

DATABASE MANAGEMENT

FOR

HYBRID CLOUD



DATA, DATA, DATA

It's everywhere and growing exponentially in volume and relevance. Every day there's more of it to integrate into business strategies. Whether it's driving sales, boosting marketing, or improving bottom lines—the possible applications are endless.

The cloud has made managing this deluge of data a simpler, feasible task for companies of all shapes and sizes, but as the landscape of the cloud database changes, knowing how to best manage the data your company stores there is more important than ever.

By 2025, IDC predicts enterprises will produce around

60% OF GLOBAL
DATA.

The fact of the matter is, you probably already have applications in the cloud (or you're in the process of planning an application migration), and your database IS coming along with those apps. However, for some data loads the cloud simply doesn't make sense (yet), and it's rare that a company is able to move all of its data to the cloud in one fell swoop. This blend of **public cloud, private cloud**, and even **on-premise data solutions** is helping companies take advantage of the benefits of public cloud where they can while keeping more sensitive/regulated data close. It also allows corporations to move to the cloud gradually, rather than jumping in all at once.

For example, GE currently has the goal of moving roughly 60 percent of its data to the public cloud (AWS), which will mean a 52 percent decrease in total cost of ownership, according to Amazon. In addition to that significant move to the cloud, the corporate giant continues to invest in its existing data centers at a smaller scale and is even developing its own platform-as-a-service to handle industrial applications. This hybrid arrangement gives them the benefit and cost savings of the public cloud with the flexibility and control over the data that needs more regulation.

And GE isn't alone in this hybrid approach. According to IDC, **more than 70 percent of heavy cloud users are considering a hybrid cloud strategy**. As curiosity for this IT architecture grows, so too have its uses, and nowhere does it make more sense than with database management.

KEY CLOUD DEFINITIONS



DEFINITIONS

The rampant pace of technological advancement in enterprise IT is accelerating every day, and keeping up with the terminology can truly be a full time job. So before diving into the details of managing your databases in the cloud here are a few important definitions:

HYBRID CLOUD

An IT architecture design that uses both private and public cloud services. Generally the public and private pieces run separately and are linked via an encrypted connection.

PUBLIC CLOUD

A set of hardware, networking, storage, service, and interfaces owned and operated by a third party for use by other companies or individuals. This covers most majority of cloud offerings at present. Amazon Web Services, Google, and Azure all fall into the public cloud bucket.

PRIVATE CLOUD

A set of hardware, networking, storage, service, and interfaces owned and operated by an organization for the use of its employees, partners, and customers. For many hybrid solutions, private cloud is a misnomer. At present most "private clouds" are still very much tied to on-premise solutions running a cloud software stack. But the private cloud world is on the rise as companies look for more efficient ways to manage data that is limited by regulations and industry compliance standards.

MULTI-CLOUD

On the surface this seems synonymous with hybrid cloud, apart from one small detail. Multi-cloud could be a combination of multiple, separate public clouds and/or private clouds, while hybrid cloud almost exclusively refers to the combination of both public and private.

HYBRID IT

This term is still finding itself, but generally refers to running existing, on-premise solutions along with public cloud solutions, generally as data and applications are migrated to the cloud over a period of time.

BENEFITS OF HYBRID CLOUD



BENEFITS

Much like the path to hybrid cloud, the reasons for utilizing this IT infrastructure design are many. These are the most common benefits companies experience from hybrid cloud:

COST

For some companies the total cost of ownership with cloud solutions is far lower than the ongoing costs of maintaining on-premise hardware. For this reason, many organizations are eager to get as much of their data as possible to the public cloud. On the flip side, there are also companies that may be using the public cloud already and are looking to a private cloud solution to reduce costs particularly with high volumes of data that requires more storage and network charges. In both scenarios, finding the right mix of public and private can mean cost savings

DISASTER RECOVERY

For some the hybrid cloud allows them to build redundancy into their IT architecture, giving them extra security in the event of disaster recovery.

SCALABILITY

Especially for organizations with high volumes of data who have previously been operating with a private cloud or on-premise solution, the addition of a public cloud to their data management mix provides new resiliency to allow them to quickly scale up.

OPTIMIZATION

Different applications and data sets thrive in different clouds. Making sure your data and enterprise apps are in the cloud setting best suited to them often requires multiple clouds and/or a mix of cloud and on-premise.

CHALLENGES OF DATABASE MANAGEMENT IN HYBRID CLOUD



CHALLENGES

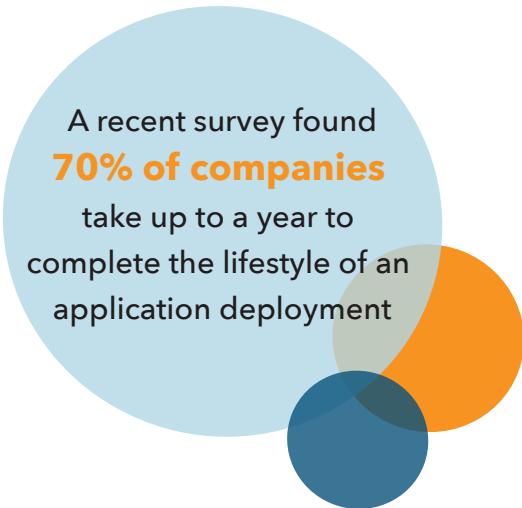
Hybrid cloud technology is already being used in a variety of industries, first and foremost with finance companies. The necessity for high-speed paired with the incredible level of regulations and compliance restrictions make hybrid a natural fit. Similarly, healthcare has taken to the hybrid cloud, allowing it to easily share patient information between providers and insurance companies, while still maintaining compliance with HIPAA. But even as implementations of the hybrid cloud grow, there are challenges that must be considered.

