

How to Launch the Reliability and Performance Monitor

The Reliability and Performance Monitor is launched off of the **Start Menu** by choosing the **Administrative Tools** sub-menu and opens in the standard **Microsoft Management Console** format.

It can be launched directly from the **Control Panel** as well via the **System and Maintenance** option and choosing **Administrative Tools** (if you're using the Standard view; if you're using Classic views for the Control Panel then you'd access this directly by the Administrative Tools link).

Additionally, you can select **START** and right click **COMPUTER** and choose **MANAGE** which will bring up the Server Manger MMC. In the Server Manager MMC you can go to the Diagnostics node and choose Reliability and Performance.

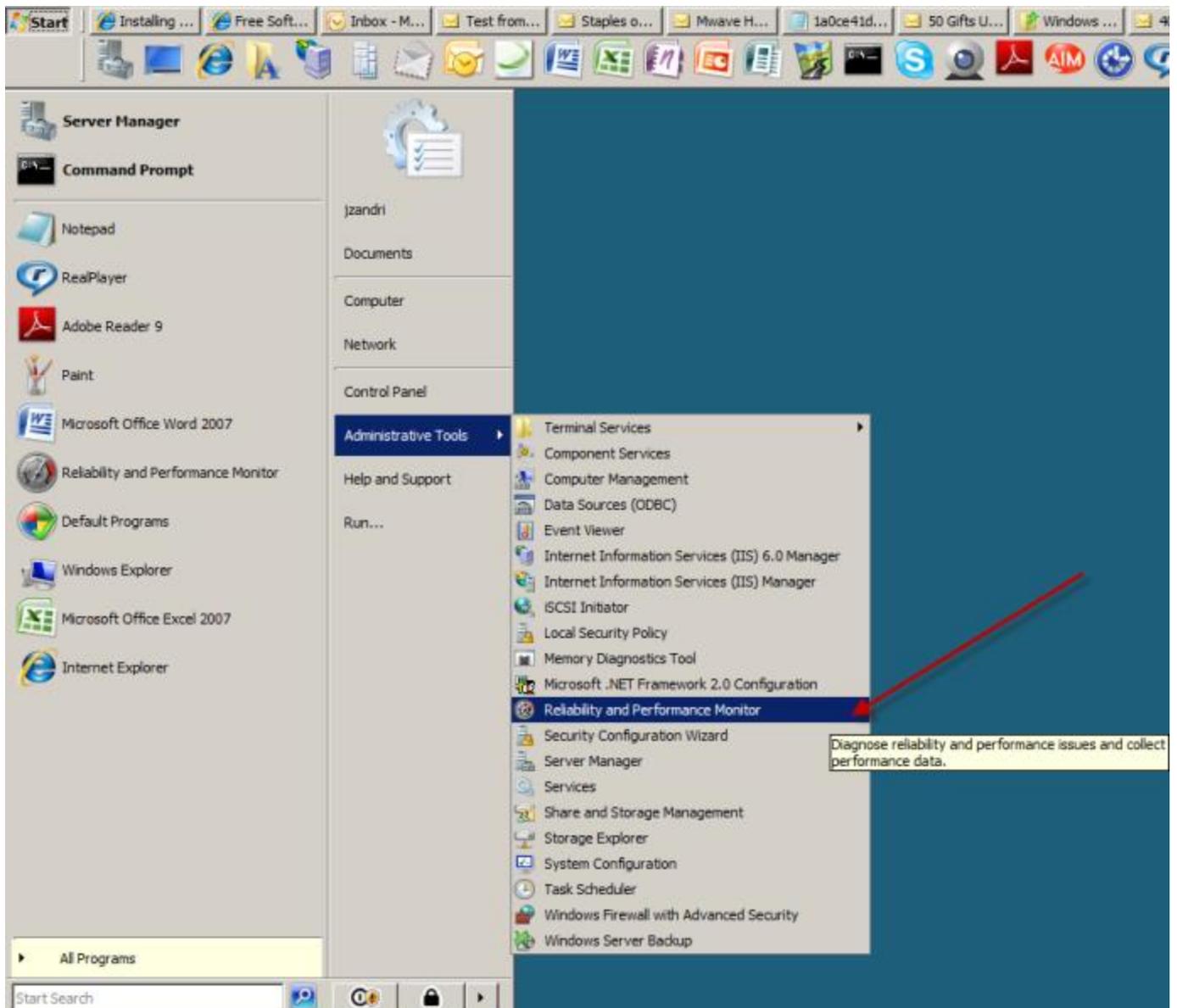


FIGURE 1 – Launching the Reliability and Performance Monitor MMC

The Reliability and Performance Monitor MMC

Once you launch the MMC you'll notice on the left side is the **Console Tree** pane which shows you all of the loaded snap in modules for the active MMC. This is your main navigation source for all of the Microsoft Management Consoles and selections made from the tree will affect the results shown in the Result pane and the Action pane.

Generally a system designed MMC such as the Reliability and Performance Monitor will have default snap-ins preloaded but you can add to them and **SAVE AS** to customize what you feel you may need for a given tool.

This is done by going to the **FILE** menu option and choosing **ADD/REMOVE SNAP-IN** and then choosing any additional snap-ins that you'd prefer to add to the custom console you're creating.

The **Result Pane** is generally the center pane in the default view which provides details of the selected node from the Console Tree.

The **Action Pane** is the far right default view which offers the actions to take for the highlighted item in the Console Tree pane. These are the same options available to you from the **ACTION** menu option.

