

ACCELERATE PRECISION MEDICINE

Genomics is creating massive data growth. Smart Storage is ready.



As genomics has evolved and cost has been driven out of the process, the number of sequences run has risen dramatically. This has forced change in the storage and computing involved. The massive quantities of data created by sequencing and the resulting analytic challenges have led researchers to seek more and more compute and higher performance storage. As genomics research has grown, scientists and physicians have leveraged technologies like high-performance computing environments and cluster computing to meet demands. However, today's fastest compute environments are prevented from delivering on their promise for genomics as a result of the constrained performance of the underlying storage environment. The storage environment is effectively a limit on the speed at which genomics capabilities can be delivered cost-effectively at volume.



ALL-FLASH PERFORMANCE

High-performance, high availability
all-flash infrastructure



SIMPLE SCALE

Plug-n-play scale-out means
easily handling data growth



LOWER COSTS

Dramatically smaller footprint, and
big savings on power, cooling
and space

DATA-DRIVEN GENOMICS APPROACHES ARE DISRUPTING MEDICINE

Genomics is in the process of disrupting patient care as we know it; the science is making the move from research to an active role in care delivery. Precision medicine is the translation of genomics into care; it is defined as an approach to preventing and treating disease that takes an individual's genes, lifestyle, and environment into account.

As part of the transition to precision medicine, genomics-based tools are being developed for clinicians that use big data analytics environments to make sense of the many genetic, environmental and personal determinants of health. For many patients, genomic data and resulting precision medicine approaches are key to unraveling the causes, treatments, and potential cures for their disease. In turn, the computing environments that underlie precision medicine are key to inventing, targeting, and delivering these treatments and cures to patients. IT has the opportunity to become a vital partner in these new models of care delivery.

CAN INFORMATION TECHNOLOGY AFFORD THE DATA EXPLOSION UNDERLYING PRECISION MEDICINE?

The shift to precision medicine is not only a disruption to care delivery, but also a digital disruption. Precision medicine organizations will need to generate, store and manipulate massive data volumes that are expected to grow in excess of 50%, year-over-year, indefinitely. IT organizations that support precision medicine need to be prepared to meet this growth with storage and computing power that delivers the performance required by clinicians. The promise of precision medicine can only be realized when the right information is delivered to the point of care in real time. To deliver precision medicine, IT needs to be ready to work with the clinicians and scientists who are building new models for precision care delivery. Yet IT organizations are seeing resources and budgets shrink as the data needed for precision medicine only grows.

PRECISION MEDICINE DEMANDS A NEW MODEL FOR ACQUIRING STORAGE

IT, as a partner in precision medicine, needs to examine legacy approaches and look for new, smarter strategies to acquire the storage and compute capabilities necessary to support precision medicine.

With the scale and growth rate of data volumes increasing exponentially, precision medicine requires a storage platform that:

Reduces TCO: Storage must effectively lower the cost of IT, both in terms of the initial investment and ongoing cost of operations, so funds can be directed toward clinical initiatives.

Enables innovation: Providers increasingly recognize that exceptional IT is fundamental to delivering precision medicine at the velocity of care and to enabling further innovation. As the criticality of IT grows, so does the demand for new services. IT organizations need to prepare for the on-demand, data-driven market that is emerging.

Improves clinician experience: Incorporating genomics into care delivery requires seamless big data analytics at the point of care, and often from within the clinician's point of view – the EHR desktop.

Manages risk: With so much clinical risk being introduced into the business, IT risk needs to be reduced, and investments in IT need to be mindful of their impact on the overall portfolio.

HOW SMART STORAGE MAKES PRECISION MEDICINE POSSIBLE

Pure Storage offers a new approach for acquiring and leveraging storage over the long run: Smart Storage is a unique architecture that enables superior performance in a high-density form factor that can replace racks of legacy storage for 50-80% less total cost of ownership. Smart Storage is also:

Effortless: Smart Storage solutions are always-on, always-fast, and always-secure. They're self-managing and plug-n-play simple. Genomics environments will be up and running quickly, and, with cloud-based management, predictive analytics, and unrivalled support and protection, precision medicine teams can focus on innovation, not administration.

Efficient: Smart Storage is based on a fully-automatable open platform that delivers more. Bring storage closer to the lab, and save precious resources, with dramatically lower floor space and cooling requirements. Control capacity growth via industry-leading data reduction while lowering risk through built-in encryption, replication, and QoS.

Evergreen: Unlike traditional approaches, maintenance for Smart Storage is a carrot, not a stick. With the Pure Evergreen™ Storage business model, maintenance renewal fees are flat indefinitely. Deploy storage once and keep expanding and improving it for 10 years or more – all without any downtime, performance impact, or disruptive data migrations. Smart Storage is the only storage that gets better with age.

