

# Computer Management & Storage

Helpful pages about how to manage, backup, and store data on your device. Also information about checking your computers performance.

- [Computer Setup & Data Management](#)
- [Computer Performance](#)

# Computer Setup & Data Management

**Below are the steps you should take to purchase, setup, and manage a new workstation.**

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## Purchasing Computers & Hardware:

When purchasing any computer hardware with SJSU, SJSURF, or Lab-specific funds, we recommend contacting the IT Group by submitting an [IT Helpdesk Ticket](#), so IT can help you find the best hardware to fit your specific needs.

## **Recommended Configurations**

Browse the workstation configurations available and recommended by IT through the SJSU Workstation Refresh program.

- [Workstation Refresh \(No-Cost\)](#)
- [Workstation Refresh \(Discounted\)](#)

## **High Performance Configurations**

- If you or your lab has a need for a high performance machine for a specific purpose, please contact IT by submitting an [IT Helpdesk Ticket](#). The IT Group will work with you to decide what hardware will best suit your needs, whether it is a High Performance Desktop Workstation, a Virtual Machine in the on-premise environment, or a Cloud Compute Instance.

## **Storage Devices**

- **External Hard Drive**

- For backing up your workstation, IT recommends a portable external hard drive. Below are a few recommended drives.
  - [Seagate Backup Plus Slim](#)
  - [Western Digital My Passport](#)

- **Network Attached Storage (NAS)**

- For lab environments, where you may have lots of data that needs to be shared between many workstations, IT recommends purchasing a NAS. These are physical data storage servers, connected to the network, that allow you to keep your lab data in a centralized location and are accessible by whomever you give access.
- Be aware that any lab wanting to purchase a NAS must do so with their own funds.
- If you are thinking of purchasing a NAS for your lab, please submit an [IT Helpdesk Ticket](#). The IT Group will advise and assist in the process of planning, purchasing hardware, and getting the NAS setup for use.

## **Hardware Upgrades**

- In some cases, a slow workstation's performance can be improved by an increase in memory or replacing a hard drive with a solid-state drive. If you are thinking about a hardware upgrade for your workstation, please submit an [IT Helpdesk Ticket](#). For more information, see the [Hardware Upgrades page](#).

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## **Operating System (OS) & Software Configuration:**

### **Operating Systems and Updates**

- Install the latest operating system compatible with your device and perform regular updates to keep it running quickly and efficiently. For more information, visit the

[Recommended Operating Systems page.](#)

## Software Installation

*To see what services and technologies you have access to at MLML, check out our [Service Level Agreements](#).*

- Basic software recommendations include: [Microsoft Office](#), [Adobe CC](#), and [Google Chrome](#)
  - To learn about all software available through MLML and other recommended software visit our [Software Page](#)
  - Software Installation Procedures can be found on our [Knowledge Base](#)
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## Security:

All State-Owned computers will need to meet certain security requirements set by SJSU that IT will install (e.g., Spirion), but a password manager will also need to be setup by you and is required.

## Password Management

- Learn how to keep your passwords robust, safe, and securely stored please visit our [Password Storage & Management Page](#).

## Information Security

- IT **strongly** recommends thoroughly reading and implementing the advice on the [Information Security Overview](#) to keep you and your data safe online.
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## Data Management:

# **Computer Backup**

There are two methods you may use to backup a computer:

## **1) Backup User Files to Hard Drive**

- Purchase an external hard drive to backup your workstation (recommended 1-2 TB)
- This hard drive should be dedicated for this purpose only
- Setup the following backup programs available on your device to backup to your external hard drive:
  1. Time Machine - Apple Mac
  2. File History (or equivalent) - Windows PC

## **2) Create a Disk Image**

- Imaging your computer's disk creates a replica of the contents on your computer
- Using a differential setup creates one initial full image of your disk, then the proceeding images save only the content that has changed since the initial image

# **Storage Management**

- To keep your workstation working properly it is important to properly manage the files and data on the computer
- Backups should be routinely scheduled - can automatically set this up in the backup computer settings (see Backup section above and follow link)

# **File Migration**

To successfully migrate folders and files from an old device to a new device, visit the [File Migration Page](#).

