



Navigating Workloads: Understanding Enterprise approach on Public, Hybrid and Private Clouds

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With the rise of public cloud services offered by industry giants like Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP), many organizations have migrated or are considering migrating their workloads to these platforms. However, the decision is not always straightforward, as factors like cost, performance, security, vendor lock-in and compliance come into play. In this article, we'll explore how enterprises think about workloads in the public cloud, their perceptions of its cost, and when a private cloud or a hybrid cloud setup might be a better fit.

Expectations and perceived benefits of public cloud

Enterprises view the public cloud as a versatile solution that offers scalability, flexibility, and accessibility. Workloads that exhibit variable demand patterns, such as certain web applications, mobile apps and development environments, are well-suited for the public cloud. The ability to quickly provision resources and pay only for what is used may make it an attractive option for some businesses and applications.

Public cloud offerings also typically provide a vast array of managed services, including databases, analytics, machine learning and AI, and can enable enterprises to innovate rapidly without the burden of managing underlying infrastructure. This is also a key selling point of public cloud offerings.

But how have enterprises' real-life experiences of public cloud set-ups compared against these expectations?

Public cloud experiences

While the public cloud offers numerous benefits it is not suitable for all enterprises and workloads. Many enterprises have found the 'pay-as-you-go' pricing model to be very expensive and to have led to unexpected cost increases particularly if workloads and usage spike unexpectedly or if the customer packages have been provisioned inefficiently. If not very carefully managed, the costs of public cloud services have a tendency to balloon quickly.

Public cloud providers and enterprises that have adopted public cloud strategies are naturally seeking to address these concerns. Enterprises are increasingly adopting cloud cost management strategies, including using cost estimation tools, implementing resource tagging for better visibility, optimising instance sizes, and utilising reserved instances or savings plans to reduce costs. Cloud providers offer pricing calculators and cost optimisation recommendations to help enterprises forecast expenses and increase efficiency. Despite these efforts, the public cloud has proved to be far more expensive for many organisations than originally envisaged and managing costs effectively in public cloud set-ups requires a lot of management and oversight and ongoing vigilance and optimisation efforts.

When private clouds make sense

There are numerous situations where a private cloud environment is a more suitable and cost-effective option. Workloads with stringent security and compliance requirements, such as those in regulated industries like finance, healthcare or government, often necessitate the control and isolation provided by a private cloud environment, that is hosted in a local data center on a server that is owned by the user.

Many workloads with predictable and steady resource demands, such as legacy applications or mission-critical systems, may not need the flexibility of the public cloud and could potentially incur much higher costs over time. In such cases, a private cloud infrastructure offers much greater predictability and cost control, allowing enterprises to optimize resources based on their specific requirements.

And last but not least, once workloads are in the public cloud, vendor lock-in occurs, it is notoriously expensive to repatriate workloads back out of the public cloud, mainly due to excessive data egress costs.

Hybrid Cloud

It is becoming increasingly clear that most organizations will benefit most from a Hybrid Cloud setup. Simply put, 'horses for courses'. Only put those workloads that will benefit from the specific advantages into the public cloud and keep the other workloads within their own control in a private environment.

Retaining a private environment does not require an enterprise to have or run their own data center. Rather, they should take capacity in a professionally managed,

third-party colocation data center that is located in the vicinity of the enterprises' own premises. Capacity in a colocation facility will generally be more resilient, efficient, sustainable, and cost effective for enterprises compared to operating their own facilities. The private cloud infrastructure can also be outsourced – in a private instance. This is where regional and edge data center operators such as Portus Data Centers (www.portusdatacenters.com) come to the fore. They operate data centers that are local where large enterprise are concentrated and provide a home to those private cloud instances that is near to the enterprise itself.

Wrap up

The era where enterprises went all-in into the cloud are over. Enterprises now approach workloads in the public cloud with a mix of enthusiasm and caution. While the public cloud offers scalability, flexibility, and access to cutting-edge technologies, concerns about cost, security, vendor lock-in and compliance persist.

To mitigate these concerns, enterprises must carefully evaluate their workloads and determine the most appropriate hosting environment based on factors such as demand patterns, performance requirements, security considerations, and cost implications. While the public cloud is well-suited for some workloads, there are many instances where a private cloud environment is a better fit, offering greater control, predictability, and cost efficiency.

As a result, in most cases larger organizations will end up with Hybrid Cloud IT architecture to benefit from the best of both worlds. This will require careful consideration of how to seamlessly pull those workloads together through smart networking. Regional data centers with strong network and connectivity options will be crucial to serving this demand for local IT infrastructure housing.

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