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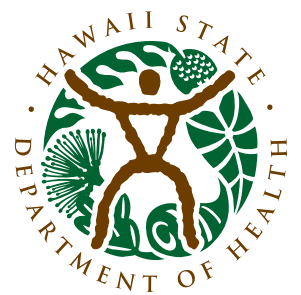

CASE STUDY

Hawaii Department of Health Cures VM Backup and DR Woes with Veeam and DXi

Faced with growing data and a major transition to VMware, the Hawaii State Department of Health's Disease Outbreak Control Division (DOCD) found itself needing to strengthen its battle to protect and retain its critical data. The cure combined DXi® appliances with Veeam software for backup and DR protection—and included a new archive function, too.

FEATURED PRODUCTS

DXi-Series Deduplication

"The DXi systems and their replication support Veeam just as well as they did Backup Exec and they make it easy to use the same appliance for different apps."

Steve Sakamoto
Sr. Data Processing Systems Analyst, DOCD

> **"** We set up one DXi partition as a NAS share and just moved the old files over to it as an archive. It got them off the filers, we didn't have to manage them—or back them up anymore—but they were there for us to access whenever we needed... **"**
>
> **Steve Sakamoto** - Sr. Data Processing Systems Analyst, DOCD

SOLUTION OVERVIEW

- DXi6700 deduplication appliance at main data center
- DXi4700 deduplication replication target at remote site
- Veeam Backup Software for VMware

KEY BENEFITS

- Backup to DXi disk shortens backup window to support growing data sets
- Deduplication reduces disk and bandwidth needs by more than 95%, providing 12-month retention on disk and replication over WAN
- Automated replication provides daily data protection and extended DR on disk, eliminating need for managing removable media
- DXi partition capability and multiple interfaces let IT department support both Veeam and Backup Exec with a single appliance
- DXi provides capacity-on-demand for scalability as data increases in the future
- DXi NAS interface supports archive function

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The State of Hawaii's Disease Outbreak Control Division (DOCD), part of the State's Department of Health, monitors infectious diseases in the state, investigates their sources, and works to control them and prevent their spread. Because Hawaii is a leading tourist destination centrally located between Asia and the Americas, the DOCD's role in identifying diseases spread by travelers is central to protecting public health not only in the state but also in the rest of the world. That makes the data that the DOCD collects extremely important, and protecting it is a responsibility to which its IT staff gives the highest priority.

"Years ago, we protected our data exclusively using tape," explains Steve Sakamoto, DOCD Sr. Data Processing Systems Analyst, "but added deduplication appliances to get disk backup speeds when our backup window started to stretch into the next work day. We started with an early DXi model from Quantum and it worked so well that we moved to the next-generation product. Backup and recovery now came from the DXi, but we still used Backup Exec to create tapes that we moved off-site for DR. We moved tape creation out of the backup window, but we wanted to see if we could reduce the admin time and the cost of managing all that media."

LOOKING FOR ALTERNATIVE, AUTOMATED DR SOLUTION

The DOCD team went back to Quantum and the Technology Integration Group, a local reseller and integrator with a long history of working both with the Division and with Quantum solutions. They looked to see if replication of DOCD's roughly 4.5TB of daily backup data was feasible and whether they could meet the department's retention requirements using DXi disk alone. The answer was yes on both counts.

"We deal with important data—disease surveillance and immunization databases, some email, and various studies—but we don't store any patient records, so our backup

retention requirement is normally limited to twelve months," Sakamoto says. "The great dedupe results that the DXi gave us—over a 95% reduction—meant that we ought to be able to keep data on disk in two locations for that long and stay within our budget. The high dedupe rate also meant that we should be able to replicate daily backups over our WAN."

SECOND DXi PROVIDES THE SOLUTION

The team decided to purchase a DXi4700 and use it as a replication target at a second, remote location. The team brought the new unit to the data center in Honolulu for initial configuration and to do the initial copying of the backup data over a local network.

"The roll-out was incredibly efficient," Sakamoto explains. "The biggest job—or the one that took the longest—was copying the backup data set to the new DXi. Once that was done, we moved the new unit to the remote site and synched it, and at that point we started doing daily replication of the whole backup over the WAN. The system is so efficient that it doesn't impact any of our normal network traffic.

