

EXECUTIVE VIEWPOINT

A Conversation with

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The deputy director of the DHS office responsible for delivering enterprisewide services talks about how to optimize cloud resources

How is DHS shifting from implementing to optimizing cloud services?

We have early adopters across the department who have moved to the cloud and, in some cases, been in the public GovCloud for some time. The real opportunity now is to optimize our presence in the cloud to realize intentional and targeted benefits at the program level, at the component level and at the enterprise level. This is something that the administration is asking us to undertake.

There has been guidance – executive orders that came out last year on reorganizing government and improving cybersecurity, the “Report to the President on Federal IT Modernization,” the President’s Management Agenda – all of which encourage us to move to the cloud in a smart way.

We’re also seeing the move to the cloud as something that’s accelerating across the department. In 2017, about 9 percent of our applications were either in the cloud or moving to the cloud. The number as reported by components in 2018 is just over 20 percent of our application portfolio. That number reflects activities moving to or already in the cloud so it includes new starts, migrations and the folks who are planning as well as underway.

Through that, we saw about a 25 percent increase year over year in what was successfully operating in the cloud and an almost 300 percent increase in what’s moving to the cloud.

Here at corporate, we’re definitely seeing the need, the opportunity and the

demand from components to organize, support and help optimize that migration, so it has a bottom-up component that’s pretty robust.

We’re in the process of standing up what we’re calling the Cloud Steering Group. The purpose of this group is to help us accelerate IT operations to cloud and optimize the remaining data centers. That Cloud Steering Group would be a capstone governance activity chaired by the undersecretary, the vice chair would be the deputy undersecretary, the CIO would be the executive secretary, and the components would all participate, as well as the different CXOs here at headquarters.

The role of the Cloud Steering Group is using the component environment to help identify barriers and opportunities for us to provide value at the enterprise level to the components as they’re moving to the cloud – and setting a tone of collaboration and accountability and sharing best practices and lessons learned.

We think that developing playbooks and a shared-services strategy for the cloud is a key opportunity. We think engaging the workforce through communities of interest and supporting early adopters to help them document the lessons learned will be key aspects. We refer to that as a cloud center of excellence concept. We’re committed to that.

This interplay between the bottom-up, active evolution to the cloud and the top-down Cloud Steering Group we formed to credibly tackle enterprisewide barriers and opportunities will be essential to our transformation.

As we tackle the enterprise-level concerns, we want to establish a preferred path that **builds on the experiences** of the early adopters across the components.

What are the benefits of using optimized cloud resources?

Moving to the cloud can advance the DHS mission in three areas. One is the mission itself. We think there is the opportunity to increase agility and speed, improve our cybersecurity posture and better leverage our data. The second bucket we are looking at is efficiency. We think there is the opportunity to realize unit cost savings, reduce capital expenditures and shift reinvesting in new capabilities from the legacy investment that's predominantly in operations and maintenance.

We also see the opportunity to transform as an organization by engaging our workers and helping them develop and move toward the skills of the future, while developing a federated unity of effort and moving to an as-a-service IT service delivery operations model.

Mission, efficiency and transformation are the top-line benefits now. Realizing those benefits requires smart planning, execution and oversight. With our early cloud adopters, some programs are seeing some benefits, but uniformly we're not seeing the benefits I just talked about. That underscores the need for optimization.

The early adopters are seeing that they're all at the beginning of a learning curve about how to optimize in an

effective way. A key strategy within our Cloud Steering Group is to leverage the early adopters and help them move up the learning curve so that we're realizing some of those benefits and then leaving repeatable processes behind so we can scale out their experience across the department.

Is the cloud making it easier to use emerging technology?

We are actively working with our partners in industry on leading technologies that could support enterprisewide migration to a more defense-in-depth security model and accelerate the migration and optimization of applications to the cloud. The early adopters have, in turn, been working with our partners in industry and sharing knowledge across the government and the private sector. That's a direct innovation pathway.

The indirect piece is that we're reducing barriers to enterprisewide collaboration. For example, we are federating code repositories around the teams and across the department in terms of cloud engineering, cloud-based software development and deployment, and security and the DevSecOps ideas. As we are able to develop those collaboration pathways, mature them and move them up the learning curve, those same pathways can scale to other types of collaboration.

What options do agencies have for managing cloud costs, governance and data?

As we tackle the enterprise-level concerns, we want to establish a preferred path that builds on the experiences of the early adopters across the components.

U.S. Citizenship and Immigration Services, for example, has done a lot of work over the past four years pioneering DevOps approaches and moving a very large system, the Electronic Immigration System, to the cloud.

In addition, Customs and Border Protection has some interesting initial projects with an emphasis on advanced cloud technology around containers and security.

The Federal Emergency Management Agency has also been in the cloud and has an interesting challenge around its work in emergency response and bringing in non-federal partners.

Another area that is foundational from an organizational transformation perspective is that as we move to the cloud, our operating model is going to shift. I talked about our desire to transform to more of an as-a-service model, and we think that engaging the workforce in this bottom-up way is going to be crucial to helping folks develop skills and be an integral part of developing this future-state organization. ■