Azure VMware Solution Host Types

VMware Getting Started

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Introduction

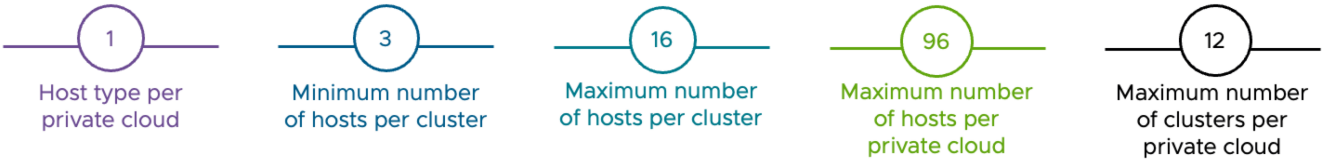
Azure VMware Solution delivers consistent vSphere-based infrastructure that runs on bare-metal, hyper-converged, hosts within the Microsoft Azure Cloud. These hosts are dedicated to each customer and provide the compute, storage, and network infrastructure for the AVS private cloud. There are multiple host types available with varying memory and storage options allowing customers to optimize their workloads based on their specific use cases.

Regional availability for new host types is limited during the initial rollout. For pricing, and the most current region availability, refer to the Azure VMware Solution pricing page and the products available by region page.

AV36	AV36P	AV52	AV64
CPU			
Dual Skylake (Intel 6140) 18 cores @ 2.3 GHz	Dual Cascade Lake (Intel 6240) 18 cores @ 2.6 GHz (3.9 GHz)	Dual Cascade Lake (8270) 26 cores @ 2.7 GHz (4.0 GHz)	Dual Ice Lake (8370C) 32 cores @ 2.8 GHz (3.5 GHz)
Memory			
576 GB	768 GB	1.5 TB	1 TB
vSAN Storage			
Cache: **3.2 TB** (NVMe) Capacity: **15.2 TB** (SSD)	Cache: **1.5 TB** (Intel Optane) Capacity: **19.2 TB** (NVMe)	Cache: **1.5 TB** (Intel Optane) Capacity: **38.4 TB** (NVMe)	Cache: **3.84 TB** (NVMe) Capacity: **15.36 TB** (NVMe)
Networking			
4x 25 GbE NICs			1x 100 GbE NIC
2x mgmt & control plane, 2x customer traffic			

Azure VMware Solution requires a minimum of 3 hosts, and supports up to a maximum of 16 hosts, to deploy a vSphere cluster, however multiple clusters can be deployed within a single private cloud. All hosts must be the same type within a private cloud. If different host types are required to meet use case needs, additional private clouds must be deployed.

The three common host types utilize 4x 25 Gb NICs; two for management and control plane, and two for customer traffic. The newest host type, AV64, utilizes a single 100 Gb NIC. All storage numbers are listed as total raw capacity, usable capacity will differ based on storage policy configurations.



AV36

Hosts	CPU	RAM	Storage
3	108	1.5 TB	46 TB
8	288	4 TB	122 TB
16	576	8 TB	245 TB
32	1,152	16 TB	491 TB
64	2,304	32 TB	983 TB
96	3,456	49 TB	1.4 PB

AV36P

Hosts	CPU	RAM	Storage
3	108	2.25 TB	57 TB
8	288	6 TB	153 TB
16	576	12 TB	307 TB
32	1,152	24 TB	614 TB
64	2,304	48 TB	1.2 PB
96	3,456	72 TB	1.8 PB

AV52

Hosts	CPU	RAM	Storage
3	156	4.5 TB	115 TB
8	416	12 TB	307 TB
16	832	24 TB	614 TB
32	1,664	48 TB	1.2 PB
64	3,328	96 TB	2.4 PB
96	4,992	144 TB	3.6 PB

AV64

Hosts	CPU	RAM	Storage
3	192	3 TB	46 TB
8	512	8 TB	122 TB
16	1,024	16 TB	245 TB

AV64 is the only host type that can be mixed with other hosts in the same private cloud. Used for cluster expansion only.

AV36

The AV36 host type was the initial host offering, and is generally the default option in most regions for the AVS private cloud. These hosts are suitable for most workloads, and are available in all regions.

Processor	
Memory	
Storage	

AV36P

The AV36P host type is an upgraded version of the AV36 host providing a newer, faster, processor, increased memory, and increased storage capacity and performance.This may be the default option in some regions instead of the AV36 host type.

Processor	
Type	Intel Xeon Gold 6240 (Cascade Lake)
Number of sockets	2
Number of cores per socket	18
Total physical cores	36 @ 2.6 GHz (3.9 GHz Turbo)
Hyper-threading	Enabled
Memory	
RAM	768 GB
Storage	
Boot volume	2x M.2, 240 GB, RAID-1
vSAN cache	2x 750 GB NVMe Intel Optane
vSAN capacity	6x 3.2 TB NVMe
vSAN disk groups	2
Total raw vSAN cache	1.5 TB
Total raw vSAN capacity	19.2 TB

AV52

The AV52 host type provides the largest compute resource footprint for memory and storage dense workloads.

Processor	
Type	Intel Xeon Platinum 8270 (Cascade Lake)
Number of sockets	2
Number of cores per socket	26
Total physical cores	52 @ 2.7 GHz (4.0 GHz Turbo)
Hyper-threading	Enabled
Memory	
RAM	1.5 TB
Storage	
Boot volume	2x M.2, 240 GB, RAID-1
vSAN cache	2x 750 GB NVMe Intel Optane
vSAN capacity	6x 6.4 TB NVMe
vSAN disk groups	2
Total raw vSAN cache	1.5 TB
Total raw vSAN capacity	38.4 TB

AV64

The AV64 host type is the newest host type. This host is used specifically to expand (not create) an AVS private cloud in select regions. This is the only type that can be used to build additional clusters with existing AV36, AV36P, and AV52 host types. For more details on prerequisites, supportability, design, and recommendations, refer to Microsoft's AV64 documentation.

Processor	
Type	Intel Xeon Platinum 8370 (Ice Lake)
Number of sockets	2
Number of cores per socket	32
Total physical cores	64 @ 2.8 GHz (3.5 GHz Turbo)
Hyper-threading	Enabled
Memory	
RAM	1 TB
Storage	
Boot volume	2x M.2, 240 GB, RAID-1
vSAN cache	2x 1.92 TB NVMe
vSAN capacity	8x 1.92 TB NVMe
vSAN disk groups	2
Total raw vSAN cache	3.84 TB
Total raw vSAN capacity	15.36 TB

Summary and Additional Resources

This document describes the different host types customers can choose from when deploying new clusters within their Azure VMware Solution private cloud. Multiple host types provide customers with choice and flexibility based on their use case or workload type.

Additional Resources

For more information about Azure VMware Solution, you can explore the following resources:

- Azure VMware Solution Planning and Deployment Guide
- Azure VMware Solution Documentation

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Changelog

The following updates were made to this guide:

Date	Description of Changes