



Discovery Corporate IT achieves greater control, management and visibility of virtual storage infrastructure with deployment of Virtual SAN

CLIENT

Discovery Limited

INDUSTRY

Financial Services and Health Insurance

KEY CHALLENGES

Infrastructure dependencies in the company was affecting the stability of the VMware environment, Discovery also wanted more visibility and control of its storage environment as part of a three-year plan to reduce dependencies on third-party suppliers and costly disk arrays.

SOLUTION

Looking to VSAN the company began on a road that would provide it greater visibility of its virtualised environment as well as map the foundations for a new virtualisation footprint, that includes storage, in the business.

When Discovery's Corporate IT discovered that its infrastructure dependencies were affecting the stability of its VMware environment, it turned to VMware's Virtual SAN solution (VSAN) to alleviate these dependencies and better architect its virtualised environment.

Discovery is a shared value insurance company and authorised financial services provider, providing both employers and individual clients with Health, Life, Short-term insurance and Savings and Investment products. From its head office in Johannesburg South Africa, the company services more than 5.1 million global customers in South Africa, the UK, US, China, Singapore, and Australia.

In 2015 Discovery was named by Fortune magazine as one of the top 51 companies in Fortune's inaugural Change the World list, Discovery was placed 17th ahead of established brands like IBM, Nike, Unilever, and Starbucks. Most of the company's global IT operations are run from Johannesburg and the company is an active member of VMware Customer Technical Advisory Board (CTAB).

The Challenge

"After encountering a series of infrastructure outages that we identified were due to hardware instability, we embarked on a process to identify and find better technologies to help improve our physical and virtual infrastructure stack," states Johan Marais, Virtualisation Manager at Discovery.

"What we uncovered was that, when there was instability across the traditional server, storage or SAN environment our VMware ecosystem would simply not be available. When this happened we firstly had no control, and secondly it was difficult to determine the root cause of problems due to the complexity of the integrated environments managed within the respective silos," he adds.

The Solution

Discovery is a wall-to-wall virtualised VMware environment. In early 2015 Marais and his team began looking for a solution that would reduce the VMware environment's reliance on external hardware; provide visibility into the environment; reduce complexity as well as enable the company to deploy a more scalable infrastructure stack for its VMware environment and the applications dependant on it that would ultimately reduce Total Cost of Ownership (TCO).

"Our goal was to get away from third-party dependencies in the environment, so we began looking at a number of the market leaders in this area. While the technology fit was in many cases right, it didn't make sense for us to veer away from a VMware solution So we looked at VSAN as a solution."

To ascertain the viability of the technology in the business the team were asked to provide a three-year ROI roadmap where, if using VSAN, it could eventually replace all of its VMware based array infrastructure with VSAN.

Discovery then embarked on being part of the initial VSAN Beta testing, it

VMWARE CASE STUDY

BUSINESS BENEFITS

- Greater control of the infrastructure stack to manage its VMware environment
- Improved performance at the storage, virtualisation and application layer
- Dramatic simplification of the storage environment and improved visibility, management and automation
- The ability to better scale the storage infrastructure
- Flexibility in the choice of hardware for the storage environment
- Created a better understanding of existing workloads and visibility on how to better provision storage to meet these demands

VMWARE TECHNOLOGY

- VMware Virtual SAN – VSAN

completed a test VDI cluster for part of its Citrix environment. Based on a successful outcome, the company quickly rolled it into a production environment as it became commercially available. Today 50% of the head office environment has been migrated, and Discovery's US and UK operations are now 100% operational on VSAN. The South African environment will be migrated over a three-year period due to the size of the SAN footprint and the financial impact of changing equipment before the end of its lease period.

Business Benefits

"The VSAN platform has given us greater control of our infrastructure stack as well as improved management of the VMware environment. In addition, it has also provided greater performance and simplification of the SAN infrastructure, afforded us freedom when scaling the infrastructure as well as flexibility in our choice of hardware," states Marais.

The roll out was, according to Discovery, seamless from an integration point of view. Application performance and storage IO latency has been dramatically decreased and the company has been able to simplify the methodology used within vRealize Automation because it natively consumes the VSAN stack.

"VSAN has given us fantastic visibility into our storage IO patterns for every application and this management function now sits in the virtualisation team. What also makes a huge difference is that we are experiencing space savings because VSAN is thin provisioned; this assists us greatly in keeping the storage footprint smaller as well as reducing the unit cost of supplying a virtual server" says Marais.

The new VSAN infrastructures also allow Discovery to leverage off storage policy based management, giving priority to applications requiring higher workload, I/O and protection policies.

Virtualisation Learnings

According to Marais there are a number of learnings a VMware administrator can benefit from when moving storage into a virtualised environment, particularly around how storage is managed.

"With VSAN we now have visibility into key performance indicators and metrics

for storage. As virtualisation teams we need to take these learnings and fully understand them so that we can better deploy, use and manage a storage environment. Storage capacity planning now falls on our shoulders instead of being siloed in the storage team.

"We also need to embrace concepts like deduplication, compression and software-defined storage – all of which are foreign concepts to a VMware admin. How we consume, look after and manage these environments from end-to-end is a learning curve," adds Marais.

Marais also says that the way in which storage is now procured has also changed. In the past when an array was procured it was for the long term and there was incremental growth over time – with the new design afforded by VSAN, Discovery is able to do quarterly growth approximations on compute, storage and network because the platform scales horizontally. "This is a huge positive and it gives business big gains because you can shorten the time to provision the storage elements on VSAN".

He also cites that another key learning between the virtualisation and storage teams was to understand how they balance the renewal of arrays within the business. "When these come up for renewal we need to know how much we need to feed the environment – in the past we weren't necessarily aligned. You need to work closer with storage to define hardware refresh cycles. And then you also have to be closer to your hardware vendor's software stack, especially RAID controller firmware."

Features

"We pretty much use the entire stack, it has great features in health check capabilities which makes it easy to manage. We will be taking advantage of performance management in the web client and from an overall monitoring perspective there is native integration with vROPS giving us an overall view from a VSAN perspective."

Looking ahead

"Discovery is committed to the VSAN technology. What we have seen is that the VSAN roadmap is aggressive and feature rich, which is a benefit to us as a client. Coming down the line we will

be looking at making use of stretched clusters, all flash arrays and deduplication and compression will play a big part in reducing our footprint even further from a resource point of view. Over the course of the next two years Discovery will be VSAN only, where it makes sense for us – this equates to about 95% of our virtualisation footprint. We will continue to embrace the new features where needed – and carry on contributing to the evolution of the product.

“For us, embracing VSAN is a component of the Software-Defined Data Centre we enable – future considerations for us include Software-Defined Networking and automation. It gets us closer to a software-defined everything future and forms part of our vision to fully service Global infrastructure for the group.

“As a business we have to evolve and make IT more accessible to our customers. We intend to be innovative and bold by using use newer technologies, and stay relevant in the business we are in,” ends Marais.

