



IBM Cloud for VMware Solutions

Leverage IBM Cloud for VMware Solutions
to deploy new or existing workloads

Virtualization in the era of cloud

Historically, organizations running virtualized environments on-premises have experienced many challenges like incurring significant capital expenditures, expending resources, and spending a lot of time maintaining and managing onsite servers. Likewise, in this model, licenses are generally purchased with large and lengthy Enterprise License Agreements (ELAs) that are inflexible and unable to scale quickly to accommodate the ever-changing business needs.

In the era of cloud what does virtualization look like and what is the best way for organizations to make the move while maintaining your current investments?

VMware and IBM have partnered together to offer you a streamlined approach for migrating VMware environments to the cloud. By deploying new or existing VMware workloads in a hybrid cloud architecture with IBM Cloud, you can achieve substantial benefits while using the same familiar tools, resources and capabilities you currently employ with on-premises VMware deployments. Together, VMware and IBM are empowering IT departments to transform static server and network infrastructure into dynamic, virtualized resource pools. These resources can be provisioned on demand based on evolving business and technical needs.

What is a hybrid cloud?

A hybrid cloud implementation is when workloads are run in both on-premises or co-located infrastructure, and infrastructure that is hosted by a cloud provider. Hybrid clouds enable you to maximize the agility and flexibility of a public cloud environment while continuing to take advantage of existing investments.

Imagine being able to manage all these resources using the same tools that you've been using for years. A hybrid cloud can extend VMware infrastructure to IBM Cloud enabling you to address critical business needs. Expanding capacity or consolidating data centers, building a disaster recovery environment and modernizing applications to meet key security and compliance goals are just a few opportunities that a hybrid cloud supports quickly and securely.

Why cloud?

Cloud adoption can greatly benefit enterprises that need to expand capacity quickly to meet demand, gain agility not offered on-premises or depreciate heritage architecture. Consider the key benefits of cloud adoption: flexibility, agility, cloud economics and global presence.

Key benefits of cloud adoption



Flexibility

Scale resources up or down without being concerned about over-procurement or under-utilization. Public clouds help eliminate the need to purchase your own hardware, and they can enable you to refocus IT staff on strategic pursuits.



Agility

Expand and contract capacity quickly with pay-as-you-go pricing models. With the cloud, you are freed from procuring your own infrastructure or engaging in long-term contracts.



Cloud economics

Transition from a capital expenditure model to an operational expenditure model. Better budget by proactively sizing your environments based on what is consumed.



Global presence

Move workloads to the geographic areas where you need them running. You can meet business requirements by more quickly reaching new locations or reducing network latency.

¹ VMware accounts for 81 percent of virtual machine software revenue. IDC, "Worldwide Virtual Machine Software Market Shares, 2017: Virtualization Still Showing Positive Growth," December 2018, <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/products/vmware-idc-virtual-machine-market-shares-2017.pdf>

Why IBM Cloud for VMware Solutions?

How do you gain strategic advantage when leveraging VMware on IBM Cloud™? Whether you plan to expand beyond on-premises infrastructure or depreciate heritage architecture, you can gain flexibility, agility, cloud economics and global presence when adopting a hybrid cloud environment on IBM Cloud.

IBM Cloud for VMware Solutions is known for a hardened design based on the requirements of global enterprises, trusted by the most security conscious organizations and takes advantage of deep VMware expertise at global scale. Nearly 2,000 organizations worldwide depend on this portfolio of flexible solutions.

Working together, IBM and VMware provide flexibility and meets you where you are in your cloud journey. To address varying workload needs, IBM Cloud offers both client-managed and IBM-managed solutions.

The client-managed solution, known as [IBM Cloud for VMware Solutions Dedicated](#), includes VMware vSphere and VMware vCenter options in a monthly subscription model on a single-tenant infrastructure. Both client-managed options are available on bare metal servers enabling secure, single-tenant deployments. Additionally, you can retain the same root level hypervisor access as with your on-premises cloud. These models improve compatibility and increase cloud agility.

The IBM-managed solution, known as [IBM Cloud for VMware Solutions Shared](#), leverages VMware vCloud Director in an hourly or monthly consumption model on a multi-tenant infrastructure. This cost-effective, self-service solution provides a way to start migrating virtual machines (VMs) to the cloud in a matter of minutes. IBM Cloud manages the hypervisor, so you don't have to worry about managing, patching or updates. This model is flexible and cost-effective for scalability.

IBM Cloud uses a flexible and secure location for all workloads. With multiple deployment models, more than 100 bare metal configurations, expansive client control and management, IBM provides a secure, cost-effective solution from development and testing to deploying and running mission-critical workloads.

