

## Chapter 4

# Using hybrid cloud to control and harness data

Data at the edge continues to explode in size and scale, generated by billions of devices of increasing complexity and power. The abundance of data from edge to cloud resides well outside the realm of traditional computing. Enterprises are grappling with how to harness and control it. How do you access all the data in silos and use it to generate business value? And how do you do so in a way that is efficient and secure?



### Hybrid cloud offers the most effective infrastructure design for controlling data

When it comes to controlling and harnessing data, hybrid cloud users reported more success than non-hybrid users. Specifically, 43% of hybrid users said their strategy was effective at controlling and harnessing data across edge to cloud, while only 33% of non-hybrid users said the same (see Chart 6).

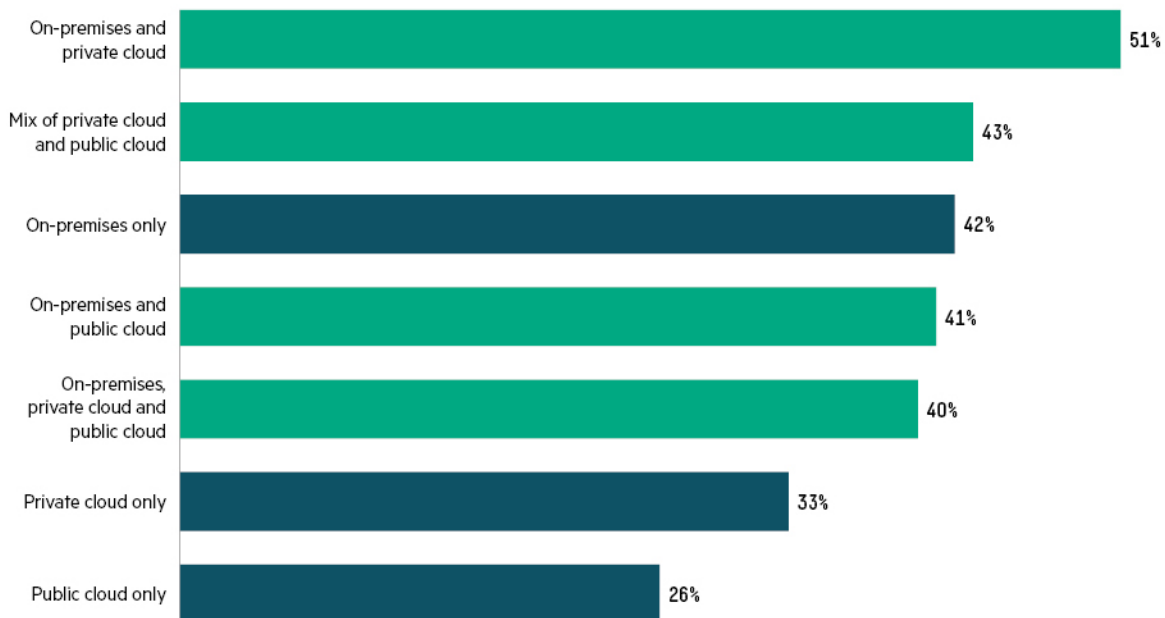
Breaking down the numbers further, organizations that operate using both on-premises and private cloud (but not public cloud) infrastructures reported the highest levels of success at controlling and harnessing data across edge to cloud, with an overall 51% success rate. Those with a mix of private cloud and public cloud infrastructures reported a 43% success rate. Those with a mix of private cloud and public cloud infrastructures reported a 43% success rate, the next highest level (see Chart 7).

**Chart 6: What has your current cloud strategy been most successful at helping you achieve so far?**



Quantitative research—base size: hybrid users (n=837), non-hybrid users (n=82)

**Chart 7: Percent who said their current strategy is successful at: “controlling and harnessing data across edge to cloud”**



Quantitative research—base size: private cloud only (n=36\*), on-premises and public cloud (n=108), on-premises and private cloud (n=140), on-premises private cloud and public cloud (n=285), mix of private and public cloud (n=304), on-premises only (n=19\*), public cloud only (n=27\*). \*Indicates small base sizes; use directionally.



