
Strategically Achieving Multicloud Success

Industry leaders F5 Networks, IBM, and VMware team up to deliver a multicloud solution capable of alleviating organizational woes.



How successful businesses operate is constantly evolving, and the time has come for organizations to embrace the multicloud environment. We are all familiar with the hybrid cloud, but what is multicloud? By definition, a multicloud strategy is the practice of using cloud services from multiple heterogeneous clouds, including private cloud and hybrid cloud with more than one public cloud component, to create the best-possible business solution.

A quick look at the stats shows that most organizations understand the need to embrace and ultimately optimize the multicloud environment.

Specifically:

- 73% have a hybrid cloud strategy.
- 66% use at least one private cloud.
- 50% of organizational workloads are in the public cloud.
- 85% of organizations are committed to a multicloud approach.

This trend represents a significant departure from the traditional approach in which in-house data centers host the majority of an organization's applications. And for good reason—with today's demands, the traditional approach falls short.

However, a multicloud approach can quickly become a complex environment—often requiring a mix of management skills at a time when IT is constantly asked to do more with less. Effectively deploying an array of apps or workloads to different clouds means that internal teams need a working domain knowledge of each provider. After all, each cloud environment understandably operates differently, requires different management skills, and often provides services differently. It is a very complex application environment, and in many instances, applications may have multiple owners.

Unfortunately, with the complexity of managing multicloud environments, businesses can see noticeable slowdowns, meaning that the agility benefit is lost, application services are often limited, and inconsistency reigns. As a result, the

benefits that initially attracted organizations to the cloud in the first place rapidly diminish.

Multicloud More Essential Than Ever

Considering the challenges, what makes this multicloud approach important today? Simply put, the digital economy continues to transform how organizations operate. The need for dynamic applications that diligently focus on enhancing customer engagement is driving today's businesses. At the same time, DevOps and mobility are taking center stage. Expectations continue to climb—meaning that organizations need to quickly develop and deploy apps that are both smart and secure.

As companies become increasingly digital, there is a growing need to utilize multiple strategies to optimize the organization's various workloads and app demands. Of course, not all clouds are the same. As such, some cloud environments are perfect for certain workloads yet cost-prohibitive for others. No matter where applications reside, they need an overarching strategy.

Fortunately, when organizations get the multicloud strategy

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right, they benefit from having the agility needed to support compliance-focused environments and consume best-in-class applications or services for deriving the best value from different cloud platforms. They also minimize the risk of widespread data loss or downtime and satisfy diverse partner and customer needs while offering a richer user experience.

The Critical Components of a Multicloud Strategy

What's needed for a successful multicloud environment? As multicloud gains traction, the differences between cloud and

on-premises environments need to become irrelevant. What separates the good multicloud offerings from the bad is the ability to deliver consistency, speed, and security. The following are the critical components for success:

- **Delivering consistency.** Simply put, there needs to be consistency across environments, including private clouds, public clouds, and on-premises systems. After all, IT organizations are tasked with improving the customer experience, and doing so is extremely difficult if operating within differing environments means a lack of consistency. The need for consistency is true for users seeking a rich user experience without latency as well as for development and IT teams tasked with deploying and managing apps regardless of the selected environment. Without consistency, it can quickly become a daunting task for those in IT, DevOps, and the networking group to constantly learn and maintain each individual environment for each application, especially while cloud and security IT skills are in all-time short supply.

In addition, the native application services that come in each cloud platform are often basic in nature. Their features are rarely enterprise-grade, and they are often cloud-service-provider-centric. As multicloud becomes the new reality, organizations need to be able to rely on a solution that seamlessly replicates the same services, functionality, availability, and security they have on-premises within the cloud—no exceptions.

- **Addressing timeliness.** Digital organizations cannot wait. For some organizations, timeliness is about having the pure speed needed to effectively capture first-to-market opportunities. For others, timeliness is about enabling the agility to rapidly change environments or scale as different business units experience burst. The ability to effectively compete in today's environment cannot withstand a wait of weeks or even months for availability.

This is especially true when mission-critical workloads are involved. Successful multicloud environments provide organizations with the agility needed to support and consume best-in-class applications or services (SLA/capacity/analytics/CRM) for deriving the best value from different cloud platforms.

- **Fortifying security.** Security risks are as real as the opportunities within a digital environment. With wide-scale breaches making the headlines almost daily, it's clear that hackers are far more sophisticated today. As a result, security needs to remain a core focus, especially when you're changing where apps reside.

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Unfortunately, security policies are also highly cloud-centric and there are no common security assurances in a multicloud world. Additionally, when it involves a variety of toolsets (Ansible, Chef, or Puppet as well as container offerings such as Mezos and Kubernetes), the resulting environment is complex and it's increasingly harder to keep applications available, fast, and secure. As organizations embrace multicloud environments, the ability to minimize the risk of widespread data loss—whether from attacks or component failure—remains crucial.