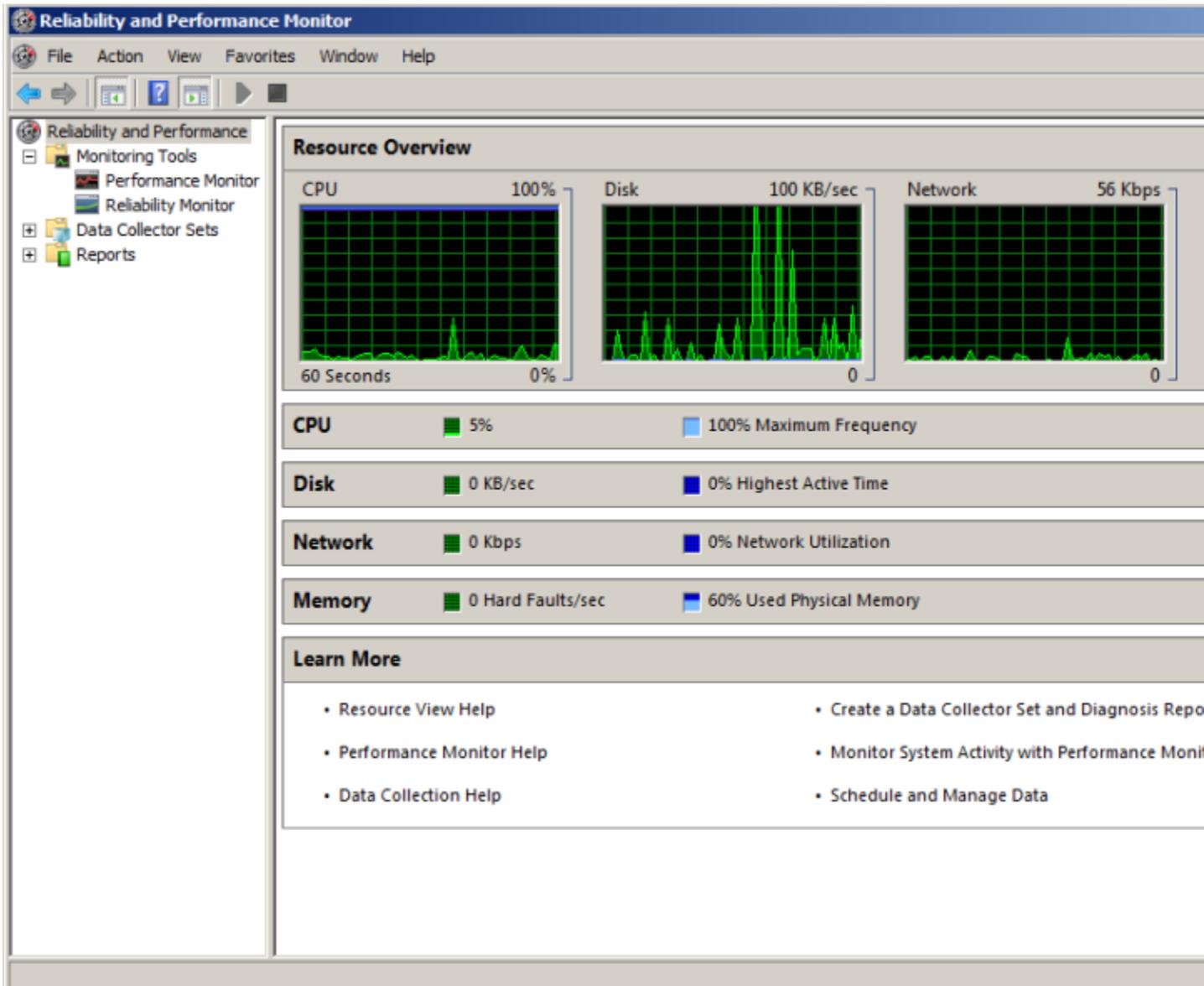


FIGURE 2 – The Reliability and Performance Monitor MMC default display

When the Reliability and Performance Monitor MMC opens up in the default view (as shown above) it will display at the top in the graphical display the current resource overview for the system.

The CPU view will show the current percentage of total processor use and maximum use limit which is 100%. This is an overall CPU commit reading of all cores and processors available and show in a single view.

Additionally the default view will show over all Disk activity in terms of KB / second (kilobytes) or in larger units as needed and the percentage of highest active time which has a maximum of 100% committed use. This view shows the total committed rate of all of the disk subsystem regardless of the number of physical disks or volume configurations).

The next graph that is available to review is the **Network monitor** which displays current network activity in Mbps (megabytes per second) and the percentage of network utilization active at the time.

The final view shows system Memory and the number of Hard Faults per second along with the percentage of Used Physical Memory.

[NOTES FROM THE FIELD] – *With respect to the Network Monitor portion of the tool, this will show the current network activity with respect to the local system and the local network connection (Ethernet port, wireless, telephone line in, etc). The percentage of network utilization active is for the machine only and not the Local Area Network (LAN) or the Wide Area Network (WAN). Additionally, this measurement should not be considered the reading for your internet connection either. When you review FIGURE 2 you will see that my network utilization is about 2%. At the time that I took that screen shot I was downloading a file from a remote location across the internet via my DSL connection which has a download throughput of about 2.4 Mbps or about 2% of my 100MB Ethernet controller. I am leveraging about 90% of my internet connection throughput (as the download is coming in at about 2 Mbps) but I am only using about 2% of the total capacity of the network card itself.*

Immediately below the graphs in the default view you will see detail subsections that are available to review for CPU, Disk, Network and Memory.

If you select the arrows at the far right of each row or click in the graphs at the top for a given monitor, you will be able to expand the details section of the chosen monitor to be able to get a real time view of resource consumption events on the system.

Each resource section has different sets of details to review and they can be sorted by their respective columns.

