Analytics Without Borders

Why Enterprises are Turning to the Hybrid Cloud

Coauthored By:

Dan Woods, CITO Research
Brian Wood, Teradata Corporation

Some statistics say the future is in the public cloud, but should a company's entire analytical architecture live there?

Cisco projects that by 2020, more than 92 percent of total data center traffic will come from global cloud IP. As customers and businesses increasingly seek to keep their data flexible and location-agnostic, seamlessly switching between solutions to access the same information, this isn't surprising. But for most businesses, the desire to still have an on-premises element to their data platform is attractive. Most have these platforms as a legacy part of their solution, and getting rid of them entirely verges on impossible.

To solve this problem, many are turning to a hybrid cloud solution. In a survey of more than 1,000 computer professionals, hybrid cloud adoption grew in the last year from 58 percent to 71 percent. While some may define a hybrid cloud architecture as a setup where some data lives on site while other data is in the cloud, the key to a true hybrid situation is interoperability. In other words, not all hybrid clouds are created the same. The best hybrid clouds allow for cross-platform queries, and deciding which data lives where to optimize analytics across the business. Any "hybrid" solution that has little to no coordination is really a series of data silos in disguise. Also, every part of the company needs to access the same data from the same place in the model to optimize their analytics.

> Some statistics say the future is in the public cloud, but should a company's entire analytical architecture live there?

The ultimate goal of all of this is to improve an enterprise's data analytics, so it can get better information about its sales, marketing, supply chain and so on. Creating the optimal environment to gain these insights is highly valuable to the modern CIO, who is ultimately in charge of more data than ever before. The infrastructure should act as a force multiplier instead of a bottleneck.

Given that this model is the en vogue data solution, what characteristics should a hybrid cloud solution have? Businesses should think about things like cost, redundancy, security and flexibility when choosing how to implement data centers on-premises and in the cloud.

Assessing the Cost of the Hybrid Cloud

Some processes are run more efficiently onsite while some are more suited for cloud computing. And with good data management, end users won't know the difference in where their data comes from.

By designating what the best-case scenario is for different kinds of data, IT professionals can cut down on the cost of data analysis.

For instance, the cost per hour of using a data service may be higher, but if the cost per query of a different service's hybrid solution is lower, companies could save money in the long run. Sometimes the difference is on the order of tens of thousands of queries, meaning a company can ultimately make better decisions from its data faster.

Cost may also drive the overall architecture of the hybrid model, since some cloud providers charge transfer fees for data that flows out of the cloud, but not into it, while others may charge for data flowing either way. Some time in the sandbox can aid with app development within the hybrid cloud infrastructure to find the best mix for data analysis solutions at the best price.

The Power of Data Redundancy

Every company needs a strategy in place for disaster recovery. While hybrid solutions may require more initial planning, by hosting data in both public and private places, critical applications can be stored in both locations to reduce overall risk if there are any system outages. This may require some retooling, since public clouds usually can't identically mirror the hardware and software configurations hosted onsite. But many hybrid cloud providers have solved for this problem and also have contingency plans built into their platforms for companies that are preparing for imminent disasters, like hurricanes. Regular testing of a disaster recovery plan can ensure that all a company's processes run the same regardless of the location of their data in an emergency.

Keeping Hybrid Cloud Data Secure

Security is a common cloud data concern, and data managers that lead with a policy approach to hybrid cloud architectures can avoid typical governance issues that could lead to breaches.

Hybrid cloud solutions allow a data manager to choose restricted on-premises locations for sensitive information. Most cloud service providers have addressed security in one way or another, since many data managers fear loss of control of their data. Hybrid cloud architectures also allow data managers to address compliance requirements, and using a dedicated solution for data of this nature could be a simple solution to meet an auditor's requirements.

Added Flexibility From the Architecture

When a hybrid solution is flexible, companies can in an agile way position their data for what a company, and its applications, need at certain times. For instance, it may be more valuable for a retail company to open up more analytics capacity in the months leading up to the new year. This practice of cloud bursting can be done effectively in an orchestrated hybrid cloud environment.

Hybrid cloud gives a company flexibility so workload can be relocated between a public or private infrastructure to address any changing business need.

This flexibility equals security for many companies, who don't want to risk onsite or cloud server outages stopping production analytics across their company.

CITO RESEARCH

Choosing the Hybrid Cloud Solution

The choice of how a business configures its architecture doesn't have to be binary — on-premises and cloud data centers are not mutually exclusive. There is a reason that hybrid cloud is growing at a <u>compound rate of 27 percent</u>. CIOs and data managers are finding that there is cost savings, redundancy, added security, and flexibility with a blended data solution. But, not all hybrid cloud solutions are created equal. The best ones offer orchestration across public, private, managed and on-premises environments, removing the siloed nature of most hybrid cloud solutions.

By carefully thinking through governance issues and allowing an IT department time to develop apps and queries that work within the hybrid solution, companies can set themselves up for faster analytics at a lower cost.

> There is a reason that hybrid cloud is growing at a compound rate of 27 percent

This paper was created by CITO Research and sponsored by Teradata

CITO RESEARCH   **TERADATA.**

Brian Wood
Director, Cloud Marketing, Teradata Corporation
Brian Wood is director of cloud marketing at Teradata. He is a results-oriented technology marketing executive with 15+ years of digital, lead gen, sales / marketing operations & team leadership success. He has an MS in Engineering Management from Stanford University, a BS in Electrical Engineering from Cornell University, and served as an F-14 Radar Intercept Officer in the US Navy.

Dan Woods
Chief Analyst and Founder, CITO Research
I do research to understand and explain how technology makes people more effective in achieving their goals. I write about data science, cloud computing, and IT management in articles, books, and on CITO Research, as well as in my column on Forbes.com.