

# Azure VMware Solution

## Contents

- Overview ..... 1
- VMware vRealize Products with Azure VMware Solution ..... 1
- VMware Tanzu Standard on Azure VMware Solution ..... 3
- VMware Tanzu Application Service on Azure VMware Solution.. 3
- VMware Site Recovery Manager for Hyperscalers ..... 4
- VMware NSX Advanced Load Balancer (Avi) on Azure VMware Solution..... 5
- VMware SD-WAN on Azure VMware Solution..... 6
- VMware Horizon on Azure VMware Solution..... 6

## Overview

### Q. What is Azure VMware Solution?

A. Azure VMware Solution is an infrastructure-as-a-service private cloud offering built on VMware Cloud Foundation running on dedicated bare-metal servers in Azure regions. Azure VMware Solution enables a fast path to the cloud for seamlessly migrating or extending existing VMware workloads from on-premises environments to Azure without the cost, effort or risk of re-architecting applications or retooling operations. It is a service sold and supported by Microsoft, backed and cloud verified by VMware.

### Q. What VMware products are included with this solution?

A. Customers can maintain operational consistency as they accelerate a move to the cloud with the use of familiar VMware technology and tools including some of the latest versions of vSphere, NSX-T, and vSAN. With additional features from HCX Enterprise, customers can further simplify their migration efforts to Azure including support for bulk live migrations.

### Q. Can VMware workloads running in Azure integrate with other native Azure services?

A. Azure VMware Solution is a native Azure service and has native integration with Azure’s broad ecosystem of services including DR, Backup, Azure Active Directory, Azure management and security services, Azure Cognitive Services, and more.

### Q. Where is Azure VMware Solution generally available today?

A. The service is currently available in 13 Azure regions with more added regularly.

To view the most update-to-date information on availability, please visit <https://azure.microsoft.com/en-us/global-infrastructure/services/?products=azure-vmware>

### Q. What is the pricing for the solution?

A. The service can be consumed on an hourly basis along with 1-year and 3-year reserved pricing increments.

To view current pricing, please visit <https://azure.microsoft.com/en-us/pricing/details/azure-vmware/>

### Q. How do I sign up for the service?

A. You can contact a representative to learn how to sign up for this service using the “Get in Touch” button on the page linked below.

<https://cloud.vmware.com/azure-vmware-solution#get-started>

## VMware vRealize Products with Azure VMware Solution

### Q. Which vRealize products and versions are tested and supported for Azure VMware Solution?

A. Both vRealize on-premises software and vRealize cloud versions are tested and supported with Azure VMware Solution. For vRealize software that may be deployed in on-premises datacenters, the following are the tested versions:

- vRealize Operations (vROps) 8.3; vRealize Automation (vRA) 8.3, and vRealize Network Insight (vRNI) 6.1.

In addition, vRealize Operations Cloud, vRealize Automation Cloud, and vRealize Network Insight Cloud are all supported.

The vRealize Log Insight software on-premises and cloud versions are currently not supported.

### Q. What Azure VMware Solution VMware SDDC platform versions were the vRealize products tested on?

A. The vRealize products were tested with Azure VMware Solution, which includes the following components of the SDDC & HCX: vSphere Enterprise Plus and vCenter 6.7 U3 standard, vSAN 6.7, NSX-T 2.5.2, and HCX R139 Advanced.

Q. What are the sales channels for these vRealize products?

A. VMware will sell the vRealize products using its standard sales channels.

Q. Who supports the vRealize products used to manage Azure VMware Solution?

A. VMware provides support directly to customers.

Q. Can customers use their perpetual licenses towards the purchase of vRealize products for Azure VMware Solution (BYOL)?

A. vRealize perpetual licenses may be deployed on-premises and used to manage Azure VMware Solution as an end point.

Q. What are the tested and supported customer deployment scenarios for the vRealize products?

A. The tested and supported scenarios are as follows:

- The vRealize software may be deployed on-premises and used to manage Azure VMware Solution as an end point.
- The vRealize Cloud services may be used to manage Azure VMware Solution as an end point.

Deploying vRealize software directly on Azure VMware Solution is not currently a supported scenario.

Q. How do customers purchase the vRealize cloud products?

A. vROps Cloud and vRA Cloud services may be procured through the vRealize Suite subscription or the vRealize Cloud Universal credits. Customers with perpetual licenses may leverage the subscription upgrade program for a discount towards the purchase of vROps Cloud and vRA Cloud services.

