# VMware vSphere Compute Virtualization

Licensing, pricing and packaging



# Table of contents

Executive summary	3
VMware vSphere overview	3
Licensing overview	3
vSphere 7 licensing: Per processor	3
License management	3
Decentralized licensing option	4
Example: Licensing new hosts with VMware vSphere Enterprise Plus 7	4
Packaging overview	4
vSphere main editions	4
VMware vSphere Hypervisor	7
VMware vSphere Desktop	7
VMware vSphere Acceleration Kits	7
VMware vSphere Essentials Kits	7
VMware vSphere Remote Office Branch Office	9
VMware vSphere Scale-Out	11
VMware Tanzu Basic	12
vCenter Server editions	13
VMware vSphere Platinum end of availability	13
Version upgrade entitlements for existing customers	13
Paid edition upgrades	14



# Executive summary

This guide provides an overview of the licensing, pricing and packaging for VMware vSphere™. The key topics discussed in this guide include:

- VMware vSphere overview
- Licensing overview Licensing metric and management
- Packaging overview Packaging options for editions (including VMware vCenter Server®), kits, vSphere Bitfusion and Tanzu Basic
- Version upgrade entitlements for existing customers
- Paid edition upgrades from vSphere 7
- · vSphere Platinum end of availability

# VMware vSphere overview

VMware vSphere is the leading server virtualization platform with the best foundation for your applications, your cloud and your business.

vSphere helps you get the best performance, availability and efficiency from your infrastructure and applications. It is the essential building block for modern cloud infrastructure.

# Licensing overview

vSphere 7 licensing: Per processor

vSphere 7 is licensed on a per-processor basis apply to select editions: vSphere Standard, vSphere Enterprise Plus, vSphere Acceleration Kits, vSphere Essential Kits, and vSphere Scale Out. Each physical processor (CPU) in a server needs to have at least one processor license key assigned to be able to run vSphere.

Each per-processor license will cover CPUs with up to 32 physical cores. If the CPU has more than 32 cores, additional CPU licenses are required. For more information, please refer to the VMware Product Guide or visit *Update to VMware's per-CPU Pricing Model (https://www.vmware.com/company/news/updates/cpu-pricing-model-update-feb-2020.html)* 

No limit on the number of virtual machines

There are no restrictions on the number of virtual machines (VMs) that can run on each properly licensed vSphere 7 processor.

vSphere for virtual desktop deployments

VMware vSphere Desktop is specifically designed for licensing vSphere when used to run virtual desktops. It can only be used as a virtualization platform for virtual desktop infrastructure (VDI) deployments with either VMware Horizon® View™ or third-party connection brokers. For more details, see the Packaging overview section.

# License management

vSphere 7 licenses are simple license keys (25-character alphanumeric strings) that contain encrypted information about the vSphere edition or kit purchased and the processor quantity. These license keys do not contain any server-specific information and are not tied to a specific piece of hardware. This means the same license key can be assigned to multiple vSphere hosts as long as the number of licenses required for physical processor units on those hosts does not exceed the encoded license quantity



in the license key. To calculate the number of licenses required, consider each perprocessor license includes licensing for up to 32 physical cores in each CPU.

#### Centralized licensing with no single point of failure

vCenter Server is the recommended interface for license assignment to vSphere hosts. When a license key is assigned by vCenter Server, it is copied to the host and saved in a persistent format. If the host becomes disconnected from vCenter Server, the license key remains active on the host indefinitely, even after a host reboot. Only a deliberate licensing operation by the user can remove or replace a host license key.

#### Decentralized licensing option

VMware recommends that customers assign all vSphere licenses centrally through vCenter Server however, vSphere customers have the option to assign their license keys directly to individual hosts. There is no difference between directly and centrally assigned license keys. When a vSphere host is added to the vCenter Server inventory, any license key already on the host will become available for management, reporting and assignment in vCenter Server, just like any license key added directly via vCenter Server. For more information on licensing, visit the VMware Licensing Help Center. (https://www.vmware.com/support/support-resources/licensing.html)

Example: Licensing new hosts with VMware vSphere Enterprise Plus 7

- 1. A user has two 2-CPU (each with up to 32 cores) hosts with 128GB of physical RAM each that they wish to license with VMware vSphere Enterprise Plus Edition™. Each physical CPU requires at least one license, so four vSphere Enterprise Plus 7 licenses are required. No additional licenses will be needed regardless of the number of VMs or the amount of virtual memory (vRAM).
- 2. A user has two 2-CPU (each with more than 32 cores and up to 64 cores) hosts with 128GB of physical RAM each that they wish to license with vSphere Enterprise Plus. Each physical CPU requires two licenses because each CPU license covers up to 32 cores in a CPU, so eight vSphere Enterprise Plus 7 licenses are required. No additional licenses will be needed regardless of the number of VMs or the amount of vRAM.