# Computer Performance

This is a copy of the [Computer Performance](#) page located in the [Software](#) book under [Operating Systems](#).

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## macOS

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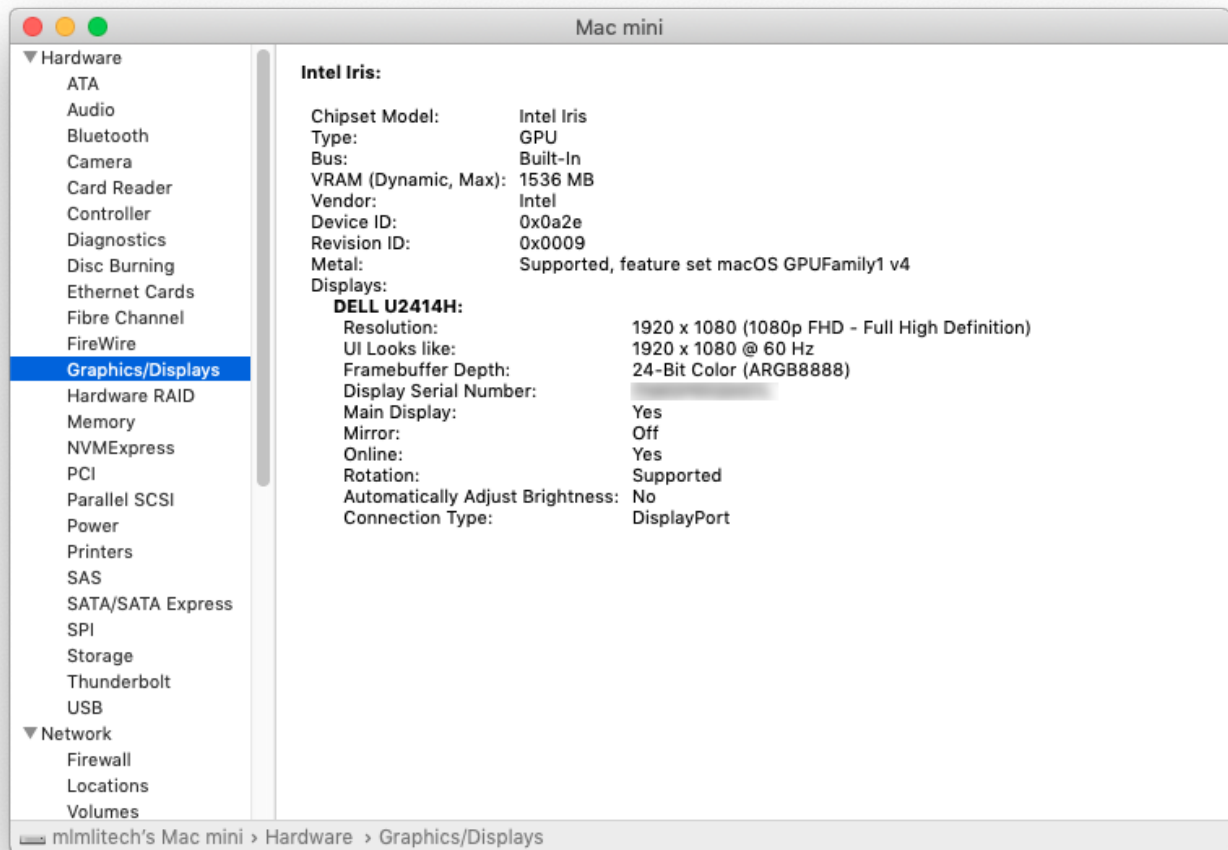
macOS is Apple's operating system for all Mac devices. For more information about macOS visit the [macOS Apple Page](#).

