Case study

X-IO Delivers Huge Cost Savings to City of St. Petersburg as VDI Environment Expands

X-IO VDI support delivers decreased TCO and increased reliability

business benefits

- Eliminated the performance issues
- Available, scalable and flexible solution to support virtualization and growth requirements
- The business is underpinned by predictable and reliable storage
- Improved performance, operational efficiency and minimal management
- Five year warranty and competitive pricing delivers low total cost of ownership (TCO)

business challenges

- Operations were being hindered by failing storage solution
- Performance issues affecting virtualization plans
- Availability was a challenge
- Storage was not flexible or scalable

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"We have had zero down-time due to equipment failures or software problems. The ISE solutions have been flawless to put into place and are used continually. They offer predictable performance, which is a key advantage to our team as we look to manage the applications within our VDI environment. We don't need to worry about the X-IO boxes because they've been designed to be hands-free; this gives us peace of mind as we expand our VDI operations, even when at almost full capacity."

David McLean, Computer Operations Manager, City of St. Petersburg

introduction

With a population of almost 250,000 people, the City of St. Petersburg is the 5th largest city in Florida. Named after St. Petersburg in Russia, it's nicknamed "the Sunshine City" for its average of 361 days of sunshine each year and has a Guinness World Record for the most consecutive days of sunshine at 768 days.

the challenge

Running an entire city produces a vast amount of data and requires resilient, scalable, and available storage behind it. As a public entity, St. Petersburg is always looking for ways to make its budgets go further. When the city discovered it was spending almost $250,000 per year on replacing computers and IT systems, the IT team knew it was time for a change.

In an attempt to reduce costs and continue supporting its mission-critical applications, the city looked into the potential of a VDI environment to be shared across internal departments. With mission-critical database applications such as Microsoft SQL Server and GroupWise on the line, St. Petersburg needed an environment that would support growth and keep key operations running.

After performing comparative pilot tests, St. Petersburg selected VMware for its VDI environment and loaded 100 virtual machines (VMs) on a Dell blade chassis, using some of the SAN space on its EMC CX3-20 equipment. However, the IT team soon discovered that the disk I/O performance couldn't accommodate its expansion plans. St. Petersburg therefore began to look for a high-performance solution to address its demand for VDI capacity, while providing the scalability and uptime required for the applications and data of a busy and growing city.

the solution

Working with Eagle Datagistics, St. Petersburg selected X-IO's ISE products to support its VDI environment. The ISE is ideal for data-heavy applications such as SQL Server because it cost-effectively provides the high performance necessary for transactions, queries, analytics, and reporting.

Since 2011, St. Petersburg has installed four ISE storage systems. Three have been used exclusively for the VDI environment, running more than 1,000 desktop

solution

Servers:

- Dell PowerEdge M610 Blade Server, PowerEdge R720, PowerEdge M620 Blade Servers

Hypervisor:

- VMware vSphere version 5.5

VDI:

- VMware Horizon View 5.3

Operating System:

- Windows Server 2008
- Windows Server 2012
- Windows 7

Network Infrastructure:

- Brocade
- Extreme
- Cisco
- WAN
- LAN
- 8Gb Fibre Channel
- 10Gb Ethernet

Applications:

- GroupWise
- Microsoft SQL Server
- Oracle
- SunGard H-T-E Suite
- Public Safety Systems

Storage:

- ISE-1 (1)
- ISE 230 (2)
- ISE 230 for the Police department's non-VDI systems (1)

VMs across 30 different departments, including City Hall, the Fire Department, Legal, HR, Leisure Services, Purchasing, Water Resources and Police Headquarters. The other ISE 230 storage array is the primary storage for St. Petersburg's Police Public Safety systems, running more than 50 virtual servers with resource-intensive applications such as CAD, COM, and BI systems.

X-IO has provided a highly available solution with strong business-continuity capabilities. The city has two datacenter sites constantly mirroring each other to support the critical enterprise production systems at both locations. Thanks to X-IO's Active-Active Mirroring, ISE arrays can be paired to allow all write operations to be replicated before the operation is acknowledged. If an ISE becomes unavailable, all data is still accessible and transparent to the applications, with no agents, intervention or fail-over required.

the result

St. Petersburg is now benefiting from reduced login times to its VMs and no disruption to the virtual environment during peak times.

The X-IO arrays require minimal management as they are easily monitored and require very few updates. The ISE has been designed to repair itself, silently and invisibly, and run for five or more years with no service events. All of the ISE storage systems have provided outstanding performance, and the only service work required has been limited to firmware updates.

The city has estimated cost savings of 30 to 40 percent compared with other solutions. In fact, the ISE has outperformed more expensive systems while reducing operating costs associated with management, power, and datacenter footprint. The five-year warranty is another important differentiator for St. Petersburg, a public body always looking to get the most from its budgets.

Reliability and scalability were central to why the IT team chose X-IO. St. Petersburg has been able to maintain a finely tuned VDI environment—essential to running a growing and exciting city. As the city continues to develop and expand, X-IO will make it easy to add capacity when required, with little fuss or disruption. This capability has given the IT team peace of mind as it considers adding more VMs to its environment. The city currently has plans to add an ISE 240 array to its infrastructure for a new remote disaster-recovery datacenter site for Public Safety.

> ***"It's critical that the VDI environment provide our departments with access to the application they need quickly and securely. With X-IO, we have peace of mind that this will happen at any time, regardless of capacity, users, or workload."***
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> ***David McLean, Computer Operations Manager, City of St. Petersburg***

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