The CPU Module

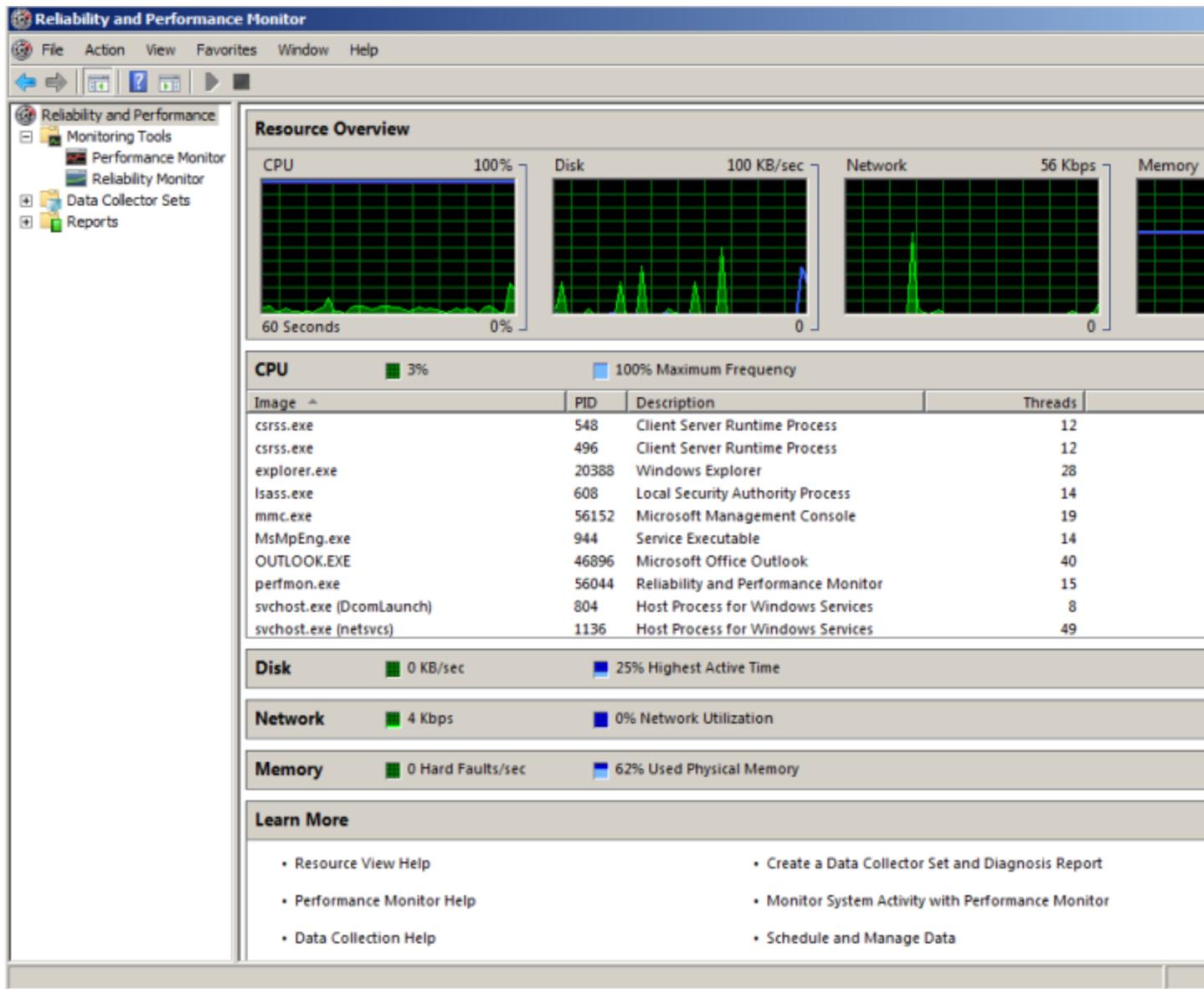


FIGURE 3 – The CPU module details section expanded

As you can see from the above screenshot, the CPU resource details are provided when the list is expanded which allows you to see current resources committed to the CPU, the number of threads attached to the processes along with the process ID and the average CPU use.

As mentioned above, if you wanted to sort the details numerically by process ID all you'd need to do would be to click on the PID header for the sort function to work from the low number to the high number. (If you select the same option a second time it sorts from high to low). If you decided to sort by active thread count you would simply select that column and so on.

