



# Troubleshooting a Slow Terminal

Version 3.x and Later

This document covers:

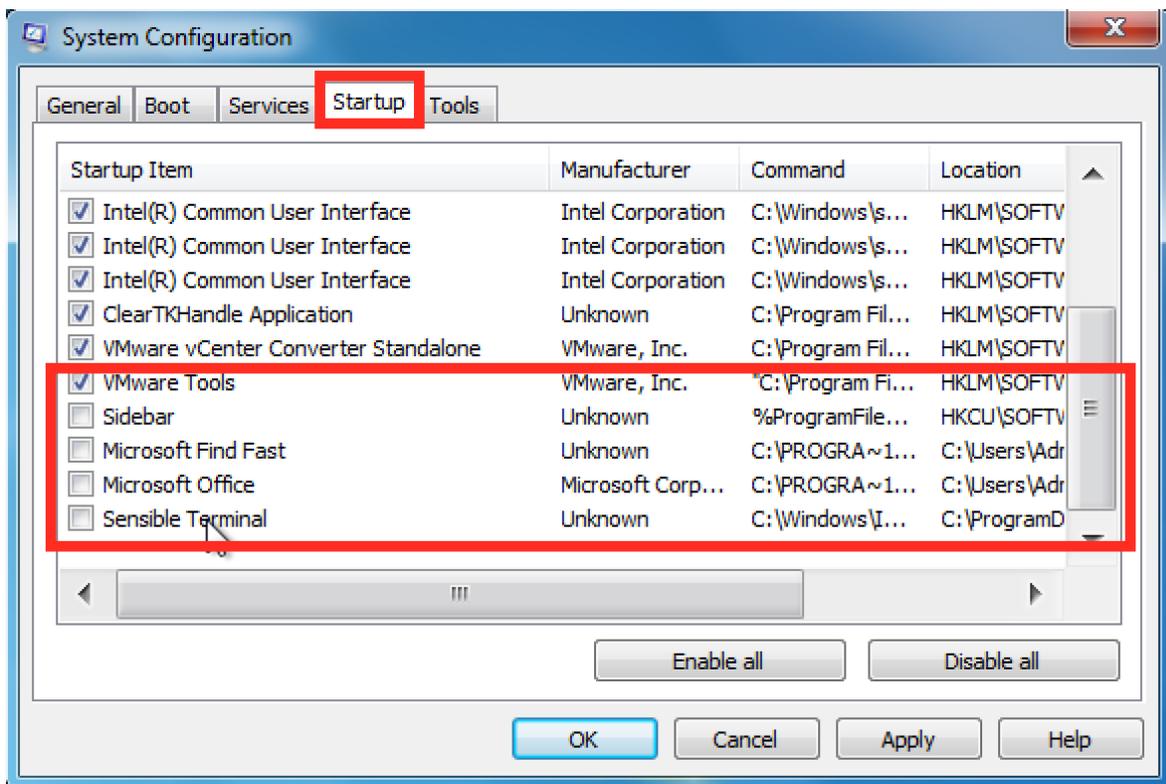
- ❖ Removal of unneeded programs consuming CPU and memory
- ❖ Freeing up disk space where disk is nearly full
- ❖ Checking integrity of the hard drive
- ❖ Defragment files on your hard drive
- ❖ Increasing available virtual memory
- ❖ Diagnosing high CPU usage

### Most Common Causes:

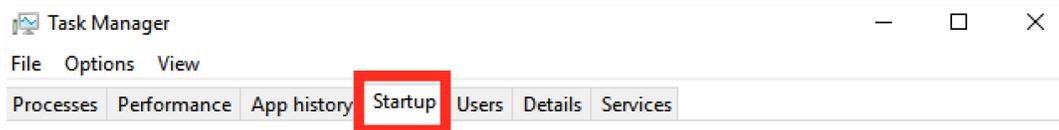
#### \* Too Many Unneeded Programs Running on the Computer

Removing unnecessary software that runs automatically at startup can free up both memory and CPU resources at runtime permitting more of each to be available to the Sensible Terminal. Caution that you remove only software you do not use and your system does not need to operate properly.

In Windows 7 and older, run MSCONFIG from the Windows RUN command in the Windows TASKMGR. The Task Manager can be started by a CTRL+ALT+DEL command on the keyboard. Then select "File" -> "New Task RUN..." and enter MSCONFIG. Uncheck the programs not needed to run at startup of the computer. After making these changes a reboot will be necessary.



Starting with Windows 8, startup programs are found in the TASKMGR itself.



