VMware vSphere

Enterprise Edition and Enterprise Plus Edition

AT A GLANCE

Designed for organizations that want to virtualize their entire datacenters and deliver IT as a service, VMware vSphere® Enterprise Edition™ and VMware vSphere Enterprise Plus Edition™ include the full range of vSphere features for transforming datacenters into dramatically simplified cloud computing environments that can deliver the next generation of flexible, reliable IT services.

KEY BENEFITS

- **Efficiency through utilization and automation** – Achieve consolidation ratios of 15:1 or more and improve hardware utilization from 5–15 percent to as much as 80 percent or more—without sacrificing performance.
- **Dramatically lower IT costs** – Reduce capital expenditures by up to 70 percent and operational expenditures by up to 30 percent to achieve 20–30 percent lower IT infrastructure costs for each application running on vSphere.
- **Agility with control** – Respond quickly to changing business needs without sacrificing security or control, and deliver zero-touch infrastructure with built-in availability, scalability and performance guarantees for all business-critical applications running on vSphere.
- **Freedom of choice** – Use a common, standards-based platform to leverage existing IT assets alongside next-generation IT services, and enhance vSphere through open APIs with solutions from a global ecosystem of leading technology providers.

What Is VMware vSphere?

VMware vSphere is the industry-leading virtualization platform for building cloud infrastructures. It enables IT to meet SLAs (service-level agreements) for the most demanding business-critical applications, at the lowest TCO (total cost of ownership).

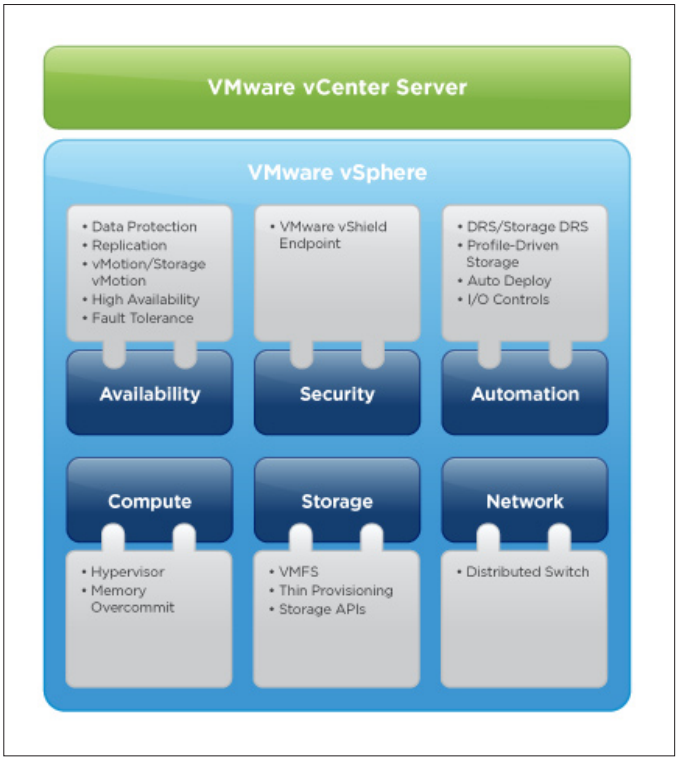
vSphere accelerates the shift to cloud computing for existing datacenters and also underpins compatible public cloud offerings, forming the foundation for the industry's only hybrid cloud model. With the support of more than 3,000 applications from more than 1,650 ISV partners, vSphere is the trusted platform for any application.

How Is vSphere Used?

- **Consolidate and optimize IT hardware** – vSphere enables IT organizations to delay costly and disruptive datacenter expansion projects by making it possible to consolidate 15 or more virtual machines on a single physical server without sacrificing performance or throughput.
- **Improve business continuity** – vSphere helps organizations reduce the cost and complexity of business continuity and disaster recovery with always-on IT capabilities and layered protection against service outages and data loss.
- **Streamline IT operations** – vSphere lowers operational overhead and dramatically simplifies the management of development, quality assurance and production IT environments that are large and geographically distributed.
- **Deliver IT as a service** – vSphere is the only virtualization platform that gives customers the power to realize the benefits of cloud computing while maintaining security, compliance and complete control over corporate assets.

