

# East SIG Report – September 2023

After welcoming members to the September meeting of East SIG, host Dave Botherway outlined the nights agenda below:

Presentation 1: **Q&A** with George Skarbek

Presentation 2: **Linux Mint Tutorials** by Trevor Hudson

Presentation 3: **Tips and Tricks** by Peter Carpenter

Presentation 4: **Cleansing a PC before handover** by George Skarbek

**Q&A** by George Skarbek.

**Question 1:** When I'm finished my computing for the day, I've been in the habit of using Sleep mode rather than shutting the computer down. I have 3 discs attached to my computer, but these are on a different power point, so obviously keep running. I was of the belief that the hard discs shouldn't be turned off regularly, so I've left them running. Have you got any advice on this procedure?

**Answer 1:** I would recommend you switch the discs off. Especially for rotating discs, as the bearings and head actuator have a finite life. I turn mine off simply to save wear and tear on the bearings rather than having them running over night unnecessarily. Turning the discs off will also save you a small amount of electricity over their 5-year life. If you're not using them, or running things in the background overnight, my recommendation is switch them off. It will prolong the life of your hard drive and save a little bit of money in the process.

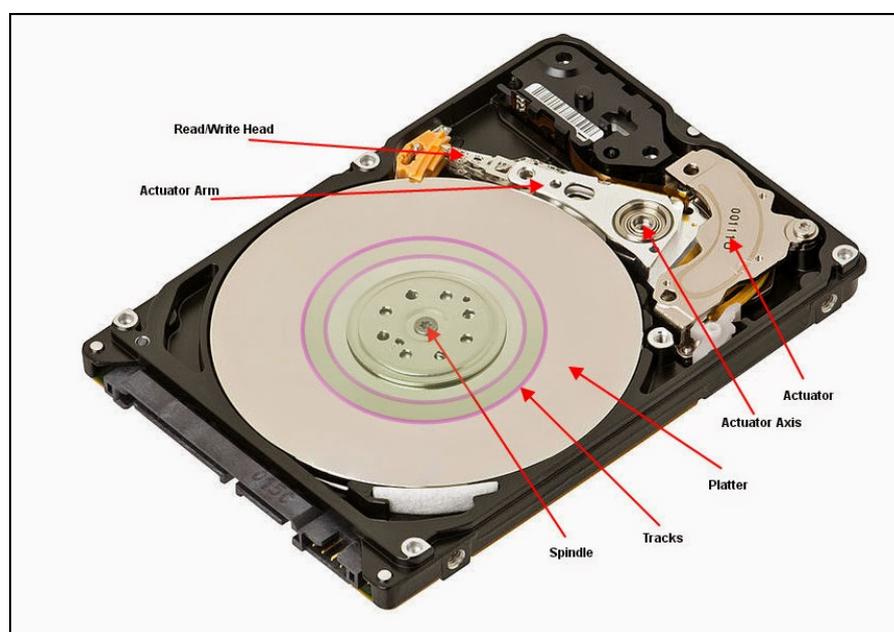


Figure 1 – SATA Hard Drive internal components

**Question 2:** I have 3 discs inside my computer, comprising of 2 SSDs and a rotating hard drive. Would you advocate turning the PC off overnight or using Sleep mode?

**Answer 2:** The disc life with SSDs is quite different to rotating discs, as you don't have any wear and tear, but I would still recommend turning your PC off. I can't see what you gain from leaving

it on overnight. Leaving the PC in Sleep mode overnight only saves you a few seconds when you turn your computer on at startup. When your laptop is in sleep mode, the RAM retains information about open programs and data. If a hacker gained access to your laptop, they can use this retained information to their advantage in what is known as a “cold boot attack.”

[During sleep mode, only your PC's RAM requires power to stay functional. Since other elements such as the screen, processor, and hard drive are turned off, your PC requires very little power to operate.]



Figure 2 – Sleep mode

**Question 3:** There is a school of thought that you should leave a computer on all the time, especially those with rotating hard drives, so the PC stays at the ambient temperature. Whereas if you turn it off, it cools down so when you turn it on the next day, it has to heat up again. The fluctuation in temperature is an argument for leaving a PC on. I turn mine off as I don't believe the argument, but what is your view?

**Answer 3:** I don't believe the ambient temperature argument either. When you're at home the ambient temperature shouldn't drop any more than 10 degrees at the most, so you're not going to get much differential heating in that range.

**Question 4:** A friend bought a laptop with an SSD and after about 17 months the SSD died. Although it was out of the 12-month warranty, he complained to ASUS saying it would be expected that the warranty for the SSD should be longer, as SSDs are more reliable. He asked for a new SSD, but ASUS refused, so he went out and bought a new one. What is the reasonable life of an SSD? There are no moving parts so what would break down?

**Answer 4:** The individual cells of an SSD have a finite life and are not like magnetic media that wears down slowly. The cell in an SSD gets charged one way then another, as it moves from a zero to one and back again. Doing that consistently causes the cells to wear. The Mean Time Between Failures (MTBF) is generally over a million hours. It doesn't mean the SSD will last that long, as that figure is an average, where some will die sooner others last longer. I believe the useful life for an SSD is around 8 years. Programs that are very aggressive with writing to an SSD is the main cause of cells wearing.

**Question 5:** I have Windows 11 on my machine and I've been looking to rationalise my apps. I have an app called "Windows Assessment and Deployment Get Windows 10". The app is 7 Gigabytes in size so do I need it?

