

HYBRID CLOUDS

Defining a Sustainable Strategy



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Executive Summary

While a number of organizations are gaining experience and increased confidence in shifting their core business functions onto cloud platforms, many organizations are still approaching cloud-based deployments with caution. Even enterprises that have presence in the cloud are more careful, when it comes to solutions involving multiple cloud providers. A hybrid cloud model is not the default choice for any organization. On one hand, these models allow organizations to take advantage of benefits such as global presence, reduced vendor lock in and cost optimization. However, on the other hand, they also pose a number of challenges. Evaluating the needs for using hybrid cloud and choosing the right strategy that is closely aligned with the business objectives are essential for successful hybrid cloud adoption.

This paper discusses the various benefits an organization can get when selecting a hybrid cloud solution to address their business problems. It also covers a number of key stakeholder concerns that need to be addressed. Finally, it outlines the components of a sustainable hybrid cloud strategy, and how UST Global can help your organization gain the most out of cloud adoption.

Intended Audience

This whitepaper is intended for the business and technology decision makers who want to consider a hybrid cloud model for their business. This paper discusses the various elements of a hybrid cloud strategy that can lead to successful business outcomes and how UST Global can help the businesses achieve that.

Why Hybrid Cloud?

Let us examine the key challenges that the current-day enterprises encounter as indicated in Figure 1. Does your organization face one or more of these problems? Then, you need to seriously look at adopting a hybrid cloud model for your IT infrastructure. In this section, we highlight the key benefits that a hybrid cloud model could offer to your business. First, let us look at what a hybrid cloud model means to an organization. National Institute of Standards and Technology (NIST) defines hybrid cloud as “a composition of two or more distinct cloud infrastructures that remain unique entities but are bound together by standardized or proprietary technology that enables data or application portability”¹. In simpler terms, a hybrid cloud model integrates an organization’s private cloud infrastructure with one or more public clouds.

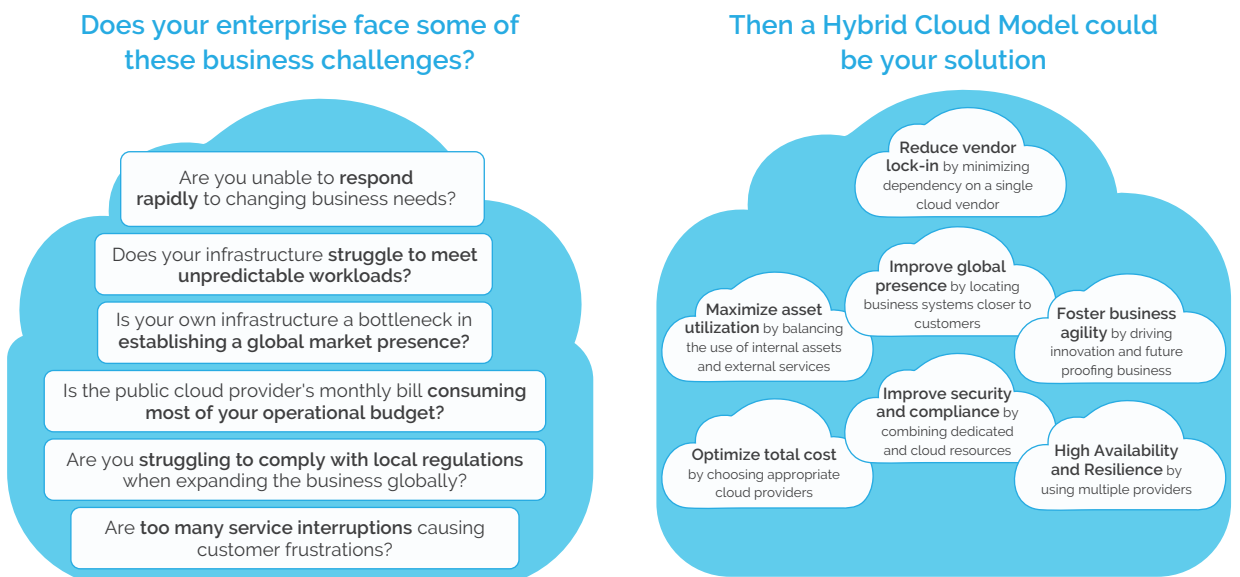


Figure 1: The problem space

From a business perspective, a hybrid cloud model allows an organization to optimize asset utilization – by balancing the use of internal assets with the private cloud as well as the external services offered by public clouds. However, this requires careful strategy planning. The call of the hour for organizations is to develop a well-defined hybrid cloud strategy that enables them to respond rapidly to changing business needs and at the same time maintain the necessary control. In the later part of this paper, we discuss the key attributes that would help an organization to develop a sustainable hybrid cloud strategy.

