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Opus Interactive delivers 100% availability for high-value growth

Cloud service provider simplifies scalability, availability with HPE StoreVirtual VSA

Objective
Offer cost-effective cloud hosting services that meet diverse customer needs for performance, scalability and data availability

Approach
Standardize on a simplified virtualized infrastructure that can be rapidly provisioned and easily managed across three data centers

IT Matters
- Software-Defined Storage scales without the limitations of dedicated SAN arrays
- Virtualized server and storage clusters span multiple data centers to deliver 100% availability of computing and data resources
- Engineers manage entire infrastructure using single interface based on VMware and HPE StoreVirtual VSA Software

Business Matters
- Hosting success drives growth to nearly 1,000 customers
- Advanced infrastructure and tools support delivery of high-value service at a competitive price

Opus Interactive is making it easy for companies to move their IT to the cloud. With three cloud-enabled data centers and more than two decades of experience hosting and managing critical IT infrastructures, Opus Interactive now serves nearly 1,000 companies across a range of industries including retail, manufacturing, finance, healthcare and travel.

While Opus Interactive provides colocation services for some customer-owned infrastructure, the majority of its customers rely on cloud services delivered through a fully virtualized, centrally managed server and storage infrastructure across the three data centers. For more than 10 years, Opus Interactive has deployed this standardized infrastructure on HPE server, storage and networking components. The company has fine-tuned its approach and platform to give customers distinct advantages in resilience, performance, cost, manageability and scalability.

"Customers typically come to us after experiencing downtime or reaching the limits of their physical infrastructure, and they're facing major capital expenditures to deliver the level of IT their company truly needs," says Eric Hulbert, CEO of Opus Interactive.

> "Because of the standardized way we manage our infrastructure, we're able to deploy a fairly large infrastructure — say a couple of hundred servers, four or five terabytes of RAM, 50 terabytes of storage — and have it online and available for a new customer in a couple of days."
>
> – Eric Hulbert, CEO of Opus Interactive

"We work with customers to understand their pain points and come up with a solution that addresses those pain points and enable them to consume IT in exactly the amount they need, billed as a predictable operating expense."

A history of smart decisions

Opus Interactive began its journey with HPE more than 10 years ago, with the purchase of several first-generation BladeSystem servers and enclosures. The move to blades from rack-and-stack servers yielded significant power savings and space efficiencies, as well as a scale-out path that could handle the company's growth curve well into the future.

"We've been working with HPE at the partnership level since the early 2000s," says Brady Wilson, CTO of Opus Interactive. "Because of the longevity of the BladeSystem c7000 Enclosure, we've been able to advance from generation one blades all the way up through the new Gen9 blades without a rip-and-replace upgrade. As customers' performance requirements grow, we simply add memory to their existing blade servers, move to newer generation blades, or scale out their infrastructure with additional blades."

During that same time period, the company also made a critical decision about its storage approach. The Opus Interactive team evaluated

traditional SAN offerings available at that time – and also some new concepts. "We needed a storage platform that was scalable, but we didn't want to be controller bound," explains Hulbert. "We were concerned about reaching the capacity limits of traditional SAN arrays and then needing to do lift-and-shift upgrades, introducing risk for our customers. We wanted a simplified approach in which every time we added a shelf we would add performance. In 2005, we got that capability with products from LeftHand Networks as one of their very first customers."

LeftHand Networks was later acquired in 2008 by HPE, which continued to develop the technology into a mature software-defined storage fabric that is the heart of HPE StoreVirtual VSA Software. Opus Interactive uses this software today to manage nearly a petabyte of virtualized storage across its hosting infrastructure, delivering enterprise-class services at a low cost with the multi-site redundancy that many of its customers require.

