

# Moving to Hybrid Cloud: Top 5 Considerations

## Introduction

Businesses are embracing public cloud because it promises increased agility and scalability. But it can also introduce complexity, interoperability, and security concerns. Hybrid cloud is emerging as a way to mitigate those concerns by providing the right combination of internal controls with the ability to securely scale to meet business demand for IT resources.

As you contemplate moving various pre-production and production workloads—and your mission-critical and sensitive data—to the cloud, be sure to develop a strategic approach based on your business and IT objectives.

Here are the top five considerations to keep in mind as you begin evaluating hybrid cloud for your workloads:

### 1. Existing and new application support



Most cloud offerings are not designed to run both existing and new applications on a common cloud platform. As you expand your IT environment to the cloud, you may face compatibility issues with your existing IT infrastructure and the need to rewrite your applications for specific public cloud platforms. You also risk getting locked into a single cloud platform that won't offer the flexibility you need to move workloads between onsite and offsite environments as requirements change. Along with rewriting your applications, you may also need to learn and implement new tools and processes—a time-consuming and expensive proposition.

On-demand application portability is possible with VMware vCloud® Air™, because it is built on the same VMware vSphere® platform you use in your data center. You can run current applications just as they are – no rewrites required. Seamless interoperability gives you the freedom to quickly deploy workloads to the cloud, and the flexibility to move them between onsite and offsite environments. vCloud Air supports a wide variety of Linux and Windows-based operating systems, plus more than 5,000 applications certified to run on vSphere.

### 2. Security and compliance



Businesses consistently identify security and compliance issues as obstacles to more widespread cloud adoption, particularly for mission-critical applications. It is important to determine if the public cloud infrastructure you are considering is provisioned with proper security policies and controls to meet your specific compliance requirements.

To ensure a controlled environment, VMware delivers a policy-driven approach to provisioning, which embeds software-defined security and resource consumption controls so pre-configured IT policies are automatically enforced. This enables you to accelerate provisioning without loss of security, compliance, or control. Security and identity management are integrated into the vCloud Air platform, with services that include VPN, NAT,

DHCP, and firewalls. Role-based access provides authorized and accountable control over cloud resource consumption, and applications can be segmented by various trust levels to ensure compliance and security.

### 3. High availability



Some public cloud environments place the burden of availability on the customer, requiring customers to redesign applications to be resilient on the service provider's platform. This can result in lower performance and availability, compromising the overall experience and expected results of moving applications to the cloud. It also introduces more complexity and silos by requiring different applications to be written for different platforms.

With vCloud Air, you can rely on the underlying platform to provide application availability, rather than redesigning your applications to work around a cloud service provider's platform limitations. vCloud Air offers automated replication, monitoring, and high availability of your applications without requiring any code changes. The service has built-in capabilities that eliminate application downtime due to planned server maintenance, by migrating running virtual machines (VMs) between hosts and rebalancing storage array utilization without disruption. vSphere also enables the auto-restart of VMs in the event of hardware failure, for highest availability.

### 4. Network bandwidth and reliability



Manual network configuration changes are typically required every time an application is moved to a public cloud. This process can introduce errors and network compatibility constraints on everything from application configurations to identity access management and security policies. When moving workloads to the cloud, you don't want to have to choose between two equally undesirable options—deploying applications into one of two discrete environments or throwing away your investment in your existing data center environment—to take advantage of the agility and cost benefits of the cloud.

vCloud Air is built on a seamless virtualized network that allows you to configure your firewalls and network as if they were in your own data center, so you can replicate the network your applications need for operation. You can extend your corporate network without creating new IP domains or adding network management. Packets can be forwarded at wire speed, causing little or no impact on network performance or bandwidth. You can extend corporate controls into vCloud Air by leveraging the same directory infrastructure as your existing data center.

### 5. Time to value



IT and business teams need a highly reliable, stable, secure, and fully supported environment that can take them from zero to cloud in hours, not weeks, with no servers, storage, or cloud software to procure, install, configure, and

maintain. Most cloud service offerings require re-coding or rewriting existing applications, as well as learning new tools and processes. When considering workloads for hybrid cloud, it's important to evaluate ease of migration, breadth of support for existing applications and operating systems, and the ability to manage your workloads across cloud environments—to ensure flexibility and faster return on investment.

You can seamlessly extend your data center to the cloud with vCloud Air for existing workloads and third-party applications, as well as new application development, with the same reliability

and performance you expect from your internal data center. By leveraging the same platform you already run internally, you can extend your management tools into the cloud, providing an integrated IT capability across your data center and the cloud. vCloud Air helps you reduce risk and cost, and avoid the need to invest in additional management tools, reinvent your processes, retrain your existing workforce, and introduce the complexity of yet another platform.

### Conclusion

Companies can ill afford to ignore the potential return on investment of cloud computing, but not every workload is suited to the public cloud. By carefully considering the five key topic areas outlined in this paper, organizations can develop strategies to ensure an effective hybrid cloud strategy—and reap the benefits of greater business agility and cost efficiency.

vCloud Air is a family of cloud services owned and operated by VMware, built on the trusted foundation of vSphere. With vCloud Air, you can seamlessly extend your data center to the cloud, leveraging the same infrastructure, network, management and skills you already use with your internal VMware infrastructure. By extending the same platform and operations model you use in your onsite data center to the cloud, you can deploy and run your applications onsite, offsite or both—without compromise and with less risk.

To learn more, visit [vcloud.vmware.com](http://vcloud.vmware.com).