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ASA Computers Redesigns On-premise Hardware Stack for Global SaaS Provider with **Hyperconverged Infrastructure, Smaller Footprint, and Major Savings**

Custom-built computing infrastructure is in demand across a wide array of companies and industries, complementing the use of cloud. Pre-integrated racks of infrastructure allow organizations to quickly deploy new services on-premises that can be easily modified, scaled, and managed. In the world of best of breed, custom rack solutions, ASA Computers, has built a dedicated customer base whose continually evolving application services require fast, agile, cost-effective, and ever more efficient infrastructure.

For a major customer that provides software-as-a-service (SaaS) solutions to companies globally, ASA Computers custom-designed and built best-of-breed, rack-level infrastructure to be seamlessly deployed as an appliance on-premise at end customer data centers. Among the many benefits of the new hyperconverged infrastructure appliance from ASA Computers: customer saw a 50% reduction from the previous hardware footprint, a 75% lower cost, and 38% reduction on power usage per appliance.

> From a legacy SAN, switching, cabling, and management solution that took months to build and prep, our customer now has an all-in-one, custom designed, factory built, pre-configured and tested hyperconverged infrastructure appliance that is shipped to their end customer data centers or colo facilities for plug and play deployment.
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> **—Joel Wineland, CTO, ASA Computers/Racklive**

Less Becomes More

The previous storage application architecture was a traditional storage area network (SAN) design. It had multiple, dedicated SAN switches, fiber channel host bus adapters (HBAs), InfiniBand cables connecting the SAN controller and storage nodes, and four Power Supply Units supplies (PSUs).

Intrigued by the operational benefits, high uptime, and IT simplicity of hyperconverged infrastructure — due to its virtualization and software-defined flexibility — ASA Computers' customer was interested in reducing their solution's footprint at end use data centers to reduce space, power, and cooling costs. Additionally, the customer was also interested in reducing on-site deployment times.

They came to ASA Computers to redesign a leaner, scalable, higher performance, more power efficient and more cost-effective virtual SAN (VSAN) with a comprehensive remote management solution as an all-in-one, hyperconverged hardware stack.

ASA Computers engineers designed a rack that integrates switching and storage within a 2U Dell PowerEdge server appliance. The design was based on specific power requirements with a number of CPU cores, memory capacity, storage space and scalability.

Built, tested, and pre-configured at ASA Computers facilities, it includes a Chassis Management Controller (CMC), network modules, compute, and storage nodes—all within one 2U platform in a Dell PowerEdge server chassis. After initial configuration of each appliance, ASA Computers provides remote access to SaaS provider to perform a final configuration before the appliance ships to a colocation data center for use by end customer companies.

Challenge

Migrate from a costly, legacy, on-premises SAN with multiple standalone switches and complex cabling and deployment requirements.

Solution from ASA Computers

Design, build, pre-configure, and test a deployment-ready hyperconverged infrastructure appliance with best-of-breed components for a VSAN integrated with switching.

Benefits

Simpler, rapid deployment eliminates the need for engineers to rack and configure. Appliance is easier to scale and more flexible to adapt, enhancing SaaS provider's go-to-market strategy. Cost savings of 75%, 38% lower energy usage, and half the size of the previous solution footprint increases the solution's market competitiveness.

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ASA Computers helped reduce cabling and physical hardware without sacrificing performance and storage capacity requirements. The legacy rack solution required 14 PSUs and 10U of rack space, whereas the current appliance requires only two power supplies, 2U of rack space, and provides redundancy for all elements. The legacy SAN required a minimum of three management cables while the current SAN requires only one. InfiniBand cables were a requirement in the old design, but the current SAN no longer requires them.

"In the past, it took multiple meetings with the customer before we could finalize the design for each build," said Anthony Lau, ASA Computers Product Manager. "With the new deployment stack, each new appliance has a much faster turnaround time for finalizing the initial build and the SaaS provider can more quickly deploy their final configuration."

About ASA Computers

ASA Computers is an ISO 9001:2015 certified IT solutions provider and a Dell Technologies Titanium Partner. Our team of top mechanical, electrical, and system engineers, along with project managers, work together on IT infrastructure projects. For companies that want to control their own infrastructure and build their own clouds, ASA Computers provides the expertise to build custom IT solutions for a wide variety of applications as market dynamics change and new opportunities arise. Our partnerships with leading manufacturers provide access to best-in-class servers, storage, networking, and software to better serve the always-evolving needs of our customers.

To learn more about ASA Computers, click here. For more information on Dell Technologies' server and storage solutions, click here.