



Defining Hybrid Cloud: A View from Above

Looking at Hybrid Cloud from a Different Perspective

The definition of hybrid cloud is evolving as the cloud market progresses and the transition to hybrid cloud continues. The emergence of hybrid cloud brings with it a multitude of new delivery models, services, technologies and more. This wealth of options provides potential hybrid cloud customers with lots of choices. But, it can also be confusing, which elevates the need for relevant detailed definitions.

Business requirements are a key driver for adopting cloud computing. Yet, most hybrid cloud definitions primarily focus on technical descriptions. A technical definition is appropriate and useful for cloud implementers and technical teams. However, it falls short at clarifying hybrid cloud to potential business users.

For example, defining a “jet plane” by describing the engine and overall plane design is a valid approach. However, it misses the important business impact of jet planes in revolutionizing commercial air travel. Similarly, defining hybrid cloud in strictly IT terms neglects the economic value and business implications of adopting it.

This is particularly important because unless business users understand the value and potential the hybrid cloud delivers, they are unlikely to reap optimal benefits from it. Consequently, their support for IT’s hybrid cloud efforts may be unenthusiastic.

Defining the hybrid cloud is complicated because each implementation is unique, as it fulfills specific business requirements. Since business needs drive adoption, business users must understand what a hybrid cloud can offer and mean to them. This knowledge can transform how business stakeholders innovate and design new business services. In order to reach both business consumers and technical implementers, we believe a broader definition of hybrid cloud is necessary.

We begin with our explanation of hybrid cloud for business cloud consumers.

The Aerial View of Hybrid Cloud: Business View

Some business staffs may think that only the technical IT team needs to understand cloud computing. Although hybrid clouds are enabling technologies, it is equally important for business leaders to understand how they can fundamentally impact and/or change business models and operations. Why? Because realizing the hybrid clouds’ full advantage requires a new, expanded way of thinking about the business and the possibilities.

Cloud computing enables an organization to extend their capabilities beyond the “walls” of their company and frequently beyond the expertise within their company. For example, traditionally, computers and information technology were company owned and resided in corporate data centers. Companies now have the option to pay service providers to use remote computer resources on-demand. Greatly expanded resources become available within minutes or hours, something not always possible in corporate data centers.

Now, cloud computing has and will continue to evolve as the variety of cloud services explodes beyond today’s technology and business resource limits. Diverse cloud service offerings run the gamut from business applications, industry specific data (for example, medical data), cloud development platforms, advanced analytics, video processing, weather data, Twitter data and much more. Today, businesses are able to access diverse services. The result is extending their capabilities far beyond the data residing within their company and the expertise of their employees. It eliminates in-house limitations on capabilities, making possible what is impossible to do in-house, and more. It provides businesses with vast opportunities to innovate creatively, beyond what they can accomplish within the constraints of their companies’ internal capabilities. Business leaders need to understand that this is what hybrid cloud can deliver.



An example is helpful in illustrating the creation of a new business service using a variety of hybrid cloud services. Imagine a car insurer's customer facing application uses customer policy data (residing on an internal cloud) to gather vehicle coverages. The application uses traffic information (from Cloud service provider A) to warn the customer of an accident just ahead of their location, a potential traffic hazard or slowing freeway traffic. The application also uses weather data (from Cloud service provider B) to warn customers that they are heading directly into potential hail, tornado or adverse weather conditions. A map service (from Cloud service provider C) provides alternative directions avoiding the hazard.

In similar ways, businesses of all kinds are able to compose innovative business services that utilize internal and external cloud services. This changes how business leaders think about innovating and developing business services. Just as botanists create a new hybrid plant by selecting and combining the best plant characteristics, business leaders can create new, innovative hybrid cloud-based services by selecting among the best available services.

A hybrid cloud makes available resources where ownership is not feasible, justified or possible. This can be true for reasons related to operations, cost, or other reasons. It makes collaboration possible without risking production environments. Hybrid cloud can lower the cost of operations, development, sales, marketing, research and development. It opens up otherwise unavailable opportunities by making it possible to use capabilities on a temporary or exceptional basis. It can allow global market access without a global presence. A hybrid cloud allows access to resources and capacity as and when they are needed from public or community clouds that can generally provide services at lower cost than private infrastructure.

Although the basic definition of hybrid cloud sounds simple, there are technical issues that IT teams must attend to behind the scenes in order to implement it, while keeping it simple and seamless. A hybrid cloud requires business leaders and IT to work as a team.

The Ground Level View of Hybrid Cloud: Technical View

As mentioned, many technical descriptions of hybrid cloud are already available. There exists little need for extensive additional discussion here.

For a very simple working definition, we describe a hybrid cloud as being an environment that connects at least two independent cloud services from whatever source. It can consist of public cloud services, private cloud services or 3rd party delivered private cloud services in any combination. Public cloud services also have many "flavors", for example they may be on- or off-premise, include multiple enterprises (e.g. a community) with access to the same resources, or have co-resident users working in 'private' spaces. Private cloud services are enterprise owned/controlled cloud services whose access are controlled by the enterprise or enterprise-authorized entity. An additional major benefit of hybrid cloud is to protect a company's current investments in infrastructure.

Summary

At times, an enterprise needs access to services or capabilities where ownership isn't necessary or is too expensive. The need may be operational, (e.g. a need to use advanced analytics), or informational, (e.g. access to weather or medical data.) It can be driven by IT or by business concerns. In short, the enterprise requires temporary and/or shared access to IT capacity (compute, storage, network, services, etc.) or functionality it doesn't own. Hybrid cloud is a utility model which has the potential to more economically and efficiently provide access to a range of products, services and resources on a pay-as-you go basis. Between the rapid innovation of infrastructure and the creativity of marketers, the variety of cloud services offered and number of definitions will continue to expand.

From a business perspective, it puts assets, resources and expertise at the disposal of the enterprise that it otherwise would not have. It allows the enterprise to leverage these assets in creative and innovative ways with manageable financial expense and economic risk. For business staff, it loosens restrictions on what can be accomplished as the enterprise transforms itself to effectively compete in a digitized world.



Since hybrid cloud is the collective composition of multiple cloud services that spans across computing domains, it requires management and coordination of service activities from both in-house and service provider sources. The challenge for IT lies in effectively managing across these hybrid cloud service compositions seamlessly, while delivering what the business needs, in the time frame they need it at the best possible cost point.

Finally, for both IT and enterprise staffs the hybrid cloud provides the opportunity to work more closely together to define and achieve aggressive, innovative enterprise goals in an economic, effective, innovative manner.