



Mary Washington Healthcare Uses Private Cloud to Clarify Focus on Patient Care



Mary Washington Healthcare is a provider of healthcare services in Fredericksburg, Virginia made up of two hospitals, four emergency departments and over 60 healthcare facilities and wellness services.

Industry

Healthcare

VMware footprint

- VMware® Cloud Foundation®
- VMware Technical Account Services™

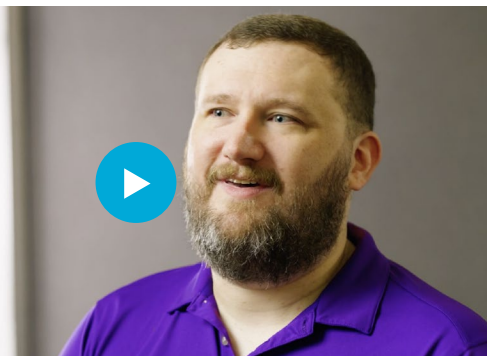
Mary Washington Healthcare is a regional healthcare provider in Fredericksburg, Virginia. As a nonprofit, the organization wants its investment in IT to improve patient care and ensure technology resources are used effectively. VMware Cloud Foundation is transforming how the healthcare organization's IT operations are managed, enabling impactful digital workflows and improving the experience for frontline medical teams. By accelerating the delivery of new, digital projects, Mary Washington Healthcare continues to improve patient care.

Providing care to those that need it most

The goal of Mary Washington Healthcare (MWHC) is to provide care to those in need, regardless of their ability to pay. As a nonprofit corporation, revenue is invested back into the organization through activities such as technology upgrades, developing new services and hiring new staff. MWHC aims to continuously improve its current services, while simultaneously adding new ones, implementing digital workflows to drive operational efficiencies and broaden its community reach.

“The more we learned about VMware Cloud Foundation, the more we saw it could address all our problems. It was the desired single pane-of-glass, and a route to new levels of automation. With VMware Cloud Foundation, we’ve been able to really start understanding the technology more. This has changed a lot, and now we can utilize it to the best of its ability.”

Michael Miller, Technical Architect, Mary Washington Healthcare



MWHC IMPROVES PATIENT CARE WITH VMWARE TECHNOLOGY

Strengthening a regional health network

MWHC has grown to become the healthcare ecosystem for the city of Fredericksburg, Virginia, spanning emergency rooms to wellness centers and 570 hospital beds.

The organization has acquired more than 50 local healthcare practices in the last 10 years, resulting in many elements needing to be connected.

To knit together its ecosystem of healthcare services, MWHC selected the EPIC electronic healthcare record system. This established a consistent system of patient records across the organization, accessible by medical, financial and management teams.

“EPIC took us from a piecemeal, Band-Aid approach to a single pane of glass,” says Michael Miller, technical architect, Mary Washington Healthcare. “It was a massive change. It also highlighted the fact our wider IT infrastructure was no longer fit for purpose.”

Rapid growth had left MWHC with an inefficient and fragmented IT infrastructure. There was no central visibility of IT operations and very little automation. Miller says it was likely, though difficult to prove, that aging and siloed IT was hampering performance and future capacity planning. In any organization, system downtime can be costly. In healthcare, it can directly impact critical, life-saving systems and procedures. For the EPIC deployment to be successful, various improvements were needed, including ensuring the IT infrastructure was modern, robust and flexible enough to support it.

Creating an IT infrastructure for today and tomorrow

Preparing to make what would be considered a generational decision, Miller and his team began to investigate the ways in which the current infrastructure was falling short. This became the wish-list for the ideal future state.

“This was not about the IT team. The focus was on how we could provide better care for patients. In a system that relies on digital applications, that means ensuring no unplanned downtime,” says Miller.

There were numerous shortfalls in how the legacy server, computing and storage was managed. The IT team was involved in too many manual tasks, it was impossible to accurately predict capacity requirements, there was no ability to chargeback users for IT resources, and little hope of addressing issues proactively.

“It was clear we needed a complete rip-and-replace,” Miller says. “It was time for an IT infrastructure that meets industry standards and follows modern best practices.”

The new approach to the management of IT infrastructure for MWHC is built on VMware Cloud Foundation. The organization has deployed a private cloud platform with a public cloud-like consumption model. Already a VMware vSphere and vSAN user, Miller says the adoption of VMware Cloud Foundation is confirmation of a deeper, more strategic engagement between MWHC and Broadcom.

“The more we learned about VMware Cloud Foundation, the more we saw it could address all our problems. It was the desired single pane-of-glass, and a route to new levels of automation. Within our environment we already had vSAN and we were planning in the future to start having different policies for different workloads. With VMware Cloud Foundation, which includes vSAN, we’ve been able to really start understanding it more. This has changed a lot, and now we can utilize it to the best of its ability.”

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Establishing visibility across IT operations

VMware Cloud Foundation has provided MWHC several breakthroughs in its IT infrastructure performance. MWHC is looking at the ability to micro-segment its network and strengthen security with VMware vDefend™. VMware Cloud Foundation Operations streamlines efficiency so medical teams now have greater agility in the deployment of new technology. For the first time, Miller and his team now have visibility across entire operations.

VMware Cloud Foundation Operations also comes with its own distinct feature set. Today, MWHC relies on operations management, including network visibility and logs, to create efficiencies and strengthen the resilience of its IT operations.

“VMware Cloud Foundation enables us to do more with less. We have the same team, but we’re able to cover so much more,” says Miller.

Reliable performance of medical technology improves patient outcomes

The result is less unplanned downtime and improved application performance. Care teams trust the IT infrastructure to support the latest medical technology. Also, fewer outages, where every minute lost costs tens of thousands of dollars, are undeniably essential for the balance sheet.

The impact of VMware Cloud Foundation is felt throughout the organization. The solutions provided help bring together previously siloed servers, network and application developer teams. Operational visibility allows MWHC to get ahead of IT issues before they impact staff and patients, reducing the strain on the help desk and shifting teams out of fire-fighting mode. “The entire mindset is now forward-facing,” says Miller.

“VMware Cloud Foundation Operations for networks is helping us build a map of the network. We’re now able to chart traffic flows and identify trends. If something is not trending as expected, if packet flows are not ideal, we’re taking action,” he explains. “Once we went live with VMware Cloud Foundation and the included NSX networking capability, we brought in the overlay network, which added to the performance of our VMs. I’ve noticed the traffic has been a lot better with that.”

VMware Cloud Foundation Operations has transformed capacity planning and management. Where previously the guiding concern was not to under-provision—inevitably leading to over-provisioning—today, MWHC can make accurate assessments of resources used. “We can now show our application analysts exactly how a resource is being used and how much it costs,” Miller says. “From a cost and resource perspective, we can be more certain in planning new applications.”

The capacity needed for one project, he adds, was reduced by 70 percent with insight from VMware Cloud Foundation Operations.

Operations improvements with better automation are happening across the entire organization. Password updates, patch compliance and change certificates—tasks that used to take days—are now completed in minutes.

Strengthening security and solidifying business resiliency

Miller acknowledges that the quest for greater efficiency and resiliency has no end point, and that there are further gains to be found within VMware Cloud Foundation. As such, MWHC is working with a VMware Technical Account Manager to find new opportunities for improvement.

Further micro-segmentation using NSX, vDefend Distributed Firewall and automating the build of new vCenter virtual machines with VMware Cloud Foundation Automation are next on Miller’s to-do list. “Hardening security and solidifying our business recovery are our priorities,” he says. “I’m also keen to see the VMware technology plans for how AI can be integrated within the VMware Cloud Foundation environment.”