Organizations with **any** type of hybrid cloud environment reported higher success rates at taming edge-to-cloud data than organizations with either private-cloud-only (33% success rate) or public-cloud-only (26% success rate) environments. Ultimately, it is clear that some level of on-premises control is beneficial in ensuring edge data is more accessible, that reporting and analysis is expedient, and that timely action can be taken based on this information.

### Why hybrid cloud works best for controlling edge data

So, why does a hybrid cloud design make sense when it comes to harnessing data from edge to cloud? In delving deeper into this question, respondents focused on a few key areas.

First is the question of balance: a hybrid structure allows organizations to manage performance, cost, and security all at once, by maximizing the control the organization has over the way data is stored and processed. The explosive growth in the amount of data at the edge has led organizations to pursue strategies to process as much of that data as close to where it lives. This reduces friction and latency and improves performance, as data has less distance to travel for processing while minimizing the need for data to move at all. In cases involving sensitive data and the need for a high level of security, a hybrid approach gives the organization flexibility over where processing is performed as well as the ability to lock down information on a more secure storage system.

One respondent said this type of flexibility is new in the industry—it simply wasn't possible a few years ago.

### Data harnessing becomes easier with hybrid cloud

**“The cloud strategy has really helped to harness a lot of data, which was very hard to do a few years back.”**

– CTO, large enterprise, US

**“We have near real-time data visualization.”**

– CIO, medium-sized enterprise, Australia

But thanks to the rapid maturation of both edge and cloud technologies, that has finally changed. Survey respondents described seeking a secure and fast way to control and harness data so they can turn it into intelligence quickly.

### Factors driving the need for hybrid cloud in edge data management

While all organizations embrace flexibility in general, a few specific factors are driving many businesses to a hybrid cloud strategy. Chief among those is the increasingly distributed workforce. As workers continue to work from remote environments and organizational footprints spread out across the globe, the need for flexibility has increased. With a mix of on-premises, private cloud and public cloud services, organizations find they have the greatest possible amount of flexibility and control in the way they provision their resources. With hybrid cloud, the organization improves its redundancy, scalability, and reliability across the board.



In the survey, one CIO of a large US enterprise elaborated on the need for hybrid cloud. They said they want to get the business to the point where workers in the field can capture the data they need and upload it via 5G or a satellite connection to a shared system, where other employees can then access the data on demand for manipulation. While this scenario is certainly possible today, a hybrid model maximizes the flexibility of this type of capability. Remote staff can work anywhere, and data can be stored in the system that's physically closest to their location, closest to the analyst on the receiving end or both.



**There's a lot more than just cloud that goes into this kind of infrastructure. We want to put less friction behind getting things done in order to speak to our agility."**

– CIO, large enterprise, US

Another CIO of a large enterprise based in the US outlined a different rationale for using hybrid cloud to manage edge data. This enterprise manages millions of customer documents, which are stored in SQL databases on-premises. To help customers find documents using the organization's on-premises storage system, it provides a shared portal. The CIO explained having this type of workload in the cloud would be cost prohibitive. But by using a virtual private network tunnel to connect cloud environments to their on-premises storage system, the organization achieves optimal security that's cost-effective.

### **Getting started with a hybrid approach**

Every organization is different, and every hybrid cloud implementation is different. Think about the timing of your transformation and consider establishing a Cloud Business Office to govern and direct all aspects of your cloud program. Take a deep dive into the economics of various cloud solutions and commit to ongoing education about cloud technology. This field changes dramatically from one month to the next, and your focus on learning and research will pay off. ■





## Read the full report

Research shows that enterprise decision-makers are increasingly choosing hybrid cloud as their preferred operating model because it offers significant value to the business. There is no one right way to build a hybrid cloud; it exists in many forms and varies from one enterprise to the next. But all hybrid cloud advocates tend to say the same thing about their strategy: it improves the flexibility and responsiveness, which in turn improves the ability of the organization to draw meaningful insights from data and open up new opportunities for growth. They also report that hybrid allows them to incorporate multigenerational IT into their environment, addresses security and redundancy issues and helps them meet compliance standards.

This report contains a behind-the-scenes look at real-life hybrid cloud experiences from a survey of hundreds of chief executive officers (CEOs), chief information officers (CIOs), chief technology officers (CTOs) and other IT decision-makers. Their candid advice, based on personal experience, can help guide your organization as you plan and implement your own successful hybrid cloud strategy.

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