



Perfect Health: OSIS Provides 100 Percent Uptime for Its Healthcare Clients with VMware

OSIS cannot tolerate downtime. Community health centers rely on OSIS to host their healthcare applications, and if those are unavailable, patient care will suffer. After struggling with outages for years on the Microsoft Hyper-V platform, OSIS migrated to VMware vSphere® with Operations Management™ and achieved 100 percent uptime of IT systems.

OSIS assists community health centers around the United States with technology solutions developed by NextGen Healthcare, a healthcare management application. It helps implement and support NextGen's electronic practice management and electronic health records systems, and provides advisory services and IT support customized to the demands of health centers. A nonprofit based in Cincinnati, OSIS serves 38 health centers in 17 states, empowering them to focus on patients, maximize technology investments, and ensure reporting compliance.

The Challenge

OSIS provides secure cloud hosting for NextGen, a practice-management and electronic health records application used by nonprofit community health centers. It builds environments around NextGen for each of its clients and maintains large terminal server farms and SQL clusters. It also supports third-party and ancillary applications that plug into the management system.

OSIS is constantly building new systems and expanding. It was using Microsoft Hyper-V, but that technology didn't scale well. "The bigger we got, the more issues we had," says Rob Frilling, the infrastructure team lead and senior virtualization engineer at OSIS. "We had three different Hyper-V clusters, and we had issues across all three—failures, outages, a lot of downtime caused by migration incidents, fail-over incidents, as well as things that were just unexplainable."

Hyper-V averaged one 15-minute outage per week and one to two extended outages per month, some lasting hours at a time and affecting hundreds of virtual machines for dozens of clients. This was a serious issue for OSIS's health center clients that require continuous application uptime to provide care for their patients.

"We also had bad experiences with Hyper-V support," Frilling says. "Practically my first day on the job, one of my first questions was, 'Why don't we have VMware for this?'"

The Solution

OSIS needed a more stable and scalable IT platform to support both its current IT operations and future growth. It looked at various solutions but ultimately decided on vSphere with Operations Management, in part because vSphere integrates well with the OSIS core infrastructure, which is all VMware. Frilling began the migration from Microsoft Hyper-V to vSphere in 2014. It took just six months to migrate 550 virtual machines.

INDUSTRY

Healthcare

LOCATION

Cincinnati, Ohio

KEY CHALLENGES

- Eliminate system failures, outages and downtime.
- Move from a reactive to proactive IT environment.
- Accommodate rapid growth.

SOLUTION

OSIS migrated from its error-plagued Microsoft Hyper-V platform to vSphere with Operations Management, which eliminated downtime at the infrastructure level, reduced the hardware footprint, and freed IT staff from mundane tasks of management, maintenance, and troubleshooting.

BUSINESS BENEFITS

- Reduced infrastructure downtime to zero.
- Made client setup faster and client support easier, leaving more time for strategic initiatives.
- Enabled IT staff to take quick action and right-size client environments as necessary.

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Infrastructure Team Lead and
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OSIS

VMWARE FOOTPRINT

- VMware vSphere with Operations Management
- VMware vRealize Operations Insight
 - vRealize Log Insight
 - vRealize Operations Advanced
- VMware Horizon® (with View)

APPLICATIONS VIRTUALIZED

- Microsoft Active Directory
- Microsoft Exchange
- Microsoft SQL Server
- Microsoft SharePoint
- Microsoft Remote Desktop Services

PLATFORM

- HP 3PAR StoreServ and EVA
- HP Virtual Connect, blades and chassis
- Brocade
- Cisco

PARTNER

- Logicalis

Since switching from Hyper-V to VMware, OSIS has had no planned or unplanned downtime at the infrastructure level. “I’ve also been able to decrease time spent on diagnostics and problem resolution,” Frilling says. “I no longer spend my days drilling down through Windows event logs. VMware reports an error or warning, and we act on it immediately, with little time wasted on troubleshooting.”

Once he’d stabilized the environment with VMware, Frilling’s next step was to transition from reactive to proactive monitoring. He upgraded to VMware vRealize® Operations Insight™ to extend intelligent operations-management capabilities to operating systems, physical servers, storage, and networking hardware.

The new unified management solution also takes advantage of a wide-ranging marketplace of extensions for third-party tools such as HP OneView. OSIS deployed the HP 3PAR StoreServ management pack, which provides standard and custom dashboards, reports, alerts, and remediation actions for their storage array—directly within the operations dashboard.

Additionally, OSIS deployed VMware vRealize Log Insight™, which is bundled with vRealize Operations Insight. This real-time log-management solution allows OSIS to correlate events across the IT environment with real-time monitoring, search and log analytics, a dashboard for stored queries, reports, and alerts.

“We had another logging product that did not give me the information I wanted,” Frilling says. “It was horrible for alerting and things like that. So I deployed vRealize Log Insight and pointed our entire VMware infrastructure to it and now I get all the information I need.”

Business Benefits

VMware has improved operations at all levels for OSIS. Where it once took many days to get a new client set up, it now takes one day. And, once clients are set up, they’re simpler to support. “Expanding anything from disk size to RAM and CPU on their virtual machines is easy,” Frilling says.

vSphere with Operations Management gives OSIS deeper insight into its virtual environments, so IT staff can quickly act to right-size clients’ environments as necessary through the operations dashboard. IT staff can anticipate when to add more hard drives, CPUs and memory to the systems that require them through the advanced capacity-planning capabilities of the platform.

“Moving to VMware has freed up a lot of time for the entire team,” Frilling says. “We don’t spend hours troubleshooting those miscellaneous problems that once came out of nowhere. With vSphere we’ve also been able to limit the number of systems we have to manage and that means less maintenance time spent on things like Windows patching.” Tasks that were arduous in the Hyper-V days, like standing up new hosts or deploying new customer environments, are now quickly completed, leaving more capacity to focus on strategic business initiatives.

OSIS has also reduced its hardware footprint by 25 percent. Despite growth over the past year, the switch to VMware allowed it to decommission eight BL460 Blades, with four more slated for retirement. The change boosted memory utilization on all virtual machines, which can now be oversubscribed on each host by 20 percent without performance impact.

“As for reliability, I can’t underscore that enough,” Frilling says. “I had a list on a whiteboard behind my desk of all the outages we had with Hyper-V—and I’m talking a lot of outages, whether it was a host, a cluster, a specific VM, a CSV attached to a Hyper-V cluster. The second we moved to VMware, that list stopped. I haven’t added anything to it.”

Looking Ahead

OSIS is now in the process of switching to VMware as the backbone for its entire virtual infrastructure, and Frilling is working to get OSIS anti-virus tools connected to the virtual infrastructure. His goal is to manage everything that's on his virtual machines with VMware vRealize software.

