

## Solution brief

# Azure VMware Solution by CloudSimple

Today, public cloud is being adopted for nearly all workloads and use cases based on a gradually growing acceptance among enterprise IT organizations that public cloud is a necessary component of their IT platform and services mix.<sup>1</sup>

Migrating applications to public cloud IaaS has increased demand for managed services as well as the development of virtual machine and database redeployment tools. Now, enterprises are experiencing a broad set of priorities and needs well beyond total cost of operations (TCO), which include key themes like assistance with modernization, on-premises consistency, access to new technologies, and more specific needs like performance, flexibility, and low startup costs.

To meet a growing set of needs from enterprise-class customers, Microsoft continues to invest in Azure to help IT organizations accelerate their cloud journey while reducing risks and costs. Azure VMware Solution by CloudSimple represents yet another installment of our portfolio expansion in that direction.

## Solution overview



Microsoft Azure VMware Solution by CloudSimple is an Azure service that allows you to run VMware workloads natively on Azure. Microsoft provides and supports the management systems, networking services, operating platform, and backend infrastructure required to run VMware environments at scale in Azure.

With this solution, you can deploy VMware workloads on a dedicated, high-performance, and single-tenant environment on Azure. This means you can provision, expand, and shrink your VMware infrastructure on demand—in minutes—while continuing to operate your VMware environment on Azure the same way you do on-premises. Leverage Azure economies of scale without the complexity of rearchitecting your applications—and, you can modernize and enhance your applications at your own pace.

The solution is supported, verified, and certified by VMware.

<sup>1</sup> IDC white paper, *Enabling Cloud for All Compute Needs: Azure's Compute Portfolio*, sponsored by Microsoft, January 2019

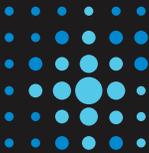


## Key benefits



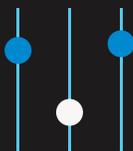
### Lower costs

- Investment protection (tools, relationships, and skills)
- Free Extended Security Updates and reservation pricing
- Azure economies of scale



### Innovation

- Access to a massive ecosystem of Azure services
- Ability to modernize applications
- DevOps toolchains in VMware environments



### Operational and business agility

- No application refactoring
- Operational continuity
- Accelerated transition to Azure

## Solution features

Seamlessly transition from your datacenter to Azure with these Azure VMware Solution by CloudSimple capabilities.

### Deep integration with an existing on-premises VMware environment

#### Native VMware vSphere support

Redeploy, extend, and run VMware workloads in Azure without rearchitecting your environment or converting your vSphere VMs.

#### Full compatibility with VMware tools

Leverage VMware tools and products you know, including vCenter, vSphere Client, vMotion, vRealize Operations, Power CLI, among others.

#### Bundled VMware products

Use built-in VMware vSphere, vSAN, and NSX-T.

#### Fully featured networking stack

Support existing VMware environment networking capabilities.

### Resilient and high-performance infrastructure

#### Dedicated, isolated, single tenant

Use a self-service, automated service running on a dedicated, isolated, and single-tenant environment in Azure.

#### Self-service provisioning

Add or remove Software Defined Datacenter (SDDC) hosts with one click using integrated management with Azure Resource Manager (ARM).

#### Optimized elastic infrastructure

Access a high-performance, VMware-optimized infrastructure that can be rightsized to match your application requirements.

#### Support for high levels of security and encryption

Encrypt your data at rest and in transit using your keys.

### Deep integration with Azure

#### Broad access to the Azure ecosystem

Access the innovation, scale, elasticity, and economies of scale that Azure offers, including the massive array of Azure services such as Azure Active Directory, AI and Analytics.

#### Azure Active Directory (AD) integration

Rely on Azure AD as your VMware vCenter Single Sign-On identity source.

#### Highly secure, high-speed, low-latency connectivity to Azure

Choose from a variety of connectivity options, including Azure ExpressRoute and VPN services, for a reliable, high-speed, low-latency connectivity to Azure.

