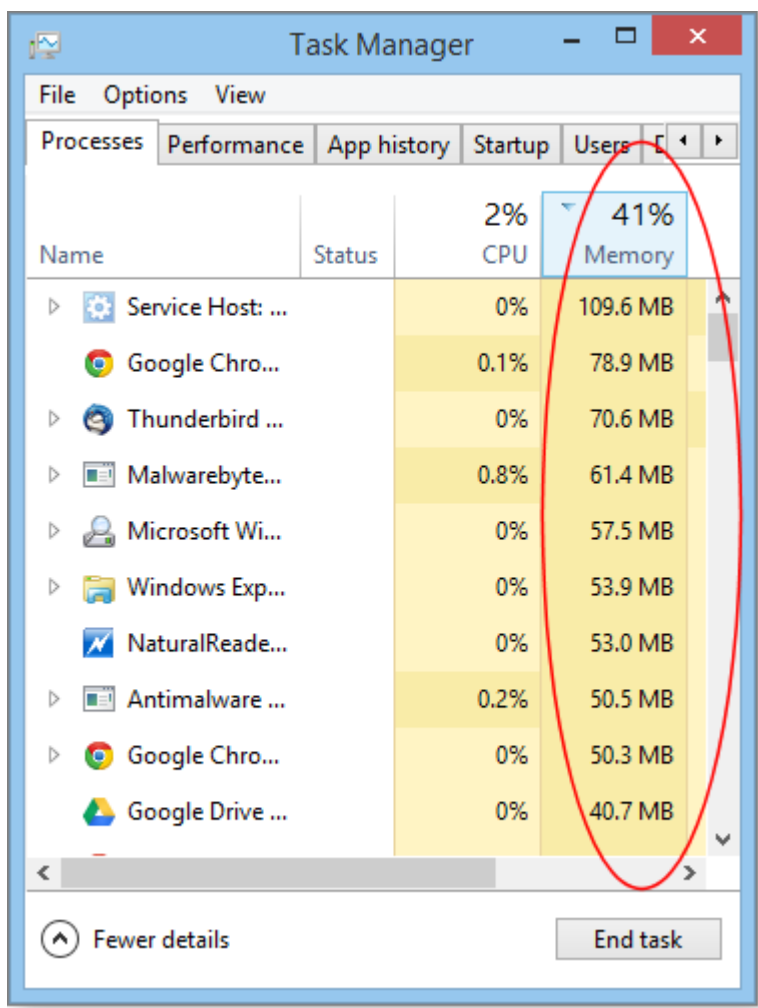


Figure 3. Each Task Manager column is sortable; just click a column's header. In this example, items are sorted by memory footprint.

Clicking the **Name** column heading re-sorts the list by app/process and restores the default three-part grouping — Apps, Background Processes, and Windows Processes.

Whenever it can, Task Manager uses noncryptic *friendly* names for apps, processes, and services. But some items will remain obscure to most Windows users. Right-click any item you wish to know more about, and a context menu will provide shortcuts to related functions, data, and other information. The context menu even includes a *Search online* option (see Figure 4), which feeds your default browser a preconfigured Web search for the item.

