As federal agencies shift data and IT operations to the cloud, some are exploring new technologies like artificial intelligence and robotic process automation to track and control cloud spending.

The Department of Veterans Affairs is one agency still working to migrate IT operations to the cloud and is using AI to streamline the process.
“We have 25% of our workload running in the cloud,” said Executive Director of Infrastructure Operations Reggie Cummings at an ACT-IAC webinar on controlling cloud spend last week. “There are a lot of things we are doing from an AI perspective, also our handling and processing of mail or other kinds of things that would traditionally have a backhand solution, we're looking to automate those in a robotic way so we don't have to look at traditional constructs of server storage builds and stuff like that. [We are] looking at those cloud native capabilities that are out there for those solutions.”

For the VA, keeping a direct line of sight on cloud spend is a critical component of cloud operations.

“It is a task that a team has to keep track of and connect those dots,” Cummings said. “While we do have a centralized funding model, we do have to tie our costs specifically back to the various administrations and their needs and so on. It's one of those things where we have to show the cost of consumption and the associated impacts of decision. Key to that is identifying exactly what consumption is occurring per application and per product. Whatever we do from a cloud perspective, we'll have integration touch points to that environment to tell the full story at the macro level.”

To cut costs and organize cloud spending more efficiently, the Department of Homeland Security took a step back to think through its cloud vision.

“Late 2016, we quickly did an assessment of where we were from a business perspective,” said Customs and Border Protection Executive Director of the Enterprise Management & Engineering Directorate Edward Mays at the webinar. “My data center was highly functional, but we were spending a lot of money. We started to look at what that spend looked like and how to reduce that spend and help us deliver capability to our customers faster, our officers and agents in the field, and was that going to improve our resiliency?”

CBP, in particular, suffered “numerous” power and hardware outages, resulting in “astronomical” capital expenditure costs, Mays said.
“We started to look at the cloud-first policy and what that meant to us. How could we reduce costs across the data centers, and what could we really afford to shut down, which also took us down the road of how do we do portfolio management and rationalization, and if we were going to move something to the cloud, what were the requirements around that?” he said.

DHS turned to AI and automation to clean up cloud spend. Mays said what started as an IT modernization effort ballooned into a department-wide project to increase efficiency and efficacy across all operations.

“Right now we have literally a small team of people that are using things like power tools, etc, to read through all this data,” he said. “It is not the long-term approach. We’ve got to have a better way of adjusting that information and got to have some AI in terms of the analytics, and a little of RPA.”

For both the VA and DHS, managing the cost of cloud services is about economies of scale.

“How do you also get the best bang for the buck, and is it more advantageous to move from one [cloud service provider] to another?” Mays said.

"Our approach is twofold, there is the cost of what we would consider the launchpad — that's more the traditional enterprise we have to identify and obviously make clear what we're spending just to be in that fray,” Cummings said. “Then there is the teasing out of the actual products and applications and their costs associated. That's where we've probably a little bit more work to do with how we manage that because obviously when we purchase cloud credit, how do you from an overall aggregate CFO perspective make those tradeoffs where excess credit can be transferred to other applications or products in the portfolio?”