

CASE STUDY

US AIR FORCE MAKES VDI FLY WITH ASTUTE VISX STORAGE APPLIANCES



“Our existing storage systems simply could not handle VDI. Flash storage was the only answer and Astute was simply the most cost-effective approach.”

Project Manager, USAF

Overview of US Air Force Command

This US Air Force installation is located in the southeastern United States and is home to several key test, fighter and special operations wings of the US Air Force. It is involved with the complete life cycle of weapons system development from concept, development and testing.



IT Environment

With a mandate to implement a Virtual Desktop Infrastructure (VDI), the Command’s IT managers planned a phased approach to the project starting with their top 100 most critical users. The objective was to replace their existing desktop PCs and laptops using VMware View VDI. After doing a trial on their existing HP spinning disk storage system, they quickly learned that the legacy arrays were not able to meet the demands of the first 100 users, or scale to meet the response times required to support the full production deployment.

IT Challenges

The key challenge was to ensure users could quickly access mission critical data with increased performance levels. They needed a solution that could cost-effectively scale to support hundreds of persistent VDI users. The ability of the storage system to instantaneously respond to heavy user demand during boot-up and other peak demand activities was critical. The solution had to have extremely fast and reliable performance in responding to user demand. In addition, it needed to be scalable to meet the future needs of the Command. The Air Force also required that the product be simple and agile to deploy, highly scalable and seamlessly managed from VMware’s vCenter management console.

Solution Evaluation

In late 2012, the Air Force Command started researching new storage solutions that would support its demanding VDI environment. Its existing vendor, HP, proposed a solution comprised of both flash and spinning disk arrays that were nearly eight times the price of the Astute ViSX Networked Flash™. The performance of the HP solution had no independent benchmarks that validated its claimed ability to support hundreds of VDI users. Also evaluated were a number of other hybrid and all flash array solutions from several vendors including NetApp and EMC. None were able to deliver the combination of proven high performance under persistent VDI workloads and low-cost. Astute was the only solution that was able to meet the performance and scalability requirements at a solution price comparable to disk-based storage systems.

ViSX Deployment and Results

After rigorous testing against the Command's production workloads ViSX Networked Flash was deployed in the spring of 2013. It was configured for production use in less than 30 minutes by using the Astute VMware vCenter plug-in and was proving its performance capabilities within days. The end users were extremely pleased with the performance and the Command's IT management saw the real value by realizing their Return on Investment (ROI) in under a few weeks.

Summary

With the deployment of Astute Networks' ViSX Networked Flash to support their new VDI environment, all end user productivity concerns were eliminated. The storage infrastructure is now in place to support the hundreds of VDI users and capable of growing to thousands with the same predictable performance and superior user experience. The benefits of the ViSX solution include:

- Predictable accelerated VDI performance
- Increased user productivity and satisfaction
- Scalable storage infrastructure that can easily add capacity without affecting users
- Seamless integration with existing VMware vCenter Console for centralized management
- Up to 98% reduction across data center environmentals including: power, cooling, cabling

Once the VDI project was up and running, the IT Manager in charge of the Air Force Project concluded, *"Flash storage was the only answer to address VDI performance and Astute was simply the most cost-effective approach."*

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