**Answer 5:** My gut feeling is you don't want it. I have no intention to upgrade my Windows 10 to 11 personally. Windows 11 has a few extra nice features, but quite a few things require an extra one or two clicks and are buried.

[Dave Botherway] I would support deleting that app, particularly for anything that big. I'd copy it out and then back it up. I'd then delete the app from Windows 11 and see what happens.

## Linux Mint Tutorials by Trevor Hudson

As a recent convert to Linux, Trevor Hudson presented two short videos he prepared to help new Linux users. These and other videos that he plans to add in the future can be found on his YouTube Channel "Linux Mint 1080 Tutorials".

The first video which is titled "Hide Linux Screen Icons", outlines how to hide screen icons and the Linux Mint watermark from the desktop.

The video can be found at <https://www.youtube.com/watch?v=tQjHbXAO9LQ>

The second video is titled "Delete Linux Desktop Icons", outlines 2 methods to delete desktop icons in Linux Mint.

This video can be viewed at <https://www.youtube.com/watch?v=PCBwT102vIA>

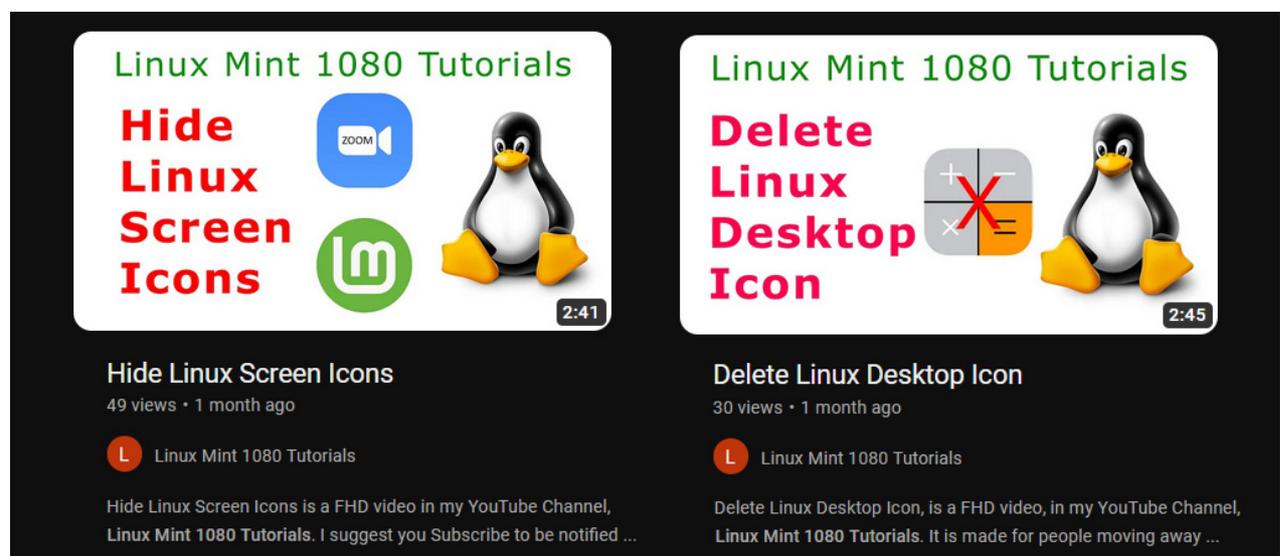


Figure 3 – Linux Mint 1080 Tutorials

## Tips and Tricks by Peter Carpenter

In this presentation, Peter Carpenter outlined how he extended the life of a keyboard and phone using clever low-cost solutions.

Peter's standard keyboard had a broken front leg, but even with the legs folded up, the keyboard rocked when used on an uneven surface. Peter felt if the forward-facing legs of the keyboard were soft legs, that might solve the problem of the keyboard rocking. To test his theory, Peter used adhesive to attach 2 square pieces of foam to the base of the keyboard as shown in figure 4. The foam raised the front of the keyboard and prevented the keyboard from rocking when used on an uneven surface. This trick extended the life of a perfectly good keyboard with this clever low-cost solution.



Figure 4 – Peter's computer keyboard repair.

When Peter's wife's iPhone 7 would only charge intermittently, Peter believed cleaning the charging socket on the iPhone might solve the problem. Using a bright light and tooth pick, Peter was able to carefully clear accumulated material from the charging socket on the iPhone. Then using some "Electrical Clean and Lube" on a fine flat artist's brush, he carefully cleaned the connectors within the charging socket.

When the charging cable was again connected to the iPhone, charging worked perfectly and was no longer intermittent. Peter used a brush to apply the "Electrical Clean and Lube", as it's unwise to spray isopropyl alcohol straight onto the socket. If the liquid had found its way inside and onto internal components it could have damaged them.