### About This Mac

- This dialog shows you basic information about the manufacture date and hardware of your Mac.
- Click the Apple icon at the top left of the screen on the menu bar.
- Click **About This Mac**.
- The dialog window with basic system information will pop up



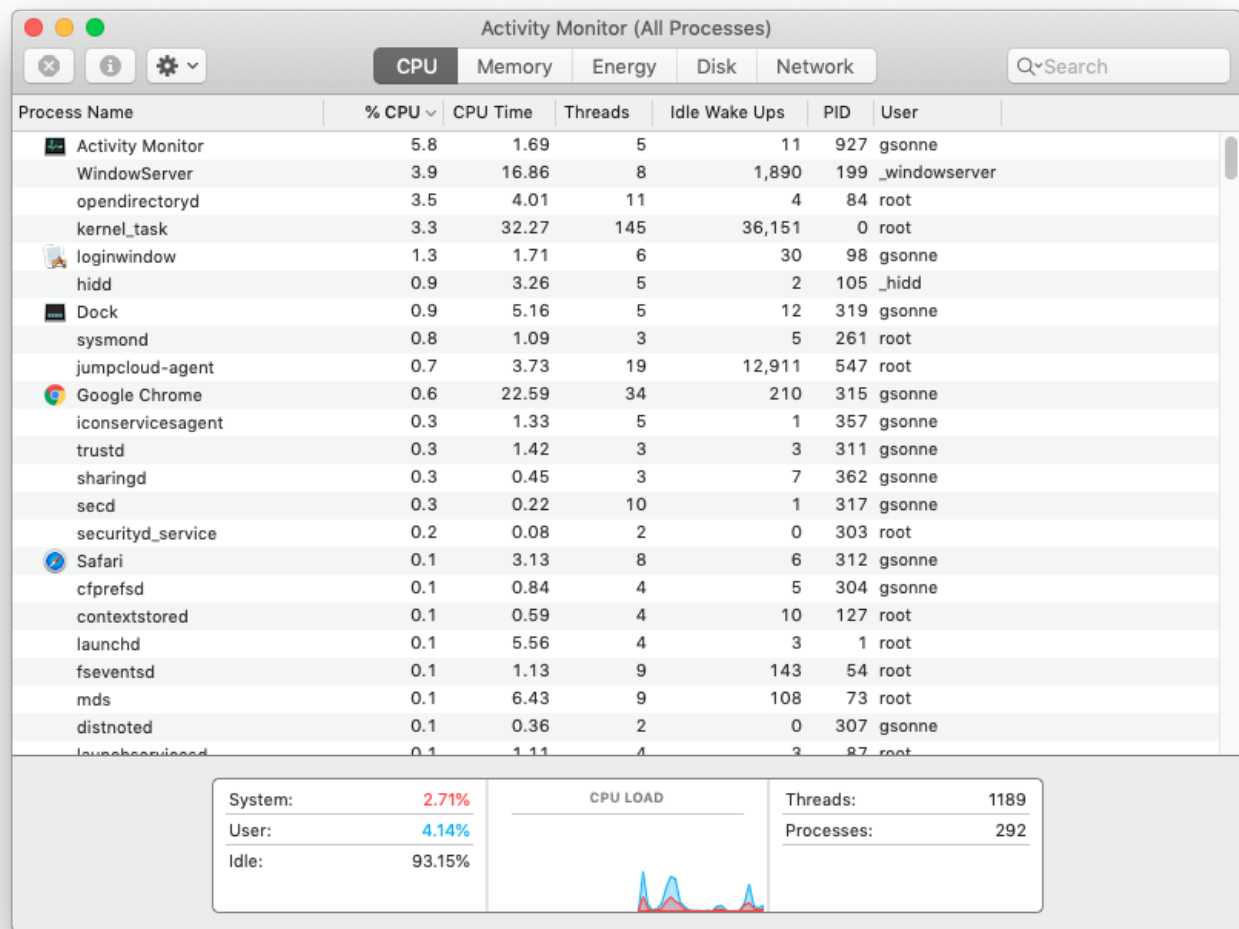
- Click the **System Report** button for more detailed information for the advanced user.