The Disk Module

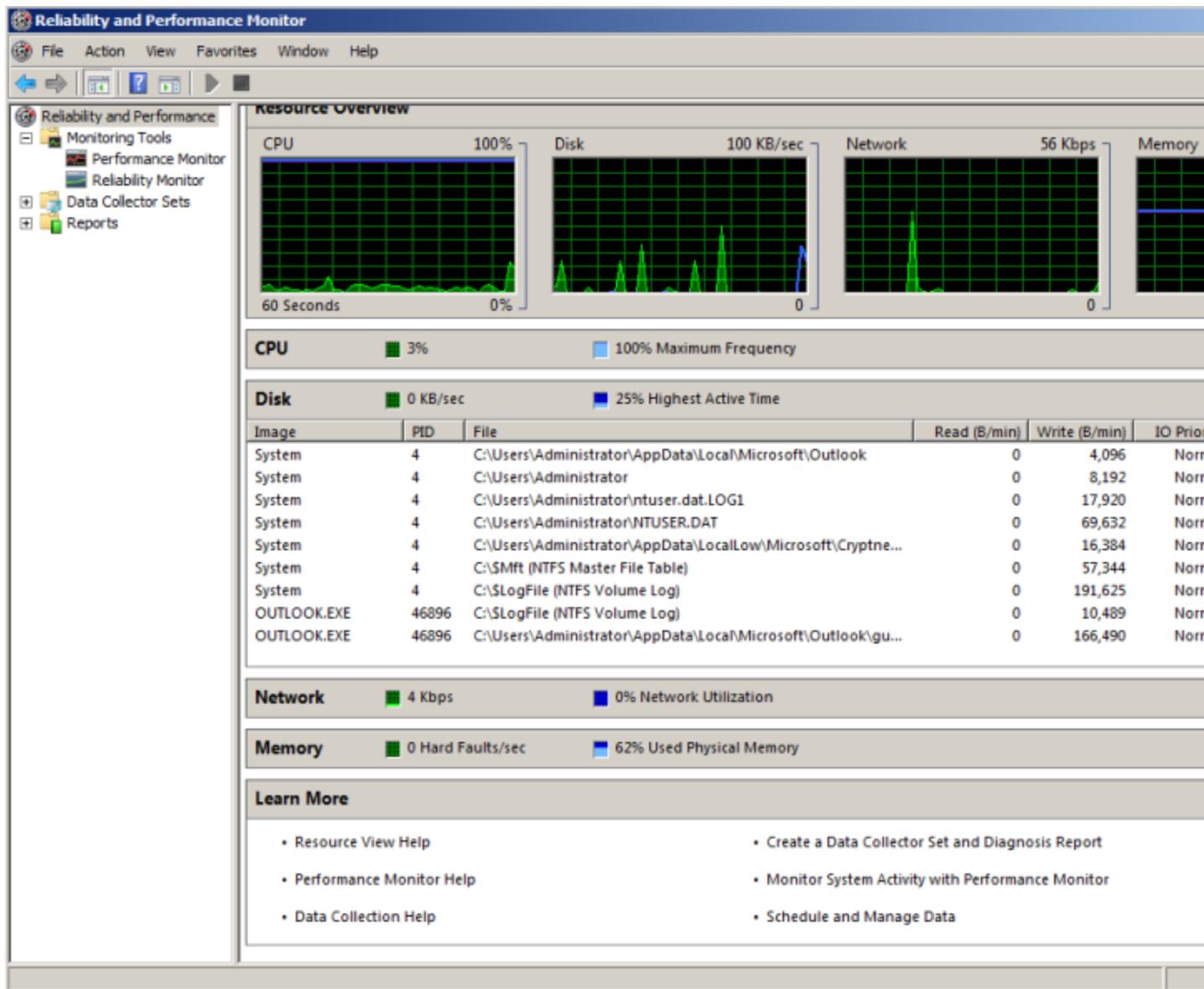


FIGURE 4 – The Disk module details section expanded

The Disk resource details are provided when the list is expanded and these details allow you to see current resources committed to the Disk subsystem including the listed process and corresponding ID, read time in bytes per minutes as well and the write time in bytes per minute. Additionally, you'll see the listed IO priority as well as the response time in milliseconds.

