NAVIGATING THROUGH THE CLOUD

Cloud computing has ceased being a luxury afforded by a few; it is a prerequisite for a modern organization.

Choosing between a multicloud or hybrid cloud model depends on enterprise specific requirements and priorities.

Multicloud

Global Multi-Cloud Management Market is valued at USD 6.10 Billion in 2021 and is expected to reach **USD 39.77 Billion** by 2028 with a CAGR of **30.7%** over the forecast period.

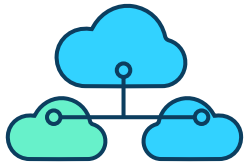
- The multicloud approach is when an organization runs its cloud computing from two or more cloud providers. Organizations pick and choose different vendors based on services that best fit their business.
- Allows organizations to choose the 'best-of-breed' solutions as needed. E.g., AWS offers advanced analytics. Google Cloud is the leader in AI and open-source technologies.
- Reduces vulnerability of outages, data losses, and unplanned downtime since an outage in one cloud won't impact the services from the rest, thereby increasing resilience and reliability.
- It can be as simple as using software-as-a-service like Salesforce and Workday.
- Runs enterprise applications on a Platform-as-a-Service. (PaaS) or Infrastructure-as-a-Service (IaaS) from multiple providers like AWS, or Azure.
- The primary benefit of the multicloud solution is to avoid vendor lock-in, reducing risk while being cost-effective.
- The key focus is to manage services and resources across multiple clouds centrally.

Multicloud

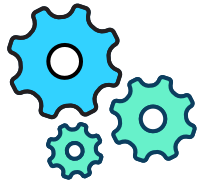
Challenges while adopting a multicloud strategy.

Security and Network

An organization can find it difficult to implement and manage its IT functions across multiple clouds from different providers - security policies, networking protocols, user authentication, and access protocols.



Navigating and managing multiple cloud environments is complex.



Application interoperability

Moving applications in a multicloud environment can be complex because of the proprietary nature of each provider platform.

Hybrid Cloud

- A hybrid cloud is a combination of public and private clouds (dedicated solely to the customer).
- A key differentiator is that resources will work together rather than as separate entities.
- In contrast to the multicloud solution, each platform will serve different purposes.
- Ensures highly sensitive data and processes remain on the premise in a controlled environment while enjoying the resources and lower overheads of the public cloud.

Multicloud Vs Hybrid Cloud

	Hybrid cloud	Multicloud
Architecture	Public, private clouds, or on-premises data canters.	Multiple public clouds
Cross cloud workloads	Components work in tandem; data and process intersect.	Different clouds handle different tasks, so data and processes run in silos.
Sensitive data	Resides on the private cloud or on-premise.	Data is in the public cloud.
Security	Highly secure since it resides on-premise or in a private cloud.	Public clouds are responsible for security.
Vendor Lock-in	High integration among the environments makes it difficult to change vendors.	Since each cloud provider handles independent data and workloads; switching them is easy.
Cloud Migration	Migration is usually a shorter process since most workloads run locally.	Having to migrate to multiple clouds can be complex and time-consuming.
Availability	Users might encounter problems if the public clouds encounter problems preventing cloud bursting.	If the cloud fails, workloads can be shifted to another. Can also set up separate public clouds based on user location.
Cost	Organizations incur managing costs of a private cloud or on-premise infrastructure.	Public clouds are more cost-effective.

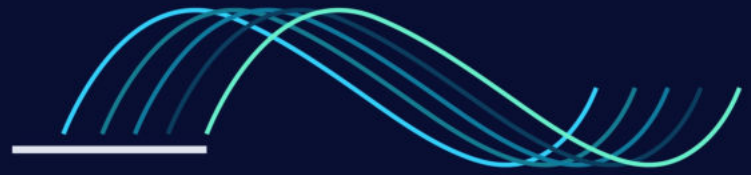
Key trends

Increased adoption of artificial intelligence and machine learning	AI and ML will become increasingly integrated into cloud computing, enabling organizations to process large amounts of data and make more informed decisions.
Growth of edge computing	Edge computing will become more prevalent, allowing organizations to process data closer to the source and reduce latency.
Expansion of hybrid and multi-cloud strategies	Organizations will continue to adopt hybrid and multi-cloud strategies to take advantage of the benefits offered by different cloud providers and increase resilience.
Emphasis on security and privacy	Security and privacy will remain a top priority for organizations using cloud computing, as they look for ways to protect sensitive data and comply with regulations.
Focus on sustainability and eco-friendliness	Cloud providers will place more emphasis on sustainability and eco-friendliness, reducing the environmental impact of their operations.

These trends and developments will shape the future of cloud computing and significantly impact how organizations use and benefit from cloud computing resources.

In Conclusion

- Irrespective of choice, both models offer the advantages of the cloud. Choosing between them would depend on each organization’s requirements.
- The future of cloud computing is expected to be marked by continued growth and evolution.
- Key factors driving growth are the increasing demand for digital transformation, the rise of the Internet of Things (IoT) devices and edge computing, and advancements in artificial intelligence and machine learning.



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