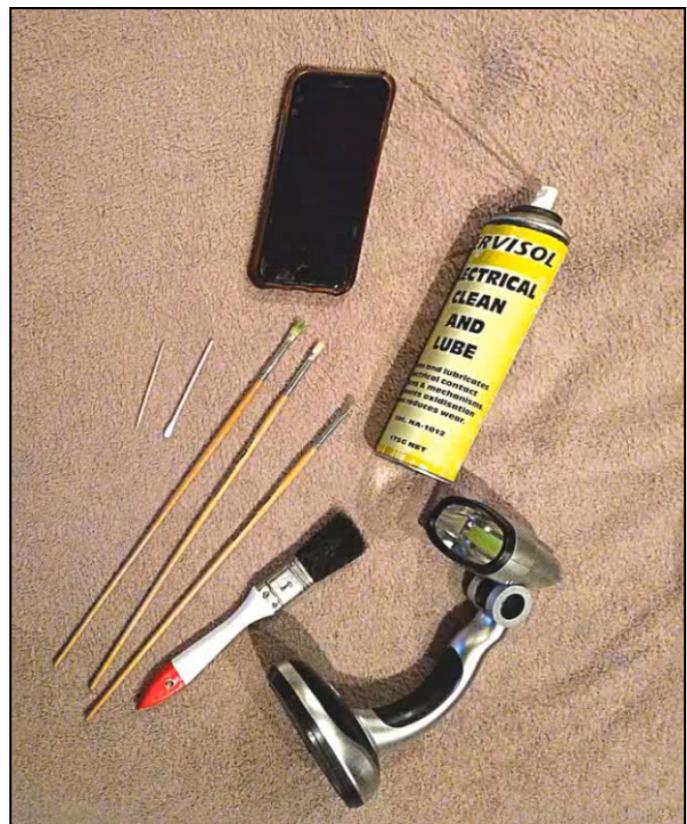


Figure 5 – Peter's iPhone 7 cleaning utensils.

Peters' moral was if something fails, don't give up on it, try to repair it first.

## Cleansing a Windows computer before handover by George Skarbek

In this presentation George Skarbek explains how to clean personnel information from a Windows computer before it's ready for donation or sale. The easiest solution to clean a Windows PC is to put it back to its factory settings. However, this option would wipe all data and any software installed, other than the Windows operating system. In his presentation however, George demonstrated how to remove all personal data, but retain existing software such as MS Office etc for use by the new owner, using only applications within Windows.

### Pre cleaning issues

The owner of an ASUS laptop running Windows 10 had asked George if he could remove all personnel information from the computer, prior to it being donated. The PC had become so slow to respond to commands, it was unusable. George referred to it as almost “dead”, as it was that slow.

Before cleaning of personnel data from the computer could commence, two problems had to be solved:

1. The Administer password was unknown and needed to be identified.
2. A rogue program had found its way onto the computer, slowing it to a crawl. This malware needed to be found and removed in order for the computer to be usable.

### *Identifying and removing the rogue malware*

Initially George was unsure what was causing the computer to run slow. His first step was to open “Task Manager” and select the “Startup” tab, (Figure 6) where he disabled all programs except the virus checker. This procedure stopped programs loading into RAM unnecessarily, but did not delete them from the computer.

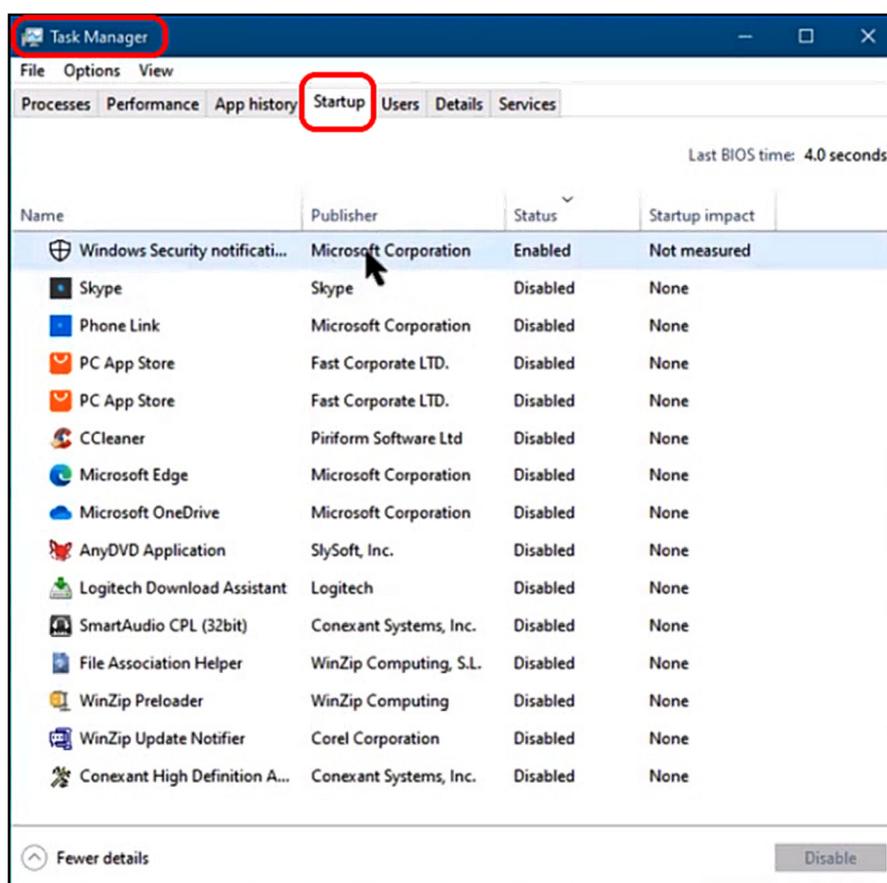


Figure 6 – Windows Startup

On rebooting the computer there was no change, and the computer was still running as slow as before. The malware was continuously paging data to the hard drive, causing the PC to slow to a crawl. This indicated the malware was not in startup.

