Nol-Tec Systems Improves Customer, IT and Employee Experiences

Nol-Tec Systems is a leader in engineering bulk material handling and air pollution control mitigation systems for a diverse group of industries worldwide. Its employees rely on the company’s IT infrastructure and applications—including enterprise resource planning (ERP), programmable logic controller/human machine interface (PLC/HMI) systems and computer-aided design (CAD)—to help customers solve their unique challenges, meet regulations and improve their industrial processes. However, with aging systems requiring expensive hardware and storage upgrades, Nol-Tec began looking for new ways to enable its small IT team to reduce complexity and management requirements, and give traveling employees easy access to digital workspaces.

To provide a flexible and scalable foundation for growth, Nol-Tec upgraded its VMware vSphere environment and moved to VMware Cloud Foundation, leveraging its partnerships with VMware, Dell and CDW for convenience and value. With its new private cloud, the company gains centralized infrastructure management and enhanced operations visibility, while automated lifecycle management frees the IT team from tedious patching and upgrades. Nol-Tec also uses VMware Horizon and VMware Workspace ONE to deliver virtual desktops and manage applications on all end-user devices, providing employees with more consistent and secure work experiences.
A simplified foundation for cloud and mobility
Nol-Tec deployed VMware Cloud Foundation, an integrated solution that includes virtualized servers (vSphere), storage (VMware vSAN) and network micro-segmentation (VMware NSX Data Center). VMware vRealize Suite simplifies cloud management and monitoring, and VMware SDDC Manager provides robust deployment and lifecycle management capabilities. A VMware Validated Design™ helps ensure consistency and interoperability between components. Once Nol-Tec saw the benefits of VMware Cloud Foundation, it moved its entire production environment into the new private cloud, refreshing its host servers with Dell vSAN ReadyNodes procured through CDW, a VMware partner.

“When trying to figure out what to do with our aging infrastructure, VMware solutions fit our business challenges: vSphere, NSX, vSAN for storage, and then having vRealize Suite for visibility into our environment,” says Plank. “VMware Cloud Foundation brought all of those solutions together and was the right fit for our company.”

Shortly thereafter, Nol-Tec deployed Horizon virtual desktops through VMware Cloud Foundation, rolling out a greenfield virtual desktop infrastructure (VDI) environment in just two hours. Backed by NVIDIA GPUs and vSAN, the virtual desktops are powerful enough to run CAD software and other demanding engineering applications with very low latency. To provide employees with intelligence-driven digital workspaces, Nol-Tec also deployed Workspace ONE, using built-in integration with Dell endpoints to simplify BIOS and driver configurations.

“Workspace ONE allowed us to quickly bring our Windows 10 machines up to enterprise specifications through a robust set of profiles and application management tools,” says Harmelink. “We were able to enroll and secure our mobile fleet of Android and iOS devices within a matter of days.”

Adapting to a growing business and mobile workforce
Nol-Tec wanted the flexibility and scalability benefits of public cloud but was concerned about the potential costs it might incur as its business grew. At the same time, the costs and time associated with keeping aging systems running were steadily increasing. Security was also a concern as legacy network security solutions lacked the ability to segment east-west traffic and had to be managed in silos.

“We had an aging data center that we needed to modernize, and we wanted to bring together management into one area instead of having separate systems across our switching, compute and storage,” says Dustin Plank, IT manager at Nol-Tec Systems.

Nol-Tec was also experiencing challenges in securely managing a modern, mobile workforce and utilizing more efficient means of solving challenges. As an example, when engineers traveled to customer sites, they often relied on bringing stacks of paper drawings with them, which is impractical. Employees needed an easier way to view drawings while on site to effectively work with contractors and customers, and provide appropriate controls to protect its data and intellectual property.

“We wanted to move our trust paradigm from the device to the user, so we can provide the best user experience possible on our campus location while enforcing stricter, more secure protocols when employees travel,” says Tony Harmelink, endpoint administrator at Nol-Tec.
Improving manageability, performance and security

With VMware Cloud Foundation, Nol-Tec quickly modernized its infrastructure, achieving the same cloud native flexibility as much larger businesses while keeping costs under control. By providing guided templates and centralizing management and visibility across servers, storage and network, the VMware solution significantly reduces management time and improves overall consistency. When additional resources are required to support customers’ changing needs, Nol-Tec can deploy them immediately, using software-based micro-segmentation in NSX to isolate virtual machines for enhanced security.

“VMware Cloud Foundation gives us the ability to quickly adapt to the needs of the business,” says Nick Tempelis, systems engineer at Nol-Tec. “We can scale up and scale out. What used to take us weeks of planning and preparation and ordering, now it’s just there. Thanks to our all-flash vSAN nodes, we’ve been able to reduce latency and improve the customer experience.”

With Workspace ONE and Horizon, Nol-Tec transforms how its employees serve customers remotely and at customer plants and job sites. As long as they have an internet connection, Nol-Tec employees can now access enterprise resources, such as project files and CAD drawings, remotely and more securely from anywhere in the world. They can view and manipulate drawings in the field using their company-issued devices.

“The remote work and collaboration capabilities provided through VMware Workspace ONE and the Blast Extreme display protocol in Horizon 7 allow engineers in our home office to work with engineers in the field to make real-time adjustments to 3D models of the systems we’re deploying for customers,” says Harmelink.

Looking ahead

As Nol-Tec continues to modernize, it plans to use VMware Tanzu™ Kubernetes Grid™ Integrated Edition, a Kubernetes-based container solution, within a VMware Cloud Foundation environment to streamline container deployment. The company has also been using Workspace ONE to enable a bring-your-own-device (BYOD) program to allow employees to use their personal devices to access corporate resources while maintaining strong security.

“The benefits of VMware Cloud Foundation and Workspace ONE are critical for small and medium-sized businesses,” says Plank. “It allows you to free up time and still securely manage your data center and end-user devices. For us, that’s a huge advantage.”

Learn how @NolTecSystems modernized IT while controlling costs with #VMware solutions.