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BRINGING HOPE AND HEALING TO THE WORLD'S POOR

Mercy Ships charts a course to double its healthcare services by building a new ship-based hospital and two software-defined data centers with Dell EMC hyper-converged appliances

Nonprofit | United States

Business needs

Mercy Ships needed to design a data center for a new ship nearly four years before its maiden voyage, so it sought a cutting-edge IT platform that's fast and flexible enough to support diverse requirements well into the future, while minimizing space and complexity. The organization also needed to improve the efficiency of onshore operations.

Solutions at a glance

- Dell EMC Data Domain appliance
- Dell EMC Data Protection Software
- Dell EMC Isilon storage
- Dell EMC VxRail G410F, V470F and V570F hyper-converged infrastructure appliances
- VMware Horizon 7

Business results

- Ensures long-term viability of a ship-based data center
- Boosts staff efficiency and improves patient services
- Frees up more ship space and resources for medical personnel
- Increases IT simplicity and manageability
- Streamlines data protection and IT deployments
- Minimizes risk

"*We get the consolidated platforms we need from Dell EMC to optimize what we do and make a greater impact on the lives of the people we serve.*"

Jonathan Dyson
Director of Enterprise Infrastructure, Mercy Ships

Up to 5 billion people lack access to safe, affordable and timely surgical services. Mercy Ships, a global nonprofit organization, is helping to address this problem with mobile, ship-based hospitals that travel to the shores of impoverished countries. Since 1978, more than 2.71 million people have received free medical care from Mercy Ships, including lifesaving and life-changing operations.

To serve more people, Mercy Ships decided to add a second ship to its fleet—and improve the efficiency of its onshore operations in Garden Valley, Texas. The site's storage and servers couldn't keep up with applications' demand for resources. Jonathan Dyson, director of enterprise infrastructure at Mercy Ships, says, "At least once a day, we had issues with applications slowing down and freezing. And support was very difficult because, over the years, we've added many technologies from different vendors."

Even though the new vessel hasn't launched yet, builders needed the ship's data-center design right away to meet their requirements. For consistency, Mercy Ships would use a similar model in its onshore data center.

In addition to delivering excellent longevity, the new IT platform needed to be flexible enough to support hospital systems including medical records; diverse applications for managing safety and business functions such as logistics; and an onboard K–12 school, attended by the staff's children. Working with third-party Technologent, Mercy Ships evaluated offerings from Dell EMC, Nutanix and Cisco—and chose a seamless, software-defined solution from Dell EMC. "We wanted to consolidate vendors and have just a few partners who could help advance the vision of Mercy Ships," Dyson explains. "We knew that Dell EMC would provide the solution and support that would meet our needs well into the future. It's not a flash-in-the-pan newcomer."

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One consolidated platform

The new ship's data center includes 12 VxRail Appliances: G-Series models support virtual servers and storage, and V-Series models run VMware Horizon 7 virtual desktops. Mercy Ships also deployed four VxRail Appliances at its Texas site for development and testing. However, after seeing the new platform in action, Mercy Ships accelerated its onshore technology refresh, migrating the organization's core applications to the VxRail systems originally scoped for development and testing. "The migration process to our new VxRail platform was flawless," says Dyson. "There was no downtime, and it was astounding how fast it went."

To expand its development and test environment, the organization added six more VxRail Appliances. Mercy Ships also deployed Dell EMC Data Domain appliances with Data Protection Software and Dell EMC Isilon network-attached storage to automate data protection processes and reduce storage and network requirements by compressing data and eliminating duplication.

Shipshape operations—onboard and onshore

With the new platform, Mercy Ships boosted the efficiency of onshore operations and there's less risk of outages. "We have significantly improved our services now that we're using all-flash Dell EMC VxRail Appliances," says Dyson. "Applications are fast and reliable, and data is there when people need it."

Mercy Ships is also making better use of its resources. "The condensed approach we gain with a Dell EMC hyper-converged architecture saves us rack space and money," Dyson says. In a ship environment, space is at a premium, so it was vital for the system's footprint to be small while still capable of handling our complex needs. This also meant we didn't have to make expensive space modifications to our data center in Texas."

Because IT staff spend less time resolving issues and managing operations, the organization can keep the same number of IT personnel going forward—even though the new ship is 50 percent larger than the existing one. "The more people we can place on the front lines running the hospital and delivering patient care, the more efficient and effective we are as an organization," Dyson says. "We get the consolidated platforms we need from Dell EMC to optimize what we do and make a greater impact on the lives of the people we serve."

Learn more about Dell EMC hyper-converged solutions

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