The next step was to again open “Task Manager” and from the “Performance” tab, click the link on the bottom of that window to open the “Resource Monitor”. (Figure 7)

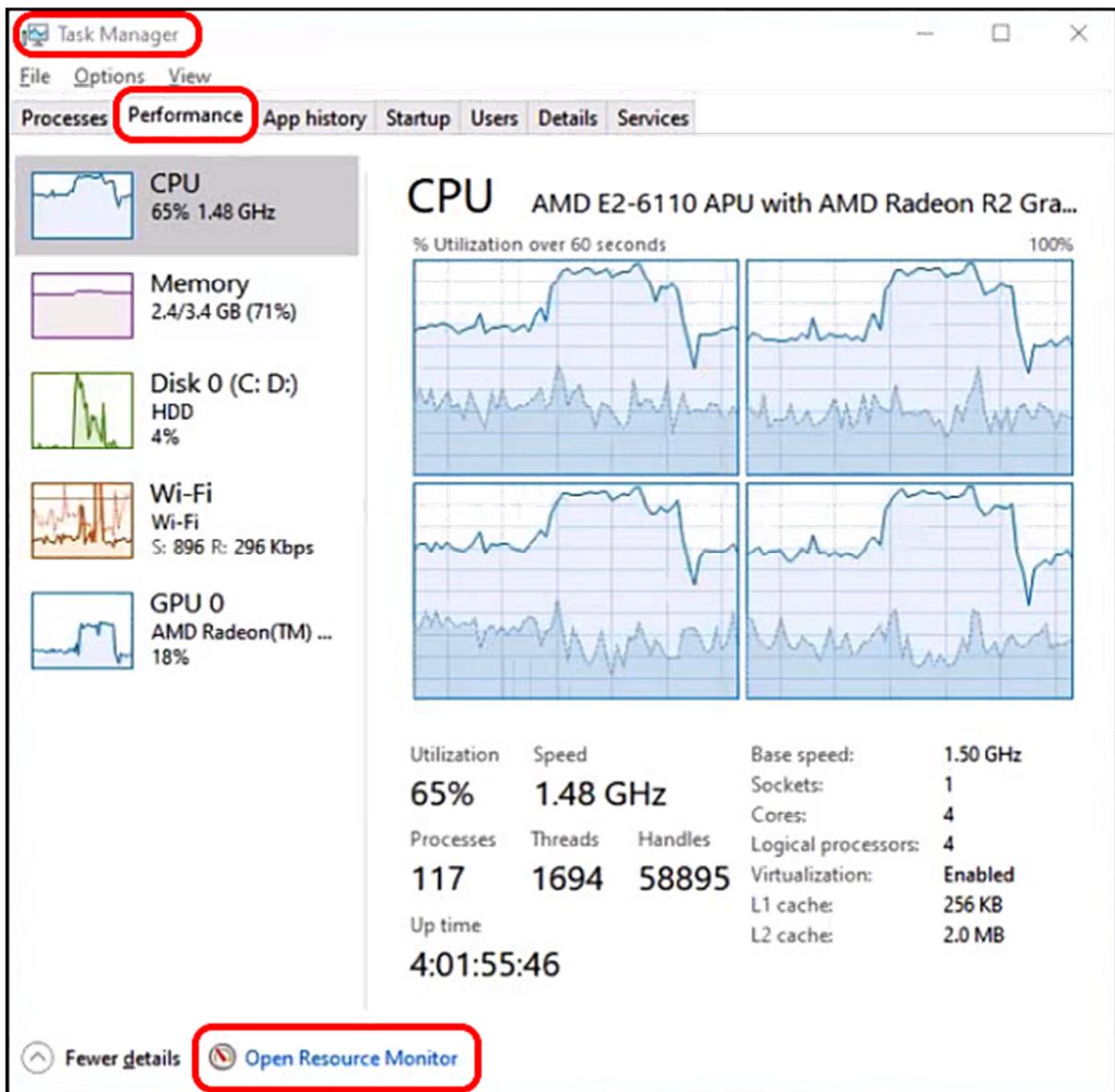


Figure 7 – Windows Task Manager

In “Resource Monitor” George selected the “Overview” tab to view the “Disk” panel, to see what was writing to the disk. Here he clicked the “total bytes written” column, to see which apps were writing the most data to the hard drive. (Figure 8)

As that failed to identify the culprit, next view the “Memory” panel in “Resource Monitor” and the select the column header for “Hard Faults/sec”. (Figure 8) This helped George identify the malware, as the app had a “Hard Faults/sec” reading over 100. Generally, a reading under 10 is the usual maximum found in that column.

