

# VMware vSphere

Enterprise and Enterprise Plus Editions

## AT A GLANCE

Designed for organizations that want to virtualize their entire datacenters and deliver IT as a service, VMware vSphere™ Enterprise and Enterprise Plus editions 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 percent to 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 percent to 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's most complete, scalable and powerful virtualization platform, delivering the infrastructure and application services that organizations need to transform their information technology and deliver IT as a service.

Proven by more than 170,000 customers—including all the Fortune Global 100—and leveraging more than a decade of industry-leading technology and experience, vSphere provides unparalleled agility, control and efficiency while fully preserving customer choice.

## How is vSphere Used?

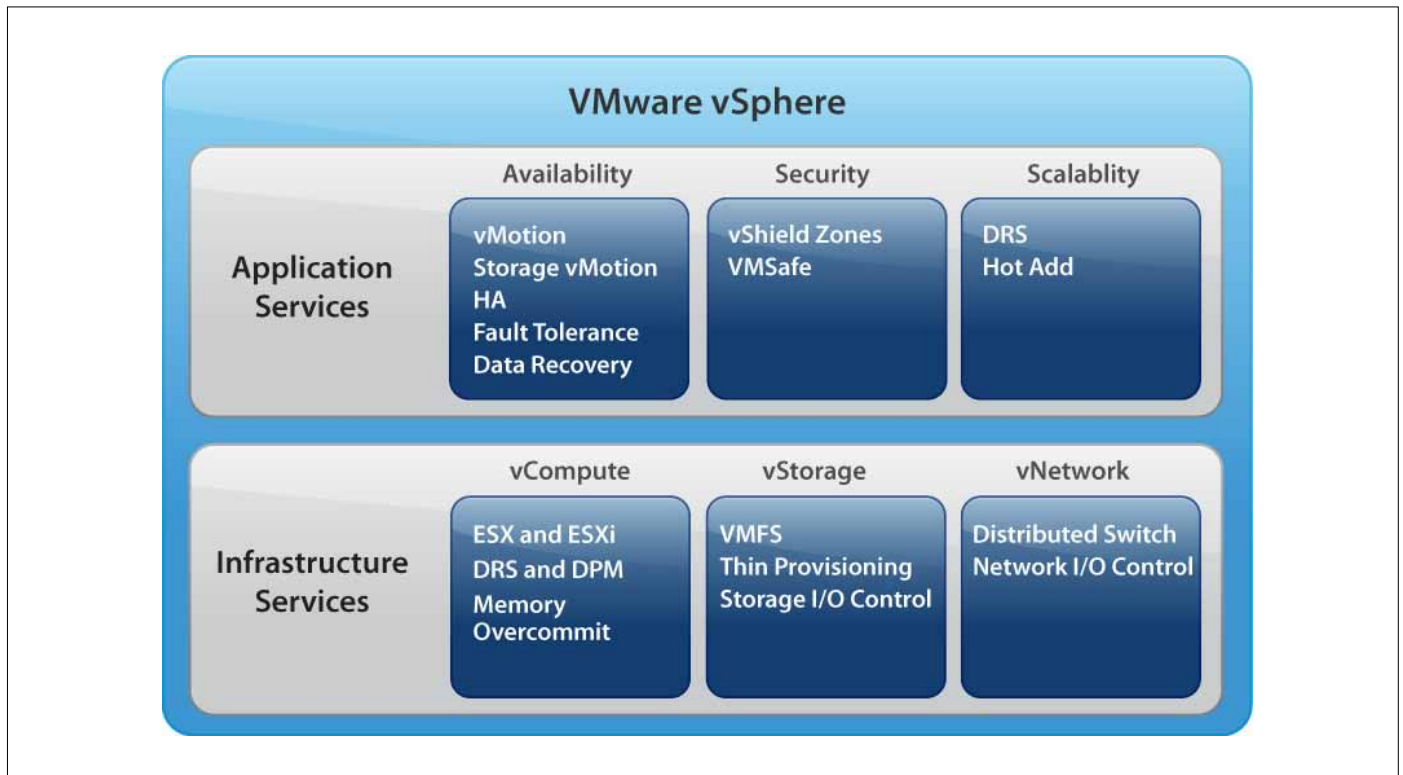
- **Consolidate and optimize IT hardware**—vSphere enables IT organizations to delay costly and disruptive datacenter expansion projects by making it possible to consolidate 15 or more virtual machines on a single physical server without sacrificing performance or throughput.
- **Improve business continuity**—vSphere 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 large, geographically distributed development, QA and production IT environments.
- **Deliver IT as a service**—VMware 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

## Infrastructure Services

- **VMware ESXi™ and ESX® hypervisor architectures** provide a robust, production-proven, high-performance virtualization layer that allows multiple virtual machines to share hardware resources with record-breaking performance that can match and in some cases exceed) native throughput.
- **VMware Virtual SMP** enables the use of ultra-powerful virtual machines that possess up to eight virtual CPUs.
- **VMware vStorage Virtual Machine File System (VMFS)** allows virtual machines to access shared storage devices (FibreChanel, iSCSI, etc.), and is a key enabling technology for other vSphere components such as Storage vMotion.
- **VMware vStorage APIs** provide integration with supported third-party data protection, multipathing, and disk array solutions.