The Network Module

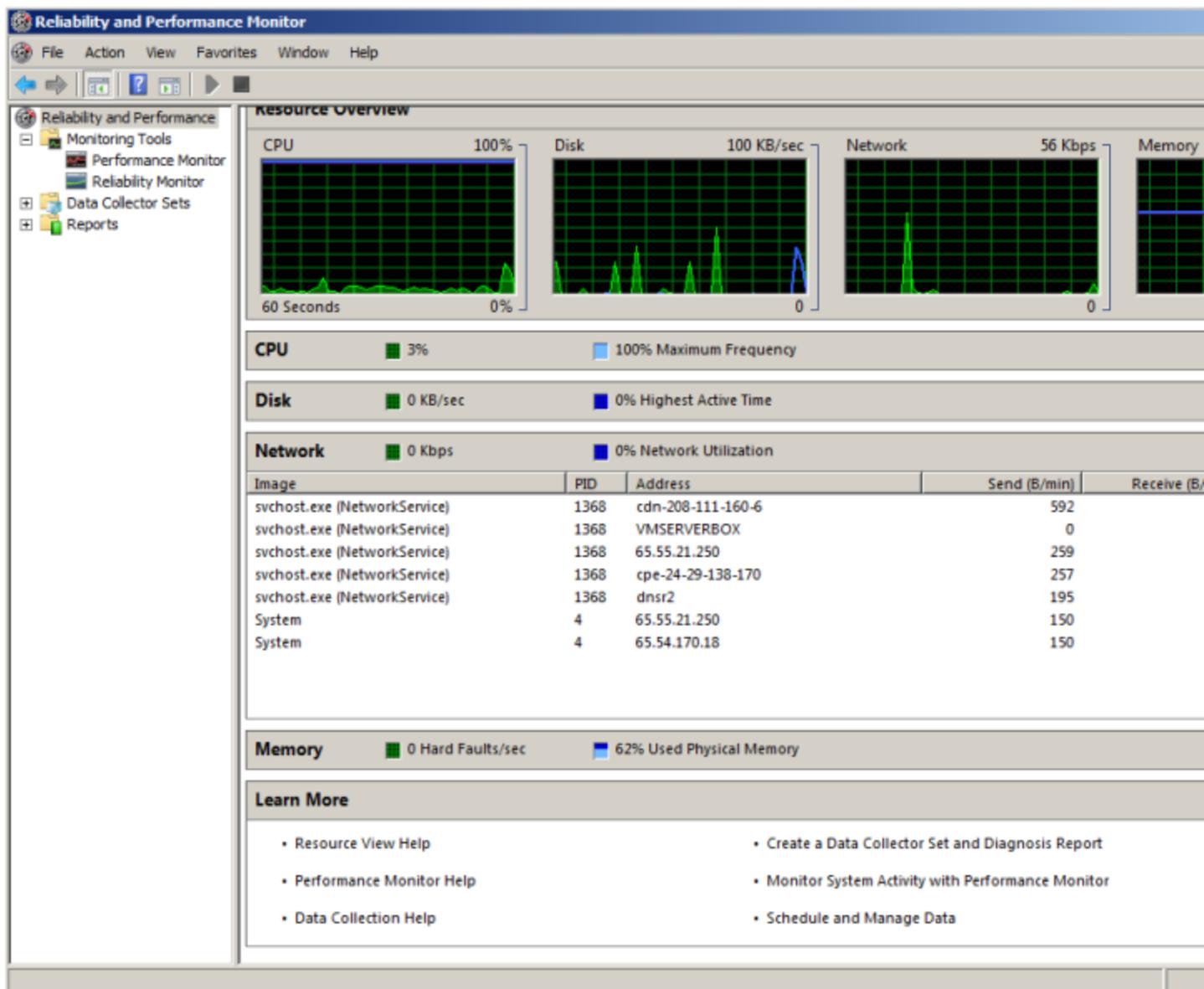


FIGURE 5 – The Network module details section expanded

The expanded Network resource section details the currently active network service or application and its process ID. The Address section provides information on the local or remote resource that is tied to the running service. There is also a section that details the Send bytes per minute, the Receive bytes per minute and the Total bytes per minute.