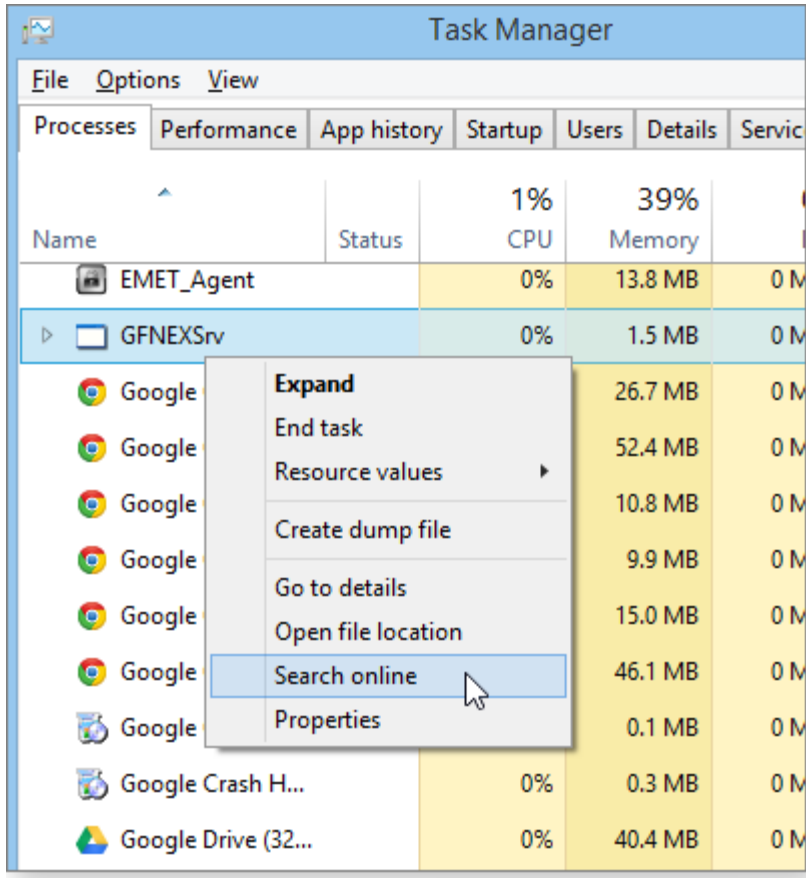


Figure 4. Task Manager's right-click context menu offers links to related functions, data, and information — including direct Web searches.

Performance: Display real-time subsystem stats

The Performance tab provides a ton of data on a PC's CPU, memory, hard-disk, and networking subsystems.

For example, the CPU section displays processor utilization overall or for each core or logical processor. It can also show rated and actual (measured) processor speeds; real-time counts of the number of processes, threads, and handles the CPU is managing; information about the chip type; the presence and size of on-board caches; and virtualization support (see Figure 5).

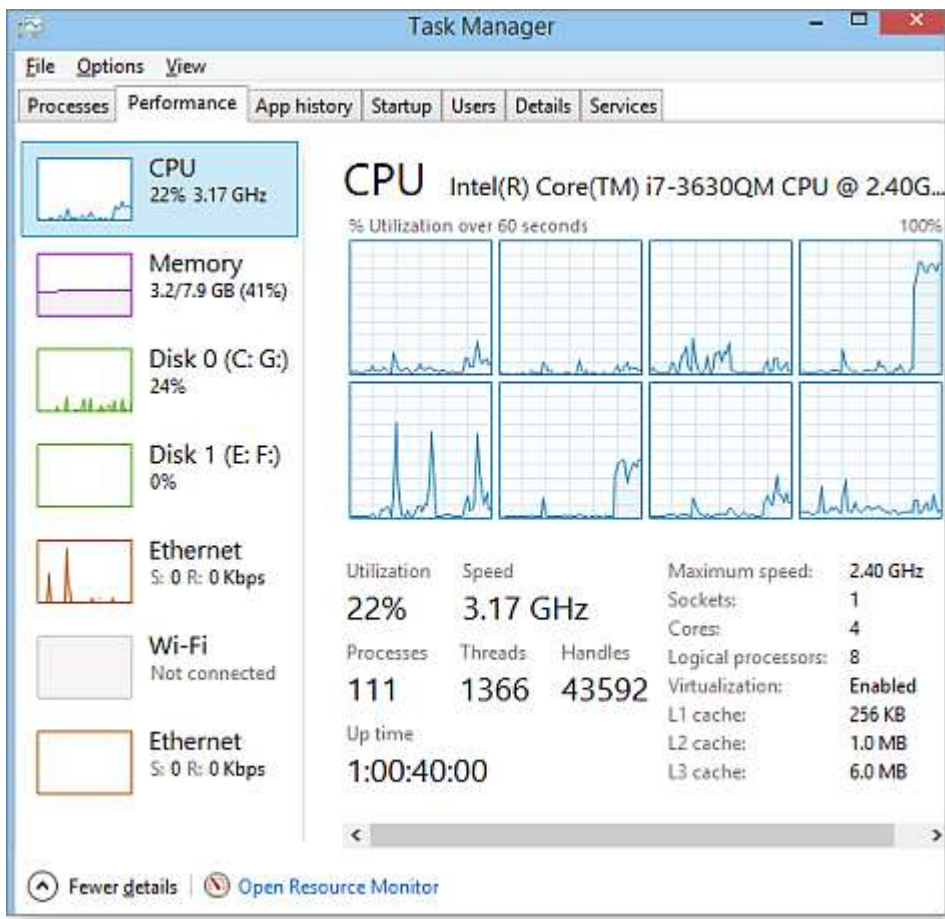


Figure 5. Task Manager's details rival those provided by some add-on diagnostic tools.

The other subsystems — memory, disk, and networking — are similarly detailed. For example, the Disk section's data includes activity level, disk transfer rate, average response time, and average read/write speeds for each disk in the system.