## Packaging overview

VMware offers several packaging options designed to meet customers' specific requirements for scalability, size of environment and use cases.

# vSphere main editions

Customers can choose from two editions: VMware vSphere Standard Edition™ and vSphere Enterprise Plus (see Table 1). A support and subscription (SnS) contract is required for every edition purchased.

vSphere Standard provides an entry-level solution for basic server consolidation to slash hardware costs while accelerating application deployment.

vSphere Enterprise Plus offers the full range of vSphere features for transforming data centers into dramatically simplified cloud infrastructures, and for running modern applications with the next generation of flexible, reliable IT services.

For information on local currency prices for vSphere editions, visit the vSphere product page (https://www.vmware.com/products/vsphere.html#pricing).



FEATURES	vSPHERE STANDARD	vSPHERE ENTERPRISE PLUS
vSphere Hypervisor – Provides a robust, production-proven, high-performance virtualization layer	•	•
vSphere vMotion® – Enables live migration of VMs with no disruption to users or loss of service, eliminating the need to schedule application downtime for planned server maintenance	•	•1
VMware vCenter® Hybrid Linked Mode – Enables unified visibility and management across on- premises vCenter and vCenter on a cloud enabled with vSphere, such as VMware Cloud™ on AWS	vCenter Server Standard™	vCenter Server Standard
vSphere Virtual Symmetric Multiprocessing (SMP) – Enables VMs to have multiple virtual CPUs	•	•
vSphere High Availability (HA) – Automatically restarts your VMs following physical machine failure	•	•
vSphere Storage vMotion® – Avoids application downtime for planned storage maintenance by migrating live VM disk files across storage arrays	•	•
vSphere Fault Tolerance – Provides continuous availability of any application in the event of a hardware failure with no data loss or downtime; for workloads up to 4-vCPU	2-vCPU	8-vCPU
VMware vShield Endpoint™ – Secures VMs with offloaded anti-virus and anti-malware solutions, without the need for agents inside the VM	•	•
vSphere Replication™ – Enables efficient, array-agnostic replication of VM data over the LAN or WAN, and simplifies management by enabling replication at the VM level	•	•
Support for 4K native storage – Enhances platform scalability by leveraging high-capacity drives; reduces CapEx	•	•
vSphere Quick Boot™ – Skips hardware initialization steps and dramatically reduces time required for patching and upgrades	•	•
vCenter High Availability – Provides native vCenter Server availability	vCenter Server Standard	vCenter Server Standard
vCenter Backup and Restore – Provides native vCenter Server backup and restore	vCenter Server Standard	vCenter Server Standard
vCenter Server Appliance™ Migration – Provides single-step migration and upgrade of existing Windows vCenter deployments to vCenter Server Appliance	vCenter Server Standard	vCenter Server Standard
TPM 2.0 support and virtual TPM – Supports TPM 2.0 hardware modules and adds a virtual TPM device to shield a guest OS from operator or in-guest attacks	•	•
FIPS 140-2 compliance and TLS 1.2 support – Provides default enhanced security compliance	•	•
VM encryption – Provides data-at-rest encryption for VM data and disks		•
Support for Microsoft virtualization-based security (VBS) – Supports Windows 10 and Windows 2016 security features, such as Credential Guard, on vSphere	•	•
Per-VM Enhanced vMotion Compatibility – Allows seamless migration across different CPUs across the hybrid cloud by persisting the Enhanced vMotion Compatibility mode per VM during migrations across clusters and during power cycles	٠	•

<sup>1.</sup> Plus Cross-vCenter Server/long distance/cross-cloud.