Key Features and Components

- **vSphere Hypervisor architecture** provides a robust, production-proven, high-performance virtualization layer. It allows multiple virtual machines to share hardware resources with performance that can match (and in some cases exceed) native throughput.
- **vSphere Virtual Symmetric Multiprocessing (SMP)** enables the use of ultrapowerful virtual machines that possess up to 32 virtual CPUs for Enterprise Edition and 64 virtual CPUs for Enterprise Plus Edition.
- **VMware virtual hardware** can support 1TB of RAM and a variety of next-generation hardware.
- **vSphere VMFS (Virtual Machine File System)** allows virtual machines to access shared storage devices (Fibre Channel, iSCSI, etc.) and is a key enabling technology for other vSphere components such as vSphere Storage vMotion®.
- **vSphere Storage APIs** provide integration with supported third-party data-protection, multipathing and disk-array solutions.
- **vSphere Distributed Resource Scheduler™ (DRS)** provides dynamic, hardware-independent load balancing and resource allocation for virtual machines in a cluster, using policy-driven automation to reduce management complexity while enhancing compliance with service-level agreements (SLAs).



vSphere provides a complete virtualization platform with a comprehensive set of application and infrastructure services.

- **vSphere Distributed Power Management™ (DPM)**, included with DRS, automates energy efficiency in DRS clusters by continuously optimizing server power consumption within each cluster.
- **vSphere Thin Provisioning** provides dynamic allocation of shared storage capacity, enabling IT organizations to implement a tiered storage strategy while reducing storage spending by up to 50 percent.
- **vSphere vMotion®** enables live migration of virtual machines between servers with no disruption to users or loss of service, eliminating the need to schedule application downtime for planned server maintenance.
- **vSphere Storage vMotion** enables live migration of virtual-machine disks with no disruption to users, eliminating the need to schedule application downtime for planned storage maintenance or storage migrations.
- **vSphere High Availability (HA)** provides cost-effective, automated restart within minutes for all applications if a hardware or operating system failure occurs.
- **vSphere Fault Tolerance (FT)** provides continuous availability of any application in the event of a hardware failure—with no data loss or downtime.
- **vSphere Data Protection** provides simple, cost effective backup and recovery for virtual machines. It is a newly architected solution based on EMC Avamar technology that enables agentless backups with built-in deduplication.
- **vSphere vShield Zones™** simplifies application security by enforcing corporate security policies at the application level in a shared environment while maintaining trust and network segmentation of users and sensitive data.
- **VMware vShield Endpoint™** secures virtual machines with offloaded antivirus and anti-malware (AV) solutions without the need for agents inside the virtual machine.

- **vSphere Replication** enables efficient array-agnostic replication of virtual machine data over the LAN or WAN. vSphere Replication simplifies management enabling replication at the virtual machine level and enables RPOs as low as 15 minutes.
- **Hot Add** enables administrators to add CPU and memory to virtual machines when needed without disruption or downtime.
- **vSphere Update Manager™** automates tracking, patching and updating for vSphere hosts, and for applications and operating systems running in virtual machines.
- **VMware vCenter™ Operations Manager Foundation** enables you to leverage comprehensive views into health, risk and efficiency scores of your vSphere environment infrastructure. Quickly drill down to see what's causing current workload conditions, pinpoint potential problems in the future and identify areas with inefficient use of resources.
- **VMware vCenter Converter™** enables IT administrators to rapidly convert physical servers and third-party virtual machines into virtual machines.
- **vSphere Web Client** is the core administrative interface into vSphere. It enables IT administrators to manage the essential functions of vSphere from anywhere in the world.