Networking is now broken down into network type, with separate tracking for each Ethernet and Wi-Fi adapter in your system.

If you like to keep an eye on things, you can *tear off* any Performance graph and leave it open as an independent, floating window. Right-click the graph you want and select **Graph summary view** from the context menu (Figure 6); a new, small window will appear containing just the graph you selected (Figure 7).

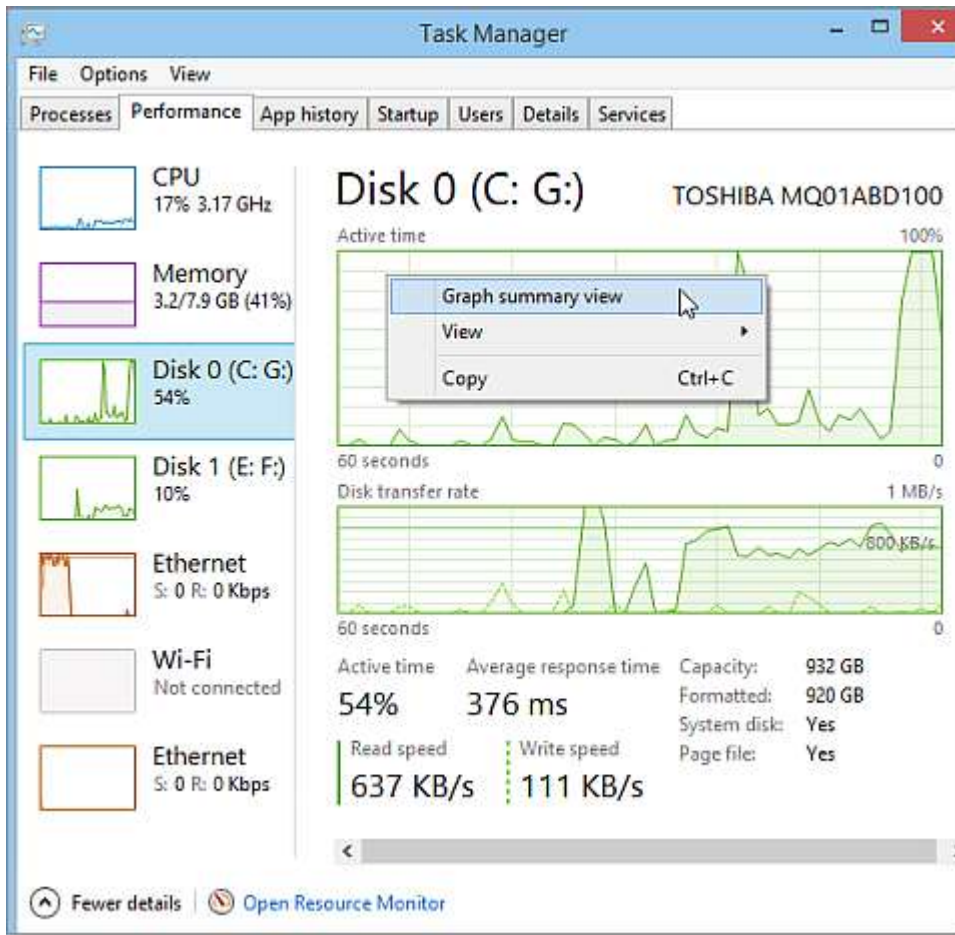


Figure 6. Right-click and select *Graph summary view* to convert a performance graph into a free-floating window for easy, ongoing monitoring.

