

Memory Information

Mike McBride



Memory Information

Memory Information

Contents

1	Memory Information	4
1.1	Memory Types	4
1.2	Memory Information Module	4

1 Memory Information

This module displays the current memory usage. It is updated constantly, and can be very useful for pinpointing bottlenecks when certain applications are executed.

1.1 Memory Types

The first thing you must understand, is there are two types of 'memory', available to the operating system and the programs that run within it.

The first type, is called physical memory. This is the memory located within the memory chips, within your computer. This is the RAM (for Random Access Memory) you bought when you purchased your computer.

The second type of memory, is called virtual or swap memory. This block of memory, is actually space on the hard drive. The operating system reserves a space on the hard drive for 'swap space'. The operating system can use this virtual memory (or swap space), if it runs out of physical memory. The reason this is called 'swap' memory, is the operating system takes some data that it doesn't think you will want for a while, and saves that to disk in this reserved space. The operating system then loads the new data you need right now. It has 'swapped' the not needed data, for the data you need right now. Virtual or swap memory is not as fast as physical memory, so operating systems try to keep data (especially often used data), in the physical memory.

The total memory, is the combined total of physical memory and virtual memory.

1.2 Memory Information Module

This window is divided into a top and bottom section

The top section shows you the total physical memory, total free physical memory, shared memory, and buffered memory.

All four values are represented as the total number of bytes, and as the number of megabytes (1 megabyte = slightly more than 1,000,000 bytes)

The bottom section shows you three graphs:

- Total Memory (this is the combination of physical and virtual memory).
- Physical Memory
- Virtual memory, or Swap Space.

The green areas are free, and the red areas are used.

Memory Information

TIP

The exact values of each type of memory are not critical, and they change regularly. When you evaluate this page, look at trends.

Does your computer have plenty of free space (green areas)? If not, you can increase the swap size or increase the physical memory.

Also, if your computer seems sluggish: is your physical memory full, and does the hard drive always seem to be running? This suggests that you do not have enough physical memory, and your computer is relying on the slower virtual memory for commonly used data. Increasing your physical memory will improve the responsiveness of your computer.