

## Expected Issue

Computer will not boot into the desktop. When turning the computer on from the standby sleep approach it more often it will minutes the computer screen flashes loading up. In the weeks preceding the client reports that the computer is acting "fussy" sometimes taking up to 10 minutes. The client believed that the computer might be evidence of viruses and malicious software attack. The consultant did not make any difference.

## Diagnosis

There were two issues found with the computer hardware that were causing the problem:

1. One of the memory modules malfunctioning. The client's computer memory was composed of the modules and quite a few computer and the rest computer functioning then started displaying many of the same issues the client reported experiencing. The computer would boot up at random times and generally was unstable.
2. Hard drive has numerous bad sectors. This is the reason the computer would not boot up.

## Resolution

Although only one memory module is bad, both need to be replaced. Memory modules of this type tend to be "matched" pairs so replacing only one module is not an option. I would also recommend that the memory modules are be increased to the maximum allowed by the motherboard specs. The cost of both has fallen dramatically over the past few years and increasing RAM size is one of the easiest ways to increase the performance of a computer.

The hard drive will also need to be replaced. The bad sectors on the hard drive can be mapped and skipped over by the operating system but it is highly likely that additional sectors will corrupt before long. As with the RAM increase in the size of the hard drive is needed and will add very little if any additional cost. Most of all of the data from the bad hard drive should be saved and transferred to the new hard drive.