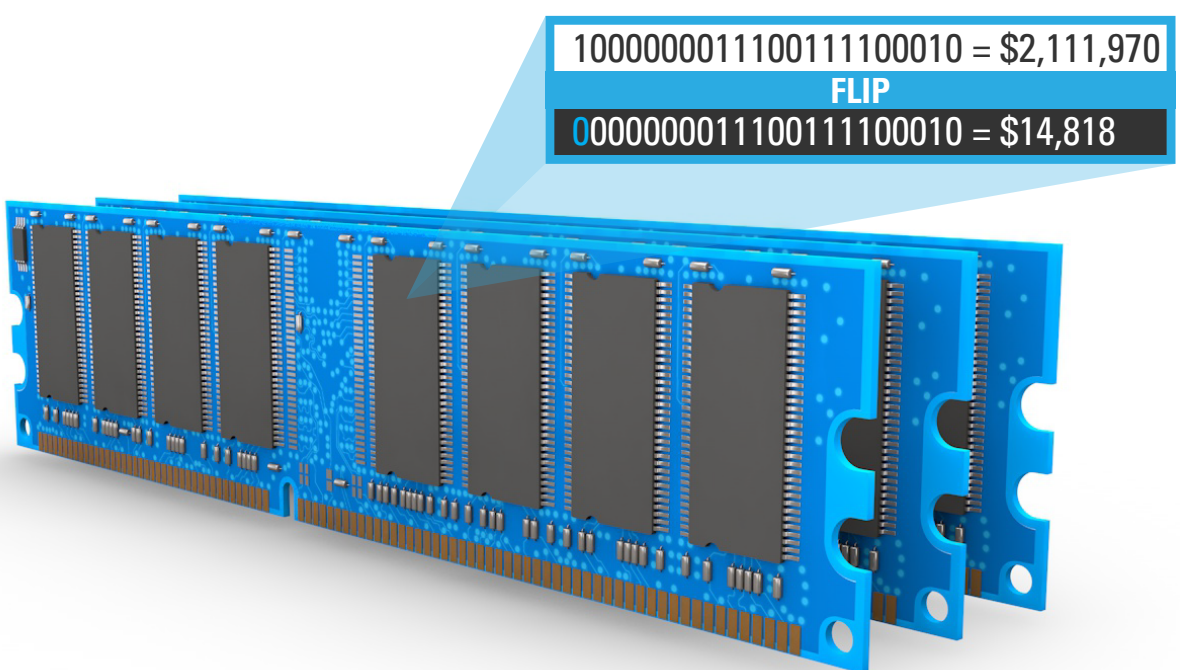


# NUMBERS DON'T LIE... BUT WHAT IF THEY DID?

Data corruption means more than just **HARDWARE FAILURE**. It can produce problems beyond **A SYSTEM CRASH**. In fact, data changing in memory can go **COMPLETELY UNDETECTED**. Corrupted data can impact every aspect of your business and **YOU MIGHT NOT EVEN REALIZE IT**.

## HOW AND WHY DATA CAN CHANGE IN SYSTEM MEMORY

Faster memory speeds and larger capacities increase the likelihood of **SYSTEM MEMORY ERRORS**.



A memory bit can **FAIL** and cause a hard error that **CRASHES THE SYSTEM** or **"FLIP"** and cause a soft error that **CORRUPTS YOUR DATA**.

## SO HOW COMMON ARE MEMORY ERRORS? MORE COMMON THAN YOU MIGHT THINK

**1 IN 3** systems experience one or more correctable memory errors a year<sup>1</sup>



**24/7 OPERATION** = greater risk of memory errors

BUT THERE'S A SOLUTION...

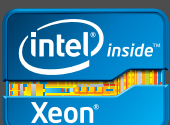
## ERROR-CORRECTING CODE (ECC) MEMORY CAN DETECT AND REPAIR ERRORS THAT CAUSE DATA CORRUPTION AND SYSTEM CRASHES



Finds and fixes **99.9998%** of memory errors<sup>2</sup>

**AVAILABLE ON SERVERS**  
**NOT AVAILABLE ON DESKTOP PCS**

Gain added protection against crashes and data errors



**CHOOSE A REAL SERVER WITH  
ECC MEMORY AND AN INTEL® XEON® PROCESSOR**

<sup>1</sup> Source: "DRAM Errors in the Wild: A Large-Scale Field Study"; <http://www.cs.toronto.edu/~bianca/papers/sigmetrics09.pdf>

<sup>2</sup> Source: X. Li, K. Shen, M. Huang, and L. Chu. "A memory soft error measurement on production systems." <http://www.ece.rochester.edu/~xinli/usenix07>; "A Realistic Evaluation of Memory Hardware Errors and Software System Susceptibility." [www.cs.rochester.edu/~kshen/papers/usenix2010-li.pdf](http://www.cs.rochester.edu/~kshen/papers/usenix2010-li.pdf)

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