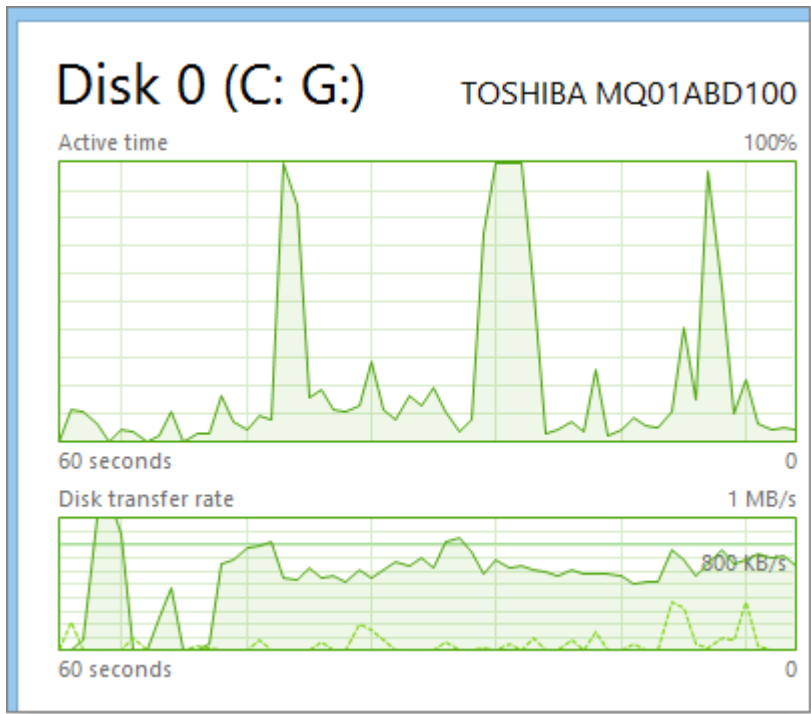


Figure 7. The free-floating performance graph window can be resized and moved as you wish. Use the *Esc* key to close the window.

App history: The one dud in the bunch

Of all Task Manager tools, this is the one offering that seems rather useless.

The App history tab monitors native Metro/Modern Win8 apps — and only those apps. Classic Windows apps you typically install on the Win8 Desktop are, unfortunately, ignored. I assume this is a remnant of Microsoft’s early delusion that everyone would instantly abandon the classic desktop and live happily ever after inside the tiled universe of Modern pages and apps. ***Yeah, r i g h t!***

Aside from that considerable omission, **App history** works fine. It lists all the native Win8 apps on your system (Figure 8) and displays a sortable heat map for CPU use, network time, metered network time (for those who have bandwidth caps or limits), and **tile uptime** (or “Total network usage for tile updates and notifications”).

Resource usage since 5/3/2014 for current user account.
[Delete usage history](#)

Name	CPU time	Netw...	Metem...	Tile up...
Google Chrome	0:00:01	0 MB	0 MB	0 MB
Health & Fitness	0:00:00	0.4 MB	0 MB	0.4 MB
Help+Tips	0:00:00	0 MB	0 MB	0 MB
HP AiO Printer Remote	0:00:00	0 MB	0 MB	0 MB
Hulu Plus	0:00:00	0 MB	0 MB	0 MB
iCookbook SE	0:00:00	0 MB	0 MB	0 MB
iHeartRadio	0:00:00	0 MB	0 MB	0 MB
Mail, Calendar, and People (3)	0:01:50	0.1 MB	0 MB	0 MB
Maps	0:00:00	0 MB	0 MB	0 MB
Music	0:00:00	0 MB	0 MB	0 MB

Figure 8. *App history* displays metrics for all Metro/Modern apps on your system. It *doesn't* track classic desktop apps.

Startup: Manage app loading at system boot

The Startup tab is a power-user's delight. It not only lists all the software that normally launches at Windows boot, it also tracks the impact of each item on system boot (see Figure 9).