Benefits of running VMware on IBM Cloud

IBM Cloud offers three key advantages: compatibility, security and control.



Compatibility: Many public clouds require you to change to a different hypervisor or unknown API. But IBM Cloud is compatible with existing VMware environments. As a result, you don't have to retrain, re-architect or create incompatible environment silos.



Control: Some enterprise leaders believe that moving to the cloud means losing control. But with IBM Cloud for VMware Solutions, you stay in control with full VMware access. In the familiar vCenter Server or vCloud Director pane of glass, your environment has the same look and feel as when it is operating in your data center. Your environment runs on an IBM's network of secure, interconnected data centers. These same data centers put global expansion and interconnectivity at your fingertips.



Security: Many times, public clouds are considered less secure than on-premises models, but IBM Cloud for VMware Solutions help you avoid such risk. By providing a range of infrastructure options, IBM Cloud fits the security and compliance needs of your workloads. Additionally, IBM Cloud offers the highest-level of key-management encryption with FIPS 140-2 Level 4 and "bring your own key" (BYOK), so only the client can access their data.

Common use cases for hybrid cloud

IBM Cloud provides a global cloud platform with on-demand, high-performance computing power, networking and storage. As a result, it can deliver the elasticity needed without forcing you to completely change your IT operations. Take a look at some of the most common use cases for IBM Cloud for VMware Solutions.

Data center transformation

Migrating VMware workloads from an on-premises infrastructure to IBM Cloud helps expand capacity and consolidate data center infrastructure onto an automated and centrally managed software-defined data center.

- Leverage more than **35 global data centers** varying among dedicated and shared solutions.
- Capitalize on more than **15 years of IBM's experience** deploying and supporting VMware environments.
- Create a hybrid cloud strategy or fully managed VMware on IBM Cloud service with help from thousands of VMware technical experts.
- Protect mission-critical workloads with geofencing, encryption, and multiple firewall and internet gateway options for cost-effective migration to and from the cloud.

Disaster recovery and business continuity

A robust cloud disaster recovery (DR) and backup strategy with multiple solution options and an expansive network of data center-to-data center replication helps protect you in the event of planned or unplanned outages.

- Select from various IBM and ecosystem partner automated solutions including [IBM Spectrum® Protect Plus](#), [Veeam on IBM Cloud](#) and [Zerto on IBM Cloud](#) to expand data protection and recovery options.
- Gain value from unlimited, no-cost bandwidth for replication within IBM Cloud data center-to-IBM Cloud data center, and monthly cloud subscription models for VMware workloads.

- Maintain control and expand choice by implementing a multitier backup strategy with options of file, block and object storage for cost-effective, long-term retention.
- Retrieve data assets in 15 minutes or less with Veeam on IBM Cloud, and recover data quickly to a point in time with Zerto on IBM Cloud, which can deliver accelerated recovery time objective (RTO) in minutes and recovery point objective (RPO) in seconds.
- Reduce IT complexity by leveraging disaster recovery as a service (DRaaS) and backup as a service (BaaS) solutions on IBM Cloud.
- Create a cost-effective DR environment without losing flexibility and scalability with IBM Cloud for VMware Solutions Shared.

Application modernization

IBM and VMware can help you fast-track to Day 2 operations with automation, so you can focus on modernizing VMware applications using containers and access high-value services such as artificial intelligence (AI) and blockchain.

- Retain root access control—similar to on-premises solutions—down to the hypervisor level.
- Adopt Kubernetes without breaking governance or security policies while maintaining full control over the entire stack.
- Integrate existing VMware-based applications into a hybrid cloud strategy and innovate freely between containers and VMware VMs with Red Hat® OpenShift®.
- Deploy VMware NSX-T to enforce networking security policies across containers and VMs.
- Protect workloads with IBM Cloud secure private network and turnkey solutions from partners such as F5, Fortinet and HyTrust.

Choose the options you need from a growing list of available VMware solutions in the IBM Cloud for VMware Solutions portfolio. Select a custom build, automated preconfigured bundle or DR environment.

SAP on VMware in the IBM Cloud

IBM Cloud for VMware Solutions provides the flexibility to deploy SAP S/4HANA your way— on a public or private cloud, on-premises, or in a hybrid environment—to meet your business requirements while maintaining control and security.

- Migrate SAP workloads to the cloud more quickly and securely.
- Leverage VMware HCX with IBM Cloud Direct Link for seamless network extension with high security and low latency.
- Access secure, full control and flexible environment for SAP.
- Get VMware SSDC with full (root) control combined with secure single-tenant SAP-certified IaaS for SAP HANA.

