![vmware® logo]

VMware Infrastructure 3
Data center management and optimization suite

The Responsive Data Center.
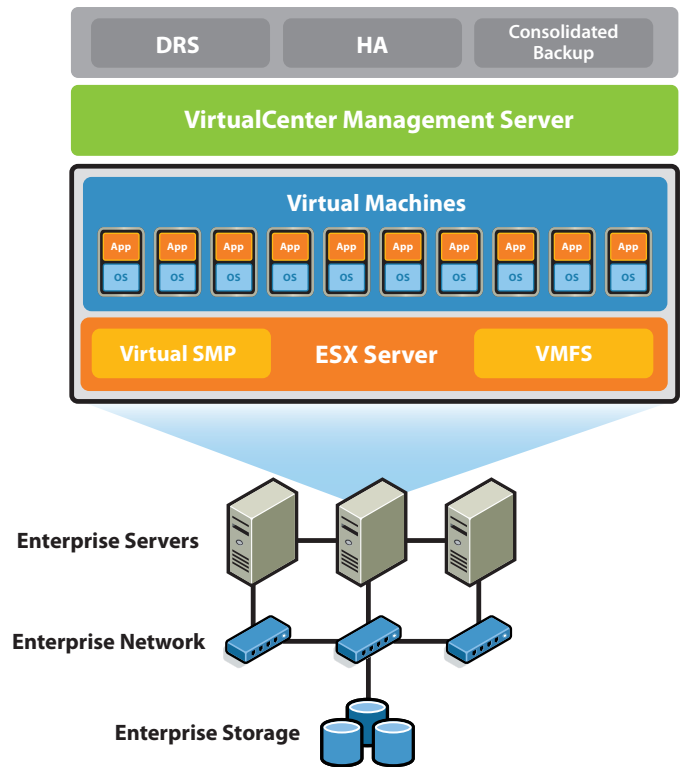## Dynamic. Efficient. Available.

VMware® Infrastructure is the most widely deployed software suite for optimizing and managing industry standard IT environments through virtualization – from the desktop to the data center. The only production-ready virtualization software suite, VMware Infrastructure is proven to deliver results at more than 20,000 customers of all sizes, used in a wide variety of environments and applications. The suite is fully optimized, rigorously tested and certified for the widest range of hardware, operating systems and software applications. VMware Infrastructure provides built-in management, resource optimization, application availability and operational automation capabilities that deliver transformative cost savings as well as increased operational efficiency, flexibility and IT service levels.

How is VMware Infrastructure Used?

VMware Infrastructure delivers a responsive IT—dynamic, efficient and available. Eliminating many of the constraints of traditional hardware, VMware Infrastructure allows companies to:

- **Implement Production Server Consolidation and Containment.** Contain server sprawl by running software applications in virtual machines on fewer, highly scalable, reliable enterprise-class servers. Customers of VMware Infrastructure have been able to consolidate 10 or more virtual machines per physical processor, thereby drastically increasing server utilization and containing server sprawl.

- **Provide Advanced Business Continuity Protection at Lower Cost.** Deliver high availability for critical applications with cost-effective virtualization-based solutions. With VMware Infrastructure, customers can implement a unified disaster recovery platform that allows many production virtual machines to be recovered in the event of hardware failure without investing in costly one-to-one mapping of production and DR hardware.

- **Streamline Software Test & Development.** Consolidate disparate development, testing and staging environments involving multiple operating systems and multi-tier applications. Set up self-service developer portals to increase developer productivity.

VMware Infrastructure

VMware Infrastructure virtualizes and aggregates industry standard servers and their attached network and storage.

- **Secure and Manage Enterprise Desktops.** Secure enterprise desktops of geographically dispersed workforce by providing a standard corporate desktop image in a virtual machine. At the same time, provide standardized enterprise desktop environments hosted in virtual machines accessed through thin clients or PCs.

- **Simplify Infrastructure Provisioning.** Reduce the time for provisioning new infrastructure to minutes with sophisticated automation capabilities. Virtual appliances combine simple deployment of software with the benefits of pre-configured devices. Centralize control and responsibility for hardware resources while giving business units and application owners complete control over how resources are utilized.