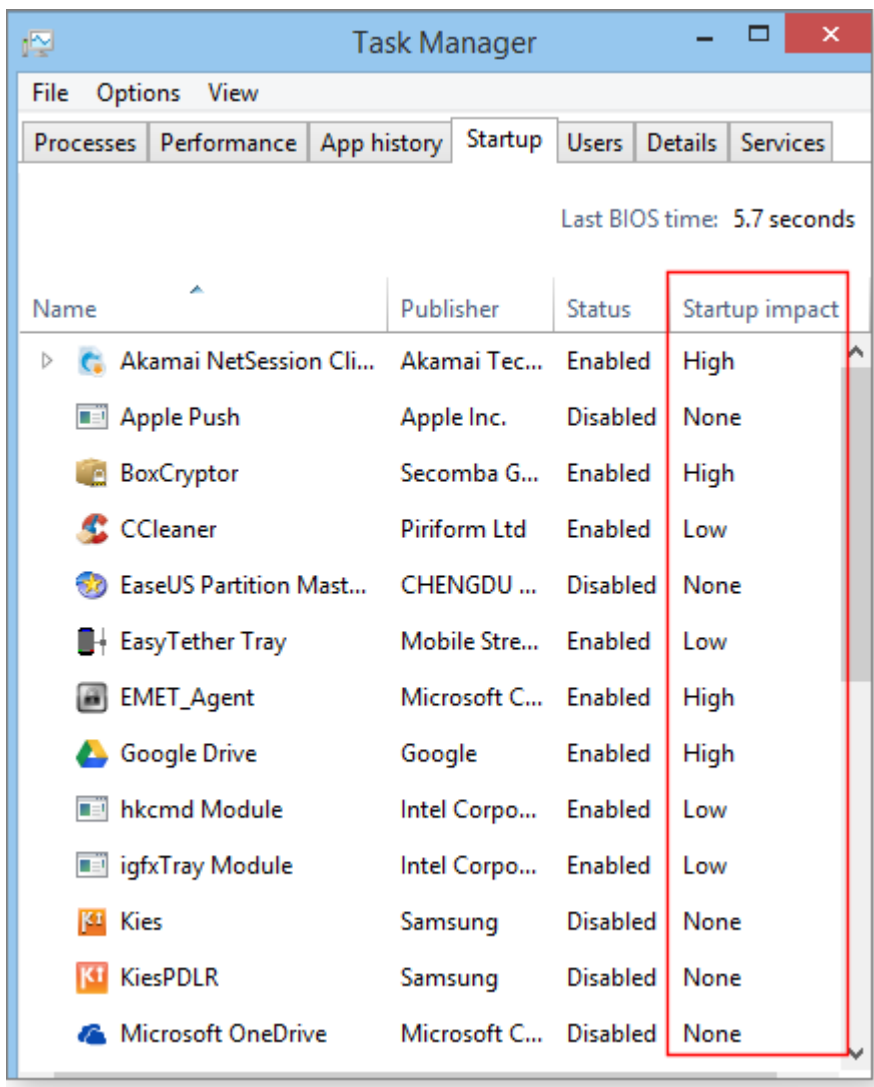


Figure 9. The Startup tab's *Startup impact* column lets you easily identify which software is slowing down your boot times..

Disabling nonessential app-loading at system boot time is a time-honored way of improving system startup speed. The **Startup impact** column makes it easy to find those apps that have a disproportionate (High) impact on system boot and quickly remove them from the boot process.

Here's an example:

Figure 9 shows that my system was loading the *Akamai NetSession Client* at system startup and that its impact was **High** — it took a relatively long time to load.

I vaguely remembered that the Akamai NetSession Client was some kind of download helper. I was fairly sure it didn't need to load at boot time.

I right-clicked on the Akamai item to open its context menu and used the **Search online** option to learn more about this software. After reading several websites, I was confident it didn't need to run every

time I started Windows. Again using the context menu, I clicked **Disable** (Figure 10) so that it would load only when actually needed.