FEATURES	vSPHERE STANDARD	vSPHERE ENTERPRISE PLUS
VMware Instant Clone – Reduces provisioning times, especially beneficial for VDI applications	•	•
Identity federation with Active Directory Federation Services (ADFS) – Provides secure access and account management	•	•
vSphere Trust Authority™ – Provides remote attestation for sensitive workloads		•
Content Library – Provides simple and effective centralized management for VM templates, virtual appliances, ISO images and scripts	•	•
APIs for storage awareness	•	•
Storage APIs for array integration and multipathing – Improves performance, reliability and scalability by leveraging efficient array-based operations and third-party storage vendor multipath software capabilities	•	٠
vSphere Virtual Volumes™ – Virtualizes external storage (SAN and NAS) and provides VM-aware, policy-based storage management through vCenter	•	•
Storage policy-based management – Allows common management across storage tiers and dynamic storage class-of-service automation via a policy-driven control plane	•	•
Next-generation infrastructure image management – Manages infrastructure images to patch, update or upgrade VMware ESXi™ clusters using a desired state model	•	•
vSphere Distributed Switch™ – Centralizes provisioning, administration and monitoring by using cluster-level network aggregation		•
Host Profiles and vSphere Auto Deploy™ – Captures host-level configuration settings and saves them as a template to configure other vSphere hosts; monitors hosts for configuration changes and automatically alerts vSphere administrators if a host falls out of compliance		٠
vSphere Distributed Resource Scheduler™ (DRS) and vSphere Distributed Power Management™ (DPM) – Enables usage with business priorities by automatically load balancing across hosts; optimizes power consumption by turning off hosts during periods of reduced demand		٠
vSphere Storage DRS™ – Enables automated load balancing to look at storage characteristics to determine the best place for a given VM's data when it is created and used over time		•
vSphere Network I/O Control and vSphere Storage I/O Control – Prioritizes storage and network access by continuously monitoring I/O load of a storage volume and over the network, and dynamically allocating available I/O resources to VMs according to business needs		٠
Single root I/O virtualization (SR-IOV) support – Allows one PCI Express (PCIe) adapter to be presented as multiple separate logical devices to VMs; allows users to offload I/O processing and reduce network latency		٠
vSphere Persistent Memory™ – Leverages persistent memory to provide DRAM-like performance with flash-like prices		•
NVIDIA GRID vGPU – Enables native 2D and 3D graphics performance for VMs; supports multiple vGPUs per VM		•
Proactive HA – Provides server health information and migrates VMs from degraded hosts before problems occur		•



FEATURES	vSPHERE STANDARD	vSPHERE ENTERPRISE PLUS
Predictive DRS – Feature that combines the analytics of vRealize Operations Manager with the logic of vSphere. This collaboration between products allows DRS to execute predictive moves based on the predictive data sent by vRealize Operation		•
Accelerated graphics for VMs		•
Dynamic vSphere DirectPath I/O™ – Supports vGPU and vSphere DirectPath I/O initial VM placement		•
vCenter Server Profile – Provides desired-state configuration management capabilities for vCenter Server; helps users to define/validate/apply configuration for multiple vCenters		vCenter Server Standard
vCenter Server update planner – Manages the compatibility and interoperability for vCenter Server for upgrade scenarios; allows users to generate an interoperability and pre-checks report, which helps plan for upgrades		٠

TABLE 1. vSphere 7 main editions

## VMware vSphere Hypervisor

vSphere Hypervisor is a free product that provides a simple way to get started with virtualization at no cost. It provides only basic virtualization capabilities, allowing customers to virtualize servers and run applications in VMs in a matter of minutes. vSphere Hypervisor cannot connect to vCenter Server and therefore cannot be centrally managed. Users can remotely manage individual vSphere Hypervisor hosts using the VMware vSphere Client. There are no restrictions on the number of physical CPUs per host and on the amount of RAM per server/host. The maximum vCPUs per VM is eight.

#### VMware vSphere Desktop

vSphere Desktop is designed for licensing vSphere in VDI deployments. vSphere Desktop provides all the functionalities of vSphere Enterprise Plus. It can only be used for VDI deployments and can be leveraged with both Horizon View and third-party VDI connection brokers.

vSphere Desktop is licensed based on the total number of powered-on desktop VMs and can be purchased either standalone in a pack of 100 desktop VMs or included with the Horizon View bundle. For detailed information on pricing, visit <a href="https://www.vmware.com/products/horizon.html">www.vmware.com/products/horizon.html</a>

# VMware vSphere Acceleration Kits

vSphere Acceleration Kits are all-in-one convenience bundles that provide a simple way for customers to purchase all the necessary components to set up a new VMware environment. Each kit consists of six processor licenses for vSphere and a license for one instance of vCenter Server Standard.