Organizations need to align with providers that understand the current threat landscape and devote significant resources to building and maintaining secure offerings. Multicloud environments need to offer organizations secure operating environments that adhere to best-in-class security principles.

Value of the F5/IBM/VMware Partnership

F5 Networks, IBM, and VMware understand the challenges businesses face when building a multicloud environment. As

such, these three providers are drawing from their individual strengths and areas of expertise to jointly develop a solution that provides IT organizations with the flexibility to increase capacity, adapt to change, and stay ahead of evolving business demands.

This strategic partnership enables organizations to quickly move between environments to capitalize on cost efficiencies and differing capabilities—all without monumental changes. The partnership also affords organizations the flexibility needed to scale on demand. At its core, F5 on IBM Cloud for VMware Solutions gives organizations the visibility into and power to control—inspect and encrypt or decrypt—all the traffic that passes through the network. The platform establishes a virtual unified pool of highly scalable, resilient, and reusable services that can dynamically adapt to ensure application availability, performance, and security on IBM Cloud.

When the **F5 Big-IP virtual editions (VEs)** product suite is coupled with **IBM Cloud for VMware Solutions**, the confines that often characterize the operational challenges between on-premises and cloud environments diminish. The ability to offer choice for an industry-standard product set and simplify deployment enables the market-leading installed base of

VMware and F5 clients to replicate their on-premises infrastructure on a seamless, hybrid model running on IBM Cloud. Likewise, for greenfield organizations, the ability to quickly access IBM Cloud and take advantage of the expanding partner ecosystem helps address business challenges.

Since the VMware environment many organizations already utilize in their on-premises environments is exactly the same as what IBM has available in the cloud, the partnership provides the consistency that organizations need within a multicloud environment. Utilizing this common set of standards and policies provides compatibility and common management with the same tools and Layer 4–7 stateful services such as ADC, local load balancing, application security and performance, identity and access control, and application proxies.

Because of the consistency, organizations have the flexibility to allow actual needs to dictate which environment makes the most sense for each individual application. For example, the need for big data processing is a compelling reason to select IBM and its access to Watson APIs. The cognitive processing capabilities Watson affords are not available elsewhere—making them crucial as processing demands and the need for apps to service customers in real time intensify.

Case in Point

Data center consolidation has become a hot topic as organizations look to optimize their resource investments without stripping users of the rich experience they desire. After all, a truly successful data center consolidation program should have no negative effects on the user experience. Instead, it should enable users to do their jobs more effectively, and at a lower infrastructure cost.

Achieving this requires a fundamental shift in emphasis from the network environment to the application. The F5/IBM/VMware multicloud solution facilitates consolidation efforts by providing the methodologies, designs, and technologies that help you build an infrastructure that enables your applications to run efficiently and effectively in an ever-changing environment, whether that's in the cloud, on-premises, or in a hybrid environment.

fies. Additionally, with over-cloud data centers around the globe, IBM can provision cloud resources wherever and whenever needed, which can prove instrumental as global organizations work to comply with the tightening GDPR regulations governing use of European data.

The partnership also addresses the need for speed and agility. Supported by IBM's automation framework, organizations have the ability to order, deploy, and configure the F5 BIG-IP virtual edition products for automated integration with VMware Cloud Foundation and vCenter Server platforms on IBM Cloud. Although it can typically take a significant amount of time—often weeks or months—to set up a VMware production environment, IBM's automation empowers the organization to stand up fully operational bare metal servers within a day. They also automate the installation of F5 services in less than an hour.

By providing a managed multicloud solution, the partnership goes beyond offering Level 4–7 services to create a single unified architecture that encompasses both the on-premises and cloud infrastructures. Using technologies such as VMware's vSphere, NSX, and vSAN empowers organizations to deploy applications in the cloud just as they would in their own data center. F5 is also constantly focused on finding new ways to expand the security offering.

F5 on IBM Cloud enables secure application delivery performance for a reliable enterprise-class cloud experience. This provides fast application deployment, reduced complexity, and consistent policies across the private data center and IBM Cloud. It leverages familiar tools and scripts to manage workloads in the cloud without the need to retool or refactor applications.

Bottom line: Together, IBM, VMware, and F5 Networks have created an agile environment able to react swiftly to changing business demands. Whether an organization is embracing multicloud as a means of data center consolidation, bursting capacity, expansion, or disaster recovery, the resulting solution simply delivers.

It gives any organizations currently running an application in a VMware framework in an on-premises environment the opportunity to scale, with a validated solution that leverages not only F5's BIG-IP suite of virtual services but also automated provisioning and integration with the IBM Cloud for VMware Solutions portfolio.

Organizations can enjoy scalable application delivery services for reduced downtime, protection against advanced threats with leading Layer 7 mitigation services, the ability to deploy and manage network services for specific applications, and seamless workload availability between their on-premises and cloud environments.

To learn more about this valuable environment, visit the [F5 website](#).