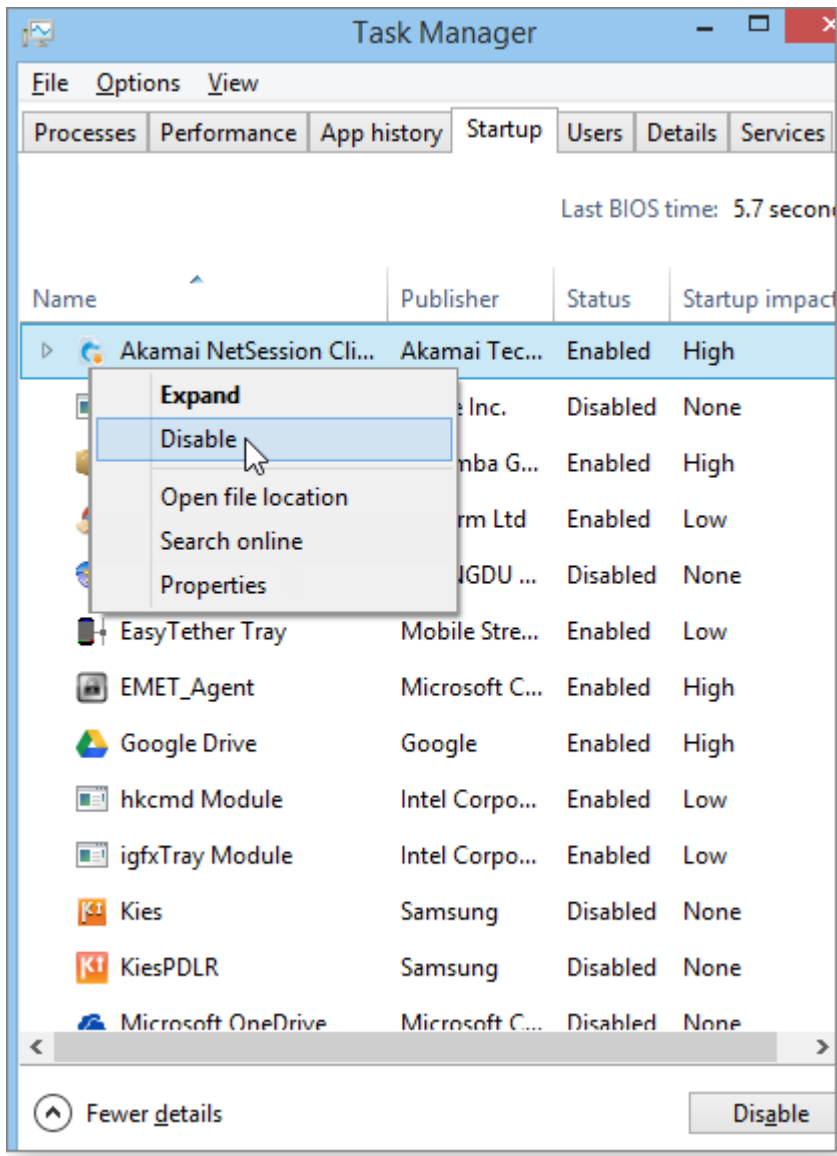


Figure 10. The right-click context menu makes it easy to disable (or enable) any given app/component from loading at system boot — or, by clicking *Search online*, to learn more about it.

Note: To be perfectly clear, disabling a program on the Startup tab *doesn't* prevent that software from being used; it simply removes it from the startup queue. You can manually launch the software later (after startup), and in most cases it'll load and run normally.

Figure 11 shows the result of disabling Akamai NetSession Client — it no longer has any impact on my PC's boot time. Perfect!

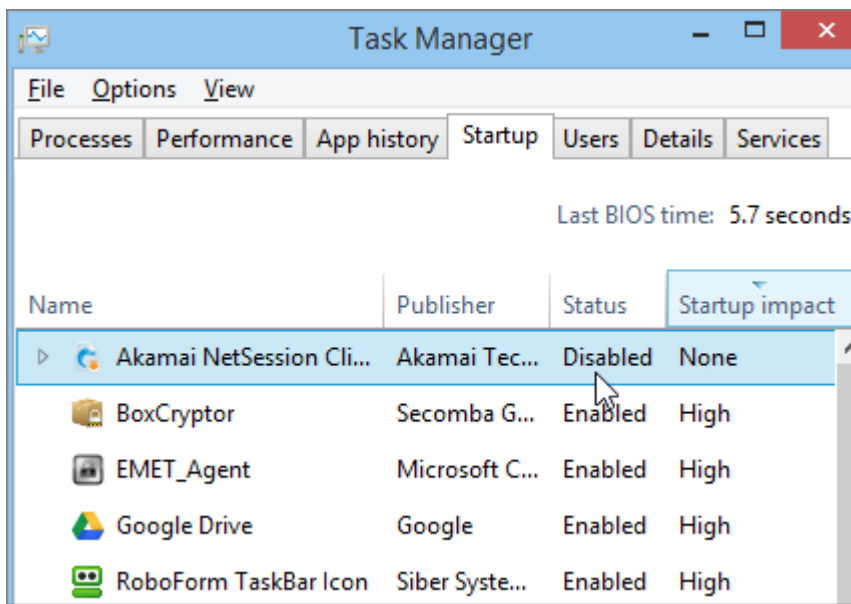


Figure 11. Disabling boot-time loading of nonessential software can shorten system-startup times.

Note: It may take one or two Windows reboots for Task Manager to recalculate the effects of any changes you make.

Users: Individual user stats on multiuser PCs

The Users tab lists the accounts that are active on a system. Each User's listing can be expanded to show all the apps that that user is currently running plus the impact of those apps on system resources. The columns are sortable and, like the other Task Manager tabs, heat-map color-coded (see Figure 12).