More details on vRealize Cloud Universal are available here:

- <https://cloud.vmware.com/vrealize-cloud-universal/faq#general>

vRNI Cloud customers may use their cloud licenses for procurement. More information on vRNI Cloud is available below:

- <https://www.vmware.com/products/vrealize-network-insight.html>

Q. What are the connectivity options for vRealize products deployed on-premises managing an Azure VMware Solution end point?

A. Customers may leverage site-to-site VPNs or an Azure ExpressRoute service to access an Azure VMware Solution end point from vRealize deployed in an on-premises datacenter.

Q. Is there a free trial period for vRealize Cloud?

A. All customers can request a free 30-day trial of vRealize Cloud prior to making a commitment to purchase.

Q. What are the licensing implications of a customer with vRealize software migrating to vRealize Cloud?

A. For vROps and vRA, customers may leverage the Subscription Upgrade Program to move from existing perpetual licenses to vRealize Universal subscription licenses and receive a discount towards purchase of vRealize cloud services. More details on the Subscription Upgrade Program are available here:

- <https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/products/vmw-subscription-upgrade-program.pdf>

For vRealize Network Insight customers, an upgrade SKU will enable customers to receive a discount towards purchase of vRNI Cloud. More information on vRNI Cloud is available here:

- <https://www.vmware.com/products/vrealize-network-insight.html>

Q. What product related best practices guidelines are available for customers looking to migrate older on-premises vRealize versions to the latest vRealize version on-premises; or to vRealize Cloud?

A. vRealize Automation:

- On-premises to on-Premises Upgrade:
  - A vRA migration assistant service (link below) is available for customers to move from vRA 7.0 to vRA 8.0 on-premises.
  - [vRealize Automation 8 Transition Guide](#)
- On-premises to Cloud Upgrade:
  - A similar migration assistant service helping customers migrate from on-premises to vRA cloud is in development. Once it is available, this FAQ will be updated.

vRealize Network Insight:

- On-premises to on-premises Upgrade:
  - Upgrading from vRNI older version software to the latest version is well documented in the product release notes. A link to this document is below.
  - [Upgrading vRealize Network Insight](#)
- On-premises to Cloud Upgrade:
  - Backup and restore procedures for migrating customers from on-premises to cloud variants are outlined in the document below.
  - [About Backing up and Restoring of Deployment Data](#)

vRealize Operations:

- Procedures for migrating content from on-premises vROps to vROps Cloud are captured in the below links:
  - [Managing Content](#)
  - [Importing Content](#)

## VMware Tanzu Standard on Azure VMware Solution

Q. What is VMware Tanzu?

A. Tanzu is VMware's modern apps brand which includes a portfolio of products and services for modernizing customer infrastructure and applications with cloud native technologies such as containers and Kubernetes.

Q. How is VMware Tanzu packaged and sold?

A. VMware Tanzu is currently available in three editions: Tanzu Basic, Tanzu Standard, and Tanzu Advanced. Learn more about Tanzu Editions here: <https://tanzu.vmware.com/tanzu>

Q. Which of the Tanzu Editions are supported on Azure VMware Solution?

A. Currently, Tanzu Standard Edition is the tested and supported edition on Azure VMware Solution.

Q. Which VMware Tanzu Kubernetes Grid version is tested and supported on Azure VMware Solution?

A. The VMware Tanzu Kubernetes Grid version 1.3, included with Tanzu Standard Edition is tested and supported on Azure VMware Solution.

Q. What is the licensing model for VMware Tanzu Standard?

A. VMware Tanzu Standard is available as a subscription license and is licensed on a per core basis for Hyperscalers.

Q. What are the key functionalities included in VMware Tanzu Standard?

A. VMware Tanzu Standard simplifies operation of Kubernetes for multi-cloud deployment. It delivers an open source-aligned Kubernetes distribution with consistent operations and management to support customers' infrastructure and app modernization.

Tanzu Standard provides an enterprise-grade, open-source aligned Kubernetes runtime, powered by Tanzu Kubernetes Grid, which can be deployed across different environments – on-premises on vSphere and VMware Cloud Foundation, on hybrid clouds like Azure VMware Solution, on native public clouds, as well as at the edge. It also provides a global control plane, powered by Tanzu Mission Control, to manage all the Tanzu Kubernetes clusters, as well as any conformant clusters, centrally, consistently, and efficiently. In addition, it includes monitoring with out of the box dashboards using open-source Prometheus and Grafana.

