

VMware vSphere Version Comparison

Across versions

KEY FEATURES/ CAPABILITIES	VMWARE vSPHERE® VERSION		
	6.5	6.7	7 ¹
VMWARE vSPHERE® 7 WITH VMWARE TANZU™ ² (Available through the Tanzu Basic Edition and vSphere 7 Update 1 release)			
Application focused management			•
VMware Tanzu™ Kubernetes Grid™ Service for vSphere			•
vSphere Pod Service			Requires NSX-T currently
Storage Service			•
Network Service			•
Registry Service			Requires NSX-T currently
Network Load Balancing			•
VM Service			•
VM Service support for GPU			•

KEY FEATURES/ CAPABILITIES	6.5	6.7	7 ¹
VM MOBILITY AND MANAGEMENT			
vSphere vMotion®	•	•	•
vSphere Storage vMotion®	•	•	•
Content library	•	•	•
Cross-vSwitch vMotion	•	•	•
Cross-vCenter® vMotion ³	•	•	•
Long-distance vMotion	•	•	•
Cross-cloud vMotion/ hot migration ⁴	•	•	•
Cross-vCenter mixed- version vMotion ⁴	•	•	•
Cross-cloud cold migration ⁴	•	•	•
Per-virtual machine (VM) enhanced vMotion compatibility		•	•
vMotion for Multi- Instance GPUs (MIG)			•

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RESOURCE MANAGEMENT			
vSphere Distributed Resource Scheduler™ (DRS) – for compute and memory	•	•	•
vSphere Enhanced DRS			•
vSphere Storage DRS™	•	•	•
vSphere Storage I/O Control	•	•	•
vSphere Network I/O Control	•	•	•
Network-aware DRS		•	•
Assignable hardware support for vGPU and vSphere DirectPath I/O™ initial placement			•
Initial workload placement for Multi-Instance GPUs (MIG)			•
AVAILABILITY			
Fault tolerance	4 vCPU	8 vCPU	8 vCPU
vSphere Replication™	•	•	•
High availability (HA) VM component protection	•	•	•
Orchestrated HA restart	•	•	•
Proactive HA	•	•	•
vCenter Server® HA ³	•	•	•
vSphere HA for PMEM workloads			•

KEY FEATURES/ CAPABILITIES	6.5	6.7	7 ¹
STORAGE			
vSphere Virtual Volumes™	•	•	•
Storage policy-based management	•	•	•
NFS 4.1 support	•	•	•
Automated UNMAP	•	•	•
Support for 4K native storage		•	•
SECURITY			
Multifactor authentication	•	•	•
vSphere security hardening and compliance	•	•	•
VM encryption	•	•	•
Secure boot	•	•	•
Audit quality logging	•	•	•
Cross-vCenter encrypted vMotion		•	•
Support for TPM 2.0		•	•
Virtual TPM 2.0		•	•
Support for Microsoft virtualization-based security (VBS), including Credential Guard		•	•
FIPS 140-2 validated		•	•
vSphere Trust Authority™			•
Identity federation with Active Directory Federation Services			•
vSphere Native Key Provider			•
Confidential containers with AMD SEV-ES			•
Simplified NSX security setup from vSphere Client *			•

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ENHANCED APPLICATION SUPPORT			
VMware Instant Clone	•	•	•
NVIDIA vGPU	•	•	•
vSphere Integrated OpenStack	•	•	•
vSphere Integrated Containers™	•	•	•
vMotion support for NVIDIA vGPU		•	•
vSphere Persistent Memory™		•	•
Support for memory mapping for 1GB page sizes		•	•
Support for RoCE v2		•	•
iSCSI extension for RDMA (iSER)		•	•
Support for RDMA InfiniBand		•	•
vSphere Bitfusion		(Requires add-on) ⁴	(Requires add-on) ⁴
NVIDIA Multi-Instance GPU (MIG)			•
vMotion for Multi-Instance GPUs (MIG)			•

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ADMINISTRATION			
vCenter Server Appliance™	•	•	•
Enhanced Linked Mode	•	•	•
Certificate management	•	•	•
Migration to vCenter Server Appliance	•	•	•
vCenter Server Hybrid Linked Mode ⁵	•	•	•
vCenter Server backup and restore ⁶	•	•	•
HTML5-based vSphere Client	•	•	•
REST-based APIs for vCenter Server management	•	•	•
Enhanced Linked Mode for vCenter Server Appliance with Embedded Platform Services Controller™	• ⁵	•	•
Single reboot upgrades		•	•
vSphere Quick Boot™		•	•
vCenter Server Appliance backup with built-in scheduler and retention ⁵		•	•
vSphere Lifecycle Manager™			•
vCenter Server update planner			•
vCenter Server profiles			•
vSphere Ideas			•
Desired image seeding			•
ESXi suspend-to-memory			•

KEY SCALE METRICS: MAXIMUMS	6.5	6.7	7 ¹
Host per cluster	64	64	96 (Requires vSphere 7U1)
VMs per cluster	8,000	8,000	8,000
Hosts per VMware vCenter Server	2,000	2,000	2,500
Powered-on VMs per vCenter Server	25K	25K	30K
Hosts for 15 linked vCenter Servers	5K	5K	15K
CPUs per host	576	768	768
RAM per host	12TB	16TB	16TB
VMs per host	1,024	1,024	1,024
vCPUs per VM	128	128	128
vRAM per VM	6TB	6TB	6TB
Non-volatile memory per host		1TB	1TB
Non-volatile memory per VM		1TB	1TB
Maximum vCenter Server request latency		200ms	250ms

¹ The End of General Support for vSphere 6.0 was March 12, 2020 per KB66977. To maintain your full level of support and subscription services, VMware recommends upgrading to the latest release of vSphere.

² vSphere with Tanzu is available through the Tanzu Basic edition. Pre-requirements for 'vSphere with Tanzu' capabilities are that customers already have the vSphere Enterprise plus edition, and that they have upgraded to at least vSphere 7 Update 1.

³ Compatible with vSphere 6.0, U1, U2 and U3 for vMotion between same versions. Backwards compatible with vSphere 6.0 U3+ and vSphere 6.5 U1+.

⁴ vSphere Bitfusion is available through a new add-on for all Enterprise plus customers. Visit the vSphere pricing and packaging whitepaper for more details about the add-on for vSphere Bitfusion.

⁵ Backwards compatible with vSphere 6.0 U3+ on-premises and with vSphere 6.5 on premises. Compatible with vSphere 6.5 U2+ on-premises.

⁶ For vCenter Server Appliance only.