What Is Multicloud?

Multicloud is the use of multiple cloud computing and storage services in a single distributed architecture. Multicloud also refers to the distribution of cloud assets, software, and applications across several cloud environments, using multiple cloud computing platforms to support a single application or ecosystem of applications that work together in a common architecture. Multicloud can include multiple public cloud providers, on-premises environments (NetApp® HCI), private-cloud infrastructure with a public-cloud provider (hybrid cloud), or a combination of both approaches.

HOW DOES MULTICLOUD WORK?

There are various architectural approaches to multicloud. You can build different portions of an application stack in different clouds, with each portion accessing different systems and services that are required to work together. The intelligence in such scenarios is often built in to the application itself rather than the infrastructure side of the stack.

In other scenarios, the same application services might be required to run in more than one cloud, and few (if any) code changes would be required for the different physical locations. Although this approach used to be challenging to accomplish, modern Linux container orchestration, especially Kubernetes, has made application portability across different clouds, both public and on premises, far more feasible.

WHY MULTICLOUD MATTERS

There are many reasons to implement a multicloud architecture for an application:

- Building an application to take advantage of best-in-class services that span two public cloud providers
- Using two public cloud providers to reduce risk or cost
- Avoiding vendor lock-in

Many environments involve an on-premises architecture component. This approach is typically for economic, regulatory, or technical reasons related to accessibility of ancillary systems that were previously built to run in the data center.

Multicloud situations are sometimes inherited within an organization. For example, separate teams might have made different architectural decisions and then come together after an acquisition or a decision to integrate two autonomous applications. In these situations, there is often a lack of cohesiveness that makes integration challenging. It is important to partner with an open, agnostic vendor who can help solve this problem and create a forward-looking hybrid multicloud strategy.

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BENEFITS OF A MULTICLOUD ARCHITECTURE

Organizations whose cloud environments incorporate a full breadth of enterprise capabilities will gain market advantage. Advantages come with delivering a consistent hybrid multicloud experience based on frictionless consumption, self-service, automation, programmable APIs, and infrastructure independence. This advantage ensures that customers can thrive by unleashing agility and latent abilities in their own organizations.

A well-executed multicloud strategy can create many business benefits, given an architecture that includes:

- A common, integrated experience across multiple public cloud and private cloud environments
- Simplified, trackable end-user consumption of IT resources across multiple clouds, often including self-service
- Deployment and management automation to efficiently meet disparate needs in a timely fashion
- Flexible access to best-in-class cloud services from multiple providers, including Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform

CONTINUE READING ABOUT MULTICLOUD

- The Easy Button for Delivering Better Experiences. Faster. With NetApp and Red Hat
- What the Heck Is VMware Private Cloud with NetApp HCI, Anyway?
- Complete Data Protection for the Private Cloud: Recovering from Disaster with SnapMirror® and Element® OS
- NetApp Simplifies Hybrid Cloud Adoption with NetApp Cloud Volumes for AWS and Support for VMware Cloud on AWS

About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation, and optimize their operations. For more information, visit www.netapp.com. #DataDriven.