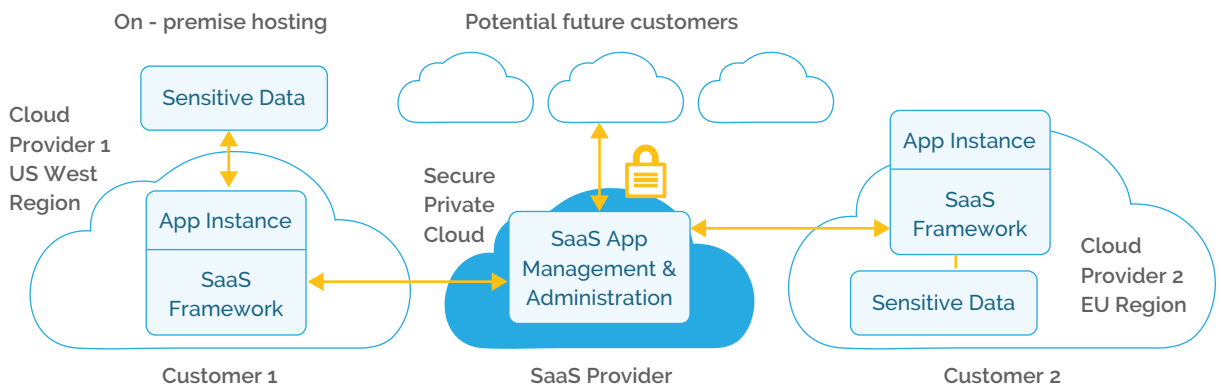
Figure 2 shows the key benefits of adopting a hybrid cloud model for your business needs.

Example 1: SaaS Application Serving Customers from Multiple Countries

Business Problem: Our client, a Media SaaS Provider, met with a challenge where a number of international customers would sign in only if their instances of the SaaS product are hosted on the public cloud infrastructure of their choice and within their country / continent. Some of these customers have even mandated connectivity to their own private cloud infrastructure.

Solution Provided: In this case, the only choice The SaaS Provider had was to use a hybrid cloud model to host the SaaS application utilizing a mix of private cloud and public cloud infrastructure hosted in various geographic regions. High-level view of the proposed solution is given below.

Results Achieved: The competitive advantages offered by the solution for the SaaS provider were: Confidence to seamlessly on-board a global client, Ability to quickly achieve global presence, Quick adherence to the local regulations, and Ability to support each customer's SLA without affecting other customers.



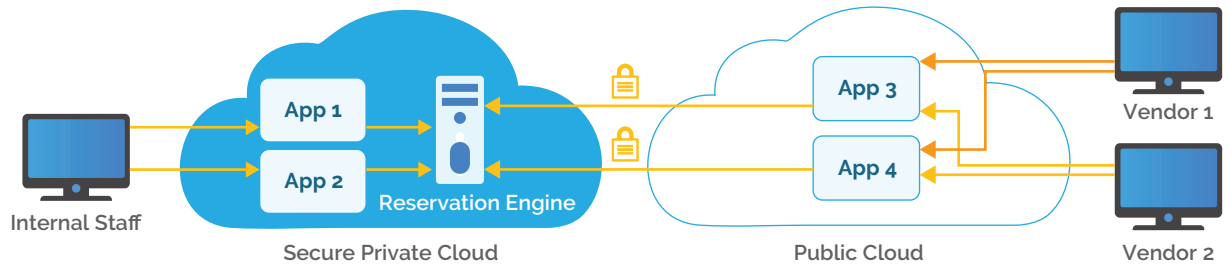
Example 2: Keep Sensitive Systems On-Premise – Serve Customers from Public Cloud

Business Problem: A leading Cruise Line company wanted to extend their reservation system to a large number of vendors in addition to serving the internal support staff. The company wanted to leverage their existing software and hardware investments, and provide isolation between internal and external users. However, the company didn't want to expose their core reservation engine and sensitive data to public.

Solution Provided: On-premise infrastructure along with their core reservation engine was made part of a secure private cloud which also served the internal customers. Front-end applications

were deployed to a public cloud serving external vendors, thus achieving rapid scalability to support additional vendor workloads.

Results Achieved: Rapid scaling to quickly support additional customers, Protection of intellectual assets, and Bringing the systems nearer to the customers.



