

# US Marine Corps Global Command & Control System Deploys VDI on Tintri



US Marine Corp switches to Tintri VMstore systems to gain more performance for new virtual desktop initiative.

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## Industry

- United States Military

## Geography

- Oahu, Hawaii

## Virtualization environment

- VMware Horizon View Virtual Desktop Infrastructure
- Traditional storage: Dell, NetApp

## Key challenges

- Existing storage was reaching end of life and could not support new VDI environment

## Tintri solution

- Tintri VMstore™ systems

## Primary use case

- Tintri is being used for all virtualized workloads, including 100 virtual desktops, MS SQL databases, vCenter, connection broker, domain controllers, DNS, and IPAM management services

## Business benefits

- Decreased management overhead from 10 hours per month to 30 minutes
- Reduced deployment time from days to 8 minutes
- Enabled the launch of critical VDI service for deployed troops and headquarters personnel

## IT Challenges

The United States Marine Corps Global Command & Control System – Joint (GCCS-J) service offers vital connectivity to the systems used to plan, execute, and manage military operations for the Marines’ joint and multinational operations. GCCS-J fuses select C2 capabilities into a comprehensive, interoperable system by exchanging imagery, intelligence, status of forces, and planning information. Kyle Graves is a civilian IT project manager for the GCCS-J service. He and his team of three IT professionals manage the command and control systems for the Marine Corps’ Pacific region, covering the West Coast of the United States to Japan.

GCCS-J had been relying on three physical Dell 2950 servers and an aging NetApp FAS270 system running Windows XP. “When I started this job three years ago, everything was still physical,” explained Graves. “Our NetApp FAS system was reaching end of life. It was failing on a regular basis, and we couldn't buy replacement hard drives from NetApp any more. The Windows XP operating system was no longer supported, and the Department of Defense (DoD) had just issued a mandate that all divisions had to migrate to Windows 2008R2 servers. Since we knew we had to upgrade both our OS and storage environment, we decided it was the perfect time to virtualize all of our workloads and launch our new VDI project to support our ground troops.”

## Looking for New Storage

Graves and his team looked at storage solutions from NetApp, EMC, and Tintri. “We started by evaluating the NetApp systems, since NetApp has always had a huge presence within the DoD,” Graves explained. “But Tintri had a much better solution for our needs. Tintri’s hybrid flash storage provided the higher performance we needed for VDI, and its dedupe and compression stats were beyond impressive. The logical to physical storage that Tintri offers for the price point is unmatched in the industry. That’s why we decided to go with Tintri.”

“Tintri is a premier technology-based company that is offering an excellent product at a great price point. It was a great choice of platform for our VDI field deployment.”

**Kyle Graves**, Project Manager/GCCS-J Engineer

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## Easy Deployment

The US Marine Corps purchased two Tintri T820 systems, one for all virtual workloads at headquarters, and a second system offsite for disaster recovery. Graves and his team deployed the Tintri systems at the GCCS-J headquarters on Oahu.

“We saw a demo of Tintri at a tradeshow and were quite impressed,” said Graves. “We also liked the fact that Tintri works natively with VMware, which is the basis of all of our virtual infrastructure. Since Tintri doesn't use iSCSI, the deployment was extremely simple. I had the first Tintri system up and running in under eight minutes. That was amazing since it used to take 5-7 day to deploy and STIG the Dell or NetApp systems. Our SQL databases, vCenter, connection broker, domain controllers, DNS, and IPAM management service are now virtualized, and everything resides on the same Tintri system.”

## Launching VDI on Tintri

The Tintri T820 enabled the launch of the Marine Corps new VDI deployment. “We were the first group within the Marine Corps to deploy VDI in a production level environment,” noted Graves. “We have VDI users in Japan and California running off the storage here at headquarters. We now have 100 virtual desktops that are used by government civilians, contractors, and active duty Marines. We use them here at our headquarters, and I just put one in Yuma a few weeks ago for the Marines Aircraft Group (MAG). With Tintri running our VDI environment, our troops can pull their entire desktops up quickly from wherever they are. That's pretty impressive, since storage is generally the “bottleneck” with most VDI deployments.”

## Simpler Management

“Management and patching on NetApp involved a very convoluted and time-intensive processes, since we didn't purchase Web licenses for the FAS 270s,” explained Graves. “NetApp offers that now with a centralized management console, but ours was only a command-line interface. It used to take hours to take down the hard drive and rebuild something on NetApp. The Tintri systems can easily be managed from the Web and vCenter. We now spend just half an hour a month managing Tintri, versus 10 hours a month on NetApp. To be honest, I never need to touch the Tintri unless there's an update or a patch I need to send.”

## Better Performance and Great Compression Ratios

“With Tintri, storage is never the bottleneck for us,” said Graves. “I don't have to worry about the storage anymore. We haven't had any downtime at all since moving to Tintri. The controllers fix themselves if anything happens. The fault tolerance resets itself, it's doing what it's supposed to do. Plus, Tintri's de-dupe and compression results are also great.”

## Future Plans

The Tintri systems are working so well that the Marines just issued a purchase order for 16 additional units. “The VDI deployment wouldn't have happened without the Tintri systems,” concluded Graves. “Tintri is a premier technology-based company that is offering an excellent product at a great price point. It was a great choice of platform for our virtual deployments.”

