VMware vSphere

The Best Platform for Cloud Infrastructures

vmware®

At a Glance

VMware vSphere® is the industry-leading virtualization platform for building cloud infrastructures. vSphere enables users to run business-critical applications with confidence and respond to their business faster. vSphere accelerates the shift to cloud computing for existing datacenters, while underpinning compatible public cloud offerings, paving the way to the only hybrid cloud model.

Used by more than 250,000 customers—including all the Fortune Global 100—and leveraging more than a decade of industry-leading VMware® technology, vSphere provides unparalleled agility, control and efficiency while fully preserving customer choice.

Key Benefits

- **Efficiency through utilization and automation**—Achieve high consolidation ratios and improve hardware utilization from 5 percent to 15 percent to 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.

IT Challenges are Business Challenges

In today's technology-driven environment, business agility depends on IT agility. But for many organizations, the potential business value of information technology has become trapped within traditional IT infrastructures that are too rigid, costly and complex to keep up with the pace of real-time business.

In fact, most IT organizations spend 70–80 percent of their time and budget just "keeping the lights on," leaving little time to innovate or support strategic business initiatives. With users demanding faster response times, and management demanding lower costs, organizations need a better strategy.

Cloud Computing: A New Model for IT

To break this cycle so that organizations can transform IT from a cost center to a strategic asset that energizes the business, a new model for IT services is emerging: cloud computing.

Cloud computing is an approach to IT that leverages the efficient pooling of resources to create an on-demand, self-managing virtual infrastructure that can be allocated dynamically as a service. This approach abstracts applications and information from the complexity of underlying hardware infrastructure, so IT organizations can focus on business needs and strategic innovation.

VMware Provides a Pragmatic Path to the Cloud

As the global leader in virtualization, VMware is charting an evolutionary course to cloud computing that can accommodate the applications of today and the cloud-based IT services of tomorrow. Working in concert with industry leaders, VMware is helping organizations of all sizes move beyond the limitations of traditional IT and revolutionize the way IT serves the business.
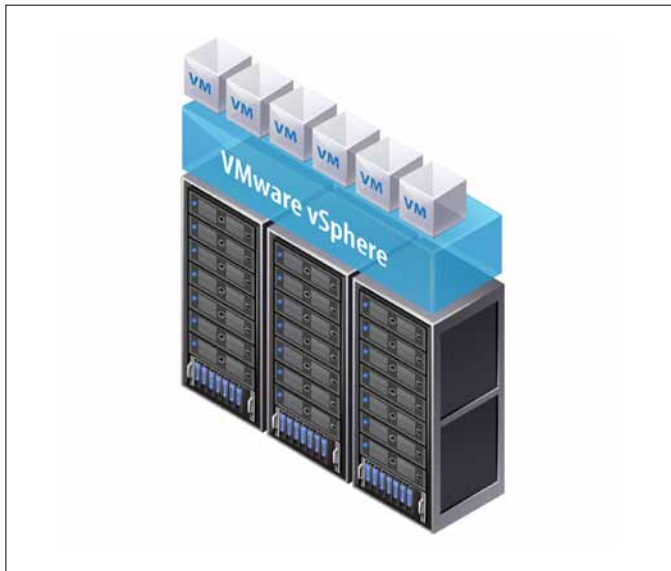
Using vSphere

vSphere is an enterprise-class solution that more than 250,000 organizations of all sizes use to consolidate and optimize existing IT assets, improve business continuity, streamline IT operations and deliver IT as a service.

Consolidate & Optimize IT Hardware

vSphere enables IT organizations to delay costly and disruptive datacenter expansion projects by consolidating more virtual machines on a single physical server without sacrificing performance or throughput.

Customers also use vSphere to create powerful multicore virtual machines and virtual machine clusters that span multiple physical servers to support even the most demanding applications.

In addition, vSphere reduces the complexity of hardware management through comprehensive virtualization of server, storage and networking hardware. On average, vSphere customers can slash IT capital expenses by more than 70 percent and IT operating costs by more than 30 percent.

vSphere abstracts server workloads from underlying hardware to create a single pool of resources that IT organizations can allocate dynamically in response to changing business conditions.

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.

vSphere eliminates planned downtime and maintenance windows with live migration of virtual machines and shared storage. vSphere also helps to minimize unplanned downtime with hardware-independent failover for virtual machines. Fault tolerance capabilities provide lockstep redundancy for the most critical application loads.