Customers can choose from two editions: vSphere Standard Acceleration Kit and vSphere Enterprise Plus Acceleration Kit. An SnS contract is required for every edition purchased.

vSphere Acceleration Kits decompose into their individual kit components after purchase. This allows customers to upgrade and renew SnS for each individual component on its own schedule. Visit the *VMware Store* (https://store.vmware.com) or contact your local reseller for more specific information on the latest available offerings.

#### VMware vSphere Essentials Kits

vSphere Essentials Kits are all-in-one solutions for small environments (up to three hosts with up to two CPUs each) available in two editions: vSphere Essentials Kit and vSphere



Essentials Plus Kit (see Table 2). Each kit consists of six processor licenses for vSphere and a license for one instance of vCenter Server for Essentials™. Scalability limits for the kits are product-enforced and cannot be extended other than by upgrading the whole kit to an Acceleration Kit (see the Paid edition upgrades section). vSphere Essentials Kits and vSphere Essentials Plus Kits are self-contained solutions and may not be decoupled or combined with other vSphere editions.

vSphere Essentials Kit is an all-in-one solution ideal for small offices. It enables consolidation and management of applications to reduce hardware and operating costs, all with a low upfront investment. This kit must be purchased along with a one-year subscription to software patches and updates. Support is optional and available on a perincident basis.

vSphere Essentials Plus Kit adds features such as vSphere vMotion, vSphere HA and vSphere Data Protection™ to vSphere Essentials to enable always-on IT for the small environment. This kit is ideal for small businesses that, in addition to hardware and operational cost savings, are looking for maximization of application availability and business continuity with a low upfront investment. SnS for vSphere Essentials Plus is sold separately. A minimum of one year of SnS is required.

FEATURES	vSPHERE ESSENTIALS	vSPHERE ESSENTIALS PLUS
vSphere Hypervisor – Provides a robust, production-proven, high-performance virtualization layer	•	•
vCenter High Availability – Provides native vCenter Server availability	vCenter Server for Essentials	vCenter Server for Essentials
vCenter Backup and Restore – Provides native vCenter Server backup and restore	vCenter Server for Essentials	vCenter Server for Essentials
vCenter Server Appliance Migration – Provides single-step migration and upgrade of existing Windows vCenter deployments to vCenter Server Appliance	vCenter Server for Essentials	vCenter Server for Essentials
vShield Endpoint – Secures VMs with offloaded anti-virus and anti-malware solutions, without the need for agents inside the VM		٠
vSphere Replication – Enables efficient, array-agnostic replication of VM data over the LAN or WAN, and simplifies management by enabling replication at the VM level		٠
vSphere Quick Boot – Skips hardware initialization steps and dramatically reduces the time required for patching and upgrades		٠
vSphere vMotion – Enables live migration of VMs with no disruption to users or loss of service, eliminating the need to schedule application downtime for planned server maintenance		•
vSphere HA – Automatically restarts your VMs following physical machine failure		•
FIPS 140-2 compliance and TLS 1.2 support – Provides default enhanced security compliance		•
Support for Microsoft VBS – Supports Windows 10 and Windows 2016 security features, such as Credential Guard, on vSphere		•
Next-generation infrastructure image management – Manages infrastructure images to patch, update or upgrade ESXi clusters using a desired state model		•

TABLE 2. vSphere 7 Essentials Kit and Essentials Plus Kit editions



VMware vSphere Remote Office Branch Office

VMware vSphere Remote Office Branch Office™ is designed specifically for an IT infrastructure located in remote, distributed sites and delivers improved service levels, standardization, availability and compliance. These editions include 25 VM licenses of vSphere Remote Office Branch Office.

The flexible per-VM pricing model also allows customers to deploy only the number of workloads they require in each remote site. Customers can deploy a maximum of 25 VMs per vSphere Remote Office Branch Office site. Server hosts can be managed by vCenter Server Foundation™ or vCenter Server Standard, purchased separately.

vSphere Remote Office Branch Office Standard – Remote site server virtualization platform with business continuity and backup features.

vSphere Remote Office Branch Office Advanced – Remote site server virtualization offering business continuity and backup with advanced features, such as standardization of host configurations.

vSphere Remote Office Branch Office Enterprise – Remote site server virtualization offering business continuity and backup, standardization of host configurations and data security through encryption.