"At the same time, Quantum did a great job in training our team to help them understand how the system worked and how to get the most out of replication. It really helped us, and it made the transition easy. Now, we can take care of all our backup and DR on these two DXi systems.

It's fast and we spend zero time managing DR. They both also give us really easy scalability so we know we'll be able to add capacity when our data set gets bigger in the future."

VEEAM AND DXi
MAKE PROTECTING VMs EASY

The change of DR strategies at DOCD was made more complex because it happened at the same time that the IT team dramatically increased its use of VMware virtualization and started a major transition in backup software.

"Just before we made the decision to increase our use of the DXi appliances, we went through a huge increase in the percentage of servers that we virtualized," Sakamoto says. "And as part of the process, we also added a new backup software—Veeam—for VMware backup.

"Looking back on it, we did make several big changes within a short period of time, but it all worked out perfectly. The DXi systems and their replication support Veeam just as well as they did Backup Exec and they make it easy to use the same appliance for different apps. The DXi partition feature was especially important. It means we can present the DXi as a VTL to software that wants to see a tape library and as a NAS share to software that wants to write to that interface. It lets us use both types of applications as long as we want to with the same DXi—and both use the replication for DR."

"...Quantum did a great job in training our team to help them understand how the system worked and how to get the most out of replication. It really helped us, and it made the transition easy. Now, we can take care of all our backup and DR on these two DXi systems. It's fast and we spend zero time managing DR. They both also give us really easy scalability so we know we'll be able to add capacity when our data set gets bigger in the future."

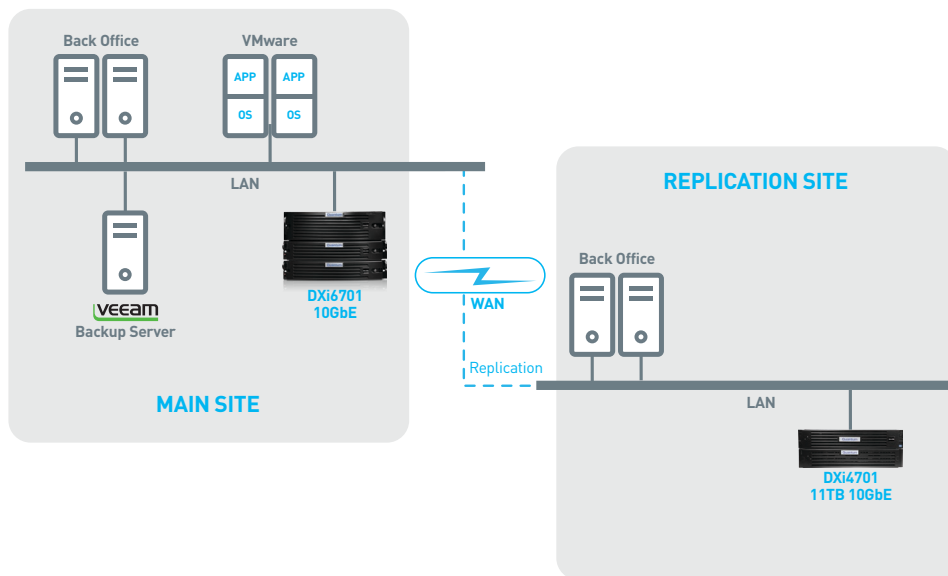**Steve Sakamoto**
Sr. Data Processing Systems Analyst, DOCD

ADDING ARCHIVE TO BACKUP

Being able to present part of the DXi capacity as a NAS share opened up another use for the system at DOCD as well.

"We had a growing problem of where to store old files that were important to us but that were no longer being actively worked," Sakamoto adds. "They were filling up our filers—which was pretty expensive storage—and we kept having to back them up. We realized that we could use the DXi to solve that problem. We set up one DXi partition as a NAS share and just moved the old files over to it as an archive. It got them off the filers, we didn't have to manage them—or back them up anymore—but they were there for us to access whenever we needed to re-activate them and we could even have a second off-site if we wanted. So our DXi backup system also gives us a really important archive function."

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