In addition, organizations can leverage agentless backup and recovery capabilities to prevent data loss, with built-in deduplication to reduce data storage requirements.

Streamline IT Operations

vSphere lowers operational overhead and dramatically simplifies the management of large, geographically distributed development, QA and production IT environments that include a heterogeneous mix of applications, operating systems and hardware platforms.

vSphere also simplifies the provisioning of IT services and provides a uniform assurance of service levels regardless of physical infrastructure or the actual location of the services. This allows IT staff to move application loads from one virtual infrastructure to another without needing to reconfigure or customize policies or configurations.

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.

With an array of management and automation capabilities such as advanced resource pooling, automated resource allocation, role-based administration, zero-touch infrastructure and self-service portals for end users, vSphere dynamically aligns IT resources with business needs, making it possible to deliver IT as a utility-like service.

By adopting vSphere as an IT-as-a-service (ITaaS) platform, organizations gain the ability to transform IT from a cost center to a strategic advantage that saves energy—human, financial and environmental.

The Most Complete Virtualization Platform

vSphere is the industry's most complete virtualization platform, with infrastructure services that transform IT hardware into a high-performance shared computing platform, and application services that help IT organizations deliver the highest levels of availability, security and scalability.

Infrastructure Services

• **Compute**—vSphere provides a rock-solid virtualization layer that enables organizations to create powerful multicore virtual machines and virtual machine clusters that span across hardware platforms.

vSphere can boost application performance by nearly 50 percent with dynamic, automated, policy-based resource allocation. vSphere also helps customers cut IT power usage by up to 55 percent with distributed power-management capabilities that continuously and automatically optimize the power consumption of underlying server hardware.

• **Storage**—By enabling administrators to defer storage purchases until they are really required, vSphere helps to reduce storage expenditures by up to 50 percent. vSphere also enables on-demand expansion of virtual machine storage capacity.

• **Network**—vSphere brings visibility, control and scalability to virtual machine networks. Administrators can move beyond per-host network configurations and maintain continuous enforcement of network policies for virtual machines as they live-migrate from one server to another.
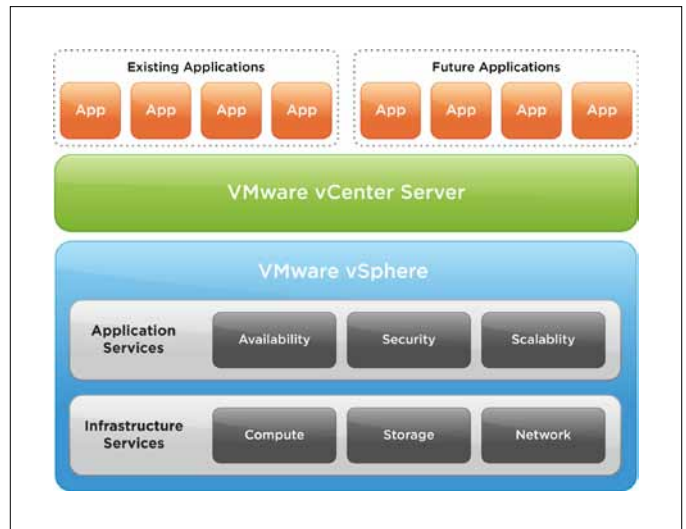
Application Services

• **Availability**—vSphere helps IT organizations ensure business continuity and prevent data loss with always-on IT capabilities such as automated failover, zero-downtime maintenance, virtual machine fault tolerance and cost-effective data protection.

• **Security**—IT security is inherently more complex in virtual environments. vSphere simplifies security and compliance by helping to enforce policies at the application level within logical zones in a shared environment while maintaining network segmentation of users and sensitive data.

• **Scalability**—vSphere makes it possible to achieve cloud-scale capacity with central management for thousands of virtual machines and hundreds of vSphere hosts. vSphere also delivers record-breaking performance for business-critical applications from Microsoft, Oracle, SAP and other leading software providers.

Open Architecture

For more than a decade, VMware has embraced an open, standards-based approach to virtualization that allows customers to leverage existing tools and infrastructure while adopting next-generation applications. vSphere also includes a comprehensive set of APIs for building tools and solutions that enhance and extend storage, networking, security and management capabilities.

vSphere provides the most complete set of infrastructure and application services available.