## Activity Monitor

- Similar to Task Manager for PC, Activity Monitor displays every program running on your Mac. You can manage these running programs and identify how they are affecting your Mac's performance.
- For more information visit [Activity Monitor Support](#).





## Uninstall Unnecessary Applications

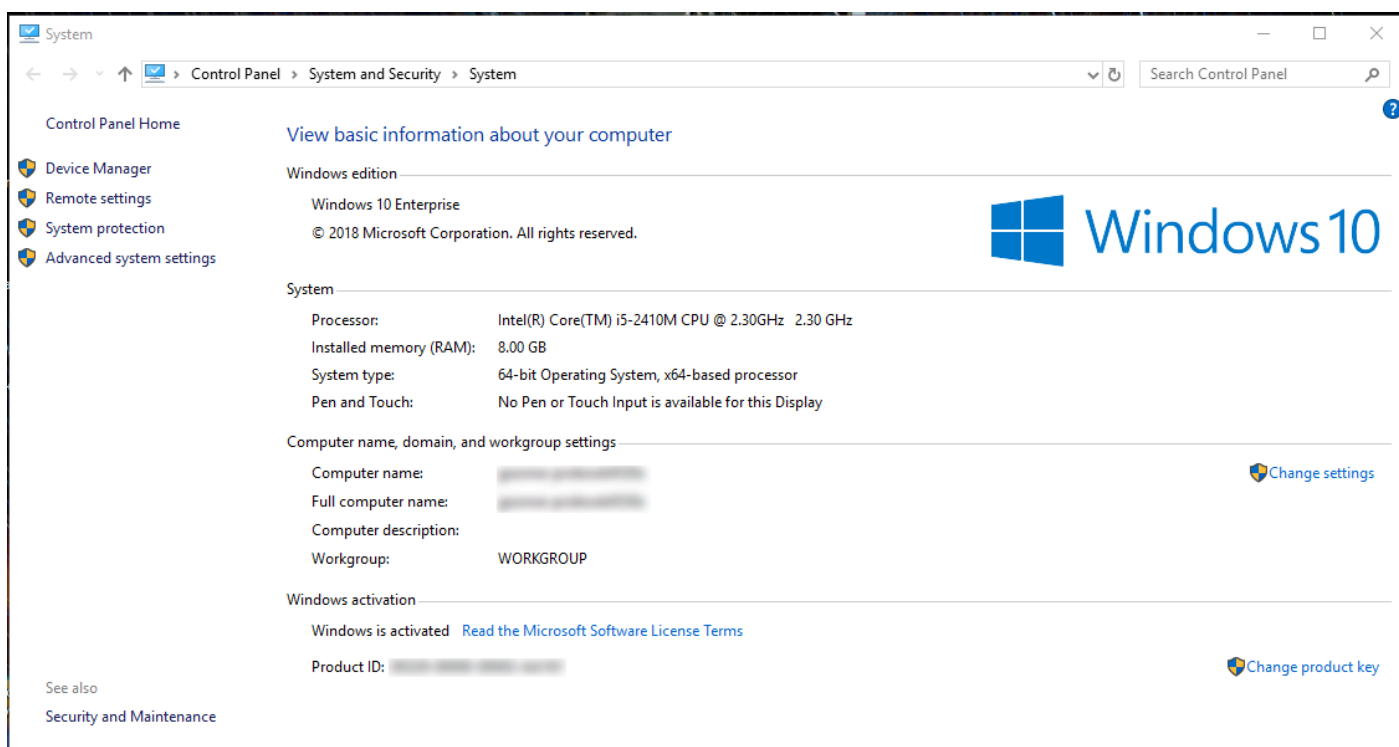
- One simple way to clear disk space and keep your computer running smoothly is to uninstall applications you don't need or aren't using.
- **NOTE: Make sure you know what the application function is before you delete it, some applications are key to keeping your computer functioning properly.**
- Find the list of applications: Open Finder → Applications (left side panel)
- [How to Uninstall Applications on Mac](#)