The Memory Module

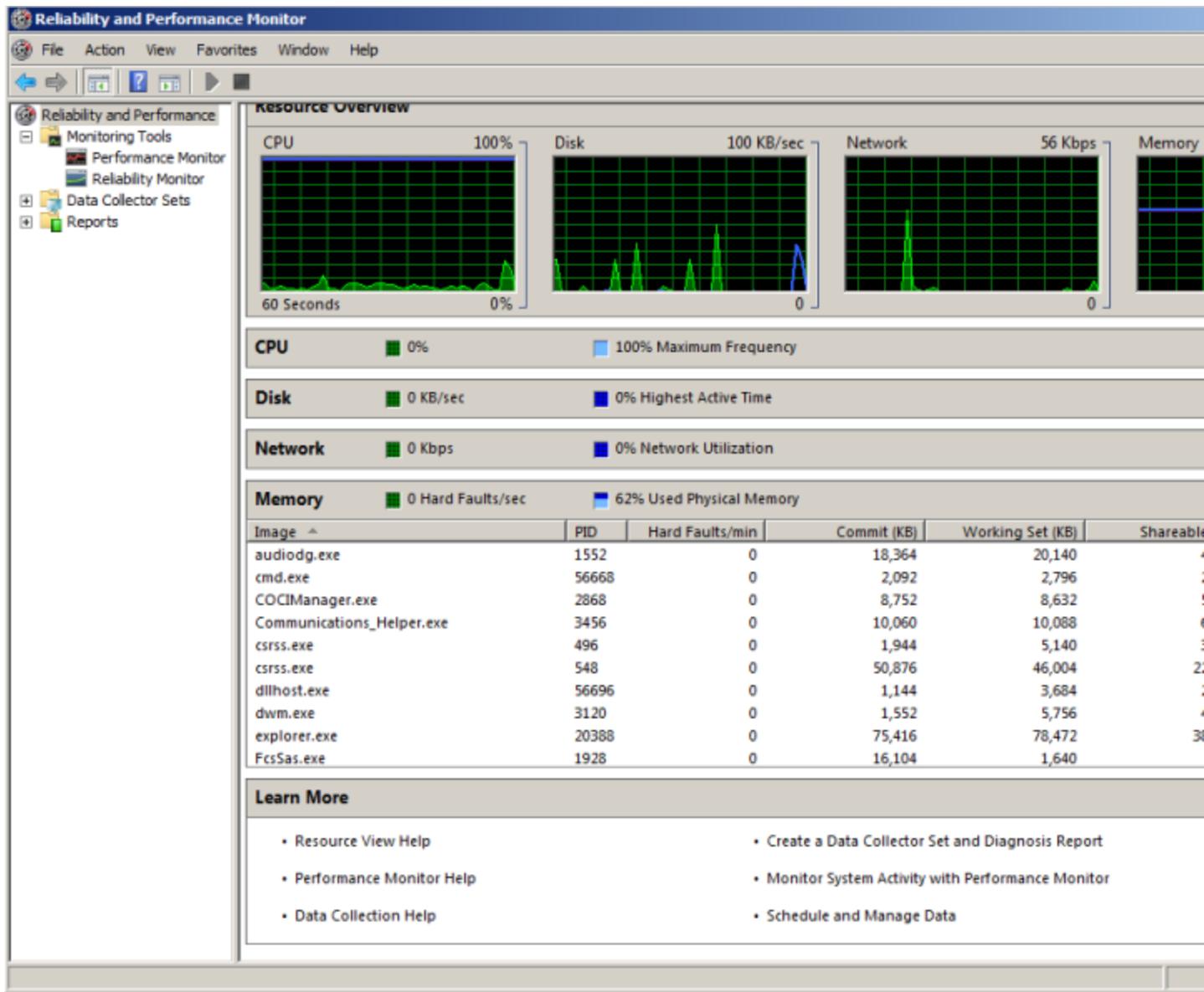


FIGURE 6 – The Memory module details section expanded

The last of the resource details is system memory which shows all of the active applications and services committed to memory and their relative PIDs. There is a column which outlines the Hard Faults per minute on an individual level as well as the Commit charge (listed in KB – kilobytes). You can also see the Working Set of memory, what is shown as Sharable memory and what is committed in a Private address space.