- **Re-host Legacy Applications.** Migrate legacy operating systems and software applications to virtual machines running on new hardware for better reliability.

What are the Benefits of VMware Infrastructure?

VMware Infrastructure uses virtualization technology to deliver transformative capital and operating cost savings as well as increased operational efficiency, flexibility and IT service levels.

• VMware Infrastructure delivers measurable savings in both capital and operating costs

» Increases hardware utilization and reducing hardware requirements with server consolidation ratios commonly exceeding ten virtual machines per physical processor

» Reduces the cost of rack space and power proportionate to the consolidation ration achieved

» Decreases labor cost by simplifying and automating labor and resource intensive IT operations across disparate hardware, operating system and software application environments

• VMware Infrastructure improve responsiveness, serviceability, availability and flexibility of IT infrastructure

» Enables broad-based, cost-effective application availability and business continuity independent of hardware and operating systems

» Enables continuous uptime and non-disruptive maintenance of IT environments with live migration of entire running systems

» Eliminates the need for cumbersome software installation and configuration with virtual appliances

» Accelerates the application development and deployment life-cycles

» Improves responsiveness to business needs with instant provisioning and dynamic optimization of application environments

» Allows legacy systems to co-exist with new environments

How Does VMware Infrastructure Work?

VMware Infrastructure virtualizes and aggregates industry standard servers and their attached network and storage into unified resource pools. Complete environments including operating systems and applications are encapsulated in virtual machines that are independent from the hardware. A set of virtualization-based distributed infrastructure services for virtual machines bring breakthrough levels of flexibility, serviceability and efficiency to IT environments:

• Central management and monitoring of virtual machines automate and simplify provisioning

• Distributed resource optimization dynamically and intelligently allocates the available resources among virtual machines, resulting in significantly higher hardware utilization and better alignment of IT resources with business priorities

• Easy-to-use high-availability provides better service levels to applications at lower cost than static, physical infrastructure

VMware Infrastructure is not tied to any operating system, giving customers a bias-free choice of operating system and software applications. VMware Infrastructure scales to support IT environments of any size.

"With VMware Infrastructure, STM was able to cut costs by 30%, and management sleeps better at night knowing that customers will be able to get transportation information, even in the event of a disaster in our data center."
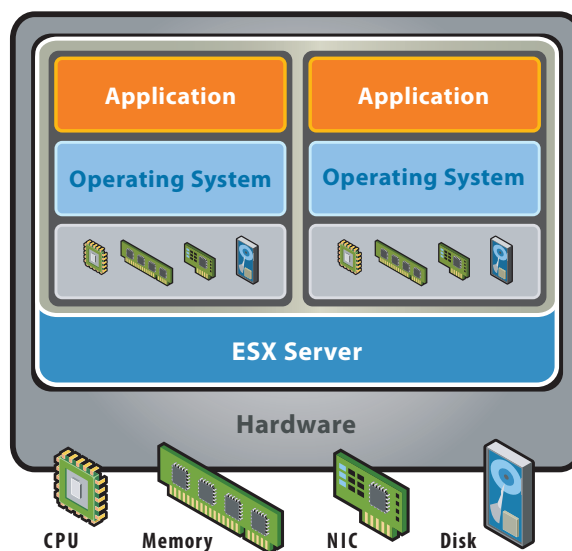
Mike Stefanakis
Concepteur Principale/Systems Administrator, Société de transport de Montréal

What's Included in VMware Infrastructure?

VMware ESX Server

VMware ESX Server is the foundation for the dynamic, self-optimizing IT infrastructure. VMware ESX Server is a robust, production-proven virtualization layer that abstracts processor, memory, storage and networking resources into multiple virtual machines. ESX Server increases hardware utilization and dramatically decreases capital and operating cost by sharing hardware resources across a large number of virtual machines. ESX Server improves service levels even to the most resource-intensive applications with advanced resource management, high availability, and security features.

VMware ESX Server virtualizes server storage and networking, allowing multiple applications to run in virtual machines on the same physical server.

