Enterprise Data Clouds Help Governments Get Smarter and More Predictive

Joe Perrino, regional vice president of civilian and SLED for Cloudera, explains how an enterprise data cloud can help governments move toward a data-driven, automated future.

Please discuss the role of data analytics, AI and other advanced tools in improving decision-making and service delivery. What trends are you seeing?

There's a lot of great innovation in this space, with many states and municipalities pushing the envelope. The majority of adoption is around providing personalized services. Government agencies understand their constituents have an expectation of real-time connectivity and, therefore, demand a high level of service. To that end, many state and local governments are actively working to use technologies and approaches that let them effectively implement the data-driven services, policies, taxes and regulations that their customers are looking for. They're using enterprise data platforms to break out of data silos that have been a barrier to smart government projects, and they're implementing solutions that give them flexibility while maintaining the security necessary for sensitive data. We're seeing great traction within smart transportation management, smart water management, smart energy management and data-driven policy initiatives.

What are the challenges of using these tools in state and local governments?

Society today expects so much more out of IT systems. Citizens and employees, accustomed to a consumer experience, want systems that enable self-service, answer common requests and perform other activities. This means governments have to respond nimbly, innovate frequently and remain connected to their users' requirements. Besides the technical challenges, state and local governments often lack skilled staff who can implement these strategies. Finding the right technology partner can be the key to success as governments look to meet constituents' needs.

What is an enterprise data cloud?

Being data-driven requires you to support the full life cycle of your data, from processing and streaming real-time data from multiple endpoints at the edge to predicting outcomes and applying machine learning on that same data set. It means being able to take advantage of public cloud infrastructure for its agility and elasticity — and increasingly, its data gravity — as well as doing all of this on an open platform where data security and governance are applied wherever the data lives and wherever analytics run.

A true enterprise data cloud enables organizations to do these things. It lets you handle a hybrid multi-cloud, operating from your data center to the cloud, wherever your data resides. It supports the full life cycle of data and data management, from initial collection to enrichment and reporting. It enables a unified and consistent approach to managing security, governance and metadata across the environment. Finally, it provides an open platform that allows you to avoid vendor lock in — so you own your data and the insights it unlocks.

How does an enterprise data cloud enable governments to move to a more data-driven, automated future?

I'll use a public health crisis as an example, reflecting real challenges many state and local governments are currently facing. With any public emergency or crisis, most agencies have new data continuously streaming from the edge and multiple other sources. They have to collect and shape all that data and make it useful for the people who need it. They have to store the different types of data, so they can effectively report it back to the decision-makers who must determine how to respond to concerns and deploy resources. Then they have to make information accessible to the public, regardless of the communication medium a constituent uses. Furthermore, agencies must predict what will happen next based on the data and make decisions on how to act. And importantly, they have to safeguard all this information from the edge to AI with one security and governance approach. An enterprise data cloud company can do all that for you.

What should organizations think about as they address security and governance within a data-driven organization?

Many government environments use multiple, disparate approaches. For example, the set of tools and approaches used to implement governance and security on-premises is completely different from what's used in the cloud or for different cloud providers. This fractured approach creates a significant amount of risk. To meet regulatory constraints, it's critical to consider solutions that let organizations apply unified data security and governance across multiple platforms.

What preliminary steps can IT and business leaders take to build data pipelines from edge and IoT devices to the cloud?

Gartner recently wrote in the *Harvard Business Review* that data analytics leaders must prepare for the complexity of multi-cloud deployments. To avoid things like performance issues, cost overruns and integration challenges, it's absolutely critical to implement an effective data strategy. Achieving that core will be a huge factor in their success.

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