## Windows

Windows is Microsoft's operating system for PCs. For more information about Windows visit the [Microsoft Windows Page](#).

## System Information

- Windows also has a basic system information dialog, similar to *About This Mac* (OS Version, Processor, Memory, 32/64bit info)
- Right click the **This PC** Icon on your Desktop and Click **Properties**.
  - If it isn't there, search "This PC" in the Search Box on your Taskbar.
- This system information dialog should pop up



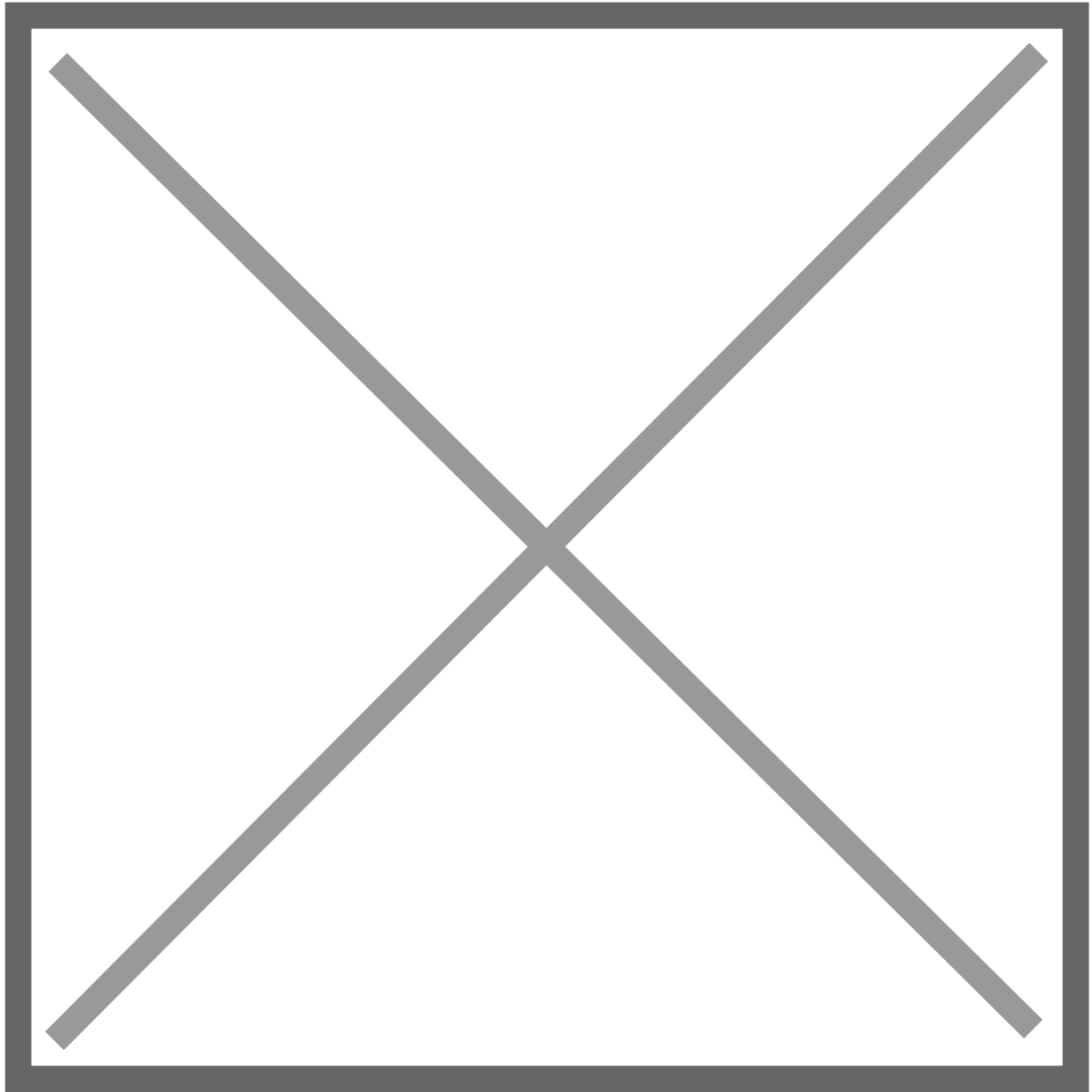
- For more detailed and advanced info, download a third-party system info utility program like [CPU-Z](#).