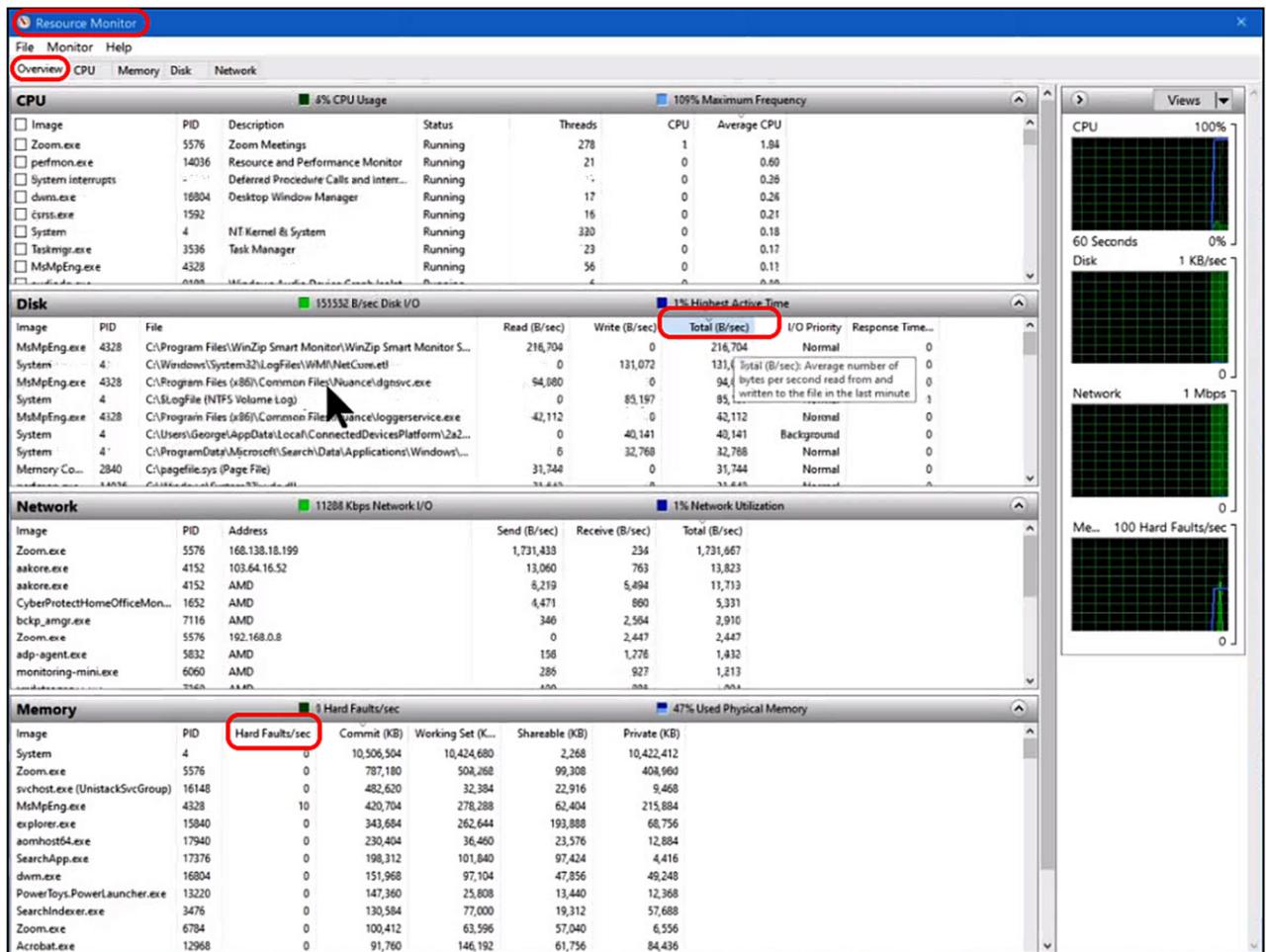


Figure 8 – Windows Resource Monitor

Two instances of a program called DSOOne.exe (the second with a similar name) were found to be running constantly, 100% of the time. The laptop had 4GB of memory and 3.9GB was used up paging data back and forth from the hard drive to RAM. This process occurs as programs can only run from memory.

George eventually removed the 2 apps using IObit Uninstaller, when the Windows uninstaller was unable to remove them.

### Identifying the administrator password

Like many Window users, the original owner of the laptop set the computer to open without a password. This was achieved from the “Run” command and typing “control userpassword2” (Figure 9).

In the “User Accounts” window that opens, untick the box labelled “Users must enter a user name and password to use this computer”. This now meant the computer loaded Windows on bootup, not needing a password to start. (Note: If the command “control userpassword2” is run when the box is unticked, George found the command doesn’t run).

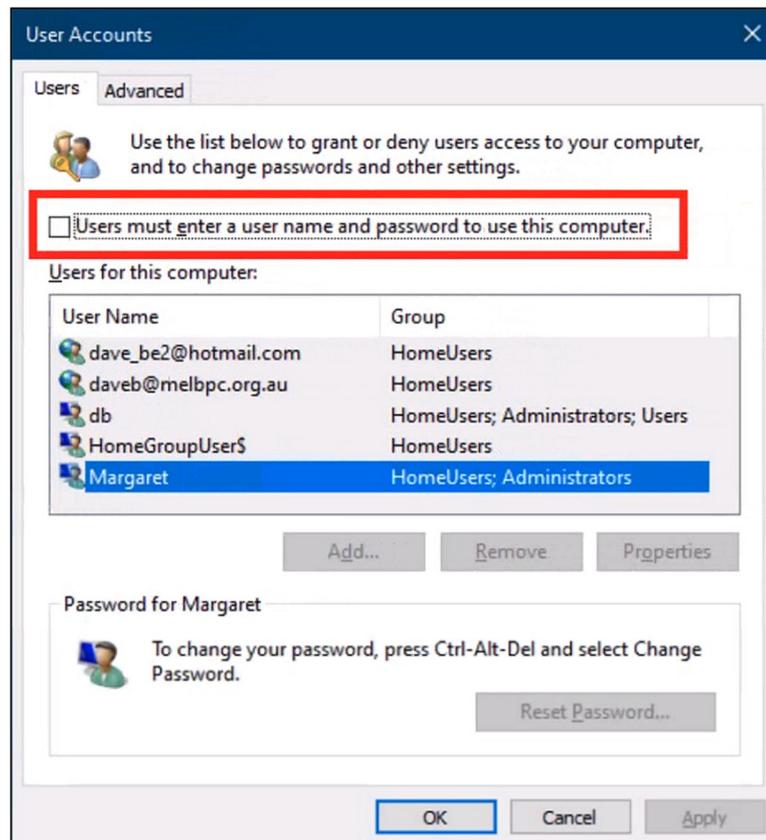


Figure 9 – User Accounts

As the original owner didn't remember the password they used 6 years ago, George set about creating a new user with admin privileges. He did this by using the Password app from Hiren's BootCD, to remove the passwords and then created a new user.