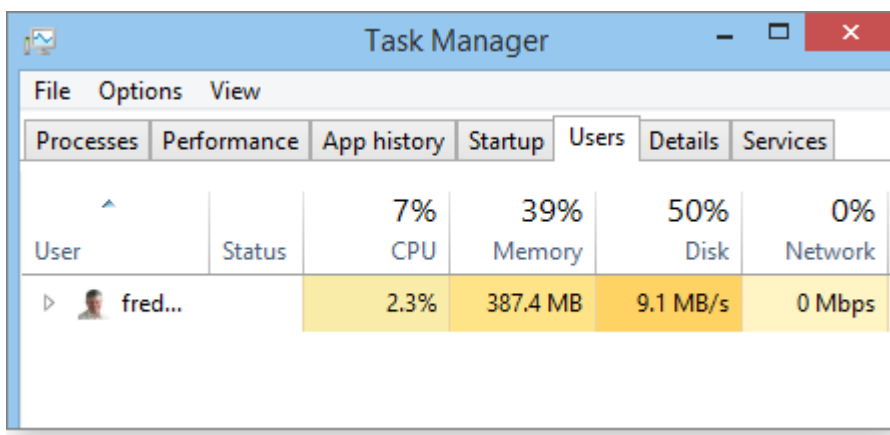


Figure 12. The Users tab can be useful in managing multi-user PCs but serves little purpose on a one-user system.

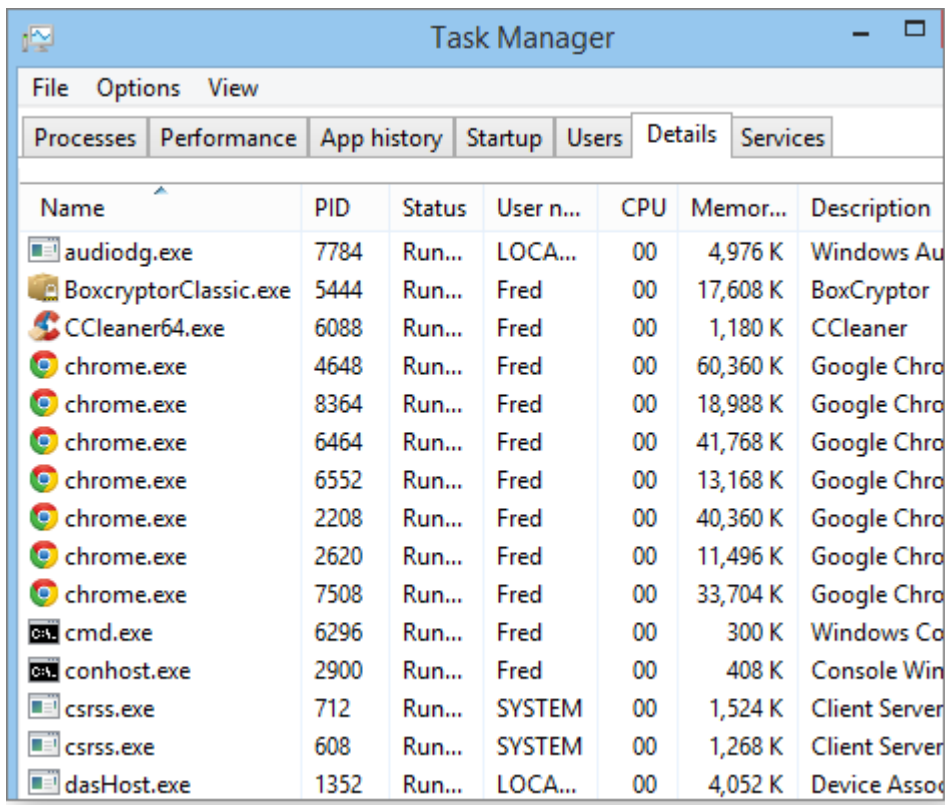
On single-user systems, information in the User tab duplicates the data already available in other tabs. But if you're running a multi-user setup, the Users tab lets you see who's on the system and whether anyone is hogging an undue share of resources. If you have an admin-level account, you can also alter

what any user is running — even terminate their apps — and disconnect connected users or force them to sign off.

Details and Services: Serious troubleshooting

The Details and Services tabs can be helpful for heavy-duty problem solving. It's fine to explore these tabs casually, but don't make changes there unless you know what you're doing — and have thoroughly backed up your system!

Details (Figure 13) shows you every executable file currently running on a PC. Advanced task information includes **PID** (process identifier; used by software to track what's what), **User name** (person or software that launched the executable), plus **CPU** and **Memory** use. A general text description helps you understand what you're seeing. The columns are sortable, but there's no heat-map coloring.