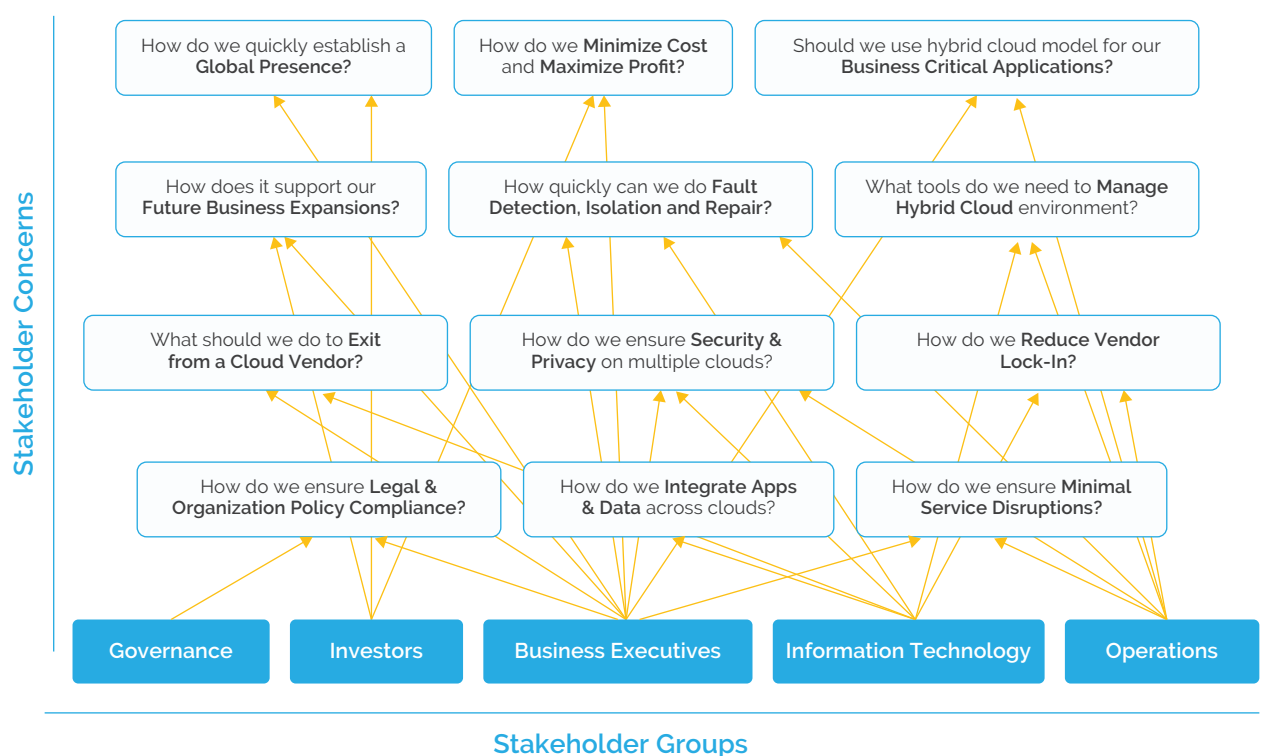
Hybrid Cloud - Concerns & Challenges

In the recent Worldwide Cloud 2015 Predictions², IDC envisages that over 65% of enterprise IT organizations would commit to hybrid cloud technologies before 2016.

However, organizations need to make sure that every step in their hybrid cloud journey provides successful business outcomes, in spite of the challenges faced during each phase of its implementation.

This section explains key challenges and concerns that an organization need to address during the course of adopting a hybrid cloud model. Along with the numerous benefits that a hybrid cloud model offers, a successful hybrid cloud adoption needs to take into account various concerns of the key stakeholders. Figure 3 shows a set of important stakeholder concerns pertaining to hybrid cloud adoption.

Next section discusses how an effective hybrid cloud strategy addresses stakeholder concerns and brings in business benefits.



Defining a Successful Hybrid Cloud Strategy

For any organization, true success of adopting a hybrid cloud model depends on how closely it is aligned with key organizational goals and initiatives, the expectations of individual stakeholders, and the realized benefits of business goals. An important step in this exercise is to formulate a hybrid cloud strategy. However, it must be noted that an effective hybrid cloud strategy cannot be a mere extension of an organization's existing single cloud strategy. Instead, it must focus specifically on how to extract the maximum business benefits while addressing the specific concerns that key stakeholders have about hybrid cloud (Figure 4).

