VMware Case Study

INDUSTRY
Infrastructure as a service

LOCATION
Perth, Australia

KEY CHALLENGES
- Avoid downtime due to management cluster that's not separate from general compute.
- Avoid storage outages with existing SAN.
- Reduce operational complexity of SAN management.

SOLUTION
When Zettagrid decided it was time to separate customer and management workloads to gain better control of its cloud infrastructure, it turned to VMware Virtual SAN storage to increase capacity, simplify operations, and ensure continuous uptime.

BUSINESS BENEFITS
- Increased revenue by using freed-up capacity to monetize production platform
- Reduced costs by deferring hardware purchases and allowing incremental spend on storage
- Increased IT team's ability to scale and grow organically with the business

Zettagrid Improves Availability by Easing Public Cloud Management with VMware Virtual SAN Solution

Operating the easiest, fastest, and most highly available public cloud in its market, Zettagrid is constantly looking for ways to improve the infrastructure and services it provides to customers. When it came time to future-proof its architecture to ensure performance and service delivery, it turned to the VMware Virtual SAN™ solution to increase storage capacity. In the process it gained operational efficiencies, lowered operating costs, and became agile enough to grow its IT environment with the business.

Founded in Perth in 2010 as a startup within parent company Zetta Group, Zettagrid provides cloud-based infrastructure as a service to customers throughout Australia. With a focus on automation and provisioning, the young company delivers its service from more data centers in Australia than any other public cloud provider.

The Challenge

When Zettagrid launched with an initial offering of a basic virtual private server based on the VMware vCenter™ solution, no one knew how fast the company would grow. But grow it did, and within a few years it was operating three data centers—in Perth, Sydney, and Melbourne—and running more than 4,000 virtual machines (VMs) from its public cloud powered by the VMware vCloud® solution.

By the time lead architect Anthony Spiteri joined Zettagrid in 2013, the company's data center environment was beginning to feel this rapid growth—particularly in storage. Because Zettagrid's cloud operations had struggled to keep pace with its organic expansion while also making the most of existing resources, it had not created separate management clusters in its physical storage. Customer and management workloads were intermingled in each of the company's cloud zones.

Spiteri and team knew that to avoid such problems in the future, Zettagrid would need to isolate its management cluster—and finding the right solution became a top priority.

The Solution

While the company considered the legacy approach of using a small traditional SAN with three or four hosts to add the storage capacity required to create separate management clusters, Spiteri and team quickly ruled out that option. Beyond representing a step backward in terms of the company's technology vision, it did not seem like a viable option from a cost perspective.

"Virtual SAN allows us to have the best-of-breed HCI technology. The simplicity and flexibility is such a massive factor. It makes it easy for our cloud operations team to manage storage along with our VMware environment, and it also allows us to scale as and when we need it."

- Anthony Spiteri, Lead Architect, Zettagrid

VMWARE FOOTPRINT

- VMware Virtual SAN
- VMware vSphere®
- VMware vCenter Server
- VMware vRealize Orchestrator
- VMware vCloud Director

APPLICATIONS HOSTED

- Microsoft SQL Server
- Microsoft Active Directory
- Veeam backup servers

PLATFORM

- Dell PowerEdge FX2 platform

"We see our future in hyper-converged infrastructure," says Spiteri. "So we already knew that we wanted to consolidate storage and stop buying big SANs. Plus, it quickly become evident that it would be impossible to rightsize a traditional SAN for the management platform, which didn't require a massive amount of compute or storage—meaning we would have had to buy far more than what we needed."

Although Zettagrid evaluated hyper-converged solutions from other vendors such as Nutanix, VMware Virtual SAN storage won the day for its affordability, ease of use, and flexibility. Says Spiteri, "We put Virtual SAN through its paces and conducted extensive failover tests, and in every instance—and at every stage—it was able to recover without any data loss. This, combined with its tight integration with our VMware environment—and most notably its interoperability with VMware vCenter Server®—made Virtual SAN the clear choice."

Today, each of Zettagrid's three cloud zones has a four-node Virtual SAN cluster on the Dell PowerEdge FX2 platform, with each node hosting four servers and 9TB of storage for its management platform, which runs everything from Microsoft Active Directory and SQL Server to automation servers, VMware vCloud Director® provisioning, VMware vCenter Server management, VMware vRealize®Orchestrator™ cloud automation, Veeam backup servers, and more.

Business Benefits

Four months after a Virtual SAN deployment that couldn't have gone more smoothly, Spiteri continued to marvel at the scalability and ease of use afforded by the VMware hyper-converged solution. "The simplicity of setup has been a huge productivity booster for us," he says. "Thanks to its integration with vCenter, I can see everything, and with a couple of clicks, I can create a couple of disk groups, provision virtual machines, assign SLAs, and then you have your storage presented."

The benefits of using Virtual SAN storage for Zettagrid's management platform, however, go far beyond scalability and ease of use. Thanks to the Virtual SAN solution, Zettagrid is actually increasing its revenue, according to Spiteri. "Virtual SAN enables us to better monetize our production platform, freeing up resources for clients and deferring investment in new hardware," he says. "And because our management platform is now separate and automated, we have better control in everything we do, which makes us more comfortable as a business."

That newfound control will also help Zettagrid as it explores plans to expand its operations in Australia and New Zealand, as well as in the Asia Pacific and Japan regions. Says Spiteri, "Knowing that we can start small and scale out—with Virtual SAN management clusters—means that we can grow comfortably with the hyper-converged infrastructure and move forward with confidence."

Looking Ahead

Spiteri is looking forward to the quality of service capability introduced in Virtual SAN 6.2, which will enable Zettagrid to control the number of IOPS per VM regardless of "what's going on with their noisy neighbors." This, in turn, will allow the company to create different service levels, which it can monetize as well.

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