HYBRID SOLUTIONS SHOULD BE DELIBERATE BUT OFTENTIMES AREN'T

With more and more data moving to the cloud, it's increasingly common to find organizations that haven't so much chosen a hybrid strategy so much as they've haphazardly wandered into one. Being deliberate about your hybrid strategy is imperative to success and making the most of your available IT resources.

HYBRID DEPLOYMENTS ARE OFTEN MORE TIME-INTENSIVE

The speed of deployment has long been a thorn in the side of applications and the businesses that rely on them. The personalization that is required when implementing a hybrid cloud solution likely means a time-intensive process, and that may not be feasible for all companies from a cost or personnel perspective, particularly in the case of small businesses.



A recent survey found
70% of companies
take up to a year to
complete the lifecycle of an
application deployment

SECURITY REQUIREMENTS ARE OFTEN MORE COMPLEX

While it must be said that cloud security (particularly public cloud) is better than ever, trust in that security is still catching up. The complex setup of a hybrid cloud solution makes certainty around security even more imperative.

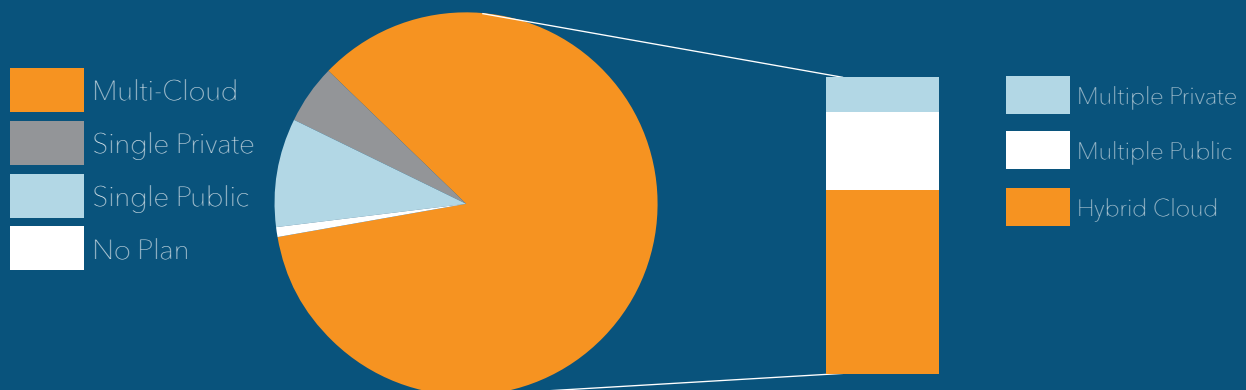


PRIVATE CLOUD IS NOT KEEPING PACE WITH PUBLIC CLOUD INNOVATION

For the hybrid cloud to be a worthwhile strategy, it can't just be about running public and private clouds side by side. Both public and private need to offer agility and room to scale up your applications and databases. Many private cloud options simply do not have the same level of efficiency and features of public cloud offerings. For this reason, many hybrid cloud solutions cross into the realm of hybrid IT by incorporating an on-premise solution, usually a previously existing data center vs investing in a traditional private cloud environment.

ENTERPRISE CLOUD STRATEGY

1000+ employees



PLANNING YOUR DATABASE MANAGEMENT STRATEGY FOR HYBRID CLOUD



The move to the cloud looks different for every company, and **the management of your databases can include any variety of combinations of the previous definitions whether it's a true hybrid cloud or a hybrid IT solution.**

Amazon, Google, Microsoft, Rackspace, and others all offer software for hybrid cloud deployment, but it's important to remember that one size does not fit all. Every corporation has its own unique set of data and requirements, limitations, and processes that go with it.



STRATEGY

Here are the pieces to consider when planning your database management strategy for the cloud to make sure you are implementing a thorough and well-thought-out approach that is designed for the long term.

COMPLIANCE

Make sure to select a vendor that specializes in your industry and is familiar with the unique compliance measures that must be met whether that's HIPAA, FISMA, PCI, or whatever regulations your company subscribes to. Ultimately your database management strategy should be determined by what architecture will best meet the needs of your business and scale with you as you grow.

WORKLOADS

Every database represents many varieties of workloads. Some of those will fare better in a public cloud, some on-premise, some in a private cloud. Every organization will have a different mix. Knowing yours is essential to finding the right cloud mix for your databases.



IMPLEMENTATION & OPTIMIZATION

It seems obvious, but knowing the who and how of getting your cloud solutions up and running is necessary. Continuity on this front will make for much smoother sailing for all of your databases and enterprise applications. Not to mention, having an expert in place means knowing that your data is at its best, in its best cloud.

MAINTENANCE AND MANAGEMENT

A new environment means a new way to manage that environment and maintaining that data. Whether that means new hires or partnering with a managed service provider, making sure you have the right pieces and people in place to manage those new environments needs to be determined before you make the jump.

WHETHER YOU'RE TAKING YOUR FIRST STEPS INTO THE CLOUD OR TIGHTENING AN EXISTING SETUP, IT'S A LARGE TASK.

But, it's one with results that mean more efficient and flexible IT and data management for your company.

Ultimately you'll need to determine what combination of clouds and IT will allow you to operate most effectively at the lowest cost.

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