### **How to boot up your system with Hiren's Boot CD**

In order to boot from the Hiren's Bootable USB stick, you need to set the USB as the first boot device from BIOS settings. Here are the steps:

1. Power On your computer and then press "F1" or "F2" or "F10" or "DEL" to enter BIOS (CMOS) setup utility.  
(The method to enter into BIOS Settings depends on the computer manufacturer).
2. When you enter the BIOS menu, go to the "Advanced BIOS Features" menu and find the "Boot Order" setting.
3. In the "Boot Order" setting, set the USB-HDD as a first boot device.
4. Save and exit from BIOS settings.

The link to view a video that explains using Hiren's BootCD is at:

<https://www.youtube.com/watch?v=p3l5aM2hPXI>

When creating a new user in Windows, you will be asked “Is it a family member”? Answer “No”, then it will ask “Is it a friend”? When asked to put in the friend email address, answer “I don’t know” or enter [no@thankyou.com](mailto:no@thankyou.com) or [aa@bb.com](mailto:aa@bb.com), the latter as suggested by audience members.

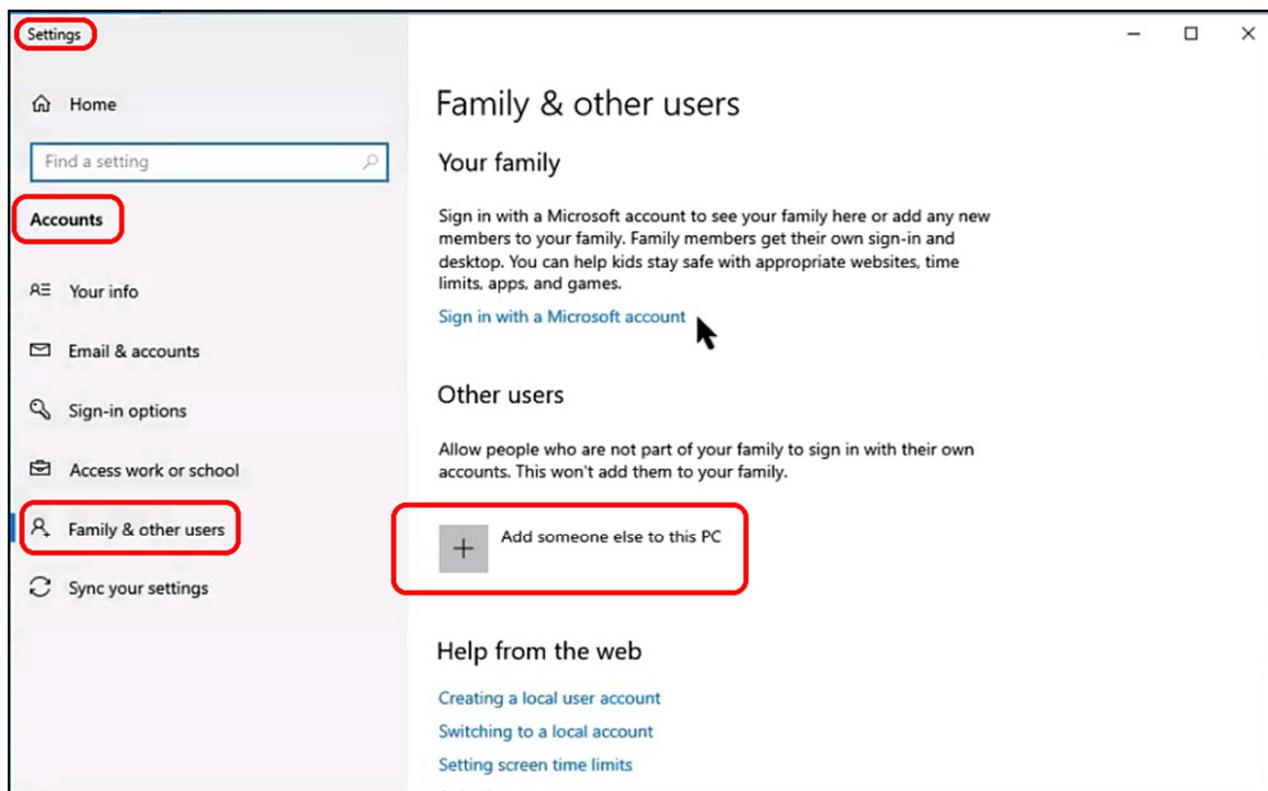


Figure 10 – Creating a New Administrator User

Eventually you will be given the option to create a new user and asked 3 questions. These questions could be “What city were you born in?”, answer “a”, then “What school did you go to?” answer “a” again, then “What was your first pet’s name?” and answer “a” again. Occasionally Windows may ask you to verify yourself. Answering with a lower case “a”, makes it easier to remember. Once your new admin user is created you will be able to delete other users from the computer.



Figure 11 – New Administrator creation

Once the 2 major hurdles of removing the malware and creating a new user with Administrator privileges were overcome, the laptop became quite usable and George could proceed with the clean-up of the laptop.