Name	PID	Status	User n...	CPU	Memor...	Description
audiodg.exe	7784	Run...	LOCA...	00	4,976 K	Windows Au
BoxcryptorClassic.exe	5444	Run...	Fred	00	17,608 K	BoxCryptor
CCleaner64.exe	6088	Run...	Fred	00	1,180 K	CCleaner
chrome.exe	4648	Run...	Fred	00	60,360 K	Google Chro
chrome.exe	8364	Run...	Fred	00	18,988 K	Google Chro
chrome.exe	6464	Run...	Fred	00	41,768 K	Google Chro
chrome.exe	6552	Run...	Fred	00	13,168 K	Google Chro
chrome.exe	2208	Run...	Fred	00	40,360 K	Google Chro
chrome.exe	2620	Run...	Fred	00	11,496 K	Google Chro
chrome.exe	7508	Run...	Fred	00	33,704 K	Google Chro
cmd.exe	6296	Run...	Fred	00	300 K	Windows Co
conhost.exe	2900	Run...	Fred	00	408 K	Console Win
csrss.exe	712	Run...	SYSTEM	00	1,524 K	Client Server
csrss.exe	608	Run...	SYSTEM	00	1,268 K	Client Server
dasHost.exe	1352	Run...	LOCA...	00	4,052 K	Device Assoc

Figure 13. The Details tab displays data about every executable file running on a PC.

As elsewhere in the Win8 Task Manager, right-clicking any listed item brings up a context menu that lets you explore and control that item — including a **Search online** option to help you determine what unfamiliar items do.

The context menu lets you terminate any selected item or terminate the entire *process tree* associated with that item. Similarly, you can analyze and manage the item's entire *Wait chain* — a way to sniff out the source of hangs and delays. (For more information on wait chains, see the June 13, 2012, [Top](#)

[Story](#), “Exploring Windows’ Administrative Tools: Part 2.” Skip down to the “Using ResMon to cure hangs and delays” section. The Win8 Task Manager’s wait-chain tools are similar to ResMon’s.)

The context menu also lets you adjust any given item’s *priority* (Figure 14). An advanced technique for managing software bottlenecks, it tells the system to give a selected item more or less CPU time and other system resources.

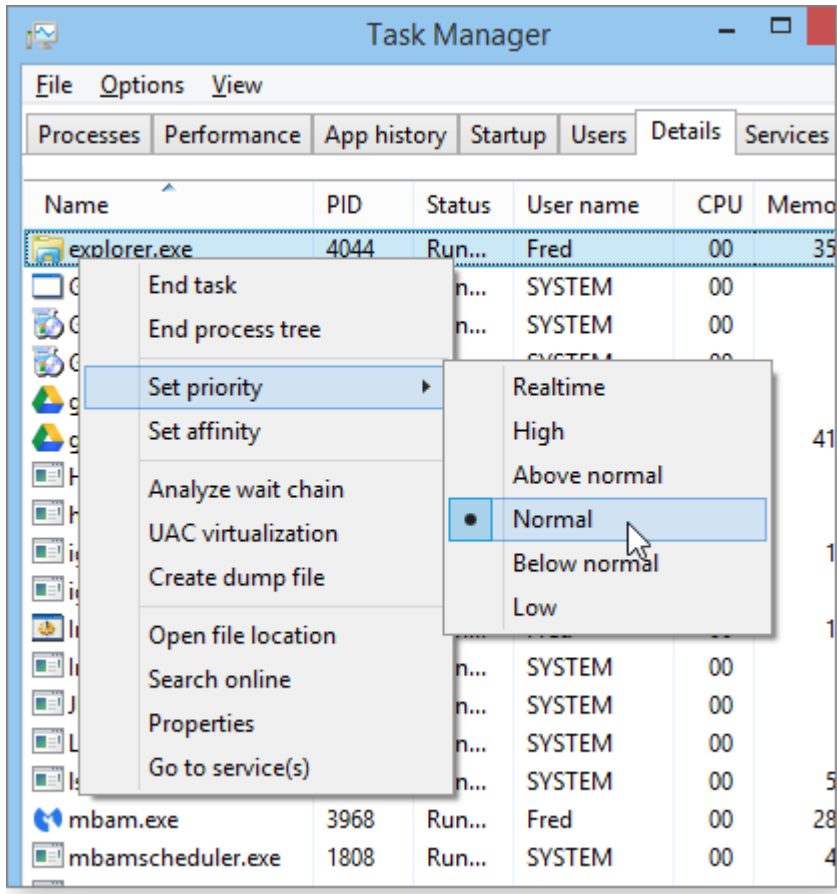


Figure 14. The Details context menu offers a wealth of expert-level troubleshooting options.

The Services tab offers similar data for every system service currently running in Windows. It lists the service, any associated process identifier, a description, status (stopped or running), and the Group to which the service belongs.

The Services tab’s right-click options include the usual Search online for more information plus the ability to start any stopped services — or to stop any running ones. Obviously, this feature deserves great caution.