To learn more, check the Tanzu Standard web page and solution brief here:

- <https://tanzu.vmware.com/tanzu/standard>
- [Tanzu Standard Edition Solution Brief](#)

Q. Which VMware Tanzu Mission Control version is included in the Tanzu Standard edition packaging and licensing?

A. Tanzu Mission Control is the product that powers the Global Control Plane of the Tanzu Standard edition. Tanzu Mission Control Standard version is included in the Tanzu Standard edition. To learn more about Tanzu Mission Control Standard version, check out this comparison chart:

- <https://tanzu.vmware.com/content/tanzu-mission-control/tmc-comparison-chart>

Q. Who sells VMware Tanzu Standard on Azure VMware Solution?

A. VMware and its channel partners sell Tanzu Standard to customers.

Q. Who supports VMware Tanzu Standard on Azure VMware Solution?

A. VMware provides support for Tanzu Standard.

## VMware Tanzu Application Service on Azure VMware Solution

Q. What is Tanzu Application Service?

A. Tanzu Application Service is a modern application platform for enterprises that want to continuously deliver and run microservices across clouds. It is often referred to as an application development platform as a service.

Q. What are the benefits of Tanzu Application Service on Azure VMware Solution?

A. Tanzu Application Service delivers high-impact improvements in developer productivity enabling enterprises to modernize existing applications and deploy new cloud native applications that would otherwise require heavy outlays in developer staffing, training, and patching and maintenance effort. Tanzu Application Service customers have seen 37% increases in developer productivity, 82% increases in software production, as well as spending 92% less time patching.

VMware Tanzu Application Service complements the Azure cloud by offering a consistent, integrated experience that simplifies operations and helps you get better at delivering software. Tanzu Application Service provides a consistent modern application platform for developers and operators across on-premises vSphere, VMware Cloud Foundation, Azure, AWS, and Google Cloud Platform to make the benefits of multi-cloud operations a reality.

Q. Can apps running on Tanzu Application Service integrate with native Azure services?

A. Yes, with the [Tanzu Cloud Service Broker for Azure](#), Azure-managed services can be consumed by Tanzu applications.

Cloud Service Broker for Azure uses brokerpaks to expose services.

Q. Which Tanzu Application Service versions are certified on Azure VMware Solution?

A. Tanzu Application Service 2.7 through 2.11 have been certified. VMware HCX certification with Tanzu Application Service for migration of applications is in process.

Q. Who sells and supports Tanzu Application Service on Azure VMware Solution?

A. Tanzu Application Service is sold by VMware and our partners. VMware provides support for Tanzu Application Service.

Q. What professional services are available from VMware to assist customers with Tanzu Application Service on Azure VMware Solution.

A. [VMware Tanzu Labs](#) is a service that partners side-by-side with organizations to accelerate the delivery of software and to modernize legacy apps, all while reducing operating costs and risk.

Q. What is the licensing model for Tanzu Application Service on Azure VMware Solution?

A. Tanzu Application Service components are licensed on an annual subscription basis. Subscriptions scale with the number of application instances, service instances, and runtime components deployed. Please contact your [VMware sales representative](#) for details. The Azure VMware Solution SDDC infrastructure required for Tanzu Application Service can be purchased on an hourly on-demand basis, or with 1-year and 3-year reserved instances.

Q. Where can I find additional information on Tanzu Application Service?

A. These Tanzu Application Service resources apply to installations on Azure VMware Solution:

- [VMware Tanzu Application Service Web page](#)
- [VMware Tanzu Application Service for VMs product information and download page](#)
- [Tanzu Application Service for VMs documentation](#)
- [Tanzu Application Service for VMs on Azure VMware Solution Reference Architecture](#)

## VMware Site Recovery Manager for Hyperscalers

Q. Who sells and supports Site Recovery Manager for Hyperscalers?

A. VMware and VMware partners sell Site Recovery Manager (SRM) for Hyperscalers to customers. VMware provides support for the Site Recovery Manager for Hyperscalers directly to customers.

Q. How can customers obtain Site Recovery Manager for Hyperscalers evaluation licenses?

A. Customers can use the Site Recovery Manager evaluation licenses on the [Site Recovery Manager evaluation site](#). After the 60-day evaluation period, and for production use, customers will need to purchase the Site Recovery Manager for Hyperscalers term license. The evaluation licenses can be replaced with a term license and Site Recovery Manager will continue to work non-disruptively through this evaluation-to-production conversion process. Azure VMware Solution SDDC hosts will need to be obtained directly from Microsoft through the standard mechanisms they may offer (e.g., trial, on demand, reserved instance, etc.)

Q. What is the licensing model for Site Recovery Manager for Hyperscalers?

A. Site Recovery Manager for Hyperscalers is available as a prepaid 1- and 3-year term license only and is licensed on a per protected VM basis in packs of 25 VMs.

