HOW STATE AND LOCAL GOVERNMENTS CAN BENEFIT FROM DATA IN MOTION

Keys to Data-Driven Success

85%

Of state, local and government IT leaders say the pandemic amplified the importance of migrating to a hybrid cloud environment

(2021 Meritalk Survey)

Data combined with analytics is a uniquely valuable asset for state and local government agencies. When harnessed correctly, it can enhance productivity, lead to better decision making, improve transparency and reduce cost. As agencies seek to eliminate fraud, waste and abuse, combat cyber-threats and improve citizen services, Cloud is the obvious technology of choice to unlock the value of data. But the discussion is no longer about cloud, but rather hybrid cloud.

Hybrid is the de facto model

The reality is that hybrid cloud is the new normal. According to a 2021 Meritalk survey of state and local government IT leaders, "85 percent – say the pandemic amplified the importance of migrating to a hybrid cloud environment. And 67 percent say the pandemic accelerated their organization's hybrid cloud adoption by a year or more." While 56 percent of respondents report "managing and securing data to be their biggest challenge", implementing a hybrid architecture as part of an organization's data strategy stands to give public sector agencies the solutions required to overcome these challenges.

But how do you use a hybrid cloud to unlock the value from the vast amounts of data generated by the public sector? Is it as easy as combining hybrid cloud and data - for a Hybrid Data Cloud? Maybe. If so: what is a Hybrid Data Cloud, how does it unlock data value, and is it real? To answer that question we researched industry analyst cloud guidance, customer experiences with data applications, as well as considerable advice from our partner ecosystem. Here's what we learned: Hybrid Data Clouds aren't easy, but they are real, and every organization is doing them a little bit differently.

A Hybrid Data Cloud combines the data management, analytics, transactional and data science services of public and private clouds. That "and" is important because with "and" state and local agencies can be sure they are able to unlock value from all their data, no matter where it is. A Hybrid Data Cloud enables agencies to industrialize the development, production and operationalization of AI-powered data applications. It allows the extension of AI-powered data applications across the organization, faster and more reliably. This is the magic that drives digital transformation.

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The Hybrid Data Cloud Top 10

So what makes a good hybrid data cloud? From our research, we have identified the following essential elements, which we call the Hybrid Data Cloud Top 10:

1. Distributed cloud model

A Hybrid Data Cloud is based on a distributed cloud model that operates across all infrastructures including private, multi-, and edge clouds. Operated as a single platform, there's no need to pick one platform for the on-premises data architecture and another for the cloud. Data and workloads move friction-free and in any direction between clouds without costly rewrites or refactors.

2. Portable, interoperable data services

Implementing a new use case requires more than just a better data warehouse or snazzier data science workbench. With a Hybrid Data Cloud, interoperable data services cover the data lifecycle - from data ingestion to transformation, warehousing, and machine learning - and, without refactoring or redevelopment, are portable across clouds.

3. Data services for all eventualities

Uncovering value and insight demands data services that are more than just diverse in terms of what they deliver. In a Hybrid Data Cloud, data services must be able to work with data in all its diversity: structured, semi-structured or unstructured. They must also deal with the various sources from which data is provided or must be delivered: real-time, streaming, batch or other.

4. Separated compute and storage

The key to cloud-native scale and agility is the separation of compute and storage, letting each be sized independently and flexibly. A Hybrid Data Cloud delivers not only separation but also choice on which resource is consumed from which provider, letting organizations select their optimal mix based on dimensions that include price, performance or locality.

5. Common tools

With data and workloads spread across any available infrastructure, it's important to keep tabs on utilization, performance and cost without subjecting users to different tools, architectures and metrics used for each. With a single pane of glass, a Hybrid Data Cloud provides a clear window with a consistent view of resource consumption, performance and cost, together with the tools to manage and optimize data center hardware and cloud infrastructure.

6. Orchestration and management

The most valuable business use cases leverage multiple data services, each deployed to the most suitable infrastructure. Hybrid data cloud tooling to easily orchestrate and automate management workflows takes the complexity out of working across heterogeneous clouds.

7. Cross-platform security and governance

Good data governance uncovers business value and helps demonstrate compliance; strong security ensures the right users can access more data. Neither can be an afterthought in any one form factor, and even less so across multiple. Consistent security and governance across all deployments is the crux for hybrid cloud success and a fundamental requirement for the mobility of data and services.

8. Automated, optimized workload placement

Individual teams, departments, or the organization as a whole have continually evolving priorities around aspects such as cost and performance for data and analytics. In a Hybrid Data Cloud, an intelligent decision framework automatically places or moves either to adapt to change circumstances, ensuring continuous, optimal delivery without refactoring.

About Cloudera
At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. Cloudera delivers an enterprise data cloud for any data, anywhere, from the Edge to AI. Powered by the relentless innovation of the open source community, Cloudera advances digital transformation for the world's largest enterprises.

Learn more at cloudera.com

9. Intuitive experience

Hybrid should not mean different interfaces and ways of working on each cloud. A true Hybrid Data Cloud offers simple, consistent and intuitive experiences for data users and developers everywhere, streamlined with a unique identity across all for each user.

10. Open and extensible

One thing's certain: change is constant! A successful Hybrid Data Cloud therefore must be ready for what the future brings. And that includes being able to extend for and adapt to new clouds, new data types and new data services.

CDP - a leading Hybrid Data Cloud Platform

We believe Cloudera Data Platform (CDP) Hybrid Cloud is the industry's leading Hybrid Data Cloud. It includes an integrated suite of secure cloud-native data services for data collection, engineering, warehousing, transactional analytics, data science and reporting that can run on multiple public clouds and on-premises, including the edge. It supports all types and structures of data at rest as well as in motion. And it delivers data security and governance that is controlled centrally and consistently across clouds, without gaps between services and without the need to become an expert in each and every unique cloud. Unlike most cloud data services, it is based on open source and open standards to ensure future extensibility.

This is Cloudera's Hybrid Data Cloud today. We believe it's miles ahead of any other data cloud or data services solution. Proud as we are of what we offer today, we are just getting started. We have a vision, product strategy and roadmap that we expect will deliver on all of the Hybrid Data Cloud Top 10 essential elements. We are committed to delivering the industry's best Hybrid Data Cloud platform. We want to enable state and local government agencies to confidently extend AI powered data applications across agencies - faster, easier and reliably.

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