## Task Manager

- Similar to Activity Monitor for Mac, Task Manager displays every program running on your computer. You can manage these open programs and identify how they are affecting your

computer's performance.

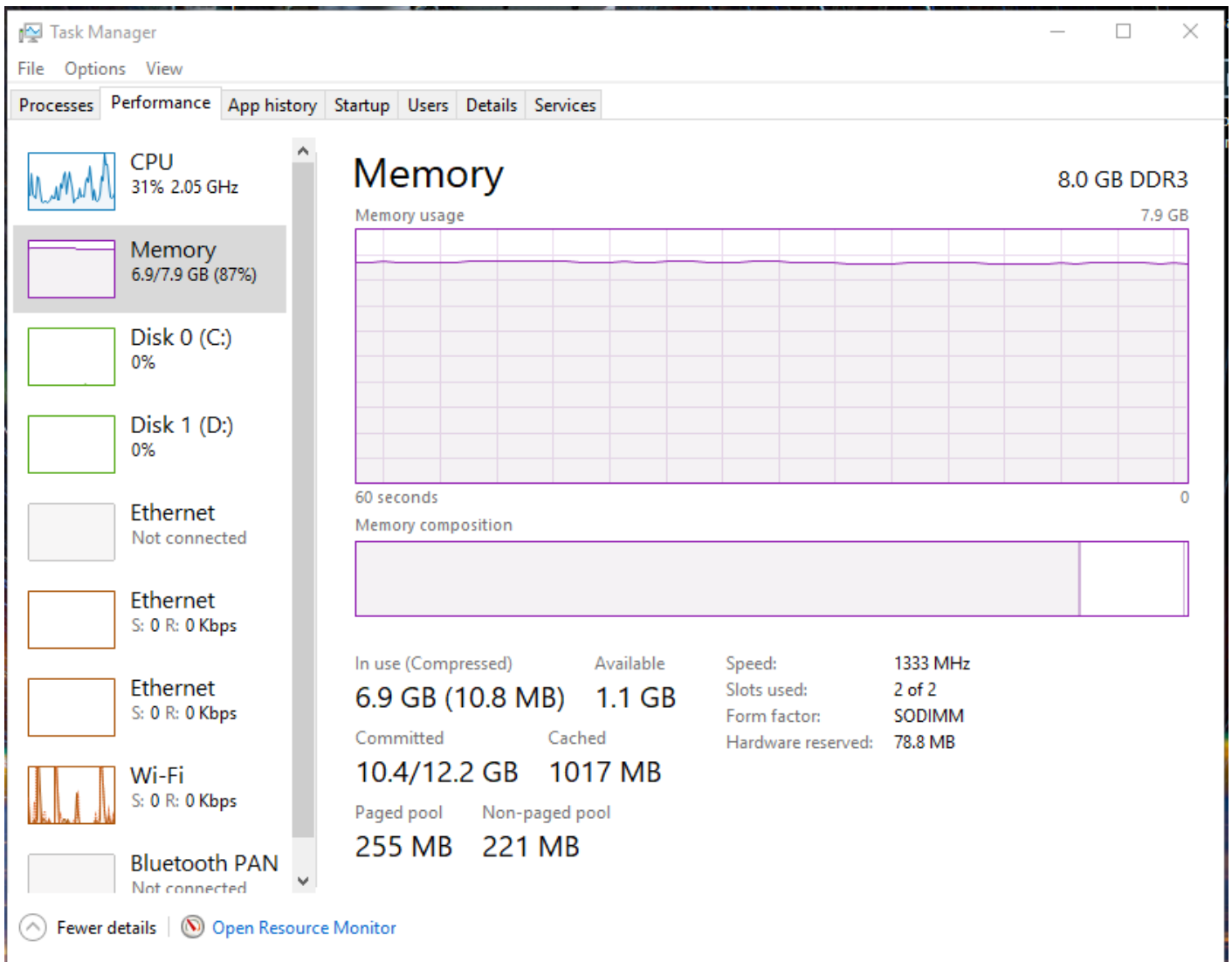
- You can access the Task Manager by pressing Ctrl-Alt-Delete (press all three keys at once). Once the screen changes color and a menu pops up, click **Task Manager**.
- For more information visit [About Task Manager](#).