Components Exclusive to vSphere Enterprise Plus Edition

- **vSphere Auto Deploy** performs quick, as-needed deployment of additional vSphere hosts. When Auto Deploy is running, it pushes out update images, eliminating patching and the need to schedule patch windows.
- **vSphere Host Profiles** help IT administrators simplify host deployment and compliance.
- **vSphere Distributed Switch** simplifies and enhances virtual machine networking in vSphere environments and enables third-party distributed virtual switches to be used in vSphere environments.
- **vSphere Storage I/O Control** sets storage quality-of-service priorities for guaranteed access to storage resources.
- **vSphere Storage DRS™** automated load balancing uses storage characteristics to determine the best place for a virtual machine's data to reside both when it is created and when it is used over time.
- **vSphere Profile-Driven Storage** reduces the steps in the selection of storage resources by grouping storage according to a user-defined policy.
- **vSphere Network I/O Control** sets network quality-of-service priorities for guaranteed access to network resources.

Customer Success Stories

Marshall University, the oldest public institution of higher learning in West Virginia, has leveraged vSphere to extend the life of an overcrowded datacenter while reducing IT expenditures and accelerating server provisioning time.

Read the Marshall University success story:
http://www.vmware.com/go/customer_success/marshall_u

EGIS Nyrt., one of the leading pharmaceutical manufacturers in the Central-Eastern-European region, has used vSphere to consolidate the number of servers managed and has virtualized its business critical applications to help improve performance and uptime.

Read the EGIS Nyrt. Success story:
http://www.vmware.com/go/customer_success/EGIS_Nyrt

QIC, one of Australia's largest institutional investment managers, has used vSphere to virtualize 80 percent of its Microsoft Windows Server production servers to not only streamline its infrastructure, but has also leveraged vSphere's backup and recovery capabilities to further its disaster recovery and business continuity planning.

Read the QIC Success story:
http://www.vmware.com/go/customer_success/QIC

Additional vSphere Products and Add-Ons

VMware vCenter Server™ – vCenter Server provides unified management for the entire virtual infrastructure and enables many key vSphere capabilities, such as live migration. vCenter Server can manage thousands of virtual machines across multiple locations and streamlines administration with features such as rapid provisioning and automated policy enforcement.

Note: vCenter Server is a required element of a complete vSphere implementation and is licensed separately on a per-instance basis.

Cisco Nexus 1000V – This pure-software network switch integrates with vSphere to deliver virtualization-aware network services. It is available for purchase as an add-on product for use with vSphere Enterprise Plus Edition.

Support and Professional Services

VMware offers global subscription and support (SnS) services to all vSphere customers. For customers requiring additional services, VMware also offers professional services engagements on best practices and getting started with your vSphere deployment, both directly and through an extensive network of certified professionals. http://www.vmware.com/services/

How to Buy

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

You can also visit the online VMware Store to determine which kit or edition of vSphere is right for your organization: http:// www. vmware.com/vmwarestore/datacenter-products/

If you are an existing vSphere or VMware Infrastructure customer, visit the vSphere Upgrade Center to determine the appropriate upgrade path for your organization: http://www.vmware.com/ products/vsphere/upgrade-center/

For organizations that are new to virtualization, VMware offers solution bundles called vSphere Acceleration Kits that combine a vSphere edition with vCenter Server. They are available for up to 30 percent off the list price: http://www.vmware.com/vmwarestore/buyvsphere- acceleration-kits.html

VMware vCloud Suite

Building on vSphere Enterprise Plus Edition, the VMware vCloud® Suite delivers a complete, integrated cloud infrastructure suite that simplifies IT operations while delivering the best SLAs for all applications. The vCloud Suite includes the entire set of cloud infrastructure capabilities: virtualization, software-defined datacenter services, policy-based provisioning, disaster recovery, application management and operations management.

Learn More

For information or to purchase VMware products, call 877-4-VMWARE (outside North America, +1-650-427-5000), visit http://www.vmware.com/products, or search online for an authorized reseller. For detailed product specifications and system requirements, refer to the vSphere documentation.

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