- **VMware Distributed Resource Scheduler (DRS)** provides dynamic, hardware-independent load balancing and resource allocation for virtual machines across a cluster, using policy-driven automation to reduce management complexity while enhancing SLAs.
- **VMware Distributed Power Management (DPM)**, included with VMware DRS, automates energy efficiency in VMware DRS clusters by continuously optimizing server power consumption within each cluster.
- **VMware vNetwork Distributed Switch** simplifies and enhances virtual machine networking in vSphere environments, and enables third-party distributed virtual switches such as the Cisco Nexus 1000V to be used in vSphere environments.
- **VMware vStorage Thin Provisioning** provides dynamic allocation of shared storage capacity, allowing IT organizations to implement a tiered storage strategy while reducing storage spending by up to 50 percent.
- **VMware Storage I/O Control** sets storage quality-of-service priorities for guaranteed access to storage resources.
- **Network I/O Control** sets network quality-of-service priorities for guaranteed access to network resources.



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

## Application Services

- **VMware vMotion™** eliminates the need to schedule application downtime due to scheduled server maintenance through live migration of virtual machines across servers with no disruption to users or loss of service.
- **VMware Storage vMotion** eliminates the need to schedule application downtime due to planned storage maintenance or during storage migrations by enabling live migration of virtual machine disks with no disruption to users.
- **VMware High Availability (HA)** provides cost effective, automated restart within minutes for all applications in the event of hardware or operating system failures.
- **VMware Fault Tolerance (FT)** provides continuous availability, without any data loss or downtime, to any application, in the event of hardware failures.
- **VMware Data Recovery** provides simple, cost effective, agentless backup and recovery for virtual machines, in smaller environments.
- **VMware vShield Zones** simplifies application security by enforcing corporate security policies at the application level in a shared environment, while still maintaining trust and network segmentation of users and sensitive data.
- **VMware VMsafe™ APIs** enable the use of security products that work in conjunction with the virtualization layer to provide higher levels of security to virtual machines than even physical servers.
- **VMware Distributed Resource Scheduler (DRS)** dynamically load balances server resources to deliver the right resource to the right application based on business priority; allowing applications to shrink and grow as needed.
- **Hot add** enables CPU and memory to be added to virtual machines when needed without disruption or downtime.
- **Hot plug** virtual storage and network devices to or from virtual machines without disruption or downtime.
- **Hot extend** of virtual disks allows virtual storage to be added to running virtual machines without disruption or downtime.

## Management Services

- **VMware vCenter Agent** allows vSphere hosts to connect to vCenter Server for centralized management of all host and virtual machines.
- **Host profiles** help IT administrators simplify host deployment and compliance by creating virtual machines from configuration templates.
- **Virtual Serial Port Concentrator** allows connections over the network via the serial port concentrator to the serial port console on any server.

- **VMware vCenter Update Manager** automates tracking, patching and updating for vSphere hosts, as well as applications and operating systems running in VMware virtual machines.
- **VMware vCenter Converter** allows IT administrators to rapidly convert physical servers and third-party virtual machines into VMware virtual machines

## Customer Success Stories

**Campbell Clinic**, one of the country's leading centers of orthopedic teaching and practice, uses vSphere to consolidate server hardware, reduce overhead and ensure high availability.

Read the Campbell Clinic success story:

[http://www.vmware.com/go/customer\\_success/campbell\\_clinic](http://www.vmware.com/go/customer_success/campbell_clinic)

**Financial Technologies India Ltd. (FTIL)**, owner and operator of 10 international financial exchanges across Africa, India, the Middle East and Southeast Asia, 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](http://www.vmware.com/go/customer_success/ftil)

**Marshall University**, the oldest public institution of higher learning in West Virginia, has leveraged on 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](http://www.vmware.com/go/customer_success/marshall_u)

**Southwestern/Great American**, an employee-owned corporation founded in 1855, relies on vSphere to run a rock-solid SAP ERP infrastructure.

Read the Southwestern success story:

[http://www.vmware.com/go/customer\\_success/southwestern\\_great\\_american](http://www.vmware.com/go/customer_success/southwestern_great_american)

**SonicWALL**, a leader in the Unified Threat Management security, has virtualized 95 percent of its customer-facing applications with vSphere.

Read the SonicWALL success story:

[http://www.vmware.com/go/customer\\_success/sonicwall](http://www.vmware.com/go/customer_success/sonicwall)

## VMware vSphere Editions

### VMware vSphere Enterprise

VMware vSphere Enterprise edition includes exclusive capabilities such as VMware Storage vMotion, VMware Distributed Resource Scheduler (DRS), VMware Distributed Power Management (DPM), Virtual Serial Port Concentrator, and VMware vStorage APIs for array integration and multipathing.

### VMware vSphere Enterprise Plus

vSphere Enterprise Plus includes all the capabilities found in vSphere Enterprise, along with an expanded memory entitlement, eight-way virtual SMP, VMware vNetwork Distributed Switch, VMware Host Profiles, VMware Storage I/O Control, and VMware Network I/O Control.

## 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.**

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

### Support and Professional Services

VMware offers global Subscription and Support (SnS) services to all VMware vSphere customers. For customers that require 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 VMware 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](http://www.vmware.com/vmwarestore/vsphere_purchaseoptions.html)

If you are an existing VMware vSphere or VMware Infrastructure 3 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 VMware vSphere edition with VMware vCenter Server and are available for up to 30 percent off the normal list price:

<http://www.vmware.com/vmwarestore/buyvsphere-acceleration-kits.html>

## Learn More

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

