



VSFCD TRANSFORMS SECURITY AND DELIVERS DIGITAL WORKSPACE WITH VMWARE



INDUSTRY
LOCAL GOVERNMENT

LOCATION
VALLEJO, CA

KEY CHALLENGES

- Run critical water and sewer IT infrastructure 24/7 with a small staff
- Enable employees to access their own desktop from any endpoint
- Secure critical infrastructure and access across all endpoints

SOLUTION

VMware NSX virtualizes the district's network, improving security and efficiency while virtual desktops provisioned through Horizon allow for anytime, anywhere access to applications and information across endpoint devices. Finally, AirWatch manages the district's fleet of mobile devices while protecting sensitive information across applications.

BUSINESS BENEFITS

- Delivered security and flexibility from the endpoint device to the network
- Enabled employees to securely access full desktops and applications anytime, anywhere and on any device
- Maintained continuity of operations and achieved 99.99% uptime

The Vallejo Sanitation and Flood Control District (VSFCD) chose VMware® technologies to keep its water treatment and control operations securely running 24/7. VSFCD uses the VMware NSX® network virtualization platform to bring agility and enhanced security to its network infrastructure while VMware Horizon® provides virtual desktops and a platform for anytime, anywhere access to critical data and applications for employees. VMware AirWatch® provides mobile device management and security for workers accessing information on mobile devices in the field. Together, this suite of technologies secures application infrastructure and endpoints for a modern digital workspace.

The Vallejo Sanitation and Flood Control District (VSFCD) is an independent district created by the state of California in 1952 to collect and treat wastewater, and protect the Vallejo community from flooding. VSFCD provides wastewater collection, treatment and disposal as well as storm water transmission and pollution control services to customers within its 36-square-mile service area. Known for technical innovation, VSFCD has won national and state awards for its services, including Wastewater Plant of the Year and Safety Plant of the Year from the California Water Environment Association.

The Challenge

Waste disposal and water treatment are perhaps the most important public services that no one likes to think about. Yet in the Vallejo area and around the world, these critical systems are managed by computers, making the safety of their data just as important as the safety of their water. With hacking and data breaches constantly in the news, anyone with a network has to remain vigilant. "We are listed as critical infrastructure," said Jason Kaduk, IT Director at VSFCD. "And these days you have to have security. If you have an IP address, you're a part of the world. There's always somebody that's trying to find your Social Security numbers, your credit cards, your facility, your controls."

At its primary water treatment facility, safety and health are paramount. "The district here is very important to the environment and to the health of the community," said Frank Silvera, IT & Electrical Department Superintendent for VSFCD. "Our primary goal is to keep our wastewater treatment plant running twenty-four hours a day, seven days a week, all year long without any shutdown."

"I can actually manage my entire network in the palm of my hand and have my organization online 24 hours a day, 365 days a year. That is the power that VMware gives me."

JASON KADUK
IT DIRECTOR
VALLEJO SANITATION AND
FLOOD CONTROL DISTRICT

VMWARE FOOTPRINT

- VMware AirWatch
- VMware Horizon
- VMware NSX

The Solution

"VMware is probably our biggest solution at the district," said Silvera. "It's allowed us to maintain our network with minimal staff. Our operations staff is able to run the plant from anywhere in the plant – they don't have to sit behind a computer. VMware NSX secures application infrastructure for VSFCDD through micro-segmentation. If a threat gets inside the network, NSX blocks any east-west movement to other servers, reducing the attack surface and keeping the threat isolated.

"VMware NSX is providing something that hasn't really been seen before in the networking world," said Terry Chatman, Information Systems Specialist. "We're able to set up micro-segmentation on the network to provide enhanced security, set up groups and policies based on virtualized context, and configuration is way easier. VMware allows us to deploy desktops for new users and different configurations that wouldn't be possible with physical machines. We can easily manage our whole network."

VSFCDD also uses VMware partner Palo Alto Networks for more advanced threat and malware prevention. Together, VMware NSX and Palo Alto Networks provide next-generation security services to the software-defined data center. "Security is our number one priority," said Kaduk. Using Palo Alto Networks "allows us to do some really deep inspection layers so we can offload our SSL and say, hey, Palo Alto, look for these virus signatures."

VSFCDD uses VMware AirWatch to manage a fleet of iPads and iPhones that field and office workers use to do business. "AirWatch has been great as far as being able to manage our devices in the field and also keep things secure. With AirWatch we're able to push out profiles to the devices and keep track of our assets in the field," said Chatman. If a worker loses their mobile device, the IT team can quickly provision a new device with the same applications, security and network profiles.

When workers need maps of property lines, pipes or other infrastructure in the field, they use VMware AirWatch Content Locker™ to push updated and detailed maps to Internet-connected mobile devices as well as offline versions of maps if there is no signal, saving travel time back to the office. Content Locker ensures that only authorized users can access the maps, keeping sensitive information secure.

VMware Horizon allows VSFCDD to provision virtual desktops and save money on hardware replacement and upgrades. Virtualization keeps apps, desktops and data secure in the data center and off the endpoint. With desktop pools, employees can use any endpoint to log into their own desktop. Chatman said added that when the district upgraded all its machines to Windows 7 several years ago, they simply set up a virtual machine with Windows 7 and cloned desktops for all their users. "Horizon made that very easy. The only thing we had to do was copy the users' settings. Most people can't even tell they're running a virtual machine."

Business Results & Benefits

VMware is helping VSFCDD achieve new levels of operational efficiency, field productivity and security—saving time, costs and power. Replacing traditional PCs with lower-power devices running virtual desktops saves energy which is important to a county committed to sustainable operations.

Silvera noted the importance of keeping costs low. “Our customers are the rate payers, and we want to continue to provide quality services to them as cost effectively as possible.” VSFCD’s VMware solutions have eased the district’s IT workload, enabling them to run their systems 24/7 with only two administrators. “Last year we had 99.992% uptime,” said Kaduk. “VMware is solid. It’s definitely instrumental to our success.”

Kaduk noted that what used to take two weeks now takes ten minutes using Horizon. For a new user, for example, “We had to purchase the system, wait for it to show up, assemble it, install the operating system, patch it, and update it. Now if someone needs a system or if they need another desktop we can get ready to go in ten minutes — if it takes that long. That really empowers us to deliver on the fly what the organization needs, when they want it, any time.”

The combination of AirWatch, Horizon and NSX enables VSFCD to deliver secure digital workspaces—extending from the endpoint to the data center—to its employees anytime and anywhere. “Our mobile devices are encrypted. When they connect through Horizon and RDSH, that allows us to keep data onsite in our facility. With VMware NSX we can tie that right in through the AirWatch client itself. Now our staff just opens an app and the app works in the background with AirWatch and NSX and creates a secure tunnel automatically. It really empowers the user to get in, get out and be done with what they need.” shared Chatman. “VMware is great because AirWatch provides our mobile device management; NSX controls access in our network and to our network; and Horizon, provides the platform for our employees to get onto the desktop from anywhere they are. They all work well together.”

Looking Ahead

VSFCD plans to continue transforming security with VMware by expanding its footprint. Kaduk and his colleagues are looking forward to a future where virtualization continues to provide a high degree of agility, security and management. Said Kaduk, “When I’m talking to someone about VMware NSX and what it can do for them – a lot of people want to hold onto hardware. They say to me, ‘This is my load balancer, this is how everything works!’ And I tell them, VMware NSX takes a lot of that out. You’re virtualizing it. You’re saving power and rack space, all those pieces that go along with having physical boxes. VMware NSX allows you to do so many things that you couldn’t ever do in the hardware world.”

