CASE STUDY: IT WORLDWIDE SERVICES

VMware hosting over iSCSI with **TrueNAS®**

"*FreeNAS is great, I really love the product. We had it running in the data center and that worked out really well. TrueNAS was a natural progression for our needs.*"

- Todd Lamonia
   President & CEO
   IT Worldwide Services

THE STORAGE CHALLENGE

IT Worldwide Services offers network design and hosting on VMware servers, with the aim of providing high performance and highly available storage to their clients. They also provide management services and technical support of VMware configurations. They were using a Buffalo Terastation, which worked for them for a while. However, it only had a limited number of drives, it could not be expanded and they weren't getting the performance they needed due to the low number of spinning disks. Their customers demanded speedy, highly available virtual machines and servers, and not being able to provide this would cause them to lose revenue.

IT Worldwide Services planned to invest in a new storage solution that would meet their customers' needs. They were familiar with FreeNAS, having deployed it on Dell servers in their data center. They looked at TrueNAS, from iXsystems, and saw it used the same web interface as FreeNAS. After talking to iXsystems, they were confident that TrueNAS would provide the High Availability (HA) support for the uptime and performance they needed.

"I had deployed FreeNAS in the DataCenter on some Dell R715 servers and really loved the simplicity of management. The web interface is nice and easy to use. We just didn't have enough throughput and needed something with High Availability to fit our service offering of no downtime. TrueNAS filled those needs."

- Todd Lamonia

"I have multiple clients who do all their work from a virtual desktop stored on TrueNAS. Using TrueNAS makes things easy to manage from a system admin perspective and our customers are very happy with the user experience they get by using TrueNAS."
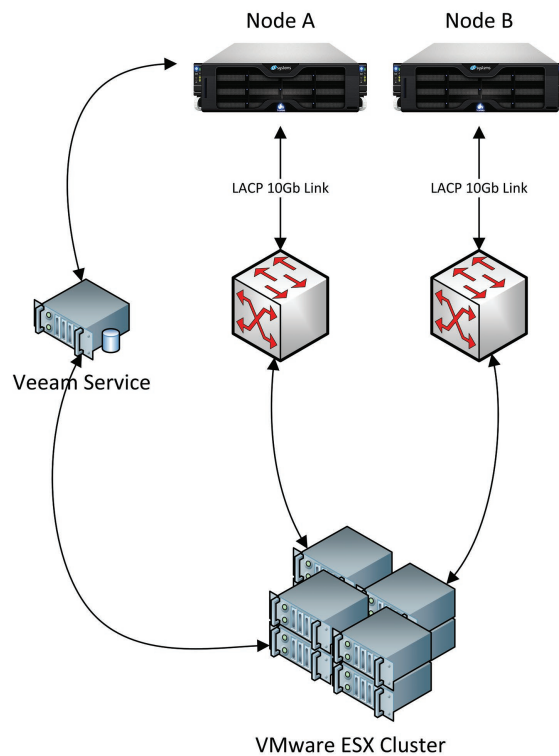
- Todd Lamonia

VMWARE HOSTING WITH TRUENAS

IT Worldwide Services chose TrueNAS due to a number of factors. Its modular high end hardware components, high speed read and write caching, the ability to scale storage painlessly, ease of management, cost per gigabyte, as well as the fact that it was built from a Unix Based operating system were all factors that made TrueNAS the right solution for their needs.

The TrueNAS solution they used had 14TB usable with dual controllers, 2 expansion shelves and 2 hot spare disks. They also ensured network redundancy with aggregated 2 x 10 GbE links connected to 2x10GbE Cisco Switches.

IT Worldwide Services had 31 virtual machines with a variety of Operating Systems including CentOS, Ubuntu, Windows Server 2003, Windows Server 2008 and Windows Server 2012 R2. They used VEEAM to backup snapshots & copies of VM files to another server, and used Virtual Desktop Infrastructure (VDI) for hosting client virtual desktops.