In a 2014 international survey³ from Avanade Inc., conducted with 1000 C-Level executives, business leaders and IT decision makers, 75% of C-level executives believed that implementing a hybrid cloud strategy would be one of their biggest areas of focus in 2015. However, 58% of the respondents did not currently have a hybrid cloud strategy in place. Even those companies with a hybrid cloud strategy did not have clearly defined steps for implementing cloudnative applications, application migration or a cloud management platform. In fact, many companies are simply using the cloud infrastructure to just run their existing applications. This survey clearly illustrates the importance of developing a hybrid cloud strategy – we propose it to be business outcome focused.

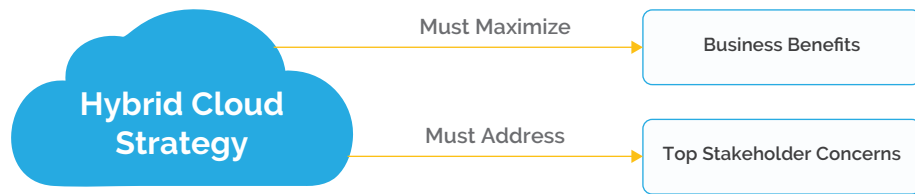


Figure 4: Qualities of a successful hybrid cloud strategy

Figure 5 shows some of the key components that are essential for building a highly successful hybrid cloud strategy. Table 1 summarizes a set of important points that must be taken into account under each component category.