#### DevOps toolchain support

Receive support for the most popular DevOps toolchains (e.g., Terraform, Jenkins, Puppet, Chef, and others) to help automate your IT environment.

#### Unified management

Discover unified management across Azure and VMware that enables you to use familiar Azure capabilities (Portal, CLI, and ARM templates) along with your VMware toolset. Manage both Azure and VMware resources using ARM for the first time.

# Solution components

## Compute

The underlying infrastructure features Azure bare-metal servers equipped with Intel Xeon processors. Each node offers up to 36 physical cores, up to 512 GB of RAM, up to 3.2 TB of NVMe cache, and up to 11.25 TB of flash storage per cluster.

## Hypervisor

At the time of the release, VMware vSphere 6.7U1b is being used. The hypervisor is maintained by Microsoft. No host-level access is allowed but a “just-in-time” privileged access feature is included to enable access to VMware or other third parties. Use VMware native capabilities for migration. We support vSphere 5.5 or earlier. For large-scale migrations, VMware HCX is included as part of the service. Customers can also use third-party tools provided by vendors such as Zerto, Veeam, and others. Microsoft guarantees a 99.9% SLA.

## Storage

The storage infrastructure is based on hyperconverged vSAN, which features all-flash SSD-based persistent primary storage and NVMe cache storage (up to 3.2 TB). Easily expand storage by adding more nodes. Use Azure Storage for vSphere templates and other similar content. Access Azure services, including Azure storage, directly from your VMware Virtual Machines. Dynamically grow or shrink storage capacity in minutes, as vSAN enables high availability and reliable storage and vSAN storage policies are fully supported. Receive support for key management system (KMS) encryption solutions. Azure Backup can be used in conjunction with the Azure VMware Solution by CloudSimple. In addition, customers can continue to use existing VMware or third-party tools such as Zerto and Veeam.

## Encryption

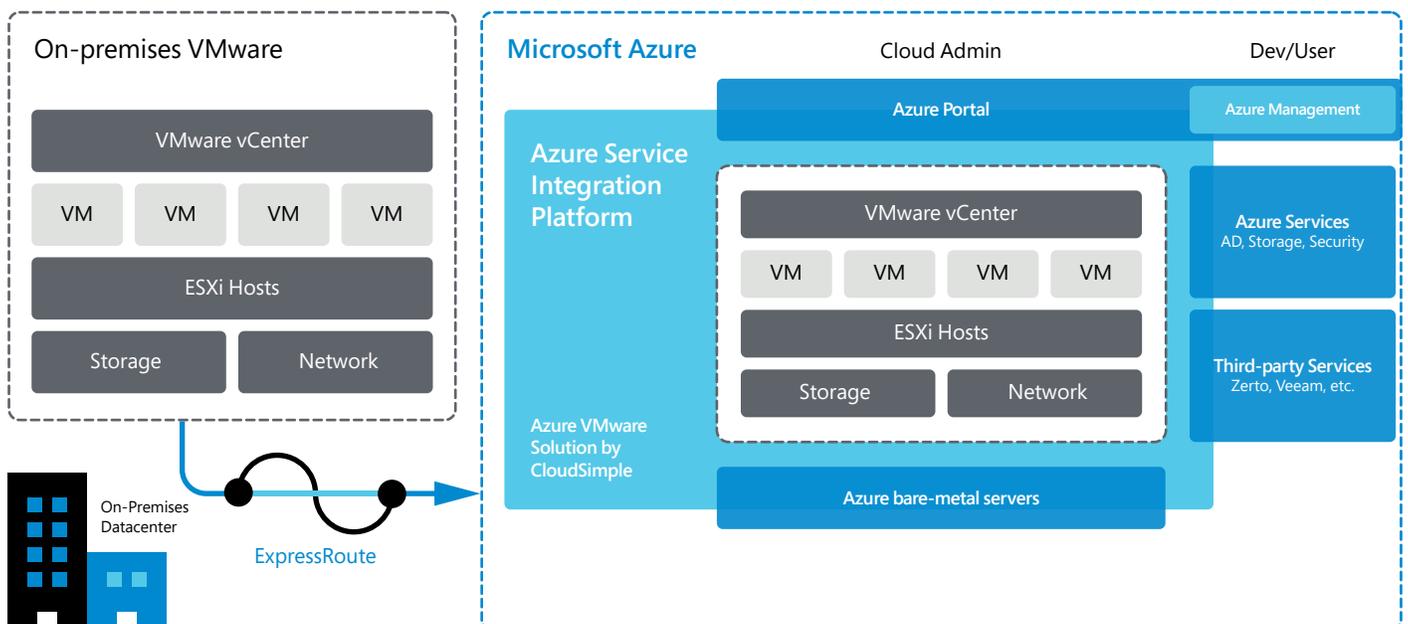
Encrypt data at rest and in transit using preferred methods. HyTrust, a decentralized KMS that allows you to encrypt data at rest, is supported in addition to other VMware compatible KMSs.

