

AvMed

X-IO delivers outstanding VDI user experience for AvMed, virtually eliminates support calls

business challenges

- The legacy storage performance limitations were affecting the VDI environment performance
- The new VDI environment was swamping AvMed's storage I/O capabilities
- Adding a new separate storage network to manage the VDI was too expensive and would take too long to install
- It was becoming complex and cumbersome to provision storage
- The support team was being swamped with support calls
- The storage performance started degrading at 80% utilization
- Login times for the organization were very slow, affecting user performance and satisfaction

solution

- 3 x HP DL580 G7 Servers with 4 x 6 CORE CPUs and 320GB RAM
 - Running VMware vSphere 5.1
 - Servers connected via Cisco 9148 Fibre Channel switches
- 2 x X-IO ISE 730 hybrid storage array

business benefits

- Adding the X-IO ISE immediately improved the performance issues in the VDI architecture without the need to heavily tune and tweak the hypervisor
- It took only three hours to install and train the IT team to run the X-IO solution
- Much easier for all of the IT staff to provision and manage the storage
- 92% improvement in login/boot performance
- Much smaller rack space required than existing storage
- Support calls during a week fell from as high as 50 to one



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Nelson Remy, IT Infrastructure Manager, AvMed

introduction

AvMed serves over 300,000 Floridians, with a superior network of doctors, specialists, and hospitals, with stellar service. AvMed is headquartered in Miami, Florida and the IT department is responsible for managing corporate systems for over 1,000 employees and a wide array of applications that keep the organization running with efficiency.

At AvMed, a finely tuned Virtual Desktop Infrastructure (VDI) environment that runs on vSphere 5.1 provides staff with critical training in their classrooms, and workers in the field are able to access business applications quickly and securely while keeping private data in the data center.

the challenge

As AvMed's business users saw the value in being able to access desktops from any device while keeping data secure, demand for virtual desktops skyrocketed. With more users being added to the system, the performance of the existing enterprise storage infrastructure was dramatically impacting users' daily routine.

"We carefully planned for robust growth in virtual desktops and acquired enterprise-grade storage technology to handle it. But we realized very quickly that VDI shattered even our best performance projections and completely overwhelmed the very expensive storage," said Nelson Remy, IT Infrastructure Manager, AvMed. *"Our only option if we stuck with our existing storage vendor was to purchase an entirely new 42 rack unit system to take the VDI load off the storage that we shared with our databases and other applications. The cost, time to deploy and rack, power and cooling requirements were simply too exorbitant."*

Storage performance started to degrade after AvMed crossed the 80% consumption threshold set by the vendor as more and more VDI users chewed up SAN space. *"We finally had to do something quickly when we were at 92% capacity on our storage, way past the 80% 'best practice' recommended by the vendor, and we were seeing it take up to two minutes to login to some of our most important VDI sessions," said Alex Salstein, Lead Infrastructure Engineer for AvMed. "Even worse, our Desktop Support Team was taking up to 50 support cases per week about sluggish performance, frozen desktops, dropped connections and long login delays."*

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The AvMed team realized it had some very tough options if it stuck with the existing enterprise storage. The controllers were getting old and could not handle any more expansion shelves, meaning AvMed would need to acquire a full rack of equipment with new controllers and multiple shelves of disk drives, all at a large cost to meet the unique I/O demands of the VDI environment. Even if it was prepared to pay the cost,

it would have taken too long to procure, install and configure the system for the rapidly growing VDI user base.

"Our existing enterprise storage was so complex and error prone to provision that I was the only one on our team that anyone trusted with it," said Scott Ferry, Sr. Unix Administrator, AvMed. "The storage required specialized expertise that the rest of the team just didn't have and that was not flexible enough for VDI."

the result

"Some of our most critical virtual desktops, which also drive the most performance demand, were taking up to two minutes from login to desktop presentation on our existing enterprise SAN. With X-IO, it takes 10 seconds," said Nelson Remy. "The learning curve on ISE is non-existent. In just 15 minutes, all of my staff knew how to provision storage. That's huge for us."

Remy and his team reported a dramatic turnaround in the VDI environment. Performance went from sluggish to stellar across the board. Virtual desktops saw such great performance it was impossible to tell a physical desktop from a virtual one.

But some of the best news came from the support team which was at the forefront of VDI, taking support calls from users before and after X-IO. *"We were handling 20 to 50 tickets per week about slow VDI performance from our training labs and our consultants in the field. We burned up so much time working these tickets. Since we moved to X-IO, we are down to ONE support ticket per week, and those are never related to the storage,"* said Giovanni Cortina, Support Manager, AvMed.

Good news travels fast at AvMed. Remy and his team were called in by the executive management to discuss the improvements in the VDI environment and asked what made the difference. Remy was able to report that not only were the performance improvements attributable to X-IO, but it brought the added benefit of a storage platform that his entire team could use with next to no learning curve. AvMed decided to build upon this success by investing in X-IO's ISE 200 Series performance storage on other mission critical applications to its business.