

SUCCESS STORY
PUBLIC Sector

## INTERNATIONAL DEVELOPMENT AGENCY PROBLEM SOLVED

Meeting both mission and mandate requirements, a Federal international development agency accelerated their migration to the cloud with NetApp Cloud Volumes ONTAP, driving efficiencies and measurable cost-savings.

# Cloud Migration Using the Easy Button

Cloud migration is an obvious path for most businesses today, but that was not entirely the case five years ago. In the wake of a fresh batch of Federal regulations, many agencies scrambled to close data centers and struggled to better understand how to integrate cloud computing into their business models.

For one international development agency, the process of cloud migration began with a well-designed Enterprise Architecture (EA), which allowed it to slowly ease into the cloud while complying with Federal mandates.

So how did this agency, supporting several thousand employees worldwide, hit its cost savings and optimization targets? The blueprint was in their EA strategy, but IT consolidation played a critical role, as well as the Agency's implementation of a Cloud First computing model.

After evaluating possibilities and crunching the numbers, the agency determined that the cloud was an irresistible proposition.

By their own estimates, it could save them somewhere between 35 percent and 40 percent on capital expenditures.

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#### **FIRST TO GO?**

Data centers. Consolidation into a single co-lo (a colocation, or shared data center) enabled staff to better evaluate systems and business processes, monitor and manage the IT infrastructure effectively. This led to early adoption of Software-As-A-Service (SaaS) offerings covering e-mail and office applications. Now the numbers were starting to justify the big move.

Nobody expected the transition to be simple. Maintaining the mission around-the-clock through the migration was the first priority. Federal regulations that govern the transition are complex, and cloud skills in the existing IT workforce were limited. Still, within a matter of months, the bulk of the work was done.

#### STEP ONE: HAVE AN EXIT PLAN READY

In October 2017, the agency announced a five-year contract with CGI Federal, a major Federal systems integrator, to build a cloud computing environment. After several months of research and planning, the organization began the process of migrating its IT system to Amazon Web Services in Q1 of 2018.

Just five months later, the agency had moved 900 workloads from its existing infrastructure into the cloud, or about 99 percent of its IT system and applications.

One of the agency's requirements, before they even approved the migration, was that they wanted an exit strategy. If, after 12 months, they decided to move to a different cloud provider, they needed the freedom to extract their data swiftly and seamlessly. To help meet this demand, CGI partnered with NetApp, a Sunnyvale, Calif.-based cloud data services company, whose tools work identically in every cloud environment, regardless of the provider.

"NetApp's tools and OS (DataOnTap) are exactly the same on prem as in the CSP (Cloud Service Provider), be that Azure, AWS, Google or IBM," says David Godbold, Global Account Manager, Foreign Affairs Community, NetApp Public Sector

"NetApp gives clients the flexibility to move from one CSP to another. There are even native cloud services that facilitate the move and the ultimate end user experience. NetApp makes it transparent."

#### **UP AND AT 'EM**

NetApp played a critical role in keeping the system running throughout the migration. Network outages can cost organizations thousands of dollars per minute — not just in the loss of critical services, but also in corrupt or missing data, plus the impact of recovery time and materials. While any outage is far from ideal, many organizations plan for downtime while moving to the cloud. It's difficult to avoid, given that data and network applications are often downloaded onto an appliance and physically transported to a cloud provider before they are uploaded to a new virtual environment.

In this specific case, the agency utilized NetApp as their on-premise data platform, which meant they could eliminate outages altogether by using SnapMirror data replication tool, software that replicates network data at high speeds and then makes data available over secondary sites.

Finally, once migrated, the workloads are managed using Cloud Volumes ONTAP software, running inside AWS.



"Without having a utility like SnapMirror, historically, you would have had to send on-premise items away on a physical appliance that you offload data onto and ship. The challenge is that during the transportation time -- during offloading and reloading -- the application is down. SnapMirror images the data and determines on a day-to-day basis what changes are made and updates the data. By using SnapMirror, we migrated all of the [agency's] applications without a single outage,"

says CGI Technical Director Grady Johnson

"We moved them that night and the next morning everything was ready to run."

#### **TECH WAS THE EASY PART**

The technological component was the least challenging aspect of the move, says Johnson. Finding the right talent to operate and maintain the system, and optimizing business processes to take advantage of the cloud, are an ongoing effort.

"The path to migration was never a technical problem," Johnson says.

"The biggest lesson learned is that you can change your infrastructure, but you need to establish a new governance model. Look at your talent and make sure you have the right people on staff. There are three legs to the stool: Infrastructure, people and processes. They should all be looked at before migration."

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