Q. What are the key features included in the Site Recovery Manager for Hyperscalers license?

A. The Site Recovery Manager for Hyperscalers license is available in an enterprise edition. It is customer-managed and has the same features as the Site Recovery Manager enterprise edition. Refer to <https://www.vmware.com/products/site-recovery-manager.html> for further detail.

Q. How does a customer install Site Recovery Manager for Hyperscalers on Azure VMware Solution?

A. Microsoft Azure has added a Site Recovery Manager installation click-through workflow on the Azure VMware Solution Portal.

Q. What protection configurations does Site Recovery Manager for Hyperscalers support?

A. Site Recovery Manager for Hyperscalers can protect (1) workloads running in an on-premises datacenter to an Azure VMware Solution SDDC, (2) workloads running on an Azure VMware Solution SDDC to an on-premises datacenter, and (3) between different Azure VMware Solution SDDCs.

Other hyperscaler cloud SDDCs may be added in the future, but cross-cloud protection configurations may not be supported. Refer to the [Site Recovery Manager FAQ](#) for the latest listing of hyperscaler cloud SDDCs that can be used with the Site Recovery Manager for Hyperscalers license.

Note that the Site Recovery Manager for Hyperscalers term license cannot be used to protect workloads between on-premises data centers only – a separate Site Recovery Manager perpetual license is required.

**Q. Can customers use their existing Site Recovery Manager perpetual licenses on hyperscaler cloud solutions?**

A. No. Existing Site Recovery Manager perpetual licenses cannot be used on public clouds.

## VMware NSX Advanced Load Balancer (Avi) on Azure VMware Solution

**Q. How does NSX Advanced Load Balancer enhance Azure VMware Solution?**

A. NSX Advanced Load Balancer Enterprise Edition (Avi) provides a rich set of features with elastic scale, automation workflows and observability to help accelerate your moves to Azure VMware Solution. NSX Advanced Load Balancer provides load balancing and seamless and consistent application delivery in both Azure VMware Solution and connected on-premises data center environments. In addition, NSX Advanced Load Balancer for Azure VMware Solution provides better scalability with auto-scale capabilities, so that the LB capacity can grow based on demand.

**Q. How does NSX Advanced Load Balancer integrate with Azure VMware Solution?**

A. NSX Advanced Load Balancer integrates as an attached load balancing solution, with communication between the Avi Controller, NSX-T Manager and vCenter within Azure VMware Solution. This integration enables NSX Advanced Load Balancer to deploy and manage Service Engines automatically based on demand, providing for an elastic, automated approach to load balancing.

**Q. Where is NSX Advanced Load Balancer installed in an Azure VMware Solution environment?**

A. The Avi Controller resides in the customer environment, either within the Azure VMware Solution SDDC or on-premises. Other NSX Advanced Load Balancer components (Service Engines) run in VMs in the Azure VMware Solution SDDC.

**Q. Who sells and supports NSX Advanced Load Balancer with Azure VMware Solution?**

A. VMware and its partners sell NSX Advanced Load Balancer with Azure VMware Solution. VMware provides support directly to customers.

**Q. What are the use cases for NSX Advanced Load Balancer in Azure VMware Solution?**

A. Avi facilitates application delivery in Azure VMware Solution for use cases such as:

- **Lift and Shift:** Customers familiar with NSX Advanced Load Balancer in their private data centers can move applications to Azure VMware Solution and preserve the same load balancing features and capabilities in the public cloud.
- **Data Center Extension:** NSX Advanced Load Balancer can provide consistent load balancing, Global Server Load Balancing (GSLB) and Web Application Firewall (WAF) for customer applications hosted across on-premises and Azure VMware Solution environments.
- **Disaster Recovery:** NSX Advanced Load Balancer supports BC/DR scenarios for application availability with load balancing and GSLB features.

**Q. Which NSX Advanced Load Balancer (Avi) editions are supported on Azure VMware Solution?**

A. NSX Advanced Load Balancer Enterprise Edition is supported on Azure VMware Solution. NSX Advanced Load Balancer Enterprise Edition is a full-featured load balancing, GSLB, and WAF solution available for multi-cloud and hybrid cloud environments including VMware vCenter, Microsoft Azure, and Azure VMware Solution.

**Q. Can customers use their existing perpetual licenses towards NSX Advanced Load Balancer with Azure VMware Solution (BYOL)?**

A. NSX Advanced Load Balancer perpetual licenses may be used for the tested deployment scenario listed above.

**Q. Is there a free trial period for NSX Advanced Load Balancer?**

A. All customers can utilize a free 30-day trial of NSX Advanced Load Balancer prior to making a commitment to purchase. The trial license is included in the Avi Controller by default.

