VMware vSphere
The World's Leading Virtualization Platform

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 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 data centers 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 2,000 ISV partners, vSphere is the trusted platform for any application.
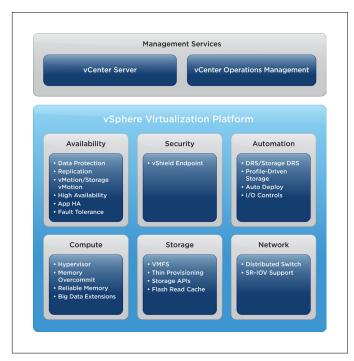
How Is vSphere Used?

- **Availability and Performance** – Deliver enhanced availability and performance for business-critical applications and next-gen applications, such as Hadoop

- **Storage** – Leverage server-side caching for enhanced performance of applications

- **Scalability** – Support the largest workloads possible by doubling configuration maximums in several key areas

Key Features and Components of vSphere

Virtualization Platform

- **VMware vSphere Hypervisor Architecture** provides a robust, production-proven, high-performance virtualization layer. It enables multiple virtual machines to share hardware resources with performance that can match (and in some cases exceed) native throughput.

- **VMware vSphere Virtual Symmetric Multiprocessing** enables the use of ultra-powerful virtual machines that possess up to 64 virtual CPUs.

- **VMware vSphere Virtual Machine File System (VMFS)** allows virtual machines to access shared storage devices (Fibre Channel, iSCSI, etc.) and is a key enabling technology for other vSphere components such as VMware vSphere Storage vMotion®.

- **VMware vSphere Storage APIs** provide integration with supported third-party data protection, multipathing and disk array solutions.

vmware®

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

- **VMware 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.
- **VMware 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.
- **VMware 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.
- **VMware vSphere High Availability (HA)** provides cost-effective, automated restart within minutes for all applications if a hardware or operating system failure occurs.
- **VMware vSphere Fault Tolerance (FT)** provides continuous availability of any application in the event of a hardware failure—with no data loss or downtime.
- **VMware 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.
- **VMware vShield Endpoint**™ secures virtual machines with offloaded antivirus and antimalware solutions without the need for agents inside the virtual machine.

Additional Components Available in Enterprise Edition
- **VMware vSphere Distributed Resource Scheduler**™ provides dynamic, hardware-independent load balancing and resource allocation for virtual machines in a cluster, using policy-driven automation to reduce management complexity while meeting SLAs.
- **VMware vSphere Distributed Power Management**™ automates energy efficiency in vSphere Distributed Resource Scheduler clusters by continuously optimizing server power consumption within each cluster.
- **VMware vSphere Reliable Memory** places critical vSphere components (such as the hypervisor) into memory regions identified as "reliable" on supported hardware. This further protects components from an uncorrectable memory error.
- **VMware vSphere Big Data Extensions** run Hadoop on vSphere to achieve higher utilization, reliability and agility. vSphere Big Data Extensions support multiple Hadoop distributions and make it seamless for IT to deploy, run and manage Hadoop workloads on one common platform.

Additional Components Available in Enterprise Plus Edition
(also inclusive of Enterprise Edition Components listed earlier)

- **VMware vSphere Distributed Switch** simplifies and enhances virtual-machine networking in vSphere environments and enables those environments to use third-party distributed virtual switches.
- **VMware vSphere Storage I/O Control and VMware vSphere Network I/O Control** set storage and network quality-of-service priorities for guaranteed access to resources.
- **VMware vSphere Auto Deploy**™ performs quick, as-needed deployment of additional vSphere hosts. When vSphere Auto Deploy is running, it pushes out update images, eliminating patching and the need to schedule patch windows.
- **VMware vSphere Host Profiles** help IT administrators simplify host deployment and compliance.
- **VMware vSphere Storage DRS**™ automates load balancing by using 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.
- **VMware vSphere Profile-Driven Storage** reduces the steps in the selection of storage resources by grouping storage according to a user-defined policy.
- **VMware vSphere Flash Read Cache** virtualizes server-side flash providing a high performance read cache layer that dramatically lowers application latency.
- **vSphere App HA** adds a new level of availability that allows vSphere to detect and recover from application or OS failure. Supports the most common applications on the market and can extend to the VMware ecosystem through its APIs.

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 data center 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 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. The company not only has streamlined its infrastructure; it also has leveraged the backup and recovery capabilities of vSphere 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™ 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.

Support and Professional Services

VMware offers global support and subscription (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

VMware vSphere is available standalone and as part of VMware vSphere® with Operations Management™ or VMware vCloud Suite. 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/.

Find Out 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.