



# **Tackle hybrid cloud challenges with an edge-to-cloud approach**

## Hybrid cloud management doesn't have to be complicated. Here's how to surmount five common challenges.

Hybrid cloud is becoming the preferred strategy of enterprise decision-makers. According to Hewlett Packard Enterprise research, 91% of enterprises currently use the operating model in some form: 33% use a mix of private and public clouds, and 31% use a mix of private and public clouds as well as on-premises. Leaders surveyed overwhelmingly said a hybrid cloud strategy represents the right mix of technologies needed to meet their business goals.

Of course, managing a disparate IT landscape spanning private cloud, edge, and public cloud operations can add managerial complexity. Yet, that shouldn't stop you from embracing hybrid cloud. Here are a few of the most common hybrid cloud challenges, with practical advice on how to solve each.

### 1 → Integrating on-premises and cloud environments

Ensuring seamless interoperability of your on-premises and cloud environments starts in the planning stage. The choices you make early on will have great impact on how your hybrid cloud ultimately works. That means it's critically important to clarify your objectives for using a hybrid cloud architecture and identify what applications, data, and services will need to work together. You can employ many different integration strategies and tools to successfully integrate older and more modern technologies. Assess the requirements of your systems and choose the strategy that best meets your organization's needs.

You can also keep your integrated environments running smoothly by using tools that allow you to monitor and manage your on-premises and cloud environments from a single interface. This helps you maintain visibility, troubleshoot issues, and optimize performance across your hybrid cloud.

### 2 → Managing multicloud complexity

While the flexibility of multiple cloud services can promote greater productivity and innovation, it also brings new complexity that must be managed. Optimizing resources, minimizing security issues, and enforcing policies can all become more difficult in a hybrid architecture across multiple environments. "If you don't have solid technology governance practices in place, you're going to very quickly lose control of that landscape," says Matt Maccaux, global field CTO at HPE.

Cloud governance is the process of creating and monitoring policies that guide your organization's cloud operations and oversee how users work in your cloud environments. It enables you to get more control over system integration, data management, compliance practices, and other areas of your cloud operations, ensuring your hybrid cloud consistently meets your organizational goals while minimizing interruptions and risk. A cloud governance framework can be developed from your organization's existing IT practices, or you may choose to create a new set of rules and policies specifically for the cloud. The most important thing is to design a cloud governance model that suits your business needs.

### 3 → **Maintaining visibility into operations**

As organizations integrate private cloud capabilities and public cloud services, visibility into the environments gets more challenging. It can be difficult to get valuable insights about the availability and performance of network resources, service usage, operational costs, and other factors that indicate the overall effectiveness of your hybrid cloud.

Often a single pane of glass — a dashboard-style monitoring tool that unifies data from multiple sources into a single view — is offered as the solution to visibility challenges. But Maccaux says that isn't always practical given the mesh of different technologies that make up hybrid cloud architecture. Instead, he says, it's more important to decide on a consistent set of metrics to report on what factors matter most to you, regardless of the tools you use.

"Maybe those metrics are related to security or governance or productivity," he says. "Every organization is going to look at it differently. But you've got to define at the executive level the most important things to monitor and report and then drive that through the organization for consistency's sake."

### 4 → **Ensuring security across the network**

The recent increase in cybercrime has put organizations under more pressure than ever to protect their customers' data from theft and prevent interruption of their critical business operations. This is more difficult for organizations when their networks are no longer confined within the four walls of an on-premises data center.

"In the traditional on-premises environment, you own the data center and everything in it," says Maccaux. "In a hybrid environment, you may not own most of the infrastructure. You have to evolve your security policies to adapt to these new operating models and the modern technologies they use."

Using a zero trust architecture is critical for securing your hybrid cloud, Maccaux says. Instead of trusting the users and devices connecting to your network by default, a zero trust approach assumes no user or device should be automatically trusted, regardless of their location or what resource they're attempting to access. A zero trust architecture uses strict policies and permissions and advanced technologies such as AI to ensure authorized users can access only the resources they need to perform their role and nothing more.

"Zero trust is a very different approach than perimeter-based security," Maccaux says. "You trust nothing and make the requesting user or application prove who they are through multiple factors. That's the secret sauce to modern, hybrid cloud security."

### 5 → **Keeping cloud costs in check**

Hybrid cloud can introduce new cost management challenges. Because these environments typically involve multiple cloud providers, it can be complicated to manage the different service offerings, pricing models, and billing structures. It can also be difficult to get a handle on data costs, as each platform may have unique cost management tools and interfaces, making it difficult to consolidate and compare cost data. In addition, it can be challenging to properly allocate resources over multiple environments, resulting in unnecessary expenses due to underutilization.

The first step to improving cost management is to get visibility into your hybrid cloud expenses with effective monitoring and analysis tools. These can help you track spending and analyze trends and patterns so you can optimize the cost and performance of your cloud resources. Another way to reduce unnecessary costs is to leverage automation to provision and scale resources according to workload demands, ensuring resources are provisioned only when they're needed. It may also be necessary to enlist the help of a cloud partner that can provide expertise in optimizing your cloud experience to ensure it's working for your organization.



## Let business needs guide your hybrid cloud strategy

When tackling hybrid cloud challenges, it's important to look at them holistically and consider your overarching business goals, Maccaux notes.

“Hybrid cloud is not just about the tech,” he says. “It’s about the technology processes and the organizational processes that must adapt. When you can do that and combine it with the right technology and people, you set the stage for successful business transformation.”

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