



MAGLITE® manufacturer modernizes mission-critical ERP system with HPE

Superdome X improves availability and performance while lowering costs

Objective

Migrate mission-critical ERP solution from AS/400 to x86 platform to support new Windows-based functionality without sacrificing performance and reliability

Approach

Modernize the entire mission-critical application environment with HPE Integrity Superdome X Servers and HPE 3PAR StoreServ 7200 Storage

IT Matters

- Increased performance by 45%
- Lowered licensing costs by 20%
- Reduced administration time by 50%
- Consolidated 100+ VMs on multiple physical servers to 57 VMs on a single Superdome X

Business Matters

- Gained 20 times better RAS for improved end-user experience
- Ensured continuous availability of mission-critical applications
- Increased applications responsiveness to improve productivity
- Supported application migration and ongoing growth with no additional IT staff



Unlocking the value of modern mission-critical applications

Founded more than 35 years ago by entrepreneur Anthony Maglica, Mag Instrument, Inc. is a uniquely American company. Manufactured in the United States, the company's MAGLITE® adjustable-beam machined aluminum flashlights are renowned for their iconic design, function, and durability.

Central to Mag's long-term success is running its business on a modern infrastructure that supports efficiency, productivity, and availability for mission-critical operations. At the core of the business is Infor XA, a leading enterprise resource planning (ERP) solution designed specifically for discrete manufacturing.

Mag relies on Infor XA for nearly every aspect of its manufacturing operations, from supply chain management and logistics to shipping, payroll, and financial reporting. Availability of Infor XA is paramount: Without it, order processing would be halted, goods would stop moving, and no products would ship. The financial ramifications and impact on reputation would be devastating.

For years Mag ran Infor XA (previously MAPICS) on IBM AS/400 systems—a traditional "green screen" solution delivered from a central mid-range server. However, while reliable, AS/400 and its OS/400 operating environment were obsolete technologies, and the latest graphical version of Infor XA required a Windows environment.

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— Eli Ramirez, Senior Programmer Analyst, Mag Instrument

To gain newest, most advanced ERP capabilities, Mag needed to migrate onto a modern x86 infrastructure that could assure the same levels of mission-critical availability and performance to which it was always accustomed. The company also had other mission-critical applications, including Microsoft SQL Server, Exchange, and SharePoint running in a rack of “pizza box” Windows servers. Ideally, the new infrastructure would accommodate all mission-critical applications on one platform.

Superdome X proves ideal replacement for IBM

Working closely with its trusted solutions provider, Becker Technologies, Mag evaluated offerings from IBM, Super Micro, and Hewlett Packard Enterprise. Ultimately, the company chose the HPE Integrity Superdome X Server.

Cody Becker, partner at Becker Technologies, explains, “We recommended Superdome X because there’s no other mission-critical solution on the market like it. With other x86 platforms you still need at least two boxes

to get the physical workload isolation and uptime Mag required. Superdome X with nPars provided everything in one box.”

Eli Ramirez, senior programmer analyst at Mag Instrument, adds, “The fact that HPE engineered a lot of the robust capabilities typically associated with UNIX into Superdome X is a real game changer.”

Integrated HPE solution delivers reliability for critical ERP

Becker Technologies architected and implemented a comprehensive infrastructure modernization solution for Mag that encompasses HPE Integrity Superdome X and HPE 3PAR StoreServ 7200 Storage. The integrated, standards-based HPE solution runs the company’s mission-critical ERP environment, as well as Microsoft Exchange, SharePoint, and a range of custom-developed SQL Server applications for engineering, job scheduling, tooling, bar coding, and other key functions.

The application environment is 100% virtualized, with VMware virtual machines (VMs) running in each of two nPars on Superdome X. This allows Mag to treat each nPar as a separate physical system within the same chassis for built-in continuous availability. End user computing is provided via Microsoft Windows Remote Desktop, with the exception of a few engineers who require physical PCs.