## Cleanup Procedure

George explained how, using only the software that comes with Windows to remove all personal data, while keeping existing software applications intact for the next user. Georges steps are underlined below.

1. Delete all user docs and personal files  
File Explorer can be used to delete data initially.
2. Format all data drives. Do NOT use quick Format  
If data is kept on a separate drive or partition from the Windows operating system, format the drive. Make sure the “Quick Format” option is not selected as a full format is needed to ensure data cannot be retrieved. Figure 12.

Quick Format just wipes the directory and the File Allocation Table (FAT). All data remains on the hard drive and can be retrieved by someone using third-party Recovery software.

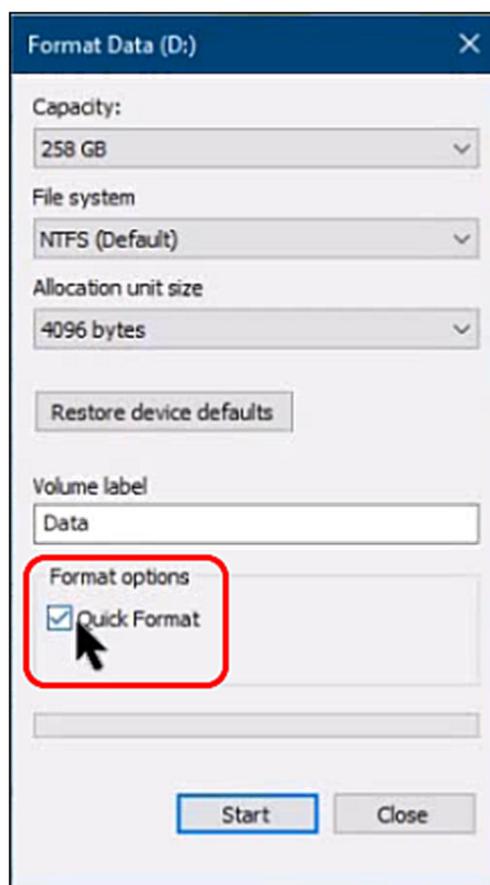


Figure 12 – Format Data Drive

3. Create a new Administrator user - use a simple name such as User and password  
This step is detailed above.
  
4. Delete all mail account profiles via Control Panel, Mail  
To delete other users mail accounts in this step requires a user with administrative privileges. Deleting Microsoft Outlook mail is fairly easy. From the “Control Panel” select “Mail (Microsoft Outlook)”, which opens the “Mail Setup - Outlook” window. (Figure 13)  
Select “Email Accounts” to open the “Account Settings” window and delete all the accounts from the list.  
The “Mail” icon will only appear in Control Panel if the user uses MS Outlook as their mail client.

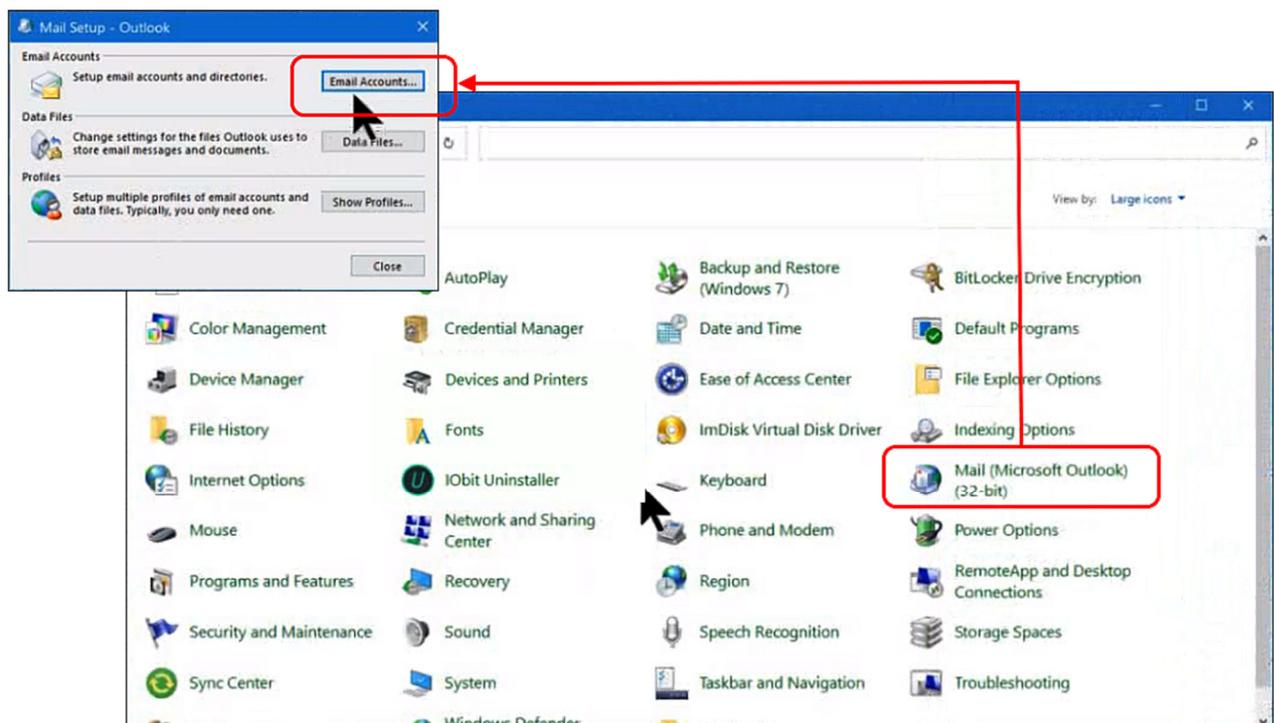


Figure 13 – Mail Accounts - Outlook

5. Delete all mail account databases such as \*.pst and / or \*.ost  
Once all email accounts in step 4 have been deleted, select the “Data Files” button and delete all the data files from the list and select “Close”
  
