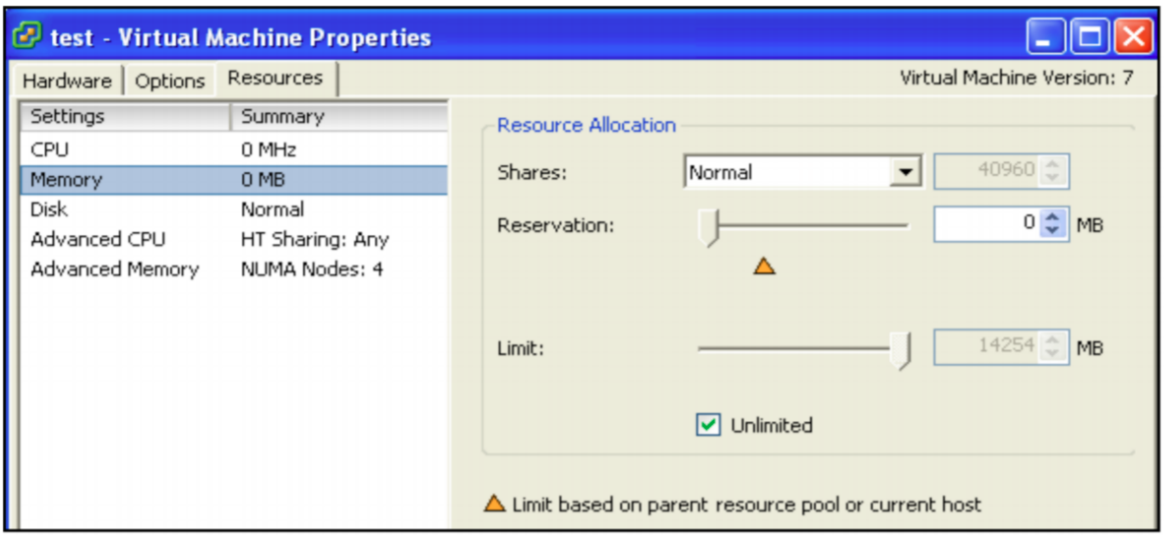
Virtual Machine Memory - Explaination

The configured size is the amount of memory that is presented to the guest operating system. This is different from the amount of physical RAM that is allocated to the virtual machine. The latter depends on the resource settings (shares, reservation, limit) and the level of memory pressure on the host.

> **For example**, consider a virtual machine with a configured size of 1GB. When the guest operating system boots, it detects that it is running on a dedicated machine with 1GB of physical memory. In some cases, the virtual machine might be allocated the full 1GB.

> In other cases, it might receive a smaller allocation. Regardless of the actual allocation, the guest operating system continues to behave as though it is running on a dedicated machine with 1GB of physical memory.

There are basically three option feild under the VMM



▼ **Shares**

specify the relative priority for a virtual machine if more than the reservation is available.

▼ **Reservation**

is a guaranteed lower bound on the amount of physical RAM that the host reserves for the virtual machine, even when memory is overcommitted. Set the reservation to a level that ensures the virtual machine has sufficient memory to run efficiently, without excessive paging.

After a virtual machine consumes all of the memory within its reservation, it is allowed to retain that amount of memory and this memory is not reclaimed, even if the virtual machine becomes idle. Some guest operating systems (for example, Linux) might not access all of the configured memory immediately after booting. Until the virtual machines consumes all of the memory within its reservation, VMkernel can allocate any unused portion of its reservation to other virtual machines. However, after the guest's workload increases and the virtual machine consumes its full reservation, it is allowed to keep this memory.

▼ **Limit**

is an upper bound on the amount of physical RAM that the host can allocate to the virtual machine. The virtual machine's memory allocation is also implicitly limited by its configured size.