Node A   Node B

LACP 10Gb Link   LACP 10Gb Link

Veeam Service

VMware ESX Cluster

iX systems™

"When doing maintenance at 3am, every minute counts. And TrueNAS saves us a good number of them. Boot times and VM build times have been reduced by more than half. For one, our Windows 2012 R2 servers boot up in about 1 minute compared with 5 minutes with our previous hardware."

- Todd Lamonia

"One of the best things about our TrueNAS system is that I don't have to babysit or worry about it, it just runs."

- Todd Lamonia

IMPROVED PERFORMANCE AND RELIABILITY WITH TRUENAS HA

Since deploying their TrueNAS system, IT Worldwide services improved their performance on multiple fronts. Booting and rebooting times were more than twice as fast, minimizing downtime. Maintenance tasks were 75% shorter, and application loading times were two times better. Administrators had enjoyed significantly quicker Virtual Machine build times as well, freeing them up for other tasks. From improved build and boot times to applications loading faster, their customers enjoy a better user experience on their virtual machines.

In addition to substantial performance gains, TrueNAS has greatly reduced downtime. The controller High Availability means that if they have a failure, their system will automatically switch to the other controller without losing data. It also means that a failed controller can be serviced without interruption to the system. When you combine this with a modular architecture, redundant power supplies, hot spare disks, remote replication and link aggregation with network redundancy, TrueNAS provides peace of mind.

ADDITIONAL BENEFITS OF TRUENAS

Beyond performance and reliability, one of the major advantages of TrueNAS is the ability to scale storage. IT Worldwide Services will need to expand storage if their data growth keeps up at its current rate. With TrueNAS, they'll just need to add an expansion shelf to quickly and painlessly upgrade their storage.

Minimizing downtime and data loss is essential for IT Worldwide Services. With data growing at approximately 50% annually, meeting recovery objectives became difficult for native, roll-your-own and legacy tools, so they used a 3rd party backup product, VEEAM. The design of TrueNAS ensured that VEEAM could quickly backup their customer's VMs and data with no change to existing procedures. iXsystems provided 24/7 support for IT Worldwide Services. Their VMs must be available 24 hours a day, so this helps them eliminate the risk of VM downtime should any problems with TrueNAS occur.

"The Veeam backups are working great. I am using Veeam's Direct SAN Access transport mode which connects directly to the TrueNAS using iSCSI which improves the data transfer throughput and reduces the amount of time it takes to backup each VM significantly."

- Todd Lamonia

CONCLUSION

IT Worldwide Systems needed a solution that supported multiple servers and virtual machine instances. They needed to eliminate the risk of VM downtime in the case of a hardware failure. TrueNAS helped them eliminate storage risk and provided them with the power, stability and reliability required to meet their customers' expectations and provide a greater level of service to them. The simplicity of its interface allows for them to configure and manage their VMs with little headache. They found that maintenance was greatly reduced, support was improved and customers had a better user experience. TrueNAS was beneficial for IT Worldwide Services and their customers.

ABOUT IT WORLDWIDE SERVICES

IT Worldwide Services is a subsidiary of Intellifed Corporation which has provided IT and telecommunications services to the US Government since 2009. After rapid growth, they launched the brand of IT Worldwide Services in 2014, which offers advanced and innovative services and solutions in the private and public sector. They offer many services including network design, system administration, 24x7 technical support, .NET software development, virtual machine hosting and more. They are authorized resellers for many popular brands, such as Dell, Cisco, VMware, and others, offering technical expertise and support in addition to hardware and licensing.

ABOUT IXSYSTEMS

iXsystems is the industry leader in Open-Source-friendly enterprise servers and storage solutions. All of its products are assembled, tested, and shipped from company headquarters in Silicon Valley, and technical support is provided in-house by the same engineers that build the systems. Thousands of companies, universities, and U.S. Government departments have come to rely on iXsystems' customer-first commitment to excellence. iXsystems champions the cause of Open Source technology by dedicating extensive resources to several FreeBSD community projects: FreeNAS®, PC-BSD®, FreeBSD®, TrueOS®, and OpenZFS.