6. Delete all other user accounts AND their data
  
7. Delete all user accounts - Control Panel, User Accounts and all their data  
Open Control Panel and Select “User Accounts”
  
8. Delete all saved passwords & bookmarks in ALL browsers  
In all browsers select “Settings” and look for Passwords.  
Again, you will need the Windows Administrator password (i.e. the password used to start the computer) to be able to look at everyone’s browser passwords and delete them.

In Firefox you will need to look at Settings → Privacy & Security → Logins and Passwords.

User profiles for Thunderbird can be found in the Thunderbird Profile folder. The default location for profiles in Windows is:

C:\Users\UserName\AppData\Roaming\Thunderbird\Profiles.

9. Delete all passwords in Credential Manager

Passwords are also stored in “Credential Manager”. From “Control Panel” select “Credential Manager” and displayed are 2 lists of passwords for “Web Credentials” and “Windows Credentials”. (Figure 14). As noted previously, these can be deleted but the Windows login password is required before this is possible.

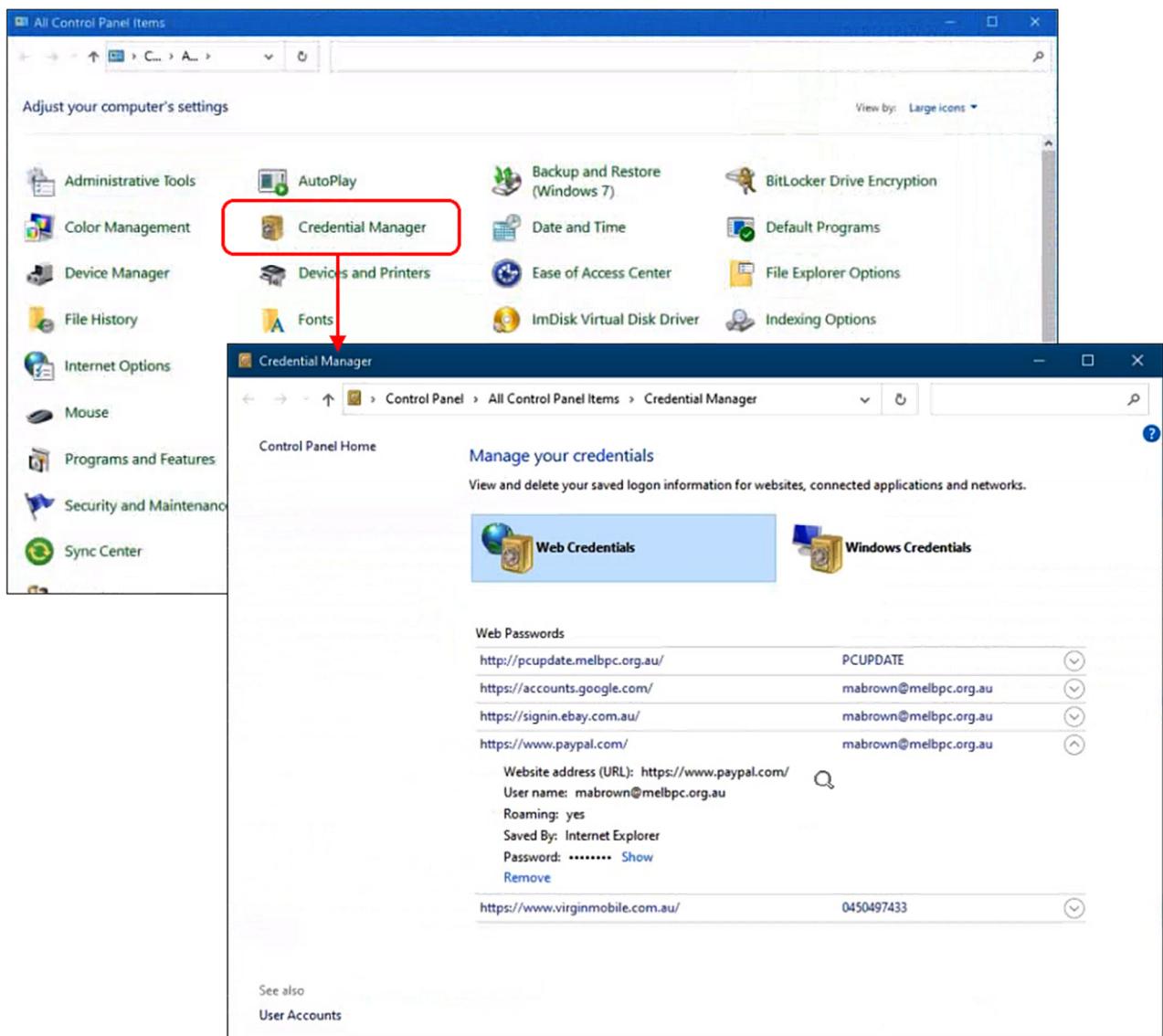


Figure 14 – Credential Manager

10. Finally defrag all drives to reduce the very tiny chance of some data being recovered

11. Now the computer is ready to be donated