Virtualization simplified

Opus Interactive has established a standard configuration for its hosting infrastructure, typically installing twelve server compute nodes, two storage controller blades and two storage blades with SSD drives in each HPE c7000 Enclosure. Opus Interactive engineers

use VMware to create virtual server clusters and StoreVirtual VSA Software to create clustered pools of storage using internal hard disks and SSD devices. Customers require the highest levels of availability, for this Opus Interactive uses StoreVirtual's Network RAID technology to stripe data across the storage cluster, assuring that the data and applications remain available in the event of disk or server failures.

"Through our management tools, we can easily configure virtualized IT environments to achieve the highest levels of availability for a customer's computing and data resources," says Wilson. "We provide 100% availability by having active resources in multiple data centers."

"By keeping the infrastructure highly consistent — with the same hardware and software in every location — we've built an environment that's very easy to manage."

– Eric Hulbert, CEO of Opus Interactive

Data center facilities that support growth

Opus Interactive currently relies on three data centers to host its cloud hosting customer infrastructure: Hillsboro and Portland Oregon; and Dallas, TX. The facilities are certified to meet Tier-III design standards for availability, connectivity, security, and physical resilience. Their geographic dispersal, coupled with IT infrastructure redundancy inherent in the Opus Interactive hosting environment, assures that no single disaster event can interrupt customer IT operations or cause data loss. "We really don't have to worry about being kept up at night anymore, because we've built everything to be concurrently maintainable," says Hulbert. Opus Interactive just completed an expansion of new space in Hillsboro and additional

expansion is also in the works. The Hillsboro datacenter will soon take on a major new customer in a 100,000 square foot, 16MW facility expansion now completing construction. Hulbert notes that the data centers are highly efficient and have ample power capacity to accommodate high-density IT infrastructure. The Oregon data centers also benefit from the region's low-cost power – much of it from green sources like wind and hydroelectric.

Staying ahead of customer needs

Opus Interactive builds out spare hosting capacity to stay ahead of growth, always ready to accommodate on-demand scale-out needs for existing customers. Hulbert says that 60% of the growth in data storage is coming from existing customers. "Having software-defined storage really allows us to grow that infrastructure as fast as our customers are needing us to grow it — in a seamless way that's been a really huge advantage for our business over the years," says Hulbert.

The speed of deployment also benefits new customers. "Because of the standardized way we manage our infrastructure, we're able to deploy a fairly large infrastructure — say a couple of hundred servers, four or five terabytes of RAM, 50 terabytes of storage — and have it online and available for a new customer in a couple of days," says Hulbert. "We can then support the customer as they transition applications and data from their on-premises systems to a cloud or hybrid environment."

Powerful tools empower IT generalists

Opus Interactive has multiple engineers at each data center and staff its network operation center, for an all engineer based team. "We don't have specialized teams for storage, or networking or backup," says Wilson. "With StoreVirtual VSA Software running as an appliance within VMware,

Customer at a glance

Hardware

- HPE ProLiant Server Blades, through Gen9
- HPE BladeSystem c7000 Enclosures
- HPE Storage Blades
- HPE Networking

Software

- HPE StoreVirtual VSA Software
- VMware vSphere
- Veeam Backup and Replication software

our IT generalists can manage the entire infrastructure from a single interface. They aren't looking at a command line or writing code — they're managing a diverse environment and getting the opportunity to solve some of the exciting and unique challenges that customers bring to us."

Single source for innovation

"When new customers come to us, they're looking for a single proven partner to provide a solid IT platform, not a lot of vendors to manage all of the little pieces," says Wilson. "Similarly, we've relied on our relationship with HPE to deliver core infrastructure components — compute, storage and networking plus great management tools — that truly is the basis for just about everything we do. Certainly we didn't start off that way, but through some great purchases we've come to that. At the same time, we don't feel constrained, because we've always been able to interoperate with other pieces successfully."

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– Brady Wilson, CTO, Opus Interactive

"By keeping the infrastructure highly consistent — with the same hardware and software in every location — we've built an environment that's very easy to manage," adds Hulbert. "The tools and infrastructure we get from HPE provide the right platform we need to deliver excellent service to our customers and compete with larger firms."

Learn more at
hpe.com/StoreVirtual

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