HPE 3PAR StoreServ complements the mission-critical Superdome X with all-flash performance and six-nines availability.

Becker remarks, "In a mission-critical environment like Mag's, reliability is key. That's why HPE 3PAR StoreServ was such a good fit. It predictively analyzes for failures, which is a great feature. And performance has been tremendous."

HPE backs the solution with HPE Proactive Care Advanced to continually help Mag optimize the solution and accelerate incident resolution when needed. Proactive Care Advanced provides an assigned Account Support Manager who partners with the company to understand its IT and business needs, and guide the team with personalized best practice advice.

More performance, fewer licenses

With Superdome X, Mag was able to consolidate more than 100 VMs on multiple physical servers down to just 57 VMs on a single Superdome X server, while boosting performance dramatically. Fewer machines enabled the company to reduce the number of operating system licenses, which is expected to lower licensing costs by 20%.

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With a higher core count and more memory than the previous physical environment, Superdome X also provided Mag with 45% higher performance along with the consolidation.

Ramirez notes, "We've seen a noticeable improvement in application responsiveness since moving to Superdome X. For example, someone pulling up the open job status in the tool room will get results in a fraction of the time it took before. Everything runs better now on the virtual desktops—services are more available and fully protected because they're running off the Superdome X, and it doesn't slow down. I'd never want to go back to the old style of PC desktops."

Case study

Mag Instrument, Inc.

Industry

Manufacturing

Customer at a glance

Application

Infor XA enterprise resource planning, Microsoft Exchange, Microsoft SharePoint, and a variety of custom Microsoft SQL Server applications

Hardware

- HPE Integrity Superdome X
- HPE 3PAR StoreServ 7200
- HPE 5900 Switch Series

Software

- Microsoft Windows Server 2012 R2
- Microsoft Remote Desktop
- VMware vSphere
- HPE Integrated Lights-Out (iLO) Advanced

Services

- HPE Proactive Care Advanced

Maintains 100% uptime

With critical business operations on the line, the high availability of Superdome X has also proven essential. In fact, in a 90-day look-back following deployment, Superdome X maintained 100% uptime. Overall, the server's reliability/availability/serviceability (RAS) has more than lived up to expectations.

"The RAS on Superdome X is absolutely 20 times better than the competition," Becker asserts. "Once we did the physical installation and joined the onboard administrator to the network, we were able to do the whole OS installation, switch configurations, set-up inside chassis—everything—remotely. It was a huge time savings."

Ramirez elaborates, "Because we could do so much remotely, we were able to do the migration without adding staff, and we got it done a lot faster than otherwise would have been possible."

System practically runs itself

When it comes to servicing the Superdome X, the IT staff can simply move VMs (using VMware vMotion) from one nPar to the other, perform any necessary maintenance, and move the VMs back with no impact on application performance or the user experience.

Becker points out, "In a traditional server environment, there's always a couple seconds where the app might freeze when moving a

VM. But vMotioning between nPars is so fast, the move is imperceptible to users."

Fast, zero-impact vMotioning between nPars also makes it very easy for Mag to scale the system as workloads grow. In fact, blades can be added to the Superdome X practically on the fly just by moving virtual hosts from one nPar to the other any back again.

"Ramping up capacity in a scale-out environment is difficult," says Becker. "You need to provision the physical server, update software to access those additional servers, and with more physical servers come more licensing, maintenance demands and costs. In a scale-up environment like Superdome X we can simply add blades and VMware will automatically distribute the workload over the additional blades."

The combination of remote administration and seamless movement of VMs between nPars also simplifies ongoing management of the Superdome X. Ramirez estimates his team spends 50% less time managing Superdome X compared to the previous infrastructure.

He concludes, "It's nice to sleep at night knowing everything will be fine in the morning. The Superdome X is so reliable with a lot of built-in intelligence, it practically runs itself."

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