

# The Value of Knowing Your I/O DNA

## Introduction

As IT infrastructure increases in complexities and inter-dependencies, in order to properly manage and orchestrate these multifaceted components, enterprises need to be able to properly evaluate next-generation solutions and ensure that they truly meet and exceed the individual demands of the enterprise.

I/Os generated by each enterprise are unique to themselves, much as DNA defines an individual. So, as enterprises need to evolve and upgrade their storage technology infrastructures (due to performance demands, product obsolescence, or any other number of business factors), it is critical that enterprises be able to assess the compatibility of their technology DNA with the new storage systems.

Even minor changes in the architecture of a datacenter infrastructure can manifest performance issues that may not be obvious. Using tools such as IOmeter, Loadster, Loadsim and Vcsim, to name a few, may help, but they cannot properly simulate the individual I/O “DNA” that a distinct enterprise has.

## Guidance

What is required is a solution that can properly emulate the idiosyncratic I/O patterns of a distinct enterprise. The solution must incorporate knowledge of existing I/O workloads to provide a test platform that is consistent with the distinct I/O “DNA” of the enterprise.

### Savings Calculator

What is your expected storage spending for the next 12 months?

Expected Savings†  
(Multiply above by 30%)

Making purchase or deployment decisions without comprehending your I/O DNA is very risky. Without this perspective, you will not be able to predict storage system behavior, and could be substantially overprovisioned, wasting precious company financial resources, or substantially underprovisioned, risking unsatisfied customers or users.

## Our Methodology

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Neuralytix audited a sample of roughly 5% of Virtual Instrument's customers. We documented the savings from these customers against the intended spending. Using standard statistical analyses, augmented with Neuralytix's expert market knowledge, we synthesized these data together to generate a simplified savings calculator that we believe represents an approximation that a large enterprise could expect using Virtual Instrument's storage performance validation solution.

†Although, all reasonable care has been taken, there will never be any substitute for an in-depth study using the specifics of an organization's data against a solution proposed by the vendor. Neuralytix does not make any warranties to the accuracies of this simulation.

## Conclusion

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Managing an IT environment absent proper instrumentation is akin to acting in a vacuum. Given the extreme dependencies enterprises have on data, optimizing I/O must be top priority. Solutions like WorkloadWisdom provide an ideal way of ensuring that data reaches its intended users per SLAs while also ensuring that business capital is spent optimally.