The Best Platform for Cloud Infrastructures

vSphere is the best platform for creating private, public and hybrid cloud infrastructures, and the only virtualization solution that offers an evolutionary path to cloud computing. By adopting vSphere, customers can avoid "rip-and-replace" solutions in favor of a common platform they can use to make a pragmatic transition to cloud-based solutions and services.

Private Cloud Infrastructures

vSphere enables organizations to turn their existing datacenters into private clouds that can more efficiently and effectively manage existing applications as well as the next generation of flexible, on-demand IT services.

Capabilities such as resource pooling and dynamic resource allocation, centralized management and automation, and a self-service portal for end users all help to reduce costs and increase agility while ensuring security, compliance and control over IT assets. vSphere also helps IT administrators streamline routine operational tasks to enhance service-level agreements, increase productivity and free up time for more strategic initiatives.

By adopting vSphere as a private cloud platform, IT teams can deliver IT services more flexibly and efficiently while automating key processes such as systems management and application provisioning.

Public Cloud Infrastructures

VMware partners with hundreds of hosting and service providers to enable compatible public cloud infrastructures. In the future, this will help establish vSphere as a common cloud platform so that IT as a service will span across public and private clouds through federation.
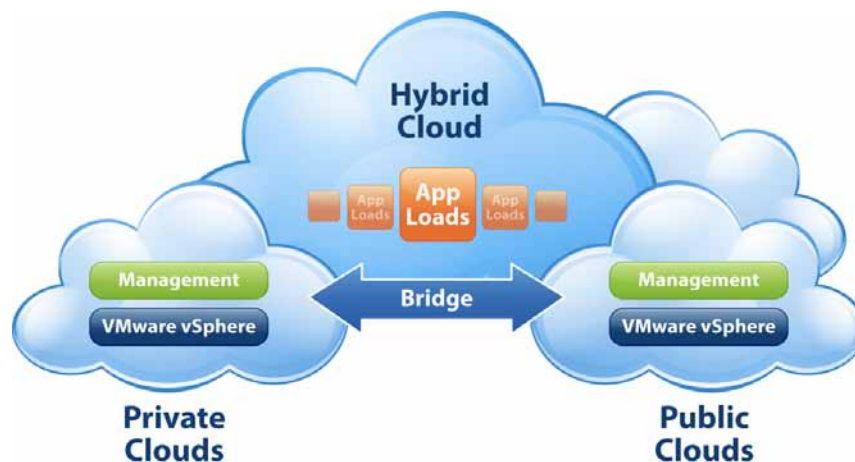
By offering customers the freedom of open standards and interoperability of applications, VMware offers the best choice for organizations that want to expand IT capacity or migrate applications to the public cloud.

A common management and infrastructure platform ensures visibility of pooled resources along with the elasticity to provide the highest service levels for applications. Through a broad ecosystem of leading cloud service providers, organizations can get VMware virtualized services, ranging from on-demand, pay-as-you-go infrastructure to enterprise-class, production-ready offerings.

Hybrid Cloud Infrastructures

The VMware vision for cloud computing is to bridge internal resources with available external resources, enabling customers to create hybrid cloud infrastructures that span seamlessly across connected clouds, both private and public.

The model ultimately allows organizations to achieve the full benefits of cloud computing by leveraging a strategic mix of internal and external solutions for data storage, application hosting and disaster recovery while retaining full control over their IT infrastructures. Organizations that adopt private or public cloud solutions based on vSphere will be in the best position to employ this hybrid cloud model as it becomes mainstream.

vSphere provides a robust common platform for private, public and hybrid cloud infrastructures.

Chosen by the World's Top Companies

The world's top companies choose VMware:

• 100 percent of the Fortune 100
• 98 percent of the Fortune 500
• 96 percent of the Fortune 1000
• 100 percent of the Fortune Global 100
• 95 percent of the Fortune Global 500
• 91 percent of the FTSE 100 (U.K.)
• 95 percent of the DAX 100 (Germany)
• 100 percent of the CAC 40 (France)
• 87 percent of the MIB 30 (Italy)
• 91 percent of the IBEX 35 (Spain)
• 94 percent of the ASX 100 (Australia/New Zealand)
• 83 percent of the Nikkei 225 (Japan)

Customer Success Stories

Campbell Clinic

Campbell Clinic is a world leader in sports medicine, orthopedics, joint replacement, and physical medicine and rehabilitation. Since adopting vSphere, the clinic has reduced hardware, power and cooling costs by more than $100,000 while improving the performance, efficiency and availability of Tier-1 applications.

