

Every workload has unique requirements, and every cloud has unique strengths. An increasing number of enterprises are executing on a multicloud strategy, deploying workloads in the cloud that optimize performance, security, and costs.

# Maximizing ROI by Selecting the Best Cloud for Your Workload

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## Introduction

Cloud has become the de facto standard for organizations executing on digital-first strategies. According to IDC, 70% of companies are planning a major business transformation over the next five years, and around a quarter of those companies will rely on cloud providers to achieve that goal.

Cloud methodologies have increased the pace of innovation by allowing developers to quickly provision resources, scale on demand, and deploy globally. Operations teams can manage these environments with an increasing amount of automation, improving the overall availability of applications and data. Product teams can respond faster to customer requirements, releasing new features and capabilities as they are needed. The impact can be felt across all areas of the business.

Today, cloud computing accounts for 33% of total IT budgets, and 97% of organizations plan to either maintain or increase their cloud budgets over the next two years.

According to IDC research, these investments are spread across a variety of areas. Security tops the list, with 66% of survey respondents citing concerns involving cyberthreats and the need to protect sensitive data. In addition, 65% of organizations are looking to maximize the performance and availability of mission-critical applications. Another 60% are focused on maximizing utilization of cloud resources.

As CIOs become more cloud savvy, they are exploring new deployment patterns and working through the challenges of how to optimize workloads in a multivendor environment. There is growing interest in multicloud architectures and best practices for facilitating workload mobility between multiple public cloud providers and private clouds. This approach also extends to edge computing, where it becomes essential to deploy applications close to where users are located.

These developments have led to a strategy of matching workloads with the optimal cloud provider and deployment model based on a defined set of requirements to optimize performance, security, and costs.

## AT A GLANCE

### KEY STATS

- » 70% of companies are planning a major business transformation.
- » 64% of companies are currently using multiple cloud providers.
- » 40% of enterprise apps have been architected to run across multiple clouds.

### KEY TAKEAWAYS

Every cloud has unique strengths. CIOs are choosing a multicloud approach to their infrastructure and application strategy to optimize performance, security, and costs.

## Changing Deployment Patterns

Every organization starts with a single cloud provider. However, IDC data shows that 64% of survey respondents are currently using multiple cloud providers; this number rises to 70% if private cloud is included.

Several motivations are driving this trend. According to IDC, 44% of organizations said they have embarked on a "best of breed" approach to selecting a cloud provider. This response is an acknowledgement that cloud infrastructure and platform services are not a commodity but differentiated in how they are designed and delivered. For example, it is not uncommon to use one cloud for enterprise applications and another for data analytics. In other cases, CIOs planned to use a single cloud provider but expanded to others because of architectural limitations.

As cloud becomes a larger percentage of overall IT spend, there has been increased scrutiny on how to manage the associated costs. According to IDC, 33% of organizations indicated that their multicloud strategy is intended to mitigate the risk of vendor lock-in. The ability to move applications between clouds makes it easier to negotiate favorable commercial terms. It also provides an additional level of resiliency in the event a cloud provider suffers a major outage.

Edge computing is also having an impact on how infrastructure is designed to address limitations associated with hyperscale cloud datacenters. For real-time applications where milliseconds matter, the round trip between an endpoint and the datacenter introduces unwanted network latency that negatively affects performance. Another consideration is the cost involved in transmitting and storing data created at the edge, especially if it is not needed long term.

Digital sovereignty, which often starts with data residency requirements, is also attributed to the growth of multicloud architectures. The ability to have control over where data is stored and accessed is necessary as organizations must comply with a growing number of industry and government regulations.

## Workload Optimization

An organization's ability to take advantage of a multicloud deployment strategy is often linked to the architecture of the workloads. IDC research shows an average of 43% of applications have already moved to the cloud. However, there is a difference between migrating a legacy application to cloud infrastructure and modernizing an application using cloud-native concepts such as containers, microservices, and declarative APIs.

Enterprises report their applications fall into three categories:

- » 31% are considered a monolithic single-tier architecture.
- » 32% are n-tier (front end, business logic, database).
- » 37% are considered cloud native designed with microservices.

There are several considerations for selecting the right cloud for a particular workload. The first is to create an inventory of all existing applications, taking particular note of the architecture. Next is to identify usage patterns, determining whether resource usage is consistent or if a plan for bursting is needed to meet peaks in demand. Performance requirements also determine whether a hyperscale region will suffice or an edge deployment is needed. Further, costs, including data transfer fees and other commercial terms, can have an important impact on cloud selection. The worksheets in Tables 1–3 can help an organization select the right cloud provider for its needs.

## Worksheet Section

Workloads that are designed with cloud-native design principles are easier to move to a new cloud provider.

TABLE 1: **Portability Readiness**

Is the workload based on microservices?	
Does communication between microservices rely on documented APIs?	
Does the workload require virtual machines?	
Is the workload implemented with containers?	
Does the workload use any serverless compute functions?	
Is the workload dependent on any specific open source projects?	
Is the workload dependent on any provider-specific platform services (e.g., PaaS)?	
Does the workload need to store/persist data in a database?	

Source: IDC, 2022

Workload performance and scalability requirements can be used to determine the best deployment approach.

TABLE 2: **Performance and Scalability**

Would the workload benefit from geographical diversity in deployment locations?	
Is demand on the workload consistent, or do usage patterns vary?	
What is the maximum allowable network latency for a positive user experience?	
Is there a content/media element to the workload (e.g., images, video)?	
How much data is managed by the workload?	
How much of that data involves transfer from the cloud to an endpoint (egress)?	

Source: IDC, 2022

Additional criteria can also affect the selection of a cloud provider.

TABLE 3: *Additional Criteria*

Are any elements of the workload subject to data sovereignty regulations?	
Does the workload integrate with any on-premises systems in a hybrid cloud model?	
Are there any specific security requirements that would require zero trust segmentation?	
Do you have automated tools to track and optimize cloud costs?	

Source: IDC, 2022

The preceding checklists are helpful when deciding on which cloud to deploy a workload. Workloads that meet five or more portability criteria require less effort to migrate across environments. As a result, they are perfect candidates to consider moving to a provider that offers optimal cost-to-performance and operational capabilities.

Performance and scalability are another concern and one of the main drivers of multicloud. Three or more positive responses to these requirements suggest that the application would benefit from multiple environments.

If your workloads need to meet any of the additional criteria, make sure you look for a cloud with a broad set of region options and a complete set of security and connectivity options.

## About the Analyst



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Dave McCarthy is a Vice President within IDC's worldwide infrastructure practice, where he leads a team of analysts covering shared (public) cloud, dedicated (private) cloud, and edge strategies. Benefitting both technology suppliers and IT decision makers, Dave's insights delve into how hybrid and distributed cloud platforms provide the foundation for next-generation workloads, enabling organizations to innovate faster, automate operations, and achieve digital resiliency.

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