VMware VMFS

VMware Virtual Machine File System (VMFS) is a high-performance cluster file system for that allows multiple installations of ESX Server to access the same virtual machine storage concurrently. VMFS enables the virtualization-based distributed infrastructure services delivered by VMware VirtualCenter, VMware VMotion™ technology, VMware DRS and VMware HA.

VMware Virtual SMP™

VMware Virtual Symmetric Multi-Processing (SMP) enhances virtual machine performance by enabling a single virtual machine to use multiple physical processors, simultaneously. A unique VMware feature, Virtual SMP enables virtualization of the most processor and resource-intensive enterprise applications such as databases, ERP and CRM.

VMware VirtualCenter

VirtualCenter delivers centralized management, operational automation, resource optimization and high availability to IT environments. These capabilities equip IT environments with unprecedented levels of serviceability, efficiency and reliability. VirtualCenter exposes a rich set of programmatic Web service interfaces that enable integration with third party system management products as well as customized development.

VMware DRS

VMware Distributed Resource Scheduler (DRS) aligns available resources with pre-defined business priorities while streamlining labor and resource intensive operations.

VMware VMotion

VMotion technology allows the migration of live virtual machines, enabling non-disruptive maintenance of IT environments.
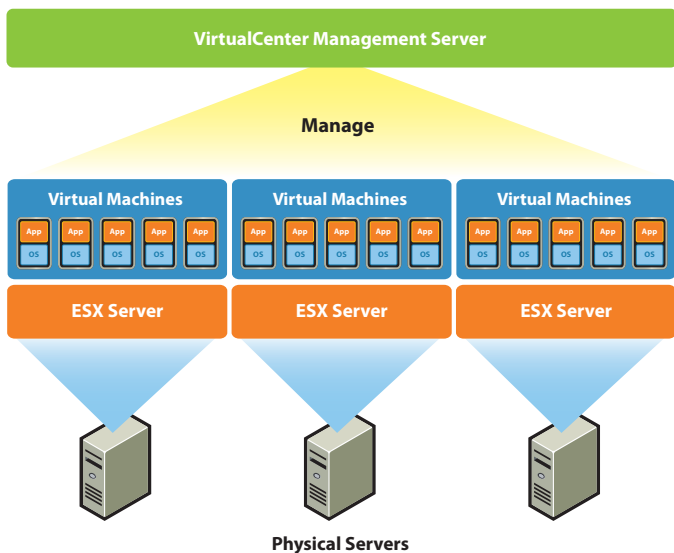
VMware HA

VMware High Availability (HA) enables cost-effective application availability independent of hardware and operating systems.

VMware Consolidated Backup

VMware Consolidated Backup provides an easy to use, centralized backup facility for virtual machines. It enables virtual machine contents to be backed up from a centralized Microsoft® Windows 2003 proxy server rather than directly from ESX Server.

"Using VMware Infrastructure enterprise-wide since January 2005, Enbridge Energy has streamlined its IT infrastructure, saving more than $1 million in hardware costs. The new products and capabilities in VMware Infrastructure bring even greater efficiency and flexibility to our infrastructure."

Ed Baldwin, Senior Network Engineer
Enbridge Energy Company, Inc.

VMware VirtualCenter provides a central point of control for managing, monitoring, provisioning and migrating virtual machines

How Can I Purchase VMware Infrastructure?

Package Summary			
PRODUCTS	VMWARE INFRASTRUCTURE STARTER	VMWARE INFRASTRUCTURE STANDARD	VMWARE INFRASTRUCTURE ENTERPRISE
ESX Server	✓ • NAS or local storage only • Deployable on server with up to 4 physical CPU up to 8GB physical memory	✓	✓
VMFS	✓ • On local storage only • Does not include cluster file system	✓	✓
VirtualCenter Agent	✓	✓	✓
Virtual SMP		✓	✓
VMotion			✓
VMware HA			✓
VMware DRS			✓
VMware Consolidated Backup			✓

VMware Infrastructure is available in three editions: Starter, Standard and Enterprise. The VirtualCenter Management Server is sold separately.

The following products are also available as separately licensed products:

• VMware VMotion

• VMware HA

• VMware DRS

• VMware Consolidated Backup

vmware®