The Multicloud Networking Advantage: Driving Agility, Performance, and Cost Savings

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The growing enterprise adoption of hybrid and multicloud architectures, as part of distributed digital infrastructure, requires the extensive modernization of IT infrastructure, including the network, to ensure adequate end-to-end performance and security. IDC has found that enterprises that fail to properly appreciate the need for network infrastructure modernization invariably discover that the network becomes an inhibitor to successful digital transformation (DX) and cloud strategies.

As applications get distributed across clouds, datacenters, and edge locations, there is a need for definition and enforcement of consistent network policy across the entire landscape. Enterprises also face new requirements for routing traffic reliably through global cloud networks and interconnection-oriented architectures, and delivering secure ingress and convenient on-ramps into clouds to mitigate latency, improve availability, and enhance digital experiences.
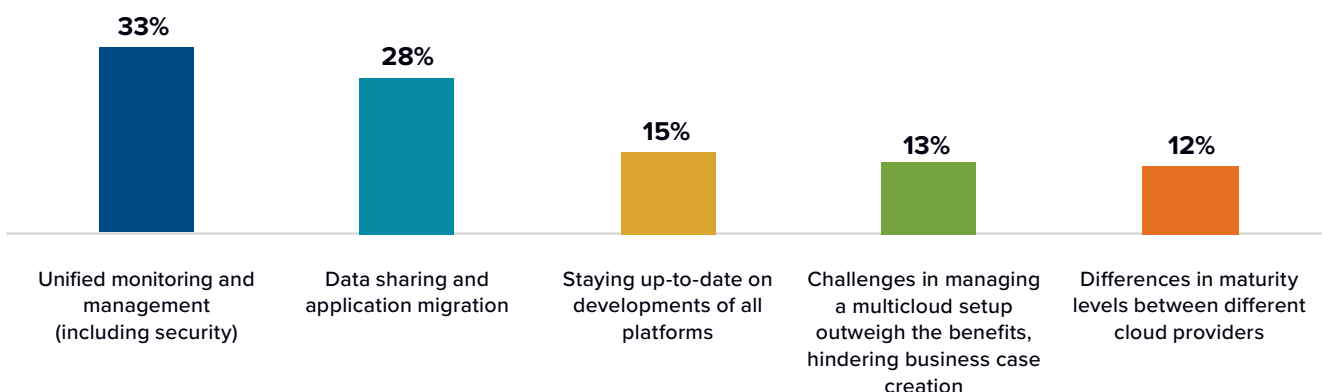
"**75**% of organizations highlighted using a multicloud environment consisting of at least two public cloud providers."

- IDC's Cloud Survey

Exploring Enterprise Multicloud Challenges

IDC Cloud Survey shows that the top challenges associated with a multicloud environment are related to enterprise operations and management (including security), migration of workloads among clouds, and staying up to date with developments across all cloud platforms.

FIGURE 1
Enterprise Challenges in a Multicloud Environment

33%	28%	15%	13%	12%
Unified monitoring and management (including security)	Data sharing and application migration	Staying up-to-date on developments of all platforms	Challenges in managing a multicloud setup outweigh the benefits, hindering business case creation	Differences in maturity levels between different cloud providers

Source: IDC Asia/Pacific Cloud Survey 2022 (n = 1,270 enterprise-size digital infrastructure decision makers in Asia/Pacific)

In this context, IDC finds that traditional network architectures and routing infrastructure, as well as traditional transports and operational models, fail to meet multicloud objectives.

Multicloud Networking Essentials: Exploring Key Attributes and Benefits

Before we begin, it is important to understand that multicloud networking is more than simply connecting, through the configuration of routers or VPNs, to multiple discrete clouds.

Multicloud networking provides automated, policy-based networking to offer connectivity and network services for distributed workloads in and across multiple clouds. Multicloud networking solutions, provided as network software or as a service, are declaratively managed, on demand, elastically scalable, highly available, and secure.

Organizations should take note of the following key attributes of multicloud networking when considering multicloud SPs' offerings.

"Essentially, multicloud networking is an approach that conforms to the key attributes of a cloud environment."

- IDC Research

FIGURE 2
Attributes of Multicloud Networking

Supports distributed enterprise workloads across clouds (IaaS clouds, private clouds, industry clouds).

Declaratively managed, on demand, elastically scalable, highly available, and secure.

Includes abstractions that simplify networking to and across disparate clouds.

Should deliver operational agility and efficiency through observability and actionable insights.

Enables fast troubleshooting and remediation of network issues that affect application availability and facilitates a more proactive (and cost- effective) approach to cloud-centric network operations.

Provides an integral network foundation for digital infrastructure.

Source: IDC, 2023

If You Are Not Already Considering or Using Multicloud Networking, Start NOW

As organizations execute their multicloud strategy, they invariably find that digital infrastructure modernization is both acutely required and highly challenging. To this end, organizations are actively exploring multicloud networking solutions from network SPs, and IDC forecasts that the worldwide multicloud networking market will grow at a compound annual growth rate (CAGR) of 67% from 2022–2027.

Organizations should ask the following questions to assess their requirements as they get started or expand on their multicloud networking journey:

User experience

- At what rate are you migrating new and existing workloads to public clouds?
- How can you ensure that user experience is not impacted for workloads migrated to cloud?

Application and workload performance

- How does your application landscape look today (premises-based versus cloud), and how will it evolve in the foreseeable future?
- How can you manage the performance of cloud-based and premises-based apps?

Network flexibility and scalability

- Is your organization aggressively adopting Kubernetes and cloud-native applications?
- How does your organization's network transformation initiatives align with these cloud ambitions to provide flexible and scalable connectivity?

Network cloud management and operations

- How difficult is it for your organization to manage the networks that support distributed workloads across a hybrid or multicloud environment?

Observability and visibility

- Do you have an overall understanding and visibility of your spending and utilization across all cloud environments? How do you plan to track your total cost of ownership as you migrate more workloads into cloud?

If you decide that you need a multicloud network, you will have to determine your specific requirements, including your preferred architectural approach, deployment model, and network SP partner.

In summary, traditional approaches to network architecture and operations are untenable for multicloud. Organizations should plan as far ahead as possible to ensure that they have a multicloud network that aligns with and facilitates digital business outcomes, and takes place as an integral element of modern digital infrastructure.

"CAGR 67%
(2022-2027)
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