## Most Common Causes:

### \* Disk Is Nearly Full

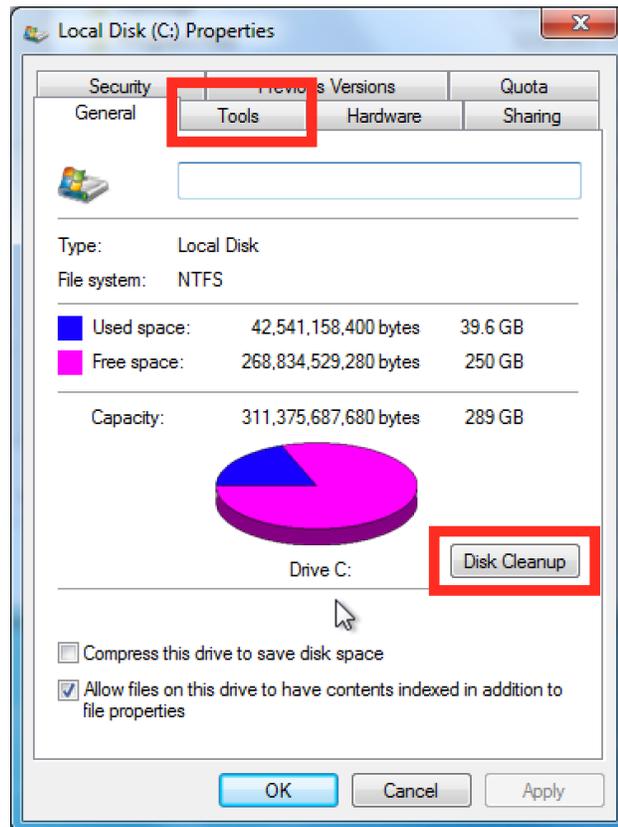
A full disk may not be able to supplement available physical RAM with additional *virtual* memory, thus slowing the machine down substantially. First, determine if the disk is nearly full. Locate the C: drive in Windows Explorer and select "Properties" either by right-clicking a mouse or holding a lingering finger over the drive letter to rise the right-click menu on a touch screen and selecting "Properties".

If the amount of free space available is at least 20% of the drive or over 10 GB in size, the available drive space is unlikely to be the cause of the speed issue.

If you are especially low on disk space, use the Disk Cleanup button to access the disk cleanup tool and free up as much disk space as you possibly can.

### \* Hard Disk Contains Errors or Hard Disk is Highly Fragmented

A disk that has physical damage, is on the path to failure or simply corrupted because of an improper shutdown can be the cause of a slowdown. A highly fragmented disk has files that are in fragmented pieces that must be assembled every time they are accessed instead of optimally being a contiguous whole file which can be opened and accessed quickly. The Disk Tools menu contains options for defragmenting your drive and checking the integrity of the drive to determine if the disk is failing or certain files are in need of repair. To do a complete defragmentation could take hours. Completing a physical scan of the disk for bad sectors may take a long time as well and will require you to restart the computer to perform the test. Allow ample time for these tasks to be performed without the need to interrupt them.



## Most Common Causes:

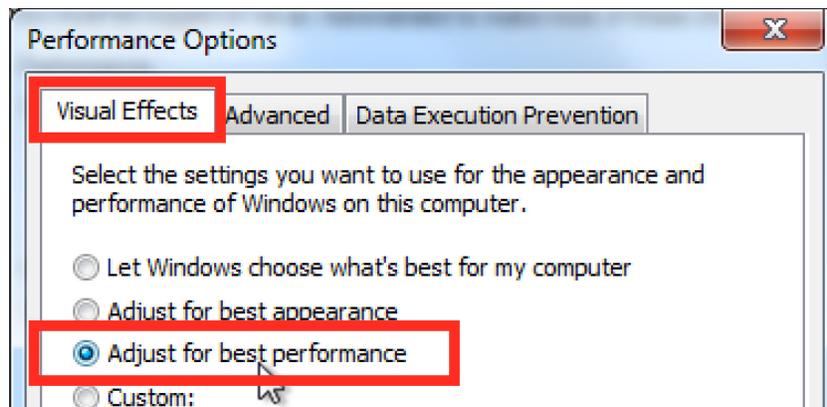
### \* Virtual Memory Setting Is Too Low

Optimally, your physical RAM should be at least 512MB when running Sensible Terminal. If you have less than that it becomes even more important that you have ample *virtual* memory available. With 2048MB of virtual memory, Sensible Terminal can be successfully run with as little as 128MB of physical RAM, albeit not ideally. This is because virtual memory, using disk space as memory, is substantially slower than using physical RAM. Ideally, Sensible Terminal should run on a system with 1GB physical RAM and be supplemented by 2048MB of virtual RAM on concession sales terminals and as much as possible on ticketing terminals. 3072 or 4096 should be sufficient.