See Table 3 for details on which features are included in each vSphere Remote Office Branch Office edition.

FEATURES	vSPHERE REMOTE OFFICE BRANCH OFFICE STANDARD	vSPHERE REMOTE OFFICE BRANCH OFFICE ADVANCED	vSPHERE REMOTE OFFICE BRANCH OFFICE ENTERPRISE
vSphere Hypervisor – Provides a robust, production-proven, high- performance virtualization layer	•	•	•
vSphere vMotion – Enables live migration of VMs with no disruption to users or loss of service, eliminating the need to schedule application downtime for planned server maintenance	٠	•	•
vSphere Virtual SMP – Enables VMs to have multiple virtual CPUs	•	•	•
vSphere HA – Automatically restarts your VMs following physical machine failure	•	•	•
vSphere Storage vMotion – Avoids application downtime for planned storage maintenance by migrating live VM disk files across storage arrays	٠	٠	٠
vSphere Fault Tolerance – Provides continuous availability of any application in the event of a hardware failure with no data loss or downtime; for workloads up to 4-vCPU	2-vCPU	4-vCPU	4-vCPU
vShield Endpoint – Secures VMs with offloaded anti-virus and anti-malware solutions, without the need for agents inside the VM	•	•	•
vSphere Replication – Enables efficient, array-agnostic replication of VM data over the LAN or WAN, and simplifies management by enabling replication at the VM level	٠	•	•
vSphere Quick Boot – Skips hardware initialization steps and dramatically reduces the time required for patching and upgrades	•	•	•



FEATURES	vSPHERE REMOTE OFFICE BRANCH OFFICE STANDARD	vSPHERE REMOTE OFFICE BRANCH OFFICE ADVANCED	vSPHERE REMOTE OFFICE BRANCH OFFICE ENTERPRISE
vCenter High Availability – Provides native vCenter Server availability	vCenter Server Foundation	vCenter Server Foundation	vCenter Server Foundation
vCenter Backup and Restore – Provides native vCenter Server backup and restore	vCenter Server Foundation	vCenter Server Foundation	vCenter Server Foundation
vCenter Server Appliance Migration – Provides single-step migration and upgrade of existing Windows vCenter deployments to vCenter Server Appliance	vCenter Server Foundation	vCenter Server Foundation	vCenter Server Foundation
FIPS 140-2 compliance and TLS 1.2 support – Provides default enhanced security compliance	•	•	•
Support for Microsoft VBS – Supports Windows 10 and Windows 2016 security features, such as Credential Guard, on vSphere	•	•	•
Identity federation with ADFS – Provides secure access and account management	•	•	•
Content Library – Provides simple and effective centralized management for VM templates, virtual appliances, ISO images and scripts	•	•	•
APIs for storage awareness	•	•	•
vSphere Virtual Volumes – Virtualizes external storage (SAN and NAS) and provides VM-aware, policy-based storage management through vCenter	•	•	•
Storage policy-based management – Allows common management across storage tiers and dynamic storage class-of-service automation via a policy-driven control plane	•	•	•
Next-generation infrastructure image management – Manages infrastructure images to patch, update or upgrade ESXi clusters using a desired state model	•	•	•
Host Profiles and vSphere Auto Deploy – Captures host-level configuration settings and saves them as a template to configure other vSphere hosts; monitors hosts for configuration changes and automatically alerts vSphere administrators if a host falls out of compliance		•	•
vSphere Distributed Switch – Centralizes provisioning, administration and monitoring by using cluster-level network aggregation		•	•
Limited DRS (maintenance mode only)			•
VM encryption – Provides data-at-rest encryption for VM data and disks			•
	1	1	1

TABLE 3. vSphere 7 Remote Office Branch Office editions



VMware vSphere Scale-Out

VMware vSphere Scale-Out™ is a solution that packages all the core vSphere features required for big data and high-performance computing (HPC) workloads at an attractive price point.

vSphere Scale-Out is licensed specially for big data and HPC workloads and sold in packs of eight CPUs.

See Table 4 for details on which features are included in vSphere Scale-Out.