## Network and security

NSX-T is built in, including full support for microsegmentation. Underlay network segmentation is provided via vLAN and network security groups. Edge services for access are available via VPN, public IP, and internet. Full connectivity to Azure network, including on-premises environments, is available via ExpressRoute and full self-service management via Azure Portal. Receive dedicated bandwidth up to 50 Gbps for East-West communication between VMs in the VMware cluster.

## Management

You can continue to use the same standard suite of VMware tools that you are using today to manage your VMware on-premises environments. The service includes vCenter and NSX with direct access to the system via UI, Power CLI, or API calls. Manage the environment using tools such as vRealize Automation, Service Now, or others. Additionally, customers can view and create VMware vSphere-based VMs in the familiar Azure Portal. Microsoft also offers access to other Azure infrastructure services through Azure Resource Manager. Now, customers can develop and deploy applications across a VMware environment and Azure through Azure Cloud APIs with integrated identity management across VMware and Azure. In addition, there is support for key features, such as access control, audit logging, alerting, and metrics management, as well as Azure Monitor.



# Customer scenarios

Here are a few examples of how our customers are using the Azure VMware Solution by CloudSimple.

## Datacenter footprint reduction, consolidation, or retirement

Reduce the datacenter footprint via “one-time redeployment” of VMware-based virtual machines while decreasing the overall on-premises infrastructure. Customers can “lift and shift” vSphere-based workloads to Azure in a non-disruptive, automated, scalable, highly available fashion without changing the underlying vSphere hypervisor or the network, security, or data protection policies.

## Datacenter expansion and hybrid cloud

Seamlessly expand or augment datacenter capacity for short periods of time—on demand—with the elasticity and flexible payment plans available in the public cloud.

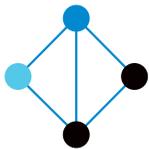
## Disaster recovery and business continuity

Use the VMware stack deployed in Azure as a primary or secondary on-demand disaster recovery site for on-premises datacenter infrastructure.

## Enable new business models and revenue streams

Tap into Azure’s ecosystem so application developers can modernize applications without refactoring existing VMware-based workloads.

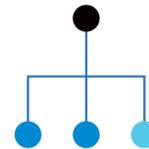
## Differentiated set of capabilities



**Azure native service integrations**—offers Azure AD as VMware vCenter SSO identity source. Connect to Azure services endpoints.



**Lower cost for Windows Server and SQL Server**—provides major cost reductions for Windows Server and SQL Server with Extended Security Updates, including Azure reservations discounts (for both Linux and Windows) for any workload.



**Unified Management**—enables a single pane of glass to manage vSphere-based and Azure native VMs with uniform identities, access control, and monitoring.

Learn more



Request a free trial