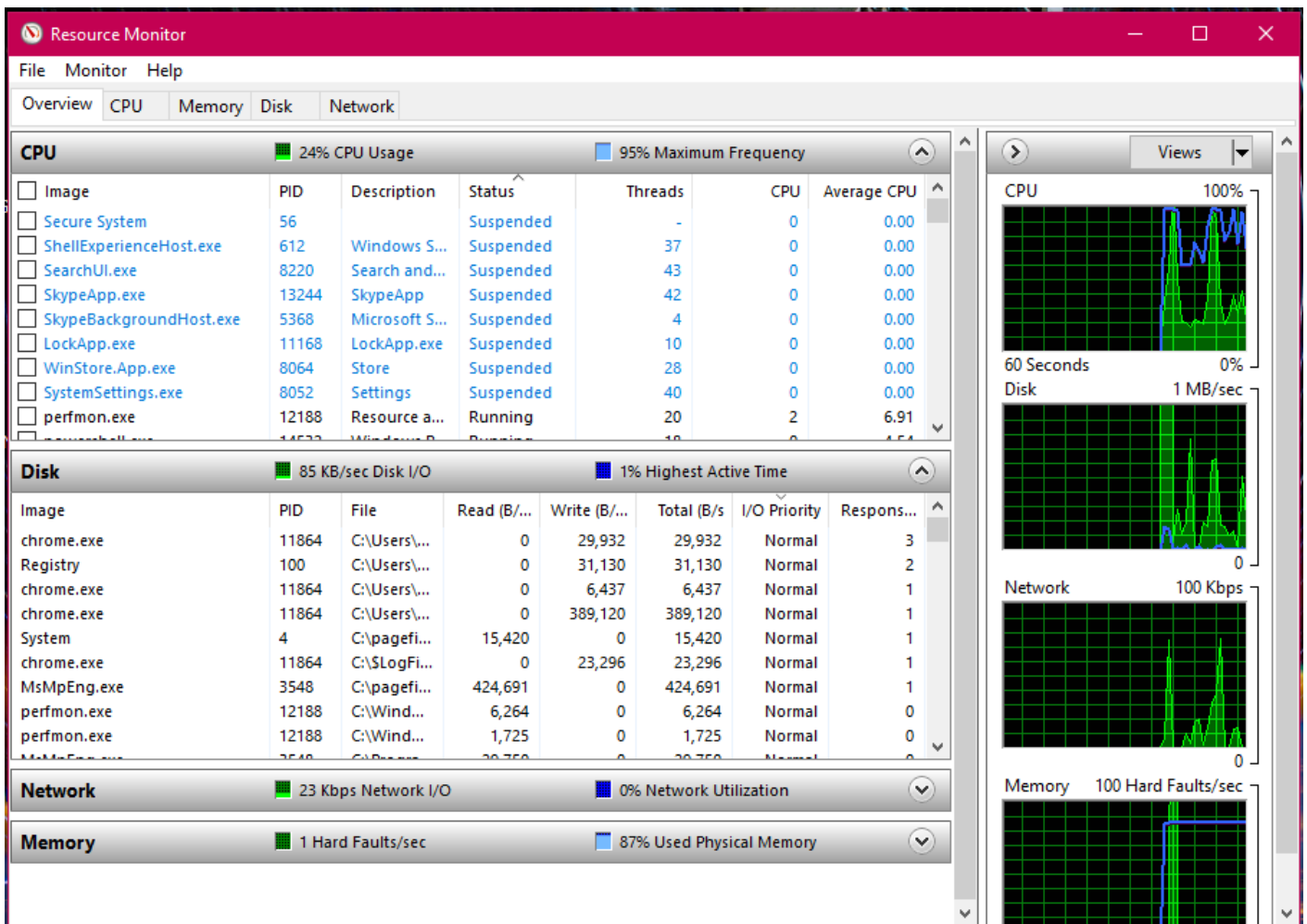
## Resource Monitor

- The Resource (and Performance) Monitor in Windows allows the user to monitor CPU and memory usage, and disk and network activity in real time. It's a great resource if your computer or your software is running slow and you'd like to see what program is causing the slowdown.

- You can access the Resource Monitor by pressing Ctrl-Alt-Delete (press all three keys at once). Once the screen changes color and a menu pops up, click **Task Manager**. The Resource Monitor is a tab, **Performance**, within the Task Manager window.



- There is a more detailed Resource Monitor within the Performance tab. At the bottom of the dialog window, there is a button **Open Resource Monitor**, with a speedometer icon. Click on this for a resource monitor where you can find details on which programs are eating up resources.
- For more information visit [PC World Resource Monitor](#).



## Event Viewer

- Log files such as security changes, administrative files, application files, etc. are all compiled for viewing in the Event Viewer. It can be very helpful in locating a source of a problem if your computer starts to have issues.
- For more information visit [How to Use Event Viewer](#).
- To use Event Viewer to detect problems in your PC visit [Microsoft Support - Event Viewer](#).