FEATURES	vSPHERE SCALE-OUT
vSphere Hypervisor – Provides a robust, production-proven, high-performance virtualization layer	•
vSphere vMotion – Eliminates application downtime from planned server maintenance by migrating running VMs between hosts	•
vSphere Storage vMotion – Avoids application downtime for planned storage maintenance by migrating live VM disk files across storage arrays	•
vShield Endpoint – Secures VMs with offloaded anti-virus and anti-malware solutions, without the need for agents inside the VM	•
vSphere Quick Boot – Reduces time required for patching and upgrading	•
vCenter High Availability – Provides native vCenter Server availability	vCenter Server Standard
vCenter Backup and Restore – Provides native vCenter backup and restore	vCenter Server Standard
vCenter Server Appliance Migration – Provides single-step migration and upgrade of existing vCenter Server deployments to vCenter Server Appliance	vCenter Server Standard
FIPS 140-2 compliance and TLS 1.2 support – Provides default enhanced security compliance	•
Support for Microsoft VBS – Supports Windows 10 and Windows 2016 security features, such as Credential Guard, on vSphere	•
Identity federation with ADFS – Provides secure access and account management	•
Content Library – Provides simple and effective centralized management for VM templates, virtual appliances, ISO images and scripts	•
APIs for storage awareness	•
Storage APIs for array integration and multipathing – Improves performance and scalability by leveraging efficient array-based operations	•
vSphere Distributed Switch – Centralizes provisioning, administration and monitoring by using cluster-level network aggregation	•
Host Profiles and vSphere Auto Deploy – Helps IT administrators simplify host deployment and compliance, so hosts can be deployed on the fly	•
vSphere Virtual Volumes – Virtualizes external storage (SAN and NAS) and provides VM-aware, policy-based storage management through vCenter	•



FEATURES	vSPHERE SCALE-OUT
Storage policy-based management – Allows common management across storage tiers and dynamic storage class-of-service automation via a policy-driven control plane	•
vSphere Network I/O Control and vSphere Storage I/O Control) – Prioritizes access by monitoring I/O load and dynamically allocating available I/O resources to VMs according to business needs	•
SR-IOV support – Allows users to offload I/O processing and reduce network latency	•
Next-generation infrastructure image management – Manages infrastructure images to patch, update or upgrade ESXi clusters using a desired state model	٠

TABLE 4. vSphere 7 Scale-Out

#### VMware Tanzu Basic

Tanzu Basic enables VI admins to deliver self-service access to Kubernetes infrastructure for developers. With vSphere 7.0 or later, VI admins can extend today's trusted vSphere platform to the future by co-locating Kubernetes, containers and VMs as first-class citizens into vSphere.

As part of vSphere 7.0 U1 release, Tanzu Basic can be purchased as an add-on to vSphere Enterprise Plus or as a bundle with vSphere Enterprise Plus. Tanzu Basic is sold as a subscription (1-year or 3-year) on a per-CPU basis with upfront payment.

With the rebranding to Tanzu Basic (formerly known as vSphere add-on for Kubernetes), the licensing has been simplified - a purchase of Tanzu Basic will fulfill a single Tanzu Basic license key.

Due to this licensing change, customers who purchased vSphere add-on for Kubernetes and want to upgrade their vSphere 7.0 deployment to vSphere 7.0 U1 can upgrade their vSphere add-on for Kubernetes license keys to Tanzu Basic license keys through an upgrade process detailed in the KB article.

There is no impact to customers purchasing Tanzu Basic after vSphere 7.0 U1 or customers who purchased vSphere add-on for Kubernetes but do not plan to upgrade their vSphere 7.0 deployment to vSphere 7 U1.

See Table 5 for details on which features are included in Tanzu Basic.

TANZU BASIC FEATURES	DESCRIPTION
Application-focused Management	Enables VI admins to leverage vSphere namespace to organize multiple objects into a logical group and then apply policies to the entire group
Tanzu Kubernetes Grid Service	Allows developers to manage consistent, compliant and conformant Kubernetes clusters.
vSphere Pod service	Allows developers to run containers without managing VMs or Kubernetes clusters. Note: NSX Data Center Advanced is needed as a technical requirement to enable vSphere Pod service.
Storage service	Allows developers to manage persistent disks for use with containers, Kubernetes and VMs
Network service	Allows developers to manage virtual routers, load balancers and firewall rules
Registry service	Allows developers to store, manage and secure Docker and OCI images. Note: NSX Data Center Advanced is needed as a technical requirement to enable vSphere Pod service.