Open the "System" icon in the Windows Control Panel and select "Advanced System Settings" from the menu at the left and select the "Advanced" tab. (On Windows XP simply select the "Advanced" tab). In the "Performance" frame select the "Settings" button. Select the "Advanced" tab now to edit the Virtual Memory size settings.

### \* Too many visual effects are turned on and are consuming memory

Open the "System" icon in the Windows Control Panel and select "Advanced System Settings" from the menu at the left and select the "Advanced" tab. (On Windows XP simply select the "Advanced" tab). In the "Performance" frame select the "Settings" button. Choose the "Visual Effects" tab. Select "Adjust for best performance" and press "Apply" at the bottom of the dialog box.

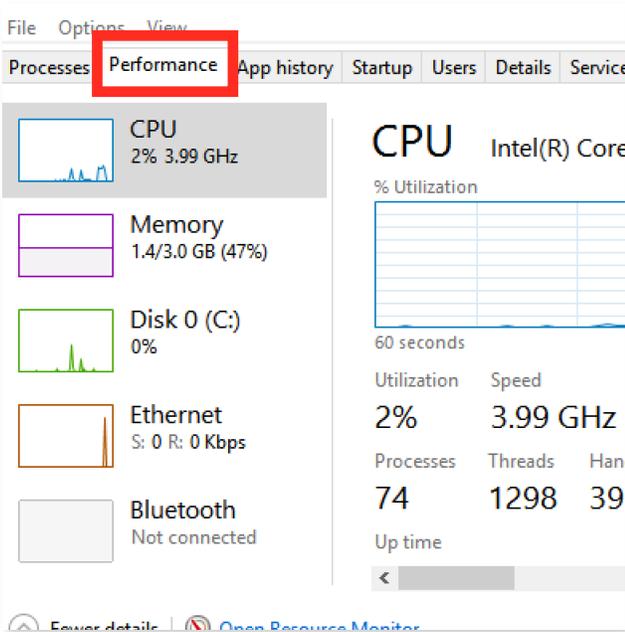


## Troubleshooting

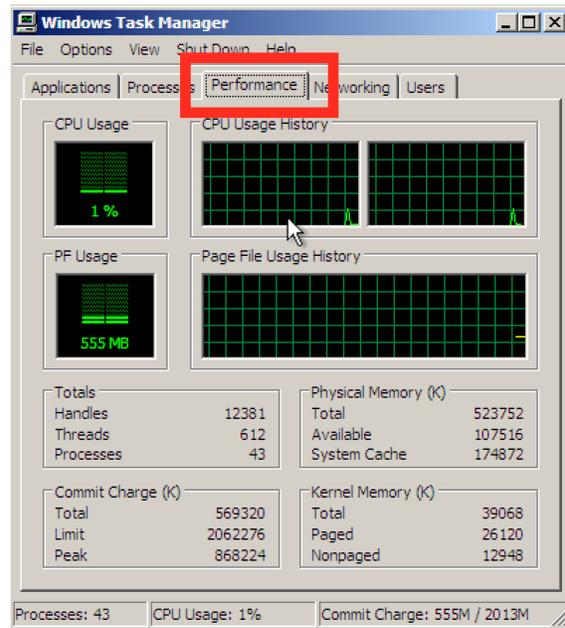
### \* CPU usage is extraordinarily high and keeping the machine too busy to perform normal tasks with out extraordinary wait times

To determine if your system is suffering from high CPU usage, run the Task Manager **TASKMGR.EXE** from the RUN command or by doing a CTRL+ALT+DEL with a keyboard. Select the "Performance" Tab and note the CPU Usage. It should not remain above 85% for any lingering period of time. Ideally it should be at 35% or lower except for occasional peaks of higher usage. It should never sit sustained at 100%.

Windows 8.1 and Windows 10:



Windows XP and Windows 7:



If your system CPU Usage is sitting and running at 100% nearly all of the time, your system has a rogue process, likely malware or a virus, causing the CPU to run constantly. Check the "Processes" tab and see if you can determine what process is using so much of your system resources. If possible, disable that process and see if the CPU Usage returns to an acceptable level. If everything on the system seems to be running normally again, consider leaving that process disabled.

Any system which tests for high CPU usage should be considered to be corrupted in some way. Use more than one anti-virus and anti-malware scanning tool to rule out a possible infection. It is especially important to suspend use of this terminal for credit card processing should it be suspected that this system has been compromised. Theft of credit card data (except where Verifone terminals are utilized with Sensible Terminal 4.0 and later) is a very likely possibility on any compromised system using an "in scope" payment application.