## Uninstall Unnecessary Applications

- One simple way to clear disk space and keep your computer running smoothly is to uninstall applications you don't need/use.
- **NOTE: Make sure you know what the application function is before you delete it, some applications are key to keeping your computer functioning properly.**
- Find the list of applications by following [these instructions](#).

- [How to Uninstall Windows Applications](#)

# 3rd Party Tools

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See the list of 3rd party tools below, or visit these websites:

- [Mac 3rd Party Tools](#)
  - Etrecheck - Find serious problems on your Mac
    - <https://eterecheck.com/>
    - <https://eterecheck.com/faq>
  - MacKeeper - ***DO NOT USE THIS!*** (Uninstall if present)
    - [Uninstall Instructions](#) - be sure to clean up bits that may be leftover
- [PC 3rd Party Tools](#)

## Mac OS

- [Caffeine](#)
- [Quicksilver](#)
- [Spectacle](#)
- [Synergy](#)
- [iStat Menus](#)
- [Dropbox](#)
- [Spotify](#)
- [Google Chrome](#)
- [Sublime Text](#)

## Windows

- [Ninite](#)
- [Synergy](#)
- [7-Zip](#)
- [VLC Media Player](#)
- [Spotify](#)
- [FileZilla](#)
- [WinDirStat](#)
- [CPU-Z](#)
- [GPU-Z](#)
- [Dropbox](#)
- [Google Chrome](#)
- [Notepad++](#)
- [Sublime Text](#)