Read the Campbell Clinic success story:

http://www.vmware.com/go/customer_success/campbell_clinic

Financial Technologies India Ltd.

Financial Technologies India Ltd. (FTIL) owns and operates 10 international financial exchanges across Africa, India, the Middle East and Southeast Asia. To support rapid, sustainable growth, FTIL adopted vSphere to maximize its existing real estate and infrastructure, achieving 50:1 consolidation ratios while running SAP and Microsoft applications in production environments.

Read the FTIL success story:

http://www.vmware.com/go/customer_success/FTIL

Marshall University

Marshall University is the oldest public institution of higher learning in West Virginia and is home to approximately 14,000 students. The university's IT department first adopted VMware technology in 2004, and today the university has virtualized approximately 82 percent of its IT environment, with a long-term goal of virtualizing the entire IT infrastructure.

Read the Marshall University success story:

http://www.vmware.com/go/customer_success/marshall_u

Southwestern/Great American

Founded in 1855, Southwestern/Great American Inc. has a dozen distinct lines of business, including direct selling, customized publishing, school fundraising, sales training, and executive search and recruitment. The company relied on VMware technology to run its SAP infrastructure for several years, and it has been so successful that it now has a "VMware first" policy and uses virtual machines as the default when provisioning new server application workloads.

Read the Southwestern success story:

http://www.vmware.com/go/customer_success/southwestern_great_american

SonicWALL

SonicWALL Inc. is a leader in the unified threat management security industry, with solutions such as solid-state firewalls and VPN appliances and value-added security subscriptions. Using vSphere, SonicWALL has virtualized 95 percent of its customer-facing server infrastructure and ensured the rock-solid reliability its customers demand.

Read the SonicWALL success story:

http://www.vmware.com/go/customer_success/sonicwall

vSphere Kits and Editions

- **vSphere Essentials Kits**—Designed especially for small and midsized business (SMB) environments with fewer than 20 physical servers, these kits deliver enterprise-class virtualization with integrated management and business continuity features.

- **vSphere Standard Edition**—This entry-level solution for basic consolidation of applications slashes hardware costs while accelerating application deployment.

- **vSphere Enterprise and Enterprise Plus Editions**—These editions include the full range of features for transforming datacenters into dramatically simplified cloud computing environments, providing the next generation of flexible, reliable IT services.

vSphere Kits and Editions Compared				
	CONSOLIDATION Optimize existing infrastructure by converting physical systems to virtual machines	**AVAILABILITY** Enable high availability and data recovery; leverage live migration for applications	**AUTOMATED RESOURCE ALLOCATION** Deliver load balancing, power management and live storage migration (VMware Storage vMotion®) without manual intervention	**SIMPLIFIED IT OPERATIONS** Use advanced networking (distributed network switch) and host configuration templates (host profiles) for more OpEx savings
Essentials*	✓			
Essentials Plus*	✓	✓		
Standard**	✓	✓		
Enterprise**	✓	✓	✓	
Enterprise Plus**	✓	✓	✓	✓

* All vSphere Essentials Kits contain a version of VMware vCenter™ Server for centralized management.
** A version of VMware vCenter Server (licensed separately) is required for all vSphere editions.

Additional vSphere Products and Add-ons

- **VMware vCenter Server**—vCenter Server provides unified management for the entire virtual infrastructure and unlocks 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. Customers can also get vCenter Server for Essentials as an included component of all vSphere Essentials Kits.

- **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.

- **VMware vSphere Storage Appliance**—This new virtual appliance creates the benefit of shared storage without the cost and complexity. SMBs can now experience enterprise-class features such as VMware Storage vMotion and VMware High Availability in smaller configurations.

Support and Professional Services

VMware offers global Subscription and Support (SnS) services to all vSphere customers. For customers that require additional services, VMware also offers professional service engagements on best practices and getting started with your vSphere deployment. Professional services are available 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/vsphere_purchaseoptions.html

If you are an existing vSphere or virtual infrastructure customer, visit the 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 kit or edition with vCenter Server and are available for up to 30 percent off the normal list price:

http://www.vmware.com/vmwarestore/vsphere_accel_purchaseoptions.html

VMware also offers vSphere Essentials Kits for Retail and Branch offices. These kits are tailored for midsize and enterprise customers interested in virtualizing smaller remote sites. The kits provide complete, integrated turnkey solutions for greater business agility and continuity at all remote locations.

Learn More

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