TABLE 5. Tanzu Basic



#### VMware vSphere Bitfusion

vSphere Bitfusion allows for the sharing of GPUs in a similar fashion to the way vSphere allowed the sharing of CPUs many years ago.

vSphere Bitfusion is an add-on to vSphere Enterprise Plus, licensed per-CPU as perpetual license

Up to two-GPUs can be licenses per each vSphere Bitfusion per-CPU license.

#### vCenter Server editions

vCenter Server provides unified management for vSphere environments and is a required component of a complete vSphere deployment. One instance of vCenter Server is required to centrally manage VMs and their hosts, and to enable all vSphere features.

vCenter Server is available in the following packages:

- vCenter Server for Essentials Integrated management for vSphere Essentials Kits.
- vCenter Server Foundation Powerful management tool for smaller environments looking to rapidly provision, monitor and control VMs.
- vCenter Server Standard Highly scalable management with rapid provisioning, monitoring, orchestration and control of all VMs in a vSphere environment. vCenter Server High Availability does not require a separate vCenter Server Standard license for the passive or witness node.

	vCENTER SERVER FOR ESSENTIALS	vCENTER SERVER FOUNDATION	vCENTER SERVER STANDARD
Number of hosts	Up to 3	Up to 4	Unlimited
vSphere licenses managed	vSphere Essentials and vSphere Essentials Plus	vSphere Standard, vSphere Enterprise Plus and VMware vCloud Suite®	vSphere Standard, vSphere Enterprise Plus and vCloud Suite

TABLE 6. vCenter Server editions.

## VMware vSphere Platinum end of availability

As part of the vSphere 7 version update, VMware is announcing the end of availability of vSphere Platinum as well as all vCloud Suite Platinum and VMware Cloud Foundation Platinum offerings. Existing customers will be entitled to the components of these offerings after the end of availability of vSphere Platinum.

Existing customers will be able to expand their deployments by acquiring a combination of VMware offerings.

Visit *Link* (https://kb.vmware.com/s/article/77536) for end of availability dates, fulfilment path, entitlement plan, instructions on how to expand existing deployments and more information.

# Version upgrade entitlements for existing customers

vSphere customers with an active SnS contract are entitled to a version upgrade to vSphere 7 at no extra charge. All version upgrades to vSphere 7 require acceptance of the new end-user licensing agreement (EULA).

Visit the vSphere Upgrade Center (https://www.vmware.com/products/vsphere/upgrade-center.html) for more information and to determine the appropriate upgrade path for your organization.

Version downgrades for vSphere vSphere can version downgrade.

Reinstatement options for customers with inactive SnS contracts Customers who have an expired SnS contract must pay reinstatement fees to purchase



#### **HOW TO BUY**

Visit the vSphere product page (https://www.vmware.com/products/v sphere) for information on local currency prices for vSphere 7 products.

To purchase vSphere, use the VMware Partner Locator (https://partnerlocator.vmware.com) to find an authorized reseller in your area.

You can also visit the *VMware Store* (https://store.vmware.com) to determine which kit or edition of vSphere is right for your organization.

# FOR MORE INFORMATION OR TO PURCHASE VMWARE PRODUCTS

Call 877-4-VMWARE (outside of North America, +1-650-427-5000), visit *vmware.com/products* or search online for an authorized reseller. For detailed specifications and systems requirements, refer to the VMware vSphere documentation.

supported upgrades. Reinstatement fees are based on the following criteria:

- The applicable SnS fees for the current contract term
- Fees that would have been paid for the period of time that the customer's SnS contract was not active
- A 20 percent fee on the sum of the fees in the preceding two criteria

# Paid edition upgrades

Customers may purchase and upgrade to a higher vSphere edition. For example, vSphere Standard customers may upgrade to vSphere Enterprise Plus. When customers upgrade supported licenses to a higher edition, the original license key is deactivated, and a new license key is issued for the upgraded edition. An SnS contract for the edition upgraded to must be purchased at the time of the upgrade purchase. This new SnS contract will be extended by the original SnS contract value remaining on the edition from which the customer upgraded. SnS contracts as short as two months are available for customers with a significant value remaining in their existing contract. This process ensures that only a single license key exists that has a single SnS contract with a single termination date.

Because vSphere Acceleration Kits decompose into individual kit components after purchase, customers upgrade using the same upgrade paths as vSphere customers. There are no Acceleration Kit to Acceleration Kit upgrades.





