

SLED Agencies Explore Cloud Environments to Transform Services

State, local and education agencies are turning to hybrid-cloud and AI/ML solutions to better serve citizens, improve public safety and enhance universities.

State and local governments are prioritizing the move to cloud and adopting artificial intelligence to enhance processes and transform services to better meet the needs of citizens and internal systems. Agencies are implementing the use of AI tools for a variety of purposes such as analyzing weather data in real-time for more up-to-date alerts, planning for road maintenance to improve traffic flow, incorporating task automation and more.

To accelerate adoption progress, SLED agencies are turning to federal and commercial AI applications. Government, industry and education leaders spoke at a recent [FedInsider panel](#) to discuss their experiences adopting cloud and AI solutions to solve complex challenges and meet evolving needs.

The Need for Cloud Infrastructure

As many industries turn to hybrid cloud portfolios to better manage workflows and services, recent top drivers include continuity, cybersecurity and changes in contracts and procurements, according to Rita Reynolds, chief information officer for the National Association of Counties.

"Local government responded quickly to address situations during the pandemic. But they also looked at how can we continue the services that we need to continue, and ensuring that there is no disruption," Reynolds said. Organizations quickly recognized that an enterprise of cloud and cloud solutions was the key to business and service continuity.

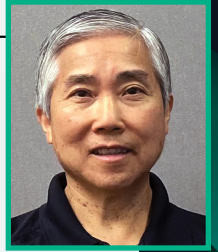
The need to stay on top of cyber and secure IT environments, especially in the wake of the fast and massive shift to remove work, also drove organizations to cloud solutions. "We had a monthly IT standing committee meeting this past week and everyone talked about the challenge of... sustaining that hybrid work force and how cloud is helping to solve that," Reynolds added.

This doesn't mean agencies are relying solely on the cloud. Steve Heibein, public sector AI lead at Hewlett Packard Enterprise, said the federal government has 70% of its applications on-prem. Cloud storage and application migration costs can be significant with cloud, and certain functions in government will inevitably remain on-prem due to the nature of federal work.

Featuring:

Keson Khieu

Chief Information Officer,
California Emergency
Medical Services Authority



Rita Reynolds

Chief Information Officer,
National Association
of Counties



Steve Heibein

Public Sector Artificial
Intelligence Lead,
Hewlett Packard Enterprise



"The cloud economics that was hoped for isn't there because there are other hidden costs," Heibein noted. Regardless, cloud adoption and implementation remains a journey and an agency-specific approach for most SLED organizations.

The Cloud Adoption Process

For some agencies, cloud adoption became a necessity due to its scalability and elasticity. Keson Khieu, CIO for the California Emergency Medical Services Authority, said cloud was inevitable for his organization because of the emergency management element.

"When you have something to do, you have to explode into a lot of activities," Khieu said. "I need the scalability, the on-demand, the elasticity of the cloud." The agency started with software-as-a-service, as these applications made it easier to manage disaster volunteers and paramedics. Then,

Khieu realized if the agency turned to infrastructure-as-a-service, it could reduce the need for its two data centers – one used as a primary and one used as a backup. The emergency backup would be built in. “If I have my infrastructure in the cloud, it is backed up. I don’t have to maintain two different data centers just so I can have 100% reliability,” Khieu said. “So, the journey continues from some forms of service to platform-as-a-service, and now we are moving to infrastructure-as-a-service.”

Cloud and platform adoption did require the implementation for certain standards and protocols, as Khieu said his agency alone works with 58 counties all using various formats – but their shared goal has put them on the same track.

Managing Security in Cloud

Some of the most common security threats in hybrid-cloud environments involve identities. “Between you and the clouds, it’s only the identity. And identity is not a simple thing,” Khieu said. It’s a balance between security and convenience when it comes to multi-factor authentication and just how many factors you want to make people go through.

If the cloud portfolio is implemented correctly, Reynolds said it presents an opportunity to add a zero trust architecture to improve organizational cybersecurity and identity access management. “Management of it and the monitoring of

it – both of those are key components,” Reynolds said. “This is where AI can come in handy from that monitoring perspective. AI can pull the knowledge from the logs and activities, and prioritize what you should be looking at.”

In other words, IT professionals won’t have to manually go and look at activity logs as long as monitoring is set up correctly. AI can look for correlations and anomalies. “You should be getting a report and seeing patterns over time,” Reynolds said. “Then you are focusing on the areas you need to focus on, and not spending time on particular issues that really are not important.” Ensuring this part of the cloud journey is set up for compatibility requires ongoing care and intention, but improves the security element.

AI Opportunities for SLED Agencies

AI off-the-shelf solutions are making smart cities, smart spaces and even smart campuses possible. Cities are using cameras for a variety of purposes, including improving public safety, studying traffic patterns to improve traffic flow, analyzing street footage to catch criminals, adopting data forecasting and more. Plus, Heibein said education, higher education and affluent districts are setting up AI centers of excellence to progress AI environments.

“A lot of times, universities like being on-prem because they have a chance for their own students to be a part of this, and you can teach them additional skills,”

Heibein said. “But also, it’s close to the data.” The centers of excellence gives researchers and students a unique experience, and gives universities a competitive edge.

AI tools on campuses can also help students organize their schedules by sorting emails, managing calendars and automating tasks. “The other piece is more from the opportunities of student happiness,” Reynolds said. “Trying to address depression. Looking at what their patterns are... and what’s the most common path that seems to make the most sense to reach the most students?”

From Khieu’s perspective, AI can also help with emergency medical training. An algorithm can be derived based on past medical emergency events and treatment data, and then paramedics-in-training can use that system to learn via real-life situations that ultimately improve services.

Yet the move to cloud environments and AI adoption ultimately requires a cultural change. “You have these systems that still are cranking out and working, but the security implications of trying to even move it from an infrastructure perspective and containerize it are huge,” Reynolds said. “As a result of that, this is not a technical issue. This is a change management issue with people and processes. And so we still have a large hurdle to overcome there.” But once that is achieved, there really are no limits on the value that AI could potentially provide.

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