

**COMPANY:**

Afrihost

www.afrihost.com**CHALLENGE:**

- Exponential customer growth on slowing HDD storage arrays
- High \$/TB cost for RAID10 configuration due to huge VM load on HDD arrays
- Customers have no long-term contracts—outstanding service is critical to company

SOLUTION:

- Two datacenters running VMware vSphere on blade servers
- 47TB Pure Storage FlashArray 450
- 3.6:1 Data Reduction
- Provisioning time cut from 30 minutes to one minute
- No support calls, five nines reliability

USE CASE

Virtualization

GEO

Africa

INDUSTRY

Telecommunications

AFRIHOST FINDS THE KEY TO CLIENT HAPPINESS WITH PURE STORAGE FLASH ARRAYS

SMB-focused ISP aligns IOPs delivery to customers, and reduces client provisioning from hours to seconds with All FlashArrays.

DEMANDING CLIENTS, HIGH GROWTH AND THIN PROVISIONED HDD STORAGE ADDS UP TO A PERFORMANCE HEADACHE

Afrihost started life in South Africa in 2000 as a web design and internet service provider for small and medium businesses. As it grew, the ISP, brainchild of three close friends, added ADSL broadband internet connections, domain services and more, becoming one of the top three ADSL providers in South Africa and winning MyBroadband's ISP of the Year four years running.

The company has evolved into a managed service provider, while also building one of the largest ADSL networks in the region. Despite its phenomenal growth, Afrihost has built a solid reputation as the most affordable service provider in Africa, relying on storage efficiencies to deliver both low cost and high performance.

Afrihost now offers cloud solutions and hosted Linux and Windows environments, as both shared and dedicated services. At the top end, this encompasses a Windows or Linux server with up to 8TB of virtual disk capacity. These are run from two VMware virtualized data centers, which make use of blade servers running VMware vSphere. The company deploys and manages thousands of virtual machines running a wide variety of operating systems, databases and applications.

At present, 95% of clients are based in South Africa, and come to the company via word of mouth, attracted by the ease of sign-up, competitive pricing and high levels of support. With no long-term contracts keeping clients tied down, a key focus for Afrihost is to ensure its clients are happy and makes service delivery and uptime critical for the company.

The Afrihost hosted environment started growing exponentially during 2013, resulting in a high number of clients logging support calls for poor storage performance. The company had already invested heavily in traditional hard disk arrays from reputable enterprise storage vendors, and continuously struggled with performance and scalability. The highly random nature of workloads from multiple clients running multiple configurations across thousands of virtual machines meant the spinning disk-based arrays all had to be configured in RAID10, heavily limiting capacity and producing a high cost per usable terabyte.

Afrihost's spinning disk array problems created a significant storage administration overhead. While the company could keep performance issues under control for the most part, it meant that heavy users had their IOPs capped to avoid their resource consumption obliterating others' capacity.

ALL FLASH WITH FIVE NINES AVAILABILITY

A combination of performance problems and actual downtime forced Afrihost to look for alternatives.

"We'd come in to help Afrihost address some of its storage performance and migration issues on earlier environments, and over time, we became technical advisors," said Gerard Almon, Managing Director at Data Sciences, a Pure Storage Partner. "What started as a consulting engagement became a partnership. We wanted to help."

Data Sciences provided an All Flash Array for a proof of concept (POC). It proved to be Data Sciences' fastest POC implementation ever. The POC—an 11TB All FlashArray—arrived at one of Afrihost's datacenters on the Friday, and was in production before Sunday. Afrihost originally deployed a 35TB Pure Storage FlashArray in March, and upgraded to 47TB in July. Now, more than a thousand of Afrihost's most resource-hungry virtual machines use Pure Storage. A few hundred of the larger virtual machines using fewer IOPs are still hosted on the legacy HDD arrays.

NOT A SINGLE COMPLAINT WITH PURE STORAGE, AND 30X FASTER PROVISIONING

Since the installation, not a single storage performance complaint for clients on the Pure Storage Array has been received. This has slashed storage administration hours and freed up its technical staff to do more elsewhere. Storage uptime is now five nines, and it's not just the clients that have noticed.

"Our model is to offer our clients the best value—and not lock them in to long-term contracts," said Brendan Armstrong, Chief Technology Officer at Afrihost. "If we don't provide our clients with a superior valued service, they can leave us. That means we have to get it right. When deploying Pure Storage, we can cut the time needed to provision a VM from half an hour to less than a minute. We have performed software and hardware upgrades on our Pure Storage arrays during business hours with no loss of performance or interruption—something we couldn't do with our old hard disk arrays."

"Perhaps the best thing is the ease of management. We didn't need a user manual. Where our old storage was a mission to manage, we were using the storage within half an hour. We can monitor performance and capacity easily—we can get information from Pure Storage arrays in seconds. Traditional storage would take us minutes or hours."

Afrihost is also enjoying zero impact backups at any time on Pure Storage—before, backups had to be scheduled at specific times, and hit user performance.

Afrihost's transition to Flash Array has meant it has been able to reduce the IOPs capping for more demanding clients. The array runs at a steady 15,000 IOPs, regularly peaking at 35,000.

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IOPs bursts. With Pure Storage, Afrihost now needs only monitor capacity—the IOPs look after themselves.

"We can start concentrating on strategy now," said Armstrong. "Our storage team was totally focused on production and business issues, and now they can take a longer, uninterrupted view of what we need to do to perfect our disaster recovery plans."

Because of the stability of the platform, Afrihost has started looking at optimizing its backup and disaster recovery, something that wasn't possible when it used to be completely focused on production and maintaining availability.

As for the future, Afrihost is already planning its next Pure Storage purchase. As more virtual machines are switched over to the All FlashArray, data reduction ratios are increasing, as is the value per terabyte. The expectation is that further reductions in media costs over the next 12 months will see Afrihost moving further towards becoming an all-flash enterprise.



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