NetApp®

Success Story

King County: Secure, Taxpayer-Friendly Data Protection in the Cloud

King County

Protecting millions of records

Imagine how many agencies it takes to run a county government that spans over 2,307 square miles, provides hundreds of services to over two million residents, and is one of the fastest growing counties in the United States. Now consider the documentation collected, processed, and digitized by such agencies—everything from licenses and deeds to police, court, and health records.

For King County, a major hub of business and culture in Washington state, protecting data growing by 50% a year with on-premises purpose-built appliances (PBBAs) and tape had become challenging and costly. "We needed a modern approach," says Bob Micielli, senior enterprise technology manager at King County. "We wanted to simplify backup and recovery, and like many with conservative budgets and growing needs, we were interested in leveraging the efficiencies of the public cloud."

The Challenge
Unsustainable tape-based backup
Rising backup demands across 17 agencies required 2.5 FTEs who supported a 24/7, six-step process hindered by tape jams, robot arm calibration issues, and drive failures. Almost 10% of the 790 backup jobs required daily staff attention. Missed backup windows and slow restorations were also beginning to affect county employees' ability to serve the public. Because the same machines were used for both tape backup and restoration, only one process could run at a time, causing delays on both sides.

"Our data protection infrastructure was costly, unreliable, and at full capacity," says Micielli. "We could either invest in a $1.1 million infrastructure refresh or move to a more affordable and flexible cloud-based backup solution."

The Solution
Flexible, efficient, and secure
After King County investigated and compared other cloud-based backup offerings,

NetApp AltaVault cloud-integrated storage appliances were selected as the top choice. Not only were they 70% less expensive to deploy than upgrading existing equipment, but they also supported seamless integration with AWS and the backup software the IT team was already using.

With support from NetApp partner Ednetics, two AltaVault AVA400 appliances were up and running within hours. These appliances, in conjunction with Veeam software, now enable the IT team to back up most of the county's data infrastructure, including 700 VMware virtual machines. And with inline deduplication and compression, AltaVault appliances speed data transfer to the cloud while reducing the amount of data the county sends there by a ratio of 12 to 1. Data is also protected in flight and at rest using AES 256-bit encryption and TLS, so everything from criminal to health records remains secure.

Business Benefits
Easy, enterprise-class backup and recovery
With an AltaVault cloud-integrated storage solution, the IT team can quickly and securely back up most of the county business to the AWS cloud. This includes county files that must comply with regulations such as those related to Criminal Justice Information Services (CJIS) and the Health Insurance Portability and Accountability Act (HIPAA). Local key encryption management and cloud-based storage enable King County to further comply with both internal and external data protection mandates, including a 50-mile off-site storage requirement.

Because AltaVault works with existing Veeam backup software, the IT team is able to use familiar tools for protecting

and restoring data, which has made the transition to cloud-based backup even easier. Since deployment, the solution has enabled the county to affordably store almost 500TB of backup data in the AWS cloud. Incremental nightly backups of up to 20TB also now fit within a 12-hour window. That's half the time it used to take for tape backup.

Additionally, the new solution is much simpler to manage, and the county is able to reduce time spent on backups by 80%. Valuable staff who used to change tapes all day can now work on proactive monitoring and management or deploying new applications.

Ready and reliable access
Recovery, when needed, happens much more quickly as well, backed by AltaVault on-premises cache and AWS S3 cloud-based storage. Together they support redundant, scalable, 30-day backup repositories where everything—from an employee's lost file to a resident's pet licensing record to a departmental file server—can be quickly retrieved and restored if the data is lost. Says Micielli, "98% of restoration requests happen within the first 30 days of the data being backed up, so we wanted that recovery to be immediate."

More efficiency, less expense
Finding new ways to use the county's AltaVault appliances, the IT team recently began leveraging them for long-term cold storage. Previously, the Assessor's Office archived old files using portable hard drives that it shipped off site. These were hard to track and slow to retrieve. Today, the office simply drags and drops files to a CIFS share on an AltaVault appliance, which provides an efficient, enterprise-based archive solution that looks and acts just like a local drive.

With its AltaVault and AWS backup solution, King County is not only keeping records safe and accessible, it's also conserving money. In addition to avoiding more than $1.0 million infrastructure refresh and licensing costs, approximately $124,000 a year in tape, transportation, and off-site storage costs is no longer necessary. Savings are further magnified by the new solution's deduplication and compression capabilities and competitively priced AWS storage, resulting in an additional $300,000 saved annually.

"We now have an enterprise-class data protection and recovery solution that helps us to provide more affordable services to our residents and protect their data," concludes Micielli.

SOLUTION COMPONENTS

NetApp Products
NetApp AltaVault cloud-integrated storage

Third-Party Products
Veeam Backup & Replication

Protocols
Fibre Channel

Partners
Amazon Web Services, Inc.
www.aws.amazon.com

Ednetics Inc.
www.ednetics.com

Veeam Software
www.veeam.com

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