



Hybrid Cloud: The Architecture of Choice for Transformation

The 451 Take

Hybrid, once an unintended (yet in retrospect, completely predictable) consequence of unchecked technology sprawl, is emerging as the predominant strategic posture for managing IT and digital transformation. As flexible/agile cloud infrastructure (both public and private) becomes embedded into mainstream IT, organizations are beginning to take a more mindful approach to their hybrid strategy. Some key considerations when deciding which workloads go where include best execution venue, data locality, application performance assurance and overall cost. Implementing and optimizing hybrid environments is not a 'set it and forget it' process. For individual workloads, self-service provisioning/on-demand access is a major benefit of public cloud. But enterprise IT estates now feature workloads deployed in a variety of cloud environments, along with distributed applications, silos of storage, and traditional IT workloads that require ITIL-levels of resiliency and service management. Managing this mix of components is challenging, and it magnifies the complexity of managing the infrastructure environment.

Enterprises require hybrid environments for integrated operations across the cloud continuum and a service delivery approach that ensures consistent service level management across the entire infrastructure/application environment. As hybrid cloud becomes more relevant for specific workloads, buyers will expect a homogenous user experience across all cloud platforms – public, private and hybrid. While a majority of enterprises identify hybrid cloud as the way forward for their IT estates, many are still developing strategies for the deployment, operation and management of on-premises/private and off-premises public cloud resources in a unified IT environment.

Hybrid Cloud is a Near Universal Imperative

Source: 451 Research NTT Hybrid Cloud Study 2020

Q: Which of the following best describes your organization's status with regard to hybrid cloud (which we describe as a combination of private cloud and public cloud)?

Base: All respondents (n=950)



In general, organizations that have not yet begun to execute on their hybrid cloud visions are confronting an inconvenient truth: that implementing and optimizing hybrid environments is not straightforward. IT is an iterative process requiring up-front (Day 0) planning and design, phased migration and deployment (Day 1), ongoing management (Day 2), and optimization. While some workloads belong in (and greatly benefit from) public cloud environments, this may not be the case across the board. Emerging hybrid infrastructure options present a challenge to infrastructure and operations leaders due to their varying value propositions and resilience characteristics.

Enterprises need to think holistically about their workload and application requirements – not just the technological specifications, but also the financial/total-cost-of-ownership implications, enterprise security considerations, internal governance issues, and compliance mandates that are part of the decision-making mix. This up-front work is vital to ensuring that the eventual hybrid strategy accommodates seamless, uninterrupted operation (and modernization) of existing mission-critical workloads and supports net-new digital initiatives.

451 Research's data finds that cloud platform expertise is a key area in which organizations face skills gaps. As a result, enterprises increasingly look for external assistance to integrate, manage and optimize hybrid private/public, on-premises/off-premises infrastructure environments, as well as centralized cloud operations and a single version of the truth for resource management, performance monitoring, identity access and management, and security.



Business Impact

Factors to consider as you plan your hybrid strategy include the following:

APPLICATION-CENTRIC, APPLICATION-FIRST. This notion should be the top-of-mind organizing principle of your hybrid journey; discovery and classification should be the first step. Take stock of your organization's application/workload portfolio through an operational lens, looking at factors such as processing, storage and latency requirements; application dependencies; and overall operational complexity.

INTEGRATE THE BUSINESS-CENTRIC PERSPECTIVE. Once you've mapped and documented the technical aspects of your applications, the next step is layering on the business considerations. What are the cost, security, regulatory/compliance, and business-criticality/data-sensitivity factors that may shift workload deployment decisions toward (or away from) certain IT deployment venues?

MIND THE (SKILLS) GAP. Identify areas where internal expertise is lacking and determine whether engagement with a provider of managed/professional services could accelerate implementation and optimize execution of the hybrid strategy. Develop a plan that will entail transforming IT's skills from being infrastructure and product experts to having software skills with knowledge of how to code to RESTful API standards.

OPERATIONALIZE THE HYBRID STRATEGY. Standardization and consistency form the foundation of hybrid success; achieving this goal requires centralized monitoring and management of the IT estate. With unified management in place, policy management can be applied across the entire environment, making it possible to implement workload placement decisions based on organization-wide or application-specific considerations such as security controls, data protection/data sovereignty rules, IT governance processes, and resource/cost allocation parameters. IT operational teams will need to audit their procedures to assess their level of ITIL maturity before they can begin automating and streamlining their operational practices.

CHOOSE THE RIGHT MANAGEMENT PLATFORM. Workloads may not remain in their current environments forever, which is why you should ensure that your hybrid approach accommodates legacy workloads operating alongside cloud-native applications. Remember that developers are a key element in digital-era business supply chains. Be sure that the architecture enables the developers to build and deploy applications across environments as needed (or allowed) to deliver the speed and flexibility demanded by digital transformation.

Looking Ahead

Business disruption is the rule (not the exception) in the digital economy. Organizations need IT environments that are optimized for change while being sufficiently resilient and secure to meet enterprise performance and compliance requirements. While cloud plays a key role in enabling digital transformation, enterprises must simultaneously develop modernization strategies for legacy mission-critical workloads, adopt cloud-native approaches to application development for net-new workloads, and integrate the old and the new within a common management and operations framework. Hybrid cloud helps to deliver on these imperatives, but the integration piece brings with it engineering challenges that service providers are stepping in to resolve, helping organizations put effective hybrid operating models in place.



[Learn more about how NTT Ltd can help](#) you manage through the complexity of your disparate cloud services and environment and get to one integrated hybrid cloud with consistent cloud management across any delivery mode on a global level.