How are VMware solution bundles licensed?



IBM Cloud for VMware Solutions is flexible with an array of deployment options, as well as a client-managed or IBM-managed option to fit your workload needs. No contracts are necessary, and you can scale up or down at any time.



The client-managed option, IBM Cloud for VMware Solutions Dedicated, runs on a single-tenant environment. You can rent VMware licenses on a monthly subscription basis. Licenses rented from IBM are offered on a monthly subscription and metered by physical CPU at a highly competitive price.



The IBM-managed option, IBM Cloud for VMware Solutions Shared, runs on a multi-tenant infrastructure and VMware licenses are included in the price of the solution. This solution can be consumed in a scalable hourly model.

VMware options for the cloud

IBM Cloud for VMware Solutions Dedicated

VMware vCenter Server on IBM Cloud

- Offers automated installation of vSphere on bare metal servers with attached storage options. Optional features include VMware NSX and additional storage capabilities.
- Is available in a two-node minimum configuration and can expand to meet changing requirements quickly.
- Is a client-managed solution on a single-tenant infrastructure.

VMware vSphere on IBM Cloud

- Is a customizable virtualization service that offers full flexibility and configuration control, combines VMware-compatible bare metal servers, hardware and licenses to build your own IBM-hosted VMware environment.
- Build to your needs, select a specific version of vCenter or a true à la carte license.
- Is a client-managed solution on a single-tenant infrastructure.

IBM Cloud for VMware Solutions Shared

VMware vCloud Director on IBM Cloud

- Is a self-service solution that provides capacity flexibility and scalability, with a low startup cost. Available in an “on-demand” or “reserved” consumption model.
- Deploy VMs in minutes. Start as low as 1vCPU and 1GB RAM.
- Is an IBM-managed solution on a multi-tenant infrastructure.

Does elasticity gain mean sacrificing control?



Adopting a cloud strategy should not force you to choose between elasticity and control. With IBM Cloud for VMware Solutions, you remain in complete control without having to trade the reliability and security of your existing infrastructure to get the agility your organization needs. You can continue using the tools, capabilities and skill sets that you developed using vSphere on-premises—and can extend those skills to IBM Cloud.



Other benefits include not having to retrain staff on new tools, and you don't need to build silos, or hire and train new staff to maintain and operate this cloud. Best of all, you don't have to re-architect applications because IBM Cloud for VMware Solutions is compatible with your existing VMware environments.

What do technology partners offer?

IBM and VMware continue to expand the ecosystem of technology partners that support VMware solutions.

IBM Cloud Secure Virtualization — Intel and HyTrust

- Get ensured security of your data in the cloud. IBM has teamed up with Intel and HyTrust to design a data protection and compliance solution.
- Leverage IBM Cloud Secure Virtualization with Intel Trusted Execution Technology (Intel TXT) to geofence data at the microchip level.
- Utilize HyTrust DataControl Workload Encryption and CloudControl Workload Policy Enforcement software to get advanced levels of encryption, data protection and compliance monitoring. This combination addresses security needs and enables clients to prepare for GDPR to minimize audit risk.

F5 on IBM Cloud

- Identify, authenticate and control user access to applications and network resources.
- Defend app-layer attacks, such as bot traffic, DDoS and OWASP Top 10, with dynamic threat profiling and anomaly detection.

Fortinet on IBM Cloud

- Employ segmentation and persistent connection inspection between private and public clouds to mitigate threats.
- Control and segment thousands of applications, users and data for improved availability, visibility and security.

Veeam on IBM Cloud

- Achieve high-speed recovery of applications and data in minutes with this backup and replication solution that offers data loss avoidance for lower RPOs and RTOs.
- Take advantage of verified recoverability through automated backup and replica testing.

- Leverage automatic backups that create isolated copies of your production environment for testing, troubleshooting and training.
- Get comprehensive visibility of virtual environments to help in monitoring environments and issuing alerts for unseen problems.
- Create an offsite disaster recovery environment without the cost and complexity of managing an offsite infrastructure with Veeam Cloud Connect Replication in IBM Cloud.

Zerto on IBM Cloud

- Capitalize on industry-leading DR solutions for virtualized environments, including VMware environments on-premises or in the cloud.
- Gain fast replication of VMware environments with adjustable RPO and RTO options.
- Deploy the Zerto automated solution offered on vCenter Server bundles.



Are you ready to get started?

Learn more about IBM Cloud for VMware Solutions.
Contact your IBM representative or IBM Business Partner,
or visit: ibm.com/cloud/vmware

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Armonk, NY 10504

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