**Q. How is NSX Advanced Load Balancer (Avi) licensed and packaged on Azure VMware Solution?**

A. NSX Advanced Load Balancer is licensed based on Service Cores (vCPUs consumed by the Avi data-path VMs, i.e., Service Engines). For example, two Service Engines of two vCPUs each would require 4 Service Core licenses. The Avi Controller is not licensed separately and has no cost.



## VMware SD-WAN on Azure VMware Solution

**Q. What does VMware SD-WAN on Azure VMware Solution provide?**

A. VMware SD-WAN, as a part of the VMware SASE solution, delivers a rich experience when users in branch, campus and Work-from-Home locations access their workloads in Azure VMware Solution. The solution provides optimal, reliable, and efficient access for these users by bringing SD-WAN to the front door of Microsoft Azure. The deployment of the VMware SD-WAN Edges in Azure Virtual WAN Hub is automated using the Microsoft Azure Portal. This connectivity leverages BGP peering between the VMware SD-WAN Edges and the Virtual WAN Hub. VMware SD-WAN Edges can also connect through the Azure Route Server, which is a fully managed Azure Service configured with high availability.

**Q. What Azure VMware Solution customer issues does VMware SD-WAN solve?**

A. Connecting a distributed workspace to the enterprise network that now lives in the cloud and/or on-premises poses great challenges. VMware SD-WAN offers a reliable, scalable, highly available, and secure connectivity method to Azure and Azure VMware Solution workloads and provides the optimized network needed for assured application performance.

**Q. What are the use cases for VMware SD-WAN and Azure VMware Solution?**

A. VMware SD-WAN provides reliable, scalable, highly available, and secure connectivity to both your Azure VMware Solution SDDCs and on-premises data centers.

- **VDI:** VMware SD-WAN ensures that users working from home, or anywhere else, all get that same increased and consistent experience when going over the Internet by prioritizing virtual desktop traffic over other traffic. VMware SD-WAN provides expanded WAN bandwidth by bonding all available links.
- **Data center expansion:** In the case of unplanned projects, seasonal spikes, or temporary events requiring additional resources to be spun up in the Azure VMware Solution SDDC, the VMware SD WAN edges can be deployed in a highly available and on-demand fashion directly from the Azure portal to meet the desired scale and address the increased load on the network.
- **Enterprise network extension:** In the event the Azure VMware Solution SDCC cannot be deployed in a region near your users, it may be beneficial to extend SD-WAN from your branches to the nearest Azure region and then leverage the Azure backbone and Azure Virtual WAN Hub

to connect to the Azure region where your Azure VMware Solution SDDC is deployed.

**Q. Is VMware HCX traffic to Azure supported with VMware SD-WAN?**

A. Yes, with HCX version 4.2 and above, any VMware SD-WAN connection meeting the [HCX minimum network underlay requirements](#) for bandwidth, packet loss, and latency is supported. Supported HCX features over VMware SD-WAN include HCX vMotion, Replication Assisted vMotion, Bulk Migration and DR, and OS Assisted Migration. HCX Mobility Optimized Networking is also supported with HCX over SD-WAN to route migrated virtual machine traffic within the Azure cloud, without tromboning.

VMware SD-WAN and HCX enable secure, high-performance migrations of virtual machines to Azure VMware Solution and connectivity between branch and data center locations to Azure to optimize hybrid multi-cloud operations

**Q. Where do I find more information about VMware SD-WAN?**

A. These sources provide more details about VMware SD-WAN on Azure VMware Solution:

- Blog - [Connecting Users to Workloads on Azure VMware Solution with VMware SD-WAN](#)
- Solution Overview - [VMware SD-WAN Connects Users to Workloads on Azure VMware Solution](#)
- Web Page - [VMware Software-Defined WAN \(SD-WAN\)](#)

**Q. What versions of the VMware SD-WAN edges are tested and supported for Azure VMware Solution?**

A. VMware SD-WAN Edges running version 4.3.0 and newer.

**Q. What Azure VMware Solution VMware SDDC platform versions were the VMware SD-WAN products tested on?**

A. The VMware SD-WAN Edges are not deployed in the Azure VMware Solution SDDC stack itself but rather in native Azure. Hence, there is no dependency on vSphere, vSAN, and NSX versions in the Azure VMware Solution SDDC.

## VMware Horizon on Azure VMware Solution

VMware Horizon is a modern platform for secure delivery of virtual desktops and apps across the hybrid cloud, from the market leader in software-defined data center (SDDC) architecture and digital workspaces. VMware Horizon is supported on Azure VMware Solution, enabling cloud desktops that leverage a unified Horizon architecture and familiar tools.

For more information, please see the [VMware Horizon on Azure VMware Solution FAQ](#).