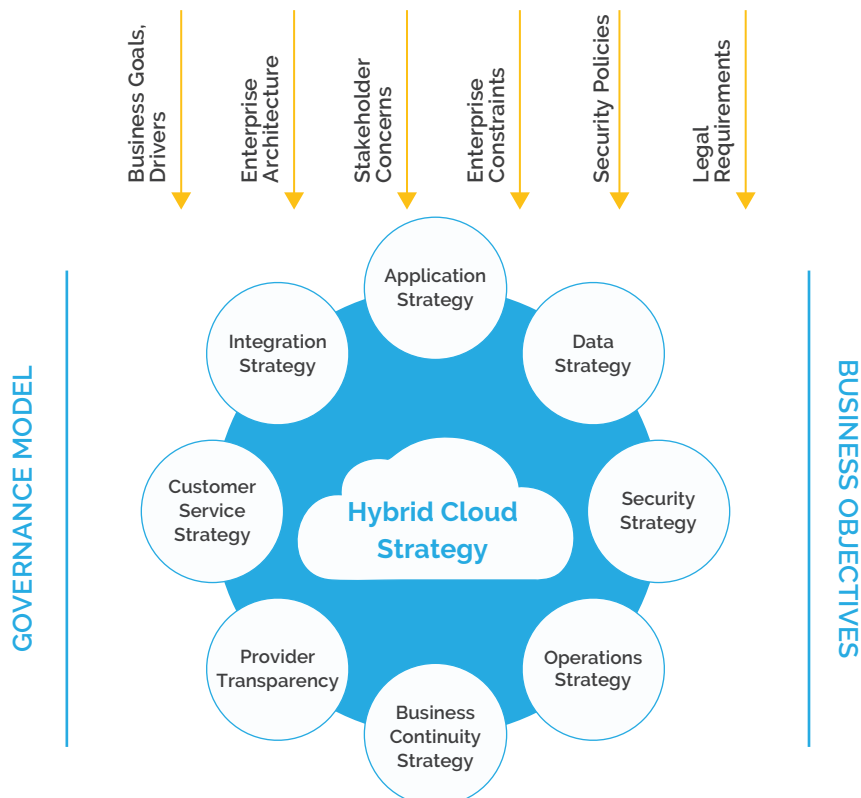


Figure 5: Key components of a successful hybrid cloud strategy

Category	Example Points to Consider
Integration Strategy	<ul style="list-style-type: none"> • Integration of business services, applications and data within and across cloud boundaries • Selection of enterprise integration patterns, based on business scenarios • Demarcation of business transactions between integration points
Data Strategy	<ul style="list-style-type: none"> • Strategies on data encryption and data sharing within and across cloud infrastructures • Enforcement of regulatory compliance and data sovereignty policies across geographies • Data backup and recovery strategy – for individual as well as the entire cloud portfolio
Security Strategy	<ul style="list-style-type: none"> • Strategies around integrating with identity providers and using federated security schemes • Policies around application-to-application authentication & security (intra- and inter-cloud) • Planning for perimeter security, access control policies, intrusion detection and monitoring
Operations Strategy	<ul style="list-style-type: none"> • Hybrid cloud management strategy – people, tools and processes • Integrated alerts and monitoring messages across cloud • SLA management across multiple clouds, strategies to collect and analyze metrics
Application Strategy	<ul style="list-style-type: none"> • Cloud mapping matrix – choice of the right cloud for each application • Geo load balancing strategy – which application instances serve which customers • Strategies on automated release management to multi-clouds during SDLC cycles
Provider Transparency	<ul style="list-style-type: none"> • Cloud selection matrix – criteria around choosing cloud providers and their regions • Entry & Exit strategies – when to use particular cloud services and when to exit • Transparency across cloud providers - easy access to performance, usage and billing data
Customer Service Strategy	<ul style="list-style-type: none"> • Development of globally scalable support services that are available 24 * 7 * 365 • Ensure consistent customer experience, despite the changes within hybrid cloud ecosystem • Audit trails on customer activities spanned across multiple clouds
Business Continuity Strategy	<ul style="list-style-type: none"> • Ensure business continuity in spite of operational failure in the hybrid cloud ecosystem • Approaches to guarantee business SLAs regardless of outages in the cloud environments

Table 1: Important points for consideration under each category in hybrid cloud strategy

UST Global Cloud Service Offerings

UST Global®, established in 1999, provides IT solutions that propel businesses forward, helping CIOs build the future of their organizations, and merging industry-specific expertise with transformative thinking. UST Global delivers market-defining solutions to Global 1000 companies with speed and agility. By focusing on “fewer CLIENTS, more ATTENTION”, we invest significantly upfront in each client relationship to ensure full client satisfaction and value. As a trusted partner to clients worldwide, UST Global uses an optimal blend of locally based senior resources and highly accomplished and cost-effective offshore teams. Headquartered in Aliso Viejo, California, UST Global fosters client-specific cutting-edge innovation from its state-of-the-art centers in the United States, the United Kingdom, India, China, Spain, Malaysia, Singapore, Philippines, and Mexico.

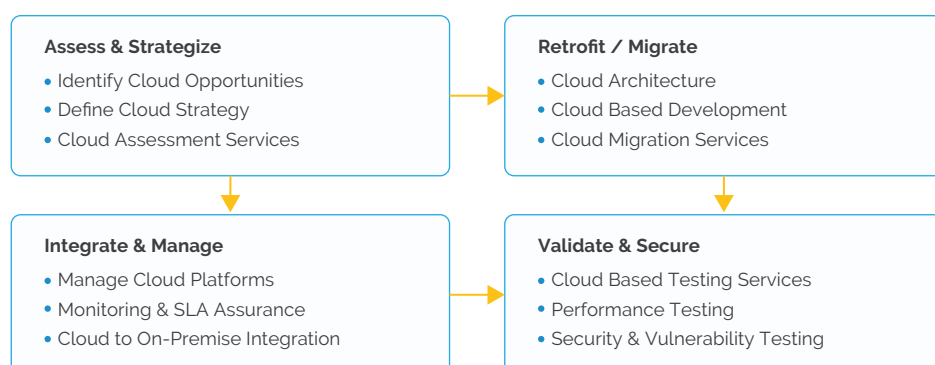


Figure 6: UST Global Cloud Services

Summary

Enterprises need to respond to changing business needs while ensuring necessary controls to empower business needs. As businesses expand globally, their existing IT infrastructure becomes redundant and their reliance on a single cloud provider becomes too risky. Businesses large and small are turning to blended infrastructure because it combines the best of all worlds: public cloud, private cloud and dedicated servers working together in any combination.

Like any Enterprise IT Architecture, there is no "one size fits all" solution when it comes to hybrid cloud. Having an effective hybrid cloud strategy helps you assess your current position, identify your future requirements and develop a road map for a successful hybrid cloud migration.

Adopting hybrid cloud into an organization's system portfolio and making it deliver the desired business outcomes is not a trivial task. It starts with the planning and creation of an effective hybrid cloud strategy, with the help of a service provider having solid expertise in this area. UST Global can help organizations improve their top-line revenue in their hybrid cloud migration journey while reducing the risk of outages and optimizing costs. With UST Global Cloud Services, an organization can transform its existing IT ecosystem to one that is a portfolio of public, private, and hybrid cloud services in the most cost effective manner.

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UST Global is headquartered in Aliso Viejo, California and operates in 21 countries. Our clients include Fortune 500 companies in Banking and Financial Services, Healthcare, Insurance, Retail, High Technology, Manufacturing, Shipping, and Telecom. UST Global believes in building long-lasting, strategic business relationships through agile and client-centric global engagement models that combine local experts and resources with cost, scale, and quality advantages of global operations.

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